
IP Surveillance API User Guide

Version 2.5

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1 Scope

This specification defines a HTTP-based application programming interface that enables physical security and video management systems to communicate with IP media devices in a particular way.

With regard to Media Streaming, please refer to “develop API of RTSP protocol”.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] RFC2616 Hypertext Transfer Protocol-HTTP/1.1
- [2] W3C XML 1.0 specification
- [3] W3C Character encodings
- [4] RFC 2396 Uniform Resource Identifiers (URI): Generic Syntax and Semantics
- [5] RFC 2617 HTTP Authentication: Basic and Digest Access Authentication
- [6] International Electrotechnical Commission “ISO/IEC standard on UPnP device architecture makes networking simple and easy”, 2008-12-09. Retrieved on 2009-05-07.
- [7] International Organization for Standardization “ISO/IEC standard on UPnP device architecture makes networking simple and easy”, 2008-12-10. Retrieved on 2009-05-07.
- [8] UPnP Forum “UPnP Specifications Named International Standard for Device Interoperability for IP-based Network Devices”, 2009-02-05. Retrieved on 2009-05-07.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

Standard Resources: “index”, “indexr”, “description” and “capabilities” resources, that are contained in all Services and General Resources, and provide a special description for these

resources.

Services: a set of resources consisting of relevant General Resources.

General Resources: physical resources that supported by the devices.

Node: Services and General Resources.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

FQDN	Fully Qualified Domain Name
REST	REpresentational State Transfer
IO	Input/Output
UPnP	Universal Plug and Play

4 Architecture and Transmission Mechanism

The IP Media Device Management Protocol is based on REST architecture. The management and control interfaces defined in this specification are treated as resources utilizing the REpresentational State Transfer (REST) architecture. This architecture facilitates users by grouping related resources within hierarchical namespaces, and is more flexible for service discovery and future expansion.

REST architecture consists of clients and servers, among which clients initiate request to servers, while servers handle requests and response accordingly. Requests and responses are established via the transmission of “representations” of “resources”. REST architecture need to be based on an Application Layer protocol which provides various of standard communication formats for applications based on the transfer of meaningful representational state. HTTP[1] has a very rich vocabulary in terms of verbs(or “methods”), URIs, request and response headers, Internet media types, HTTP request and response codes etc. In addition, HTTP also has some features particularly suitable for REST architecture. So HTTP is used as external Application Layer protocol in this specification. In the architecture, clients are physical security and video management systems; servers are IP media devices.

This specification also contains full XML schema for the introduced resources.

4.1 REST and HTTP Methods

The following table shows how HTTP verbs are typically used to implement a web service based on REST architecture.

Table 1

Resource	GET	PUT	POST	DELETE
Collection URI, such as http://webServer/resources	List the members of collection, complete with their member URIs for further navigation.	Meaning defined as “ replace the entire collection with another collection”.	Create a new entry in the collection where the ID is assigned automatically by the collection. The ID created is usually included as part of the data returned by this operation.	Meaning defined as “ delete the entire collection”.
Member URI, such as http://webServer/resources/7416	Retrieve a representation of the addressed member of the collection expressed in an appropriate MIME type.	Update the addressed member of the collection or create it with the specified ID.	Treat the addressed member as a collection in its own right and create a new subordinate of it.	Delete the addressed member of the collection.

4.2 XML

A device must support the syntax defined by W3C XML 1.0 specification [2] and UTF-8 character set [3]. All XML files must adopt UTF-8 encoding according to RFC3629. Additionally, all resources share a common XML schema as defined in Annex.

Any resources can specify separate input and output XML Documents. If a specific data structure is defined inside these documents, then they must be specified as XML Schema Documents (xsd) in Annex.

Lists contained in XML blocks will be represented in the format of <ISAPIList>, and each <ISAPIList> tag may contain one or more nodes.

4.3 Resources overview

Three kinds of resources are defined in this specification. They are “Standard Resources”, “Services” and “General Resources”. Related General Resources are grouped by Services. Services and General Resources contain Standard Resources. Figure 1 shows their relationship.

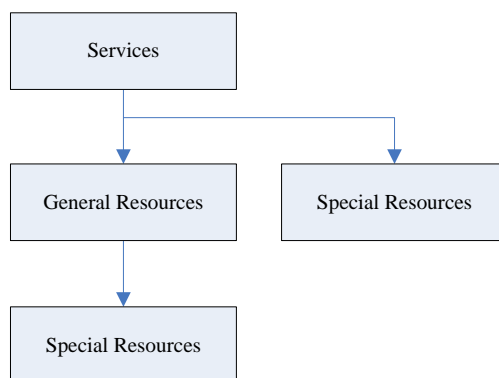


Figure 1

The “index”, “indexr”, “description” and “capabilities” are defined as Standard Resources in this specification. Both “index” and “description” will be mandatorily included by each node, and both “indexr” and “capabilities” will be optionally included by each node. For more detailed description see Section 6.

Services defined in this specification are divided into different services categories. Each category has its own name spaces (see Section 4.6 for the name space definitions). The following services are defined:

Table 2

Services	Description	Reference
System	Configure and operate the general system functions.	8.1
Network	Configure network interfaces.	8.2
IO	Configure the Input/Output (IO).	8.3
Video	Handle video-related configuration.	8.4
Audio	Configure the Audio.	8.5
Two way audio	Control two ways audio.	8.6
Serial	Configure and control the Serial ports.	8.7
Security	Provide Security functions.	8.8
Streaming	Configure and control the streaming media content.	8.9
Motion Detection	Configure and control the motion detection of the device	8.10
Event	Provide event notification functions.	8.11
PTZ	Control the device pan tilt and zoom.	8.12

4.4 Protocol URL

The URL scheme is used to locate device resources via a specific protocol in the network. This section defines the syntax and semantics for http(s) URLs.

```
<protocol>://<host>[:port][abs_path [?query]]
```

protocol: URL scheme for the particular request. The http and https protocols are allowed in this specification.

host: The host field refer to the hostname, IP address, or the FQDN of an IP device.

port: The port field refer to the port number of that host on which the identified resource is located at the IP device listening for TCP connections. If the port is empty or not given, the default port is assumed. For HTTP, the default port 80. For HTTPS, the default port 443.

abs_path: The Request-URI [1] for the resources is abs_path [4]. The abs_path in this specification is most often of the form “[/Services][/General Resources][Standard Resources]”, which is suitable for resources to update or restore device configurations. “ID” which appears in the abs_path identifies one resource of a list resource in this specification.

query: The query field is a string of information to be interpreted by the resource. It can include some resource-related parameters. It must be listed in name-value pair syntax (p1=v1&p2=v2&...&pn=vn). Each resource can define a set of parameters. Defining input data which is specific to the resource will be prior than query usage.

4.5 Messages

HTTP messages are used for communication between physical security and video management systems and IP media devices in this specification. In order to configure and control the device, some provisions are specified for these HTTP message.

4.5.1 Connection Header Field

Devices that implement HTTP/1.1 should support persistent connections in order to meet video management systems or client applications’ requirements that issue multiple HTTP(s) transactions. HTTP/1.1 is implemented and utilized according to RFC 2616 in the IP devices. For a video management system or client application that uses persistent connection for multiple transactions, it is required to implement “Connection: Keep-Alive” HTTP header field, while also adopt the “Connection: close” HTTP header field for the last transaction of the persistent connection. This process will assume that the application can identify the last request in a sequence of multiple requests.

4.5.2 Authorization and WWW-Authenticate Header Fields

When a video management system or client application sends any request to the device, it must be authenticated by means of Basic Access [5] according to RFC 2617, and thus all the devices are

required to support Basic Access. Authorization header field is sent along with each request, and if a user is authenticated, the request will follow the normal execution flow. If client HTTP request is with no authentication credentials, unauthorized HTTP response (401) will be returned with WWW-Authenticate header field.

4.5.3 Entity Body

The Content-Type entity-header field indicates the media type of the entity body. The Content-Type may be designated as “application/xml; charset=’UTF-8’”, “application/octet-stream”, etc.

For configuration information, the Content-Type is usually “application/xml; charset=’UTF-8’”. For example,

HTTP Request Message:

```
GET /ISAPI/System/status HTTP/1.1
...
```

HTTP Response Message:

```
HTTP/1.1 200 OK
...

Content-Type: application/xml; charset="UTF-8"
...
<?xml version="1.0" encoding="UTF-8"?>
<DeviceStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
...
</DeviceStatus>
```

For data (i.e. firmware, configuration file, etc.), the Content-Type may be “application/octet-stream”. For example,

HTTP Request Message:

```
PUT /ISAPI/System/configurationData HTTP/1.1
...

Content-Type: application/octet-stream
...
[proprietary configuration file data content ]
```

HTTP Response Message:

```
HTTP/1.1 200 OK
...
```

```
Content-Type: application/xml; charset="UTF-8"
...
<?xml version="1.0" encoding="UTF-8"?>
<ResponseStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
...
</ResponseStatus>
```

4.5.4 Operations

Different resources will specify different operation.

- The “set device configuration” resources use PUT operation. If there is an XML block parameter for the request, the inbound XML format is defined according to a resource-special XML schema. Request status will be returned by the XML response information of the device, and can be used for indicating the PUT operation status. The responded XML format is defined by “XML Response Schema” (please refer to section 4.5.5 for detail description). After the device configuration is updated successfully, it will return an XML response with status code “OK”; while another status code will be used for indicating unsuccessful operations. In either case, the device only responses after it is ready to continue normal operation, i.e. accepting streaming request, receiving configuration commands, etc.
- The “get device configuration” resources use GET operation. After a successful GET operation, the result will be returned in XML format according to the resource description. For an unsuccessful request (i.e. users is not authenticated), the result will be returned in XML format according to “XML Response Schema”.
- Resources to create device configurations information will use the POST operation. If there is an XML block parameter for the request, the inbound XML format is defined according to a resource-special XML schema. The request status will be indicated by the XML response information returned from the device, and can be used to indicate the status of the POST operation. This XML format is defined according to “XML Response Schema” (see section 4.5.5 for details). After successfully creating the data, the device returns an XML response with status code “OK”. A separate status code is used for unsuccessful operations.
- Resources to delete device configurations information will use the Delete operation. If successful, the result will be returned an XML response with status code “OK”. A separate status code is used for unsuccessful operations. This XML format is defined according to “XML Response Schema” (see section 4.5.5 for details).
- Data uploading resources (i.e. firmware upgrade, import configuration, etc.) will use PUT operation. The content of the data will be stored in the body of the HTTP request. If successful, the result will be returned an XML response with status code “OK”. A separate status code is used for unsuccessful operations. This XML format is defined according to “XML Response Schema” (see section 4.5.5 for details).
- Data receiving resources (i.e. export configuration file) use GET operation. If successful,

the result will be returned the data according to the resource description. An XML block is used for unsuccessful operations. This XML format is defined according to “XML Response Schema” (see section 4.5.5 for details).

- For Standard Resources, GET operation will be used. For more detailed description see Section 6.

If there is an XML block for the HTTP request or response, the Content-Type and Content-Length will be set in the headers of the HTTP message.

4.5.5 Error Handling

As with any other protocol, errors may occur during communications, protocol or message processing, and the specification classifies error handling into categories below:

- Protocol Errors, which are result of an incorrectly formed protocol message. Protocol Errors may contain header value or be received in an not expected or experience a socket timeout. To indicate and interpret protocol error, HTTP protocol has defined a set of standard status codes [e.g., 1xx, 2xx, 3xx, 4xx, 5xx]. According to this specification, the IP devices will use appropriate HTTP protocol defined status codes for error reporting and when received handle accordingly.
- Application Errors, which are generated as a result of REST operations errors. All such application errors must be reported and handled through HTTP messages. The following table indicates the mapping relationship between HTTP status codes and REST operations, and also the information contained in response header and bodies.

Table 3

HTTP Status Codes	REST Meaning	GET	PUT	POST	DELETE
200	“OK”-The request has succeeded. Header Notes: None Body Notes: The requested resource will be returned in the body.	√	√		√
201	“Created”- The request has created a new resource. Header Notes: The Location header contains the URI of the newly created resource. Body Notes: The response returns an entity describing the newly created resource.		√	√	
204	“No Content” – The request succeeded, but there is no data to return.		√		√

HTTP Status Codes	REST Meaning	GET	PUT	POST	DELETE
	Header Notes: None Body Notes: No body is allowed.				
301	“Moved Permanently” – The requested resource has moved permanently. Header Notes: The Location Header contains the URI of the new location. Body Notes: The body may contain the new resource location.	√			
302	“Found” – The requested resource should be accessed through this location, but the resource actually lives at another location. This is typically used to set up an alias. Header Notes: The Location header contains the URI of the resource. Body Notes: The body may contain the new resource location.	√			
400	“Bad Request” – The request was badly formed. This is commonly used for creating or updating a resource, but the data was incomplete or incorrect. Header Notes: The Reason-Phrase sent with the HTTP status header may contain information on the error. Body Notes: The response may contain more information of the underlying error that occurred in addition to the Reason-Phrase.		√	√	
401	“Unauthorized” – The request requires user authentication to access this resource. If the request contains invalid authentication data, this code is sent. Header Notes: At least one authentication mechanism must be specified in the WWW-Authenticate header. The	√	√	√	√

HTTP Status Codes	REST Meaning	GET	PUT	POST	DELETE
	Reason-Phrase sent with the HTTP status header may contain information on the error. Body Notes: The response may contain more information of the underlying error that occurred in addition to the Reason-Phrase.				
403	“Forbidden” – The request is not allowed because the server is refusing to fill the request. A common reason for this is that the device does not support the requested functionality. Header Notes: The Reason-Phrase sent with the HTTP status header may contain information on the error. Body Notes: The response may contain more information of the underlying error that occurred in addition to the Reason-Phrase.	√	√	√	√
404	“Not Found” – The requested resource does not exist. Header Notes: None Body Notes: None	√	√	√	√
405	“Method Not Allowed” – The request used an HTTP method that is not supported for the resource because the specification does not allow this method. If the device does support the functionality but it is a valid operation (that has been defined in this specification), then 403 is returned. Header Notes: The Allow header lists the supported HTTP methods for this resource. Body Notes: None	√	√	√	√
500	“Internal Server Error” - An internal server error has occurred. Header Notes: None	√	√	√	√

HTTP Status Codes	REST Meaning	GET	PUT	POST	DELETE
	Body Notes: None				
503	<p>“Service Unavailable” – The HTTP Server is up, but the REST service is not available. Typically this is caused by too many client requests.</p> <p>Header Notes: The Retry-After header suggests to the client when to try resubmitting the request.</p> <p>Body Notes: None</p>	√	√	√	√

Responses to many resources calls contain data in XML format. XML Response Schema is defined in Annex. XML Response Schema consists of the following sections:

- requestURI - the URI of the corresponding HTTP request message
- statusCode - indicating the status of the REST operations.

Table 4

statusCode	Description
1	“OK” - indicate a successful operation is done (remark: if the request contains some parameters that are not supported, the device will ignore those parameters and return OK as statusCode)
2	“Device Busy” - for a command which cannot be processed at that time (i.e. if the device receives a reboot command during upgrading process)
3	“Device Error” - if the device can not perform the request for a hardware error. An error message in statusString format to indicate operation failure
4	“Invalid Operation” - either if the operation is not supported by the device, or if the user has not passed the authentication, or if the user does not have enough privilege for this operation
5	“Invalid XML Format” - if the XML format is not recognized by the system. There will be statusString returned to represent different errors
6	“Invalid XML Content” - an incomplete message or a message containing an out-of-range parameter. Relative statusString will be return.
7	“Reboot Required” - If a reboot is required before the operation taking effect

- statusString – error type for the not completed operation.
- id – Return the ID created by the device in POST operation
- subStatusCode – detail string indicating the reason the command was not completed. Table 5 contains general subStatusCode, In addition, Each resource may have some special subStatusCode, Each subStatusCode reference resource description.

Table 5

statusCode	subStatusCode	Description
1	ok	indicate a successful operation is done

statusCode	subStatusCode	Description
	riskPassword	There is a risk of the password
2	noMemory	Device doesn't have enough memory
	serviceUnavailable	service unavailable
	upgrading	upgrading
	deviceBusy	Device busy or no response
	reConnectIpc	Reconnect the video server
3	deviceError	Device hardware error
	badFlash	Operate flash error
	28181Uninitialized	28181 configuration uninitialized
4	notSupport	The device doesn't support this resource
	lowPrivilege	Not have enough privilege for this operation
	badAuthorization	The user has not passed the authentication
	methodNotAllowed	http method is not allowed
	notSetHdiskRedund	can't set redundancy attribute for hdd disk(system exists more than one non-operate hdd disk,and the attribution of a hdd disk is WR)
	invalidOperation	Invalid operation
	notActivated	The device is not activated
	hasActivated	The device has activated
5	badXmlFormat	Wrong XML format
6	badParameters	Parameters error
	badHostAddress	Wrong Host Address
	badXmlContent	Wrong XMLcontent
	badIPv4Address	Wrong IPv4 address
	badIPv6Address	Wrong IPv6 address
	conflictIPv4Address	IPV4 address conflict
	conflictIPv6Address	IPV6 address conflict
	badDomainName	Wrong Domain
	connectSreverFail	Failed to connect with Server
	conflictDomainName	Domain conflict
	badPort	Port conflict
	portError	Port error
	importErrorData	Failed to import data
	badNetMask	Wrong subnet mask
	badVersion	Version mismatching
	badDevType	Device type mismatching
	badLanguage	Language mismatching
	incorrentUserNameOr Password	The user name or the password is incorrect.
	invalidStoragePoolOfCl oudServer	The storage pool of the cloud server is invalid, no configured storage pool or the storage pool ID is incorrect.

statusCode	subStatusCode	Description
	noFreeSpaceOfStoragePool	No free space for the storage pool.
	riskPassword	There is a risk of the password
	fileFormatError	Incorrect file format
	fileContentError	Incorrect file Content
	UnSupportCapture	Note: When H.264+ is enabled, capture of 4096*2160 or 3072*2048 resolution is not supported. To use the capture function, you can turn off H.264+ or select other resolution.
7	rebootRequired	A reboot is required before the operation taking effect

Note:

1. When live view at the resolution of 2560*2048 or 3072*1728, if capture is needed, please set the frame rate as lower than 30 fps.
2. When H.264+ is enabled, captures of 4096*2160, 3072*2048, 3072*1728, and 2560*2048 resolution are not supported. To use the capture function, you can turn off H.264+ or select other resolution.

4.6 Namespaces

The namespace xmlns="http://www.isapi.org/ver20/XMLSchema" is used in this specification.

The following namespaces are referenced by this specification:

- xmlns:xs="http://www.w3.org/2001/XMLSchema"
- xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
- xmlns:xlink="http://www.w3.org/1999/xlink"

4.7 Security

User-based access control is adopted in this specification. Security policy configuration in this specification based on three different user levels.

- Administrator – the privilege can access all supported resources on IP device.
- Operator – the privilege can access some general-level and higher-level resources. See the Resource Description of each resource for details.
- Viewer – the privilege can only access some general-level resources. See the Resource Description of each resource for details.

In order to access all supported resources, one account with Administrator privilege level must be active at all times. A default user account "admin" is provided by all IP devices. It has an Administrator user level, and must not be deleted. Its default password is "12345".

5 Device discovery

The IP devices support Universal Plug and Play (UPnP) technology to discovery/locate themselves. A UPnP compatible device will automatically announce its network address, supported devices and services types when connected to a network, and therefore becoming “plug-and-play” by allowing clients recognize those information and begin using this device immediately.

The UPnP architecture supports zero-configuration networking, and the device can dynamically join a network, obtain IP address, announce its name, convey its capabilities upon request, and gets the on-line status and capabilities of other devices. DHCP and DNS servers are optional and are only used if they are available on the network. Devices can leave the network automatically without leaving any unwanted status information behind. UPnP was published as a 73-part International Standard, ISO/IEC 29341, in December, 2008 [6][7][8].

The foundation for UPnP networking is IP addressing. When a device is connected to the network for the first time, its Dynamic Host Configuration Protocol (DHCP) client will search for a DHCP server. If the device successfully get its domain name via DNS server or DNS forwarding, then it should use this domain name for the following network operations; if the network is unmanaged and no DHCP server is found, the device must assign an address for itself, which is known as “AutoIP” of the UPnP Device Architecture [9][10], and use this IP address for the following network operations.

Once given an IP address, the Discovery process will be executed in UPnP networking. The UPnP discovery protocol is also known as Simple Service Discovery Protocol (SSDP). When a device is added to the network, SSDP allow that device to announce its services to the control points on the network. Similarly, when a control point is added to the network, SSDP allows that control point to search for relative devices on the network. During the above searching or announcing process, a discovery message which contains essential device specifics or one of its services will be transferred, for example, device type, identifier, and a pointer to more detailed information.

After a control point has discovered a device, the control point still needs more operations to request more information about the device or to interact with it. An HTTP GET request for mandatory index Standard Resource will return a list of the resources supported by the device. Remark: the index resource will only return the first level resources of a node, while the indexr Standard Resource will return a complete folder list in tree structure with the current resource as root folder.

6 Resource Description

6.1 Resource Description Outline

Each resource in this specification is defined using the following format.

<i>Resource_URI</i>		<i>Type</i>	<i>Version</i>
<i>Operation_Name</i>			
Description	<i>Description of the operation.</i>		
Query	<i>Indicates the name/value pairs (p1, p2, p3,...,pn) for the resource.</i>		
Inbound Data	<i>Indicates inbound data for the resources.</i>		
Success Return	<i>the Type (if present) and the name of XML Data Block</i>		
Error Status Code	<i>Special fault code, optional</i>		
<i>Notes: describes any special processing rules for the resource.</i>			

Type refers to “Standard Resource”, “Service” and “General Resource”.

Version is used to determine the version of the protocol. The version number shall be set to “1.0” in this specification.

Operation_Name refers to “GET”, “PUT”, “POST” and “DELETE”.

Inbound Data includes three types as follows:

- NONE –no input data
- DataBlock – the name of an XML Data Block. Datablocks used here must be defined according to the specification.
- Mime type – mime type for the input data in the HTTP payload. Remark: “application/xml” is not a valid mime type.

If a device does not support particular XML tags or blocks, then it may not be supported by the resource operations.

Generally, if a field is not provided in the inbound XML, then its current values shall not be modified in the device’s repository.

If a required field did not exist in the device’s repository, then it must be provided in the applicable resource operations.

Success Return and Error Return detailed description see Section 4.5.5.

6.2 Built-in Types

Table 6

Type	Description
BaudRate	A positive numerical value indicating the data transmission rate in symbols per second. Value is >=0.

	Example: 9600
Color	RGB triplet in hexadecimal format (3 bytes) without the preceding "0x". Example: "FF00FF"
Coordinate	A positive numerical value in pixels. A coordinate pair of 0,0 (x,y) indicates the bottom-left corner of the video image. Value is >=0. Maximum value is dependent on video resolution.
FPS	Frame rate multiplied by 100. Example: 2500 [PAL]
IPv4 Address	Notation is ISAPI.ISAPI.ISAPI.ISAPI Example: 3.137.217.220
MAC	MAC Address Notation is aa:bb:cc:dd:ee:ff with 6 hex bytes.

6.3 Annotation

The XML Data Blocks described in this document contains annotations for the field's properties. Please refer to the XML schema definitions for detail description.

The following annotation content is inserted into the comments to describe the data carried in the field:

Table 6

Annotation	Description
req	Required field.
Opt	Optional field. For data uploaded to the device, if the field is present but the device does not support it, it should be ignored.
Dep	This field is required depending on the value of another field.
Ro	Read-only. For XML data that is both read and written to the device, this field is only present in XML returned from the device. If this field is present in XML uploaded to the device, it should be ignored.
Wo	Write-only. This field is only present in XML that can be uploaded to the device. This field should never be present in data returned from the device. [This is used for uploading passwords].
Xs:<type>	A type defined in XML Schema Part 2: Datatypes Second Edition, see http://www.w3.org/TR/xmlschema-2

Remark: optional XML structures may contain required fields for the operation, which mean that even if the entire XML block is optional, some of its contained fields may still be necessary if required.

7 Standard Resources

This section describes the standard resources.

Standard Resources do not contain themselves.

The requestURIs “/index”, “/description” are required.

7.1 index

index		Standard	Resource	v2.0
GET				
Description	Enumerate child resources of a resource.			
Query	None			
Inbound Data	None			
Success Return	<ResourceList>			
Notes: Returns a non-recursive resource listing of all child resources.				

7.2 indexr

indexr		Standard	Resource	v2.0
GET				
Description	Enumerate child resources of a resource.			
Query	None			
Inbound Data	None			
Success Return	<ResourceList>			
Notes: Returns a recursive resource listing of all child resources.				

7.3 description

description		Standard	Resource	v2.0
GET				
Description	Describe the corresponding resource			
Query	None			
Inbound Data	None			
Success Return	<ResourceDescription>			
Notes: <version> set the version of resource. In this specification, its value is “2.0”.				

A version attribute is included in the description. This means resources with different versions

may exist within the same Services. In that case, the version of Services is the version of the contained resource with the lowest version, and all resources in the Services container must be backward compatible. If any resource of a Service container can not maintain backward compatibility with previous versions, a new Services version should be introduced.

7.4 capabilities

capabilities		Standard	Resource	v2.0
GET				
Description	Describe the capabilities of the corresponding resource			
Query	None			
Inbound Data	None			
Success Return	Resource-specified			
Notes:				

For the General Resource, which inbound data is specified as an XML payload, the Standard Resource (capabilities) is provided for video management systems or client applications to query an IP device and understand what XML tags are supported.

“Capabilities” is essentially an XML instance of the corresponding General Resource XML Data Block. “Capabilities” must contain the acceptable values for each attribute.

While XML Schema Document are also required of any XML data defined by this specification and xsd documents are capable of defining the acceptable range of values for any attribute, using a global xsd to define capacities would imply that all devices support the same options for any parameter. By allowing devices to respond to the capabilities request, each device can support different values for any attribute, within the constraints of the schema.

Table 7

Capabilities Attribute	Description	Syntax	Applicable XML Data Types
min	The minimum character length for a string, or the minimum numerical value of a number	Examples: min="0" min="19" min="-74"(numerical only) min="1.6"	All except fixed data types ¹⁾
max	The maximum character length for a string, or the maximum numerical value of a number	Examples: max="4" max="37" max="8192" max="14.61"	All except fixed data types ¹⁾
range	Indicates the possible range of numerical values within the "min" and "max" attributes of	Ranges are listed in numerical order separated by a "," character. A range	All numerical data types

Capabilities Attribute	Description	Syntax	Applicable XML Data Types
	an element. This attribute should only be used if the possible value for an XML element does not include the entire numerical range between “min” and “max” attributes	has the form “x~y” where x is the range floor and y is the range ceiling. Single numbers may also be used. Example: if an XML element supports values 0, 456, 1674 to 2009 and 2012, the syntax would be: range=”0, 456, 1674~2009, 2012”	
opt	All except fixed data types	If all options are supported, the syntax is “all”. Otherwise, supported options are listed separated by a “, ” character. Examples: opt=”all” opt=”1, 4, 6, 7”	All except fixed data types
def	Indicates the default value of the XML element. If the element has not default value, this attribute should not be used	Examples: def=”7416” def=”ace”	All data types
reqReboot	Indicates if configuration of this XML element requires a device reboot before taking effect. If an element does not require a boot, this attribute should not be used	reqReboot=”true”	All data types
dynamic	Indicates if an XML element has dynamic capabilities dependent on other XML configuration. For example, if an element’s data range changes based on another element’s configured value, this attribute must be used. In this case, the element’s	dynamic=”true”	All data types

Capabilities Attribute	Description	Syntax	Applicable XML Data Types
	capability attributes must always reflect the current device configuration		
Size	Indicates the maximum number of entries in an XML List. This attribute is only applicable to XML list elements. This attribute should not be used for any other type of element	Example: If a device supports 16 users the example would be <pre><UserList size="16"> <User> ... </User> </UserList></pre>	Only supported for list elements

- 1) Fixed, pre-defined data types do not need certain capability attributes because their formats/data ranges are already defined.

8 Services and General Resources

8.1 /ISAPI/System

/ISAPI/System	Service v2.0
Notes:	

8.1.1 /ISAPI/System/activate

/ISAPI/System/activate		General Resource	v2.0
PUT			
Description	It is used to activate device		
Query	None		
Inbound Data	<ActivateInfo>		
Success Return	<ResponseStatus>		
Notes:			

ActivateInfo XML Block

```
<ActivateInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <password><!-- req, xs:string --></password>
</ActivateInfo>
```

8.1.2 /ISAPI/System/capabilities

/ISAPI/System/capabilities		General Resource	v2.0
GET			
Description	It is used to get device capability.		
Query	None		
Inbound Data	None		
Success Return	<DeviceCap>		
Notes: Some capabilities that could not be described by statand capability resource will be listed here. <isSupportDst>: Is this device support daylight saving time. isSupportElectronicsEnlarge:is this device support Electronics Enlarge			

DeviceCap XML Block

```
<DeviceCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SysCap> <!-- opt -->
    <isSupportDst> <!-- opt, xs:boolean --> </isSupportDst>
    <NetworkCap/> <!-- opt -->
    <IOCap/> <!-- opt -->
    <SerialCap/> <!-- opt -->
    <VideoCap/> <!-- opt -->
    <AudioCap/> <!-- opt -->
    <isSupportExternalDevice> <!-- opt, xs:boolean --> </isSupportExternalDevice>
  </SysCap>
  <voicetalkNums> <!-- opt, xs:integer --> </voicetalkNums>
  <isSupportSnapshot> <!-- opt, xs:boolean --> </isSupportSnapshot>
  <SecurityCap/> <!-- opt -->
  <EventCap/> <!-- opt -->
  <ImageCap/> <!-- opt -->
  <RacmCap/> <!-- opt -->
  <SmartCap/> <!-- opt -->
  <ThermalCap/> <!-- opt -->
  <WLAAlarmCap/> <!-- opt -->
  <isSupportGIS> <!-- opt, xs:boolean --> </isSupportGIS>
  <isSupportCompass> <!-- opt, xs:boolean --> </isSupportCompass>
  <isSupportRoadInfoOverlays> <!-- opt, xs:boolean --> </isSupportRoadInfoOverlays>
  <isSupportFaceCaptureStatistics> <!--opt, xs:boolean --> </isSupportFaceCaptureStatistics>
  <isSupportExternalDevice> <!-- opt, xs:boolean --> </isSupportExternalDevice>
```

```

<isSupportElectronicsEnlarge><!-- opt, xs:boolean --></isSupportElectronicsEnlarge>
<isSupportCloud> <!-- opt, xs:boolean --> </isSupportCloud>
<isSupportRecordHost/><!--opt, xs:boolean--> </isSupportRecordHost>
</DeviceCap>

```

8.1.3 /ISAPI/System/reboot

/ISAPI/System/reboot				General Resource	v2.0
PUT					
Description	Reboot the device.				
Query	None				
Inbound Data	None				
Success Return	<ResponseStatus>				
Error Status Code	statusCode	subStausCode	description		
	2	upgrading	Device is upgrading		
Notes:					
<ResponseStatus> is returned before the device proceeds to reboot.					

8.1.4 /ISAPI/System/updateFirmware

/ISAPI/System/updateFirmware				General Resource	v2.0
PUT					
Description	Updatethe firmware of the device.				
Query	None				
Inbound Data	Opaque Data				
Success Return	<ResponseStatus>				
Error Status Code	statusCode	subStatusCode	description		
	2	upgrading	device upgrading		
	3	badFlash	Flash error		
	6	badLanguage	Language mismatch		
Notes:					
After successful completion of this API, the <ResponseStatus> XML data is returned, and the device proceeds to reboot.					

8.1.7 /ISAPI/System/deviceInfo

/ISAPI/System/deviceInfo

General Resource v2.0

GET	
Description	It is used to get device information.
Query	None
Inbound Data	None
Success Return	<DeviceInfo>
PUT	
Description	It is used to update device information.
Query	None
Inbound Data	<DeviceInfo>
Success Return	<ResponseStatus>

Notes:

Some fields are read-only and may not be set. If these fields are present in the inbound XML block, they are ignored.
For the <DeviceInfo> uploaded to the device during a PUT operation, all fields are considered optional and any fields that are not present in the inbound XML are not changed on the device. This allows setting of the fields individually without having to load the entire XML block to the device.
<deviceDescription> is a description of the device as defined in RFC1213.
For IPC the <deviceDescription> value is IPCamera;
For IP speed Dome the <deviceDescription> value is IPDome;
For DVR or DVS the <deviceDescription> value is DVRDVS;
<deviceLocation> is the location of the device as defined in RFC1213
<systemContact> is the contact information for the device as defined in RFC1213.

DeviceInfo XML Block

```
<DeviceInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <deviceName>      <!-- req, xs:string -->      </deviceName>
  <deviceId>         <!-- ro, req, xs:string, uuid-->      </deviceId>
  <deviceDescription> <!--opt, xs:string--> </deviceDescription>
  <deviceLocation>   <!--opt, xs:string --> </deviceLocation>
  <systemContact>    <!-- opt, req, xs:string --> </systemContact>
  <model>            <!-- ro, req, xs:string --> </model>
  <serialNumber>     <!-- ro, req, xs:string --> </serialNumber>
  <macAddress>       <!-- ro, req, xs:string; --> </macAddress>
  <firmwareVersion>  <!-- ro, req, xs:string --> </firmwareVersion>
  <firmwareReleasedDate> <!-- ro, opt, xs:string --> </firmwareReleasedDate>
  <bootVersion>      <!-- ro, opt, xs:string --> </bootVersion>
```

```

<bootReleasedDate>    <!-- ro, opt, xs:string -->    </bootReleasedDate>
<hardwareVersion>    <!-- ro, opt, xs:string -->    </hardwareVersion>
<encoderVersion><!-- ro, opt, xs:string> </encoderVersion>
<encoderReleasedDate> <!-- ro, opt, xs:string --> </encoderReleasedDate>
<decoderVersion><!-- ro, opt, xs:string> </decoderVersion>
<decoderReleasedDate> <!-- ro, opt, xs:string --> </decoderReleasedDate>
<deviceType>
    <!--ro, req, xs:string; "IPCamera, IPDome, DVR, HybirdNVR, NVR, DVS, IPZoom"-->
<deviceType>
<telecontrolID><!-- opt, xs:integer; "1-255"> <telecontrolID>
<supportBeep><!--opt, xs:boolean --> </supportBeep>
</DeviceInfo>

```

8.1.8 /ISAPI/System/status

/ISAPI/System/status		General Resource	v2.0
GET			
Description	It is used to get the status information of the device.		
Query	None		
Inbound Data	None		
Success Return	DeviceStatus		
Notes:			

DeviceStatus XML Block

```

<DeviceStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <currentDeviceTime> <!-- opt, xs:datetime --> </currentDeviceTime>
  <deviceUpTime> <!-- opt, xs:integer, seconds --> </deviceUpTime>
  <TemperatureList>
    <!-- opt -->
    <Temperature>
      <tempSensorDescription> <!-- req, xs:string -->    </tempSensorDescription>
      <temperature> <!-- req, xs:float --> </temperature>
    </Temperature>
  </TemperatureList>
  <FanList>
    <!-- opt -->
    <Fan>
      <fanDescription><!-- req, xs:string -->    </fanDescription>

```

```

        <speed>    <!-- req, xs:integer -->    </speed>
    </Fan>
</FanList>
<PressureList>
    <!-- opt -->
    <Pressure>
        <pressureSensorDescription>    <!-- req, xs:string --></pressureSensorDescription>
        <pressure> <!-- req, xs:integer -->    </pressure>
    </Pressure>
</PressureList>
<TamperList>
    <!-- opt -->
    <Tamper>
        <tamperSensorDescription>    <!-- req, xs:string -->    </tamperSensorDescription>
        <tamper>    <!-- req, xs:boolean -->    </tamper>
    </Tamper>
</TamperList>
<CPUList>
    <!-- opt -->
    <CPU>
        <cpuDescription>    <!-- req, xs:string -->    </cpuDescription>
        <cpuUtilization> <!-- req, xs:integer, percentage 0..100 --> </cpuUtilization>
    </CPU>
</CPUList>
<MemoryList>
    <!-- opt -->
    <Memory>
        <memoryDescription>    <!-- req, xs:string -->    </memoryDescription>
        <memoryUsage><!-- req, xs:float, in MB --> </memoryUsage>
        <memoryAvailable> <!-- req, xs:float, in MB--> </memoryAvailable>
    </Memory>
</MemoryList>
    <openFileHandles>    <!-- opt, xs:integer -->    </openFileHandles>
</DeviceStatus>

```

8.1.9 /ISAPI/System/time

GET	
Description	Get the device time information.
Query	None
Inbound Data	None
Success Return	Time
PUT	
Description	Update the device time information.
Query	None
Inbound Data	Time
Success Return	ResponseStatus
Notes: If <timeMode> is present and set to “local”, the <localTime> and <timeZone> fields are required. The <localTime> block sets the device time. If <timeMode> is present and set to “NTP”, only the <timeZone> field is required. The device time is set by synchronizing with NTP.	

Time XML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode>    <!-- req, xs:string, "NTP, manual,timecorrect" -->    </timeMode>
  <localTime>    <!-- req, xs:datetime -->                            </localTime>
  <timeZone>    <!-- req, xs:string, POSIX time zone string -->    </timeZone>
</Time>
```

8.1.10 /ISAPI/System/time/localTime

/ISAPI/System/time/localTime

General Resource v2.0

GET	
Description	It is used to get the device local time information.
Query	None
Inbound Data	None
Success Return	ISO 8601 Date-Time String
PUT	
Description	It is used to update the device local time information.
Query	None
Inbound Data	ISO 8601 Date-Time String
Success Return	ResponseStatus

Notes:

An ISO 8601 Date/Time string is accepted and returned. If the date/time value has a time zone, the time is converted into the device’s local time zone.

If the device time mode is set to “ntp” setting this value has no effect.

Success Return	NTPServerList
PUT	
Description	It is used to update the configuration of NTP servers for the device.
Query	None
Inbound Data	NTPServerList
Success Return	ResponseStatus
POST	
Description	It is used to add the configuration of a NTP server for the device.
Query	None
Inbound Data	NTPServer
Success Return	ResponseStatus
DELETE	
Description	It is used to delete the configuration of NTP servers for the device.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: When the <timeMode> is set to "NTP", the servers in this list are used to synchronize the device's system time. To determine whether it is possible to dynamically create or delete ntp server, check the defined HTTP methods in /ISAPI/System/time/ntpServers/description.	

NTPServerList XML Block

```
<NTPServerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <NTPServer/> <!-- opt -->
</ NTPServerList>
```

8.1.13 /ISAPI/System/time/ntpServers/<ID>

/ISAPI/System/time/ntpServers/ID		General Resource	v2.0
GET			
Description	It is used to get the configuration of a NTP server for the device.		
Query	None		
Inbound Data	None		
Success Return	NTPServer		
PUT			
Description	It is used to update the configuration of a NTP server for the device.		
Query	None		
Inbound Data	NTPServer		
Success Return	ResponseStatus		

DELETE	
Description	It is used to delete the configuration of a NTP server for the device.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the NTP server.	

NTPServer XML Block

```
<NTPServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string; id -->  </id>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname"-->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address>  <!-- dep, xs:string -->  </ipv6Address>
  <portNo>    <!-- opt, xs:integer -->    </portNo>
  <synchronizeInterval> <!--opt, xs:integer, minutes --> </synchronizeInterval>
</NTPServer>
```

8.1.14 /ISAPI/System/time/ntpServers/test

/ISAPI/System/time/ntpServers/test		General Resource	v2.0
GET			
Description	It is used to test the NTP server available or not		
Query	None		
Inbound Data	NTPTestDescription		
Success Return	NTPTestResult		
POST			
Description	It is used to test the NTP server available or not		
Query	None		
Inbound Data	NTPTestDescription		
Success Return	NTPTestResult		
Notes:			

NTPTestDescription XML Block

```
<NTPTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <addressingFormatType>
```

```

    <!-- req, xs:string, "ipaddress,hostname"-->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address> <!-- dep, xs:string -->    </ipv6Address>
  <portNo>    <!-- req, xs:integer -->    </portNo>
</NTPTestDescription>

```

NTPTestResult XML Block

```

<NTPTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string -->.</errorDescription>
</NTPTestResult>

```

8.1.15 /ISAPI/System/Holidays

URI	/ISAPI/System/Holidays			Type	Resource
Function	Access the list of holidays				
Methods	Query String(s)	Inbound Data	Return Result		
GET			<holidayList >		
PUT		<holidayList>	<ResponseStatus>		
Notes					

holidayList XML Block

```

<HolidayList version="2.0" xmlns="http://urn:selfextension:ISAPIext-ver10-xsd">
  <holiday/> <!-- opt -->
</HolidayList>

```

8.1.16 /ISAPI/System/Holidays/<ID>

URI	/ISAPI/System/Holidays/ID/			Type	Resource
Function	Access a holiday.				
Methods	Query String(s)	Inbound Data		Return Result	
GET				<holiday >	

PUT		<holiday>	<ResponseStatus>
Notes	<p><holidayMode> decides whether <holidayDate>,<holidayWeek>or <holidayMonth> is contained.</p> <p><holidayMode>:date: example form May 5th,1900 to June 8th,1900.</p> <p><holidayMode>:week: example form May 1st week to May 2nd week.</p> <p><holidayMode>:month: example form May 1st to May 5th.</p>		

holiday XML Block

```

<holiday version="2.0" xmlns="http://urn:selfextension:ISAPlext-ver10-xsd">
  <id>                                <!-- req, xs:string,id -->                                </id>
  <enabled>                            <!-- req, xs:boolean -->                            </enabled>
  <holidayMode/>    <!-- req, xs:string, "date, weeeek, month" -->    <holidayName>                <!-- req,
xs:string -->    </holidayName>
  <holidayDate>    <!-- dep -->
    <startDate> <!-- req, xs:date --> </startDate>
    <endDate>    <!-- req, xs:date --> </endDate>
  </holidayDate>
  <holidayWeek>    <!-- dep -->
    <startWeek>    <!-- req -->
      <monthOfYear> <!-- req --> </monthOfYear>
      <sequence> <!-- req, xs:integer, 1...5 --> </sequence>
      <dayOfWeek>
        <!-- req, ISO8601 weekday number, 1=Monday" -->
      </dayOfWeek>
    </startWeek>
    <endWeek>    <!-- req -->
      <monthOfYear> <!-- req --> </monthOfYear>
      <sequence> <!-- req, xs:integer, 1...5 --> </sequence>
      <dayOfWeek>
        <!-- req, ISO8601 weekday number, 1=Monday" -->
      </dayOfWeek>
    </endWeek>
  </holidayWeek>
  <holidayMonth>    <!-- dep -->
    <startMonth>    <!-- req -->
      <monthOfYear> <!-- req, xs:integer, "1...12" --> </monthOfYear>
      <dayOfMonth> <!-- req, xs:integer, "1...31" --> </dayOfMonth>
    </startMonth>

```

```

<endMonth>    <!-- req -->
    <monthOfYear> <!-- req, xs:integer, "1...12" --> </monthOfYear>
    <dayOfMonth> <!-- req, xs:integer, "1...31" --> <dayOfMonth>
</endMonth>
</holidayMonth>
</holiday>

```

8.1.17 /ISAPI/System/upgradeStatus

/ISAPI/System/upgradeStatus		General Resource	v2.0
GET			
Description	It is used to get upgrade status of the device.		
Query	None		
Inbound Data	None		
Success Return	upgradeStatus		
Notes:			

upgradeStatus XML Block

```

<upgradeStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <upgrading>    <!-- ro, req, xs:boolean -->    </upgrading>
    <percent>    <!-- ro, req, xs:integer "0-100" --> </percent>
</upgradeStatus>

```

8.1.18 /ISAPI/System/externalDevice

/ISAPI/System/externalDevice		General Resource v2.0
GET		
Description	It is used to get the ExternalDevice's configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	ExternalDevice	
PUT		
Description	It is used to configure the ExternalDevice's configuration of a specified image channel.	
Query	None	
Inbound Data	ExternalDevice	

Success Return	ResponseStatus
Notes:	

ExternalDevice XML Block

```
<ExternalDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SupplementLight/><!--opt, 补光灯配置-->
  <THScreen/><!--opt, 外接屏幕配置-->
</ExternalDevice>
```

8.1.19 /ISAPI/System/externalDevice/capabilities

/ISAPI/System/externalDevice/capabilities		General Resource v2.0
GET		
Description	It is used to get the ExternalDevice's configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	ExternalDevice	

ExternalDevice XML Block

```
<ExternalDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SupplementLight/><!--opt, -->
  <THScreen/><!--opt, 外接屏幕配置-->
</ExternalDevice>
```

8.1.20 /ISAPI/System/externalDevice/supplementLight

/ISAPI/System/externalDevice/supplementLight		General Resource v2.0
GET		
Description	It is used to get the SupplementLight 's configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	SupplementLight	
PUT		
Description	It is used to configure the SupplementLight 's configuration of a specified image channel.	

Query	None
Inbound Data	SupplementLight
Success Return	ResponseStatus
Notes:	

SupplementLight XML Block

```
<SupplementLight version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--opt,xs:boolean--></enabled>
  <mode><!--opt,xs:string, "schedule,auto"--></mode>
  <Schedule> <!--dep, -->
    <TimeRange> <!-- req -->
      <beginTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </beginTime>
      <endTime> <!-- req, xs:time, ISO8601 time hh:mm:ss --> </endTime>
    </TimeRange>
  </Schedule>
  <lowBeamBrightness><!--opt,xs:integer,"0~10" --></lowBeamBrightness>
  <highBeamBrightness><!--opt,xs:integer,"0~10" --></highBeamBrightness>
  <filteringTime><!--opt,xs:integer,"0~120",unit:s--></filteringTime>
</SupplementLight>
```

8.1.21 /ISAPI/System/externalDevice/supplementLight/capabilities

/ISAPI/System/externalDevice/supplementLight/capabilities		General Resource v2. 0
GET		
Description	It is used to get the externalDevice 's configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	SupplementLight	
Notes:		

SupplementLight XML Block

```
<SupplementLight version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--opt,xs:boolean--></enabled>
  <mode opt="schedule,auto"><!--opt,xs:string, --></mode>
  <Schedule> <!--dep, -->
    <TimeRange> <!-- req -->
```



```

    <beginTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </beginTime>
    <endTime> <!-- req, xs:time, ISO8601 time hh:mm:ss --> </endTime>
  </TimeRange>
</Schedule>
<lowBeamBrightness min="" max=""><!--opt,xs:integer,"0~10" --></lowBeamBrightness>
<highBeamBrightness min="" max=""><!--opt,xs:integer,"0~10" --></highBeamBrightness>
<filteringTime><!--opt,xs:integer,"0~120",unit:s--></filteringTime>
</SupplementLight>

```

8.1.22 /ISAPI/System/onlineUpgrade/server

/ISAPI/System/onlineUpgrade/server		General Resource	v2.0
GET			
Description	It is used to get online upgrade server status		
Query	None		
Inbound Data	None		
Success Return	OnlineUpgradeServer		
Notes:			

OnlineUpgradeServer XML Block

```

<OnlineUpgradeServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <connectStatus> <!--ro,req xs:boolean --></connectStatus>
</OnlineUpgradeServer>

```

8.1.23 /ISAPI/System/onlineUpgrade/version

/ISAPI/System/onlineUpgrade/version		General Resource	v2.0
GET			
Description	It is used to get new version information		
Query	check		
Inbound Data	None		
Success Return	OnlineUpgradeVersion		
Notes:			
check:false—the device return the version directly;true—the device get the version from the server, then send to the client			

OnlineUpgradeVersion XML Block

```

<OnlineUpgradeVersion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <newVersionAvailable><!--ro,req,xs:boolean--></newVersionAvailable>

```

```

<newVersion><!--ro,dep,xs:string--></newVersion>
<changeLog><!--ro,dep,xs:string--></changeLog>
</OnlineUpgradeVersion>

```

8.1.24 /ISAPI/System/onlineUpgrade/upgrade

/ISAPI/System/onlineUpgrade/upgrade		General Resource	v2.0
PUT			
Description	It is used to allow device upgrade automatically.		
Query	None		
Inbound Data	None		
Success Return	<ResponseStatus>		
Notes:			

8.1.25 /ISAPI/System/onlineUpgrade/status

/ISAPI/System/onlineUpgrade/status		General Resource	v2.0
GET			
Description	It is used to get online upgrade status of the device.		
Query	None		
Inbound Data	None		
Success Return	OnlineUpgradeStatus		
Notes:			

OnlineUpgradeStatus XML Block

```

<OnlineUpgradeStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <status>    <!-- ro, req, xs:string,"notUpgrade,upgrading,successful,languageMismatch,
  writeFlashError,packageTypeMismatch,packageVersionMismatch,netUnreachable,
  unknownError" -->    </status>
  <percent>    <!-- ro, req, xs:integer "0-100" -->    </percent>
</OnlineUpgradeStatus>

```

8.1.26 /ISAPI/System/firmwareCode

/ISAPI/System/firmwareCode		General Resource	v2.0
GET			
Description	It is used to get firmware code.		
Query	startIndex maxNumber		

Inbound Data	None
Success Return	<FirmwareCodeList>
Notes: Examples: GET /ISAPI/System/firmwareCode?startIndex=1&maxNumber=32	

FirmwareCodeList XML Block

```
<FirmwareCodeList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FirmwareCode>
    <index><!--req, xs:integer--></index>//start from 1
    <code><!-- req, xs:string --></code>
    <version><!--req,xs:string--></version>
  </FirmwareCode>
</FirmwareCodeList>
```

8.1.27 /ISAPI/System/onlineUpgrade/judgeVersion

/ISAPI/System/onlineUpgrade/judgeVersion		General Resource	v2.0
GET			
Description	It is used to check the version is new than the device current is.		
Query	firmwareCode version		
Inbound Data	None		
Success Return	<JudgeVersionResult>		
Notes: Examples: GET /ISAPI/System/onlineUpgrade/judgeVersion?firmwareCode=00001XXXXX&...version=00000001XX XXXX.....//space need convert to “%20”			

JudgeVersionResult XML Block

```
<JudgeVersionResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <recommenUpgrade><!--req,xs:boolean--></recommenUpgrade >
</JudgeVersionResult>
```

8.1.28 /ISAPI/System/onlineUpgrade/capabilities

/ISAPI/System/onlineUpgrade/capabilities		General Resource	v2.0
GET			
Description	It is used to get online Upgrade capabilities.		
Query	None		

Inbound Data	None
Success Return	<OnlineUpgradeCap>
Notes:	

OnlineUpgradeCap XML Block

```
<OnlineUpgradeCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <firmwareNum max=""/><!--req-->
  <firmwareCode max=""/>    <!-- req -->
  <firmwareVersion max=""/>  <!-- req -->
  <firmwareCodeNumOnce max=""/> <!--req--> //max number once
  <upgradePercent min="" max=""/>  <!-- req -->
  <Version>
    <newVersion max=""/><!--req-->
    <changeLog max=""/><!--req-->
  </Version>
  <rebootAfterUpgrade><!-- opt, ro, string "auto,manual"></rebootAfterUpgrade>
</OnlineUpgradeCap>
```

8.1.29 /ISAPI/System/Network/ANRArmingHostIP

/ISAPI/System/Network/ANRArming		General Resource	v2.0
GET			
Description	获取断网续传的主机 IP 地址.		
Query	None		
Inbound Data	None		
Success Return	ANRArmingHostIP		
Notes:			

ANRArmingHostIP XML Block

```
<ANRArmingHostIP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  <portNo><!-- opt, xs:integer --> </portNo>
```

</ANRArmingHostIP>

8.1.30 /ISAPI/System/externalDevice/THScreen

/ISAPI/System/externalDevice/THScreen		General Resource v2.0
GET		
Description	It is used to get the THScreen 's configuration of a specified image channel.	
Query	None	
Inbound Data	None	
Success Return	THScreen	
PUT		
Description	It is used to configure the THScreen 's configuration of a specified image channel.	
Query	None	
Inbound Data	THScreen	
Success Return	ResponseStatus	
Notes:		

THScreen XML Block

```
<THScreen version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--req,xs:boolean--></enabled>
  <normalizedScreenSize> <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <THOSDDisplay><!--dep,-->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <CalibratingCoordinates><!--dep,-->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </CalibratingCoordinates>
  </THOSDDisplay>
  <Timing> <!--dep,-->
    <timing opt="manual,auto"><!--dep,xs:string 依赖于<enabled>节点打开--></timing>
    <interval min="1" max="10080"><!--dep,xs:interge 依赖于 <timing> 节点为
auto--></interval>
  </Timing>
</THScreen>
```

8.1.31 /ISAPI/System/externalDevice/THScreen/capabilities

/ISAPI/System/externalDevice/THScreen/capabilities		General Resource v2.0
GET		
Description	It is used to get the THScreen’s configuration	
Query	None	
Inbound Data	None	
Success Return	THScreen	
Notes:		
<Timing> 表示 自动校时 && 手动校时		

THScreen XML Block

```
<THScreen version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!--req,xs:boolean--></enabled>
  <normalizedScreenSize> <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <THOSDDisplay><!--dep,-->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <CalibratingCoordinates><!--dep,-->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </CalibratingCoordinates>
  </THOSDDisplay>
  <Timing> <!--dep,-->
    <timing opt="manual,auto"><!--dep,xs:string 依赖于<enabled>节点打开--></timing>
    <interval min="1" max="10080"><!--dep,xs:interge 依赖于 <timing> 节点为
auto--></interval>
  </Timing>
</THScreen>
```

8.1.32 /ISAPI/System/externalDevice/THScreen/timing

/ISAPI/System/externalDevice/THScreen/timing	General Resource v2.0
PUT	

Description	It is used to configure the THScreen's timing
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

8.1.33 /ISAPI/System/accessoryCardInfo/capabilities

/ISAPI/System/accessoryCardInfo/capabilities		General Resource	v2.0
GET			
Description	It is used to get accessory Card Info capabilities.		
Query	None		
Inbound Data	None		
Success Return	<AccessoryCardInfo>		
Notes: AccessoryCardTypeName: the string length should not exceed 256.			

AccessoryCardInfo XML Block

```
<AccessoryCardInfo version="2.0" xmlns=" http://www.isapi.org/ver20/XMLSchema ">
  <AccessoryCardTypeName><!--opt,ro,xs:string--></AccessoryCardTypeName>
</AccessoryCardInfo>
```

8.1.34 /ISAPI/System/accessoryCardInfo

/ISAPI/System/accessoryCardInfo		General Resource	v2.0
GET			
Description	It is used to get accessory Card Info.		
Query	None		
Inbound Data	NULL		
Success Return	<AccessoryCardInfo>		
Notes: AccessoryCardTypeName: the string length should not exceed 256.			

AccessoryCardInfo XML Block

```
<AccessoryCardInfo version="2.0" xmlns=" http://www.isapi.org/ver20/XMLSchema ">
  <AccessoryCardTypeName><--opt,ro,xs:string--></AccessoryCardTypeName>
</AccessoryCardInfo>
```

8.2 /ISAPI/System/Network

/ISAPI/System/Network	Service v2.0
Notes: Network configuration.	

8.2.1 /ISAPI/System/Network/capabilities

/ISAPI/System/Network/capabilities		General Resource	v2.0
GET			
Description	It is used to get network capability.		
Query	None		
Inbound Data	None		
Success Return	<NetworkCap>		
Notes:			

NetworkCap XML Block

```
<NetworkCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportWireless> <!-- req, xs:boolean --> <isSupportWireless>
  <isSupportPPPoE> <!-- req, xs:boolean --> <isSupportPPPoE>
  <isSupportBond> <!-- req, xs:boolean --> <isSupportBond>
  <isSupport802_1x> <!-- req, xs:boolean --> </isSupport802_1x>
  <isSupportNtp> <!-- opt, xs:boolean --> </isSupportNtp>
  <isSupportFtp> <!-- opt, xs:boolen --> </isSupportFtp>
  <isSupportUpnp> <!-- opt, xs:boolean --> </isSupportUpnp>
  <isSupportPNP> <!-- opt, xs:boolean --> </isSupportPNP>
  <isSupportDdns> <!-- opt, xs:boolean --> </isSupportDdns>
  <isSupportHttps> <!-- opt, xs:boolean --> </isSupportHttps>
  <SnmpCap><!-- opt -->
    <isSupport> <!-- req, xs:boolean --> </isSupport>
  </SnmpCap>
  <isSupportExtNetCfg> <!-- opt, xs:boolean --> </isSupportExtNetCfg>
  <isSupportIPFilter> <!-- opt, xs:boolean --> </isSupportIPFilter>
  <isSupportEZVIZ> <!-- opt, xs:boolean --> </isSupportEZVIZ>
  <isSupportEhome> <!-- opt, xs:boolean --> </isSupportEhome>
  <isSupportWirelessServer> <!-- opt, xs:boolean --> </isSupportWirelessServer>
  <isSupportWirelessDial><!--opt, xs:boolean --> </isSupportWirelessDial>
  <GB28181Cap> <!--opt -->
    <isSupportGB28181Service> <!-- opt, xs:boolean --> </isSupportGB28181Service>
```



```

</GB28181Cap>
<WPS>
  <NetworkInterfaceList size="2">
    <NetworkInterface>
      <id> <!-- req, xs:string, --> </id>
      <enabled> <!-- req, xs:boolean--> </enabled>
      <isSupportAutoConnect><!-- opt, xs:boolean --></isSupportAutoConnect>
      <isSupportDevicePinCode><!-- opt, xs:boolean --></isSupportDevicePinCode>
      <isSupportDevicePinCodeUpdate><!-- opt, xs:boolean
--></isSupportDevicePinCodeUpdate>
      <ApPinCode>
        <ssid min="" max=""><!-- opt, xs:string --> </ssid>
        <pinCode min="" max=""><!-- opt, xs:string --> </pinCode>
      </ApPinCode>
    </NetworkInterface>
  </NetworkInterfaceList>
</WPS>
</NetworkCap>

```

8.2.2 /ISAPI/System/Network/interfaces

/ISAPI/System/Network/interfaces		General Resource	v2.0
GET			
Description	It is used to get the device network interfaces.		
Query	None		
Inbound Data	None		
Success Return	NetworkInterfaceList		
Notes:			
As hardwired system resources, network interfaces cannot be created or destroyed.			

NetworkInterfaceList XML Block

```

<NetworkInterfaceList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <NetworkInterface/> <!-- opt -->
</NetworkInterfaceList>

```

8.2.3 /ISAPI/System/Network/interfaces/<ID>/capabilities

/ISAPI/System/Network/interfaces/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get interfaces capabilities.		
Query	None		
Inbound Data	None		
Success Return	NetworkInterface		
Notes:			

NetworkInterface XML Block

```
<NetworkInterface version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>      <!-- req, xs:string -->      </id>
  <IPAddress/>  <!-- req -->
  <Wireless/><!-- opt -->
  <Discovery/> <!-- opt -->
  <Link /> <!-- opt -->
  <defaultConnection> <!-- opt, xs:boolean--> </defaultConnection>
  <macAddress min="" max=""> <!--opt, xs:string; --> </macAddress>
</NetworkInterface>
```

8.2.4 /ISAPI/System/Network/interfaces/<ID>

/ISAPI/System/Network/interfaces/ID			General Resource	v2.0
GET				
Description	It is used to get a particular network interface.			
Query	None			
Inbound Data	None			
Success Return	NetworkInterface			
PUT				
Description	It is used to update a particular network interface.			
Query	None			
Inbound Data	NetworkInterface			
Success Return	ResponseStatus			
Error Status Code	statusCode	subStatusCode	Description	
	6	badIPv6Address	error IPv6 address	

	6	conflictIPv6Address	conflictIPv6Address
	6	badNetMask	error subnet mask
	6	conflictIPv4Address	conflictIPv4Address
	6	badIPv4Address	error IPv4 address
Notes: defaultConnection: default network connection, required when device has more than one interface.			

NetworkInterface XML Block

```
<NetworkInterface version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>      <!-- req, xs:string -->      </id>
  <IPAddress/>  <!-- req -->
  <Wireless/> <!-- opt -->
  <Discovery/> <!-- opt -->
  <Link /> <!-- opt -->
  <defaultConnection> <!-- opt, xs:boolean--> </defaultConnection>
  <ActiveMulticast/> <!--opt-->
  <macAddress>  <!--opt, xs:string; --> </macAddress>
</NetworkInterface>
```

ActiveMulticast XML Block

```
<ActiveMulticast>
  <enabled><!--req,xs:boolean--></enabled>
  <streamID opt="main"><!--req,xs:string--></streamID>
  <ipV4Address><!--opt,xs:string--></ipV4Address>
  <ipV6Address><!--opt,xs:string--></ipV6Address>
  <port min="" max=""><!--opt,xs:interger--></port>
</ActiveMulticast>
```

8.2.5 /ISAPI/System/Network/interfaces/<ID>/ipAddress

/ISAPI/System/Network/interfaces/ID/ipAddress		General Resource	v2.0
GET			
Description	It is used to get the ip address of a particular network interface.		
Query	None		
Inbound Data	None		
Success Return	IPAddress		
PUT			
Description	It is used to update the ip address of a particular network interface.		
Query	None		
Inbound Data	IPAddress		

Success Return	ResponseStatus		
Error Status Code	statusCode	subStatusCode	Description
	6	badIPv6Address	error IPv6 address
	6	conflictIPv6Address	conflictIPv6Address
	6	badNetMask	error subnet mask
	6	conflictIPv4Address	conflictIPv4Address
	6	badIPv4Address	error IPv4 address

Notes:

If <addressingType> is dynamic, fields below it need not be provided.

If <addressingType> is dynamic, a DHCP client is used for the device.

If <addressingType> is static the device IP address is configured manually and the gateway and DNS fields are optional.

If <addressingType> refers to APIPA, the device IP address is automatically configured without DHCP. In this case the gateway and DNS fields are optional.

Use of <ipAddress> or <ipv6Address> in fields is dictated by the <ipVersion> field. If <ipVersion> is "v4" the <ipAddress> fields are used; if <ipVersion> is "v6" the <ipv6Address> fields are used. If <ipVersion> is "dual", both <ipAddress> and <ipv6Address> fields may be used.

<subnetMask> notation is "ISAPI.ISAPI.ISAPI.ISAPI".

<IPv6Address> is "ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx:ISAPIx" using CIDR notation.

IPAddress XML Block

```
<IPAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipVersion> <!-- req, xs:string, "v4,v6,dual" --></ipVersion>
  <addressingType> <!-- req, xs:string, "static,dynamic,apipa" --> </addressingType>
  <ipAddress><!-- dep, xs:string --> </ipAddress>
  <subnetMask> <!-- dep, xs:string, subnet mask for IPv4 address --> </subnetMask>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <bitMask> <!-- dep, xs:integer, bitmask IPv6 address --> </bitMask>
  <DefaultGateway> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  </DefaultGateway>
  <PrimaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  </PrimaryDNS>
  <SecondaryDNS><!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  </SecondaryDNS>
  <Ipv6Mode> <!-- opt -->
  <ipV6AddressingType>
```

```

    <!-- dep, xs:string,"ra,manual,dhcp">
</ipV6AddressingType>
<ipv6AddressList>
  <v6Address>
    <id> <!-- dep, xs:string;id --> </id>
    <type> <!-- dep, xs:string,"ra,manual,dhcp"> </type>
    <address> <!-- dep, xs:string --> </address>
    <bitMask><!-- dep, xs:integer --> </bitMask>
  </v6Address>
</ipv6AddressList>
</Ipv6Mode>
</IPAddress>

```

8.2.6 /ISAPI/System/Network/interfaces/<ID>/wireless/capabilities

/ISAPI/System/Network/interfaces/ID/wireless/capabilities		General Resource	v2.0
es			
GET			
Description	It is used to get the wireless settings of a particular network interface.		
Query	None		
Inbound Data	None		
Success Return	Wireless		
PUT			
Description	It is used to update the wireless settings of a particular network interface.		
Query	None		
Inbound Data	Wireless		
Success Return	ResponseStatus		
Notes:			

Wireless XML Block

```

<Wireless version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <wirelessNetworkMode opt="infrastructure,adhoc"><!-- opt, xs:string
--></wirelessNetworkMode>
  <channel opt="1,2,3,4,5,6,7,8,9,10,11,12,13,14,auto"> <!-- opt, xs:string-->
</channel>
  <ssid min="" max=""> <!-- opt, xs:string --> </ssid>
  <wmmEnabled> <!-- opt, xs:boolean --> </wmmEnabled>
  <WirelessSecurity> <!-- opt -->
  <securityMode opt="disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,

```

```

WPA-enterprise,WPA2-enterprise"><!-- opt, xs:string,--></securityMode>
  <WEP>
    <!-- dep, depends on <securityMode> -->
    <authenticationType          opt          =          "open,sharedkey,auto"><!--          req,
xs:string--></authenticationType>
    <defaultTransmitKeyIndex      min=""       max=""><!--          req,          xs:integer          -->
</defaultTransmitKeyIndex>
    <wepKeyLength opt=" 64,128"><!-- opt, xs:integer --> </wepKeyLength>
    <EncryptionKeyList>
      <encryptionKey>
        <!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
      </encryptionKey>
    </EncryptionKeyList>
  </WEP>
  <WPA>
    <!-- dep, depends on <securityMode> -->
    <algorithmType opt="TKIP,AES,TKIP/AES"> <!-- req, xs:string,--> </algorithmType>
    <sharedKey> <!-- req, xs:string, pre-shared key used in WPA --> </sharedKey>
    <wpaKeyLength min="8" max="64"> <!-- req, xs: integer"--> </wpaKeyLength>
  </WPA>
  <support64bitKey              opt="WPA-personal,              WPA2-personal"/><!--opt,
xs:string,--></support64bitKey>
</WirelessSecurity>
</Wireless>

```

8.2.7 /ISAPI/System/Network/interfaces/<ID>/wireless

/ISAPI/System/Network/interfaces/ID/wireless		General Resource	v2.0
GET			
Description	It is used to get the wireless settings of a particular network interface.		
Query	None		
Inbound Data	None		
Success Return	Wireless		
PUT			
Description	It is used to update the wireless settings of a particular network interface.		
Query	None		
Inbound Data	Wireless		
Success Return	ResponseStatus		
Notes:			

Wireless XML Block

```

<Wireless version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <wirelessNetworkMode>
    <!-- opt, xs:string, "infrastructure,adhoc" -->
  </wirelessNetworkMode>
  <channel>    <!-- opt, xs:string, "1-14,auto" -->    </channel>
  <ssid>    <!-- opt, xs:string -->    </ssid>
  <wmmEnabled>    <!-- opt, xs:boolean -->    </wmmEnabled>
  <WirelessSecurity> <!-- opt -->
    <securityMode>
      <!-- opt, xs:string,
        "disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
        WPA-enterprise,WPA2-enterprise" -->
    </securityMode>
    <WEP>
      <!-- dep, depends on <securityMode> -->
      <authenticationType>
        <!-- req, xs:string, "open,sharedkey,auto" -->
      </authenticationType>
      <defaultTransmitKeyIndex>
        <!-- req, xs:integer -->
      </defaultTransmitKeyIndex>
      <wepKeyLength>    <!-- opt, xs:integer "64,128" -->    </wepKeyLength>
      <EncryptionKeyList>
        <encryptionKey>
          <!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
        </encryptionKey>
      </EncryptionKeyList>
    </WEP>
    <WPA>
      <!-- dep, depends on <securityMode> -->
      <algorithmType>    <!-- req, xs:string, "TKIP,AES,TKIP/AES" -->    </algorithmType>
      <sharedKey>    <!-- req, xs:string, pre-shared key used in WPA -->    </sharedKey>
      <wpaKeyLength> <!-- req, xs: integer, "8-63"-->    </wpaKeyLength>
    </WPA>
  </WirelessSecurity>
</Wireless>

```

8.2.8 /ISAPI/System/Network/interfaces/<ID>/wireless/ accessPointList

/ISAPI/System/Network/interfaces/ID/wireless/accessPointList		General Resource v2.0
GET		
Description	It is used to get the valid access points on the wireless interface.	
Query	None	
Inbound Data	None	
Success Return	accessPointList	
Notes:		

accessPointList XML Block

```
<accessPointList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessPoint/>
</accessPointList>
```

8.2.9 /ISAPI/System/Network/interfaces/<ID>/wireless/ accessPointList/<ID>

/ISAPI/System/Network/interfaces/ID/wireless/accessPointList/ID		General Resource v2.0
GET		
Description	It is used to get a particular access point.	
Query	None	
Inbound Data	None	
Success Return	accessPoint	
Notes:		

accessPoint XML Block

```
<accessPoint version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <networkMode>
    <!-- opt, xs:string, "infrastructure,adhoc" -->
  </networkMode>
  <channel> <!-- opt, xs:string, "1-14,auto" --> </channel>
  <ssid> <!-- req, xs:string --> </ssid>
  <speed> <!-- opt, xs:Integer, in Mbps--></speed>
```



```

<signalStrength><!-- opt, xs:Integer,"0-100">< /signalStrength>
<securityMode>
  <!-- req, xs:string, "disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,
    WPA-enterprise,WPA2-enterprise" -->
</securityMode>
<connected><!--opt,xs:boolean, --></connected>
</accessPoint>

```

8.2.10 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList

/ISAPI/System/Network/interfaces/ID/wirelessServer/accessDeviceList		General Resource v2.0
GET		
Description	Get access device list	
Query	none	
Inbound Data	none	
Success Return	accessDeviceList	
注：		

accessDeviceList XML Block

```

<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice/>
</accessDeviceList

```

8.2.11 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/<ID>

/ISAPI/System/Network/interfaces/ID/wireless/accessDeviceList/ID		General Resource v2.0
GET		
Description	Get access device list by ID	
Query	none	
Inbound Data	none	
Success Return	accessDevice	
注:		

accessDevice XML Block

```

<accessDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <MACAddress> <!--opt, xs:string--> </MACAddress>
  <ipV4Address> <!-- dep, xs:string --> </ipV4Address>
  <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
</accessDevice>

```

8.2.12 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/capabilities

/ISAPI/System/Network/interfaces/<ID>/wireless/accessDeviceList/capabilities		General Resource	v2.0
GET			
Description	It is used to get accessDeviceList configuration capability.		
Query	None		
Inbound Data	None		
Success Return	accessDeviceList		
Notes:			

accessDeviceList XML Block

```

<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice size="4">
    <id> <!-- req, xs:integer--> </id>
    <MACAddress> <!--opt, xs:string--> </MACAddress>
    <ipV4Address> <!-- opt, xs:string --> </ipV4Address>
    <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
  </accessDevice>
</accessDeviceList>

```

8.2.13 /ISAPI/System/Network/interfaces/<ID>/discovery

/ISAPI/System/Network/interfaces/<ID>/discovery		General Resource	v2.0
GET			
Description	It is used to get the discovery settings of a particular network interface.		
Query	None		
Inbound Data	None		
Success Return	Discovery		

PUT	
Description	It is used to update the discovery settings of a particular network interface.
Query	None
Inbound Data	Discovery
Success Return	ResponseStatus
Notes:	

Discovery XML Block

```
<Discovery version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <UPnP>      <!-- req -->
    <enabled>   <!-- req, xs:boolean -->  </enabled>
  </UPnP>
  <Zeroconf>   <!-- opt -->
    <enabled>   <!-- req, xs:boolean -->  </enabled>
  </Zeroconf>
</Discovery>
```

8.2.14 /ISAPI/System/Network/interfaces/<ID>/Link

/ISAPI/System/Network/interfaces/ID/link		General Resource	v2.0
GET			
Description	It is used to get the link layer settings of a particular network interface.		
Query	None		
Inbound Data	None		
Success Return	Link		
PUT			
Description	It is used to update the link layer settings of a particular network interface.		
Query	None		
Inbound Data	Link		
Success Return	ResponseStatus		
Notes:			

Link XML Block

```
<Link xmlns="http://www.isapi.org/ver20/XMLSchema">
  <MACAddress> <!-- req, xs:string --> </MACAddress>
  <autoNegotiation> <!-- req, xs:boolean --> </autoNegotiation>
  <speed> <!-- req, xs:integer, "10, 100, 1000" --> </speed>
  <duplex> <!-- req, xs:string, "half, full" --> </duplex>
  <MTU> <!-- req, xs:integer --> </MTU>
</Link>
```

8.2.15 /ISAPI/System/Network/ANRArmingHost

/ISAPI/System/Network/ANRArmingHost		General Resource	v2.0
GET			
Description	Get the ANR arming host info		
Query	None		
Inbound Data	None		
Success Return	ANRArmingHostList		
Notes:			

ANRArmingHost XML Block

```
<ANRArmingHostList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ANRArmingHost>
    <ipAddress><!-- opt, xs:string --></ipAddress>
    <ipv6Address><!-- opt, xs:string --></ipv6Address>
    <portNo><!-- sopt, xs:integer --></portNo>
    <ANRArmType><!-- opt, xs: string: "SDK, Ehome" ---></ANRArmType>
  </ANRArmingHost>
</ANRArmingHostList>
```

8.2.16 Examples

Example: Getting the Network Settings

```
GET /ISAPI/System/Network/interfaces HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<NetworkInterfaceList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <NetworkInterface>
    <id>1</id>
    <IPAddress>
      <ipVersion>v4</ipVersion>
      <addressingType>static</addressingType>
      <ipAddress>172.6.64.7</ipAddress>
      <subnetMask>255.255.255.0</subnetMask>
      <DefaultGateway>
        <ipAddress>172.6.64.1</ipAddress>
```

```

    </DefaultGateway>
    <PrimaryDNS>
      <ipAddress>192.0.0.200</ipAddress>
    </PrimaryDNS>
  </IPAddress>
  <Discovery>
    <UPnP>
      <enabled>true</enabled>
    </UPnP>
    <Zeroconf>
      <enabled>true</enabled>
    </Zeroconf>
  </Discovery>
  <Link>
    <MACAddress> 00:40:48:4C:7F:F2</MACAddress>
    <autoNegotiation>true</autoNegotiation>
    <speed>1000</speed>
    <duplex>full</duplex>
    <MTU>1500</MTU>
  </Link>
</NetworkInterface>
</NetworkInterfaceList>

```

Example: Setting the IP Address

```

PUT /ISAPI/System/Network/interfaces/1/ipAddress HTTP/1.1
...
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<IPAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipVersion>v4</ipVersion>
  <addressingType>static</addressingType>
  <ipAddress>172.6.64.16</ipAddress>
  <subnetMask>255.255.255.0</subnetMask>
  <DefaultGateway>
    <ipAddress>172.6.64.1</ipAddress>
  </DefaultGateway>
  <PrimaryDNS>
    <ipAddress>192.0.0.200</ipAddress>
  </PrimaryDNS>
</IPAddress>

```

```

HTTP/1.1 200 OK
...
Content-Type: application/xml; charset="UTF-8"
Content-Length:xxx

<?xml version="1.0" encoding="UTF-8"?>
<ResponseStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <requestURL>/Network/interfaces/1/ipAddress</requestURL>
  <statusCode>1</statusCode>
  <statusString>OK</statusString>
</ResponseStatus>

```

8.2.17 /ISAPI/System/Network/interfaces/<ID>/WPS

/ISAPI/System/Network/interfaces/ID/WPS		General Resource	v2.0
GET			
Description	It is used to access WPS configuratioin		
Query	None		
Inbound Data	None		
Success Return	WPS		
PUT			
Description	It is used to access WPS configuratioin		
Query	None		
Inbound Data	WPS		
Success Return	ResponseStatus		
Notes:			

WPSXML Block

```

<WPS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enable> <!-- req, xs:boolean--> </enable>
</WPS>

```

8.2.18 /ISAPI/System/Network/interfaces/ID/WPS/Auto Connect

/ISAPI/System/Network/interfaces/ID/WPS/AutoConnect		General Resource	v2.0
PUT			

Description	It is used to WPS auto connection mode
Query	None
Inbound Data	WPS
Success Return	ResponseStatus
Notes:	

8.2.19 /ISAPI/System/Network/interfaces/ID/WPS/devicePinCode

/ISAPI/System/Network/interfaces/ID/WPS/devicePinCode		General Resource	v2.0
e			
GET			
Description	It is used to get WPS device PIN code		
Query	None		
Inbound Data	None		
Success Return	PIN code string		
Notes:			

8.2.20 /ISAPI/System/Network/interfaces/ID/WPS/devicePinCodeUpdate

/ISAPI/System/Network/interfaces/ID/WPS/devicePinCodeUpdate		General Resource	v2.0
GET			
Description	It is used to generate a new device PIN code		
Query	None		
Inbound Data	None		
Success Return	PIN code string		
Notes:			

8.2.21 /ISAPI/System/Network/interfaces/ID/WPS/ApiPinCode

/ISAPI/System/Network/interfaces/ID/WPS/ApiPinCode		General Resource	v2.0
GET			

Description	It is used to access WPS configuratioin
Query	None
Inbound Data	None
Success Return	WpsApPincode
PUT	
Description	It is used to access WPS configuratioin
Query	None
Inbound Data	WpsApPincode
Success Return	ResponseStatus
Notes:	

WpsApPincodeXML Block

```
<WpsApPincode version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ssid> <!-- req, xs:string --> </ssid>
  <pinCode> <!-- req, xs:string --> </pinCode>
</WpsApPincode>
```

8.2.22 /ISAPI/System/Network/interfaces/ID/ieee802.1

X

/ISAPI/System/Network/interfaces/ID/ieee802.1x		General Resource	v2.0			
GET						
Description	It is used to access IEEE 802.1x settings					
Query	None					
Inbound Data	None					
Success Return	IEEE802_1x					
PUT						
Description	It is used to configure IEEE 802.1x settings					
Query	None					
Inbound Data	IEEE802_1x					
Success Return	ResponseStatus					
Notes:						
<p>If the <authenticationProtocolType> tag corresponds to "EAP-TTLS", then the <innerTTLSAuthenticationMethod> tag must be provided.</p> <p>If the <authenticationProtocolType> corresponds to "EAP-PEAP" or "EAP-FAST", then the <innerEAPProtocolType> tag must be provided.</p> <p>The <anonymousID> tag is optional. If the <authenticationProtocolType> corresponds to "EAP-FAST", then the <autoPACProvisioningEnabled> tag must be provided.</p>						

<anonymousID> is the optional anonymous ID to be used in place of the <userName>.

IEEE802_1x XML Block

```
<IEEE802_1x version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <authenticationProtocolType>
    <!-- req, xs:string, "EAP-TLS,EAP-TTLS,EAP-PEAP,EAP-LEAP,EAP-FAST,EAP-MD5" -->
  </authenticationProtocolType>
  <innerTTLSAuthenticationMethod>
    <!-- dep, xs:string, "MS-CHAP,MS-CHAPv2,PAP,EAP-MD5" -->
  </innerTTLSAuthenticationMethod>
  <innerEAPProtocolType>
    <!-- dep, xs:string, "EAP-POTP,MS-CHAPv2" -->
  </innerEAPProtocolType>
  <validateServerEnabled> <!-- dep, xs:boolean --> </validateServerEnabled>
  <userName> <!-- dep, xs:string --> </userName>
  <password><!-- dep, xs:string --> </password>
  <anonymousID> <!-- opt, xs:string --> </anonymousID>
  <autoPACProvisioningEnabled> <!-- dep, xs:boolean --> </autoPACProvisioningEnabled>
  <Extensions> <!-- opt -->
    <EAPOLVersion xmlns="http://www.isapi.org/ver20/XMLSchema">
      <!--opt, xs:string, "1, 2"-->
    </EAPOLVersion>
  </Extensions>
</IEEE802_1x>
```

8.2.23 /ISAPI/System/Network/PPPoE

/ISAPI/System/Network/PPPoE		General Resource	v2.0
GET			
Description	It is used to get the configurations of pppoe.		
Query	None		
Inbound Data	None		
Success Return	PPPoEList		
PUT			
Description	It is used to set the configurations of pppoe.		
Query	None		
Inbound Data	PPPoEList		
Success Return	ResponseStatus		
Notes:			

PPPoEList XML Block

```
<PPPoEList xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PPPoE/> <!--req-->
</PPPoEList>
```

8.2.24 /ISAPI/System/Network/PPPoE/status

/ISAPI/System/Network/PPPoE/status		General Resource	v2.0
GET			
Description	It is used to get the status of pppoe.		
Query	None		
Inbound Data	None		
Success Return	PPPoEStatusList		
Notes:			

PPPoEStatusList XML Block

```
<PPPoEStatusList xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PPPoEStatus/> <!--req-->
</PPPoEStatusList>
```

8.2.25 /ISAPI/System/Network/PPPoE/<ID>

/ISAPI/System/Network/PPPoE/ID		General Resource	v2.0
GET			
Description	It is used to get the configuration of a particular pppoe.		
Query	None		
Inbound Data	None		
Success Return	PPPoE		
PUT			
Description	It is used to set the configurations of a particular pppoe.		
Query	None		
Inbound Data	PPPoE		
Success Return	ResponseStatus		
Notes:			
<ethernetIfId> links the PPPoE to a network interface that the PPPoE dial up used, see /ISAPI/System/Network/interfaces/<ID>.			

PPPoE XML Block

```
<PPPoE xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```

<id>          <!-- req, xs:string -->  </id>
  <enabled>    <!-- req, xs:boolean -->  </enabled>
  <ethernetIfId> <!-- opt, xs:string; id -->    </ethernetIfId>
  <userName>   <!-- req, xs:string -->    </userName>
  <password>   <!-- wo, req, xs:string -->  </password>
</PPPoE>

```

8.2.26 /ISAPI/System/Network/PPPoE/<ID>/status

/ISAPI/System/Network/PPPoE/ID/status		General Resource	v2.0
GET			
Description	It is used to get the status of a particular pppoe.		
Query	None		
Inbound Data	None		
Success Return	PPPoEStatus		
Notes:			

PPPoEStatus XML Block

```

<PPPoEStatus xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <ethernetIfId> <!-- opt, xs:string; id --> </ethernetIfId>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <subnetMask> <!-- dep, xs:string, subnet mask for IPv4 address --> </subnetMask>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <bitMask> <!-- dep, xs:integer, bitmask IPv6 address --> </bitMask>
  <DefaultGateway> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </DefaultGateway>
  <PrimaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </PrimaryDNS>
  <SecondaryDNS> <!-- dep -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </SecondaryDNS>
</PPPoEStatus>

```

8.2.27 /ISAPI/System/Network/Bond

URI	/ISAPI/System/Network/Bond			Type	Service
Function	Get or set the configuration information of Bond net interfaces.				
Methods	Query String(s)	Inbound Data	Return Result		
GET			<BondList>		
Notes	Bond NIC configuration				

BondList XML Block

```
<BondList version="2.0" xmlns="urn:selfextension:ISAPIext-ver10-xsd">
  <Bond>
</BondList>
```

8.2.28 /ISAPI/System/Network/Bond/<ID>

URI	/ISAPI/System/Network/Bond/ID		Type	Resource
Function	Get or set the configuration information of Bond net interface			
Methods	Query String(s)	Inbound Data	Return Result	
GET			<Bond>	
PUT		<Bond>	<ResponseStatus>	
Notes				

Bond XML Block

```
<Bond version="2.0" xmlns="urn:selfextension:ISAPIext-ver10-xsd">
  <id>      <!-- req, xs:string -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <workMode> <!-- req, xs:string;"balance-rr, active-backup" --> </workMode>
  <primaryIf> <!-- req, xs:string;id --></primaryIf>
  <slaveIfList> <!-- req -->
    <ethernetIfId>    <!-- req, xs:string; id -->      </ethernetIfId>
  </slaveIfList>
  <IPAddress>
    <ipVersion>        <!-- req, xs:string, "v4,v6,dual" --></ipVersion>
    <addressingType>    <!-- req, xs:string, "static,dynamic,apipa" --> </addressingType>
    <ipAddress>        <!-- dep, xs:string -->          </ipAddress>
    <subnetMask>       <!-- dep, xs:string, subnet mask for IPv4 address --> </subnetMask>
```

```

<ipv6Address>      <!-- dep, xs:string -->      </ipv6Address>
<bitMask>          <!-- dep, xs:integer, bitmask IPv6 address -->  </bitMask>
<DefaultGateway>   <!-- dep -->
  <ipAddress>       <!-- dep, xs:string -->       </ipAddress>
  <ipv6Address>     <!-- dep, xs:string -->       </ipv6Address>
</DefaultGateway>
<PrimaryDNS>       <!-- dep -->
  <ipAddress>       <!-- dep, xs:string -->       </ipAddress>
  <ipv6Address>     <!-- dep, xs:string -->       </ipv6Address>
</PrimaryDNS>
<SecondaryDNS>     <!-- dep -->
  <ipAddress>       <!-- dep, xs:string -->       </ipAddress>
  <ipv6Address>     <!-- dep, xs:string -->       </ipv6Address>
</SecondaryDNS>
</IPAddress>
<Link xmlns="urn:selfextension:ISAPIext-ver10-xsd" <!-- opt -->
  <MACAddress> <!-- req, xs:string> </MACAddress>
  <autoNegotiation> <!-- req, xs:boolean> </autoNegotiation>
  <speed> <!-- req, xs:integer, "10, 100, 1000" --><speed>
  <duplex> <!-- req, xs:string, "half, full"> </duplex>
  <MTU> <!-- req, xs:integer --> </MTU>
</Link>
</Bond>

```

8.2.29 /ISAPI/System/Network/extension

URI	/ISAPI/System/Network/extension			Type	Resource
Function	Get or set the configuration information of network extensnion				
Methods	Query String(s)	Inbound Data	Return Result		
GET			<networkExtension>		
PUT		<networkExtension>	<ResponseStatus>		
Notes					

networkExtension XML Block

```

<networkExtension version="2.0" xmlns="urn:selfextension:ISAPIext-ver10-xsd">
  <multicastAddress> <!-- opt -->
    <ipVersion>          <!-- req, xs:string, "v4,v6,dual" --></ipVersion>
    <ipAddress>          <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  </multicastAddress>
  <enVirtualHost> <!--opt, xs:Boolean --> <enVirtualHost>
</networkExtension>

```

8.2.30 /ISAPI/System/Network/DDNS

/ISAPI/System/Network/DDNS		General Resource	v2.0
GET			
Description	It is used to get the configurations of DDNS.		
Query	None		
Inbound Data	None		
Success Return	DDNSList		
PUT			
Description	It is used to set the configurations of pppoe.		
Query	None		
Inbound Data	DDNSList		
Success Return	ResponseStatus		
Notes:			

DDNSList XML Block

```

<DDNSList xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DDNS/> <!--req-->
</DDNSList>

```

8.2.31 /ISAPI/System/Network/DDNS/<ID>

/ISAPI/System/Network/DDNS/ID		General Resource	v2.0
GET			
Description	It is used to get the configuration of a particular DDNS.		
Query	None		
Inbound Data	None		
Success Return	DDNS		
PUT			
Description	It is used to set the configurations of a particular pppoe.		

Query	None
Inbound Data	DDNS
Success Return	ResponseStatus
Notes: <serverAddress> DDNS server's address. Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the NTP server. Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress. When <provider> is "IPServer", <serverIPAddress> is required. When <provider> is "DysDNS", all fields are required except the <portNo>. When <provider> is "PeanutHall", all fields are required except the <serverIPAddress> and <portNo>. <deviceDomainName> the device's domain name. <password> is a write-only field. <countryID> see the Country List.	

DDNS XML Block

```
<DDNS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string -->
  <enabled>    <!-- req, xs:boolean --> </enabled>
  <provider>
    <!-- req, xs:string, "IPServer, DynDNS, PeanutHall, HiDDNS ..." -->
  </provider>
  <serverAddress>
    <addressingFormatType>
      <!-- req, xs:string, "ipaddress,hostname" -->
    </addressingFormatType>
    <hostName>    <!-- dep, xs:string --> </hostName> //不能是中文
    <ipAddress>    <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string -->    </ipv6Address>
  </serverAddress>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <deviceDomainName> <!-- dep, xs:string --> </deviceDomainName>
  <userName> <!-- dep, xs:string --> </userName> //不能是中文
  <password> <!-- wo, dep, xs:string --> </password>
  <countryID> <!-- dep, xs:string --> </countryID>
  <status> <!-- ro, opt, xs:string, DDNS 运行状态: 连接服务器失败(connServerfail)、
    解析服务器消息失败(solveServerMesFail)、连接心跳服务器失败(connHeartSrvfail)、解析心跳服务器消息失败(solveHeartSrvMesFail)、连接域名服务器失败(connHostSrvfail)、解析域名服务器消息失败(solveHostSrvMesFail)、DDNS 状态正常(updateSuccess)、未启用(disable)、注册域名成功(registHostSuccess)、DNS 服务器配置错误(DNSSrvError)、
    域名被占用(DomainConflict)、别名(域名)不合法(invalidAlias)、鉴权失败(authenticationFail)
  </status>
</DDNS>
```

、注册服务器错误(registServerError)、注册失败(registFail)--></status>
</DDNS>

8.2.32 /ISAPI/System/Network/DDNS/CountryID/capabilities

/ISAPI/System/Network/DDNS/CountryID/capabilities		General Resource	v2.0
GET			
Description	It is used to get DDNS country id capability.		
Query	None		
Inbound Data	None		
Success Return	<DDNSCountry>		
Notes: the value of <id> and <name> is in Country List below.			

DDNS Country List XML Block

```
<DDNSCountry version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ContinentList>
    <Continent>
      <id><!--req, xs:integer--></id>
      <name><!-- req, xs:string --></name>
      <CountryList>
        <Country>
          <id><!--req, xs:integer--></id>
          <name><!-- req, xs:string --></name>
        </Country>
      </CountryList>
    </Continent>
  </ContinentList>
</DDNSCountry>
```

Country List:

Continent	Country	ID
Europe	Europe	100
	Andorra	101
	Austria	102
	Albania	103
	Ireland	104
	Estonia	105
	Iceland	106
	Belarus	107

	Bulgaria	108
	Poland	109
	Bosnia	110
	Belgium	111
	Germany	112
	Denmark	113
	Russia	114
	France	115
	Finland	116
	Holland	117
	Czech	118
	Croatia	119
	Latvia	120
	Lithuania	121
	Liechtenstein	122
	Romania	123
	Macedonia	124
	Malta	125
	Luxembourg	126
	Monaco	127
	Moldova	128
	Norway	129
	Serbia	130
	Portugal	131
	Sweden	132
	Switzerland	133
	Slovak	134
	Slovenia	135
	San marino	136
	Ukraine	137
	Spain	138
	Greece	139
	Hungary	140
	Italy	141
	United Kingdom	142
	Europe Other	143
Asia	Asia	200
	Afghanistan	201
	United Arab Emirates	202
	Oman	203
	Azerbaijan	204
	Pakistan	205
	Palestine	206

	Bahrain	207
	Bhutan	208
	North Korea	209
	Timor	210
	Philippines	211
	Georgia	212
	Kazakhstan	213
	Korea	214
	Kirgizstan	215
	Cambodia	216
	Qatar	217
	Kuwait	218
	Laos	219
	Lebanon	220
	Maldives	221
	Malaysia	222
	Mongolia	223
	Bangladesh	224
	Myanmar	225
	Nepal	226
	Japan	227
	Cyprus	228
	Saudi Arabia	229
	Srilanka	230
	Tajikistan	231
	Thailand	232
	Turkey	233
	Turkmenistan	234
	Brunei	235
	Uzbekistan	236
	Singapore	237
	Syria	238
	Armenia	239
	Yemen	240
	Iran	241
	Iraq	242
	Israel	243
	India	244
	Indonesia	245
	Jordan	246
	Vietnam	247
	China	248
	Asia Other	249

America	America	300
	Argentina	301
	Antigua and Barbuda	302
	Barbados	303
	Bolivia	304
	Brazil	305
	Dominica	306
	Ecuador	307
	Cuba	308
	Colombia	309
	Grenada	310
	Guyana	311
	Canada	312
	Peru	313
	United States	314
	Mexico	315
	Surinam	316
	Saint-Lucia	317
	Trinidad and Tobago	318
	Uruguay	319
	Venezuela	320
	Jamaica	321
	Chile	322
	Bahamas	323
	America Other	324
	Paraguay	325
	Haiti	326
	Netherlands Antilles	327
	El Salvador	328
	Panama	329
	Guatemala	330
	Nicaragua	331
	Honduras	332
	Costa Rica	333
	Aruba	334
	Belize	335
	Cayman Islands	336
	Curaçao	337
	Dominican Republic	338
	Martinique	339
	Puerto Rico	340
Africa	Africa	400
	Algeria	401

	Egypt	402
	Ethiopia	403
	Angola	404
	Benin	405
	Botswana	406
	Burkina Faso	407
	Burundi	408
	Equatorial Guinea	409
	Togo	410
	Eritrea	411
	Verde	412
	Gambia	413
	Congo	414
	Congo-Kinshasa	415
	Djibouti	416
	Guinea	417
	Guinea-Bissau	418
	Gabon	419
	Ghana	420
	Zimbabwe	421
	Cameroon	422
	Comoros	423
	Cote d'Ivoire	424
	Kenya	425
	Lesotho	426
	Liberia	427
	Libya	428
	Rwanda	429
	Madagascar	430
	Mali	431
	Mauritius	432
	Mauritania	433
	Morocco	434
	Mozambique	435
	Namibia	436
	South Africa	437
	Niger	438
	Nigeria	439
	Sierra Leone	440
	Senegal	441
	Seychelles	442
	Sao Tome and Principe	443
	Sudan	444

	Somali	445
	Tanzania	446
	Tunisia	447
	Uganda	448
	Zambia	449
	Chad	450
	Central African Republic	451
	Africa Other	452
Oceania	Oceania	500
	Australia	501
	Papua New Guinea	502
	Fiji	503
	Cook Islands	504
	Samoa	505
	Micronesia	506
	Nauru	507
	Tonga	508
	Vanuatu	509
	New Zealand	510
	Oceania Other	511

8.2.33 /ISAPI/System/Network/SNMP

/ISAPI/System/Network/SNMP		General Resource	v2.0
GET			
Description	Get SNMP Settings.		
Query	None		
Inbound Data	None		
Success Return	SNMP		
PUT			
Description	Set SNMP Settings		
Query	None		
Inbound Data	SNMP		
Success Return	ResponseStatus		
Notes:			
At least one of the <SNMPv2c> block or <SNMPAdvanced> block must be provided.			
<snmpPort> snmp agent listen port			

SNMP XML Block

```
<SNMP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```

<SNMPv1c/>
  <!-- dep, choose one mode in <SNMPv1c> <SNMPv2c> <SNMPAdvanced> is required -->
  < SNMPv2c/>          <!-- dep -->
  <SNMPAdvanced/>      <!-- dep -->
  <listenPort> <!--opt, xs:integer ,snmp port--><listenPort>
</SNMP>

```

8.2.34 /ISAPI/System/Network/SNMP/v1c

/ISAPI/System/Network/SNMP/v1c

General Resourcev2.0

GET	
Description	Get SNMP v1c parameters.
Query	None
Inbound Data	None
Success Return	SNMPv1c
PUT	
Description	Set SNMP v1c parameters
Query	None
Inbound Data	SNMPv1c
Success Return	ResponseStatus

Notes:

SNMP v1c configuration includes SNMP notification parameters and a set of SNMP trap receivers. SNMP v1c comprises SNMP v1 without the controversial new SNMP v1 security model, using instead the simple community-based security scheme of SNMP v1

SNMPv1c XML Block

```

<SNMPv1c version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <notificationEnabled>          <!-- req, xs:boolean -->  </notificationEnabled>
  <SNMPTrapReceiverList/>        <!-- opt -->
  <enabled> <!--req, xs:boolean; is enabled snmpv2c--> </enabled>
  <writeCommunity> <!--req, xs:string --> </writeCommunity>
  <readCommunity> <!-- req, xs:string --> </readCommunity>
</SNMPv1c>

```

8.2.35 /ISAPI/System/Network/SNMP/v1c/trapReceiver

S

/ISAPI/System/Network/SNMP/v1c/trapReceivers		General Resource	v2.0
GET			
Description	Get SNMP trap receiver list.		
Query	None		
Inbound Data	None		
Success Return	SNMPTrapReceiverList		
PUT			
Description	Set SNMP trap receiver list		
Query	None		
Inbound Data	SNMPTrapReceiverList		
Success Return	ResponseStatus		
POST			
Description	create a new SNMP trap receiver		
Query	None		
Inbound Data	SNMPTrapReceiver		
Success Return	ResponseStatus		
DELETE			
Description	Delete SNMP trap receiver list		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

8.2.36 /ISAPI/System/Network/SNMP/v1c/trapReceiver

/<ID>

/ISAPI/System/Network/SNMP/v2c/trapReceivers/<ID>		General Resource	v2.0
GET			
Description	Get SNMP trap receiver information.		
Query	None		
Inbound Data	None		
Success Return	SNMPTrapReceiver		
PUT			
Description	Set SNMP trap receiver information		

Query	None
Inbound Data	SNMPTrapReceiver
Success Return	ResponseStatus
DELETE	
Description	Delete SNMP trap receiver
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

8.2.37 /ISAPI/System/Network/SNMP/v2c

/ISAPI/System/Network/SNMP/v2c

General Resource

v2.0

GET

Description	Get SNMP v2c parameters.
Query	None
Inbound Data	None
Success Return	SNMPv2c

PUT

Description	Set SNMP v2c parameters
Query	None
Inbound Data	SNMPv2c
Success Return	ResponseStatus

Notes:

SNMP v2c configuration includes SNMP notification parameters and a set of SNMP trap receivers.
SNMP v2c comprises SNMP v2 without the controversial new SNMP v2 security model, using instead the simple community-based security scheme of SNMP v1

SNMPv2c XML Block

```
<SNMPv2c version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <notificationEnabled>    <!-- req, xs:boolean -->  </notificationEnabled>
  <SNMPTrapReceiverList/>    <!-- opt -->
  <enabled> <!--req, xs:boolean; is enabled snmpv2c--> </enabled>
  <writeCommunity> <!--req, xs:string --> </writeCommunity>
  <readCommunity> <!-- req, xs:string --> </readCommunity>
</SNMPv2c>
```


8.2.38 /ISAPI/System/Network/SNMP/v2c/trapReceiver

s

/ISAPI/System/Network/SNMP/v2c/trapReceivers		General Resource	v2.0
GET			
Description	Get SNMP trap receiver list.		
Query	None		
Inbound Data	None		
Success Return	SNMPTrapReceiverList		
PUT			
Description	Set SNMP trap receiver list		
Query	None		
Inbound Data	SNMPTrapReceiverList		
Success Return	ResponseStatus		
POST			
Description	create a new SNMP trap receiver		
Query	None		
Inbound Data	SNMPTrapReceiver		
Success Return	ResponseStatus		
DELETE			
Description	Delete SNMP trap receiver list		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

SNMPTrapReceiverList XML Block

```
<SNMPTrapReceiverList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SNMPTrapReceiver/>    <!-- opt -->
</SNMPTrapReceiverList>
```

8.2.39 /ISAPI/System/Network/SNMP/v2c/trapReceiver

s/<ID>

/ISAPI/System/Network/SNMP/v2c/trapReceivers/<ID>		General Resource	v2.0
GET			
Description	Get SNMP trap receiver information.		

Query	None
Inbound Data	None
Success Return	SNMPTrapReceiver
PUT	
Description	Set SNMP trap receiver information
Query	None
Inbound Data	SNMPTrapReceiver
Success Return	ResponseStatus
DELETE	
Description	Delete SNMP trap receiver
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

SNMPTrapReceiver XML Block

```
<SNMPTrapReceiver version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                                <!-- req, xs:string;id -->                                </id>
  <ReceiverAddress/>                   <!-- req -->
  <notificationType/>                  <!-- req, xs:string, "trap,inform" -->
  <communityString>                   <!-- opt, xs:string -->                                </communityString>
</SNMPTrapReceiver>
```

8.2.40 /ISAPI/System/Network/SNMP/advanced

/ISAPI/System/Network/SNMP/advanced

General Resourcev2.0

GET	
Description	Get SNMP Advanced parameters.
Query	None
Inbound Data	None
Success Return	SNMPAdvanced

PUT	
Description	Set SNMP Advanced parameters
Query	None
Inbound Data	SNMPAdvanced
Success Return	ResponseStatus

Notes:

<localEngineID> is a hexadecimal string indicating the local device engine ID.

<authenticationNotificationEnabled> indicates if SNMP authentication failure notification is enabled on the device.

<SNMPNotificationFilterList> is a list to filter traps based on OIDs

SNMPAdvanced XML Block

```
<SNMPAdvanced version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <localEngineID> <!-- req, xs:hexBinary, see RFC2571 --> </localEngineID>
  <authenticationNotificationEnabled>
    <!-- opt, xs:boolean -->
  </authenticationNotificationEnabled>
  <SNMPUserList/><!-- opt -->
  <SNMPNotificationFilterList/> <!-- opt -->
  <notificationEnabled> <!-- opt, xs:boolean --> </notificationEnabled>
  <SNMPNotificationReceiverList/> <!-- opt -->
  <enabled> <!--req, xs:boolean --> </enabled>
</SNMPAdvanced>
```

8.2.41 /ISAPI/System/Network/SNMP/advanced/users

/ISAPI/System/Network/SNMP/advanced/users		General Resource	v2.0
GET			
Description	Get SNMP advanced user list.		
Query	None		
Inbound Data	None		
Success Return	SNMPUserList		
PUT			
Description	Set SNMP advanced list		
Query	None		
Inbound Data	SNMPUserList		
Success Return	ResponseStatus		
POST			
Description	create a new SNMP advanced user		
Query	None		
Inbound Data	SNMPUser		
Success Return	ResponseStatus		
DELETE			
Description	Delete SNMP advanced user list		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes: Defines the set of SNMP users and their permissions.			

SNMPUserList XML Block

```
<SNMPUserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SNMPUser/>  <!-- opt -->
</SNMPUserList>
```

8.2.42 /ISAPI/System/Network/SNMP/advanced/users/

<ID>

/ISAPI/System/Network/SNMP/advanced/users/ID		General Resource	v2.0
GET			
Description	Get SNMP advanced user information.		
Query	None		
Inbound Data	None		
Success Return	SNMPUser		
PUT			
Description	Set SNMP advanced user information		
Query	None		
Inbound Data	SNMPUser		
Success Return	ResponseStatus		
DELETE			
Description	Delete SNMP advanced user		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
<p><remoteEngineID> indicates the remote SNMP entity to which the user is connected.</p> <p><snmpAuthenticationMethod> indicates the authentication method used.</p> <p><snmpAuthenticationKey> defines the authentication key if encryption is used for <snmpAuthenticationMethod>.</p> <p><snmpAuthenticationPassword> optional password used to calculate the <snmpAuthenticationKey> value if encryption is used for <snmpAuthenticationMethod>.</p> <p><snmpPrivacyMethod> indicates if messages are protected from disclosure, and if so, the type of privacy protocol used.</p> <p><snmpPrivacyKey> defines the privacy key if encryption is used for <snmpPrivacyMethod>.</p> <p><snmpPrivacyPassword> optional password used to calculate the <snmpPrivacyKey> value if encryptions is used for <snmpPrivacyMethod></p>			

SNMPUser XML Block

```
<SNMPUser version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```

<id>    <!-- req, xs:string;id -->    </id>
<userName><!-- req, xs:string -->    </userName>
<remoteEngineID>    <!-- req, xs:hexBinary --></remoteEngineID>
<snmpAuthenticationMethod>
    <!-- req, xs:string, "MD5,SHA,none" -->
</snmpAuthenticationMethod>
<snmpAuthenticationKey> <!-- dep, xs:string -->    </snmpAuthenticationKey>
<snmpAuthenticationPassword>
    <!-- dep, xs:string, see RFC3414 -->
</snmpAuthenticationPassword>
<snmpPrivacyMethod>    <!-- req, xs:string, "DES,AES,none" --> </snmpPrivacyMethod>
<snmpPrivacyKey>    <!-- dep, xs:string -->    </snmpPrivacyKey>
<snmpPrivacyPassword>    <!-- dep, xs:string, see RFC3414 --> </snmpPrivacyPassword>
</SNMPUser>

```

8.2.43 /ISAPI/System/Network/mailing

/ISAPI/System/Network/mailling		General Resource	v2.0
GET			
Description	It is used to get the configuration of e-mail.		
Query	None		
Inbound Data	None		
Success Return	maillingList		
PUT			
Description	It is used to set the configuration of e-mail.		
Query	None		
Inbound Data	maillingList		
Success Return	ResponseStatus		
Notes:			

mailingList XML Block

```

<mailingList xmlns="http://www.isapi.org/ver20/XMLSchema">
    <mailing> <!-- opt, xs:string --> </mailing>
</mailingList>

```

8.2.44 /ISAPI/System/Network/mailing/<ID>

/ISAPI/System/Network/mailing/<ID>		General Resource	v2.0
GET			
Description	It is used to get the configuration of a particular e-mail.		

Query	None
Inbound Data	None
Success Return	mailingList
PUT	
Description	It is used to set the configuration of a particular e-mail.
Query	None
Inbound Data	mailingList
Success Return	ResponseStatus
Notes:	

mailing XML Block

```
<mailing xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <sender> <!--req-->
    <name> <!--req, xs:string> </name>
    <emailAddress> <!--req, xs:string --> </emailAddress>
    <smtp> <!-- req -->
      <enableAuthorization><!--req, xs:boolean--></enableAuthorization>
      <enableSSL><!--opt, xs:boolean--></enableSSL>
      <addressingFormatType>
        <!-- req, xs:string, "ipaddress,hostname" -->
      </addressingFormatType>
      <hostName>    <!-- dep, xs:string -->    </hostName>
      <ipAddress><!-- dep, xs:string -->    </ipAddress>
      <ipv6Address> <!-- dep, xs:string -->    </ipv6Address>
      <portNo>    <!-- opt, xs:integer -->    </portNo>
      <accountName> <!-- dep, xs:string -->    </accountName>
      <password><!-- dep, xs:string -->    </password>
      <enableTLS><!--opt, xs:boolean--></enableTLS>
      <startTLS><!--dep, xs:boolean--></startTLS>
    </smtp>
  </sender>
  <receiverList> <!-- req -->
    <receiver>
      <id> <!--req, xs:string; id --> </id>
      <name> <!--req, xs:string --> </name>
      <emailAddress> <!-- req, xs:string --> </emailAddress>
    </receiver>
  </receiverList>
  <attachment><!--opt-->
    <snapshot> <!--opt-->
      <enabled ><!--req, xs:boolean--></ enabled>
      <interval><!--req, xs:integer, seconds></interval>
```

```
</snapshot>
</attachment>
</mailing>
```

8.2.45 /ISAPI/System/Network/mailing/test

/ISAPI/System/Network/mailling/test		General Resource	v2.0
GET			
Description	It is used to test the mail servers are functioning and the email address is valid.		
Query	None		
Inbound Data	maillingTestDescription		
Success Return	maillingTestResult		
POST			
Description	It is used to test the mail servers are functioning and the email address is valid.		
Query	None		
Inbound Data	maillingTestDescription		
Success Return	maillingTestResult		
Notes:			

mailingTestDescription XML Block

```
<mailingTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sendName> <!--opt, xs:string --> </sendName>
  <sendEmailAddress> <!--req, xs:string --> </sendEmailAddress>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress><!-- dep, xs:string --> </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- req, xs:integer --> </portNo>
  <enableSSL><!--opt, xs:boolean--></enableSSL>
  <enableAuthorization><!--req, xs:boolean--></enableAuthorization>
  <accountName> <!-- dep, xs:string --> </accountName>
  <password><!-- dep, xs:string --> </password>
  <receiverList> <!-- req -->
    <receiver>
      <id> <!--req, xs:string; id --> </id>
      <name> <!--req, xs:string --> </name>
      <emailAddress> <!-- req, xs:string --> </emailAddress>
```

```

    </receiver>
  </receiverList>
</mailingTestDescription>

```

mailingTestResult XML Block

```

<mailingTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string -->.</errorDescription>
</mailingTestResult>

```

8.2.46 /ISAPI/System/Network/UPnP

/ISAPI/System/Network/UPnP		General Resource	v2.0
GET			
Description	Get theUPnP configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	UPnP		
PUT			
Description	Set theUPnP configuration on an IP media device.		
Query	None		
Inbound Data	UPnP		
Success Return	ResponseStatus		
Notes:			

UPnP XML Block

```

<UPnP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req -->
  <ports/> <!-- opt -->
</UPnP>

```

8.2.47 /ISAPI/System/Network/UPnP/ports

/ISAPI/System/Network/UPnP/ports		General Resource	v2.0
GET			
Description	Get the Ports configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	ports		
PUT			

Description	Set Ports configuration on an IP media device.
Query	None
Inbound Data	ports
Success Return	ResponseStatus
Notes:	

ports XML Block

```
<ports version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req -->
  <mapmode> <!-- req, xs:string, "auto,manual" --></mapmode>
  <natRouterLanAddr> <!-- opt -->
    <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </natRouterLanAddr>
  <portList> <!-- req -->
    <port/>
  </portList>
  <natType> <!--req, xs:string, "manual, auto" --> </natType>
</ports>
```

8.2.48 /ISAPI/System/Network/UPnP/ports/status

/ISAPI/System/Network/UPnP/ports/status		General Resource	v2.0
GET			
Description	Get NAT ports status on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	portsStatus		
Notes:			
<natRouter> if this element is provided, the ip media device will use this nat router.			

portsStatus XML Block

```
<portsStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req -->
  <natRouterLanAddr> <!-- req -->
    <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </natRouterLanAddr>
  <natRouterWanAddr> <!-- req -->
```

```

    <ipVersion> <!-- req, xs:string, "v4,v6,dual" --> </ipVersion>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  </natRouterWanAddr>
  <portStatusList> <!-- req -->
    <portStatus/> <!-- req -->
  </portStatusList>
</portsStatus>

```

8.2.49 /ISAPI/System/Network/UPnP/ports/<ID>

/ISAPI/System/Network/UPnP/ports/<ID>			General Resource	v2.0
GET				
Description	Get a specific NAT port configuration on an IP media device.			
Query	None			
Inbound Data	None			
Success Return	port			
PUT				
Description	Set a specific NAT port configuration on an IP media device.			
Query	None			
Inbound Data	None			
Success Return	port			
Error Status Code	statusCode	subStausCode	description	
	6	badPort	Port Conflict	
Notes:				

port XML Block

```

<port version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled/> <!--req, xs:boolean -->
  <internalPort/> <!-- req, xs:string, "http, admin, rtsp, ...">
  <externalPort/> <!--req, xs:integer -->
</port>

```

8.2.50 /ISAPI/System/Network/UPnP/ports/<ID>/status

/ISAPI/System/Network/UPnP/ports/<ID>/status		General Resource	v2.0
GET			
Description	Get NAT port status on an IP media device.		

Query	None
Inbound Data	None
Success Return	portStatus
Notes: <natRouter> if this element is provided, the ip media device will use this nat router.	

portStatus XML Block

```
<portStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled/> <!-- req -->
  <internalPort/> <!-- req, xs:string, "http, admin, rtsp, ..." -->
  <externalPort/> <!-- req, xs:integer -->
  <status/> <!-- req, xs:string, "inactive, active, conflict, ..." -->
</portStatus>
```

8.2.51 /ISAPI/System/Network/ftp/capabilities

/ISAPI/System/Network/ftp/capabilities		General Resource	v2.0
GET			
Description	It is used to get ftp capability.		
Query	None		
Inbound Data	None		
Success Return	< FTPNotificationList >		
Notes:			

FTPNotificationList XML Block

```
<FTPNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FTPNotification/> <!-- opt -->
</FTPNotificationList>
```

FTPNotification XML Block

```
<FTPNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!--req, xs:boolean --> </enabled>
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType opt=" ipaddress,hostname">
    <!-- req, xs:string, -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
```

```

<ipv6Address>                <!-- dep, xs:string -->                </ipv6Address>
<portNo>                      <!-- opt, xs:integer -->            </portNo>
<userName>                    <!-- req, xs:string -->            </userName>
<password>                    <!-- wo, xs:string -->            </password>
<passiveModeEnabled>          <!-- opt, xs:boolean -->            </passiveModeEnabled>
<annoyftp> <!--opt, xs:boolean --> </annoyftp>
<uploadPicture> <!--opt, xs:boolean --> </uploadPicture>
<uploadVideoClip> <!-- opt, xs:Boolean --> </uploadVideoClip>
<uploadPath> <!--req -->
    <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
    <topDirNameRule opt="devName,devId,devIp,customize">
        <!-- dep, xs:string, -->
    </topDirNameRule>
    <topDirName/> <!-- dep, xs:string-->
    <subDirNameRule opt="chanName,chanId,customize">
        <!-- dep, xs:string,
    </subDirNameRule>
    <subDirName/> <!-- dep, xs:string-->
</uploadPath>
<FtpUpload version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <vehiclePicName>
        <mode opt="default,custom"> <!--req, xs:string, --> </mode>
        <NameRuleType>
            <RuleTypeItem size="">
                <RuleTypeItem>
                    <id><!-- req, xs: interger --></id>
                    <item opt="capture_time,plate_No,alarm_type,camera_name"><!--
req, xs: string --></item>
                    <cameraName min="" max=""><!-- dep, xs: string
"camera_name"--></cameraName>
                </RuleTypeItem>
            </RuleTypeItemList>
        </NameRuleType>
    </vehiclePicName>
</FtpUpload>
    <picArchivingInterval min="" max=""><!--opt,xs:integer,"1~30,0-close"
--></picArchivingInterval>
    <picNameRuleType opt="default,prefix"><!-- opt, xs:string --></picNameRuleType>
    <picNamePrefix min="0" max="32"><!-- dep, xs:string --></picNamePrefix>
</FTPNotification>

```

8.2.52 /ISAPI/System/Network/ftp

/ISAPI/System/Network/ftp		General Resource	v2.0
GET			
Description	It is used to get the configurations of FTP.		
Query	None		
Inbound Data	None		
Success Return	FTPNotificationList		
PUT			
Description	It is used to set the configurations of FTP.		
Query	None		
Inbound Data	FTPNotificationList		
Success Return	ResponseStatus		
Notes:			

FTPNotificationList XML Block

```
<FTPNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FTPNotification/>  <!-- opt -->
</FTPNotificationList>
```

8.2.53 /ISAPI/System/Network/ftp/<ID>

/ISAPI/System/Network/ftp/ID		General Resource	v2.0
GET			
Description	It is used to get the configuration of a particular FTP.		
Query	None		
Inbound Data	None		
Success Return	FTPNotification		
PUT			
Description	It is used to set the configurations of a particular FTP.		
Query	None		
Inbound Data	FTPNotification		
Success Return	ResponseStatus		
Notes:			
Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the NTP server.			
Note: FTP transfers are always in binary mode.			
<pathDepth> the depth of path. For example, / depth is 0, /a depth is 1, /a/b depth is 2			

FTPNotification XML Block

```
<FTPNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!--req, xs:boolean --> </enabled>
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <userName> <!-- req, xs:string --> </userName>
  <password> <!-- wo, xs:string --> </password>
  <passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
  <annoyftp> <!--opt, xs:boolean --> </annoyftp>
  <uploadPicture> <!--opt, xs:boolean --> </uploadPicture>
  <uploadVideoClip> <!-- opt, xs:Boolean --> </uploadVideoClip>
  <uploadPath> <!--req -->
    <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
    <topDirNameRule>
      <!-- dep, xs:string, "devName, devId, devIp, customize" -->
    </topDirNameRule>
    <topDirName/> <!-- dep, xs:string-->
    <subDirNameRule>
      <!-- dep, xs:string, "chanName, chanId, customize"
    </subDirNameRule>
    <subDirName/> <!-- dep, xs:string-->
  </uploadPath>
  <picArchivingInterval><!--opt,xs:integer, --></picArchivingInterval>
  <picNameRuleType><!-- opt, xs:string,"default,prefix" --></picNameRuleType>
  <picNamePrefix><!-- dep, xs:string --></picNamePrefix>
</FTPNotification>
```

8.2.54 /ISAPI/System/Network/ftp/test

/ISAPI/System/Network/ftp/test		General Resource	v2.0
GET			
Description	It is used to test the ftp server available or not		
Query	None		
Inbound Data	FTPTestDescription		

Success Return	FTPTestResult
POST	
Description	It is used to test the ftp server available or not
Query	None
Inbound Data	FTPTestDescription
Success Return	FTPTestResult
Notes:	

FTPTestDescription XML Block

```

<FTPTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <userName> <!-- req, xs:string --> </userName>
  <password> <!-- wo, xs:string --> </password>
  <passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
  <annoyftp> <!--opt, xs:boolean --> </annoyftp>
  <uploadPath> <!--req -->
    <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
    <topDirNameRule>
      <!-- dep, xs:string, "devName, devId, devIp, customize" -->
    </topDirNameRule>
    <topDirName/> <!-- dep, xs:string-->
    <subDirNameRule>
      <!-- dep, xs:string, "chanName, chanId, customize"
    </subDirNameRule>
    <subDirName/> <!-- dep, xs:string-->
  </uploadPath>
</FTPTestDescription>

```

FTPTestResult XML Block

```

<FTPTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string -->.</errorDescription>
</FTPTestResult>

```

8.2.55 /ISAPI/System/Network/ipFilter

/ISAPI/System/Network/ipFilter		General Resource	v2.0
GET			
Description	Access IP filtering settings.		
Query	None		
Inbound Data	None		
Success Return	IPFilter		
PUT			
Description	Access IP filtering settings..		
Query	None		
Inbound Data	IPFilter		
Success Return	ResponseStatus		
Notes:			
<permissionType> field, if provided as a direct child of level configuration and will apply to all of the value provided in a particular <IPFilterAddress> block		<IPFilter>, acts as a system <IPFilterAddress> entries, overriding the	

IPFilter XML Block

```
<IPFilter version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <permissionType> <!-- opt, xs:string, "deny,allow" --> </permissionType>
  <IPFilterAddressList/> <!-- opt -->
</IPFilter>
```

8.2.56 /ISAPI/System/Network/ipFilter/filterAddresses

/ISAPI/System/Network/ipFilter/filterAddresses		General Resource	v2.0
GET			
Description	Access IP filtering settings.		
Query	None		
Inbound Data	None		
Success Return	IPFilterAddressList		
PUT			
Description	Access IP filtering settings..		
Query	None		
Inbound Data	IPFilterAddressList		
Success Return	ResponseStatus		

POST	
Description	Access IP filtering settings..
Query	None
Inbound Data	IPFilterAddress
Success Return	ResponseStatus
DELETE	
Description	Access IP filtering settings..
Query	None
Inbound Data	IPFilterAddressList
Success Return	ResponseStatus
Notes: The IP filter address list allows addresses to be added and removed from the list, or the entire list to be uploaded at once.	

IPFilterAddressList XML Block

```
<IPFilterAddressList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IPFilterAddress/>    <!-- opt -->
</IPFilterAddressList>
```

8.2.57 /ISAPI/System/Network/ipFilter/filterAddresses/

<ID>

/ISAPI/System/Network/ipFilter/filterAddresses/ID		General Resource	v2.0
GET			
Description	Access IP filtering settings.		
Query	None		
Inbound Data	None		
Success Return	IPFilterAddress		
PUT			
Description	Access IP filtering settings..		
Query	None		
Inbound Data	IPFilterAddress		
Success Return	ResponseStatus		
DELETE			
Description	Access IP filtering settings..		
Query	None		
Inbound Data	IPFilterAddress		
Success Return	ResponseStatus		
Notes:			

If the <permissionType> tag is not provided as a direct child of <IPFilter>, the <permissionType> tag must be provided for each <IPFilterAddress>.

Since the ordering of the filters can change the behavior, filtering will be applied consecutively starting with the first <IPFilterAddress> in the list.

The <bitMask> field is applied to the corresponding IP address to identify a range of addresses. It indicates the number of '1' bits used to mask the address. For example: '24' would correspond to a subnet mask of 255.255.255.0 and '32' would correspond to a subnet mask of 255.255.255.255 (a single IP address) for IPv4.

If <addressFilterType> refers to "mask", the <AddressMask> block must be provided in place of the <AddressRange> block. If it refers to "range", the <Range> block must be provided in place of the <AddressMask> block.

Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress.

IPFilterAddress XML Block

```
<IPFilterAddress version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <permissionType><!-- dep, xs:string, "deny,allow" --></permissionType>
  <addressFilterType> <!-- req, xs:string, "mask,range" --> </addressFilterType>
  <AddressRange> <!-- dep, depends on <addressFilterType> -->
    <startIPAddress> <!-- dep, xs:string --> </startIPAddress>
    <endIPAddress> <!-- dep, xs:string --> </endIPAddress>
    <startIPv6Address> <!-- dep, xs:string --> </startIPv6Address>
    <endIPv6Address> <!-- dep, xs:string --> </endIPv6Address>
  </AddressRange>
  <AddressMask><!-- dep, depends on <addressFilterType> -->
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
    <bitMask> <!-- req, xs:string --> </bitMask>
  </AddressMask>
</IPFilterAddress>
```

8.2.58 /ISAPI/System/Network/qos

/ISAPI/System/Network/qos		General Resource	v2.0
GET			
Description	This function is used to get QoS Settings.		
Query	None		
Inbound Data	None		
Success Return	QoS		
PUT			
Description	This function is used to set QoS Settings		
Query	None		

Inbound Data	QoS
Success Return	ResponseStatus
Notes:	
At least one of <CoSList> or <DSCPList> must be provided.	

QoS XML Block

```
<QoS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CoSList/> <!-- dep -->
  <DSCPList/> <!-- dep -->
</QoS>
```

8.2.59 /ISAPI/System/Network/qos/cos

/ISAPI/System/Network/qos/cos		General Resource	v2.0
GET			
Description	This function is used to get the QoS cos list setting for the device.		
Query	None		
Inbound Data	None		
Success Return	CoSList		
PUT			
Description	This function is used to set the QoS cos list setting for the device		
Query	None		
Inbound Data	CoSList		
Success Return	ResponseStatus		
POST			
Description	This function is used to creat the QoS cos setting for the device		
Query	None		
Inbound Data	CoS		
Success Return	ResponseStatus		
DELETE			
Description	This function is used to delete the QoS cos list setting for the device		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

CoSList XML Block

```
<CoSList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CoS/> <!-- opt -->
</CoSList>
```

8.2.60 /ISAPI/System/Network/qos/cos/<ID>

/ISAPI/System/Network/qos/cos/ID		General Resource	v2.0
GET			
Description	This function is used to get the QoS cos setting for the device		
Query	None		
Inbound Data	None		
Success Return	CoS		
PUT			
Description	This function is used to set the QoS cos setting for the device		
Query	None		
Inbound Data	CoS		
Success Return	ResponseStatus		
DELETE			
Description	This function is used to delete the QoS cos setting for the device		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

CoS XML Block

```
<CoS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <priority> <!-- req, xs:integer -->   </priority>
  <vlanID>   <!-- req, xs:string -->   </vlanID>
  <trafficType>
    <!-- req, xs:string, "devicemanagement,commandcontrol,video,audio" -->
  </trafficType>
</CoS>
```

8.2.61 /ISAPI/System/Network/qos/dscp

/ISAPI/System/Network/qos/dscp		General Resource	v2.0
GET			
Description	This function is used to get the QoS dscp list setting for the device		
Query	None		
Inbound Data	None		
Success Return	DSCPList		

PUT	
Description	This function is used to set the QoS dscp list setting for the device
Query	None
Inbound Data	DSCPList
Success Return	ResponseStatus
POST	
Description	This function is used to create the QoS dscp setting for the device
Query	None
Inbound Data	DSCP
Success Return	ResponseStatus
DELETE	
Description	This function is used to delete the QoS cos list setting for the device
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: A list of DSCP parameter blocks is specified for each type of traffic: device management, command and control, video and audio streaming. Devices may extend the set of traffic types.	

DSCPList XML Block

```
<DSCPList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DSCP/>    <!-- opt -->
</DSCPList>
```

8.2.62 /ISAPI/System/Network/qos/dscp/<ID>

/ISAPI/System/Network/qos/dscp/ID		General Resource	v2.0
GET			
Description	This function is used to get the QoS dscp setting for the device		
Query	None		
Inbound Data	None		
Success Return	DSCP		
PUT			
Description	This function is used to set the QoS dscp setting for the device		
Query	None		
Inbound Data	DSCP		
Success Return	ResponseStatus		
DELETE			
Description	This function is used to delete the QoS dscp setting for the device		

Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: <trafficType> determines which kind of traffic the settings apply to.	

DSCP XML Block

```
<DSCP version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <priorityValue>  <!-- req, xs:integer, 6 bits - refer to RFC2474 --> </priorityValue>
  <trafficType>
    <!-- req, xs:string, "devicemanagement,commandcontrol,video,audio" -->
  </trafficType>
</DSCP>
```

8.2.63 /ISAPI/System/Network/telnetd

/ISAPI/System/Network/telnetd		General Resource	v2.0
GET			
Description	It is used to get the configurations of telnet.		
Query	None		
Inbound Data	None		
Success Return	Telnetd		
PUT			
Description	It is used to set the configurations of telnet.		
Query	None		
Inbound Data	Telnetd		
Success Return	ResponseStatus		
Notes:			

Telnetd XML Block

```
<Telnetd version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>  <!-- req, xs:boolean -->  </enabled>
</Telnetd>
```

8.2.64 /ISAPI/System/Network/SIP

/ISAPI/System/Network/SIP		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	SIPServerList		
PUT			
Description			
Query	None		
Inbound Data	SIPServerList		
Success Return	ResponseStatus		
Notes:			

SIPServerList XML Block

```
<SIPServerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SIPServer/> <!-- opt -->
</SIPServerList>
```

8.2.65 /ISAPI/System/Network/SIP/<ID>

/ISAPI/System/Network/SIP/<ID>		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	SIPServer		
PUT			
Description			
Query	None		
Inbound Data	SIPServer		
Success Return	ResponseStatus		
Notes:			

SIPServer XML Block

```

<SIPServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <localPort> <!-- req, xs:integer, "1-65535" --> </localPort>
  <streamID> <!-- req, xs:integer, "1(main stream),2 (sub stream) " --> </streamID>
  <Standard> <!-- opt -->
    <registerStatus> <!-- ro, req, xs:boolean, "false (unregistered) ,true (registered) "
      --></registerStatus>

    <enabled> <!-- req, xs:string, "true(sign in),false (log out) " --> </enabled>
    <registrar> <!-- req, xs:string --> </registrar>
    <registrarPort> <!-- req, xs:integer --> </registrarPort>
    <proxy> <!-- req, xs:string --> </proxy>
    <proxyPort> <!-- req, xs:integer --> </proxyPort>
    <displayName> <!-- req, xs:string --> </displayName>
    <userName> <!-- req, xs:string --> </userName>
    <authID> <!-- req, xs:string --> </authID>
    <password> <!-- wo, req, xs:string --> </password>
    <expires> <!-- req, xs:integer --> </expires>
  </Standard>
  <GB28181> <!-- opt -->
    <registerStatus> <!-- req, xs:boolean --></registerStatus>
    <enabled> <!-- req, xs:string, "true,false" --> </enabled>
    <registrar> <!-- req, xs:string --> </registrar>
    <registrarPort> <!-- req, xs:integer --> </registrarPort>
    <serverId> <!-- req, xs:string --> </serverId>
    <serverDomain> <!-- req, xs:integer --> </serverDomain>
    <userName> <!-- req, xs:string --> </userName>
    <authID> <!-- req, xs:string --> </authID>
    <password> <!-- wo, req, xs:string --> </password>
    <expires> <!-- req, xs:integer --> </expires>
    <liveTime> <!-- req, xs:integer --> </liveTime>
    <heartbeatTime> <!-- req, xs:integer --> </heartbeatTime>
    <heartbeatCount> <!-- req, xs:integer --> </heartbeatCount>
    <transportType> <!-- opt, xs:string, "UDP, TCP,TLS" --> </transportType>
    <registerInterval> <!-- opt, xs:integer, "60-600", second --> </registerInterval>
    <protocolVersion> <!-- opt, xs:string, "GB/T28181-2011,GB/T28181-2015" -->
  </protocolVersion>
</GB28181>
</SIPServer>

```

8.2.66 /ISAPI/System/Network/SIP/<ID>/SIPInfo

/ISAPI/System/Network/SIP/<ID>/SIPInfo

General Resource v2.0

GET

Description	Get device ID and alarm ID
Query	None
Inbound Data	None
Success Return	SIPInfo
PUT	
Description	Set device ID and alarm ID
Query	None
Inbound Data	SIPInfo
Success Return	ResponseStatus
Notes: For IP camera or Speed Dome, videoID only stands for “Device ID” and doesn’t need to provide VideoInputList elements; For NVRs/DVRs supporting multiple video channels, videoInputList indicates separate ID of each video channel.	

SIPInfo XML Block

```
<SIPInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <videoID> <!-- req, xs:string--> <videoID>
  <AlarmInList>
  <AlarmIn>
    <id> <!--req, xs:string--> </id>
    <alarmInID> <!-- req, xs:string--> <alarmInID>
  <AlarmIn>
  <AlarmInList>
  <VideoInputList> <!--opt -->
    <VideoInput>
      <id> <!-- req, xs:string--> </id>
      <videoInputID> <!--req, xs:string> </videoInputID>
    </VideoInput>
  </VideoInputList>
</SIPInfo>
```

8.2.67 /ISAPI/System/Network/EZVIZ

/ISAPI/System/Network/EZVIZ		General Resource	v2.0
GET			
Description	It is used to get the configurations of EZVIZ		
Query	None		
Inbound Data	None		
Success Return	EZVIZ		
PUT			
Description	It is used to set the configurations of EZVIZ		

Query	None
Inbound Data	EZVIZ
Success Return	ResponseStatus
Notes: <redirect> whether allow the device to redirect the server address.	

EZVIZ XML Block

```
<EZVIZ version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <registerStatus> <!-- ro,opt xs:boolean --></registerStatus>
  <redirect><!--opt xs:boolean --></redirect>
  <serverAddress> <!--opt-->
    <addressingFormatType>
      <!-- req, xs:string, "ipaddress,hostname"-->
    </addressingFormatType>
    <hostName> <!-- dep, xs:string --> </hostName>
    <ipAddress> <!-- dep, xs:string --> </ipAddress>
    <ipv6Address><!-- dep, xs:string --> </ipv6Address>
  <serverAddress>
</EZVIZ>
```

8.2.68 /ISAPI/System/Network/pingtest

/ISAPI/System/Network/pingtest		General Resource	v2.0
GET			
Description	It is used to check the IP address available or not.		
Query	None		
Inbound Data	pingTestDescription		
Success Return	pingTestResult		
POST			
Description	It is used to check the IP address available or not.		
Query	None		
Inbound Data	pingTestDescription		
Success Return	pingTestResult		
Notes:			

pingTestDescription XML Block

```
<pingTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipAddress><!-- dep, xs:string --> </ipAddress>
</pingTestDescription>
```

pingTestResult XML Block

```
<pingTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <status> <!-- req, xs:string,"used,not used" -->.</status>
</pingTestResult>
```

8.2.69 /ISAPI/System/Network/ssh

/ISAPI/System/Network/ssh		General Resource	v2.0
GET			
Description	It is used to get the configurations of ssh.		
Query	None		
Inbound Data	None		
Success Return	SSH		
PUT			
Description	It is used to set the configurations of ssh.		
Query	None		
Inbound Data	SSH		
Success Return	ResponseStatus		
Notes:			

SSH XML Block

```
<SSH version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</SSH>
```

8.2.70 /ISAPI/System/Network/Ehome

/ISAPI/System/Network/Ehome		General Resource	v2.0
GET			
Description	It is used to get the configurations of ehome.		
Query	None		
Inbound Data	None		
Success Return	Ehome		
PUT			
Description	It is used to set the configurations of ehome.		
Query	None		
Inbound Data	Ehome		
Success Return	ResponseStatus		
Notes:			

Ehome XML Block

```
<Ehome version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>          <!-- dep, xs:string -->          </hostName>
  <ipAddress>         <!-- dep, xs:string -->          </ipAddress>
  <ipv6Address> <!-- dep, xs:string -->    </ipv6Address>
  <portNo>   <!-- opt, xs:integer -->   </portNo>
  <deviceId> <!-- req, xs:string -->    </deviceId>
  <registerStatus> <!-- ro, xs:boolean --></registerStatus>
  <version>   <!-- ro, xs:string --></version>
</Ehome>
```

8.2.71 /ISAPI/System/Network/WirelessDial

/ISAPI/System/Network/WirelessDial	General Resource	v2.0
Notes: Wireless dial service		

8.2.72 /ISAPI/System/Network/WirelessDial/Interfaces

/ISAPI/System/Network/WirelessDial/Interfaces		General Resource	v2.0
GET			
Description	It is used to get all wireless dial interaces.		
Query	None		
Inbound Data	None		
Success Return	WirelessDialInterfaceList		
PUT			
Description	It is used to get all wireless dial interaces.		
Query	None		
Inbound Data	WirelessDialInterfaceList		
Success Return	ResponseStatus		
Notes:			

WirelessDialInterfaceList XML Block

```
<WirelessDialInterfaceList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <WirelessDialInterface/>
</WirelessDialInterfaceList>
```

8.2.73 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>

/ISAPI/System/Network/WirelessDial/Interfaces/<ID>		General Resource	v2.0
GET			
Description	It is used to get a wireless dial interace.		
Query	None		
Inbound Data	None		
Success Return	WirelessDialInterface		
PUT			
Description	It is used to get a wireless dial interace.		
Query	None		
Inbound Data	WirelessDialInterface		
Success Return	ResponseStatus		
Notes:			

WirelessDialInterface XML Block

```
<WirelessDialInterface version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!--req, xs:string --> </id>
  <Dial/> <!-- opt -->
  <Schedule> <!-- opt -->
  <Dialstatus/> <!-- opt -->
  <messageConfig/> <!-- opt -->
  <messageList/> <!-- opt -->
</WirelessDialInterface>
```

8.2.74 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/dial/capabilities

/ISAPI/System/Network/WirelessDial/Interfaces/<ID>/dial/capabilities		General Resource	v2.0
GET			
Description	It is used to access wireless dial dialing capabilities.		
Query	None		
Inbound Data	None		
Success Return	Dial		
Notes:			
The ID in “/Interfaces/ID” is defined as following declaration:			
1,2,3...			

Dial XML Block

```
<Dial version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled opt="true,false" def="false"> <!-- req, xs:boolean --> </enabled>
  <DialMethod opt="auto,manual"> <!-- req, xs:string, "auto, manual" --></DialMethod>
  <SwitchMethod opt="auto,4GFirst,3GFirst,manualto2G,manualto3G,manualto4G,cableFirst">
    <!--req, xs:string, "auto,4GFirst,3GFirst, manualto2G, manualto3G,manualto4G,cableFirst"
--></SwitchMethod>
  <OfflineTime min="30" max="65535"> <!-- opt, xs:integer,seconds --> </OfflineTime>
  <UIMCardNum min="1" max="32"> <!-- opt, xs:string --> </UIMCardNum>
  <DialNum min="1" max="32"> <!-- opt, xs:string --> </DialNum>
  <Username min="1" max="32"> <!-- opt, xs:string --> </Username>
  <Password min="1" max="32"> <!-- opt, xs:string --> </Password>
  <APNname min="1" max="32"> <!-- opt, xs:string --> </APNname>
  <MTU min="100" max="1500"> <!-- opt, xs: integer --> </MTU>
  <VerifyProto opt="auto,CHAP,PAP"> <!-- req, xs:string, "auto, CHAP, PAP" --> </VerifyProto>
</Dial>
```

8.2.75 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/dial

/ISAPI/System/Network/WirelessDial/Interfaces/<ID>/dia		General Resource	v2.0
I			
GET			
Description	It is used to access wireless dial dialing configuratioin.		
Query	None		
Inbound Data	None		
Success Return	Dial		
PUT			
Description	It is used to access wireless dial dialing configuratioin.		
Query	None		
Inbound Data	Dial		
Success Return	ResponseStatus		
Notes:			
The ID in “/Interfaces/ID”is defined as following declaration:			
1,2,3...			

Dial XML Block

```
<Dial version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <DialMethod> <!-- req, xs:string, "auto, manual" --> </DialMethod>
```

```

    <SwitchMethod><!-- req, xs:string, "auto,4GFirst,3GFirst, manualto2G, manualto3G,
manualto4G" --></SwitchMethod>
    <OfflineTime> <!-- opt, xs:integer --> </OfflineTime>
    <UIMCardNum> <!-- opt, xs:string --> </UIMCardNum>
    <DialNum> <!-- opt, xs:string --> </DialNum>
    <Username> <!-- opt, xs:string --> </Username>
    <Password> <!-- opt, xs:string --> </Password>
    <APNname> <!-- opt, xs:string --> </APNname>
    <MTU> <!-- opt, xs: integer --> </MTU>
    <VerifyProto> <!-- req, xs:string, "auto, CHAP, PAP" --> </VerifyProto>
</Dial>

```

8.2.76 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/schedule

/ISAPI/System/Network/WirelessDial/Interfaces/<ID>/schedule		General Resource	v2.0
GET			
Description	It is used to get/update dial schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to get/update dial schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/Interfaces/ID” is defined as following declaration:			
1,2,3...			

Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TimeBlockList size="8"> <!-- req -->
    <id> <!-- req, xs:string; id --> </id>
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>

```

```

        <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
    </TimeRange>
</TimeBlock>
</TimeBlockList>
</Schedule>

```

8.2.77 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/dialstatus

/ISAPI/System/Network/WirelessDial/Interfaces/<ID>/dialstatus		General Resource	v2.0
GET			
Description	It is used to access wireless dialing configuration.		
Query	None		
Inbound Data	None		
Success Return	Dialstatus		
PUT			
Description	It is used to access wireless dialing configuration.		
Query	None		
Inbound Data	Dialstatus		
Success Return	ResponseStatus		
Notes: The ID in “/Interfaces/ID” is defined as following declaration: 1,2,3...			

Dialstatus XML Block

```

<Dialstatus version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <RealtimeMode>      <!-- ro, xs:string, "CDMA1X, EVDO, HYBRID, GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA, HSPA, TDSCDMA, TD-LTE, FDD-LTE, LTE, UNKNOWN" -->  </RealtimeMode>
    <UIMInfo>  <!-- ro, xs:string, "UNKNOWN, VALID, NOVALID, ROAM, NOEXIST" --> </UIMInfo>
    <SignalStrength> <!-- ro, xs: integer --> </SignalStrength>
    <Dialstat>  <!-- ro, xs:string --> </Dialstat>
    <IpAddress>      <!-- req -->
    <IpAddress><!-- dep, xs:string --> </IpAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
    </IpAddress>
    <SubnetMask><!-- req -->
    <IpAddress><!-- dep, xs:string -->  </IpAddress>
    <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
    </SubnetMask >

```



```

<Gateway> <!-- req -->
<ipAddress><!-- dep, xs:string --> </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
</Gateway>
<DNSAddress> <!-- req -->
<ipAddress><!-- dep, xs:string --> </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
</DNSAddress>
</Dialstatus>

```

8.2.78 /ISAPI/System/Network/WirelessDial/Interfaces/ <ID>/connect

/ISAPI/System/Network/WirelessDial/Interfaces/<ID>/connect		General Resource	v2.0
GET			
Description	It is used to connect the wireless network.		
Query	None		
Inbound Data	None		
Success Return	Connect		
Notes:			
The ID in “/Interfaces/ID” is defined as following declaration:			
1,2,3...			

Connect XML Block

```

<Connect version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req, xs:boolean,"true,false" -->
</Connect>

```

8.2.79 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig

/ISAPI/System/Network/WirelessDial/Interfaces/IDmessageConfig		General Resource	v2.0
GET			
Description	Access the message information.		
Query	None		
Inbound Data			
Success Return	messageConfig		

PUT	
Description	configure the message information.
Query	None
Inbound Data	messageConfig
Success Return	ResponseStatus
Notes:	

MESSAGE CONFIG XML Block

```
<messageConfig version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled/> <!-- req, xs:boolean,"true,false" -->
  <SMSWhiteList/>
</messageConfig>
```

8.2.80 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig/WhiteList

/ISAPI/System/Network/WirelessDial/Interfaces/ID/messageConfig/WhiteList		General Resource	v2.0
GET			
Description	It is used to get all messages information of whitelist.		
Query	None		
Inbound Data			
Success Return	SMSWhiteList		
PUT			
Description	It is used to set all messages information of whitelist.		
Query	None		
Inbound Data	SMSWhiteList		
Success Return	ResponseStatus		
Notes:			

SMS WHITE LIST XML Block

```
<SMSWhiteList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema" >
  <ListMember/>
</SMSWhiteList>
```

8.2.81 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig/WhiteList/ID

/ISAPI/System/Network/WirelessDial/Interfaces/ID/messageConfig/WhiteList/ID		General Resource	v2.0
GET			
Description	It is used to get single messages information of whitelist.		
Query	None		
Inbound Data			
Success Return	ListMember		
PUT			
Description	It is used to set single messages information of whitelist.		
Query	None		
Inbound Data	ListMember		
Success Return	ResponseStatus		
Notes:			

WHITE LIST MEMBER XML Block

```
<ListMember version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string--> </id>
  <phoneNumber> <!-- req, xs:string --> </phoneNumber>
  <SupportEntryList> <!-- req -->
    <SupportEntry>
      <entry/> <!-- req, xs:string, "SMSAlarm, SMSCtrl, CallCtrl" -->
      <enabled/> <!-- opt, xs:boolean,"true,false" -->
    </SupportEntry>
  </SupportEntryList>
  <SMSAlarmTypeList> <!-- dep -->
    <SMSAlarmType>
      <type/> <!-- req, xs:string, "diskfull, diskerror, nicbroken, ipconflict, illaccess,
AlarmInErr, tamper, vmd, wireless, pir, callhelp, AudioDetection, scenechangeDetection,
defocusDetection, facedetection, LineDetection, FieldDetection, regionEntrance, regionExiting,
loitering, group, rapidMove, parking, unattendedBaggage, attendedBaggage" -->
      <enabled/> <!-- opt, xs:boolean,"true,false" -->
    </SMSAlarmType>
  </SMSAlarmTypeList>
  <SMSCtrlTypeList>
    <SMSCtrlType>
```

```

<type/> <!-- req, xs:string, "messageReboot" -->
<enabled/> <!-- opt, xs:boolean,"true,false" -->
</SMSCtrlType>
</SMSCtrlTypeList>
</ListMember>

```

8.2.82 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messages/ID

URI	/ISAPI/System/Network/WirelessDial/Interfaces/ID/messages/ID			Type	Resource
Function	It is used to get/send message.				
Methods	Query String(s)	Inbound Data	Return Result		
GET			<message>		
PUT		<messag>	<ResponseStatus>		
Notes					

MESSAGE CONTENT RESULT XML Block

```

<message version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- opt, xs:string--> </id>
  <phoneNum> <!-- req, xs:string--> </phoneNum>
  <status> <!-- opt, xs:string--> </status>
  <time> <!-- opt, xs:string--> </time>
  <SMSContent> <!-- opt, xs:string--> </SMSContent>
</message>

```

8.2.83 /ISAPI/System/Network/WirelessDial/Interfaces/ ID/messageConfig/messageConfigCap

/ISAPI/System/Network/WirelessDial/Interfaces/ID/messageConfig/messageConfigCap

GET	
Description	Access the message cap information.
Query	None
Inbound Data	
Success Return	messageConfigCap

MESSAGE CONFIG XML Block

```
<messageConfigCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <supportEntry/>
  <SMSAlarmType/>
  <SMSCtrlType/>
</messageConfigCap>
```

8.2.84 /ISAPI/ System/Network/GB28181Service

/ISAPI/System/Network/GB28181Service		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	GB28181Service		
PUT			
Description			
Query	None		
Inbound Data	GB28181Service		
Success Return	ResponseStatus		
Notes:			

GB28181Service XML Block

```
<GB28181Service version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <serverID> <!-- opt, xs:string, SIP ID --> </serverID>
  <port> <!-- opt, xs:integer, "1025~65535", SIP Port--> </port>
  <authPasswd> <!-- opt,wo, xs:string --> </authPasswd>
  <liveTime> <!-- opt, xs:integer,5~3600s-> </liveTime>
  <heartbeatCount> <!-- opt, xs:integer, 3~255--> </heartbeatCount>
  <autoAddIPC><!-- opt, xs:Boolean --> </autoAddIPC>
</GB28181Service>
```

8.2.85 /ISAPI/System/Network/GB28181Service/capabilities

/ISAPI/System/Network/GB28181Service/capabilities		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	GB28181Service cap		

GB28181Service cap XML Block

```
<GB28181Service version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <serverID size="20"> <!-- opt, xs:string, SIP ID --> </serverID>
  <port min="1025" max="65535"> <!-- opt, xs:integer, "1025~65535", SIP Port--> </port>
  <authPasswd size="16"> <!-- opt, xs:string, --> </authPasswd>
  <liveTime min="5" max="3600"> <!-- opt, xs:integer, 5~3600s--> </liveTime>
  <heartbeatCount min="3" max="255"> <!-- opt, xs:integer, 3~255--> </heartbeatCount>
  <autoAddIPC><!-- opt, xs:Boolean, true.false --> </autoAddIPC>
</GB28181Service>
```

8.2.86 /ISAPI/System/Network/interfaces/<ID>/wirelessServer

/ISAPI/System/Network/interfaces/<ID>/wirelessServer		General Resource	v2.0
GET			
Description	Get Device Wireless Server Info		
Query	NULL		
Inbound Data	NULL		
Success Return	WirelessServer		
PUT			
Description	Set Device Wireless Server Info		
Query	NULL		
Inbound Data	WirelessServer		
Success Return	ResponseStatus		

WirelessServer XML Block

```

<WirelessServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <wifiApEnabled><!--opt,xs:boolean,"true,false"--></wifiApEnabled>
  <broadcastEnabled><!--opt,xs:boolean,"true,false"--></broadcastEnabled>
  <wlanShareEnabled><!--opt,xs:boolean,"true,false"--></wlanShareEnabled>
  <ssid min="" max=""><!-- opt, xs:string --> </ssid>
  <WirelessSecurity/> <!-- opt -->
  <DHCPEnabled><!--opt,xs:boolean,"true,false"--></DHCPEnabled>
  <ipVersion opt="v4,v6"><!-- opt, xs:string--></ipVersion>
  <HostIpAddress><!--opt-->
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  </HostIpAddress>
  <IPMask><!--opt-->
    <subnetMask><!-- dep, xs:string, subnet mask for IPv4 address --></subnetMask>
    <bitMask><!-- dep, xs:integer, bitmask IPv6 address --></bitMask>
  </IPMask>
  <AddressPool><!--opt-->
    <startIPV4Address><!-- dep, xs:string --></startIPV4Address>
    <endIPV4Address><!-- dep, xs:string --></endIPV4Address>
    <startIPV6Address><!-- dep, xs:string --></startIPV6Address>
    <endIPV6Address><!-- dep, xs:string --></endIPV6Address>
  <AddressPool>
  <DNSAddressList size="2"><!--opt-->
    <DNSAddress><!--opt>
      <id><!--opt,xs:string,start from 1--></id>
      <ipAddress><!-- dep, xs:string --></ipAddress>
      <ipv6Address><!-- dep, xs:string --></ipv6Address>
    </DNSAddress>
  </DNSAddressList>
  <GatewayAddress>
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  <GatewayAddress>
</WirelessServer>

```

WirelessSecurity XML Block

```

<WirelessSecurity> <!-- opt -->
  <securityMode
    opt="disable,WEP,WPA-personal,WPA2-personal,WPA-RADIUS,WPA-enterprise,WPA2-enterpri

```

```

se">
<!-- opt, xs:string,-->
</securityMode>
  <WEP>
    <!-- dep, depends on <securityMode> -->
    <authenticationType opt="open,sharedkey,auto">
      <!-- req, xs:string, "" -->
    </authenticationType>
    <defaultTransmitKeyIndex min="" max="">
      <!-- req, xs:integer -->
    </defaultTransmitKeyIndex>
    <wepKeyLength opt="64,128"> <!-- opt, xs:integer "64,128" --> </wepKeyLength>
    <EncryptionKeyList size="">
      <encryptionKey
        <!-- req, xs:hexBinary, WEP encryption key in hexadecimal format -->
      </encryptionKey>
    </EncryptionKeyList>
  </WEP>
  <WPA>
    <!-- dep, depends on <securityMode> -->
    <algorithmType opt="TKIP,AES,TKIP/AES"> <!-- req, xs:string, "TKIP,AES,TKIP/AES" -->
  </algorithmType>
    <sharedKey> <!-- opt, xs:string, pre-shared key used in WPA --> </sharedKey>
    <wpaKeyLength min="" max=""> <!-- opt, xs: integer, "8-63"--> </wpaKeyLength>
    <defaultPassword><!--opt,xs:boolean,--></defaultPassword>
  </WPA>
</WirelessSecurity>

```

8.2.87 /ISAPI/System/Network/interfaces/<ID>/wireless Server/capabilities

/ISAPI/System/Network/interfaces/<ID>/wirelessServer/capabilities		General Resource	v2.0
GET			
Description	It is used to get WirelessServer configuration capability.		
Query	None		

Inbound Data	None
Success Return	WirelessServer
Notes:	

WirelessServer XML Block

```
<WirelessServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <wifiApEnabled><!--opt,xs:boolean,"true,false"--></wifiApEnabled>
  <broadcastEnabled><!--opt,xs:boolean,"true,false"--></broadcastEnabled>
  <wlanShareEnabled><!--opt,xs:boolean,"true,false"--></wlanShareEnabled>
  <ssid min="" max=""><!-- opt, xs:string --> </ssid>
  <WirelessSecurity/> <!-- req -->
  <DHCPEnabled><!--opt,xs:boolean,"true,false"--></DHCPEnabled>
  <ipVersion opt="v4,v6"><!-- opt, xs:string--></ipVersion>
  <HostIpAddress><!--opt-->
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  </HostIpAddress>
  <IPMask><!--opt-->
    <subnetMask><!-- dep, xs:string, subnet mask for IPv4 address --></subnetMask>
    <bitMask><!-- dep, xs:integer, bitmask IPv6 address --></bitMask>
  </IPMask>
  <AddressPool><!--opt-->
    <startIPv4Address><!-- dep, xs:string --></startIPv4Address>
    <endIPv4Address><!-- dep, xs:string --></endIPv4Address>
    <startIPv6Address><!-- dep, xs:string --></startIPv6Address>
    <endIPv6Address><!-- dep, xs:string --></endIPv6Address>
  <AddressPool>
  <DNSAddressList size="2"><!--opt-->
    <DNSAddress><!--opt>
      <id><!--opt,xs:string,start from 1--></id>
      <ipAddress><!-- dep, xs:string --></ipAddress>
      <ipv6Address><!-- dep, xs:string --></ipv6Address>
    </DNSAddress>
  </DNSAddressList>
  <GatewayAddress>
    <ipAddress><!-- dep, xs:string --></ipAddress>
    <ipv6Address><!-- dep, xs:string --></ipv6Address>
  <GatewayAddress>
</WirelessServer>
```

8.2.88 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList

/ISAPI/System/Network/interfaces/ID/wirelessServer/accessDeviceList		General Resource v2.0
GET		
Description	Get Access Device List info	
Query	NULL	
Inbound Data	NULL	
Success Return	accessDeviceList	
注:		

accessDeviceList XML Block

```
<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <accessDevice/>  
</accessDeviceList
```

8.2.89 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/<ID>

/ISAPI/System/Network/interfaces/ID/wireless/accessDeviceList/ID		General Resource v2.0
GET		
Description	Get Network Interfaces Wireless Access ID	
Query	NULL	
Inbound Data	NULL	
Success Return	accessDevice	
注:		

accessDevice XML Block

```
<accessDevice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <id> <!-- req, xs:integer--> </id>  
  <MACAddress> <!--opt, xs:string--> </MACAddress>  
  <ipV4Address> <!-- dep, xs:string --> </ipV4Address>  
  <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>  
</accessDevice>
```

8.2.90 /ISAPI/System/Network/interfaces/<ID>/wireless Server/accessDeviceList/capabilities

/ISAPI/System/Network/interfaces/<ID>/wireless/accessDeviceList/capabilities		General Resource	v2.0
GET			
Description	It is used to get accessDeviceList configuration capability.		
Query	None		
Inbound Data	None		
Success Return	accessDeviceList		
Notes:			

accessDeviceList XML Block

```
<accessDeviceList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <accessDevice size="4">
    <id> <!-- req, xs:integer--> </id>
    <MACAddress> <!--opt, xs:string--> </MACAddress>
    <ipV4Address> <!-- opt, xs:string --> </ipV4Address>
    <accessTime> <!-- req, xs:time, ISO8601 data --> </accessTime>
  </accessDevice>
</accessDeviceList>
```

8.3 /ISAPI/System/IO

/ISAPI/System/IO		Service	v2.0
GET			
Description	It is used to get the I/O ports information.		
Query	None		
Inbound Data	None		
Success Return	IOPortList		
Notes:			
The allocation of IDs between input and output ports must be unique.			

IOPortList XML Block

```
<IOPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
```

```

<IOInputPortList/>    <!-- opt -->
<IOOutputPortList/>   <!-- opt -->
</IOPortList>

```

8.3.1 /ISAPI/System/IO/capabilities

/ISAPI/System/IO/capabilities		General Resource	v2.0
GET			
Description	It is used to get device capability.		
Query	None		
Inbound Data	None		
Success Return	<IOCap>		
Notes:			

IOCap XML Block

```

<IOCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOInputPortNums>    <!-- opt, xs:integer--> <IOInputPortNums>
  <IOOutputPortNums> <!-- opt, xs:integer--> <IOOutputPortNums>
  <isSupportStrobeLamp> <!-- opt, xs:integer--> <isSupportStrobeLamp>
</IOCap>

```

8.3.2 /ISAPI/System/IO/status

/ISAPI/System/IO/status		General Resource	v2.0
GET			
Description	It is used to get the status of the I/O ports.		
Query	None		
Inbound Data	None		
Success Return	IOPortStatusList		
Notes:			
<p><ioPortID> refers to /IO/inputs/ID or /IO/outputs/ID. The port IDs are guaranteed to be unique across input and output ports.</p> <p><ioState> indicates whether the input port is active or inactive. In most applications, a high signal is considered active.</p>			

IOPortStatusList XML Block

```

<IOPortStatusList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOPortStatus>    <!-- req -->
    <ioPortID>      <!-- req, xs:integer, "1, 2" -->
                                                                </ioPortID>

```

```

    <ioPortType> <!-- req, xs:string, "input,output" --> </ioPortType>
    <ioState> <!-- req, xs:string, "active,inactive" --> </ioState>
  </IOPortStatus>
</IOPortStatusList>

```

8.3.3 /ISAPI/System/IO/inputs

/ISAPI/System/IO/inputs		General Resource v2.0
GET		
Description	It is used to get the Input ports information.	
Query	None	
Inbound Data	None	
Success Return	IOInputPortList	
Notes:		
IO inputs are hardwired, meaning that the inputs are statically allocated by the device and cannot be created or deleted.		

IOInputPortList XML Block

```

<IOInputPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOInputPort/> <!-- opt -->
</IOInputPort>

```

8.3.4 /ISAPI/System/IO/inputs/<ID>

/ISAPI/System/IO/inputs/ <i>ID</i>		General Resource	v2.0
GET			
Description	It is used to get particular input port information.		
Query	None		
Inbound Data	None		
Success Return	IOInputPort		
PUT			
Description	It is used to update particular input port information.		
Query	None		
Inbound Data	IOInputPort		
Success Return	ResponseStatus		
Notes:			
<p><triggering> indicates the signal conditions to trigger the input port. High/Low will continuously trigger for the duration of high/low input signal.</p> <p><name> IO input port name.</p>			

IOInputPort XML Block

```
<IOInputPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>      <!-- req, xs:integer -->      </id>
  <enabled> <!-- req, Boolean, "true,false" --> </enabled>
  <triggering> <!-- req, xs:string, "high,low" --> <triggering>
  <name> <!-- opt, xs:string --> </name>
</IOInputPort>
```

8.3.5 /ISAPI/System/IO/inputs/<ID>/status

/ISAPI/System/IO/inputs/ID/status		General Resource	v2.0
GET			
Description	It is used to get the status of a particular input port.		
Query	None		
Inbound Data	None		
Success Return	IOPortStatus		
Notes:			
See /IO/status for an explanation of the fields.			

8.3.6 /ISAPI/System/IO/outputs

/ISAPI/System/IO/outputs		General Resource	v2.0
GET			
Description	It is used to get the output ports information.		
Query	None		
Inbound Data	None		
Success Return	IOOutputPortList		
Notes:			
IO outputs are hardwired, meaning that the outputs are statically allocated by the device and cannot be created or deleted.			

IOOutputPortList XML Block

```
<IOOutputPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IOOutputPort/> <!-- opt -->
</IOOutputPort>
```

8.3.7 /ISAPI/System/IO/outputs/<ID>

/ISAPI/System/IO/outputs/ID

General Resource

v2.0

GET	
Description	It is used to get particular output port information.
Query	None
Inbound Data	None
Success Return	IOOutputPort
PUT	
Description	It is used to update particular output port information.
Query	None
Inbound Data	IOOutputPort
Success Return	ResponseStatus

Notes:

<PowerOnState> defines the output port configuration when the device is powered on.

<defaultState> is the default output port signal when it is not being triggered.

<outputState> is the output port signal when it is being triggered. Pulse will cause the output port to send a signal (opposite of the <defaultState>) for a duration specified by the <pulseDuration> tag.

<pulseDuration> is the duration of a output port signal when it is being triggered. It must be provided if the <outputState> is “pulse”.

IOOutputPort XML Block

```
<IOOutputPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:integer, "2" -->          </id>
  <PowerOnState>  <!-- req -->
    <defaultState> <!--ro, req, xs:string, "high,low" --> </defaultState>
    <outputState>  <!--ro, req, xs:string, "high,low,pulse" --> </outputState>
    <pulseDuration> <!-- dep, xs:integer, milliseconds --> </pulseDuration> //延时
  </PowerOnState>
  <name> <!--opt, xs:string--> </name>
</IOOutputPort>
```

8.3.8 /ISAPI/System/IO/outputs/<ID>/status

/ISAPI/System/IO/outputs/ID/status		General Resource	v2.0
GET			
Description	It is used to get the status of a particular output port.		
Query	None		

Inbound Data	None
Success Return	IOPortStatus
Notes: See /IO/status for an explanation of the fields.	

8.3.9 /ISAPI/System/IO/outputs/<ID>/trigger

/ISAPI/System/IO/outputs/ID/trigger		General Resource	v2.0
PUT			
Description	It is used to manually trigger a particular output port.		
Query	None		
Inbound Data	IOPortData		
Success Return	ResponseStatus		
Notes:			
Note that the ID used here MUST correspond to the ID in /IO/outputs/ID.			
The IO output port is toggled to a high or low signal accordingly.			

IOPortData XML Block

```
<IOPortData xmlns="http://www.isapi.org/ver20/XMLSchema">
  <outputState>    <!-- req, xs:string, "high,low" -->  </outputState>
</IOPortData>
```

8.3.10 /ISAPI/System/IO/outputs/strobelampConf

/ISAPI/System/IO/outputs/strobelampConf		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	StrobeLampConf		
PUT			
Description			
Query	None		
Inbound Data	StrobeLampConf		
Success Return	ResponseStatus		
Notes:			

StrobeLampConf XML Block

```
<StrobeLampConf  "version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema >
```



```

<LineLock> <!-- opt -->
  <signalFrequency> <!-- opt, ro, xs:string "0-50hz, 60hz" --> </signalFrequency>
  <phase> <!-- opt, xs:integer --> </phase>
  <enabled> <!-- opt, xs:Boolean --> </enabled>
</LineLock>
<StrobeLampList>
  <StrobeLamp "version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <IOWorkMode> <!-- req, xs:string, "strobelamp,alarmoutput" --> </IOWorkMode>
    <syncOutputNo> <!-- req, xs:string, "F1,F2,F3" --> </syncOutputNo>
    <defaultState> <!-- opt, xs:string, "high,low" --> </defaultState>
    <workingState> <!-- opt, xs:string, "high,low,pulse" --> </workingState>
    <frequencyMultiplication> <!-- opt, xs:integer, 0-15 --> </frequencyMultiplication>
    <dutyRatio> <!-- opt, xs:integer,0-40 --> </dutyRatio>
    <FlashlightTime>
      <enabled> <!-- req, xs:Boolean --> </enabled>
      <Schedule> <!--dep-->
        <scheduleType><!--req,xs:string,"day,night"--></scheduleType>
        <TimeRange> <!-- req -->
          <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
          <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
        </TimeRange>
      </Schedule>
    </FlashlightTime>
  </StrobeLamp>
</StrobeLampList>
</StrobeLampConf>

```

8.4 /ISAPI/System/Video

/ISAPI/System/Video	Service v2.0
Notes:	

8.4.1 /ISAPI/System/Video/capabilities

/ISAPI/System/Video/capabilities		General Resource v2.0
GET		
Description	It is used to get device capability.	
Query	None	
Inbound Data	None	
Success Return	<VideoCap>	

Notes:

VideoCap XML Block

```
<VideoCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <videoInputPortNums> <!-- opt, xs:integer--> <videoInputPortNums>
  <videoOutputPortNums> <!-- opt, xs:integer--> <videoOutputPortNums>
  <isSupportHeatmap> <!-- opt, xs:boolean--> </isSupportHeatmap>
  <isSupportCounting> <!-- opt, xs:boolean--> </isSupportCounting>
  <countingType> <!-- dep, xs:string, "human,object"--> </countingType>
</VideoCap>
```

8.4.2 /ISAPI/System/Video/inputs

/ISAPI/System/Video/inputs		General Resource	v2.0
GET			
Description	It is used to get the video inputs configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	VideoInput		
Notes:			
An IP media device may contain a set of video inputs. These inputs are hardwired by the device, meaning that the IDs can be discovered but not created or deleted.			

VideoInput XML Block

```
<VideoInput version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoInputChannelList/>  <!-- opt -->
</VideoInput>
```

8.4.3 /ISAPI/System/Video/inputs/channels

ISAPI/System/Video/inputs/channels		General Resource	v2.0
GET			
Description	It is used to get the video input channels configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	VideoInputChannelList		
Notes:			
Since video input channels are resources that are defined by the hardware configuration of the			

device, they cannot be created or deleted.

VideoInputChannelList XML Block

```
<VideoInputChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoInputChannel/>    <!-- opt -->
</VideoInputChannelList>
```

8.4.4 /ISAPI/System/Video/inputs/channels/<ID>

ISAPI/System/Video/inputs/channels/ID		General Resource	v2.0
GET			
Description	It is used to get a particular video input channel configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	VideoInputChannel		
PUT			
Description	It is used to update a particular video input channel configuration on an IP media device.		
Query	None		
Inbound Data	VideoInputChannel		
Success Return	ResponseStatus		
Notes:			

VideoInputChannel XML Block

```
<VideoInputChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <inputPort> <!-- req, xs:string --> </inputPort>
  <videoInputEnabled> <!-- opt, xs:boolean --> </videoInputEnabled>
  <name> <!-- opt, xs:string --> </name>
  <videoFormat> <!-- opt, xs:string, "PAL, NTSC" --> </videoFormat>
  <portType> <!--opt, xs:string, "SDI, OPT, VGA, HDMI, YPbPr" --> </portType>
  <resDesc> <!--opt, xs:string--> </resDesc>
</VideoInputChannel>
```

8.4.5 /ISAPI/System/Video/inputs/channels/<ID>/focus

/ISAPI/System/Video/inputs/channels/ID/focus		General Resource	v2.0
PUT			
Description	Manually focus a video input channel.		
Query	None		
Inbound Data	FocusData		
Success Return	ResponseStatus		
Notes:			
<focus>: focus vector data. Negative numbers focus near, positive numbers focus far. Numerical value is a percentage of the maximum focus speed of the lens module.			

FocusData XML Block

```
<FocusData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <focus> <!-- req, xs:intger -->    </focus>
</FocusData>
```

8.4.6 /ISAPI/System/Video/inputs/channels/<ID>/iris

/ISAPI/System/Video/inputs/channels/ID/iris		General Resource	v2.0
PUT			
Description	Manually adjust iris for a video input channel.		
Query	None		
Inbound Data	IrisData		
Success Return	ResponseStatus		
Notes:			
<iris> negative numbers close iris, positive numbers open iris. Numerical value is a percentage of the maximum iris speed of the lens module.			

IrisData XML Block

```
<IrisData version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <iris>    <!-- req, xs:intger -->    </iris>
</IrisData>
```

8.4.7 /ISAPI/System/Video/inputs/channels/<ID>/privacyMask

/ISAPI/System/Video/inputs/channels/ID/privacyMask		General Resource	v2.0
GET			
Description	It is used to get the privacy masking configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	PrivacyMask		
PUT			
Description	It is used to update the privacy masking configuration for a video input channel.		
Query	None		
Inbound Data	PrivacyMask		
Success Return	ResponseStatus		
Notes:			
Privacy masking can be enabled and the region list configured per channel.			

PrivacyMask XML Block

```
<PrivacyMask version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <normalizedScreenSize>  <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <PrivacyMaskRegionList/>  <!-- opt -->
  <regionType> <!-- opt, xs:string,"quadrilateral" --> </regionType>
</PrivacyMask>
```

8.4.8 /ISAPI/System/Video/inputs/channels/<ID>/privacyMask/regions

/ISAPI/System/Video/inputs/channels/ID/privacyMask/regions		General Resource	v2.0
GET			
Description	It is used to get the privacy mask regions configuration for a video input channel.		

Query	None
Inbound Data	None
Success Return	PrivacyMaskRegionList
PUT	
Description	It is used to update the privacy mask regions configuration for a video input channel.
Query	None
Inbound Data	PrivacyMaskRegionList
Success Return	ResponseStatus
POST	
Description	It is used to add a privacy mask region for a video input channel.
Query	None
Inbound Data	PrivacyMaskRegion
Success Return	ResponseStatus
DELETE	
Description	It is used to delete the privacy mask regions configuration for a video input channel.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: Privacy masking consists of a set of regions that are combined to grey or black out areas of a video input.	

PrivacyMaskRegionList XML Block

```
<PrivacyMaskRegionList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <PrivacyMaskRegion/>  <!-- opt -->
</PrivacyMaskRegionList>
```

8.4.9 /ISAPI/System/Video/inputs/channels/<ID>/privacyMask/regions/<ID>

/ISAPI/System/Video/inputs/channels/ID/privacyMask/regions/ID		General Resource v2.0
GET		
Description	It is used to get a particular privacy mask region configuration for a video input channel.	
Query	None	
Inbound Data	None	

Success Return	PrivacyMaskRegion
PUT	
Description	It is used to update a particular privacy mask region configuration for a video input channel.
Query	None
Inbound Data	PrivacyMaskRegion
Success Return	ResponseStatus
DELETE	
Description	It is used to delete a particular privacy mask region configuration for a video input channel.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: Region coordinates are dependent on normalized screen size. The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards. Only support the rectangular region which will be “drawn” from four coordinates. The four points is counterclockwise direction, and the beginning point is the top-left point. Ordering of <PrivacyMaskRegion> blocks is insignificant.	

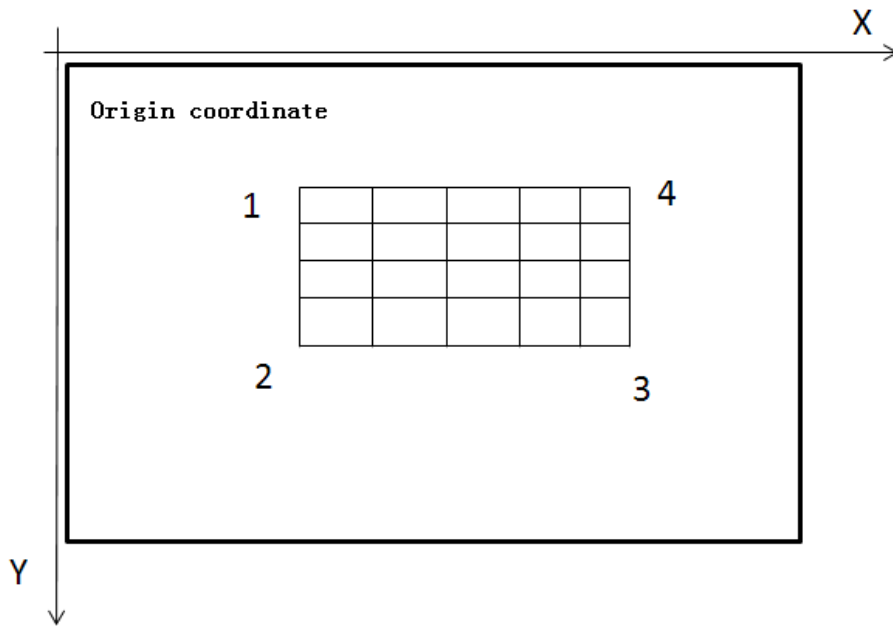
PrivacyMaskRegion XML Block

```

<PrivacyMaskRegion version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <enabled> <!-- req,xs:boolean --> </enabled>
  <RegionCoordinatesList> <!-- req -->
    <RegionCoordinates> <!-- req -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  <privacymaskName><!-- opt, xs:string--></privacymaskName>
  <maskType>
    <!--opt, xs:string "gray,red,yellow,blue,orange,green,
      transparent,half-transparent,mosaic"-->
  </maskType>
  <zoomdoorlimit> <!-- opt, xs:integer "10-1000"--> </zoomdoorlimit>
</PrivacyMaskRegion>

```

Example for priavacyMask Region:



8.4.10 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection

/ISAPI/System/Video/inputs/channels/ID/tamperDetection		General Resource	v2.0
GET			
Description	It is used to get the shelter alarm configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	TamperDetection		
PUT			
Description	It is used to update the shelter alarm configuration for a video input channel.		
Query	None		
Inbound Data	TmaperDetection		
Success Return	ResponseStatus		
Notes:			

TameprDetection XML Block

```
<TamperDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
```



```

    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
    <normalizedScreenSize>
      <tampersensitivityLevel>
        <!--req, xs:integer, 0..100, 0 is the least sensitive -->
      </tampersensitivityLevel>
    <TamperDetectionRegionList/>
    <!-- req -->
  </ TamperDetection >

```

8.4.11 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection/regions

/ISAPI/System/Video/inputs/channels/ID/tamperDetection/regions		General Resource v2.0
GET		
Description	It is used to get the shelter alarm regions configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	TamperDetectionRegionList	
PUT		
Description	It is used to update the shelter alarm regions configuration for a video input channel.	
Query	None	
Inbound Data	TamperDetectionRegionList	
Success Return	ResponseStatus	
POST		
Description	It is used to add a shelter alarm region for a video input channel.	
Query	None	
Inbound Data	TamperDetectionRegion	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete the shelter alarm regions configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		

TamperDetectionRegionList XML Block

```
<TamperDetectionRegionList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TamperDetectionRegion/> <!-- opt -->
</ TamperDetectionRegionList >
```

8.4.12 /ISAPI/System/Video/inputs/channels/<ID>/tamperDetection/regions/<ID>

/ISAPI/System/Video/inputs/channels/ID/tamperDetection/regions/ID		General Resource v2.0
GET		
Description	It is used to get a particular shelter alarm region configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	TamperDetectionRegion	
PUT		
Description	It is used to update a particular shelter alarm region configuration for a video input channel.	
Query	None	
Inbound Data	TamperDetectionRegion	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete a particular shelter alarm region configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		
Region coordinates are dependent on video resolution. Only support the rectangular region which will be “drawn” from four coordinates. The four points is clockwise direction, and the beginning point is the low-left point.		
Ordering of <TamperDetectionRegion> blocks is insignificant.		

TamperDetectionRegion XML Block

```
<TamperDetectionRegion version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string, id -->          </id>
  <sensitivityLevel>
```

```

    <!--req, xs:integer, 0..100, 0 is the least sensitive -->
  </sensitivityLevel>
  <RegionCoordinatesList> <!-- req -->
    <RegionCoordinates> <!-- req -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</TamperDetectionRegion>

```

8.4.13 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection

/ISAPI/System/Video/inputs/channels/ID		Service	v2.0
/MotionDetection			
GET			
Description	It is used to get the motion detection configuration for all video input channels.		
Query	None		
Inbound Data	None		
Success Return	MotionDetection		
PUT			
Description	It is used to update the motion detection configuration for a video input channel.		
Query	None		
Inbound Data	MotionDetection		
Success Return	ResponseStatus		
Notes:			
If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID.			

MotionDetection XML Block

```

<MotionDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <enableHighlight> <!-- opt, xs:boolean --> </enableHighlight>
  <samplingInterval> <!-- opt, xs:integer, number of frames --> </samplingInterval>
  <startTriggerTime> <!-- opt, xs:integer, milliseconds --> </startTriggerTime>
  <endTriggerTime> <!-- opt, xs:integer, milliseconds --> </endTriggerTime>
  <regionType> <!-- ro, req, xs:string, "grid, roi, none" --> </regionType>
  <Grid> <!-- dep -->

```

```

    <rowGranularity>    <!-- ro, req, xs:integer -->    </rowGranularity>
    <columnGranularity> <!-- ro, req, xs:integer -->    </columnGranularity>
</Grid>
<ROI>    <!-- dep -->
    <normalizedScreenWidth> <!-- ro, req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- ro, req, xs:integer --></normalizedScreenHeight>
</ROI>
<MotionDetectionLayout/>    <!-- req -->
</MotionDetection>

```

8.4.14 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection/layout

/ISAPI/System/Video/inputs/channels/ <i>ID</i> /MotionDetection/layout	General Resource	v2.0
Notes:		

MotionDetectionLayout XML Block

```

<MotionDetectionLayout version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sensitivityLevel>    <!-- req -->
    <!-- req, xs:integer, "0-100", 0 is least sensitive -->
  </sensitivityLevel>
  <layout>
    <gridMap> <!--dep, xs:hexstring--> </gridMap>
    <roiMap/>
  </layout>
</MotionDetectionLayout>

```

8.4.15 /ISAPI/System/Video/inputs/channels/<ID>/motionDetection/layout/gridLayout

/ISAPI/System/Video/inputs/channels/ <i>ID</i> /MotionDetection/layout/gridLayout	General Resource	v2.0
GET		
Description	It is used to get the motion detection regions configuration for a video input channel.	

Query	None
Inbound Data	None
Success Return	MotionDetectionGridLayout
PUT	
Description	It is used to update the motion detection regions configuration for a video input channel.
Query	None
Inbound Data	MotionDetectionGridLayout
Success Return	ResponseStatus
Notes: All motion detection regions share a sensitivity level. It is possible to define mask regions that are subtracted from other regions. <gridMap> required when region type is grid. A “1” denotes an grid to detect and a “0” no to detect. The first cell is in the upper left corner. Then the cell order goes first from left to right and then from up to down (see flowing example). If the number of cells is not a multiple of 8 the last byte is filled with zeros.	

MotionDetectionGridLayout XML Block

```
<MotionDetectionGridLayout version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sensitivityLevel>    <!-- req -->
    <!-- req, xs:integer, "0-100", 0 is least sensitive -->
  </sensitivityLevel>
  <gridMap> <!--dep, xs:hexstring--> </gridMap>
</MotionDetectionGridLayout>
```

8.4.16 Motion Detection Example

Set up Motion Detection

The following command configures two rectangular detection regions, with one “masked” region on video input channel ID 1. Example assumes a resolution of 1600x1200 and a grid motion detection algorithm:

- Motion detection is enabled with a granularity of a 22x18 grid (each row will reserve 2 grids, the actual region is 24x18; but generally the last two rows are ignored.) – this means the detection region coordinates will ultimately be defined by a grid of 432 regions. For a resolution of 1600x1200, this means that each “granule” will be 1600/22 x 1200/18 pixels. (If a coordinate doesn’t exactly match the configured granularity, it should be mapped internally to the nearest possible point).

Description	It is used to update the motion detection configuration for a video input channel.
Query	None
Inbound Data	MotionDetectionExt
Success Return	ResponseStatus
Notes: If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID. The devices supports two kinds of motion detection, <activeMode> is used to check current motion detection mode, if the value is normal, please refer to /motionDetection branch; if the value is expert, please refer to /motionDetectionExt branch.	

MotionDetectionExt XML Block

```

<MotionDetectionExt version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <minObjectSize>
    <!-- opt, xs:integer, min number of pixels per object -->
  </minObjectSize>
  <maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
  </maxObjectSize>
  <ROI> <!-- dep -->
    <normalizedScreenWidth> <!-- ro, req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- ro, req, xs:integer --></normalizedScreenHeight>
  </ROI>
  <enableHighlight> <!-- opt, xs:boolean --> </enableHighlight>
  <MotionDetectionSwitch/> <!--opt -->
  <activeMode> <!-- ro, xs:string, "normal,expert"> <activeMode>
  <MotionDetectionRegionList/> <!-- req -->
</MotionDetectionExt>

```

8.4.18 /ISAPI/System/Video/inputs/channels/<ID>/motionDetectionExt/regions

/ISAPI/System/Video/inputs/channels/ID /motionDetectionExt/regions	General Resource v2.0
GET	

MotionDetectionRegionList XML Block

```

<MotionDetectionRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">

```

```
<MotionDetectionRegion/> <!-- opt -->
</MotionDetectionRegionList>
```

8.4.19 /ISAPI/System/Video/inputs/channels/<ID>/motionDetectionExt/regions/<ID>

/ISAPI/System/Video/inputs/channels/ID		General Resource	v2.0
/motionDetectionExt/ID/regions/ID			
GET			
Description	It is used to get the motion detection configuration for all video input channels.		
Query	None		
Inbound Data	None		
Success Return	MotionDetectionRegion		
PUT			
Description	It is used to update the motion detection configuration for a video input channel.		
Query	None		
Inbound Data	MotionDetectionRegion		
Success Return	ResponseStatus		
Notes:			
If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID.			

MotionDetectionRegion XML Block

```
<MotionDetectionRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --></id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel><!-- req -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
  </sensitivityLevel>
  <daySensitivityLevel> <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive-->
  </daySensitivityLevel>
  <nightSensitivityLevel> <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive-->
  </nightSensitivityLevel>
  <objectSize><!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
  </objectSize>
```



```

<dayObjectSize> <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
</dayObjectSize>
<nightObjectSize>    <!-- dep -->
    <!-- req, xs:integer, 0..100, 0 is least sensitive -->
</nightObjectSize>
<RegionCoordinatesList> <!-- req -->
    <RegionCoordinates>    <!-- Note: at least two coordinates are required -->
        <positionX>    <!-- req, xs:integer --> </positionX>
        <positionY>    <!-- req, xs:integer --> </positionY>
    </RegionCoordinates>
</RegionCoordinatesList>
</MotionDetectionRegion>

```

8.4.20 /ISAPI/System/Video/inputs/channels/<ID>/motionDetectionExt/switch

/ISAPI/System/Video/inputs/channels/ID/motionDetectionExt/switch		General Resource	v2.0
GET			
Description	It is used to get the motion detection switch day and night settings.		
Query	None		
Inbound Data	None		
Success Return	MotionDetectionSwitch		
PUT			
Description	It is used to update the motion detection switch day and night settings.		
Query	None		
Inbound Data	MotionDetectionSwitch		
Success Return	ResponseStatus		
Notes:			
If motion detection is supported by the device, a motion detection ID will be allocated for each video input channel ID. The motion detection ID must correspond to the video input channel ID.			

MotionDetectionSwitch XML Block

```

<MotionDetectionSwitch version="2.0"
    xmlns="http://www.isapi.com/ver10/XMLSchema">
    <type>
        <!-- opt, xs:string, "off,auto,schedule"-->
    </type>

```

```

<Schedule> <!--dep-->
  <scheduleType><!--req,xs:string,"day,night"></scheduleType>
  <TimeRange> <!-- req -->
    <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
    <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
  </TimeRange>
</Schedule>
</MotionDetectionSwitch>

```

8.4.21 /ISAPI/System/Video/inputs/channels/<ID>/overlays

/ISAPI/System/Video/inputs/channels/ID/overlays		General Resource	v2.0
GET			
Description	It is used to get the overlays configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	VideoOverlay		
PUT			
Description	It is used to update the overlays configuration for a video input channel.		
Query	None		
Inbound Data	VideoOverlay		
Success Return	ResponseStatus		
Notes:			
The <fontSize> is defined as following declaration.			
"adaptive,16*16,32*32,48*48,64*64"			

VideoOverlay XML Block

```

<VideoOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!--ro, req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!--ro, req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <attribute> <!--opt-->
    <transparent> <!-- req, xs:boolean --></transparent>
    <flashing> <!-- req, xs:boolean --> <flashing>
  </attribute>
  <TextOverlayList/> <!-- opt -->
  <DateTimeOverlay /> <!-- opt -->
  <channelNameOverlay /> <!-- opt -->

```

```

<fontSize> <!-- opt, xs:string,"adaptive,16*16,32*32,48*48,64*64" --> </fontSize>
<frontColorMode> <!-- opt, string,"auto,customize" --> </frontColorMode>
<frontColor> <!-- dep, xs: hexBinary;color --> </frontColor>
<BatteryPowerOverlay/><!-- opt -->
<alignment><!--opt,xs:string"customize,alignRight,alignLeft"--></alignment>
<publicSecurity> <!-- req, xs:boolean--> </publicSecurity>
</VideoOverlay>

```

8.4.22 /ISAPI/System/Video/inputs/channels/<ID>/overlays/text

/ISAPI/System/Video/inputs/channels/ID/overlays/text		General Resource	v2.0
GET			
Description	It is used to get the text overlays configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	TextOverlayList		
PUT			
Description	It is used to update the text overlays configuration for a video input channel.		
Query	None		
Inbound Data	TextOverlayList		
Success Return	ResponseStatus		
POST			
Description	It is used to add a text overlay for a video input channel.		
Query	None		
Inbound Data	TextOverlay		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete the text overlays configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
A set of text overlays is managed. They are composited over the video signal in increasing ID-order.			

TextOverlayList XML Block

```
<TextOverlayList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TextOverlay/>    <!-- opt -->
</TextOverlayList>
```

8.4.23 /ISAPI/System/Video/inputs/channels/<ID>/overlays/text/<ID>

/ISAPI/System/Video/inputs/channels/ID/overlays/text/ID		General Resource	v2.0
GET			
Description	It is used to get a particular text overlay configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	TextOverlay		
PUT			
Description	It is used to update a particular text overlay configuration for a video input channel.		
Query	None		
Inbound Data	TextOverlay		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete a particular text overlay configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
Position coordinates are dependent on normalized screen size.			
The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards.			

TextOverlay XML Block

```
<TextOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->      </id>
  <enabled>            <!-- req, xs:boolean -->    </enabled>
  <positionX>          <!-- req, xs:float -->      </positionX>
  <positionY>          <!-- req, xs:float -->      </positionY>
  <displayText>        <!-- req, xs:string -->    </displayText>
</TextOverlay>
```

8.4.24 /ISAPI/System/Video/inputs/channels/<ID>/overlays/channelNameOverlay

/ISAPI/System/Video/inputs/channels/ID/overlays/channelNameOverlay		General Resource v2.0
GET		
Description	It is used to get a particular channel name configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	channelNameOverlay	
PUT		
Description	It is used to update a particular channel name configuration for a video input channel.	
Query	None	
Inbound Data	channelNameOverlay	
Success Return	ResponseStatus	
Notes: Position coordinates are dependent on normalized screen size. The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards.		

channelNameOverlay XML Block

```
<channelNameOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled> //Show channel name
  <positionX> <!-- req, xs:integer;coordinate --> </positionX>
  <positionY> <!-- req, xs:integer;coordinate --> </positionY>
</channelNameOverlay>
```

8.4.25 /ISAPI/System/Video/inputs/channels/<ID>/overlays/dateTimeOverlay

/ISAPI/System/Video/inputs/channels/ID/overlays/dateTime		General Resource v2.0
GET		
Description	It is used to get the OSD configuration for a video input channel.	
Query	None	

Inbound Data	None
Success Return	DatetimeOverlay
PUT	
Description	It is used to update the OSD configuration for a video input channel.
Query	None
Inbound Data	DatetimeOverlay
Success Return	ResponseStatus
Notes: Position coordinates are dependent on normalized screen size. The computer screen coordinate system is used, which the origin coordinate is on top-left corner, the Y axis is vertical downwards, the X axis is horizontal rightwards.	

DateTimeOverlay XML Block

```
<DateTimeOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled> //check whether to display date
  <positionX> <!-- req, xs:integer;coordinate --> </positionX>
  <positionY> <!-- req, xs:integer;coordinate --> </positionY>
  <dateStyle>
    <!-- opt, xs:string, "YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY, CHR-YYYY-MM-DD,
    CHR-MM-DD-YYYY, CHR-DD-MM-YYYY, CHR-YYYY/MM/DD, CHR-MM/DD/YYYY,
    CHR-DD/MM/YYYY" -->
  </dateStyle>
  <timeStyle> <!--opt, xs:string, "12hour, 24hour" --> </timeStyle>
  <displayWeek> <!-- opt, xs:boolean --> </displayWeek> //check whether to display week
</DateTimeOverlay>
```

8.4.26 /ISAPI/System/Video/inputs/channels/<ID>/image

e

/ISAPI/System/Video/inputs/channels/ID/image		General Resource	v2.0
GET			
Description	Access on-screen Image for a special channel.		
Query	None		
Inbound Data	None		
Success Return	ImageOverlayList		
PUT			
Description	Configure the on-screen Image for a special channel.		
Query	None		
Inbound Data	ImageOverlayList		

Success Return	ResponseStatus
Notes:	

ImageOverlayList XML Block

```
<ImageOverlayList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ImageOverlay/> <!-- opt -->
</ImageOverlayList>
```

8.4.27 /ISAPI/System/Video/inputs/channels/<ID>/image/<ID>

/ISAPI/System/Video/inputs/channels/ID/image/ID		General Resource	v2.0
GET			
Description	Access on-screen Image for a special channel.		
Query	None		
Inbound Data	None		
Success Return	ImageOverlay		
PUT			
Description	Configure the on-screen Image for a special channel.		
Query	None		
Inbound Data	ImageOverlay		
Success Return	ResponseStatus		
Notes:			

ImageOverlay XML Block

```
<ImageOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <imageName> <!-- req, xs:string --> </imageName>
  <positionX> <!-- opt, xs:integer;coordinate --> </positionX>
  <positionY> <!-- opt, xs:integer;coordinate --> </positionY>
  <transparentColorEnabled> <!-- opt, xs:boolean --> </transparentColorEnabled>
  <transparentColor> <!-- dep, xs:hexBinary;color --> </transparentColor>
  <imageWidth> <!--opt, xs:integer--> </imageWidth>
  <imageHeight> <!--opt, xs:integer--> </imageHeight>
</ImageOverlay>
```

8.4.28 /ISAPI/System/Video/inputs/channels/<ID>/image/picture

/ISAPI/System/Video/inputs/channels/ID/image/picture	
POST	
Description	Configure the on-screen Image for a special channel.
Query	None
Inbound Data	Picture over HTTP
Success Return	ResponseStatus
Notes:	

8.4.29 /ISAPI/System/Video/inputs/channels/<ID>/heatMap

/ISAPI/System/Video/inputs/channels/ID/heatMap		General Resource	v2.0
GET			
Description	It is used to get the heat map configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	HeatMap		
PUT			
Description	It is used to update the heat map configuration for a video input channel.		
Query	None		
Inbound Data	HeatMap		
Success Return	ResponseStatus		
Notes:			
Heat map can be enabled and the region list configured per channel.			

HeatMap XML Block

```
<HeatMap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <normalizedScreenSize>  <!--opt-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <HeatMapRegionList/>  <!-- opt -->
```

</HeatMap>

8.4.30 /ISAPI/System/Video/inputs/channels/<ID>/heatMap/capabilities

/ISAPI/System/Video/inputs/channels/<ID>/heatMap/capabilities		General Resource	v2.0
GET			
Description	It is used to get the heat map capabilities.		
Query	None		
Inbound Data	None		
Success Return	HeatMap		
Notes:			

HeatMap XML Block

```
<HeatMap version="2.0" xmlns="http://www.std-cgi.com/ver20/XMLSchema">
  <enabled opt="true,false">false</enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth>1000</normalizedScreenWidth>
    <normalizedScreenHeight>1000</normalizedScreenHeight>
  </normalizedScreenSize>
  <sensitivityLevel min="1" max="100">50</sensitivityLevel>
  <backgroundUpdateRate min="1" max="100">50</backgroundUpdateRate>
  <sceneChangeLevel min="1" max="100">50</sceneChangeLevel>
  <targetTracking opt="true,false">false</targetTracking>
  <minObjectSize min="1" max="100">50</minObjectSize>
  <HeatMapRegionList size="8" >
    <HeatMapRegion>
      <id>1</id>
      <RegionCoordinatesList size="10" min="4">
        </RegionCoordinatesList>
      </HeatMapRegion>
    </HeatMapRegionList>
    <isSupportHeatMapPicInfo opt="true,false">false</isSupportHeatMapPicInfo>
  </HeatMap>
```

8.4.31 /ISAPI/System/Video/inputs/channels/<ID>/heatMap/regions

/ISAPI/System/Video/inputs/channels/ID/heatMap/regions		General Resource v2.0
GET		
Description	It is used to get the heat map regions configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	HeatMapRegionList	
PUT		
Description	It is used to update the heat map regions configuration for a video input channel.	
Query	None	
Inbound Data	HeatMapRegionList	
Success Return	ResponseStatus	
POST		
Description	It is used to add a heat map region for a video input channel.	
Query	None	
Inbound Data	HeatMapRegion	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete the heat map regions configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		

HeatMapRegionList XML Block

```
<HeatMapRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <HeatMapRegion/>  <!-- opt -->
</HeatMapRegionList>
```

8.4.32 /ISAPI/System/Video/inputs/channels/<ID>/heatMap/regions/<ID>

/ISAPI/System/Video/inputs/channels/ID/heatMap/regions/ID		General Resource v2.0
GET		
Description	It is used to get a particular heat map region configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	HeatMapRegion	
PUT		
Description	It is used to update a particular heat map region configuration for a video input channel.	
Query	None	
Inbound Data	HeatMapRegion	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete a particular heat map region configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		

HeatMapRegion XML Block

```
<HeatMapRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <sensitivityLevel> <!-- req, xs:integer --> </sensitivityLevel>
  <backgroundUpdateRate> <!-- opt, xs:integer --> </backgroundUpdateRate>
  <sceneChangeLevel> <!-- opt, xs:integer --> </sceneChangeLevel>
  <targetTracking> <!-- opt, xs:boolean --> </targetTracking>
  <minObjectSize> <!-- opt, xs:integer --> </minObjectSize>
  <RegionCoordinatesList> <!-- req -->
    <RegionCoordinates> <!-- req -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</HeatMapRegion>
```

8.4.33 /ISAPI/System/Video/inputs/channels/<ID>/heatMap/search

/ISAPI/System/Video/inputs/channels/ID/heatMap/search		General Resource	v2.0
h			
GET			
Description	It is used to get the value of heat for a time interval.		
Query	None		
Inbound Data	HeatMapDataDescription		
Success Return	HeatMapDataResult		
POST			
Description	It is used to get the value of heat for a time interval.		
Query	None		
Inbound Data	HeatMapDataDescription		
Success Return	HeatMapDataResult		
Notes:			

HeatMapDataDescription XML Block

```
<HeatMapDataDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly, yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
  </timeSpanList>
</HeatMapDataDescription>
```

HeatMapDataResult XML Block

```
<HeatMapDataResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStrg><!-- req, xs:string--></responseStatusStrg>
  <numOfMatches><!-- req, xs:integer --></numOfMatches>
  <matchList> <!-- opt -->
    <matchElement> <!-- opt -->
      <timeSpan> <!-- opt -->
        <startTime><!-- req, xs:datetime --></startTime>
```

```

        <endTime><!-- req, xs:datetime --></endTime>

    </timeSpan>

    <value><!-- req, xs:integer --></value>

</matchElement>
</matchList>
</HeatMapDataResult>

```

8.4.34 /ISAPI/System/Video/inputs/channels/ID/heatMap/picture

/ISAPI/System/Video/inputs/channels/ID/heatMap/picture		General Resource	v2.0
e			
GET			
Description	It is used to get the picture of heat map.		
Query	starttime endtime		
Inbound Data	None		
Success Return	Picture over HTTP		
Notes:			
Examples:			
GET			
/ISAPI/System/Video/inputs/channels/ID/heatMap/picture?starttime=2014-01-11T11:00:00Z&endtime=2014-01-11T11:59:59Z			

8.4.35 /ISAPI/System/Video/inputs/channels/ID/heatMap/pictureInfo

/ISAPI/System/Video/inputs/channels/ID/heatMap/pictureInfo		General Resource	v2.0
GET			
Description	It is used to get the picture of heat map Info.		
Query	None		
Inbound Data	HeatMapDataDescription		
Success Return	HeatMapPicInfo		
Notes:			

HeatMapDataDescription XML Block

```
<HeatMapDataDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly, yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
      <timeSpan>
    </timeSpan>
  </timeSpanList>
</HeatMapDataDescription>
```

HeatMapPicInfo XML Block

```
<HeatMapPicInfo version="2.0" xmlns="http://www.std-cgi.com/ver20/XMLSchema">
  <MaxValue><!-- opt, xs:integer,"0~365*24*60*60" --></MaxValue>
  <MinValue><!-- opt, xs:integer,"0~365*24*60*60" --></MinValue>
</HeatMapPicInfo>
```

8.4.36 /ISAPI/System/Video/inputs/channels/<ID>/counting

/ISAPI/System/Video/inputs/channels/ID/counting		General Resource	v2.0
GET			
Description	It is used to get the counting configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	Counting		
PUT			
Description	It is used to update the counting configuration for a video input channel.		
Query	None		
Inbound Data	Counting		
Success Return	ResponseStatus		
Notes:			
<dataUploadCycle> : PDC data upload cycle			
<SECUploadEnabled> : Per second upload mechanism to enable			

Counting XML Block

```
<Counting version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->      </enabled>
  <normalizedScreenSize> <!-- opt -->
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <MountingConfiguration>    <!-- opt -->
    <viewingAngle>    <!-- req, xs:string, "vertical,tilt" --> </viewingAngle>
    <mountHeight>    <!-- opt, xs:integer;cm --> </mountHeight>
    <horizontalDistance>    <!-- opt, xs:integer;cm --> </horizontalDistance>
    <focalLength> <!-- opt, xs:integer;mm --> </focalLength>
  </MountingConfiguration>
  <Demarcation> <!-- opt -->
    <enabled>    <!-- req, xs:boolean --> </enabled>
    <DemarcationRegionList> <!-- req -->
      <DemarcationRegion> <!-- opt -->
        <id> <!-- req, xs:integer --> </id>
        <RegionCoordinatesList>
          <RegionCoordinates> <!-- req, -->
            <positionX>    <!-- req, xs:integer;coordinate --> </positionX>
            <positionY>    <!-- req, xs:integer;coordinate --> </positionY>
          </RegionCoordinates>
        </RegionCoordinatesList>
      </DemarcationRegion>
    </DemarcationRegionList>
    <DemarcationLine>
      <StartPoint> <!-- req -->
        <positionX> <!-- req, xs:integer --> </positionX>
        <positionY> <!-- req, xs:integer --> </positionY>
      </StartPoint>
      <EndPoint> <!-- req -->
        <positionX> <!-- req, xs:integer --> </positionX>
        <positionY> <!-- req, xs:integer --> </positionY>
      </EndPoint>
    </DemarcationLine>
  </Demarcation>
  <CountingRegionType><!-- ro, req, xs:string, "region,line" --></CountingRegionType>
  <CountingRegionList/> <!-- opt -->
  <CountingLineItemList/> <!-- opt -->
  <dataUploadCycle><!-- opt, xs:integer, --></dataUploadCycle>
  <SECUploadEnabled> <!-- opt, xs:boolean --> </SECUploadEnabled>
</Counting>
```

/ISAPI/System/Video/inputs/channels/ <i>ID</i> /counting/ <i>lineItem</i> / <i>ID</i>		General Resource v2.0
GET		
Description	It is used to get a particular counting Line configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	CountingLineItem	
PUT		
Description	It is used to update a particular counting Line configuration for a video input channel.	
Query	None	
Inbound Data	CountingLineItem	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete a particular counting Line configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		
<horizontalDistance> is used to get or set Horizontal Distance between Camera and Entrance/Exit.		

CountingRegion XML Block

```

<CountingLineItem version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <direction> <!--req -->
    <StartPoint> <!--req -->
      <positionX> <!-- req, xs:integer --> </positionX>
      <positionY> <!-- req, xs:integer --> </positionY>
    </StartPoint>
    <EndPoint> <!--req -->
      <positionX> <!-- req, xs:integer --> </positionX>
      <positionY> <!-- req, xs:integer --> </positionY>
    </EndPoint>
  </direction>
  <sensitivityLevel><!-- req, xs:integer --> </sensitivityLevel>
  <spaceGenerationSpeed> <!-- opt, xs:integer --> </spaceGenerationSpeed>
  <timeGenerationSpeed> <!-- opt, xs:integer --> </timeGenerationSpeed>
  <countingSpeed><!-- opt, xs:integer --> </countingSpeed>
  <detectionType> <!-- opt, xs:string, "auto,head,shoulder"--> </detectionType>

```


<objectSizeCorrection>	<!-- opt, xs: integer -->	</objectSizeCorrection>
<LineCoordinatesList>		
<Coordinates>	<!-- req, -->	
<positionX>	<!-- req, xs:integer;coordinate -->	</positionX>
<positionY>	<!-- req, xs:integer;coordinate -->	</positionY>
</Coordinates>		
</LineCoordinatesList>		
</CountingLineItem>		

8.4.37 /ISAPI/System/Video/inputs/channels/<ID>/counting/capabilities

/ISAPI/System/Video/inputs/channels/<ID>/counting/capabilities		General Resource	v2.0
GET			
Description	It is used to get the counting configuration Capabilities for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	CountingCap		
Notes:			

CountingCap XML Block

<CountingCap version="2.0" xmlns="http://www.std-cgi.com/ver20/XMLSchema">
<CountingRegionType><!-- opt, xs:string,"line" --></CountingRegionType>
<dataUploadCycle opt="1,5,10,15,20,30,60"><!--opt, xs:integer, --></dataUploadCycle>
<isSupportSECUpload> <!-- opt, xs:boolean --> </isSupportSECUpload>
<isSupportRecommendValue><!-- opt, xs:boolean,"true" --></isSupportRecommendValue>
<isSupportFlashRemoveCouting><!-- opt, xs:boolean,"true"--></isSupportFlashRemoveCouting>
</CountingCap>

8.4.38 /ISAPI/System/Video/inputs/channels/<ID>/counting/RecommendValue

/ISAPI/System/Video/inputs/channels/<ID>/counting/RecommendValue	General Resource	v2.0
--	------------------	------

GET	
Description	Get counting recommend value
Query	None
Inbound Data	None
Success Return	CountingRecommendValue
Notes:	
<widthPercent> : [0,1000]	

CountingRecommendValue XML Block

```
<CountingRecommendValue version="2.0" xmlns="http://www.std-cgi.com/ver20/XMLSchema">
  <width><!--opt,xs:integer, --></width>
</CountingRecommendValue>
```

8.4.39 /ISAPI/System/Video/inputs/channels/<ID>/counting/regions

/ISAPI/System/Video/inputs/channels/ID/counting/regions		General Resource v2.0
GET		
Description	It is used to get the counting regions configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	CountingRegionList	
PUT		
Description	It is used to update the counting regions configuration for a video input channel.	
Query	None	
Inbound Data	CountingRegionList	
Success Return	ResponseStatus	
POST		
Description	It is used to add a counting region for a video input channel.	
Query	None	
Inbound Data	CountingRegion	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete the counting regions configuration for a video input channel.	
Query	None	

Inbound Data	None
Success Return	ResponseStatus
Notes:	

CountingRegionList XML Block

```
<CountingRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CountingRegion/>  <!-- opt -->
</CountingRegionList>
```

8.4.40 /ISAPI/System/Video/inputs/channels/<ID>/counting/regions/<ID>

/ISAPI/System/Video/inputs/channels/ID/counting/regions/ID		General Resource v2.0
GET		
Description	It is used to get a particular counting region configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	CountingRegion	
PUT		
Description	It is used to update a particular counting region configuration for a video input channel.	
Query	None	
Inbound Data	CountingRegion	
Success Return	ResponseStatus	
DELETE		
Description	It is used to delete a particular counting region configuration for a video input channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		
<horizontalDistance> is used to get or set Horizontal Distance between Camera and Entrance/Exit.		

CountingRegion XML Block

```
<CountingRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer --> </id>
  <Direction> <!--req -->
```

```

<StartPoint> <!--req -->
  <positionX> <!-- req, xs:integer --> </positionX>
  <positionY> <!-- req, xs:integer --> </positionY>
</StartPoint>
<EndPoint> <!--req -->
  <positionX> <!-- req, xs:integer --> </positionX>
  <positionY> <!-- req, xs:integer --> </positionY>
</EndPoint>
</Direction>
<sensitivityLevel><!-- req, xs:integer --> </sensitivityLevel>
<spaceGenerationSpeed> <!-- opt, xs:integer --> </spaceGenerationSpeed>
<timeGenerationSpeed> <!-- opt, xs:integer --> </timeGenerationSpeed>
<countingSpeed><!-- opt, xs:integer --> </countingSpeed>
<detectionType> <!-- opt, xs:string, "auto,head,shoulder"--> </detectionType>
<objectSizeCorrection> <!-- opt, xs: integer --> </objectSizeCorrection>
<RegionCoordinatesList> <!-- req -->
  <RegionCoordinates> <!-- req -->
    <positionX> <!-- req, xs:integer;coordinate --> </positionX>
    <positionY> <!-- req, xs:integer;coordinate --> </positionY>
  </RegionCoordinates>
</RegionCoordinatesList>
</CountingRegion>

```

8.4.41 /ISAPI/System/Video/inputs/channels/<ID>/counting/search

/ISAPI/System/Video/inputs/channels/ID/counting/search		General Resource	v2.0
h			
GET			
Description	It is used to get the value of counter for a time range		
Query	None		
Inbound Data	CountingStatisticsDescription		
Success Return	CountingStatisticsResult		
POST			
Description	It is used to get the value of counter for a time range		
Query	None		
Inbound Data	CountingStatisticsDescription		
Success Return	CountingStatisticsResult		
Notes:			

CountingStatisticsDescription XML Block

```
<CountingStatisticsDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <statisticType> <!-- req, xs:string, "enternum, exitnum"--> </statisticType>
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly, yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
  </timeSpanList>
</CountingStatisticsDescription>
```

CountingStatisticsResult XML Block

```
<CountingStatisticsResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStrg><!-- req, xs:string--></responseStatusStrg>
  <numOfMatches><!-- req, xs:integer --></numOfMatches>
  <matchList> <!-- opt -->
    <matchElement> <!-- opt -->
      <timeSpan> <!-- opt -->
        <startTime><!-- req, xs:datetime --></startTime>
        <endTime><!-- req, xs:datetime --></endTime>
      </timeSpan>
      <enterCount> <!-- dep, xs:integer --> </enterCount>
      <exitCount> <!-- dep, xs:integer --> </exitCount>
    </matchElement>
  </matchList>
</CountingStatisticsResult>
```

8.4.42 /ISAPI/System/Video/inputs/channels/ID/counting/resetCount

/ISAPI/System/Video/inputs/channels/ID/counting/resetCount		General Resource	v2.0
PUT			
Description	It is used to reset the count of a video input channel.		

Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

8.4.43 /ISAPI/System/Video/inputs/channels/ID/VCARe source

/ISAPI/System/Video/inputs/channels/ID/VCAResource		General Resource	v2.0
GET			
Description	Intelligent acquisition of resources configuration parameters		
Query	None		
Inbound Data	None		
Success Return	VCAResource		
PUT			
Description	Intelligent resource parameter settings		
Query	None		
Inbound Data	VCAResource		
Success Return	ResponseStatus		
Notes:			

VCAResource XML Block

```
<VCAResource version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type> <!--                                req,                                xs:string,
  "basicBehavior,fullBehavior,facesnapBehavior,facesnap,TFS,smartVehicleDetection,smartHVTDe
  ction,smart,judicial,smart264AndRoadDetection,smart264AndFaceDetection,smart264AndHeatM
  ap" -->  </type>
</VCAResource>
```

8.4.44 /ISAPI/System/Video/outputs

/ISAPI/System/Video/outputs		General Resource	v2.0
GET			
Description	It is used to get the video outputs configuration on an IP media device.		
Query	None		
Inbound Data	None		

Success Return	VideoOutput
Notes: An IP media device may contain a set of video outputs. These outputs are hardwired by the device, meaning that the IDs can be discovered but not created or deleted.	

VideoOutput XML Block

```
<VideoOutput version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoOutputChannelList/>  <!-- opt -->
</VideoOutput>
```

8.4.45 /ISAPI/System/Video/outputs/channels

ISAPI/System/Video/outputs/channels		General Resource	v2.0
GET			
Description	It is used to get the video output channels configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	VideoOutputChannelList		
Notes:			
Since video output channels are resources that are defined by the hardware configuration of the device, they cannot be created or deleted.			

VideoOutputChannelList XML Block

```
<VideoOutputChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VideoOutputChannel/>  <!-- opt -->
</VideoOutputChannelList>
```

8.4.46 /ISAPI/System/Video/outputs/channels/<ID>

>

ISAPI/System/Video/outputs/channels/<ID>		General Resource	v2.0
GET			
Description	It is used to get a particular video input channel configuration on an IP media device.		
Query	None		
Inbound Data	None		

Success Return	VideoOutputChannel
Notes: <menu> required if the port support display menu. <mirrorMenu> check whether to support to display menu of another port simultaneously <outputId>: The ID number that corresponding to current output channel.	

VideoOutputChannel XML Block

```

<VideoOutputChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <type> <!-- req, xs:string, "VGA,CVBS,HDMI,Spot,SDI" --> </type>
  <menu> <!-- dep, ro -->
    <mirrorMenu> <!--req, xs:boolean--> </mirrorMenu>
  </menu>
  <mode> <!--opt,xs:string,"close,clip,scale,open,SDI_1080P25..."--> <mode>
  <resolution> <!--opt, xs:string; "1920*1080/60HZ,1280*720/50HZ..." --> </resolution>
  <mirrorList>
    <outputId><!-- opt, xs:string --></outputId>
  </mirrorList>
</VideoOutputChannel>

```

8.4.47 /ISAPI/System/Video/Menu

URI	/ISAPI/System/Video/Menu	Type	Resource
Function	Access the local menu configuration on an IP media device.		
Methods	Query String(s)	Inbound Data	Return Result
GET			<MenuList>
Notes	An IP media device may contain a set of local menus. These menus are hardwired by the device, meaning that the IDs can be discovered but not created or deleted. ID numbering or values should be considered arbitrary and		

MenuList XML Block

```

<MenuList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Menu/> <!-- opt -->
</MenuList>

```

8.4.48 /ISAPI/System/Video/Menu/<ID>

URI	/ISAPI/System/Video/Menu/<ID>	Type	Resource
-----	-------------------------------	------	----------

Function	Access menu configuration.		
Methods	Query String(s)	Inbound Data	Return Result
GET		None	<Menu>
PUT		<Menu>	<ResponseStatus>
Notes	If(mode == auto) VideoOutputPortList is ro		

Menu XML Block

```
<Menu version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode> <!--req, xs:string, "auto, manual" --> </mode>
  <VideoOutputPortList> <!-- req -->
    <videoOutputPortID> <!-- opt, xs:string, id--> </videoOutputPortID>
  </VideoOutputPortList>
</Menu>
```

8.4.49 /ISAPI/System/Video/inputs/channels/<ID>/overlays/capabilities

/ISAPI/System/Video/inputs/channels/ID/overlays/capabilities		General Resource	v2.0
GET			
Description	It is used to get the overlays configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	VideoOverlay		

VideoOverlay XML Block

```
<VideoOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!--ro, req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!--ro, req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <attribute> <!--opt-->
    <transparent> <!-- req, xs:boolean --></transparent>
    <flashing> <!-- req, xs:boolean--> <flashing>
  </attribute>
  <TextOverlayList/> <!-- opt -->
  < DateTimeOverlay/> <!-- opt -->
  < channelNameOverlay/> <!-- opt -->
  <fontSize> <!-- opt, xs:integer, pixels --> </fontSize>
```


yPowerOverlay/capabilities	
GET	
Description	It is used to get a BatteryPowerOverlay configuration for a video input channel capability.
Query	None
Inbound Data	None
Success Return	BatteryPowerOverlay
Notes:	

BatteryPowerOverlay XML Block

```
<BatteryPowerOverlay>
  <enabled><!-- req, xs:boolean --></enabled>
  <positionX> <!-- req, xs:integer;coordinate --> </positionX>
  <positionY> <!-- req, xs:integer;coordinate --> </positionY>
</BatteryPowerOverlay>
```

8.4.52 /ISAPI/System/Video/inputs/channels/<ID>/roadInfo/overlays/capabilities

/ISAPI/System/Video/inputs/channels/<ID>/roadInfo/overlays/capabilities	General Resource v2.0
GET	
Description	It is used to get road info overlays capability.
Query	None
Inbound Data	None
Success Return	RoadInfo
Notes:	

RoadInfo XML Block

```
<RoadInfo version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <displayRoadInfo> <!-- req, xs:boolean --></displayRoadInfo>
  <intersection min="" max=""> <!-- req, xs:integer,"路口ID" --> </intersection>
  <RoadInfoOverlayList size="6"> <!-- opt -->
    <RoadInfoOverlay>
      <id> <!-- req, xs:integer;id --> </id>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <displayText min="" max=""> <!-- req, xs:string --> </displayText>
    </RoadInfoOverlay>
  </RoadInfoOverlayList>
```


Inbound Data	None
Success Return	RoadInfoOverlayList
PUT	
Description	It is used to update the text overlays configuration for a video input channel.
Query	None
Inbound Data	RoadInfoOverlayList
Success Return	ResponseStatus
POST	
Description	It is used to add a text overlay for a video input channel.
Query	None
Inbound Data	RoadInfoOverlay
Success Return	ResponseStatus
DELETE	
Description	It is used to delete the text overlays configuration for a video input channel.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: A set of text overlays is managed. They are composited over the video signal in increasing ID-order.	

RoadInfoOverlayList XML Block

```
<RoadInfoOverlayList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <RoadInfoOverlay/>  <!-- opt -->
</RoadInfoOverlayList>
```

8.4.55 /ISAPI/System/Video/inputs/channels/<ID>/roadInfo/<ID>/overlays/text/<ID>

/ISAPI/System/Video/inputs/channels/<ID>/roadInfo/<ID>/overlays/text/<ID>		General Resource	v2.0
GET			
Description	It is used to get a particular text overlay configuration for a video input channel.		
Query	None		
Inbound Data	None		
Success Return	RoadInfoOverlay		
PUT			

Description	It is used to update a particular text overlay configuration for a video input channel.
Query	None
Inbound Data	RoadInfoOverlay
Success Return	ResponseStatus
DELETE	
Description	It is used to delete a particular text overlay configuration for a video input channel.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

RoadInfoOverlay XML Block

```
<RoadInfoOverlay version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <displayText> <!-- req, xs:string --> </displayText>
</RoadInfoOverlay>
```

8.5 /ISAPI/System/Audio

/ISAPI/System/Audio	Service v2.0
Notes:	

8.5.1 /ISAPI/System/Audio/capabilities

/ISAPI/System/Audio/capabilities	General Resource v2.0
GET	
Description	It is used to get audio capability.
Query	None
Inbound Data	None
Success Return	<AudioCap>
Notes:	

AudioCap XML Block

```
<AudioCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <audioInputNums> <!-- req, xs:integer> </audioInputNums>
```

```

<audioOutputNums> <!-- req, xs:integer> </audioOutputNums>
<mixAudioInSet><!-- opt xs:Boolean --></mixAudioInSet>
<mixAudioOutSet"><!-- opt xs:Boolean--></mixAudioOutSet>
</AudioCap>

```

8.5.2 /ISAPI/System/Audio/channels

/ISAPI/System//Audio/channels

General Resourcev2.0

GET

Description	It is used to get the audio channels configuration on an IP media device.
Query	None
Inbound Data	None
Success Return	AudioChannelList

Notes:

Since inputs are resources that are defined by the hardware configuration of the device, audio channels cannot be created or deleted.

AudioChannelList XML Block

```

<AudioChannelList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <AudioChannel/>  <!-- opt -->
</AudioChannelList>

```

8.5.3 /ISAPI/System/Audio/channels/<ID>

/ISAPI/System/Audio/channels/ID		General Resource	v2.0
GET			
Description	It is used to get a particular audio channel configuration on an IP media device.		
Query	None		
Inbound Data	None		
Success Return	AudioChannel		
Notes:			
<audioMode> is the duplex mode for audio transmission between the client and media device.			

AudioChannel XML Block

```

<AudioChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:string -->          </id>
  <enabled>     <!-- req, xs:boolean -->         </enabled>
</AudioChannel>

```

8.5.4 /ISAPI/System/Audio/channels/<ID>/dynamicCap

/ISAPI/System/Audio/channels/ID/dynamicCap		General Resource	v2.0
GET			
Description	Get dynamic capabilities, different audioSamplingRate have different audioBitRate; different audio compression types have different audio bit rate.		
Query	None		
Inbound Data	AudioDscriptor		
Success Return	DynamicCap		
Notes:			

AudioDescriptor XML Block

```
<AudioDescriptor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <audioCompressionType>
    <!--                                opt,
xs:string,"G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"-
->
    </audioCompressionType>
    <audioSamplingRate>    <!-- opt, xs:float,kHz --></audioSamplingRate>
  </AudioDescriptor>
```

DynamicCap XML Block

```
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth>    <!-- req, xs:integer -->    </videoResolutionWidth>
      <videoResolutionHeight>    <!-- req, xs:integer -->    </videoResolutionHeight>
      <supportedFrameRate>    <!-- req, xs:string -->    </supportedFrameRate>
    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
        <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
        <CBRCap> 定码率
          <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
        </CBRCap>
        <VBRCap> 变码率
          <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
        </VBRCap>
        <isSupportSVC>    <!-- opt, xs:boolean-->    </isSupportSVC>
```


<pre> <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC> <SmartCodecCap><!--opt--> <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality "><!-- opt, ro, xs:string, --></readOnlyParams> <!--req, 当 Smart264 开启后，在变码率情况下，界面上码率上限下方增加一行，标 题为平均码率，同时码率上限灰显，不能修改， 平均码率默认值根据码率上限做转换，平均码率的范围为(0,码率上限]。平均码率 单独保存，不复用码率上限； 当码率类型为定码率时，要求平均码率隐藏，码率上限可以配置。--> <BitrateType> <Constant><!--opt,定码率--> <support opt="videoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码 率),videoBitrate(码率上限)"--></support> <hiddenAbility opt="averageVideoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></hiddenAbility> </Constant> <Variable><!--opt,变码率--> <support opt="averageVideoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></support> <readOnlyAbility opt="videoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></readOnlyAbility> </Variable> </BitrateType> <vbrAverageDefault><!--dep,xs:integer in kbps " 平 均 码 率 推 荐 值 "--></vbrAverageDefault> </SmartCodecCap> </CodecParamDscriptor> </CodecParamDscriptorList> <AudioDscriptorList> <audioCompressionType> <!-- req, xs:string, "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM , MP2L2"--> </audioCompressionType> </AudioDscriptorList> </DynamicCap> </pre>	<pre> <DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema"> <AudioDscriptorList> <AudioDscriptor> <audioCompressionType> <!-- req, xs:string,"G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"- -> </audioCompressionType> </pre>
--	---

```

    <audioItemList>
      <audioItem>
        <audioSamplingRate, default = "">
        <!--opt,xs:string --></audioSamplingRate>
        <audioBitRate opt= ""> <!-- dep, xs:integer --> </audioBitRate>
        <noiseReduce>
        <!--default = "true,false"><!-- req, xs:string,"true,false" -->
        </noiseReduce>
      <audioItem>
    </audioItemList>
  </AudioDescriptor>
</AudioDescriptorList>
<CodecParamDescriptorList>
  <CodecParamDescriptor>
    <videoCodecType>
    <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
    <isSupportProfile> <!--dep, xs: boolean,""--> </isSupportProfile>
    <CBRCap> 定码率
      <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
    </CBRCap>
    <VBRCap> 变码率
      <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
    </VBRCap>
    <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
    <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
    <SmartCodecCap><!--opt-->
      <readOnlyParams opt="keyFrameInterval,Profile,SVC"><!-- opt, ro, xs:string, "需要灰显
的项有：I 帧间隔、编码复杂度、SVC"--></readOnlyParams>
      <!--req, 当 Smart264 开启后，在变码率情况下，界面上码率上限下方增加一行，标
题为平均码率，同时码率上限灰显，不能修改，
      平均码率默认值根据码率上限做转换，平均码率的范围为(0,码率上限]。平均码率
单独保存，不复用码率上限；
      当码率类型为定码率时，要求平均码率隐藏，码率上限可以配置。-->
    <BitrateType>
      <Constant><!--opt,定码率-->
        <support opt="videoBitrate"><!--opt, xs:string,"averageVideoBitrate(平均码
率),videoBitrate(码率上限)"--></support>
        <hiddenAbility opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></hiddenAbility>
      </Constant>
      <Variable><!--opt,变码率-->
        <support opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></support>
        <readOnlyAbility opt="videoBitrate"><!--opt,

```

```
xs:string,"averageVideoBitrate(平均码率),videoBitrate(码率上限)"--></readOnlyAbility>
    </Variable>
  </BitrateType>
  <vbrAverageDefault><!--dep,xs:integer in kbps " 平均 码 率 推 荐 值
"--></vbrAverageDefault>
  </SmartCodecCap>
</CodecParamDscriptor>
</CodecParamDscriptorList>
</DynamicCap>
```

8.5.5 /ISAPI/System/TwoWayAudio

/ISAPI/System/TwoWayAudio	General Resource	v2.0
Notes: two way audio Service.		

8.5.6 /ISAPI/System/TwoWayAudio/channels

/ISAPI/System/TwoWayAudio/channels		General Resource	v2.0
GET			
Description	It is used to get the two way audio channels list		
Query	None		
Inbound Data	None		
Success Return	TwoWayAudioChannellist		
Notes:			

TwoWayAudioChannellist XML Block

```
<TwoWayAudioChannelList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TwoWayAudioChannel/> <!-- opt -->
</TwoWayAudioChannelList>
```

8.5.7 /ISAPI/System/TwoWayAudio/channels/<ID>

/ISAPI/System/TwoWayAudio/channels/ID	General Resource	v2.0
---------------------------------------	------------------	------

GET	
Description	It is used to get a particular two way audio channel
Query	None
Inbound Data	None
Success Return	TwoWayAudioChannel
PUT	
Description	It is used to get a particular transparent channel
Query	None
Inbound Data	TwoWayAudioChannel
Success Return	ResponseStatus
Notes: When <enabled>is true, two way audio is open; otherwise two way audio is closed. When <audioCompressionType> is MP212, <audioBitRate> supports to set bit rate.	

TwoWayAudioChannel XML Block

```

<TwoWayAudioChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <audioCompressionType>
    <!-- req, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
    -->
  </audioCompressionType>
  <audioInboundCompressionType>
    <!-- opt, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"
    -->
  </audioInboundCompressionType>
  <speakerVolume> <!-- opt, xs:int--> </speakerVolume>
  <microphoneVolume> <!-- opt, xs:int--> </microphoneVolume>
  <noisereduce> <!-- opt, xs: Boolean,"true, false" --> </noisereduce>
  <audioBitRate> <!-- opt, xs:integer;kbs--> </audioBitRate>
  <audioInputType > <!-- opt, xs:string, "MicIn, LineIn"--> </audioInputType>
  <associateVideoInputs> <!-- opt -->
    <enabled> <!-- req, xs:Boolean --> </enabled>
    <videoInputChannelList> <!-- req -->
      <videoInputChannelID> <!-- opt, xs:string; id --> </videoInputChannelID>
    </videoInputChannelList>
  </associateVideoInputs>
  <audioSamplingRate> <!-- opt, xs:float, in kHz --> </audioSamplingRate>
</TwoWayAudioChannel>

```

8.5.8 /ISAPI/System/TwoWayAudio/channels/<ID>/open

/ISAPI/System/TwoWayAudio/channels/ID/open		General	Resource
		v2.0	
PUT			
Description	It is used to open the two way audio channel.		
Query	None		
Inbound Data	None		
Success Return	TwoWayAudioSession		
Notes:			
In sessionId 8.6.5, if send Voice data, need to use this field to represent the communication on which session.			

TwoWayAudioSession XML Block

```
<TwoWayAudioSession version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <sessionId> <!-- req, xs:string --> </sessionId>  
</TwoWayAudioSession>
```

8.5.9 /ISAPI/System/TwoWayAudio/channels/<ID>/close

/ISAPI/System/TwoWayAudio/channels/ID/close		General Resource	v2.0
PUT			
Description	It is used to close the two way audio channel.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

8.5.10 /ISAPI/System/TwoWayAudio/channels/<ID>/audioData

/ISAPI/System/TwoWayAudio/channels/ID/audioData		General	Resource
			v2.0
GET			
Description	It is used to get data on the transparent channel.		

Query	sessionId
Inbound Data	Raw Data
Success Return	ResponseStatus
PUT	
Description	It is used to send data on the transparent channel.
Query	None
Inbound Data	Raw Data
Success Return	ResponseStatus
Notes:	

Example: Client sends audio data to server

```
PUT /ISAPI/System/TwoWayAudio/channels/ID/transData HTTP 1.1
...
Content-Type: application/binary; charset="UTF-8"
\r\n
TwowayAudio Data...
...
```

Example: Client receives audio data from server

```
GET /ISAPI/System/TwoWayAudio/channels/ID/transData HTTP/1.1

HTTP/1.1 200 OK
...
Content-Type: application/binary; charset="UTF-8"
\r\n
TwoWayAudio Data.....
```

8.5.11 /ISAPI/System/Audio/AudioIn/channels/<ID>/capabilities

/ISAPI/System/Audio/AudioIn/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get audioin capability.		
Query	None		
Inbound Data	None		
Success Return	<AudioInCap>		
Notes:			

AudioInCap XML Block

```

<AudioInCap version="20" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!--req, xs:string--></id>
  <MixAudioIn><!-- req, ro -->
    <enabled opt="true,false"><!--req, xs:Boolean--></enabled>
    <audioInputType opt="micIn, lineIn"><!-- opt, xs:string--></audioInputType>
    <highPassFilter
      opt="0,8,16,24,31,39,47,55,63,71,79,87,94,102,110,118,126,134,142,150,157,165,173,181,189,1
      97,205,213,220,228,236,244,252,260,268,276,283,291,299,307,315,323,331,339,346,354,362,37
      0,378,386,394,402,409,417,425,433,441,449,457,465,472,480,488,496,504,512,520,528,535,543,
      551,559,567,575,583,591,598,606,614,622,630,638,646,654,661,669,677,685,693,701,709,717,7
      24,732,740,748,756,764,772,780,787,795,803,811,819,827,835,843,850,858,866,874,882,890,89
      8,906,913,921,929,937,945,953,961,969,976,984,992,1000" default="30"><!--req,
      xs:integer;Hz--></highPassFilter>
    <noiseMargin
      opt="1000,660,657,653,650,647,643,640,637,633,-630,627,623,620,617,613,610,607,603,600,59
      7,593,590,587,583,580,577,573,570,567,563,560,557,553,550,547,543,540,537,533,530,527,523,
      520,517,513,510,507,503,500,497,493,490,487,483,480,477,473,470,467,463,460,457,453,450,4
      47,443,440,437,433,430,427,423,420,417,413,410,407,403,400,397,393,390,387,383,380,377,37
      3,370,367,363,360,357,353,350,347,343,340,337,333,330,327,323,320,317,313,310,307,303,300,
      297,293,290,287,283,280,277,273,270,267,263,260,257,253,250,247,243,240"
      default="30"><!--req, xs:integer;-dB--></noiseMargin>
    <AutoLimitWave><!--dep,audioInputType-->
      <FBCEnable opt="true,false"><!--req, xs:Boolean--></FBCEnable>
      <mode opt="fast,general,slow" default="general"><!--req, xs:string--></mode>
      <filterQValue opt="40,10" default="40"><!--req, xs:integer;Oct--></filterQValue>
      <staticFilterNum min="0" max="12" default="0"><!--req,
      xs:integer--></staticFilterNum>
    </AutoLimitWave>
  </MixAudioIn>
  <AudioInVolumelist>
    <AudioInVlome>
      <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
      <volume min="0" max="127" default="50"><!--req, xs:integer--></volume>
    </AudioInVlome>
  </AudioInVolumelist>
</AudioInCap>

```

8.5.12 /ISAPI/System/Audio/AudioOut/channels/<ID>/capabilities

/ISAPI/System/Audio/AudioOut/channels/<ID>/capabilities

General Resource v2.0

s


```

        <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
        <volume min="0" max="127" default="50"><!--req, xs:integer--></volume>
    </AudioOutVlome>
</AudioOutVolumelist>
</AudioOutCap>

```

8.5.13 /ISAPI/System/Audio/AudioIn/channels/<ID>

/ISAPI/System/Audio/AudioIn/channels/<ID>		General Resource	v2.0
GET			
Description	It is used to get audio capability.		
Query	None		
Inbound Data	None		
Success Return	< AudioIn>		
PUT			
Description	Loitering detection configuration for all video input channels.		
Query	None		
Inbound Data	AudioIn		
Success Return	ResponseStatus		
Notes:			

AudioIn XML Block

```

<AudioIn version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <id><!--req, xs:string--></id>
    <MixAudioIn><!-- req, ro -->
        <enabled><!--req, xs:Boolean--></enabled>
        <audioInputType><!-- opt, xs:string--> </audioInputType>
        <highPassFilter><!--req, xs:integer;Hz--></highPassFilter>
        <noiseMargin><!--req, xs:integer;dB--></noiseMargin>
        <AutoLimitWave><!--dep,audioInputType-->
            <FBCEnable><!--req, xs:Boolean--></FBCEnable>
            <mode><!--req, xs:string--></mode>
            <filterQValue><!--req, xs:string;Oct--></filterQValue>
            <staticFilterNum><!--req, xs:integer--></staticFilterNum>
        </AutoLimitWave>
    </MixAudioIn>
    <AudioInVolumelist>
        <AudioInVlome>
            <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
            <volume><!--req, xs:integer--></volume>

```

```
</AudioInVlome>
</AudioInVolumelist>
</AudioIn>
```

8.5.14 /ISAPI/System/Audio/AudioOut/channels/<ID>

/ISAPI/System/Audio/capabilities		General Resource	v2.0
GET			
Description	It is used to get audio capability.		
Query	None		
Inbound Data	None		
Success Return	< AudioOut>		
PUT			
Description	Loitering detection configuration for all video input channels.		
Query	None		
Inbound Data	AudioOut		
Success Return	ResponseStatus		
Notes:			

AudioOut XML Block

```
<AudioOut version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!--req, xs:string--></id>
  <MixAudioOut>
    <enabled><!--req, xs:Boolean--></enabled>
    <modulatorEnbale><!--req, xs:Boolean--></modulatorEnbale>
    <postFilter><!--req, xs:Boolean--></postFilter>
    <limitPressure><!--req, xs:Boolean--></limitPressure>
    <modulatorValue><!--req, xs:integer;--></modulatorValue>
    <triggerTime><!--req, xs:integer;ms--></triggerTime>
    <freeTime><!--req, xs:integer;ms--></freeTime>
    <compressThreshold><!--req, xs:integer;x--></compressThreshold>
    <compressMode><!--req, xs:string;ms--></compressMode>
    <compressRate><!--req, xs:integer;x--></compressRate>
    <recoveryGain><!--req, xs:integer;x--></recoveryGain>
    <outputGain><!--req, xs: integer --></outputGain>
  </MixAudioOut>
  <AudioOutVolumelist>
    <AudioOutVlome>
      <type><!--req, xs:string;"audioOutput,audioEncode"--></type>
      <volume><!--req, xs:integer--></volume>
    </AudioOutVlome>
```

```
</AudioOutVolumelist>
</AudioOut>
```

8.6 /ISAPI/System/Serial

/ISAPI/System/Serial	Service	v2.0
Notes: Serial port service.		

8.6.1 /ISAPI/SystemSerial/capabilities

/ISAPI/System/Serial/capabilities		General Resource	v2.0
GET			
Description	It is used to get device capability.		
Query	None		
Inbound Data	None		
Success Return	<SerialCap>		
Notes:			

SerialCap XML Block

```
<SerialCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <rs485PortNums> <!-- opt, xs:integer --> </rs485PortNums>
  <supportRS232Config> <!-- opt, xs:Boolean --> </supportRS232Config>
  <rs422PortNums> <!-- opt, xs:integer--> </rs422PortNums>
  <rs232PortNums> <!-- opt, xs:integer--> </rs232PortNums>
</SerialCap>
```

8.6.2 /ISAPI/System/Serial/ports

/ISAPI/System/Serial/ports		General Resource	v2.0
GET			
Description	It is used to get the list of serial ports supported by the device.		
Query	None		
Inbound Data	None		
Success Return	SerialPorList		
Notes:			

Since serial ports are resources that are defined by the hardware configuration of the device, they cannot be created or deleted.

SerialPortList XML Block

```
<SerialPortList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SerialPort/>  <!-- opt -->
</SerialPortList>
```

8.6.3 /ISAPI/System/Serial/ports/<ID>

/Serial/ports/ID		General Resource v2.0
GET		
Description	It is used to get the configuration of a serial port supported by the device.	
Query	None	
Inbound Data	None	
Success Return	SerialPort	
PUT		
Description	It is used to update the configuration of a serial port supported by the device.	
Query	None	
Inbound Data	SerialPort	
Success Return	ResponseStatus	
Notes: Access to the serial port parameters. <serialPortType> set the type of port; RS232, RS485, etc. <direction> indicates whether the port is bidirectional. <duplexMode> indicates whether the serial port runs in full or half duplex mode. <workMode> is required only when serial port type is RS232		

SerialPort XML Block

```
<SerialPort version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string;id -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <serialPortType><!-- req, xs:string, "RS485,RS422,RS232" --></serialPortType>
  <duplexMode>  <!-- req, xs:string, "half,full" -->  </duplexMode>
  <direction> <!-- req, xs:string, "monodirectional,bidirectional" --> </direction>
  <baudRate><!-- req, xs:integer --></baudRate>
  <dataBits>  <!-- req, xs:integer -->  </dataBits>
  <parityType><!-- req, xs:string, "none,even,odd,mark,space" --> </parityType>
```

```

<stopBits> <!-- req, xs:string, "1,1.5,2" --> </stopBits>
<workMode> <!-- dep, xs:string, "console, transparent" --> </workMode>
<flowCtrl> <!-- req, xs:string, "none, software, hardware" --> </flowCtrl>
</SerialPort>

```

8.6.4 /ISAPI/System/Serial/ports/<ID>/Transparent

/ISAPI/System/Serial/ports/ID/Transparent	General Resource	v2.0
Notes: Transparent Service.		

8.6.5 /ISAPI/System/Serial/ports/<ID>/Transparent/channels

/ISAPI/System/Serial/ports/ID/Transparent/channels		General Resource	v2.0
GET			
Description	It is used to get the transparent channels list		
Query	None		
Inbound Data	None		
Success Return	TransparentChannelList		
Notes:			

TransparentChannelList XML Block

```

<TransparentChannelList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <TransparentChannel/> <!-- opt -->
</TransparentChannelList>

```

8.6.6 /ISAPI/System/Serial/ports/<ID>/Transparent/channels

/<ID>

/ISAPI/System/Serial/ports/ID/Transparent/channels/ID		General Resource	v2.0
GET			
Description	It is used to get a particular transparent channel		
Query	None		
Inbound Data	None		
Success Return	TransparentChannel		
PUT			

Description	It is used to get a particular transparent channel
Query	None
Inbound Data	TransparentChannel
Success Return	ResponseStatus
Notes:	

TransparentChannel XML Block

```
<TransparentChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <serialPortID> <!--req,ro, xs:string; id --> </serialPortID>
</TransparentChannel>
```

8.6.7 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>/open

/ISAPI/System/Serial/ports/ID/Transparent/channels/ID/open		General Resource v2.0
PUT		
Description	It is used to open the transparent channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		
Only support RS485 transparent channel.		

8.6.8 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>/close

/ISAPI/System/Serial/ports/ID/Transparent/channels/ID/close		General Resource v2.0
PUT		
Description	It is used to close the transparent channel.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	

Notes:

8.6.9 /ISAPI/System/Serial/ports/<ID>/Transparent/channels /<ID>/transData

/ISAPI/System/Serial/ports/ID/Transparent/channels/ID/transData		General Resource v2.0
GET		
Description	It is used to get data on the transparent channel.	
Query	None	
Inbound Data	Raw Data	
Success Return	ResponseStatus	
PUT		
Description	It is used to send data on the transparent channel.	
Query	None	
Inbound Data	Raw Data	
Success Return	ResponseStatus	
Notes:		

Example:

```
GET /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/transData HTTP/1.1

HTTP/1.1 200 OK
...
Content-Type: application/binary; charset="UTF-8"
Content-Length: ISAPI
\r\n
Raw data...
```

Example:

```
PUT /ISAPI/System/Serial/ports/ID/Transparent/channels/ID/transData HTTP/1.1
...
Content-Type: application/binary; charset="UTF-8"
\r\n
Raw data...
```

8.7 /ISAPI/System/Hardware/

/ISAPI/System/Hardware/	Service v2.0
Notes:	

8.7.1 /ISAPI/System/Hardware

/ISAPI/System/Hardware		General Resource v2.0
GET		
Description	It is used to get the configurations of hardware service.	
Query	None	
Inbound Data	None	
Success Return	HardwareService	
PUT		
Description	It is used to set the configurations of hardware service.	
Query	None	
Inbound Data	HardwareService	
Success Return	ResponseStatus	
Notes:		

HardwareService XML Block

```
<HardwareService version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <IrLightSwitch> <!-- opt -->
    <mode> <!-- req, xs:string,"open,close" --> </mode>
  </IrLightSwitch>
  <ABF> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </ABF>
  <LED> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </LED>
  <Defog> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </Defog>
  <SupplementLight><!--opt-->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <isSupportFireLaserLight opt="true
false"><!--opt,xs:boolen--></isSupportFireLaserLight>
  </SupplementLight >
  <Deicing><!--opt-->
```



```

    <enabled> <!-- req, xs:boolean --> </enabled>
  </Deicing>
</HardwareService>

```

8.7.2 /ISAPI/System/Hardware/irLightSwitch

/ISAPI/System/Hardware/irLightSwitch		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	IrLightSwitch		
PUT			
Description			
Query	None		
Inbound Data	IrLightSwitch		
Success Return	ResponseStatus		
Notes:			

IrLightSwitch XML Block

```

<IrLightSwitch version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode> <!-- req, xs:string,"open,close" --> </mode>
</IrLightSwitch>

```

8.7.3 /ISAPI/System/Hardware/ABF

/ISAPI/System/Hardware/ABF		General Resource	v2.0
GET			
Description	It is used to get the configurations of ABF		
Query	None		
Inbound Data	None		
Success Return	ABF		
PUT			
Description	It is used to set the configurations of ABF		
Query	None		
Inbound Data	ABF		
Success Return	ResponseStatus		
Notes:			

ABF XML Block

```
<ABF version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</ABF>
```

8.7.4 /ISAPI/System/Hardware/LED

/ISAPI/System/Hardware/LED		General Resource	v2.0
GET			
Description	It is used to get the configurations of LED		
Query	None		
Inbound Data	None		
Success Return	LED		
PUT			
Description	It is used to set the configurations of LED		
Query	None		
Inbound Data	LED		
Success Return	ResponseStatus		
Notes:			

LED XML Block

```
<LED version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</LED>
```

8.7.5 /ISAPI/System/Hardware/defog

/ISAPI/System/Hardware/defog		General Resource	v2.0
GET			
Description	It is used to get the configurations of defog.		
Query	None		
Inbound Data	None		
Success Return	Defog		
PUT			
Description	It is used to set the configurations of defog		
Query	None		
Inbound Data	Defog		

Success Return	ResponseStatus
Notes:	

Defog XML Block

```
<Defog version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</Defog>
```

8.7.6 /ISAPI/System/Hardware/deicing

/ISAPI/System/Hardware/deicing		General Resource	v2.0
GET			
Description	It is used to get the configurations of deicing.		
Query	None		
Inbound Data	None		
Success Return	Deicing		
PUT			
Description	It is used to set the configurations of deicing		
Query	None		
Inbound Data	Deicing		
Success Return	ResponseStatus		
Notes:			
url:			
/ISAPI/System/Hardware/deicing			

Deicing XML Block

```
<Deicing version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</Deicing>
```

8.7.7 /ISAPI/System/Hardware/deicing/capabilities

/ISAPI/System/Hardware/deicing/capabilities		General Resource	v2.0
GET			
Description	It is used to get the capabilities of deicing.		
Query	None		
Inbound Data	None		
Success Return	Deicing		
Notes:			
url:			
/ISAPI/System/Hardware/deicing/capabilities			

Deicing XML Block

```
<Deicing version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</Deicing>
```

8.8 ISAPI/System/dbglog

ISAPI/System/dbglog		General Resource	v2.0
PUT			
Description	It is used to get dbglog		
Query	None		
Inbound Data	None		
Success Return	Opaque Data		
Notes:			

8.9 /ISAPI/Security

/ISAPI/Security		Service	v2.0
Notes:			

8.9.1 /ISAPI/Security/capabilities

/ISAPI/Security/capabilities		General Resource	v2.0
GET			
Description	It is used to get security capability.		
Query	None		
Inbound Data	None		
Success Return	<SecurityCap>		
Notes:			

SecurityCap XML Block

```
<SecurityCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <supportUserNums> <!-- opt, xs:integer --> < supportUserNums>
  <userBondIpNums> <!-- opt, xs:integer --> <userBondIpNums>
  <userBondMacNums> <!-- opt, xs:integer --> < userBondIpNums >
  <issupIllegalLoginLock> <!-- opt, xs: Boolean,"true, false" --> <issupIllegalLoginLock>
  <isSupportOnlineUser> <!-- opt, xs: Boolean,"true,false" --> <isSupportOnlineUser>
```

```
<isSupportAnonymous> <!-- opt, xs: Boolean, "true,false" --> <isSupportAnonymous>
</SecurityCap>
```

8.9.2 /ISAPI/Security/challenge

/ISAPI/Security/challenge		General Resource	v2.0
POST			
Description	It is used to get challenge		
Query	None		
Inbound Data	<PublicKey>		
Success Return	<Challenge>		
Notes:			

PublicKey XML Block

```
<PublicKey version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <key><!-- req, xs:string --></key>
</PublicKey>
```

Challenge XML Block

```
<Challenge version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <key><!-- req, xs:string --></key>
</Challenge>
```

8.9.3 /ISAPI/Security/users

/ISAPI/Security/users		General Resource	v2.0
GET			
Description	It is used to get the user list for the device.		
Query	None		
Inbound Data	None		
Success Return	UserList		
PUT			
Description	It is used to update the user list for the device.		
Query	None		
Inbound Data	UserList		
Success Return	ResponseStatus		
POST			

Description	It is used to add a user for the device.
Query	None
Inbound Data	User
Success Return	ResponseStatus
DELETE Administrator	
Description	It is used to delete the user list for the device.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: A default user account, “admin”, must be provided. Its default password is “12345”. It has an Administrator user level, and must not be deleted. Passwords can only be uploaded - they are never revealed during GET operations.	

UserList XML Block

```
<UserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <User/>    <!-- opt -->
</UserList>
```

8.9.4 /ISAPI/Security/users/<ID>

/ISAPI/Security/users/ID		General Resource v2.0
GET		Viewer
Description	It is used to get a particular user configuration for the device.	
Query	None	
Inbound Data	None	
Success Return	User	
PUT		Administrator
Description	It is used to update a particular user configuration for the device.	
Query	None	
Inbound Data	User	
Success Return	ResponseStatus	
DELETE		Administrator
Description	It is used to delete a particular user for the device.	
Query	None	
Inbound Data	None	
Success Return	ResponseStatus	
Notes:		
<id> of “admin” account is 1. “admin” account must not be deleted.		
<password> is a write-only field.		

User XML Block

```
<User version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:integer, "1-16" -->      </id>
  <userName>     <!-- req, xs:string -->              </userName>
  <password>     <!-- wo, req, xs:string -->          </password>
  <bondIpAddressList>
    <bondIpAddress/>
  </bondIpAddressList>
  <bondMacAddressList>
    <bondMacAddress/>
  </bondMacAddressList>
  <userLevel> <!-- opt, xs:string, "Administrator, Operator, Viewer" --> </userLevel>
  <attribute> <!-- opt -->
    <inherent> <!--xs:boolean --> </inherent>
  </attribute>
</User>
```

bondIpAddress XML Block

```
< bondIpAddress>
  <id>          <!-- req, xs:integer -->      </id>
  <ipAddress>    <!-- dep, xs:string -->      </ipAddress>
  <ipv6Address>  <!-- dep, xs:string -->      </ipv6Address>
</ bondIpAddress>
```

bondMacAddress XML Block

```
< bondMacAddress>
  <id>          <!-- req, xs:integer -->      </id>
  <macAddress> <!-- opt, xs:string --> </macAddress>
</ bondMacAddress>
```

8.9.5 /ISAPI/Security/adminAccesses

/ISAPI/Security/adminAccesses		General Resource	v2.0
GET		Viewer	
Description	It is used to get administrative access protocol for the device.		
Query	None		
Inbound Data	None		
Success Return	AdminAccessProtocolList		
PUT		Administrator	
Description	It is used to update administrative access protocol for the device.		
Query	None		

Inbound Data	AdminAccessProtocolList
Success Return	ResponseStatus
Notes: <protocol> is the protocol name for admin access, i.e. "HTTP", "HTTPS", etc.	

AdminAccessProtocolList XML Block

```
AdminAccessProtocolList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  < AdminAccessProtocol />
</ AdminAccessProtocolList >
```

8.9.6 /ISAPI/Security/adminAccesses/<ID>

/ISAPI/Security/adminAccesses/ID		General Resource	v2.0
GET		Viewer	
Description	It is used to get administrative access protocol for the device.		
Query	None		
Inbound Data	None		
Success Return	AdminAccessProtocol		
PUT		Administrator	
Description	It is used to update administrative access protocol for the device.		
Query	None		
Inbound Data	AdminAccessProtocol		
Success Return	ResponseStatus		
Notes:			
<protocol> is the protocol name for admin access, i.e. “HTTP”, “HTTPS”, etc.			

AdminAccessProtocol XML Block

```
<AdminAccessProtocol version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <protocol> <!-- req, xs:string; "HTTP, HTTPS,RTSP,DEV_MANAGE" --> </protocol>
  <portNo> <!-- req, xs:integer --> </portNo>
</AdminAccessProtocol>
```

8.9.7 /ISAPI/Security/userCheck

/ISAPI/Security/userCheck	General Resource	v2.0
GET		

Description	It is used to check is password matche user name.
Query	None
Inbound Data	None
Success Return	userCheck
Notes: userCheck is successful, the device returns HTTP 200/OK userCheck is failed, the device returns HTTP 401/Unauthorized The client software checks user name/password via <statusValue>. If the value is 200, it means match, otherwise, if the value is 401, it means mismatch.	

userCheck XML Block

```
<userCheck version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <statusValue>    <!-- req, xs:integer, '200, 401' --> </statusValue>
  <statusString>    <!-- opt, xs:string, 'OK, Unauthorized --> </statusString>
  <isDefaultPassword><!--opt, xs:boolean--></isDefaultPassword>
  <isRiskPassword><!--opt, xs:boolean></isRiskPassword>
  <isActivated><!--opt, xs:boolean></isActivated>
</userCheck>
```

8.9.8 /ISAPI/Security/UserPermission

/ISAPI/Security/UserPermission		General Resource	v2.0
GET			
Description	It is used to get user permission of the device.		
Query	None		
Inbound Data	None		
Success Return	UserPermissionList		
PUT			
Description	It is used to set user permission of the device.		
Query	None		
Inbound Data	UserPermissionList		
Success Return	ResponseStatus		
Notes:			
only the user “admin” has the right to review or edit user’s permission.			

UserPermissionList XML Block

```
<UserPermissionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <UserPermission/>    <!-- opt -->
</UserPermissionList>
```

8.9.9 /ISAPI/Security/UserPermission/<ID>

/ISAPI/Security/UserPermission/ID		General Resource	v2.0			
GET						
Description	It is used to get a particular user's permission					
Query	None					
Inbound Data	None					
Success Return	UserPermission					
PUT						
Description	It is used to set a particular user's permission					
Query	None					
Inbound Data	UserPermission					
Success Return	ResponseStatus					
Notes:						
<p><userID> links the user permission to a user, see /ISAPI/Security/AAA/users/ID.</p> <p><userType> The type value of the user, which can be 'admin', 'operator' or 'viewer'. 'admin' is the administrator of the IPMD, it have all permissions. 'operator' and 'viewer' have default permission policy. The default permission policy can be edited by providing <localPermission>, <remotePermission>.</p>						

UserPermission XML Block

```
<UserPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!--req, xs:string !--> </id>
  <userID> <!--req, xs:string; id --> </userID>
  <userType> <!-- req, xs:string, "admin, operator, viewer"--> </userType>\
  <localPermission/> <!-- opt -->
  <remotePermission/> <!-- opt -->
</UserPermission>
```

8.9.10 /ISAPI/Security/UserPermission/<ID>/localPermission

n

/ISAPI/Security/UserPermission/ID/localPermission		General Resource	v2.0
GET			
Description	It is used to get a particular user's local permission		
Query	None		

Inbound Data	None
Success Return	localPermission
PUT	
Description	It is used to set a particular user's local permission
Query	None
Inbound Data	localPermission
Success Return	ResponseStatus
Notes:	

localPermission XML Block

```
<localPermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <backup> <!-- opt, xs:boolean --> </backup>
  <record> <!-- opt, xs:boolean --> </record>
  <playBack> <!-- opt, xs:boolean --> </playBack>
  <videoChannelPermissionList> <!-- opt -->
    <videoChannelPermission> <!-- opt -->
      <id> <!-- req, must correspond to the video input channel id --> </id>
      <playBack> <!-- opt, xs:boolean --> </playBack>
      <record> <!-- opt, xs:boolean --> </record>
      <backup> <!-- opt, xs:boolean --> </backup>
    </videoChannelPermission>
  </videoChannelPermissionList>
  <ptzControl> <!-- req, xs:boolean --> </ptzControl>
  <ptzChannelPermissionList> <!-- opt -->
    <ptzChannelPermission> <!-- req -->
      <id> <!-- req, must correspond to ptz id, see /ISAPI/PTZCtrl/channels/ID--> </id>
      <ptzControl> <!-- opt, xs:boolean --> </ptzControl>
    </ptzChannelPermission>
  </ptzChannelPermissionList>
  <logOrStateCheck> <!-- opt, xs:boolean --> </logOrStateCheck>
  <parameterConfig> <!--opt, xs:boolean --> </parameterConfig>
  <restartOrShutdown> <!--opt, xs:boolean --> </restartOrShutdown>
  <upgrade> <!--opt, xs:boolean --> </upgrade>
</localPermission>
```

8.9.11 /ISAPI/Security/UserPermission/<ID>/remotePermission

/ISAPI/Security/UserPermission/ID/remotePermission	General Resource	v2.0
GET		

Description	It is used to get a particular user's remote permission
Query	None
Inbound Data	None
Success Return	remotePermission
PUT	
Description	It is used to set a particular user's remote permission
Query	None
Inbound Data	remotePermission
Success Return	ResponseStatus
Notes:	

remotePermission XML Block

```
<remotePermission version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <record> <!-- opt, xs:boolean --> </record>
  <playBack> <!-- opt, xs:boolean --> </playBack>
  <preview> <!-- opt, xs:boolean --> </preview>
  <videoChannelPermissionList> <!-- opt -->
    <videoChannelPermission> <!-- opt -->
      <id> <!-- req, must correspond to the video input channel id --> </id>
      <preview> <!-- opt, xs:boolean --> </preview>
      <palyBack> <!-- opt, xs:boolean --> </palyBack>
      <record> <!--opt, xs:Boolean --> </record>
    </videoChannelPermission>
  </videoChannelPermissionList>
  <ptzControl> <!-- opt, xs:boolean --> </ptzControl>
  <ptzChannelPermissionList> <!-- opt -->
    <ptzChannelPermission> <!-- opt -->
      <id> <!--req, must correspond to ptz id, see /ISAPI/PTZCtrl/channels/ID--> </id>
      <ptzControl> <!-- opt, xs:boolean --> </ptzControl>
    </ptzChannelPermission>
  </ptzChannelPermissionList>
  <logOrStateCheck> <!-- opt, xs:boolean --> </logOrStateCheck>
  <parameterConfig> <!--opt, xs:boolean --> </parameterConfig>
  <restartOrShutdown> <!--opt, xs:boolean --> </restartOrShutdown>
  <upgrade> <!--opt, xs:boolean --> </upgrade>
  <voiceTalk> <!--opt, xs:boolean --> </voiceTalk>
  <transParentChannel> <!--opt, xs:boolean --> <transParentChannel>
  <contorlLocalOut> <!-- opt, xs:boolean --> </contorlLocalOut>
  <alarmOutOrUpload> <!-- opt, xs:boolean --> </alarmOutOrUpload>
</remotePermission>
```

8.9.12 /ISAPI/Security/UserPermission/anonymouslogin

/ISAPI/Security/UserPermission/anonymouslogin		General Resource	v2.0
GET			
Description	Access and configure the user's permission.		
Query	None		
Inbound Data	None		
Success Return	anonymouslogin		
PUT			
Description	Access and configure the user's permission.		
Query	None		
Inbound Data	anonymouslogin		
Success Return	ResponseStatus		
Notes:			
Anonymouslogin owns corresponding privilege of interfaces below:			
/ISAPI/Streaming/channels is used to get the resolution			
/ISAPI/Security/userCheck			
/ISAPI/System/Network/interfaces and /ISAPI/System/Network/UPnP/ports/status			
/ISAPI/Security/adminAccesses			

anonymouslogin XML Block

```
<anonymouslogin version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <enabled> <!-- req, xs:boolean --> </enabled>  
</anonymouslogin>
```

8.9.13 /ISAPI/Security/UserPermission/operatorCap

/ISAPI/Security/UserPermission/operatorCap		General Resource	v2.0
GET			
Description	It is used to get default capabilities of operator.		
Query	None		
Inbound Data	None		
Success Return	UserPermissionCap		
Notes:			

UserPermissionCap XML Block

```
<UserPermissionCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <userType> <!-- req, xs:string, "admin, operator, viewer" --> </userType>  
  <localPermissionCap> <!-- opt -->  
</localPermissionCap>
```

```
<remotePermissionCap> <!-- opt -->
</remotePermissionCap>
</UserPermissionCap>
```

8.9.14 /ISAPI/Security/UserPermission/viewerCap

/ISAPI/Security/UserPermission/viewerCap		General Resource	v2.0
GET			
Description	It is used to get default capabilities of viewer.		
Query	None		
Inbound Data	None		
Success Return	UserPermissionCap		
Notes:			

8.9.15 /ISAPI/Security/deviceCertificate

/ISAPI/Security/deviceCertificate		General Resource	v2.0
GET			
Description	This function is used to upload a user certificate to the device. The user certificate is used for 802.1x (radius) with various authentication mechanisms.		
Query	None		
Inbound Data	None		
Success Return	Data		
PUT			
Description	This function is used to upload a user certificate to the device. The user certificate is used for 802.1x (radius) with various authentication mechanisms.		
Query	None		
Inbound Data	Data		
Success Return	ResponseStatus		
Notes:			
The format of the certificate is device-dependent.			
Distinguish different certificate by Content-type:			
CA- certificate (root certificate): application/x-x509-ca-cert			
Client certificate: application/x-x509-client-cert			
Client password : application/x-x509-client-key			

8.9.16 /ISAPI/Security/webCertificate

/ISAPI/Security/webCertificate		General Resource	v2.0
GET		Administrator	
Description	It is used to get the certificate type of webservice.		
Query	None		
Inbound Data	None		
Success Return	WebCertificate		
PUT		Administrator	
Description	It is used to set the certificate type of webservice .		
Query	None		
Inbound Data	WebCertificate		
Success Return	ResponseStatus		
Notes:			

WebCertificate XML Block

```
< WebCertificate version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <CertificateType>    <!-- req, xs:string, basic, digest -->  </CertificateType>
</ WebCertificate >
```

8.9.17 /ISAPI/Security/serverCertificate/certificate

/ISAPI/Security/serverCertificate/certificate		General Resource	v2.0
GET		Administrator	
Description	This function is used to get a certificate information of the device.		
Query	None		
Inbound Data	None		
Success Return	CertificateInfo		
PUT		Administrator	
Description	This function is used to upload a certificated certificate to the device.		
Query	None		
Inbound Data	Data		
Success Return	ResponseStatus		
DELETE		Administrator	
Description	This function is used to delete the installed certificate of the device.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

CertificationInfo XML Block

```

<CertificateInfo version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <version><!-- opt, xs:string --> </version>
  <IssuerDN/> <!-- req, isapi:DN>
  <SubjectDN/> <!-- req, isapi:DN>
  <signatureAlgorithm> <!-- req, xs:string, RSA_3, RSA_F4--> </signatureAlgorithm>
  <keyAlgorithm> <!-- opt, xs:string --> </keyAlgorithm>
  <startDate> <!-- req, xs:time, ISO8601 time --> </startDate>
  <endDate> <!-- req, xs:time, ISO8601 time --> </endDate>
  <serialNumber> <!-- req, xs:string,uuid --> </serialNumber>
</CertificateInfo>

```

DN XML Block

```

<countryName> <!-- req, xs:string --> </countryName>
<stateOrProvinceName> <!-- opt, xs:string --> </stateOrProvinceName>
<localityName> <!-- opt, xs:string --> </localityName>
<organizationName> <!-- opt, xs:string --> </organizationName>
<organizationUnitName> <!-- opt, xs:string --> </organizationUnitName>
<commonName> <!-- req, xs:string --> </commonName>
<email> <!-- opt, xs:string --> </email>

```

8.9.18 /ISAPI/Security/serverCertificate/selfSignCert

/ISAPI/Security/serverCertificate/selfSignCert		General Resource	v2.0
PUT		Administrator	
Description	This function is used to create a new self-signed certificate of the device.		
Query	None		
Inbound Data	CertificateReq		
Success Return	ResponseStatus		
Notes:			
passwd: password to protect private key			
validity: validity days			

CertificateReq XML Block

```

<CertificateReq version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <SubjectDN/> <!-- req, isapi:DN>
  <validity> <!--opt, xs:int,1-5000 --> </validity>
  <passwd> <!-- opt, xs:string --> </passwd>
</CertificateReq>

```


8.9.19 /ISAPI/Security/serverCertificate/certSignReq

/ISAPI/Security/serverCertificate/certSignReq		General Resource	v2.0
GET		Administrator	
Description	This function is used to get the certificate sinagure request information.		
Query	None		
Inbound Data	None		
Success Return	certificateReqInfo		
PUT		Administrator	
Description	This function is used to Create a new PKCS #10 certificate signature request of the device.		
Query	None		
Inbound Data	certificateReq		
Success Return	ResponseStatus		
DELETE		Administrator	
Description	This function is used to delete the PKCS #10 certificate signature.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

CertificateReqInfo XML Block

```
<CertificateReqInfo version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<id> <!-- req, xs:string -->    </id>
<SubjectDN/> <!-- req, isapi:DN -->
<version><!-- opt, xs:string -->    </version>
<keyAlgorithm>    <!-- opt, xs:string -->    </keyAlgorithm>
<passwd> <!-- opt, xs:string --> </passwd>
</CertificateReqInfo>
```

8.9.20 /ISAPI/Security/serverCertificate/downloadCertSignReq

/ISAPI/Security/serverCertificate/downloadCertSignReq		General Resource
GET		Administrator
Description	This function is used to request download the certificate signature.	
Query	None	
Inbound Data	None	
Success Return	Data	
Notes:		

The returned data shall be either formatted exactly as specified in [PKCS#10] or PEM encoded [PKCS#10] format.

8.9.21 /ISAPI/Security/previewLinkNum

/ISAPI/Security/previewLinkNum		General Resource	v2.0
GET		Viewer	
Description	It is used to get the maximum number of connections of the device.		
Query	None		
Inbound Data	None		
Success Return	PreviewLinkNum		
PUT		Administrator	
Description	It is used to update the maximum number of connections of the device.		
Query	None		
Inbound Data	PreviewLinkNum		
Success Return	ResponseStatus		
Notes:			

PreviewLinkNum XML Block

```
<PreviewLinkNum version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <maxLinkNum>          <!-- req, xs:integer -->          </maxLinkNum>
</PreviewLinkNum>
```

8.9.22 /ISAPI/Security/illegalLoginLock

/ISAPI/Security/illegalLoginLock		General Resource	v2.0
GET			
Description	It is used to get the configurations of illegalLoginLock .		
Query	None		
Inbound Data	None		
Success Return	IllegalLoginLock		
PUT			
Description	It is used to set the configurations of illegalLoginLock		
Query	None		
Inbound Data	IllegalLoginLock		
Success Return	ResponseStatus		
Notes:			

IllegalLoginLock XML Block

```
<IllegalLoginLock version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled opt="true,false" def="true">true</enabled>
</IllegalLoginLock>
```

8.9.23 /ISAPI/Security/onlineUser

/ISAPI/Security/onlineUser		General Resource	v2.0
GET		Viewer	
Description	It is used to get Online User Info.		
Query	None		
Inbound Data	None		
Success Return	OnlineUser		
Notes:			

OnlineUser XML Block

```
<OnlineUserList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <OnlineUser>
    <id><!-- req, xs:string --></id>
    <name><!--opt,xs:string,--></name>
    <type><!--opt,xs:string,"admin,operator,viewer"--></type>
    <loginTime><!--opt,xs:time, ISO8601 time --></loginTime>
    <clientAddress>
      <ipAddress>    <!-- opt, xs:string -->    </ipAddress>
      <ipv6Address>  <!-- opt, xs:string -->    </ipv6Address>
    </clientAddress>
  </OnlineUser>
</OnlineUserList>
```

8.10 /ISAPI/Streaming

/ISAPI/Streaming	Service	v2.0
Notes:		

8.10.1 /ISAPI/Streaming/status

/ISAPI/Streaming/status	General Resource	v2.0
-------------------------	------------------	------

GET	
Description	It is used to get a device streaming status.
Query	None
Inbound Data	None
Success Return	StreamingStatus
Notes: This command accesses the status of all device streaming sessions.	

StreamingStatus XML Block

```
<StreamingStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <totalStreamingSessions>      <!-- req, xs:integer -->    </totalStreamingSessions>
  <StreamingSessionStatusList/>  <!-- dep, only if there are sessions -->
</StreamingStatus>
```

8.10.2 /ISAPI/Streaming/channels

/ISAPI/Streaming/channels		General Resource	v2.0
GET			
Description	It is used to get the properties of streaming channels for the device.		
Query	None		
Inbound Data	None		
Success Return	StreamingChannelList		
PUT			
Description	It is used to update the properties of streaming channels for the device.		
Query	None		
Inbound Data	StreamingChannelList		
Success Return	ResponseStatus		
POST			
Description	It is used to add a streaming channel for the device.		
Query	None		
Inbound Data	StreamingChannel		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete the list of streaming channels for the device.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
Streaming channels may be hardwired, or it may be possible to create multiple streaming			

channels per input if the device supports it. To determine whether it is possible to dynamically create streaming channels, check the defined HTTP methods in /ISAPI/Streaming/channels/description.

StreamingChannelList XML Block

```
<StreamingChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <StreamingChannel/>  <!-- opt -->
</StreamingChannelList>
```

8.10.3 /ISAPI/Streaming/channels/<ID>

/ISAPI/Streaming/channels/ID		General Resource	v2.0
GET			
Description	It is used to get the properties of a particular streaming channel for the device.		
Query	None		
Inbound Data	None		
Success Return	StreamingChannel		
PUT			
Description	It is used to update the properties of a particular streaming channel for the device.		
Query	None		
Inbound Data	StreamingChannel		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete a particular streaming channel for the device.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
To support multi video input devices , the streaming ID in URL should be indicate video input channel number , so it is defined as : straming-Id + video-input-Id *100, for example : /Streaming/channels/101 indicates the first streaming from the first video input /Streaming/channels/202 indicates the second streaming from the second video input			
For IPC, becouse of only one video input, case is simeple, it can accecpt 1 as the main stream id , 2 as the sub-stream.			
<ControlProtocolList> identifies the control protocols that are valid for this type of streaming.			

<Unicast> is for direct unicast streaming.
 <Multicast> is for direct multicast streaming.
 <videoSourcePortNo> and <audioSourcePortNo> are the source port numbers for the outbound video or audio streams.
 <videoInputChannelID> refers to /ISAPI/System/Video/inputs/channel/ID.
 <audioInputChannelID> refers to /ISAPI/System/Audio/channels/ID. It must be configured as an input channel.
 Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress.
 <Security> determines whether SRTP is used for stream encryption.
 <audioResolution> is the resolution for the outbound audio stream in bits.

voiceChanger: voice change

StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
    <maxPacketSize> <!-- opt, xs:integer --> </maxPacketSize>
    <audioPacketLength> <!-- opt, xs:integer --> </audioPacketLength>
    <audioInboundPacketLength><!-- opt, xs:integer --> </audioInboundPacketLength>
    <audioInboundPortNo> <!-- opt, xs:integer --> </audioInboundPortNo>
    <videoSourcePortNo> <!-- opt, xs:integer --> </videoSourcePortNo>
    <audioSourcePortNo> <!-- opt, xs:integer --> </audioSourcePortNo>
    <ControlProtocolList> <!-- req -->
      <ControlProtocol>
        <!-- req -->
        <streamingTransport>
          <!-- req, xs:string, "HTTP,RTSP,SHTTP" -->
          </streamingTransport>
        </ControlProtocol>
      </ControlProtocolList>
    <Unicast><!-- opt -->
      <enabled> <!-- req, xs:boolean --> </enabled>
      <interfaceID> <!-- opt, xs:string --> </interfaceID>
      <rtpTransportType>
        <!-- opt, xs:string, "RTP/UDP,RTP/TCP" -->
        </rtpTransportType>
      </Unicast>
    <Multicast> <!-- opt -->
      <enabled> <!-- req, xs:boolean --> </enabled>
      <userTriggerThreshold> <!-- opt, xs:integer --> </userTriggerThreshold>
  </StreamingChannel>
```

```

    <destIPAddress> <!-- dep, xs:string -->    </destIPAddress>
    <videoDestPortNo><!-- opt, xs:integer --></videoDestPortNo>
    <audioDestPortNo><!-- opt, xs:integer --></audioDestPortNo>
    <destIPv6Address><!-- dep, xs:string --></destIPv6Address>
    <ttl><!-- opt, xs:integer --></ttl>
  </Multicast>
  <Security>
    <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
  </Security>
</Transport>
<Video>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <videoCodecType>
    <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
  </videoCodecType>
  <videoScanType>
    <!-- opt, xs:string, "progressive,interlaced" -->
  </videoScanType>
  <videoResolutionWidth>    <!-- req, xs:integer -->    </videoResolutionWidth>
  <videoResolutionHeight>    <!-- req, xs:integer -->    </videoResolutionHeight>
  <videoResolutionName>
    <!-- opt, xs:string, "3MP,5MP,none" -->
  </videoResolutionName>
  <videoPositionX>    <!-- opt, xs:integer -->    </videoPositionX>
  <videoPositionY>    <!-- opt, xs:integer -->    </videoPositionY>
  <videoQualityControlType>
    <!-- opt, xs:string, "CBR,VBR" -->
  </videoQualityControlType>
  <constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
  <fixedQuality><!-- opt, xs:integer, percentage, 0..100 -->    </fixedQuality>
  <vbrUpperCap>    <!-- dep, xs:integer, in kbps -->    </vbrUpperCap>
  <vbrLowerCap>    <!-- dep, xs:integer, in kbps -->    </vbrLowerCap>
  <maxFrameRate>    <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
  <keyFrameInterval> <!-- opt, xs:integer, milliseconds -->    </keyFrameInterval>
  <rotationDegree>    <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
  <mirrorEnabled>    <!-- opt, xs:boolean -->    </mirrorEnabled>
  <snapshotImageType>
    <!-- opt, xs:string, "JPEG,GIF,PNG" -->
  </snapshotImageType>
  <Mpeg4Profile> <!--dep, xs:string, "SP,ASP"--> </Mpeg4Profile>
  <H264Profile>

```

```

    <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
  </H264Profile>
  <SVACProfile>
    <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
  </SVACProfile>
  <GovLength> <!--opt, xs:integer --> </GovLength>
  <SVC>
    <enabled> <!-- req, xs:boolean --> </enabled>
    <SVCMMode> <!--dep, xs:string, "manual,auto" --> </SVCMMode>
  </SVC>
  <smoothing> <!-- opt, xs:integer--> </smoothing>
  <SmartCodec><!-- dep, -->
    <enabled> <!-- req, xs:boolean --> </enabled>
  </SmartCodec>
  <vbrAverageCap> <!-- dep, xs:integer, in kbps , --> </vbrAverageCap>
</Video>
<Audio>
  <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <audioInputChannelID> <!-- req, xs:string;id --> </audioInputChannelID>
  <audioCompressionType>
    <!-- req, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM, MP2L2"
    -->
  </audioCompressionType>
  <audioInboundCompressionType>
    <!-- opt, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
    -->
  </audioInboundCompressionType>
  <audioBitRate> <!-- opt, xs:integer, in kbps --> </audioBitRate>
  <audioSamplingRate> <!-- opt, xs:float, in kHz --> </audioSamplingRate>
  <audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
  <VoiceChanger><!--opt, xs:integer, -12..0..12, -->
    <enabled><!-- req, xs:boolean --></enabled>
    <level><!--req, xs:integer, "-12..12"--></level>
  </VoiceChanger>
</Audio>
  <enableCABAC> <!-- opt, xs: boolean --> <enableCABAC>
  <subStreamRecStatus> <!-- opt, xs: boolean --> </subStreamRecStatus>
</StreamingChannel>

```

Example: Getting Streaming Channel Properties

The following is an example of a GET on the streaming parameters of a particular channel that

has been preconfigured by the IP media device. Depending on the device, some streaming channels may be already preconfigured or the device while other may require that channels be manually configured before use.

```
GET /ISAPI/Streaming/channels/444 HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: ISAPI

<?xml version="1.0" encoding="UTF-8"?>
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>444</id>
  <channelName>Input 1 MPEG-4 ASP</channelName>
  <enabled>true</enabled>
  <Transport>
    <rtspPortNo>554</rtspPortNo>
    <maxPacketSize>1446</maxPacketSize>
    <ControlProtocolList>
      <ControlProtocol>
        <streamingTransport>RTSP</streamingTransport>
      </ControlProtocol>
      <ControlProtocol>
        <streamingTransport>HTTP</streamingTransport>
      </ControlProtocol>
    </Transport>
    <Video>
      <enabled>true</enabled>
      <videoInputChannelID>2</videoInputChannelID>
      <videoCodecType>MPEG4</videoCodecType>
      <videoScanType>progressive</videoScanType>
      <videoResolutionWidth>640</videoResolutionWidth>
      <videoResolutionHeight>480</videoResolutionHeight>
      <videoPositionX>0</videoPositionX>
      <videoPositionY>0</videoPositionY>
      <videoQualityControlType>CBR</videoQualityControlType>
      <constantBitRate>2000</constantBitRate>
      <maxFrameRate>2500</maxFrameRate>
      <keyFrameInterval>1000</keyFrameInterval>
      <rotationDegree>0</rotationDegree>
      <mirrorEnabled>false</mirrorEnabled>
      <snapshotImageType>JPEG</snapshotImageType>
    </Video>
    <Audio>
```

```
<enabled>false</enabled>
<audioInputChannelID>2</audioInputChannelID>
<audioCompressionType> G.726</audioCompressionType>
<audioBitRate>24</audioBitRate>
<audioSamplingRate>8</audioSamplingRate>
</Audio>
</StreamingChannel>
```

Example: Getting Streaming Capabilities

```
GET /ISAPI/Streaming/channels/444/capabilities HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: ISAPI

<?xml version="1.0" encoding="UTF-8"?>
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id opt="111,222,333,444">444</id>
  <channelName min="0" max="64">Input 1 MPEG-4 ASP</channelName>
  <enabled opt="true,false" def="true">true</enabled>
  <Transport>
    <rtspPortNo min="0" max="65535" def="554">554</rtspPortNo>
    <maxPacketSize min="0" max="1500">1446</maxPacketSize>
    <audioPacketLength min="0" max="5000"/>
    <audioInboundPacketLength min="0" max="5000"/>
    <audioInboundPortNo min="0" max="65535"/>
    <videoSourcePortNo min="0" max="65535"/>
    <audioSourcePortNo min="0" max="65535"/>
    <ControlProtocolList>
      <ControlProtocol>
        <streamingTransport opt="RTSP/RTP,HTTP">RTSP</streamingTransport>
      </ControlProtocol>
      <ControlProtocol>
        <streamingTransport opt="RTSP/RTP,HTTP">HTTP</streamingTransport>
      </ControlProtocol>
    </ControlProtocolList>
    <Unicast>
      <enabled opt="true,false" def="false"/>
      <rtpTransportType opt="RTP/UDP,RTP/TCP"/>
    </Unicast>
    <Multicast>
      <enabled opt="true,false" def="false"/>
      <userTriggerThreshold/>
    </Multicast>
  </Transport>
</StreamingChannel>
```

```

    <videoDestPortNo min="0" max="65535"/>
    <audioDestPortNo min="0" max="65535"/>
    <destIPAddress min="8" max="16"/>
    <destIPv6Address min="15" max="39"/>
    <ttl min="0" max="127" def="1"/>
  </Multicast>
  <Security>
    <enabled opt="true,false" def="false"/>
  </Security>
</Transport>
<Video>
  <enabled opt="true,false">true</enabled>
  <videoInputChannelID opt="1,2,3,4">2</videoInputChannelID>
  <videoCodecType opt="MJPEG,MPEG4">MPEG4</videoCodecType>
  <videoScanType opt="interlaced,progressive">progressive</videoScanType>
  <videoResolutionWidth min="0" max="640">640</videoResolutionWidth>
  <videoResolutionHeight min="0" max="480">480</videoResolutionHeight>
  <videoPositionX min="0" max="640">0</videoPositionX>
  <videoPositionY min="0" max="480">0</videoPositionY>
  <videoQualityControlType opt="CBR,VBR">CBR</videoQualityControlType>
  <constantBitRate min="50" max="4000" dynamic="true">2000</constantBitRate>
  <maxFrameRate opt="2500,1250,625,312,156,78" dynamic="true">2500</maxFrameRate>
  <keyFrameInterval min="0", max="10000">1000</keyFrameInterval>
  <rotationDegree opt="0,90,180,270" def="0">0</rotationDegree>
  <mirrorEnabled opt="true,false" def="false">false</mirrorEnabled>
  <snapshotImageType opt="JPEG" def="JPEG">JPEG</snapshotImageType>
</Video>
<Audio>
  <enabled opt="true,false" def="false">false</enabled>
  <audioInputChannelID opt="1,2,3,4">2</audioInputChannelID>
  <audioCompressionType
def="G.726">G.726</audioCompressionType>
    opt="G.726,G.711ulaw"
  <audioBitRate opt="16,24,32,40" def="32" dynamic="true">24</audioBitRate>
  <audioSamplingRate opt="8" dynamic="true">8</audioSamplingRate>
  <audioResolution opt="3,4,5,6" dynamic="true"/>
</Audio>
</StreamingChannel>

```

8.10.4 /ISAPI/Streaming/channels/<ID>/dynamicCap

/ISAPI/Streaming/channels/ID/dynamicCap

General Resource v2.0

GET

Description	Get dynamic capabilities, different resolutions have different frame rates; different audio compression types have different audio bit rate.
Query	None
Inbound Data	None
Success Return	DynamicCap
Notes:	

DynamicCap XML Block

```

<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
      <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
      <videoResolutionName>
        <!-- opt, xs:string, "3MP,5MP,none" -->
      </videoResolutionName>
      <supportedFrameRate> <!-- req, xs:string --> </supportedFrameRate>
    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,H.265" --></videoCodecType>
      <isSupportProfile> <!--dep, xs: boolean,"" --> </isSupportProfile>
      <CBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </CBRCap>
      <VBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </VBRCap>
      <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
      <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
      <SmartCodecCap><!--opt-->
        <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality"><!-- opt, ro,
xs:string, --></readOnlyParams>
        <BitrateType>
          <Constant><!--opt, -->
            <support opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></support>
            <hiddenAbility opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></hiddenAbility>
          </Constant>
          <Variable><!--opt, -->
            <support opt="averageVideoBitrate"><!--opt,

```

```

xs:string,"averageVideoBitrate,videoBitrate"--></support>
      <readOnlyAbility                                opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></readOnlyAbility>
    </Variable>
  </BitrateType>
  <vbrAverageDefault><!--dep,xs:integer in kbps --></vbrAverageDefault>
  <smart264EnabledPrompt  opt="prompt1,prompt2,  prompt3"><!--opt,wo,xs:string,
--></smart264EnabledPrompt>
  <smart265EnabledPrompt  opt="prompt1,prompt2,  prompt3"><!--opt,wo,xs:string,
--></smart265EnabledPrompt>
  </SmartCodecCap>
</CodecParamDescriptor>
</CodecParamDescriptorList>
<AudioDescriptorList>
  <audioCompressionType>
    <!-- req, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AAC,ADPCM
MP2L2"-->
    </audioCompressionType>
  </AudioDescriptorList>
</DynamicCap>

```

Example: Getting the Dynamic Capabilities

```

GET /ISAPI/Streaming/Channels/101/dynamicCap HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth>176</videoResolutionWidth>
      <videoResolutionHeight>144</videoResolutionHeight>
      <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
    </ResolutionAvailableDescriptor>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth>352</videoResolutionWidth>
      <videoResolutionHeight>288</videoResolutionHeight>
      <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
  
```

```

</ResolutionAvailableDescriptor>
<ResolutionAvailableDescriptor>
  <videoResolutionWidth>704</videoResolutionWidth>
  <videoResolutionHeight>576</videoResolutionHeight>
  <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
</ResolutionAvailableDescriptor>
</ResolutionAvailableDescriptorList>
<CodecParamDescriptorList>
  <CodecParamDescriptor>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,H.265" --></videoCodecType>
    <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
    <CBRCap>
      <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
    </CBRCap>
    <VBRcap>
      <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
    </VBRcap>
    <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
    <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
    <SmartCodecCap><!--opt-->
      <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality"><!-- req, ro,
xs:string, --></readOnlyParams>
      <smart264EnabledPrompt
opt="prompt1,prompt2"><!--opt,wo,xs:string,--></smart264EnabledPrompt>
      <smart265EnabledPrompt
opt="prompt1,prompt2"><!--opt,wo,xs:string,--></smart265EnabledPrompt>
    </SmartCodecCap>
  </CodecParamDescriptor>
</CodecParamDescriptorList>
<AudioDescriptorList>
  <audioCompressionType
SupportedAudioBitRate="32,64,128">MP2L2</audioCompressionType>
</AudioDescriptorList>
</DynamicCap>

```

8.10.5 /ISAPI/Streaming/channels/<ID>/status

/ISAPI/Streaming/channels/ID/status		General Resource	v2.0
GET			
Description	It is used to get the list of streaming sessions associated with a particular		

	channel.
Query	None
Inbound Data	None
Success Return	StreamingSessionStatusList
Notes:	

StreamingSessionStatusList XML Block

```
<StreamingSessionStatusList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <StreamingSessionStatus>
    <clientAddress>  <!-- req -->
      <ipAddress>    <!-- dep, xs:string -->      </ipAddress>
      <ipv6Address>  <!-- dep, xs:string -->      </ipv6Address>
    </clientAddress>
  </StreamingSessionStatus>
</StreamingSessionStatusList>
```

8.10.6 /ISAPI/Streaming/channels/<ID>/picture

/ISAPI/Streaming/channels/ID/picture		General Resource	v2.0
GET			
Description	It is used to get a snapshot of the current image.		
Query	videoResolutionWidth videoResolutionHeight snapShotImageType		
Inbound Data	None		
Success Return	Picture over HTTP		
Notes:			
All devices must support <snapShotImageType> of “JPEG”.			
Only support the main stream channel snapshot.			
To determine the format of the picture returned either the parameters in <Video> or the query string values are used, or, if the Accept: header field is present in the request and the server supports it, the picture is returned in that format.			
For supported values, query /Streaming/channels/ID/picture/capabilities.			
Examples:			
GET /ISAPI/Streaming/channels/101/picture?snapShotImageType=JPEG			
...			
GET /ISAPI/Streaming/channels/101/picture			
Accept: image/jpeg			

...

8.10.7 /ISAPI/Streaming/channels/<ID>/requestKeyFrame

/ISAPI/Streaming/channels/ID/requestKeyFrame		General Resource	v2.0
PUT		Operator	
Description	It is used to request that the device issue a key frame on a particular channel.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
The key frame that is issued should include everything necessary to initialize a video decoder, i.e. parameter sets for H.264 or VOS for MPEG-4.			

8.10.8 /ISAPI/Streaming/channels/ID/dualVCA

/ISAPI/Streaming/channels/ID/dualVCA		General Resource	v2.0
GET			
Description	It is used to get the configuration of intelligence back retrieval.		
Query	None		
Inbound Data	None		
Success Return	DualVCA		
PUT			
Description	It is used to update the configuration of intelligence back retrieval.		
Query	None		
Inbound Data	DualVCA		
Success Return	ResponseStatus		
Notes:			

DualVCA XML Block

```
<DualVCA version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
</DualVCA>
```


8.10.9 /ISAPI/Streaming/channels/<ID>/regionClip/capabilities

/ISAPI/Streaming/channels/<ID>/regionClip/capabilities		General Resource	v2.0
GET			
Description	It is used to get Region Clip capability.		
Query	None		
Inbound Data	None		
Success Return	<RegionClip>		
Notes:			
The ID in “/Streaming/channels/ID” is defined as following declaration:			
101: Region Clip of video input channel “video1-main stream”.			
102: Region Clip of video input channel “video1-sub stream”.			
103: Region Clip of video input channel “video1-third stream”.			

RegionClip XML Block

```
<RegionClip version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <normalizedScreenSize> <!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <regionType opt="rectangle,convexPolygon,concavePolygon"><!--req, ro, xs:string-->
  </regionType>
  <videoResolutionWidth opt="704">704</videoResolutionWidth>
  <videoResolutionHeight opt="576">576</videoResolutionHeight>
  <ClipRegionList>
    <ClipRegion>
      <RegionCoordinatesList size="1">
        <RegionCoordinates>    <!-- req, -->
          <positionX>    <!-- req, xs:integer;coordinate -->    </positionX>
          <positionY>    <!-- req, xs:integer;coordinate -->    </positionY>
        </RegionCoordinates>
      <RegionCoordinatesList>
    </ClipRegion>
  </ClipRegionList>
</RegionClip>
```

8.10.10 /ISAPI/Streaming/channels/<ID>/regionClip

/ISAPI/Streaming/channels/<ID>/regionClip		General Resource	v2.0
GET			
Description	Region Clip configuration for a video input channels.		
Query	None		
Inbound Data	None		
Success Return	RegionClip		
PUT			
Description	Region Clip configuration for a video input channels.		
Query	None		
Inbound Data	RegionClip		
Success Return	ResponseStatus		
Notes:			
The ID in “/Streaming/channels/ID” is defined as following declaration:			
101: Region Clip of video input channel “video1-main stream”.			
102: Region Clip of video input channel “video1-sub stream”.			
103: Region Clip of video input channel “video1-third stream”.			

RegionClip XML Block

```
<RegionClip version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- ro, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- ro, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <regionType><!--req, ro, xs:string--> </regionType>
  <videoResolutionWidth>704</videoResolutionWidth>
  <videoResolutionHeight>576</videoResolutionHeight>
  <ClipRegionList>
    <ClipRegion>
      <RegionCoordinatesList>
        <RegionCoordinates>    <!-- req, size=4-->
          <positionX>    <!-- req, xs:integer;coordinate -->    </positionX>
          <positionY>    <!-- req, xs:integer;coordinate -->    </positionY>
        </RegionCoordinates>
      <RegionCoordinatesList>
    </ClipRegion>
  </ClipRegionList>
</RegionClip>
```

8.10.11 /ISAPI/Streaming/channels/<ID>/httppreview

/ISAPI/Streaming/channels/<ID>/httppreview

General Resource
v2.0

GET	
Description	Access a live stream via http.
Query	None
Inbound Data	None
Success Return	Stream over HTTP

Notes:

This function is used to request a stream from the device using HTTP or HTTPS. This API uses HTTP server-push with the MIME type multipart/x-mixed-replace. HTTP streaming must be enabled on the channel.

Example

```
GET /ISAPI/Streaming/channels/102/httppreview HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: multipart/x-mixed-replace; boundary=<boundary>
--<boundary>
Content-Type: image/jpeg
Content-Length: xxx
Image data for a single frame
--<boundary>
...
```

8.10.12 /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition

/ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition		General Resource	v2.0
GET			
Description	Get Video Streaming dynamic capabilities		
Query	None		
Inbound Data	StreamingDescriptor		
Success Return	StreamingDynamicCap		
Notes:			
VBR variable bit rate			

CBR Constant bit rate

StreamingDescriptor XML Block

```
<StreamingDescriptor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VbrAverageCapDynamicLinkTo><!--opt, -->
    <streamType><!--opt,xs:string, "mainstream,substream,stream3 "--></streamType>
    <codeType><!-- opt, xs:string, "smart264,smart265" --></codeType>
    <videoQualityControlType><!-- opt, xs:string, "CBR,VBR" --></videoQualityControlType>
    <vbrUpperCap><!-- opt, xs:integer, in kbps --></vbrUpperCap>
  </VbrAverageCapDynamicLinkTo>
</StreamingDescriptor>
```

StreamingDynamicCap XML Block

```
<StreamingDynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <vbrAverageCap> <!-- opt, xs:integer, in kbps, dep VbrAverageCapDynamicLinkTo-->
</vbrAverageCap>
</StreamingDynamicCap>
```

8.10.13 /ISAPI/Streaming/channels/<ID>/RTMPCfg

/ISAPI/Streaming/channels/<ID>/RTMPCfg		General Resource	v2.0
GET			
Description	Get RTMP param		
Query	None		
Inbound Data	None		
Success Return	RTMPCfg		
PUT			
Description	Set RTMP param		
Query	None		
Inbound Data	RTMPCfg		
Success Return	ResponseStatus		

RTMPCfg XML Block

```
<RTMPCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string, channel+ streamType,use"101"mode --> </id>
  <enabled><!--req, xs: boolean--></enabled>
  <url><!--req, xs:string--></url>
  <packetLen><!--opt, xs:integer--></packetLen>
</RTMPCfg>
```

8.10.14 /ISAPI/Streaming/channels/<ID>/RTMPCfg/capabilities

/ISAPI/Streaming/channels/<ID>/RTMPCfg/capabilities		General Resource	v2.0
GET			
Description	Get RTMP param capabilities		
Query	None		
Inbound Data	None		
Success Return	VGAParam		

RTMPCfg XML Block

```
<RTMPCfg version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string, channel+ streamType,use"101"mode--> </id>
  <enabled><!--req, xs: boolean,--></enabled>
  <url><!--req, xs:string,--></url>
  <packetLen><!--opt, xs:integer,--></packetLen>
</RTMPCfg>
```

8.10.15 /ISAPI/Streaming/channels/<ID>/capabilities

/ISAPI/Streaming/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Streaming capability.		
Query	None		
Inbound Data	None		
Success Return	<StreamingChannel>		
Notes:			
isSupportRefreshFrame: whether support refresh frame when Smart264 enabled			

StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
    <maxPacketSize> <!-- opt, xs:integer --> </maxPacketSize>
    <audioPacketLength> <!-- opt, xs:integer --> </audioPacketLength>
    <audioInboundPacketLength><!-- opt, xs:integer --> </audioInboundPacketLength>
    <audioInboundPortNo> <!-- opt, xs:integer --> </audioInboundPortNo>
    <videoSourcePortNo> <!-- opt, xs:integer --> </videoSourcePortNo>
```

```

<audioSourcePortNo> <!-- opt, xs:integer --> </audioSourcePortNo>
<ControlProtocolList> <!-- req -->
  <ControlProtocol>
    <!-- req -->
    <streamingTransport>
      <!-- req, xs:string, "HTTP,RTSP,SHTTP" -->
    </streamingTransport>
  </ControlProtocol>
</ControlProtocolList>
<Unicast><!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <interfaceID> <!-- opt, xs:string --> </interfaceID>
  <rtpTransportType>
    <!-- opt, xs:string, "RTP/UDP,RTP/TCP" -->
  </rtpTransportType>
</Unicast>
<Multicast> <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <userTriggerThreshold> <!-- opt, xs:integer --> </userTriggerThreshold>
  <destIPAddress> <!-- dep, xs:string --> </destIPAddress>
  <videoDestPortNo><!-- opt, xs:integer --></videoDestPortNo>
  <audioDestPortNo><!-- opt, xs:integer --></audioDestPortNo>
  <destIPv6Address><!-- dep, xs:string --></destIPv6Address>
  <ttl><!-- opt, xs:integer --></ttl>
</Multicast>
<Security>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
</Security>
</Transport>
<Video>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <videoCodecType>
    <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
  </videoCodecType>
  <videoScanType>
    <!-- opt, xs:string, "progressive,interlaced" -->
  </videoScanType>
  <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
  <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
  <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>
  <videoPositionY> <!-- opt, xs:integer --> </videoPositionY>

```

```

<videoQualityControlType>
  <!-- opt, xs:string, "CBR,VBR" -->
</videoQualityControlType>
<constantBitRate> <!-- dep, xs:integer, in kbps --> </constantBitRate>
<fixedQuality> <!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>
<vbrUpperCap> <!-- dep, xs:integer, in kbps --> </vbrUpperCap>
<vbrLowerCap> <!-- dep, xs:integer, in kbps --> </vbrLowerCap>
<maxFrameRate> <!-- req, xs:integer, maximum frame rate x100 --> </maxFrameRate>
<keyFrameInterval> <!-- opt, xs:integer, milliseconds --> </keyFrameInterval>
<rotationDegree> <!-- opt, xs:integer, degrees, 0..360 --> </rotationDegree>
<mirrorEnabled> <!-- opt, xs:boolean --> </mirrorEnabled>
<snapshotImageType>
  <!-- opt, xs:string, "JPEG,GIF,PNG" -->
</snapshotImageType>
<Mpeg4Profile> <!--dep, xs:string, "SP,ASP" --> </Mpeg4Profile>
<H264Profile>
  <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<SVACProfile>
  <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength> <!--opt, xs:integer --> </GovLength>
<SVC>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <SVCMode> <!--dep, xs:string, "manual,auto" --> </SVCMode>
</SVC>
  <smoothing> <!-- opt, xs:integer--> </smoothing>
</Video>
<Audio>
  <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <audioInputChannelID> <!-- req, xs:string;id --> </audioInputChannelID>
  <audioCompressionType>
    <!-- req, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM, MP2L2"
    -->
  </audioCompressionType>
  <audioInboundCompressionType>
    <!-- opt, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
    -->
  </audioInboundCompressionType>
  <audioBitRate> <!-- opt, xs:integer, in kbps --> </audioBitRate>
  <audioSamplingRate> <!-- opt, xs:float, in kHz --> </audioSamplingRate>

```

```

    <audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
  </Audio>
  <enableCABAC> <!-- opt, xs: boolean --> <enableCABAC>
  <subStreamRecStatus> <!-- opt, xs: boolean --> </subStreamRecStatus>
  <isSupportRefreshFrame> <!-- opt, xs:boolean --> </isSupportRefreshFrame>
</StreamingChannel>

```

8.10.16 Smart264

/ISAPI/Streaming/channels/ID		General Resource	v2.0
GET			
Description	It is used to get the properties of a particular streaming channel for the device.		
Query	None		
Inbound Data	None		
Success Return	StreamingChannel		
PUT			
Description	It is used to update the properties of a particular streaming channel for the device.		
Query	None		
Inbound Data	StreamingChannel		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete a particular streaming channel for the device.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
<p>To support multi video input devices , the streaming ID in URL should be indicate video input channel number , so it is defined as : straming-Id + video-input-Id *100, for example : /Streaming/channels/101 indicates the first streaming from the first video input /Streaming/channels/202 indicates the second streaming from the second video input</p> <p>For IPC, becouse of only one video input, case is simeple, it can accecpt 1 as the main stream id , 2 as the sub-stream.</p> <p><ControlProtocolList> identifies the control protocols that are valid for this type of streaming. <Unicast> is for direct unicast streaming. <Multicast> is for direct multicast streaming. <videoSourcePortNo> and <audioSourcePortNo> are the source port numbers for the outbound</p>			

video or audio streams.

<videoInputChannelID> refers to /ISAPI/System/Video/inputs/channel/ID.

<audioInputChannelID> refers to /ISAPI/System/Audio/channels/ID. It must be configured as an input channel.

Use of IPv4 or IPv6 addresses depends on the value of the <ipVersion> field in /ISAPI/System/Network/interfaces/ID/ipAddress.

<Security> determines whether SRTP is used for stream encryption.

<audioResolution> is the resolution for the outbound audio stream in bits.

StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
</Transport>
  <Video>
    <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
    </videoCodecType>
    <videoScanType>
      <!-- opt, xs:string, "progressive,interlaced" -->
    </videoScanType>
    <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
    <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
    <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>
    <videoPositionY> <!-- opt, xs:integer --> </videoPositionY>
    <videoQualityControlType>
      <!-- opt, xs:string, "CBR,VBR" -->
    </videoQualityControlType>
    <constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
    <fixedQuality><!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>
    <vbrUpperCap> <!-- dep, xs:integer, in kbps --> </vbrUpperCap>
    <vbrLowerCap> <!-- dep, xs:integer, in kbps --> </vbrLowerCap>
    <maxFrameRate> <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
    <keyFrameInterval> <!-- opt, xs:integer, milliseconds --> </keyFrameInterval>
    <rotationDegree> <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
    <mirrorEnabled> <!-- opt, xs:boolean --> </mirrorEnabled>
    <snapshotImageType>
      <!-- opt, xs:string, "JPEG,GIF,PNG" -->
    </snapshotImageType>
```

```

<Mpeg4Profile><!--dep, xs:string, "SP,ASP"--></Mpeg4Profile>
<H264Profile>
  <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<SVACProfile>
  <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength><!--opt, xs:integer --></GovLength>
<SVC>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <SVCMMode> <!--dep, xs:string, "manual,auto" --> </SVCMMode>
</SVC>
<smoothing> <!-- opt, xs:integer--> </smoothing>
<SmartCodec><!-- dep, ncode type: H.264 H.265 -->
  <enabled> <!-- req, xs:boolean --> </enabled>
</SmartCodec>
  <vbrAverageCap><!-- dep, xs:integer, in kbps , "average bitrate, depends on whether
SmartCodec is enabled or not"--> </vbrAverageCap>
</Video>
<Audio>
  <!-- opt -->
</Audio>
<enableCABAC> <!-- opt, xs: boolean --> <enableCABAC>
<subStreamRecStatus> <!-- opt, xs: boolean --> </subStreamRecStatus>
</StreamingChannel>

```

8.10.16.1 Smart264 Function Configuration and Cue words

Ability

/ISAPI/Streaming/channels/ID/dynamicCap		General Resource	v2.0
GET			
Description	Get dynamic capabilities, different resolutions have different frame rates; different vedio/audio compression types have different vedio/audio bit rate.		
Query	None		
Inbound Data	None		
Success Return	DynamicCap		
Notes:			
<p><profile>:When the <videoCodecType> is assigned to “H.264”,the valid values of <profile> are: Baseline,Main,High, Extended,while “SP,ASP” for “MPEG4”.</p>			
prompt1:			

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

1. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
2. H264+ is not supported simultaneously with third stream, SVC, smoothing, target cropping, high frame rate.

Do you want to reboot the unit?

prompt2:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

1. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
2. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, target cropping, high frame rate, WDR, HLC, 4000*3000 resolution, 3840*2160 resolution, counting, vehicle detection etc.

Do you want to reboot the unit?

prompt3:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

3. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
4. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, target cropping, high frame rate, WDR, HLC, 4000*3000 resolution, 3840*2160 resolution, counting, vehicle detection etc.

Do you want to reboot the unit?

prompt4: Available for back-end products

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

1. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
2. H264+ is not supported simultaneously with SVC etc.

Do you want to reboot the unit?

prompt5:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

5. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
6. H265 is not supported simultaneously with ROI, SVC, main stream smoothing, high frame rate, electronic stabilization.

Do you want to reboot the unit?

prompt6:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

3. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
4. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing.

Do you want to reboot the unit?

prompt7:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

5. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
6. H264+ is not supported simultaneously with ROI, SVC, main stream smoothing.

Do you want to reboot the unit?

prompt8:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

7. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
8. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, target cropping.

Do you want to reboot the unit?

prompt9:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

9. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
10. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, high frame rate, target cropping, 2048*1536 resolution, vehicle detection, HVT detection, Violation Forensic, heatmap,.

Do you want to reboot the unit?

prompt10:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

7. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
8. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream

smoothing, target cropping, high frame rate, vehicle detection.

Do you want to reboot the unit?

prompt11:

H264+ reduces bandwidth by 50% in most scenes while maintaining image quality compared to H264.

Notice:

9. Update your video player to the latest version if live view or playback is not working due to the capabilities reasons
10. H264+ is not supported simultaneously with third stream, ROI, SVC, main stream smoothing, high frame rate, electronic stabilization, vehicle detection.

Do you want to reboot the unit?

<smart264EnabledPrompt>: Smart264

<smart265EnabledPrompt>: Smart265

DynamicCap XML Block

```
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
      <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
      <supportedFrameRate> <!-- req, xs:string --> </supportedFrameRate>
    </ResolutionAvailableDescriptor>
  </ResolutionAvailableDescriptorList>
  <CodecParamDescriptorList>
    <CodecParamDescriptor>
      <videoCodecType>
        <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
      <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
      <CBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </CBRCap>
      <VBRCap>
        <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
      </VBRCap>
      <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
      <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
      <SmartCodecCap><!--opt-->
        <readOnlyParams opt="keyFrameInterval,Profile,SVC,fixedQuality"><!-- opt, ro,
xs:string, "The following functions option are read only :keyFrameInterva,Profile,SVC,
fixedQuality"--></readOnlyParams>
        <BitrateType>
          <Constant><!--opt, Constant bitrate-->
            <support opt="videoBitrate"><!--opt,
```

```

xs:string,"averageVideoBitrate,videoBitrate"--></support>
    <hiddenAbility                                opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></hiddenAbility>
    </Constant>
    <Variable><!--opt, Variable bitrate-->
        <support                                opt="averageVideoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></support>
        <readOnlyAbility                        opt="videoBitrate"><!--opt,
xs:string,"averageVideoBitrate,videoBitrate"--></readOnlyAbility>
    </Variable>
</BitrateType>
<vbrAverageDefault><!--dep,xs:integer in kbps "default value of average video
bitrate"--></vbrAverageDefault>
    <smart264EnabledPrompt    opt="prompt1,prompt2,prompt3"><!--opt,wo,xs:string,"
Smart264 enabled prompt"--></smart264EnabledPrompt>
    <smart265EnabledPrompt    opt="prompt1,prompt2,    prompt3"><!--opt,wo,xs:string,"
Smart265 enabled prompt"--></smart265EnabledPrompt>
</SmartCodecCap>
</CodecParamDescriptor>
</CodecParamDescriptorList>
</DynamicCap>

```

Example: Getting the Dynamic Capabilities

```

GET /ISAPI/Streaming/Channels/101/dynamicCap HTTP/1.1
...
HTTP/1.1 200 OK
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<DynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ResolutionAvailableDescriptorList>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth>176</videoResolutionWidth>
      <videoResolutionHeight>144</videoResolutionHeight>
      <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
    </ResolutionAvailableDescriptor>
    <ResolutionAvailableDescriptor>
      <videoResolutionWidth>352</videoResolutionWidth>
      <videoResolutionHeight>288</videoResolutionHeight>
      <supportedFrameRate>2500,6,12,25,50,100,200,400,600,800,1000,1200,1500,1600,1800,
2000,2200</supportedFrameRate>
  
```

```

</ResolutionAvailableDescriptor>
</ResolutionAvailableDescriptorList>
<CodecParamDescriptorList>
  <CodecParamDescriptor>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264" --></videoCodecType>
    <isSupportProfile> <!--dep, xs:boolean,""--> </isSupportProfile>
    <CBRCap> 定码率
      <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
    </CBRCap>
    <VBRCap> 变码率
      <isSupportSmooth><!--dep, xs:boolean--></isSupportSmooth>
    </VBRCap>
    <isSupportSVC> <!-- opt, xs:boolean--> </isSupportSVC>
    <isSupportCABAC> <!-- opt, xs:boolean--> </isSupportCABAC>
    <SmartCodecCap><!--opt-->
      <readOnlyParams opt="keyFrameInterval,Profile,SVC"><!-- req, ro, xs:string, "
keyFrameInterval,Profile. SVC"--></readOnlyParams>
      <smart264EnabledPrompt
opt="prompt1,prompt2,prompt3"><!--opt,wo,xs:string,--></smart264EnabledPrompt>
      <smart265EnabledPrompt
opt="prompt1,prompt2"><!--opt,wo,xs:string,--></smart265EnabledPrompt>
    </SmartCodecCap>
  </CodecParamDescriptor>
</CodecParamDescriptorList>
<AudioDescriptorList>
  <audioCompressionType
SupportedAudioBitRate="32,64,128">MP2L2</audioCompressionType>
</AudioDescriptorList>
</DynamicCap>

```

8.10.16.2/ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition

/ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition		General Resource	v2.0
GET			
Description	Get Video Streaming dynamic capabilities		
Query	None		
Inbound Data	StreamingDescriptor		
Success Return	StreamingDynamicCap		

Notes:

VBR variable bit rate
CBR Constant bit rate

StreamingDescriptor XML Block

```
<StreamingDescriptor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VbrAverageCapDynamicLinkTo><!--opt, " Get Video Streaming dynamic capabilities"-->
    <vbrUpperCap><!-- opt, xs:integer, in kbps --></vbrUpperCap>
    <streamType><!--opt,xs:string, stream type "mainstream,substream,stream3
"--></streamType>
    <codeType><!-- opt, xs:string, encode type "smart264,smart265" --></codeType>
    <videoQualityControlType><!-- opt, xs:string, "CBR,VBR" --></videoQualityControlType>
  </VbrAverageCapDynamicLinkTo>
</StreamingDescriptor>
```

StreamingDynamicCap XML Block

```
<StreamingDynamicCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <vbrAverageCap> <!-- opt, xs:integer, in kbps, VbrAverageCapDynamicLinkTo-->
  </vbrAverageCap>
</StreamingDynamicCap>
```

/ISAPI/Streaming/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get the properties of a particular streaming channel for the device capabilities.		
Query	None		
Inbound Data	None		
Success Return	StreamingChannel		
Notes:			
isSpportDynamicCapWithCondition : whether support the dynamic capabilities with condition			

StreamingChannel XML Block

```
<StreamingChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <channelName> <!-- req, xs:string --> </channelName>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <Transport> <!-- req -->
    <maxPacketSize> <!-- opt, xs:integer --> </maxPacketSize>
    <audioPacketLength> <!-- opt, xs:integer --> </audioPacketLength>
    <audioInboundPacketLength><!-- opt, xs:integer --> </audioInboundPacketLength>
    <audioInboundPortNo> <!-- opt, xs:integer --> </audioInboundPortNo>
```



```

<videoSourcePortNo> <!-- opt, xs:integer --> </videoSourcePortNo>
<audioSourcePortNo> <!-- opt, xs:integer --> </audioSourcePortNo>
<ControlProtocolList> <!-- req -->
  <ControlProtocol>
    <!-- req -->
    <streamingTransport>
      <!-- req, xs:string, "HTTP,RTSP,SHTTP" -->
    </streamingTransport>
  </ControlProtocol>
</ControlProtocolList>
<Unicast><!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <interfaceID> <!-- opt, xs:string --> </interfaceID>
  <rtpTransportType>
    <!-- opt, xs:string, "RTP/UDP,RTP/TCP" -->
  </rtpTransportType>
</Unicast>
<Multicast> <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <userTriggerThreshold> <!-- opt, xs:integer --> </userTriggerThreshold>
  <destIPAddress> <!-- dep, xs:string --> </destIPAddress>
  <videoDestPortNo><!-- opt, xs:integer --></videoDestPortNo>
  <audioDestPortNo><!-- opt, xs:integer --></audioDestPortNo>
  <destIPv6Address><!-- dep, xs:string --></destIPv6Address>
  <ttl><!-- opt, xs:integer --></ttl>
</Multicast>
<Security>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
</Security>
</Transport>
<Video>
  <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <videoCodecType>
    <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,HK.264,MPNG,SVAC" -->
  </videoCodecType>
  <videoScanType>
    <!-- opt, xs:string, "progressive,interlaced" -->
  </videoScanType>
  <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
  <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
  <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>

```

```

<videoPositionY> <!-- opt, xs:integer --> </videoPositionY>
<videoQualityControlType>
  <!-- opt, xs:string, "CBR,VBR" -->
</videoQualityControlType>
<constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
<fixedQuality><!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>
<vbrUpperCap> <!-- dep, xs:integer, in kbps --> </vbrUpperCap>
<vbrLowerCap> <!-- dep, xs:integer, in kbps --> </vbrLowerCap>
<maxFrameRate> <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
<keyFrameInterval> <!-- opt, xs:integer, milliseconds --> </keyFrameInterval>
<rotationDegree> <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
<mirrorEnabled> <!-- opt, xs:boolean --> </mirrorEnabled>
<snapshotImageType>
  <!-- opt, xs:string, "JPEG,GIF,PNG" -->
</snapshotImageType>
<Mpeg4Profile> <!--dep, xs:string, "SP,ASP"--> </Mpeg4Profile>
<H264Profile>
  <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<SVACProfile>
  <!-- dep, xs:string, "Baseline,Main,High,Extended" -->
</SVACProfile>
<GovLength> <!--opt, xs:integer --> </GovLength>
<SVC>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <SVCMODE> <!--dep, xs:string, "manual,auto" --> </SVCMODE>
</SVC>
<smoothing> <!-- opt, xs:integer--> </smoothing>
<H265Profile>
  <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H265Profile>
</Video>
<Audio>
  <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <audioInputChannelID> <!-- req, xs:string;id --> </audioInputChannelID>
  <audioCompressionType>
    <!-- req, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM, MP2L2"
    -->
  </audioCompressionType>
  <audioInboundCompressionType>
    <!-- opt, xs:string,
      "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM,MP2L2"
    -->
  </audioInboundCompressionType>

```

```

-->
</audioInboundCompressionType>
<audioBitRate>    <!-- opt, xs:integer, in kbps -->    </audioBitRate>
<audioSamplingRate>    <!-- opt, xs:float, in kHz -->    </audioSamplingRate>
<audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
</Audio>
<enableCABAC>    <!-- opt, xs: boolean --> <enableCABAC>
<subStreamRecStatus>    <!-- opt, xs: boolean --> </subStreamRecStatus>
<isSupportDynamicCapWithCondition><!--opt, xs:boolean," whether support the dynamic
capabilities with condition "--></isSupportDynamicCapWithCondition>
<isSupportRefreshFrame> <!-- opt, xs:boolean --> </isSupportRefreshFrame>
</StreamingChannel>

```

8.10.16.3 Smart264 Refresh Frame Function

/ISAPI/Streaming/channels/<ID>/refreshFrame

/ISAPI/Streaming/channels/ID/refreshFrame		General Resource	v2.0
PUT		Operator	
Description	Provide forced to refresh the frame control interface, just for streaming media server using; By calling the SDK interface, to sends the server refresh frame (big P frame)		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
The Smart264 need to be enabled at first.			
<ID>			
101---channel 1 with main stream;			
102—channel 1 with sub stream;			

/ISAPI/Streaming/channels/<ID>/refreshFrame/capabilities

/ISAPI/Streaming/channels/ID/refreshFrame/capabilities		General Resource	v2.0
GET		Operator	
Description	It is used to get Streaming capability.		
Inbound Data	None		
Success Return	<RefreshFrame>		
Notes:			
The Smart264 need to be enabled at first.			

RefreshFrame XML Block

```
<RefreshFrame version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <streamType opt="mainStream,subStream,stream3"><!--req, xs:string --></streamType>
</RefreshFrame>
```

8.11 /ISAPI/Snapshot

/ISAPI/Snapshot	Service	v2.0
Notes: snapshot service		

8.11.1 /ISAPI/Snapshot/channels

/ISAPI/Snapshot/channels		General Resource	v2.0
GET			
Description	It is used to get the properties of snapshot channels for the device.		
Query	None		
Inbound Data	None		
Success Return	SnapshotChannelList		
PUT			
Description	It is used to update the properties of snapshot channels for the device.		
Query	None		
Inbound Data	SnapshotChannelList		
Success Return	ResponseStatus		
Notes:			

SnapshotChannelList XML Block

```
<SnapshotChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SnapshotChannel/> <!-- opt -->
</SnapshotChannelList>
```

8.11.2 /ISAPI/Snapshot/channels/<ID>

/ISAPI/Snapshot/channel/ID		General Resource	v2.0
GET			
Description	It is used to get the properties of a particular snapshot channel.		

Query	None
Inbound Data	None
Success Return	SnapshotChannel
PUT	
Description	It is used to update the properties of a particular snapshot channel.
Query	None
Inbound Data	SnapshotChannel
Success Return	ResponseStatus
Notes:	

SnapshotChannel XML Block

```

<SnapshotChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <timingCapture> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <supportSchedule> <!-- opt, ro, xs:boolean --> </supportSchedule>
    <compress>
      <pictureCodecType>
        <!-- req, xs:string, "JPEG,BMP,GIF,PNG" -->
      </pictureCodecType>
      <pictureWidth> <!-- req, xs:integer --> </pictureWidth>
      <pictureHeight> <!-- req, xs:integer --> </pictureHeight>
      <quality> <!-- opt, xs:integer, percentage, 0..100 --> </quality>
      <captureInterval> <!-- opt, xs:integer, milliseconds --> </captureInterval>
    </compress>
  </timingCapture>
  <eventCapture> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <supportSchedule> <!-- opt, ro, xs:boolean --> </supportSchedule>
    <compress>
      <pictureCodecType>
        <!-- req, xs:string, "JPEG,BMP,GIF,PNG" -->
      </pictureCodecType>
      <pictureWidth> <!-- req, xs:integer --> </pictureWidth>
      <pictureHeight> <!-- req, xs:integer --> </pictureHeight>
      <quality> <!-- opt, xs:integer, percentage, 0..100 --> </quality>
      <captureInterval> <!-- opt, xs:integer, milliseconds --> </captureInterval>
    </compress>
  </eventCapture>
</SnapshotChannel>

```

8.11.3 /ISAPI/Snapshot/channels/<ID>/capabilities

/ISAPI/Snapshot/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get snapshot capabilities.		
Query	None		
Inbound Data	None		
Success Return	SnapshotChannelCapabilities		

SnapshotChannel XML Block

```
<?xml version="1.0" encoding="UTF-8"?>
<SnapshotChannel version="2.0" xmlns="http://www.std-cgi.com/ver20/XMLSchema">
  <id opt="1">1</id>
  <videoInputChannelID opt="1">1</videoInputChannelID>
  <timingCapture>
    <enabled opt="true,false">>false</enabled>
    <supportSchedule opt="true,false">>true</supportSchedule>
    <compress>
      <pictureCodecType opt="JPEG">JPEG</pictureCodecType>
      <pictureWidth opt="1280">1280</pictureWidth>
      <pictureHeight opt="720">720</pictureHeight>
      <quality opt="40,60,80">80</quality>
      <captureInterval min="1000" max="604800000">0</captureInterval>
      <captureNumber min="1" max="120" def="4">0</captureNumber>
    </compress>
  </timingCapture>
  <eventCapture>
    <enabled opt="true,false">>false</enabled>
    <supportSchedule opt="false">>false</supportSchedule>
    <compress>
      <pictureCodecType opt="JPEG">JPEG</pictureCodecType>
      <pictureWidth opt="1280">1280</pictureWidth>
      <pictureHeight opt="720">720</pictureHeight>
      <quality opt="40,60,80">80</quality>
      <captureInterval min="1000" max="65535">0</captureInterval>
      <captureNumber min="1" max="120" def="4">4</captureNumber>
    </compress>
  </eventCapture>
  <PromptDescription>
    <prompt1>true<prompt1><!--opt, just return successfully when supported. If it doesn't
support, the upper note still exists.-->
  </PromptDescription>
</SnapshotChannel>
```

8.12 /ISAPI/Event

/ISAPI/Event		Service v2.0
GET		Viewer
Description	It is used to get the configuration of the device event behavior, scheduling and notifications.	
Query	None	
Inbound Data	None	
Success Return	EventNotification	
PUT		Operator
Description	It is used to update the configuration of the device event behavior, scheduling and notifications.	
Query	None	
Inbound Data	EventNotification	
Success Return	ResponseStatus	
Notes:		
The event trigger list defines the set of device behaviors that trigger events.		
The event schedule defines when event notifications are active.		
The event notification methods define what types of notification (e-mail) are supported.		

EventNotification XML Block

```
<EventNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTriggerList/>      <!-- opt -->
  <EventNotificationMethods/>  <!-- opt -->
</EventNotification>
```

8.12.1 /ISAPI/Event/capabilities

/ISAPI/Event/capabilities		General Resource	v2.0
GET			
Description	It is used to get network capability.		
Query	None		
Inbound Data	None		
Success Return	< EventCap>		
Notes:			

EventCap XML Block

```
<EventCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportHDFull><!-- opt, xs:boolean --></isSupportHDFull>
  <isSupportHDError><!-- opt, xs:boolean --></isSupportHDError>
  <isSupportNicBroken><!-- opt, xs:boolean --></isSupportNicBroken>
  <isSupportIpConflict><!-- opt, xs:boolean --></isSupportIpConflict>
  <isSupportIllaAccess><!-- opt, xs:boolean --></isSupportIllaAccess>
  <isSupportViException><!-- opt, xs:boolean --></isSupportViException>
  <isSupportViMismatch><!-- opt, xs:boolean --></isSupportViMismatch>
  <isSupportRecordException><!-- opt, xs:boolean --></isSupportRecordException>
  <isSupportRaidException><!-- opt, xs:boolean --></isSupportRaidException>
  <isSupportSpareException><!-- opt, xs:boolean --></isSupportSpareException>
  <isSupportPoePowerException><!--opt, xs:boolean--></isSupportPoePowerException>
</EventCap>
```

8.12.2 /ISAPI/Event/triggersCap

/ISAPI/Event/triggersCap		General Resource	v2.0
GET			
Description	It is used to get the triggers capabilities of all event.		
Query	None		
Inbound Data	None		
Success Return	EventTriggersCap		
Notes:			
<maxPresetActionNum>,<maxPatrolActionNum> and <maxPatternActionNum> are only required if the <isSupportPTZ> is true;			

EventTriggerCap XML Block

```
<EventTriggersCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DiskfullTriggerCap><!--opt,xs: EventTriggerCapType --></DiskfullTriggerCap>
  <DiskerrorTriggerCap><!--opt,xs: EventTriggerCapType --></DiskerrorTriggerCap>
  <NicbrokenTriggerCap><!--opt,xs: EventTriggerCapType --></NicbrokenTriggerCap>
  <IpconflictTriggerCap><!--opt,xs: EventTriggerCapType --></IpconflictTriggerCap>
  <IllaAccesTriggerCap><!--opt,xs: EventTriggerCapType --></IllaAccesTriggerCap>
  <BadvideoTriggerCap><!--opt,xs: EventTriggerCapType --></BadvideoTriggerCap>
  <VideomismatchTriggerCap><!--opt,xs: EventTriggerCapType -->
</VideomismatchTriggerCap>
  <IOTriggerCap><!--opt,xs: EventTriggerCapType --></IOTriggerCap>
  <RegionEntranceTriggerCap><!--opt,xs: EventTriggerCapType --></RegionEntranceTriggerCap>
  <RegionExitingTriggerCap><!--opt,xs: EventTriggerCapType --></RegionExitingTriggerCap>
```



```

<LoiteringTriggerCap><!--opt,xs:EventTriggerCapType--></LoiteringTriggerCap>
<GroupDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></GroupDetectionTriggerCap>
<RapidMoveTriggerCap><!--opt,xs:EventTriggerCapType--></RapidMoveTriggerCap>
<ParkingTriggerCap><!--opt,xs:EventTriggerCapType--></ParkingTriggerCap>
<UnattendedBaggageTriggerCap><!--opt,xs:EventTriggerCapType--></UnattendedBaggageTriggerCap>
<AttendedBaggageTriggerCap><!--opt,xs:EventTriggerCapType--></AttendedBaggageTriggerCap>
<FireDetectionCap><!--opt,xs:EventTriggerCapType--></FireDetectionCap>
<BlackListTriggerCap><!--opt,xs:EventTriggerCapType--></BlackListTriggerCap>
<WhiteListTriggerCap><!--opt,xs:EventTriggerCapType--></WhiteListTriggerCap>
<AllVehicleListTriggerCap><!--opt,xs:EventTriggerCapType--></AllVehicleListTriggerCap>
<OtherVehicleListTriggerCap><!--opt,xs:EventTriggerCapType--></OtherVehicleListTriggerCap>
<PeopleDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></PeopleDetectionTriggerCap>
<StorageDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></StorageDetectionTriggerCap>
<MotionDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></PeopleDetectionTriggerCap>
<VideoLostTriggerCap><!--opt,xs:EventTriggerCapType--></VideoLostTriggerCap>
<HideTriggerCap><!--opt,xs:EventTriggerCapType--></HideTriggerCap>
<AlarmInTriggerCap><!--opt,xs:EventTriggerCapType--></AlarmInTriggerCap>
<VehicleDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></VehicleDetectionTriggerCap>
<VCATriggerCap><!--opt,xs:EventTriggerCapType--></VCATriggerCap>
<AudioExceptionCap><!--opt,xs:EventTriggerCapType--></AudioExceptionCap>
</EventTriggersCap>

```

EventTriggerCap XML Block

```

<EventTriggerCapType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportCenter><!-- opt, xs:boolean --></isSupportCenter>
  <isSupportRecord><!-- opt, xs:boolean --></isSupportRecord>
  <isSupportMonitorAlarm><!-- opt, xs:boolean --></isSupportMonitorAlarm>
  <isSupportBeep><!-- opt, xs:boolean --></isSupportBeep>
  <isSupportIO><!-- opt, xs:boolean --></isSupportIO>
  <isSupportFTP><!-- opt, xs:boolean --></isSupportFTP>
  <isSupportEmail><!-- opt, xs:boolean --></isSupportEmail>
  <isSupportLightAudioAlarm><!-- opt, xs:boolean --></isSupportLightAudioAlarm>
  <isSupportFocus><!-- opt, xs:boolean --></isSupportFocus>
  <isSupportPTZ><!-- opt, xs:boolean --></isSupportPTZ>
  <maxPresetActionNum><!--dep,xs:integer></maxPresetActionNum>
  <maxPatrolActionNum><!--dep,xs:integer></maxPatrolActionNum>
  <maxPatternActionNum><!--dep,xs:integer></maxPatternActionNum>
  <isSupportTrack><!-- opt, xs:boolean --></isSupportTrack>
  <isSupportCloud><!-- opt, xs:boolean --></isSupportCloud>
</EventTriggerCapType>

```

8.12.3 /ISAPI/Event/triggers

/ISAPI/Event/triggers		General Resource	v2.0
GET			
Description	It is used to get the list of event triggers.		
Query	None		
Inbound Data	None		
Success Return	EventTriggerList		
PUT			
Description	It is used to update the list of event triggers.		
Query	None		
Inbound Data	EventTriggerList		
Success Return	ResponseStatus		
POST			
Description	It is used to add an event trigger.		
Query	None		
Inbound Data	EventTrigger		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete the list of event triggers.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
Event triggering defines how the device reacts to particular events, such as video loss or motion detection.			

EventTriggerList XML Block

```
<EventTriggerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTrigger/>  <!-- opt -->
</EventTriggerList>
```

8.12.4 /ISAPI/Event/triggers/<ID>

/ISAPI/Event/triggers/ID		General Resource	v2.0
GET			
Description	It is used to get a particular event trigger configuration.		

Query	None
Inbound Data	None
Success Return	EventTrigger
PUT	
Description	It is used to update a particular event trigger configuration.
Query	None
Inbound Data	EventTrigger
Success Return	ResponseStatus
DELETE	
Description	It is used to delete a particular event trigger.
Query	None
Inbound Data	None
Success Return	ResponseStatus
<p>Notes:</p> <p>An event trigger determines how the device reacts when a particular event is detected. The following types are supported:</p> <ul style="list-style-type: none"> IO: trigger when an input IO port changes state. VMD: trigger on video motion detection. Video loss: trigger when the input video signal cannot be detected. Disk failure: trigger when a disk fails. Recording failure: trigger when recording fails: either there is a problem with the disk, or the storage volume is full, or the volume is corrupt. Bad video: trigger when the input video is bad. POS: trigger when a point-of-sale event is detected. Analytics: trigger on a general analytics event. Currently analytics events apart from VMD, which has its own event trigger, are not supported. Fan failure: trigger when a fan fails. Nicbroken: trigger when net interface is broken. Resolution mismatch: trigger when video input port resolution is not matched up to compress resolution. <p>The ID in "/Event/triggers/ID" is defined as following declaration: If the event type is IO, the ID is IO-InputPortNumber.</p> <p>Examples :</p> <p>IO-1 :the first IO input port</p> <p>If the event type is VMD, videoloss or tamperdetection, the ID style is VMD/videoloss/tamper/regionEntrance/regionExiting/loitering/group/rapidMove/parking/unattendedBaggage/attendedBaggage-InputChannelID.</p> <p>Examples:</p> <p>If video input channel id is "video1", the id is as follows:</p> <p>VMD-1: Video Motion Detection of video input channel "video1".</p> <p>videoloss-1: Video Loss Detection of video input channel "video1".</p> <p>tamper-1: Tamper Detection of video input channel "video1".</p>	

regionEntrance-1: Region Entrance Detection of video input channel "video1".
regionExiting-1: Region Exiting Detection of video input channel "video1".
loitering-1: Loitering Detection of video input channel "video1".
group-1: Group Detection of video input channel "video1".
rapidMove-1: Rapid Move Detection of video input channel "video1".
parking-1: Parking Detection of video input channel "video1".
unattendedBaggage-1: Unattended Baggage Detection of video input channel "video1".
attendedBaggage-1: Attended Baggage Detection of video input channel "video1".
blackList-1: channel 1 black list
whiteList-1: channel1 white list
allVehicleList-1: channel1 allVehicle list
otherVehicleList-1: channel1 otherVehicle list
peopleDetection-1: People Detection of video input channel "video1".

EventTrigger XML Block

```
<EventTrigger version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <eventType>
    <!-- req, xs:string,
      "IO,VMD,videoloss,raidfailure,recordingfailure,
      badvideo,POS,analytics,fanfailure,overheat, tamperdetection, diskfull, diskerror,
      nicbroken, ipconflict, illaccess, videomismatch, resolutionmismatch, radifailure,PIR,
      WLSensor, spareException, poePowerException,heatmap,
      counting,linedetection,fielddetection,regionEntrance,regionExiting,loitering,group,rapid
      Move,parking,unattendedBaggage,attendedBaggage,blackList,whitelist,peopleDetectio
      n,vehicledetection,HVTVehicleDetection,storageDetection,allVehicleList,otherVehicleLis
      t"
    -->
  </eventType>
  <eventDescription><!-- opt, xs:string --></eventDescription>
  <inputIOPortID> <!-- dep, xs:string; id --> </inputIOPortID>
  <dynInputIOPortID> <!-- dep, xs:string; id --> </dynInputPortID>
  <videoInputChannelID> <!-- dep, xs:string; id, if <eventType> is "VMD,videoloss,
  tamperdetection,regionEntrance,regionExiting,loitering,group,rapidMove,parking,unattendedBag
  gage,attendedBaggage" --> </videoInputChannelID>
  <dynVideoInputChannelID> <!-- dep, xs:string; id --> </dynVideoInputChannelID>
  <intervalBetweenEvents> <!-- opt, xs:integer, seconds --></intervalBetweenEvents>
  <WLSensorID> <!-- dep, xs:string; id --> </WLSensorID>
  <EventTriggerNotificationList/> <!-- opt -->
</EventTrigger>
```

8.12.5 /ISAPI/Event/triggers/<ID>/notifications

/ISAPI/Event/triggers/ID/notifications		General Resource	v2.0
GET			
Description	It is used to get the list of notification methods and behaviors for an event trigger.		
Query	None		
Inbound Data	None		
Success Return	EventTriggerNotificationList		
PUT			
Description	It is used to update the list of notification methods and behaviors for an event trigger.		
Query	None		
Inbound Data	EventTriggerNotificationList		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete the list of notification method and behavior for an event trigger.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
ptz: PTZ action			
record: recording			
monitorAlarm : monitor alarm			
center:send alarm to center			
LightAudioAlarm : light blink and sound the alarm			
<outputIOPortID> or <dynOutputIOPortID> is only required if the <notificationMethod> is “IO”.			
<videoInputID> or <dynVideoInputID> is only required if the <notificationMethod> is “record”.			
<ptzAction> is only required if the <notificationMethod> is “ptz”;			

EventTriggerNotificationList XML Block

```
<EventTriggerNotificationList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTriggerNotification/>  <!-- opt -->
</EventTriggerNotificationList>
```

EventTriggerNotification XML Block

```

<EventTriggerNotification> <!-- opt -->
  <id> <!-- req, xs:string;id --> </id>
  <notificationMethod>
    <!-- req, xs:string, "email,IM,IO,syslog,HTTP,FTP,beep, ptz, record
,    monitorAlarm, center, LightAudioAlarm,focus,trace,cloud" -->
  </notificationMethod>
  <notificationRecurrence>
    <!-- opt, xs:string, "beginning,beginningandend,recurring" -->
  </notificationRecurrence>
  <notificationInterval> <!-- dep, xs:integer, milliseconds --> </notificationInterval>
  <outputIOPortID> <!-- dep, xs:string;id --> </outputIOPortID>
  <dynOutputIOPortID> <!-- dep, xs:string;id --> </dynOutputIOPortID>
  <videoInputID> <!-- dep, xs:string;id --> </videoInputID>
  <dynVideoInputID> <!-- dep, xs:string;id --> </dynVideoInputID>
  <ptzAction> <!-- dep -->
    <ptzChannelID> <!--req, xs:string; id --> </ptzChannelID>
    <actionName> <!-- req, xs:string, "preset, pattern, patrol" --> </actionName>
    <actionNum> <!-- dep, xs:integer> </actionNum>
  </ptzAction>
</EventTriggerNotification>

```

8.12.6 /ISAPI/Event/schedules

/ISAPI/Event/schedules	General Resource	v2.0
Notes:		

8.12.7 /ISAPI/Event/schedules/inputs

/ISAPI/Event/schedules/inputs		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	InputScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	InputScheduleList		
Success Return	ResponseStatus		
Notes:			

InputScheduleList XML Block

```
< InputScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < Schedule/>    <!-- opt -->
</InputScheduleList>
```

8.12.8 /ISAPI/Event/schedules/inputs/<ID>

/ISAPI/Event/schedules/inputs/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

8.12.9 /ISAPI/Event/schedules/outputs

/ISAPI/Event/schedules/outputs		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	OutputScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	OutputScheduleList		
Success Return	ResponseStatus		
Notes:			

OutputScheduleList XML Block

```
<OutputScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</OutputScheduleList>
```

8.12.10 /ISAPI/Event/schedules/outputs/<ID>

/ISAPI/Event/schedules/outputs/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

8.12.11 /ISAPI/Event/schedules/motionDetections

/ISAPI/Event/schedules/motionDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	MotionDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	MotionDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

MotionDetectionScheduleList XML Block

```
<MotionDetectionScheduleList                                version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  < Schedule/>                                <!-- opt -->
</MotionDetectionScheduleList>
```

8.12.12 /ISAPI/Event/schedule/motionDetections/<ID>

/ISAPI/Event/schedule/motionDetections/ID	General Resource	v2.0
---	------------------	------

GET	
Description	It is used to get trigger schedule.
Query	None
Inbound Data	None
Success Return	Schedule
PUT	
Description	It is used to update trigger schedule.
Query	None
Inbound Data	Schedule
Success Return	ResponseStatus
Notes:	

8.12.13 /ISAPI/Event/schedules/tamperDetections

/ISAPI/Event/schedules/tamperDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	TamperDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	TamperDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

TamperDetectionScheduleList XML Block

```
<TamperDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</ TamperDetectionScheduleList>
```

8.12.14 /ISAPI/Event/schedule/tamperDetections/<ID>

/ISAPI/Event/schedule/tamperDetections/<ID>		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		

PUT	
Description	It is used to update trigger schedule.
Query	None
Inbound Data	Schedule
Success Return	ResponseStatus
Notes:	

8.12.15 /ISAPI/Event/schedules/videolosses

/ISAPI/Event/schedules/videolosses		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	videolossScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	videolossScheduleList		
Success Return	ResponseStatus		
Notes:			

videolossScheduleList XML Block

```
<videolossScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>           <!-- opt -->
</videolossScheduleList>
```

8.12.16 /ISAPI/Event/schedules/videolosses/<ID>

/ISAPI/Event/schedule/videolosses/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		

Notes:**Schedule XML Block**

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

8.12.17 /ISAPI/Event/schedules/PIR

/ISAPI/Event/schedules/PIR/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		

Inbound Data	Schedule
Success Return	ResponseStatus
Notes:	

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

8.12.18 /ISAPI/Event/schedules/fieldDetections

/ISAPI/Event/schedules/fieldDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	FieldDetectionScheduleList		
PUT			

Description	It is used to update trigger schedule.
Query	None
Inbound Data	FieldDetectionScheduleList
Success Return	ResponseStatus
Notes:	

FieldDetectionScheduleList XML Block

```
<FieldDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</FieldDetectionScheduleList>
```

8.12.19 /ISAPI/Event/schedules/fieldDetections/<ID>

/ISAPI/Event/schedules/fieldDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>         <!-- ro, dep, xs:string; id -->         </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>          <!-- req -->
        <beginTime>        <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>          <!-- req, xs:time, ISO8601 time -->    </endTime>
```

```

    </TimeRange>
  </TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

8.12.20 /ISAPI/Event/schedules/lineDetections

/ISAPI/Event/schedules/lineDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	LineDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	LineDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

LineDetectionScheduleList XML Block

```

<LineDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>      <!-- opt -->
</LineDetectionScheduleList>

```

8.12.21 /ISAPI/Event/schedule/lineDetections/<ID>

/ISAPI/Event/schedule/lineDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		

Success Return	Schedule
PUT	
Description	It is used to update trigger schedule.
Query	None
Inbound Data	Schedule
Success Return	ResponseStatus
Notes:	

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

8.12.22 /ISAPI/Event/schedules/sceneChangeDetections

/ISAPI/Event/schedules/sceneChangeDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		

Query	None
Inbound Data	None
Success Return	SceneChangeDetectionScheduleList
PUT	
Description	It is used to update trigger schedule.
Query	None
Inbound Data	SceneChangeDetectionScheduleList
Success Return	ResponseStatus
Notes:	

SceneChangeDetectionScheduleList XML Block

```
<SceneChangeDetectionScheduleList                                version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>                                <!-- opt -->
</SceneChangeDetectionScheduleList>
```

8.12.23 /ISAPI/Event/schedules/sceneChangeDetections/<ID

>

/ISAPI/Event/schedule/sceneChangeDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID> <!-- ro, dep, xs:string; id --> </videoInputChannelID>
  <TimeBlockList> <!-- req -->
```



```

<TimeBlock>
  <dayOfWeek>
    <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
  </dayOfWeek>
  <TimeRange>      <!-- req -->
    <beginTime>    <!-- req, xs:time, ISO8601 time -->  </beginTime>
    <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
  </TimeRange>
</TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time -->  </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time -->  </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

8.12.24 /ISAPI/Event/schedules/audioDetections

/ISAPI/Event/schedules/audioDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	AudioDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	AudioDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

AudioDetectionScheduleList XML Block

```

<AudioDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>      <!-- opt -->
</AudioDetectionScheduleList>

```

8.12.25 /ISAPI/Event/schedules/audioDetections/<ID>

/ISAPI/Event/schedule/audioDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType> <!-- opt, xs:string --> </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

8.12.26 /ISAPI/Event/schedules/faceDetections

/ISAPI/Event/schedules/faceDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	FaceDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	FaceDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

FaceDetectionScheduleList XML Block

```
<FaceDetectionScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</FaceDetectionScheduleList>
```

8.12.27 /ISAPI/Event/schedules/faceDetections/<ID>

/ISAPI/Event/schedule/faceDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
</Schedule>
```

```

<eventType> <!-- opt, xs:string --> </eventType>
<inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
<outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
<videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
<TimeBlockList> <!-- req -->
  <TimeBlock>
    <dayOfWeek>
      <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
    </dayOfWeek>
    <TimeRange> <!-- req -->
      <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange> <!-- req -->
      <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

8.12.28 /ISAPI/Event/schedules/regionEntrances

/ISAPI/Event/schedules/regionEntrances		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	RegionEntranceScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	RegionEntranceScheduleList		
Success Return	ResponseStatus		
Notes:			

RegionEntranceScheduleList XML Block

<code><RegionEntranceScheduleList</code> <code>xmlns="http://www.std-cgi.org/ver20/XMLSchema"></code> <code>< Schedule/></code> <code><!-- opt --></code> <code></RegionEntranceScheduleList></code>	<code>version="2.0"</code>
--	----------------------------

8.12.29 /ISAPI/Event/schedules/regionEntrances/<ID>

/ISAPI/Event/schedules/regionEntrances/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/regionEntrances/ID” is defined as following declaration: regionEntrance-1: Region Entrance Detection of video input channel “video1”.			

8.12.30 /ISAPI/Event/schedules/regionExitings

/ISAPI/Event/schedules/regionExitings		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	RegionExitingScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	RegionExitingScheduleList		
Success Return	ResponseStatus		
Notes:			

RegionExitingScheduleList XML Block

<pre> <RegionExitingScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema"> < Schedule/> <!-- opt --> </RegionExitingScheduleList> </pre>	version="2.0"
---	---------------

8.12.31 /ISAPI/Event/schedules/regionExitings/<ID>

/ISAPI/Event/schedules/regionExitings/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/regionExiting/ID” is defined as following declaration: regionExiting-1: Region Exiting Detection of video input channel “video1”.			

8.12.32 /ISAPI/Event/schedules/loiterings

/ISAPI/Event/schedules/loiterings		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	LoiteringScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	LoiteringScheduleList		
Success Return	ResponseStatus		
Notes:			

LoiteringScheduleList XML Block

<pre> <LoiteringScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema"> < Schedule/> <!-- opt --> </LoiteringScheduleList> </pre>	version="2.0"
---	---------------

8.12.33 /ISAPI/Event/schedules/loiterings/<ID>

/ISAPI/Event/schedules/loiterings/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/loitering/ID”is defined as following declaration: loitering-1: Loitering Detection of video input channel “video1”.			

8.12.34 /ISAPI/Event/schedules/groups

/ISAPI/Event/schedules/groups		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	GroupScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	GroupScheduleList		
Success Return	ResponseStatus		
Notes:			

GroupScheduleList XML Block

<pre> <GroupDetectionScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema"> < Schedule/> <!-- opt --> </GroupScheduleList> </pre>	version="2.0"
--	---------------

8.12.35 /ISAPI/Event/schedules/groups/<ID>

/ISAPI/Event/schedules/groups/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/groups/ID” is defined as following declaration: group-1: Group Detection of video input channel “video1”.			

8.12.36 /ISAPI/Event/schedules/rapidMoves

/ISAPI/Event/schedules/rapidMoves		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	RapidMoveScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	RapidMoveScheduleList		
Success Return	ResponseStatus		
Notes:			

RapidMoveScheduleList XML Block

<pre> <RapidMoveScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema"> < Schedule/> <!-- opt --> </RapidMoveScheduleList> </pre>	version="2.0"
---	---------------

8.12.37 /ISAPI/Event/schedules/rapidMoves/<ID>

/ISAPI/Event/schedules/rapidMoves/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/rapidMoves/ID” is defined as following declaration: rapidMove-1: Rapid Move Detection of video input channel “video1”.			

8.12.38 /ISAPI/Event/schedules/parkings

/ISAPI/Event/schedules/parkings		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	ParkingScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	ParkingScheduleList		
Success Return	ResponseStatus		
Notes:			

ParkingScheduleList XML Block

<code><ParkingScheduleList</code> <code>xmlns="http://www.std-cgi.org/ver20/XMLSchema"></code> <code>< Schedule/></code> <code><!-- opt --></code> <code></ParkingScheduleList></code>	<code>version="2.0"</code>
--	----------------------------

8.12.39 /ISAPI/Event/schedules/parkings/<ID>

/ISAPI/Event/schedules/parkings/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/parkings/ID” is defined as following declaration: parking-1: Parking Detection of video input channel “video1”.			

8.12.40 /ISAPI/Event/schedules/unattendedBaggages

/ISAPI/Event/schedules/unattendedBaggages		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	UnattendedBaggageScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	UnattendedBaggageScheduleList		
Success Return	ResponseStatus		
Notes:			

UnattendedBaggageScheduleList XML Block

<code><UnattendBaggageScheduleList</code> <code>xmlns="http://www.std-cgi.org/ver20/XMLSchema"></code> <code>< Schedule/></code> <code><!-- opt --></code>	<code>version="2.0"</code>
---	----------------------------

```
</UnattendBaggageScheduleList>
```

8.12.41 /ISAPI/Event/schedules/unattendedBaggages/<ID>

/ISAPI/Event/schedules/unattendedBaggages/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/unattendedBaggages/ID” is defined as following declaration:			
unattendedBaggage-1: Unattended Baggage Detection of video input channel “video1”.			

8.12.42 /ISAPI/Event/schedules/attendedBaggages

/ISAPI/Event/schedules/attendedBaggages		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	AttendBaggageScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	AttendBaggageScheduleList		
Success Return	ResponseStatus		
Notes:			

AttendBaggageScheduleList XML Block

```
<AttendBaggageScheduleList                                version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>                                <!-- opt -->
</AttendBaggageScheduleList>
```

8.12.43 /ISAPI/Event/schedules/attendedBaggages/<ID>

/ISAPI/Event/schedules/attendedBaggages/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/attendedBaggages/ID” is defined as following declaration:			
attendedBaggage-1: Unattended Baggage Detection of video input channel “video1”.			

8.12.44 /ISAPI/Event/schedules/blackList

/ISAPI/Event/schedules/blackList		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	BlackListScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	BlackListScheduleList		
Success Return	ResponseStatus		
Notes:			

BlackListScheduleList XML Block

```
<BlackListScheduleList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</BlackListScheduleList>
```

/ISAPI/Event/schedules/ blackList/ID		General Resource	v2.0
GET			

Description	It is used to get trigger schedule.
Query	None
Inbound Data	None
Success Return	Schedule
PUT	
Description	It is used to update trigger schedule.
Query	None
Inbound Data	Schedule
Success Return	ResponseStatus
Notes:	
ID: blackList-1	

Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID>      <!-- ro, dep, xs:string; id -->      </inputIOPortID>
  <outputIOPortID>     <!-- ro, dep, xs:string; id -->     </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>

```

8.12.45 /ISAPI/Event/schedules/whiteList

/ISAPI/Event/schedules/whiteList

General Resource v2.0

GET	
Description	It is used to get trigger schedule.
Query	None
Inbound Data	None
Success Return	WhiteListScheduleList
PUT	
Description	It is used to update trigger schedule.
Query	None
Inbound Data	WhiteListScheduleList
Success Return	ResponseStatus
Notes:	

WhiteListScheduleList XML Block

```
<WhiteListScheduleList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</WhiteListScheduleList>
```

/ISAPI/Event/schedules/ whiteList/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
ID:whiteList-1			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>        <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
```

```

    </dayOfWeek>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

8.12.46 /ISAPI/Event/schedules/peopleDetections

/ISAPI/Event/schedules/peopleDetections		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	PeopleDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	PeopleDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

PeopleDetectionScheduleList XML Block

```

<PeopleDetectionScheduleList                                     version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  < Schedule/>          <!-- opt -->
</PeopleDetectionScheduleList>

```

8.12.47 /ISAPI/Event/schedules/peopleDetections/<ID>

/ISAPI/Event/schedules/peopleDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/peopleDetections/ID” is defined as following declaration: peopleDetection-1: People Detection of video input channel “video1”.			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <eventType>
    <!-- opt, xs:string, "IO,VMD,videoloss, PIR,linedetection,fielddetection,
audioexception,facedetection,RegionPeopleDetection,regionExiting,loitering,group,rapidMove,pa
rking,unattendedBaggage,attendedBaggage,peopleDetection" -->
  </eventType>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID> <!-- ro, dep, xs:string; id --> </videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
```



```

        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
    </TimeRange>
</TimeBlock>
</HolidayBlockList>
</Schedule>

```

8.12.48 /ISAPI/Event/schedules/HVTVehicleDetects

/ISAPI/Event/schedules/HVTVehicleDetects		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	HVTVehicleDetectScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	HVTVehicleDetectScheduleList		
Success Return	ResponseStatus		
Notes:			

HVTVehicleDetectScheduleList XML Block

```

<HVTVehicleDetectScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <Schedule/>          <!-- opt -->
</HVTVehicleDetectScheduleList>

```

8.12.49 /ISAPI/Event/schedules/HVTVehicleDetects/ID

/ISAPI/Event/schedules/HVTVehicleDetects/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		

Success Return	ResponseStatus
Notes: ID: HVTVehicleDetects_video1	

Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID>      <!-- ro, dep, xs:string; id -->      </inputIOPortID>
  <outputIOPortID>     <!-- ro, dep, xs:string; id -->     </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
      <ScheduleProperity>
        <vehicleDetectSceneID><!-- req, xs:interger --></vehicleDetectSceneID>
      </ScheduleProperity>
    </TimeBlock>
  </TimeBlockList>
</Schedule>

```

8.12.50 /ISAPI/Event/schedules/storageDetection

/ISAPI/Event/schedules/storageDetection		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	StorageDetectionScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	StorageDetectionScheduleList		
Success Return	ResponseStatus		
Notes:			

StorageDetectionScheduleList XML Block

```

<StorageDetectionScheduleList                                     version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <Schedule/>          <!-- opt -->
</StorageDetectionScheduleList>

```

8.12.51 /ISAPI/Event/schedules/storageDetections/<ID>

/ISAPI/Event/schedules/storageDetections/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
The ID in “/storageDetections/ID”is defined as following declaration: storageDetection-1: Face Capture of video input channel “video1”. 布防时间段个数的能力在获取协议中给出。			

Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <id> <!-- req, xs:string; id --> </id>
    <eventType>
        <!-- opt, xs:string,"IO,VMD,videoloss, PIR,linedetection,fielddetection,
audioexception,facedetection,regionEntrance,regionExiting,loitering,group,rapidMove,parking,un
attendedBaggage,attendedBaggage,storageDetection"-->
    </eventType>
    <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
    <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
    <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
    <TimeBlockList size="8"> <!-- req -->
        <TimeBlock>
            <dayOfWeek>
                <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
            </dayOfWeek>
            <TimeRange> <!-- req -->
                <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
                <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
            </TimeRange>
        </TimeBlock>
    </TimeBlockList>
</Schedule>

```

```

    </TimeRange>
  </TimeBlock>
</TimeBlockList>
<HolidayBlockList> <!-- opt -->
  <TimeBlock>
    <TimeRange>      <!-- req -->
      <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
      <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
    </TimeRange>
  </TimeBlock>
</HolidayBlockList>
</Schedule>

```

8.12.52 /ISAPI/Event/notification

/ISAPI/Event/notification

General Resource v2.0

GET	
Description	It is used to get the configuration of notifications.
Query	None
Inbound Data	None
Success Return	EventNotificationMethods
PUT	
Description	It is used to set the configuration of notifications.
Query	None
Inbound Data	EventNotificationMethods
Success Return	ResponseStatus

Notes:

The following notification types are supported:

HTTP: the device connects to a given address and port and issues an HTTP GET/POST with the given parameters.
FTP: a video clip or snapshot is uploaded to an FTP server.
E-mail: a mail with the video clip or snapshot is sent in an e-mail to a list of servers.
<MediaFormat> determines the type of snapshot, video clip and the video clip pre and post recording times.

EventNotificationMethods XML Block

```

<EventNotificationMethods version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <MailingNotificationList/><!-- opt -->
  <FTPNotificationList/><!-- opt -->

```

```

<HttpHostNotificationList/><!-- opt -->
<FTPFormat><!-- opt -->
  <uploadSnapshotEnabled><!-- req, xs:boolean --></uploadSnapshotEnabled>
  <uploadVideoClipEnabled><!-- req, xs:boolean --></uploadVideoClipEnabled>
</FTPFormat>
<EmailFormat><!-- opt -->
  <senderEmailAddress><!-- req, xs:string --></senderEmailAddress>
  <receiverEmailAddress><!-- req, xs:string --></receiverEmailAddress>
  <subject><!-- req, xs:string --></subject>
  <BodySetting><!-- opt -->
    <attachedVideoURLEnabled> <!-- req, xs:boolean --> </attachedVideoURLEnabled>
    <attachedSnapshotEnabled> <!-- req, xs:boolean --> </attachedSnapshotEnabled>
    <attachedVideoClipEnabled><!-- req, xs:boolean --> </attachedVideoClipEnabled>
  </BodySetting>
</EmailFormat>
<MediaFormat> <!-- opt -->
  <snapshotImageType> <!-- opt, xs:string, "JPEG,GIF,PNG" --> </snapshotImageType>
  <videoClipFormatType> <!-- opt, xs:string, "ASF,MP4,3GP,264" --></videoClipFormatType>
  <preCaptureLength> <!-- opt, xs:integer, milliseconds --> </preCaptureLength>
  <postCaptureLength> <!-- opt, xs:integer, milliseconds --> </postCaptureLength>
</MediaFormat>
<EventNotificationMethods>

```

8.12.53 /ISAPI/Event/notification/httpHosts

/ISAPI/Event/notification/httpHosts		General Resource	v2.0
GET			
Description	It is used to get the configuration of e-mail.		
Query	None		
Inbound Data	None		
Success Return	HttpHostNotificationList		
PUT			
Description	It is used to set the configuration of e-mail.		
Query	None		
Inbound Data	HttpHostNotificationList		
Success Return	ResponseStatus		
Notes:			

HttpHostNotificationList XML Block

```

<HttpHostNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <HttpHostNotification/> <!-- opt -->

```

</HttpHostNotificationList>

8.12.54 /ISAPI/Event/notification/httpHosts/<ID>

/ISAPI/Event/notification/httpHosts/ID		General Resource	v2.0
GET			
Description	It is used to get the configuration of a particular e-mail.		
Query	None		
Inbound Data	None		
Success Return	HttpHostNotification		
PUT			
Description	It is used to set the configuration of a particular e-mail.		
Query	None		
Inbound Data	HttpHostNotification		
Success Return	ResponseStatus		
Notes:			

HttpHostNotification XML Block

```
<HttpHostNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->    </id>
  <url>    <!-- req, xs:string -->    </url>
  <protocolType>    <!-- req, xs:string, "HTTP,HTTPS" -->    </protocolType>
  <parameterFormatType>
    <!-- req, xs:string, "XML,querystring" -->
  </parameterFormatType>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address>    <!-- dep, xs:string -->    </ipv6Address>
  <portNo>    <!-- opt, xs:integer -->    </portNo>
  <userName>    <!-- dep, xs:string -->    </userName>
  <password><!-- dep, xs:string -->    </password>
  <httpAuthenticationMethod>
    <!-- req, xs:string, "MD5digest,none" -->
  </httpAuthenticationMethod>
</HttpHostNotification>
```

8.12.55 /ISAPI/Event/notification/streaming

/ISAPI/Event/notification/streaming		General Resource	v2.0
GET			
Description	It is used to get the list of recording notifications.		
Query	None		
Inbound Data	None		
Success Return	StreamingNotificationList		
PUT			
Description	It is used to update the list of E-mail notifications.		
Query	None		
Inbound Data	StreamingNotificationList		
Success Return	ResponseStatus		
POST			
Description	It is used to add an E-mail notification.		
Query	None		
Inbound Data	StreamingNotification		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete the list of E-mail notifications.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
When an event occurs, modifying the compression parameters of a video stream			

StreamingNotificationList XML Block

```
<StreamingNotificationList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <StreamingNotification/>    <!-- opt -->
</StreamingNotificationList>
```

8.12.56 /ISAPI/Event/notification/streaming/<ID>

/ISAPI/Event/notification/Streaming/ID		General Resource	v2.0
GET			
Description	It is used to get a particular E-mail notification configuration.		
Query	None		
Inbound Data	None		

Success Return	StreamingNotification
PUT	
Description	It is used to update a particular E-mail notification configuration.
Query	None
Inbound Data	StreamingNotification
Success Return	ResponseStatus
DELETE	
Description	It is used to delete a particular E-mail notification.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

StreamingNotification XML Block

```
<StreamingNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id> //101 201 301
  <streamingId> <!-- req, xs:string;id --> <streamingId>
  <Video>
    <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
    <videoCodecType>
      <!-- req, xs:string, "MPEG4,MJPEG,3GP,H.264,MPNG" -->
    </videoCodecType>
    <videoScanType>
      <!-- opt, xs:string, "progressive,interlaced" -->
    </videoScanType>
    <videoResolutionWidth> <!-- req, xs:integer --> </videoResolutionWidth>
    <videoResolutionHeight> <!-- req, xs:integer --> </videoResolutionHeight>
    <videoResolutionName>
      <!-- opt, xs:string, "3MP,5MP,none" -->
    </videoResolutionName>
    <videoPositionX> <!-- opt, xs:integer --> </videoPositionX>
    <videoPositionY> <!-- opt, xs:integer --> </videoPositionY>
    <videoQualityControlType>
      <!-- opt, xs:string, "CBR,VBR" -->
    </videoQualityControlType>
    <constantBitRate> <!-- dep, xs:integer, in kbps --></constantBitRate>
    <fixedQuality><!-- opt, xs:integer, percentage, 0..100 --> </fixedQuality>
    <vbrUpperCap> <!-- dep, xs:integer, in kbps --> </vbrUpperCap>
    <vbrLowerCap> <!-- dep, xs:integer, in kbps --> </vbrLowerCap>
    <maxFrameRate> <!-- req, xs:integer, maximum frame rate x100 --></maxFrameRate>
    <keyFrameInterval> <!-- opt, xs:integer, milliseconds --> </keyFrameInterval>
```



```

<rotationDegree> <!-- opt, xs:integer, degrees, 0..360 --></rotationDegree>
<mirrorEnabled> <!-- opt, xs:boolean --> </mirrorEnabled>
<snapshotImageType>
  <!-- opt, xs:string, "JPEG,GIF,PNG" -->
</snapshotImageType>
<Mpeg4Profile> <!--dep, xs:string, "SP,ASP"--> </Mpeg4Profile>
<H264Profile>
  <!-- dep, xs:string, "Baseline,Main,High, Extended" -->
</H264Profile>
<GovLength> <!--opt, xs:integer --> </GovLength>
</Video>
<Audio>
  <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <audioInputChannelID> <!-- req, xs:string;id --> </audioInputChannelID>
  <audioCompressionType>
    <!-- req, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"
    -->
  </audioCompressionType>
  <audioInboundCompressionType>
    <!-- opt, xs:string,
    "G.711alaw,G.711ulaw,G.726,G.729,G.729a,G.729b,PCM,MP3,AC3,AAC,ADPCM"
    -->
  </audioInboundCompressionType>
  <audioBitRate> <!-- opt, xs:integer, in kbps --> </audioBitRate>
  <audioSamplingRate> <!-- opt, xs:float, in kHz --> </audioSamplingRate>
  <audioResolution> <!-- opt, xs:integer, in bits --> </audioResolution>
</Audio>
</StreamingNotification>

```

8.12.57 /ISAPI/Event/notification/alarmCenter

URI	/ISAPI/Event/notification/alarmCenter			Type	Resource
Function	Access the list of alarm center notification hosts.				
Methods	Query String(s)	Inbound Data	Return Result		
GET			<alarmCenterNotificationList>		
PUT		<alarmCenterNotificationList>	<ResponseStatus>		
POST		<alarmCenterNotification>	<ResponseStatus>		
DELETE			<ResponseStatus>		

Notes	Alarm center notification involves the device connecting to a particular alarm center delivering an privacy event message whenever the event triggers.
--------------	--

alarmCenterNotificationList XML Block

```
<alarmCenterNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <alarmCenterNotification/>    <!-- opt -->
</alarmCenterNotificationList>
```

8.12.58 /ISAPI/Event/notification/alarmCenter/<ID>

URI	/ISAPI/Event/notification/alarmCenter/ID		Type	Resource
Function	Access a particular HTTP notification host.			
Methods	Query String(s)	Inbound Data	Return Result	
GET			<alarmCenterNotification>	
PUT		<alarmCenterNotification>	<ResponseStatus>	
DELETE			<ResponseStatus>	
Notes	Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the alarm center			

alarmCenterNotification XML Block

```
<alarmCenterNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>                                <!-- req, xs:string;id -->                                </id>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>                          <!-- dep, xs:string -->                          </hostName>
  <ipAddress>                         <!-- dep, xs:string -->                         </ipAddress>
  <ipv6Address>                       <!-- dep, xs:string -->                       </ipv6Address>
  <portNo>                           <!-- req, xs:integer -->                           </portNo>
</alarmCenterNotification>
```

8.12.59 /ISAPI/Event/notification/alertStream

/ISAPI/Event/notification/alertStream	General Resource	v2.0
GET	Viewer	

Description	It is used to get the event notification data stream through HTTP server push.
Query	None
Inbound Data	None
Success Return	Stream of <EventNotificationAlert>
Notes: <p>This function is used to get an event notification alert stream from the media device via HTTP or HTTPS. This function does not require that a client/VMS system be added as an HTTP(S) destination on the media device. Instead, the client/VMS system can call this API to initialize a stream of event information from the device. In other words, a connection is established with the device when this function is called, and stays open to constantly receive event notifications. This API uses HTTP server-push with the MIME type multipart/mixed defined in RFC 2046. <protocol> is the protocol name, i.e. "HTTP" or "HTTPS".</p> <p><channelID> is present for video and analytics events.</p> <p><activePostCount> is the sequence number of current notification for this particular event. It starts at 1. Useful for recurring notifications of an event. Each event maintains a separate post count.</p>	

EventNotificationAlert XML Block

```

<EventNotificationAlert version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipAddress>      <!-- dep, xs:string -->    </ipAddress>
  <ipv6Address><!-- dep, xs:string --></ipv6Address>
  <portNo>         <!-- opt, xs:integer -->    </portNo>
  <protocol>       <!-- opt, xs:string -->     </protocol>
  <macAddress>     <!-- opt, xs:string;MAC -->  </macAddress>
  <channelID>      <!-- dep, xs:string -->     </channelID>
  <dateTime>       <!-- req, xs:datetime -->   </dateTime>
  <activePostCount> <!-- req, xs:integer -->    </activePostCount>
  <eventType>      <!-- req, xs:string, "IO,VMD,videoloss, shelteralarm, facedetection, defocus,
audioexception, scenechangedetection, fielddetection, linedetection, regionEntrance,
regionExiting, loitering, group, rapidMove, parking, unattendedBaggage, attendedBaggage,
PIR,peopleDetection" --> </eventType>
  <eventState>     <!-- req, xs:string, "active,inactive" --> </eventState>
  <eventDescription> <!-- req, xs:string -->      </eventDescription>
  <inputIOPortID>  <!-- dep, xs:integer, if <eventType> is "IO" --> </inputIOPortID>
  <dynInputIOPortID> <!-- dep, xs:string, if <eventType> is "IO" --> </dynInputIOPortID>
  <DetectionRegionList> <!-- dep, if <eventType> is "VMD" -->
    <DetectionRegionEntry> <!-- req -->
      <regionID>          <!-- req, xs:string -->      </regionID>
      <sensitivityLevel>   <!-- req, xs:integer, 0..100 --> </sensitivityLevel>
    </DetectionRegionEntry>
  </DetectionRegionList>
</EventNotificationAlert>

```

Example

The following is an example of an HTTP event stream that pushes a VMD event from video channel 1.

```
GET /Event/notification/alertStream HTTP/1.1
...
HTTP/1.1 200 OK
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="<boundary>"
--<boundary>
Content-Type: application/xml; charset="UTF-8"
Content-Length: ISAPI

<?xml version="1.0" encoding="UTF-8"?>
<EventNotificationAlert version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ipAddress>172.6.64.7</ipAddress>
  <portNo>80</portNo>
  <protocol>HTTP</protocol>
  <macAddress>01:17:24:45:D9:F4</macAddress>
  <channelID>1</channelID>
  <dateTime>2009-11-14T15:27Z</dateTime>
  <activePostCount>1</activePostCount>
  <eventType>VMD</eventType>
  <eventState>active</eventState>
  <eventDescription>Motion alarm</eventDescription>
  <DetectionRegionList>
    <DetectionRegionEntry>
      <regionID>2</regionID>
      <sensitivityLevel>4</sensitivityLevel>
    </DetectionRegionEntry>
  </DetectionRegionList>
</EventNotificationAlert>
--<boundary>
...
```

8.12.60 HTTP Notification Alert

http://<ipAddress>:<portNo>/<url>	
POST	
Description	Send alert info to alarm center by HTTP POST method.

Query	None
Inbound Data	None
Success Return	Notification Alert

Notes:

Either GET or POST can be used. If GET is used, the corresponding query string parameters are provided in place of the inbound XML. If Post is used, the inbound XML is provided in place of the corresponding query string parameters.

The "DeviceID=" and "DeviceName=" fields are taken from the <DeviceInfo> settings for the device.

The <parameterFormatType> tag indicates whether XML or query string parameters should be used for this API.

The <protocolType> tag under <HttpHostList> determines whether HTTP or HTTPS is used for this API.

The <portNo> tag under <HttpHostList> determines the port number to be used for the notification alert.

The <portNo> and <protocolType> tags in the alert are provided for a client application to connect/manage the device after it sends out this notification.

The <addressingFormatType> tag under <HttpHostList> determines whether <ipAddress>/IPAddress or <ipv6Address>/IPv6Address is used.

The <url> tag under <HttpHostList> indicates the URL base to be used for the alert.

If <eventType>/EventType refers to an input-port-related event, the <inputIOPortID> tag or InputIOPortID parameter must be provided.

If <eventType>/EventType refers to a motion-related event, the <DetectionRegionList> block or RegionIndexX parameter(s) must be provided if detection regions have been defined. If the motion event is for a full-screen configuration, these region indexes should not be provided.

The <sensitivityLevel>/SensitivityLevelX and <detectionThreshold>/DetectionThresholdX parameters are used to indicate the current values of the activity detection at the time that the notification is sent out.

If the alert is for a motion-related event, multiple region indexes may be provided per single API. If query string parameters are used, the format "RegionIndexX" is used where "X" is a number starting with "1" and incrementing by one for every subsequent region index provided.

If the <httpAuthenticationMethod> tag under <HttpHostList> is configured for "MD5 Digest Authentication", the corresponding security values must be stored in the header fields of the HTTP(S) request.

The <activePostCount>/ActivePostCount parameter is a sequence number starting at 1 and incrementing by one for every event notification sent.

Notification Alert

version=1.0

DeviceID=

DeviceName=

IPAddress=

IPv6Address=

PortNo=

Protocol=

```
MacAddress=  
version=1.0  
DeviceID=  
DeviceName=  
IPAddress=  
IPv6Address=  
PortNo=  
Protocol=  
MacAddress=  
ChannelID=  
DateTime=  
ActivePostCount=  
EventType=  
EventState=  
EventDescription=  
InputIOPortID=  
RegionIndex1=  
SensitivityLevel1=  
DetectionThreshold1=  
RegionIndex2=  
SensitivityLevel2=  
DetectionThreshold2=  
...
```

8.11.32 Event Triggering Examples

Example: Trigger Events on IO Port

The command below enables detection for input port 1. When the input signal is detected according to <inputIOPortID>, two event notification responses are used – output port 1 will be triggered for the duration of the input signal detection, and an SMTP server will be notified with the “E-mail Event Notification Alert”. The behavior of this notification is as follows:

- A SMTP notification is sent at detection time, and every some seconds after while the signal is present. This is denoted by the <notificationRecurrence> tags. These APIs will have an <eventState> of “active”.
- When the input port 1 signal detection stops, one last E-mail notification is sent to the server with an <eventState> of “active”.
- After the signal detection stops for input port 1, the device will wait some seconds before starting to detect the signal again for this port.

```
PUT /ISAPI/Event/triggers/IO-1 HTTP/1.1  
Content-Type: application/xml; charset="UTF-8"  
Content-Length: xxx
```

```

<?xml version="1.0" encoding="UTF-8"?>
<EventTrigger version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>IO-1</id> <!-- "eventType: IO" -->
  <EventTriggerNotificationList>
    <EventTriggerNotification>
      <id>1</id>
      <notificationMethod>email</notificationMethod>
    </EventTriggerNotification>
    <EventTriggerNotification>
      <id>2</id>
      <notificationMethod>IO</notificationMethod>
      <outputIOPortID>1</outputIOPortID>
    </EventTriggerNotification>
  </EventTriggerNotificationList>
</EventTrigger>

```

Example: Schedule event detection and triggering

The command below schedules event detection and triggering from 7:00 am to 5:00 pm. every Tuesday.

```

PUT /ISAPI/Event/schedule/IO-IN-1 HTTP/1.1
Content-Type: application/xml; charset="UTF-8"
Content-Length: xxx

<?xml version="1.0" encoding="UTF-8"?>
<EventSchedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>IO-IN-1</id>
  <eventType>IO</eventType>
  <inputIOPortID>1</inputIOPortID>
  <TimeBlockList>
    <TimeBlock>
      <dayOfWeek>2</dayOfWeek>
      <TimeRange>
        <beginTime>07:00:00</beginTime>
        <endTime>17:00:00</endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
</EventSchedule>

```

8.13 /ISAPI/Smart

8.13.1 /ISAPI/Smart/capabilities

/ISAPI/Smart/capabilities		General Resource	v2.0
GET			
Description	It is used to get Smart capability.		
Query	None		
Inbound Data	None		
Success Return	< SmartCap>		
Notes:			

SmartCap XML Block

```
<SmartCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportROI> <!-- opt, xs:boolean --> </isSupportROI>
  <isSupportFaceDetect> <!-- opt, xs:boolean --> </isSupportFaceDetect>
  <isSupportIntelliTrace> <!-- opt, xs:boolean --> </isSupportIntelliTrace>
  <isSupportFieldDetection> <!-- opt, xs:boolean --> </isSupportFieldDetection>
  <isSupportDefocusDetection> <!-- opt, xs:boolean --> </isSupportDefocusDetection>
  <isSupportAudioDetection> <!-- opt, xs:boolean --> </isSupportAudioDetection>
  <isSupportSceneChangeDetection> <!-- opt, xs:boolean --> </isSupportSceneChangeDetection>
  <isSupportLineDetection> <!-- opt, xs:boolean --> </isSupportLineDetection>
  <isSupportRegionEntrance> <!-- opt, xs:boolean --> </isSupportRegionEntrance>
  <isSupportRegionExiting> <!-- opt, xs:boolean --> </isSupportRegionExiting>
  <isSupportLoitering> <!-- opt, xs:boolean --> </isSupportLoitering>
  <isSupportGroup> <!-- opt, xs:boolean --> </isSupportGroup>
  <isSupportRapidMove> <!-- opt, xs:boolean --> </isSupportRapidMove>
  <isSupportParking> <!-- opt, xs:boolean --> </isSupportParking>
  <isSupportUnattendedBaggage><!-- opt, xs:boolean --></isSupportUnattendedBaggage>
  <isSupportAttendedBaggage><!-- opt, xs:boolean --></isSupportAttendedBaggage>
  <isSupportPeopleDetection><!-- opt, xs:boolean --></isSupportPeopleDetection>
  <isSupportStorageDetection><!-- opt, xs:boolean --></isSupportStorageDetection>
</SmartCap>
```

8.13.2 /ISAPI/Smart/ROI/channels

GET	
Description	Access and configure the ROI.
Query	None
Inbound Data	None
Success Return	ROIList
PUT	
Description	Access and configure the ROI.
Query	None
Inbound Data	ROIList
Success Return	ResponseStatus
Notes:	

ROIList XML Block

```
<ROIList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <ROI/> <!-- opt -->
</ROIList>
```

8.13.3 /ISAPI/Smart/ROI/channels/<ID>

/ISAPI/Smart/ROI/channels/ID		General Resource	v2.0
GET			
Description	Access and configure the ROI for a special channel.		
Query	None		
Inbound Data	None		
Success Return	ROI		
PUT			
Description	Access and configure the ROI for a special channel.		
Query	None		
Inbound Data	ROI		
Success Return	ResponseStatus		
DELETE			
Description	Access and configure the ROI for a special channel.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
normalizedScreenSize: the size of normalized screen			
ROIRegionList:the list of ROI region			
<ID> should be consistent with <ID> of streaming.			

<enabled/> <!-- req, xs:string --> if the value of this tag is “disable”, all of regions are invalid.

ROI XML Block

```
<ROI version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled/> <!-- req, xs:string -->
  <normalizedScreenSize> <!--req-->
    <normalizedScreenWidth> <!-- req, xs:integer --></normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --></normalizedScreenHeight>
  </normalizedScreenSize>
  <ROIRegionList/> <!--dep-->
  <FaceTrace/> <!--dep-->
  <ObjectTrace/> <!--dep-->
</ROI>
```

8.13.4 /ISAPI/Smart/ROI/channels/<ID>/regions

/ISAPI/Smart/ROI/channels/ID/regions		General Resource	v2.0
GET			
Description	Access and configure the ROI regions for a special channel.		
Query	None		
Inbound Data	None		
Success Return	ROIRegionsList		
PUT			
Description	Access and configure the ROI regions for a special channel		
Query	None		
Inbound Data	ROIRegionsList		
Success Return	ResponseStatus		
Notes:			

ROIRegionsList XML Block

```
<ROIRegionsList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema" size=>
  <ROIRegion/> <!-- opt -->
</ROIRegionsList>
```

8.13.5 /ISAPI/Smart/ROI/channels/<ID>/regions/<ID>

/ISAPI/Smart/ROI/channels/ID/regions/ID	General Resource	v2.0
---	------------------	------

GET	
Description	Access and configure one ROI region for a special channel.
Query	None
Inbound Data	None
Success Return	ROIRegion
PUT	
Description	Access and configure one ROI region for a special channel
Query	None
Inbound Data	ROIRegion
Success Return	ResponseStatus
DELETE	
Description	Access and configure one ROI region for a special channel
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: qualityLevel:quality level of a region RegionCoordinatesList:coordinate of ROI	

ROIRegion XML Block

```
<ROIRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:integer--> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <name> <!-- opt, xs:string --> </name>
  <qualityLevelOfROI> <!-- req, xs:integer "1-6"--> </qualityLevelOfROI>
  <RegionCoordinatesList/>
</ROIRegion>
```

8.13.6 /ISAPI/Smart/ROI/channels/<ID>/facettrace

/ISAPI/Smart/ROI/channels/ID/facetrace		General Resource	v2.0
GET			
Description	Access and configure the ROI regions for a special channel.		
Query	None		
Inbound Data	None		
Success Return	FaceTrace		
PUT			
Description	Access and configure the ROI regions for a special channel		

Query	None
Inbound Data	FaceTrace
Success Return	ResponseStatus
Notes:	

FaceTrace XML Block

```
<FaceTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <name> <!-- opt, xs:string --> </name>
  <qualityLevelOfROI> <!-- req, xs:integer--> </qualityLevelOfROI>
</FaceTrace>
```

8.13.7 /ISAPI/Smart/ROI/channels/<ID>/objecttrace

/ISAPI/Smart/ROI/channels/ID/objecttrace		General Resource	v2.0
GET			
Description	Access and configure the ROI regions for a special channel.		
Query	None		
Inbound Data	None		
Success Return	ObjectTrace		
PUT			
Description	Access and configure the ROI regions for a special channel		
Query	None		
Inbound Data	ObjectTrace		
Success Return	ResponseStatus		
Notes:			

ObjectTrace XML Block

```
<ObjectTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <qualityLevelOfROI> <!-- req, xs:integer--> </qualityLevelOfROI>
</ObjectTrace>
```

8.13.8 /ISAPI/Smart/ROI/channels/<ID>/platetrace

/ISAPI/Smart/ROI/channels/<ID>/platetrace		General Resource	v2.0
GET			
Description	Access and configure the ROI regions for a special channel.		
Query	None		

Inbound Data	None
Success Return	PlateTrace
PUT	
Description	Access and configure the ROI regions for a special channel
Query	None
Inbound Data	PlateTrace
Success Return	ResponseStatus
Notes: The ID in "/channels/ID" is defined as following declaration: 101: Region Clip of video input channel "video1-main stream". 102: Region Clip of video input channel "video1-sub stream". 103: Region Clip of video input channel "video1-third stream".	

PlateTrace XML Block

```
<PlateTrace version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <qualityLevelOfROI> <!-- req, xs:integer, "1-6" --> </qualityLevelOfROI>
</PlateTrace>
```

8.13.9 /ISAPI/Smart/FaceDetect/<ID>

/ISAPI/Smart/FaceDetect/ID		General Resource	v2.0
GET			
Description	Access and configure the FaceDetect.		
Query	None		
Inbound Data	None		
Success Return	FaceDetect		
PUT			
Description	Access and configure the FaceDetect.		
Query	None		
Inbound Data	FaceDetect		
Success Return	ResponseStatus		
Notes:			
<ID> stands for channel number			

FaceDetect XML Block

```
<FaceDetect version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id/> <!-- req, xs:string, id -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <minObjectSize>
```

```

    <!-- opt, xs:integer, min number of pixels per object -->
</minObjectSize>
<maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
</maxObjectSize>
<ROI> <!--opt-->
    <minHorizontalResolution> <!-- req, xs:integer --> </minHorizontalResolution>
    <minVerticalResolution><!-- req, xs:integer --> </minVerticalResolution>
</ROI>
<sensitivityLevel>          <!-- req -->
    <!-- req, xs:integer -->
</sensitivityLevel>
<detectionThreshold>          <!-- dep-->
    <!-- req, xs:integer-->
</detectionThreshold>
<highlightsenabled> <!-- req, xs:boolean --> </highlightsenabled>
</FaceDetect>

```

8.13.10 /ISAPI/Smart/IntelliTrace/<ID>

/ISAPI/Smart/IntelliTrace/<ID>		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	IntelliTrace		
PUT			
Description			
Query	None		
Inbound Data	IntelliTrace		
Success Return	ResponseStatus		
Notes:			

IntelliTrace XML Block

```

<IntelliTrace version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> <id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <tracktime> <!-- opt, xs:integer, 0--300--> </tracktime>
</IntelliTrace>

```

8.13.11 /ISAPI/Smart/IntelliTrace/<ID>/ZoomRatIal

/ISAPI/Smart/IntelliTrace/ID/ZoomRatIal		General Resource	v2.0
PUT			
Description			
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

8.13.12 /ISAPI/Smart/FieldDetection

/ISAPI/Smart/FieldDetection		General Resource	v2.0
GET			
Description	Field detection configuration for all video input channels.		
Query	None		
Inbound Data	None		
Success Return	FieldDetectionList		
PUT			
Description	Field detection configuration for all video input channels.		
Query	None		
Inbound Data	FieldDetectionList		
Success Return	ResponseStatus		
Notes:			

FieldDetectionList XML Block

```
<FieldDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FieldDetection/>    <!-- opt -->
</FieldDetectionList>
```

8.13.13 /ISAPI/Smart/FieldDetection/<ID>

/ISAPI/Smart/FieldDetection/ID		General Resource	v2.0
GET			
Description	Field detection configuration for a video input channels.		
Query	None		
Inbound Data	None		
Success Return	FieldDetection		

PUT	
Description	Field detection configuration for a video input channels.
Query	None
Inbound Data	FieldDetection
Success Return	ResponseStatus
Notes:	

FieldDetection XML Block

```
<FieldDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <intelliBackSearch> <!-- opt, xs:boolean --> </intelliBackSearch>
  <startTriggerTime> <!-- req, xs:integer, milliseconds --> </startTriggerTime>
  <endTriggerTime> <!-- req, xs:integer, milliseconds --> </endTriggerTime>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <minObjectSize>
    <!-- opt, xs:integer, min number of pixels per object -->
  </minObjectSize>
  <maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
  </maxObjectSize>
  <FieldDetectionRegionList size="4"/>
</FieldDetection>
```

8.13.14 /ISAPI/Smart/FieldDetection/<ID>/regions

/ISAPI/Smart/FieldDetection/ID/regions		General Resource	v2.0
GET			
Description	Access the list of regions for Field detection on a particular video input channel.		
Query	None		
Inbound Data	None		
Success Return	FieldDetectionRegionList		
PUT			
Description	Access the list of regions for Field detection on a particular video input channel.		
Query	None		
Inbound Data	FieldDetectionRegionList		

Success Return	ResponseStatus
POST	
Description	Access the list of regions for Field detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	FieldDetectionRegion
DELETE	
Description	Access the list of regions for Field detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

FieldDetectionRegionsList XML Block

```
<FieldDetectionRegionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FieldDetectionRegion/>
</FieldDetectionRegionList>
```

8.13.15 /ISAPI/Smart/FieldDetection/<ID>/regions/<ID>

/ISAPI/Smart/FieldDetection/ID/regions/ID		General Resource	v2.0
GET			
Description	Access the list of regions for Field detection.		
Query	None		
Inbound Data	None		
Success Return	FieldDetectionRegion		
PUT			
Description	Access the list of regions for Field detection.		
Query	None		
Inbound Data	FieldDetectionRegion		
Success Return	ResponseStatus		
DELETE			
Description	Access the list of regions for Field detection.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

FieldDetectionRegion XML Block

```
<FieldDetectionRegion version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:string -->          </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel>
    <!--req, xs:integer-->
  </sensitivityLevel>
  <timeThreshold>
    <!--req, xs:integer -->
  </timeThreshold>
  <objectOccupation>
    <!--req, xs:integer-->
  </objectOccupation>
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
  <RegionCoordinatesList>
    <RegionCoordinates> <!-- req, -->
      <positionX>      <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>      <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</FieldDetectionRegion>
```

8.13.16 /ISAPI/Smart/LineDetection

/ISAPI/Smart/LineDetection		General Resource	v2.0
GET			
Description	Line detection configuration for all video input channels.		
Query	None		
Inbound Data	None		
Success Return	LineDetectionList		
PUT			
Description	Line detection configuration for all video input channels.		
Query	None		
Inbound Data	LineDetectionList		
Success Return	ResponseStatus		
Notes:			

LineDetectionList XML Block

```
<LineDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <LineDetection/>    <!-- opt -->
</LineDetectionList>
```

8.13.17 /ISAPI/Smart/LineDetection/<ID>

/ISAPI/Smart/LineDetection/ID		General Resource	v2.0
GET			
Description	Line detection configuration for a video input channels.		
Query	None		
Inbound Data	None		
Success Return	LineDetection		
PUT			
Description	Line detection configuration for a video input channels.		
Query	None		
Inbound Data	LineDetection		
Success Return	ResponseStatus		
Notes:			

LineDetection XML Block

```
<LineDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <intelliBackSearch> <!-- opt, xs:boolean --> </intelliBackSearch>
  <duration> <!-- opt, xs:integer --></duration>
  <startTriggerTime> <!-- req, xs:integer, milliseconds --> </startTriggerTime>
  <endTriggerTime> <!-- req, xs:integer, milliseconds --> </endTriggerTime>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <minObjectSize>
    <!-- opt, xs:integer, min number of pixels per object -->
  </minObjectSize>
  <maxObjectSize>
    <!-- opt, xs:integer, max number of pixels per object -->
  </maxObjectSize>
  <LineItemList size="4"/>
</LineDetection>
```

8.13.18 /ISAPI/Smart/LineDetection/<ID>/lineItem

/ISAPI/Smart/LineDetection/ID/lineItem	General Resource	v2.0
--	------------------	------

GET	
Description	Access the list of polyline for line detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	LinItemList
PUT	
Description	Access the list of polyline for line detection on a particular video input channel.
Query	None
Inbound Data	LinItemList
Success Return	ResponseStatus
POST	
Description	Access the list of polyline for line detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	LinItemList
DELETE	
Description	Access the list of polyline for line detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

LinItemList XML Block

```
<LinItemList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <LinItem/>
</LinItemList>
```

8.13.19 /ISAPI/Smart/LineDetection/<ID>/linItem/<ID>

/ISAPI/Smart/LineDetection/ID/linItem/ID		General Resource	v2.0
GET			
Description	Access the list of polyline for line detection.		
Query	None		
Inbound Data	None		
Success Return	LinItem		
PUT			

Description	Access the list of polyline for line detection.
Query	None
Inbound Data	LinItem
Success Return	ResponseStatus
DELETE	
Description	Access the list of polyline for line detection.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	

LinItem XML Block

```
<LinItem version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:string -->          </id>
    <enabled> <!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>
      <!--req, xs:integer-->
    </sensitivityLevel>
    <directionSensitivity>
      <!-- opt, xs:string, "left-right,right-left,any" -->
    </directionSensitivity>
    <CoordinatesList>
      <Coordinates> <!-- req, -->
        <positionX>      <!-- req, xs:integer;coordinate -->      </positionX>
        <positionY>      <!-- req, xs:integer;coordinate -->      </positionY>
      </Coordinates>
    </CoordinatesList>
    <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
</LinItem>
```

8.13.20 /ISAPI/Smart/DefocusDetection

/ISAPI/Smart/DefocusDetection		General Resource	v2.0
GET			
Description	Defocus detection configuration for all audio input channels.		
Query	None		
Inbound Data	None		
Success Return	DefocusDetectionList		
PUT			
Description	Defocus detection configuration for all audio input channels.		

Query	None
Inbound Data	DefocusDetectionList
Success Return	ResponseStatus
Notes:	

DefocusDetectionList XML Block

```
<DefocusDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DefocusDetection/> <!-- opt -->
</DefocusDetectionList>
```

8.13.21 /ISAPI/Smart/DefocusDetection/<ID>

/ISAPI/Smart/ DefocusDetection/ID		General Resource	v2.0
GET			
Description	Defocus detection configuration for a audio input channel.		
Query	None		
Inbound Data	None		
Success Return	DefocusDetection		
PUT			
Description	Defocus detection configuration for a audio input channel.		
Query	None		
Inbound Data	DefocusDetection		
Success Return	ResponseStatus		
Notes:			

DefocusDetection XML Block

```
<DefocusDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel> <!--opt, xs:integer--> </sensitivityLevel>
</DefocusDetection>
```

8.13.22 /ISAPI/Smart/AudioDetection/channels

/ISAPI/Smart/AudioDetection/channels		General Resource	v2.0
GET			
Description	Audio detection configuration for all audio input channels.		
Query	None		
Inbound Data	None		

Success Return	AudioDetectionList
PUT	
Description	Audio detection configuration for all audio input channels.
Query	None
Inbound Data	AudioDetectionList
Success Return	ResponseStatus
Notes:	

AudioDetectionList XML Block

```
<AudioDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <AudioDetection/>  <!-- opt -->
</AudioDetectionList>
```

8.13.23 /ISAPI/Smart/AudioDetection/channels/<ID>

/ISAPI/Smart/AudioDetection/channels/ID		General Resource	v2.0
GET			
Description	Audio detection configuration for a audio input channel.		
Query	None		
Inbound Data	None		
Success Return	AudioDetection		
PUT			
Description	Audio detection configuration for a audio input channel.		
Query	None		
Inbound Data	AudioDetection		
Success Return	ResponseStatus		
Notes:			

AudioDetection XML Block

```
<AudioDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string;id -->  </id>
  <audioInputException>
    <enabled>  <!-- req, xs:boolean -->  </enabled>
  </audioInputException>
  <soundIntensityMutation> <!-- opt -->
    <enabled> <!-- req, xs:boolean -->  </enabled>
    <sensitivityLevel>
      <!--req, xs:integer-->
    </sensitivityLevel>
    <mutationThreshold>
```

```

    <!--req, xs:integer -->
  </mutationThreshold>
</soundIntensityMutation>
<SteepFall> <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <sensitivityLevel>
    <!--req, xs:integer-->
  </sensitivityLevel>
</SteepFall>
<AudioLoss> <!-- opt -->
  <enabled><!-- req, xs:boolean --></enabled>
  <sensitivityLevel>
    <!--opt, xs:integer "1...100" def="50"-->
  </sensitivityLevel>
</AudioLoss>
</AudioDetection>

```

8.13.24 /ISAPI/Smart/AudioDetection/channels/<ID>/capabilities

/ISAPI/Smart/AudioDetection/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Audio detection capability.		
Query	None		
Inbound Data	None		
Success Return	AudioDetection		
Notes:			
<mutexAbility opt="PDC"/><!-- opt indicates that audio exception detection and people counting functions are mutual exclusion-->			
<isSupportMultiScene>:Whether to support multiple scene(speed dome supports multiple scene area)			

AudioDetection XML Block

```

<AudioDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <audioInputException>
    <enabled> <!-- req, xs:boolean --> </enabled>
  </audioInputException>
  <soundIntensityMutation>
    <enabled> <!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>

```



```

        <!--req, xs:integer-->
    </sensitivityLevel>
    <mutationThreshold>
        <!--req, xs:integer -->
    </mutationThreshold>
</soundIntensityMutation>
<SteepFall><!-- opt -->
    <enabled><!-- req, xs:boolean --> </enabled>
    <sensitivityLevel>
        <!--req, xs:integer-->
    </sensitivityLevel>
</SteepFall>
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
<AudioLoss> <!-- opt -->
    <enabled><!-- req, xs:boolean --></enabled>
    <sensitivityLevel min="" max="" def="">
        <!--opt, xs:integer "1...100" def="50"-->
    </sensitivityLevel>
</AudioLoss>
</AudioDetection>

```

8.13.25 /ISAPI/Smart/AudioDetection/channels/<ID>/status

/ISAPI/Smart/AudioDetection/channels/ID/status		General Resource	v2.0
GET			
Description	It is used to get audio strength.		
Query	None		
Inbound Data	None		
Success Return	AudioStrengthStatus		
Notes:			

AudioStrengthStatus XML Block

```

<AudioStrengthStatus version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <id>                <!-- req, xs:string -->                </id>
    <audioStrength>    <!--ro, req, xs:integer-->    </audioStrength>
</AudioStrengthStatus>

```

8.13.26 /ISAPI/Smart/SceneChangeDetection

/ISAPI/Smart/SceneChangeDetection		General Resource	v2.0
GET			
Description	Scene change detection configuration for all video input channels.		
Query	None		
Inbound Data	None		
Success Return	SceneChangeDetectionList		
PUT			
Description	Scene change detection configuration for all video input channels.		
Query	None		
Inbound Data	SceneChangeDetectionList		
Success Return	ResponseStatus		
Notes:			

SceneChangeDetectionList XML Block

```
<SceneChangeDetectionList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SceneChangeDetection/> <!-- opt -->
</SceneChangeDetectionList>
```

8.13.27 /ISAPI/Smart/SceneChangeDetection/<ID>

/ISAPI/Smart/SceneChangeDetection/ID		General Resource	v2.0
GET			
Description	Scene change detection configuration for a video input channels.		
Query	None		
Inbound Data	None		
Success Return	SceneChangeDetection		
PUT			
Description	Scene change detection configuration for a video input channels.		
Query	None		
Inbound Data	SceneChangeDetection		
Success Return	ResponseStatus		
Notes:			

SceneChangeDetection XML Block

```
<SceneChangeDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
```

```
<sensitivityLevel> <!-- req, xs:integer --> </sensitivityLevel>
</SceneChangeDetection>
```

8.13.28 /ISAPI/Smart/regionEntrance

/ISAPI/Smart/regionEntrance

General Resource

v2.0

GET	
Description	Region Entrance detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	RegionEntranceList

PUT	
Description	Region Entrance detection configuration for all video input channels.
Query	None
Inbound Data	RegionEntranceList
Success Return	ResponseStatus

Notes:

- This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
- If <RegionEntranceRegionList> doesn't exist, it means the region and sensitivity remain the same.
- If <RegionEntranceRegionList> is listed, but <RegionEntranceRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/regionEntrance/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

RegionEntranceList XML Block

```
<RegionEntranceList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RegionEntrance/> <!-- opt -->
</RegionEntranceList>
```

8.13.29 /ISAPI/Smart/regionEntrance/<ID>/capabilities

/ISAPI/Smart//regionEntrance/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Region Entrance Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<RegionEntrance>		

Notes:

<mutexAbility opt="PDC"/><!-- opt it means the region entrance function is mutually exclusive to people counting statistics -->

<isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function.

RegionEntrance XML Block

```
<RegionEntrance version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionEntranceRegionList size="4"> <!-- opt -->
    <RegionEntranceRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--opt, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
      <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
    </RegionEntranceRegion>
  </RegionEntranceRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</RegionEntrance>
```

8.13.30 /ISAPI/Smart/regionEntrance/<ID>

/ISAPI/Smart/regionEntrance/ID		General Resource	v2.0
GET			
Description	Region Entrance detection configuration for a video input channels.		
Query	None		
Inbound Data	None		
Success Return	RegionEntrance		
PUT			
Description	Region Entrance detection configuration for a video input channels.		

Query	None
Inbound Data	RegionEntrance
Success Return	ResponseStatus
Notes: 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. 2. If <RegionEntranceRegionList> doesn't exist, it means the region and sensitivity remain the same. 3. If <RegionEntranceRegionList> is listed, but <RegionEntranceRegion> is not, it means the region and sensitivity are empty. Please refer to /ISAPI/Smart/regionEntrance/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.	

RegionEntrance XML Block

```
<RegionEntrance version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionEntranceRegionList/> <!-- opt -->
  <muxAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</RegionEntrance>
```

8.13.31 /ISAPI/Smart/regionEntrance/<ID>/regions

/ISAPI/Smart/regionEntrance/ID/regions		General Resource	v2.0
GET			
Description	Access the list of regions for Region Entrance detection on a particular video input channel.		
Query	None		
Inbound Data	None		
Success Return	RegionEntranceRegionList		
PUT			
Description	Access the list of regions for Region Entrance detection on a particular video input channel.		
Query	None		
Inbound Data	RegionEntranceRegionList		
Success Return	ResponseStatus		


```

    </RegionCoordinates>
  </RegionCoordinatesList>
  <detectedTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectedTarget>
</RegionEntranceRegion>

```

8.13.33 /ISAPI/Smart/regionExiting

/ISAPI/Smart/regionExiting

General Resource

v2.0

GET	
Description	Region Exiting detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	RegionExitingList

PUT	
Description	Region Exiting detection configuration for all video input channels.
Query	None
Inbound Data	RegionExitingList
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <RegionExitingRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <RegionExitingRegionList> is listed, but <RegionExitingRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/regionEntrance/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

RegionExitingList XML Block

```

<RegionExitingList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RegionExiting/><!-- opt -->
</RegionExitingList>

```

8.13.34 /ISAPI/Smart/regionExiting/<ID>/capabilities

/ISAPI/Smart/regionExiting/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Region Exiting Detection capability.		
Query	None		
Inbound Data	None		

Success Return	<RegionExiting>
Notes: <mutexAbility opt="PDC"/><!-- opt it means the region exit function is mutually exclusive to people counting statistics--> <isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function	

RegionExiting XML Block

```

<RegionExiting version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionExitingRegionList size="4"> <!-- opt -->
    <RegionExitingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--opt, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt, -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
      <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
    </RegionExitingRegion>
  </RegionExitingRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</RegionExiting>

```

8.13.35 /ISAPI/Smart/regionExiting/<ID>

/ISAPI/Smart/regionExiting/ID		General Resource	v2.0
GET			
Description	Region Exiting detection configuration for a video input channels.		
Query	None		
Inbound Data	None		
Success Return	RegionExiting		
PUT			

Description	Region Exiting detection configuration for a video input channels.
Query	None
Inbound Data	RegionExiting
Success Return	ResponseStatus
Notes: 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. 2. If <RegionExitingRegionList> doesn't exist, it means the region and sensitivity remain the same. 3. If <RegionExitingRegionList> is listed, but <RegionExitingRegion> is not, it means the region and sensitivity are empty. Please refer to /ISAPI/Smart/regionExiting/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.	

RegionExiting XML Block

```
<RegionExiting version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionExitingRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</RegionExiting>
```

8.13.36 /ISAPI/Smart/regionExiting/<ID>/regions

/ISAPI/Smart/regionExiting/ID/regions		General Resource	v2.0
GET			
Description	Access the list of regions for Region Exiting detection on a particular video input channel.		
Query	None		
Inbound Data	None		
Success Return	RegionExitingRegionList		
PUT			
Description	Access the list of regions for Region Exiting detection on a particular video input channel.		
Query	None		
Inbound Data	RegionExitingRegionList		


```

    <RegionCoordinates> <!-- opt, -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" --> </detectionTarget>
</RegionExitingRegion>

```

8.13.38 /ISAPI/Smart/loitering

/ISAPI/Smart/loitering

General Resource

v2.0

GET	
Description	Loitering detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	LoiteringList

PUT	
Description	Loitering detection configuration for all video input channels.
Query	None
Inbound Data	LoiteringList
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <LoiteringRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <LoiteringRegionList> is listed, but <LoiteringRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/regionEntrance/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

LoiteringList XML Block

```

<LoiteringList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Loitering/><!-- opt -->
</LoiteringList>

```

8.13.39 /ISAPI/Smart/loitering/<ID>/capabilities

/ISAPI/Smart/loitering/<ID>/capabilities		General Resource	v2.0
GET			

Description	It is used to get Loitering Detection capability.
Query	None
Inbound Data	None
Success Return	<Loitering>
Notes: <mutexAbility opt="PDC"/><!-- opt it means the loitering detection function is mutually exclusive to people counting statistics--> <isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function	

Loitering XML Block

```

<Loitering version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <LoiteringRegionList size="4"> <!-- opt -->
    <LoiteringRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--opt, xs:integer, 1..100, 1 is the least
sensitive--></sensitivityLevel>
      <timeThreshold min="1" max="10"/> <!-- req, xs:integer,seconds -->
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt, -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </LoiteringRegion>
  </LoiteringRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Loitering>

```

8.13.40 /ISAPI/Smart/loitering/<ID>

/ISAPI/Smart/loitering/ID

General Resource v2.0

GET

Description	Loitering detection configuration for a video input channels.
Query	None
Inbound Data	None
Success Return	Loitering
PUT	
Description	Loitering detection configuration for a video input channels.
Query	None
Inbound Data	Loitering
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. 2. If <LoiteringRegionList> doesn't exist, it means the region and sensitivity remain the same. 3. If <LoiteringRegionList> is listed, but <LoiteringRegion> is not, it means the region and sensitivity are empty. <p>Please refer to /ISAPI/Smart/loitering/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.</p>	

Loitering XML Block

```
<Loitering version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->    </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <LoiteringRegionList/>  <!-- opt -->
  <muxAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Loitering>
```

8.13.41 /ISAPI/Smart/loitering/<ID>/regions

/ISAPI/Smart/loitering/ID/regions		General Resource v2.0
GET		
Description	Access the list of regions for Loitering detection on a particular video input channel.	
Query	None	
Inbound Data	None	
Success Return	LoiteringRegionList	

LoiteringRegion XML Block

```
<LoiteringRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--opt, xs:integer, 0..100, 0 is the least sensitive --></sensitivityLevel>
  <timeThreshold><!--opt, xs:integer--> </timeThreshold>
  <RegionCoordinatesList>  <!-- opt -->
    <RegionCoordinates>  <!--opt, -->
      <positionX>          <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>          <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</LoiteringRegion>
```

8.13.43 /ISAPI/Smart/group

/ISAPI/Smart/group

General Resourcev2.0

GET	
Description	Group detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	GroupList

PUT	
Description	Group detection configuration for all video input channels.
Query	None
Inbound Data	GroupList
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.

2. If <GroupRegionList> doesn't exist, it means the region and sensitivity remain the same.

3. If <GroupRegionList> is listed, but <GroupRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/group/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

GroupList XML Block

```
<GroupList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Group/>  <!-- opt -->
</GroupList>
```

8.13.44 /ISAPI/Smart/group/<ID>/capabilities

/ISAPI/Smart/group/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Group Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<Group>		
Notes: <mutexAbility opt="PDC"/><!-- opt it means the group detection function is mutually exclusive to people counting statistics--> <isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function			

Group XML Block

```
<Group version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <GroupRegionList size="4"> <!-- opt -->
    <GroupRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <objectOccupation min="1" max="100"/> <!-- req, xs:integer -->
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
          <positionY> <!-- req, xs:integer;coordinate --> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </GroupRegion>
  </GroupRegionList>
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Group>
```


8.13.45 /ISAPI/Smart/group/<ID>

/ISAPI/Smart/group/ID

General Resource

v2.0

GET	
Description	Group detection configuration for a video input channels.
Query	None
Inbound Data	None
Success Return	Group

PUT	
Description	Group detection configuration for a video input channels.
Query	None
Inbound Data	Group
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.

2. If <GroupRegionList> doesn't exist, it means the region and sensitivity remain the same.

3. If <GroupRegionList> is listed, but <GroupRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/group/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

Group XML Block

```
<Group version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <GroupRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!-- opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Group>
```

8.13.46 /ISAPI/Smart/group/<ID>/regions

/ISAPI/Smart/group/ID/regions	General Resource	v2.0
-------------------------------	------------------	------

GET	
Description	Access the list of regions for Group detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	GroupRegionList
PUT	
Description	Access the list of regions for Group detection on a particular video input channel.
Query	None
Inbound Data	GroupRegionList
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. 2. If <GroupRegionList> is listed, but <GroupRegion> is not, it means the region and sensitivity are empty. <p>Please refer to /ISAPI/Smart/group/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.</p>	

GroupRegionList XML Block

```
<GroupRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <GroupRegion/>
</GroupRegionList>
```

8.13.47 /ISAPI/Smart/group/<ID>/regions/<ID>

/ISAPI/Smart/group/ID/regions/ID		General Resource	v2.0
GET			
Description	Access the list of regions for Group detection.		
Query	None		
Inbound Data	None		
Success Return	GroupRegion		
PUT			
Description	Access the list of regions for Group detection.		
Query	None		

Inbound Data	GroupRegion
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged. 2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. 	

GroupRegion XML Block

```

<GroupRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <objectOccupation>  <!--opt, xs:integer-->  </objectOccupation>
  <RegionCoordinatesList>  <!-- opt -->
    <RegionCoordinates>  <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</GroupRegion>

```

8.13.48 /ISAPI/Smart/rapidMove

/ISAPI/Smart/rapidMove

General Resource v2.0

GET	
Description	Rapid Move detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	RapidMoveList

PUT	
Description	Rapid Move detection configuration for all video input channels.
Query	None
Inbound Data	RapidMoveList
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.

2. If <RapidMoveRegionList> doesn't exist, it means the region and sensitivity remain the same.

3. If <RapidMoveRegionList> is listed, but < RapidMoveRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/rapidMove/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

RapidMoveList XML Block

```
<RapidMoveList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RapidMove/>  <!-- opt -->
</RapidMoveList>
```

8.13.49 /ISAPI/Smart/rapidMove/<ID>/capabilities

/ISAPI/Smart/rapidMove/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Rapid Move Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<RapidMove>		
Notes:			
<mutexAbility opt="PDC"/><!-- opt it means the rapidMove detection function is mutually exclusive to people counting statistics-->			
<isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function			

RapidMove XML Block

```
<RapidMove version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth>  <!-- req, ro,xs:integer -->  </normalizedScreenWidth>
    <normalizedScreenHeight>  <!-- req, ro,xs:integer -->  </normalizedScreenHeight>
  </normalizedScreenSize>
  <RapidMoveRegionList size="4">  <!-- opt -->
    <RapidMoveRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id>  <!-- req, xs:string -->  </id>
      <sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least sensitive--></sensitivityLevel>
      <RegionCoordinatesList>  <!-- opt -->
        <RegionCoordinates>  <!-- opt -->
          <positionX>  <!-- req, xs:integer;coordinate -->  </positionX>
          <positionY>  <!-- req, xs:integer;coordinate -->  </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </RapidMoveRegion>
  </RapidMoveRegionList>
</RapidMove>
```


</RapidMove>

8.13.51 /ISAPI/Smart/rapidMove/<ID>/regions

/ISAPI/Smart/rapidMove/ID/regions

General Resourcev2.0

GET	
Description	Access the list of regions for Rapid Move Detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	RapidMoveRegionList
PUT	
Description	Access the list of regions for Rapid Move Detection on a particular video input channel.
Query	None
Inbound Data	RapidMoveRegionList
Success Return	ResponseStatus
Notes:	
1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.	
2. If <RapidMoveRegionList> is listed, but < RapidMoveRegion> is not, it means the region and sensitivity are empty.	
Please refer to /ISAPI/Smart/rapidMove/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.	

RapidMoveRegionList XML Block

```
<RapidMoveRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RapidMoveRegion/>
</RapidMoveRegionList>
```

8.13.52 /ISAPI/Smart/rapidMove/<ID>/regions/<ID>

/ISAPI/Smart/rapidMove/ID/regions/ID		General Resource	v2.0
GET			
Description	Access the list of regions for Rapid Move Detection.		
Query	None		
Inbound Data	None		
Success Return	RapidMoveRegion		
PUT			

Description	Access the list of regions for Rapid Move Detection.
Query	None
Inbound Data	RapidMoveRegion
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged. 2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. 	

RapidMoveRegion XML Block

```
<RapidMoveRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!-- req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList> <!-- opt -->
  <detectionTarget><!-- opt, xs:string,"all,human,vehicle" -->  </detectionTarget>
</RapidMoveRegion>
```

8.13.53 /ISAPI/Smart/parking

/ISAPI/Smart/parking

General Resource v2.0

GET	
Description	Parking Detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	ParkingList

PUT	
Description	Parking Detection configuration for all video input channels.
Query	None
Inbound Data	ParkingList
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <ParkingRegionList> doesn't exist, it means the region and sensitivity remain the same.

3. If <ParkingRegionList> is listed, but <ParkingRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/parking/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

ParkingList XML Block

```
<ParkingList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Parking/> <!-- opt -->
</ParkingList>
```

8.13.54 /ISAPI/Smart/parking/<ID>/capabilities

/ISAPI/Smart/parking/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Parking Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<Parking>		
Notes:			
<mutexAbility opt="PDC"/><!-- opt it means the parking detection function is mutually exclusive to people counting statistics-->			
<isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function			

Parking XML Block

```
<Parking version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <ParkingRegionList size="4"> <!-- opt -->
    <ParkingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id> <!-- req, xs:string --> </id>
      <sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least sensitive--></sensitivityLevel>
      <timeThreshold min="5" max="100"/> <!-- req, xs:integer,seconds -->
      <RegionCoordinatesList> <!-- opt -->
        <RegionCoordinates> <!-- opt -->
          <positionX> <!-- req, xs:integer;coordinate --> </positionX>
```



```

        <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
</RegionCoordinatesList>
</ParkingRegion>
</ParkingRegionList>
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Parking>

```

8.13.55 /ISAPI/Smart/parking/<ID>

/ISAPI/Smart/parking/ID

General Resource v2.0

GET	
Description	Parking Detection configuration for a video input channels.
Query	None
Inbound Data	None
Success Return	Parking
PUT	
Description	Parking Detection configuration for a video input channels.
Query	None
Inbound Data	Parking
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <ParkingRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <ParkingRegionList> is listed, but <ParkingRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/parking/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

Parking XML Block

```

<Parking version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <id>    <!-- req, xs:string -->    </id>
    <enabled> <!-- req, xs:boolean --> </enabled>
    <normalizedScreenSize>
        <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
        <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
    </normalizedScreenSize>
    <ParkingRegionList/> <!-- opt -->

```

```

<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</Parking>

```

8.13.56 /ISAPI/Smart/parking/<ID>/regions

/ISAPI/Smart/parking/ID/regions

General Resource v2.0

GET	
Description	Access the list of regions for Parking Detection on a particular video input channel.
Query	None
Inbound Data	None
Success Return	ParkingRegionList
PUT	
Description	Access the list of regions for Parking Detection on a particular video input channel.
Query	None
Inbound Data	ParkingRegionList
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. 2. If <ParkingRegionList> is listed, but <ParkingRegion> is not, it means the region and sensitivity are empty. <p>Please refer to /ISAPI/Smart/parking/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.</p>	

ParkingRegionList XML Block

```

<ParkingRegionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <ParkingRegion/>
</ParkingRegionList>

```

8.13.57 /ISAPI/Smart/parking/<ID>/regions/<ID>

/ISAPI/Smart/parking/ID/regions/ID		General Resource v2.0
GET		
Description	Access the list of regions for Parking Detection.	
Query	None	

Inbound Data	None
Success Return	ParkingRegion
PUT	
Description	Access the list of regions for Parking Detection.
Query	None
Inbound Data	ParkingRegion
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. If <RegionCoordinatesList> doesn't exist, it means that this coordinates for this region remains unchanged. 2. If <RegionCoordinatesList> is listed, but <RegionCoordinates> is not, it means the region and sensitivity are empty. 	

ParkingRegion XML Block

```
<ParkingRegion version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>                <!-- req, xs:string -->                </id>
  <sensitivityLevel><!--req, xs:integer, 1..100, 0 is the least sensitive --></sensitivityLevel>
  <timeThreshold><!--opt, xs:integer--> </timeThreshold>
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt -->
      <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</ParkingRegion>
```

8.13.58 /ISAPI/Smart/unattendedBaggage

/ISAPI/Smart/unattendedBaggage		General Resource	v2.0
GET			
Description	Unattended Baggage Detection configuration for all video input channels.		
Query	None		
Inbound Data	None		
Success Return	UnattendedBaggageList		
PUT			
Description	Unattended Baggage Detection configuration for all video input channels.		
Query	None		
Inbound Data	UnattendedBaggageList		
Success Return	ResponseStatus		
Notes:			

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.
2. If <UnattendedBaggageRegionList> doesn't exist, it means the region and sensitivity remain the same.
3. If <UnattendedBaggageRegionList> is listed, but <UnattendedBaggageRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/unattendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

UnattendedBaggageList XML Block

```
<UnattendedBaggageList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <UnattendedBaggage/>  <!-- opt -->
</UnattendedBaggageList>
```

8.13.59 /ISAPI/Smart/unattendedBaggage/<ID>/capabilities

/ISAPI/Smart/unattendedBaggage/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Unattended Baggage Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<UnattendedBaggage>		
Notes:			
<mutexAbility opt="PDC"/><!-- opt it means the unattended baggage detection function is mutually exclusive to people counting statistics-->			
<isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function			

UnattendedBaggage XML Block

```
<UnattendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->  </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <UnattendedBaggageRegionList size="4"> <!-- opt -->
    <UnattendedBaggageRegion version="2.0"
xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id>  <!-- req, xs:string -->  </id>
      <sensitivityLevel min="1" max="100"><!--req, xs:integer, 1..100, 1 is the least
```

```

sensitive--></sensitivityLevel>
  <timeThreshold min="5" max="100"/> <!-- req, xs:integer,seconds -->
  <RegionCoordinatesList> <!-- opt -->
    <RegionCoordinates> <!-- opt -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</UnattendedBaggageRegion>
</UnattendedBaggageRegionList>
<mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
<isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</UnattendedBaggage>

```

8.13.60 /ISAPI/Smart/unattendedBaggage/<ID>

/ISAPI/Smart/unattendedBaggage/ID

General Resource v2.0

GET	
Description	Unattended Baggage Detection configuration for a video input channels.
Query	None
Inbound Data	None
Success Return	UnattendedBaggage

PUT	
Description	Unattended Baggage Detection configuration for a video input channels.
Query	None
Inbound Data	UnattendedBaggage
Success Return	ResponseStatus

Notes:

1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.

2. If <UnattendedBaggageRegionList> doesn't exist, it means the region and sensitivity remain the same.

3. If <UnattendedBaggageRegionList> is listed, but <UnattendedBaggageRegion> is not, it means the region and sensitivity are empty.

Please refer to /ISAPI/Smart/unattendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.

UnattendedBaggage XML Block

```

<UnattendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>

```


Inbound Data	None
Success Return	AttendedBaggageList
PUT	
Description	Attended Baggage Detection configuration for all video input channels.
Query	None
Inbound Data	AttendedBaggageList
Success Return	ResponseStatus
Notes: <ol style="list-style-type: none"> 1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes. 2. If <AttendedBaggageRegionList> doesn't exist, it means the region and sensitivity remain the same. 3. If <AttendedBaggageRegionList> is listed, but <AttendedBaggageRegion> is not, it means the region and sensitivity are empty. <p>Please refer to /ISAPI/Smart/attendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.</p>	

AttendedBaggageList XML Block

```
<AttendedBaggageList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <AttendedBaggage/> <!-- opt -->
</AttendedBaggageList>
```

8.13.64 /ISAPI/Smart/attendedBaggage/<ID>/capabilities

/ISAPI/Smart/attendedBaggage/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Attended Baggage Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<AttendedBaggage>		
Notes:			
<mutexAbility opt="PDC"/><!-- opt it means the attended baggage detection function is mutually exclusive to people counting statistics-->			
<isSupportMultiScene>: whether or not support multiple scenes, speed dome supports this function			

AttendedBaggage XML Block

```
<AttendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
```


Please refer to `/ISAPI/Smart/attendedBaggage/<ID>/region/<ID>` for detailed multiple scenes configuration on Speed Dome.

AttendedBaggage XML Block

```
<AttendedBaggage version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <AttendedBaggageRegionList/> <!-- opt -->
  <mutexAbility opt="PDC"/><!--opt,ro, xs:string, "PDC" -->
  <isSupportMultiScene> <!-- opt, xs:boolean --> </isSupportMultiScene>
</AttendedBaggage>
```

8.13.66 `/ISAPI/Smart/attendedBaggage/<ID>/regions`

/ISAPI/Smart/attendedBaggage/ID/regions		General Resource	v2.0
GET			
Description	Access the list of regions for Attended Baggage Detection on a particular video input channel.		
Query	None		
Inbound Data	None		
Success Return	AttendedBaggageRegionList		
PUT			
Description	Access the list of regions for Attended Baggage Detection on a particular video input channel.		
Query	None		
Inbound Data	AttendedBaggageRegionList		
Success Return	ResponseStatus		
Notes:			
<div>1. This resource is not suitable to add/modify multiple scenes, only support to delete the coordinates of multiple scenes.</div> <div>2. If <AttendedBaggageRegionList> is listed, but <AttendedBaggageRegion> is not, it means the region and sensitivity are empty.</div>			
Please refer to /ISAPI/Smart/attendedBaggage/<ID>/region/<ID> for detailed multiple scenes configuration on Speed Dome.			

8.13.68 /ISAPI/Smart/peopleDetection

/ISAPI/Smart/peopleDetection

General Resource

v2.0

GET	
Description	Region People detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	PeopleDetectionList

PUT	
Description	Region People detection configuration for all video input channels.
Query	None
Inbound Data	PeopleDetectionList
Success Return	ResponseStatus

Notes:

1、该资源不适用多场景区域的新增和修改，只支持对多场景区域坐标的清空。

2、RegionPeopleDetectionList 节点不存在，表示区域和时间阈值参数保持不变。

3、RegionPeopleDetectionList 节点存在，但子节点（RegionPeopleDetection）不存在，表示区域和时间阈值参数清空。

球机多场景区域的配置，可以根据场景调整后，使用独立协议配置完成，详见 /ISAPI/Smart/RegionPeopleDetection/<ID>/regions/<ID>。

当前司法球只支持一个场景。ID 值为 1

PeopleDetectionList XML Block

```
<PeopleDetectionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PeopleDetection/> <!-- opt -->
</PeopleDetectionList>
```

8.13.69 /ISAPI/Smart/peopleDetection/<ID>/capabilities

/ISAPI/Smart/peopleDetection/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get Region People Detection capability.		
Query	None		
Inbound Data	None		
Success Return	<PeopleDetection>		
Notes:			

PeopleDetection XML Block

```
<PeopleDetection version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string -->    </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <normalizedScreenSize><!-- req, ro -->
    <normalizedScreenWidth> <!-- req, ro,xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, ro,xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionPeopleDetectionList size="4">  <!-- opt -->
    <RegionPeopleDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
      <id>          <!-- req, xs:string -->          </id>
      <timeThreshold min="5" max="30" def="5"><!--req, xs:integer,unit:s --></timeThreshold>
      <RegionCoordinatesList size="5">  <!-- opt -->
        <RegionCoordinates>  <!-- opt -->
          <positionX>          <!-- req, xs:integer;coordinate -->    </positionX>
          <positionY>          <!-- req, xs:integer;coordinate -->    </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </RegionPeopleDetection>
  </RegionPeopleDetectionList>
</PeopleDetection>
```

8.13.70 /ISAPI/Smart/peopleDetection/<ID>

/ISAPI/Smart/peopleDetection/ID

General Resourcev2.0

GET	
Description	Region People detection configuration for all video input channels.
Query	None
Inbound Data	None
Success Return	PeopleDetection

PUT	
Description	Region People detection configuration for all video input channels.
Query	None
Inbound Data	PeopleDetection
Success Return	ResponseStatus

Notes:

1、该资源不适用区域的新增和修改，只支持对多区域坐标的清空。

- 2、RegionPeopleDetectionList 节点不存在，表示区域和时间阈值参数保持不变。
- 3、RegionPeopleDetectionList 节点存在，但子节点（RegionPeopleDetection）不存在，表示区域和时间阈值参数清空。
- 球机多场景区域的配置，可以根据场景调整后，使用独立协议配置完成，详见 /ISAPI/Smart/peopleDetection/<ID>/regions/<ID>。
- 当前司法球只支持一个场景。ID 值为 1

PeopleDetection XML Block

```
<PeopleDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string -->    </id>
  <enabled>  <!-- req, xs:boolean -->  </enabled>
  <normalizedScreenSize>
    <normalizedScreenWidth> <!-- req, xs:integer --> </normalizedScreenWidth>
    <normalizedScreenHeight> <!-- req, xs:integer --> </normalizedScreenHeight>
  </normalizedScreenSize>
  <RegionPeopleDetectionList/> <!-- opt -->
</PeopleDetection>
```

8.13.71 /ISAPI/Smart/peopleDetection/<ID>/regions

/ISAPI/Smart/peopleDetection/ID/regions

General Resource

v2.0

GET

Description

Access the list of regions for Region People detection on a particular video input channel.

Query

None

Inbound Data

None

Success Return

RegionPeopleDetectionList

PUT

Description

Access the list of regions for Region People detection on a particular video input channel.

Query

None

Inbound Data

RegionPeopleDetectionList

Success Return

ResponseStatus

Notes:

1、该资源不适用多区域的新增和修改，只支持对多区域坐标的清空。

2、RegionPeopleDetectionList 节点存在，但子节点（RegionPeopleDetection）不存在，表示区域和时间阈值参数清空。

球机多场景区域的配置，可以根据场景调整后，使用独立协议配置完成，详见

/ISAPI/Smart/peopleDetection/<ID>/regions/<ID>。

当前司法球只支持一个场景。ID 值为 1

RegionPeopleDetectionList XML Block

```
<RegionPeopleDetectionList version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <RegionPeopleDetection/>
</RegionPeopleDetectionList>
```

8.13.72 /ISAPI/Smart/peopleDetection/<ID>/regions/<ID>

/ISAPI/Smart/peopleDetection/ID/regions/ID

General Resourcev2.0

GET

Description	Access the list of regions for Region People detection.
Query	None
Inbound Data	None
Success Return	RegionPeopleDetection

PUT

Description	Access the list of regions for Region People detection.
Query	None
Inbound Data	RegionPeopleDetection
Success Return	ResponseStatus

Notes:

1、RegionCoordinatesList 节点不存在，表示区域坐标参数保持不变。

3、RegionCoordinatesList 节点存在，但子节点（RegionCoordinates）不存在，表示区域坐标参数清空。

RegionPeopleDetection XML Block

```
<RegionPeopleDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:string -->          </id>
  <timeThreshold><!--req, xs:integer, 5..30 --></timeThreshold>
  <RegionCoordinatesList>  <!-- opt -->
    <RegionCoordinates>  <!-- opt, -->
      <positionX>          <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>          <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</RegionPeopleDetection>
```

8.13.73 /ISAPI/Smart/storageDetection

/ISAPI/Smart/storageDetection		General Resource	v2.0
GET			
Description	It is used to get Smart Storage Detection.		
Query	None		
Inbound Data	None		
Success Return	<StorageDetection>		
Notes:			

StorageDetection XML Block

```
<StorageDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <healthState> <!-- opt, xs:string,"good,bad,damage,unknown" -->    </healthState>
  <badBlocks>  <!-- opt, xs:integer,"坏块数" -->    </badBlocks>
  <SDCardState> <!-- opt, xs:string,"onLine,offLine,unknown,locked " -->    </SDCardState>
  <abnormalPowerLoss><!-- opt, xs:integer,"异常掉电数" --> </abnormalPowerLoss>
  <remainingLife><!-- opt, xs:integer,"0~100,SD卡剩余寿命;以百分比形式 " -->
</remainingLife>
</StorageDetection>
```

8.13.74 /ISAPI/Smart/storageDetection/rwlock

/ISAPI/Smart/storageDetection/rwlock		General Resource	v2.0
GET			
Description	It is used to get Smart Storage read and write lock.		
Query	None		
Inbound Data	None		
Success Return	<RWLock>		
PUT			
Description	It is used to set Smart Storage read and write lock.		
Query	None		
Inbound Data	<RWLock>		
Success Return	ResponseStatus		
Notes:			

RWLock XML Block

```
<RWLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled><!-- req,xs:boolean,--></enabled>
  <passwd><!-- req,wo, xs:string -->    </passwd>
```



```
<originalPasswd><!-- opt,wo, xs:string --> </originalPasswd>
</RWLock>
```

8.13.75 /ISAPI/Smart/storageDetection/rwlock/capabilities

/ISAPI/Smart/storageDetection/rwlock/capabilities		General Resource	v2.0
GET			
Description	It is used to get Smart Storage read and write lock capabilities.		
Query	None		
Inbound Data	None		
Success Return	<RWLock>		
Notes:			

RWLock XML Block

```
<RWLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled><!-- req,xs:boolean,--></enabled>
  <passwd min="" max=""><!-- req,wo, xs:string --> </passwd>
  <originalPasswd min="" max=""><!-- opt,wo, xs:string --> </originalPasswd>
  <SDCardType opt="HIK"><!-- opt,ro,xs:string,--></SDCardType>
</RWLock>
```

8.13.76 /ISAPI/Smart/storageDetection/unlock

/ISAPI/Smart/storageDetection/unlock		General Resource	v2.0
PUT			
Description	It is used to set Smart Storage read and write unlock.		
Query	None		
Inbound Data	<UnLock>		
Success Return	ResponseStatus		
Notes:			

UnLock XML Block

```
<UnLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <passwd><!-- req,wo, xs:string --> </passwd>
</UnLock>
```

8.13.77 /ISAPI/Smart/storageDetection/unlock/capabilities

/ISAPI/Smart/storageDetection/unlock/capabilities		General Resource	v2.0
GET			
Description	It is used to get Smart Storage read and write unlock capabilities.		
Query	None		
Inbound Data	None		
Success Return	<UnLock>		
Notes:			

UnLock XML Block

```
<UnLock version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <passwd min="" max=""><!-- req,wo, xs:string -->  </passwd>
</UnLock>
```

8.13.78 /ISAPI/Smart/HiddenInformation/channels/<ID> >/capabilities

/ISAPI/Smart/HiddenInformation/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description	It is used to get the Hidden Information settings of an interface.		
Query	None		
Inbound Data	None		
Success Return	HiddenInformation		
Notes:			
Id: Device channel number (it represents POS ID when refer to POS function)			
funcType: POS function			
PosCofig: POS hidden information configuration.			
keyWordOne,keyWordTwo,keyWordThree: Key word1-3 (The maximum length is 32)			

HiddenInformation XML Block

```
<HiddenInformation version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id><!-- req, xs:integer --></id>
  <funcType opt="POS"><!--req, xs:string--></funcType>
  <PosCofig><!-- dep, depends on <funcType> -->
    <keyWordOne min="0", max="32"><!--req, xs:string--></keyWordOne>
    <keyWordTwo min="0", max="32"><!--req, xs:string--></keyWordTwo>
    <keyWordThree min="0", max="32"><!--req, xs:string--></keyWordThree>
```

```
</PosCofig>  
</HiddenInformation>
```

8.13.79 /ISAPI/Smart/HiddenInformation/channels/<ID

>

/ISAPI/Smart/HiddenInformation/channels/<ID>		General Resource	v2.0
GET			
Description	It is used to get the Hidden Information settings of an interface.		
Query	None		
Inbound Data	None		
Success Return	HiddenInformation		
PUT			
Description	It is used to update the Hidden Information settings of an interface.		
Query	None		
Inbound Data	HiddenInformation		
Success Return	ResponseStatus		
Notes:			
Id: Device channel number (it represents POS ID when refer to POS function)			
funcType: POS function			
PosCofig: POS hidden information configuration.			
keyWordOne,keyWordTwo,keyWordThree: Key word1-3 (The maximum length is 32)			

HiddenInformation XML Block

```
<HiddenInformation version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">  
  <id><!-- req, xs:integer --></id>  
  <funcType opt="POS"><!--req, xs:string--></funcType>  
  <PosCofig><!-- dep, depends on <funcType> -->  
    <keyWordOne><!--req, xs:string--></keyWordOne>  
    <keyWordTwo><!--req, xs:string--></keyWordTwo>  
    <keyWordThree><!--req, xs:string--></keyWordThree>  
  </PosCofig>  
</HiddenInformation>
```

8.14 /ISAPI/WLAlarm/

/ISAPI/WLAlarm	Service	v2.0
Notes: wireless alarm service		

8.14.1 /ISAPI/WLAlarm/capabilities

/ISAPI/WLAlarm/capabilities		General Resource	v2.0
GET			
Description	It is used to get wireless alarm capability.		
Query	None		
Inbound Data	None		
Success Return	<WLAlarmCap>		
Notes:			

WLAlarmCap XML Block

```
<WLAlarmCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportTeleControl> <!-- opt, xs:boolean --> <isSupportTeleControl>
  <isSupportPIR> <!-- opt, xs:boolean --> </isSupportPIR>
  <isSupportWLSensors> <!-- opt, xs:boolean --> </isSupportWLSensors>
  <isSupportCallHelp> <!-- opt, xs:boolean --> </isSupportCallHelp>
</WLAlarmCap>
```

8.14.2 /ISAPI/WLAlarm/telecontrol

/ISAPI/WLAlarm/telecontrol		General Resource	v2.0
GET			
Description	It is used to get the properties of snapshot channels for the device.		
Query	None		
Inbound Data	None		
Success Return	telecontrol		
PUT			
Description	It is used to config the properties of snapshot channels for the device.		
Query	None		
Inbound Data	telecontrol		
Success Return	ResponseStatus		
Notes:			

telecontrol XML Block

```
<telecontrol version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <delay> <!--opt, xs:integer, seconds -->
    <armingdelay><!--opt, xs:integer, seconds --> </armingdelay>
    <disarmingdelay><!--opt, xs:integer, seconds --> </disarmingdelay>
</telecontrol>
```

```
</delay>  
</telecontrol>
```

8.14.3 /ISAPI/WLAlarm/telecontrol/study

/ISAPI/WLAlarm/telecontrol/study		General Resource	v2.0
PUT			
Description	It is used to update the properties of a particular snapshot channel.		
Query	None		
Inbound Data			
Success Return	ResponseStatus		
Notes: the device enters arming status			

8.14.4 /ISAPI/WLAlarm/telecontrol/arming

/ISAPI/WLAlarm/telecontrol/arming		General Resource	v2.0
PUT			
Description	It is used to update the properties of a particular snapshot channel.		
Query	None		
Inbound Data			
Success Return	ResponseStatus		
Notes:			
The device enters arming status			

8.14.5 /ISAPI/WLAlarm/telecontrol/disarming

/ISAPI/WLAlarm/telecontrol/disarming		General Resource	v2.0
PUT			
Description	It is used to update the properties of a particular snapshot channel.		
Query	None		
Inbound Data			
Success Return	ResponseStatus		
Notes:			

8.14.6 /ISAPI/WLAlarm/PIR

/ISAPI/WLAlarm/PIR		General Resource	v2.0
GET			
Description	It is used to get the properties of snapshot channels for the device.		
Query	None		
Inbound Data	None		
Success Return	PIRAlarm		
PUT			
Description	It is used to config the properties of snapshot channels for the device.		
Query	None		
Inbound Data	PIRAlarm		
Success Return	ResponseStatus		
Notes:			

PIRAlarm XML Block

```
<PIRAlarm version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!--req, xs:boolean --></enabled>
  <name> <!--opt, xs:string --></name>
</PIRAlarm>
```

8.14.7 /ISAPI/WLAlarm/WLSensors

/ISAPI/WLAlarm/WLSensors		General Resource	v2.0
GET			
Description	It is used to get the properties of snapshot channels for the device.		
Query	None		
Inbound Data	None		
Success Return	WLSensorlist		
PUT			
Description	It is used to config the properties of snapshot channels for the device.		
Query	None		
Inbound Data	WLSensorlist		
Success Return	ResponseStatus		
Notes:			

WLSensorlist XML Block

```
<WLSensorlist version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <WLSensor/>
</WLSensorlist>
```

8.14.8 /ISAPI/WLAlarm/WLSensors/<ID>

/ISAPI/WLAlarm/WLSensors/ID		General Resource	v2.0
GET			
Description	It is used to get the properties of snapshot channels for the device.		
Query	None		
Inbound Data	None		
Success Return	WLSensor		
PUT			
Description	It is used to config the properties of snapshot channels for the device.		
Query	None		
Inbound Data	WLSensor		
Success Return	ResponseStatus		
Notes:			

WLSensorlist XML Block

```
<WLSensor version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!--req, xs:boolean --></enabled>
  <name> <!--opt, xs:string --></name>
</WLSensor>
```

8.14.9 /ISAPI/WLAlarm/callhelp

/ISAPI/WLAlarm/callhelp		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	Callhelp		
PUT			
Description			
Query	None		
Inbound Data	Callhelp		
Success Return	ResponseStatus		
Notes:			

Callhelp XML Block

```
<Callhelp version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled> <!--req, xs:boolean --></enabled>
  <name> <!--opt, xs:string --></name>
</Callhelp>
```

</Callhelp>

8.15 /ISAPI/GIS

/ISAPI/GIS	Service v2.0
Notes: GIS configuration.	

8.15.1 /ISAPI/GIS/channels

/ISAPI/GIS/channels		General Resource	v2.0
GET			
Description	It is used to get all value that the url of AngleView, MaxViewRadius, PTZValue and CCD parameters.		
Query	None		
Inbound Data	None		
Success Return	GISList		
Notes:			

GISList XML Block

```
<GISList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <GIS/> <!-- opt -->
</GISList>
```

8.15.2 /ISAPI/GIS/channels/<ID>/centralizedControl/capabilities

/ISAPI/GIS/channels/<ID>/centralizedControl/capabilities		General Resource v2.0
GET		
Description		
Query	None	
Inbound Data	None	
Success Return	CentralizedControl	

CentralizedControl XML Block

```
<CentralizedControl version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enabled><!-- req, xs:boolean "true-开始, false-结束"--></enabled>
```



```

    <controlType opt="forcedControl,optionalControl"><!--dep, xs:string;集成控制模式"(强制布控),(非强制布控)"--></controlType>
    <expires min="" max=""><!--dep,xs:integer "60S---6*60*60S" 单位是S--></expires>
    <longitudeType opt="E,W"><!--req,xs:string "经度"--></longitudeType>
    <latitudeType opt="S,N"><!--req,xs:string "纬度"--></latitudeType>
    <Longitude><!--req,"经度"-->
        <degree><!--req,xs:interge--></degree>
        <minute><!--req,xs:interge--></minute>
        <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
    </Longitude>
    <Latitude><!--req,"纬度"-->
        <degree><!--req,xs:interge--></degree>
        <minute><!--req,xs:interge--></minute>
        <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
    </Latitude>
</CentralizedControl>

```

8.15.3 /ISAPI/GIS/channels/<ID>/centralizedControl

/ISAPI/GIS/channels/<ID>/centralizedControl		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	CentralizedControl		
PUT			
Description			
Query	None		
Inbound Data	CentralizedControl		
Success Return	ResponseStatus		
Notes:			

CentralizedControl XML Block

```

<CentralizedControl version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <enabled><!-- req, xs:boolean "true-开始, false-结束"--></enabled>
    <controlType opt="forcedControl,optionalControl"><!--dep, xs:string;集成控制模式"(强制布控),(非强制布控)"--></controlType>
    <expires min="" max=""><!--dep,xs:integer "60S---6*60*60S" 单位是S--></expires>
    <longitudeType opt="E,W"><!--req,xs:string "经度"--></longitudeType>

```

```

<latitudeType opt="S,N"><!--req,xs:string "纬度"--></latitudeType>
<Longitude><!--req,"经度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
</Longitude>
<Latitude><!--req,"纬度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后3位"--></sec>
</Latitude>
</CentralizedControl>

```

8.16 /ISAPI/GIS

8.16.1 /ISAPI/GIS/channels/<ID>/reviseGPS/capabilities

/ISAPI/GIS/channels/<ID>/reviseGPS/capabilities		General Resource	v2.0
GET			
Description	Get revise GPS capabilities		
Query	None		
Inbound Data	None		
Success Return	ReviseGPS		
Notes:			

ReviseGPS XML Block

```

<ReviseGPS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <longitudeType opt="E,W"><!--req,xs:string --></longitudeType>
    <latitudeType opt="S,N"><!--req,xs:string--></latitudeType>
    <Longitude><!--req, -->
        <degree><!--req,xs:interge--></degree>
        <minute><!--req,xs:interge--></minute>
        <sec><!--req,xs:float, --></sec>
    </Longitude>
    <Latitude><!--req, -->
        <degree><!--req,xs:interge--></degree>

```

```

        <minute><!--req,xs:interge--></minute>
        <sec><!--req,xs:float, --></sec>
    </Latitude>
</ReviseGPS>

```

8.16.2 /ISAPI/GIS/channels/<ID>/reviseGPS

/ISAPI/GIS/channels/<ID>/reviseGPS		General Resource	v2.0
GET			
Description	Get revise GPS		
Query	None		
Inbound Data	None		
Success Return	ReviseGPS		
PUT			
Description	Set revise GPS		
Query	None		
Inbound Data	ReviseGPS		
Success Return	ResponseStatus		
Notes:			

ReviseGPS XML Block

```

<ReviseGPS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <longitudeType><!--req,xs:string "E,W"--></longitudeType>
    <latitudeType><!--req,xs:string "S,N"--></latitudeType>
    <Longitude><!--req, -->
        <degree><!--req,xs:interge--></degree>
        <minute><!--req,xs:interge--></minute>
        <sec><!--req,xs:float, --></sec>
    </Longitude>
    <Latitude><!--req, -->
        <degree><!--req,xs:interge--></degree>
        <minute><!--req,xs:interge--></minute>
        <sec><!--req,xs:float, --></sec>
    </Latitude>
</ReviseGPS>

```

8.16.3 /ISAPI/GIS/channels/<ID>

/ISAPI/GIS/channels/ID		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	GIS		
PUT			
Description			
Query	None		
Inbound Data	GISList		
Success Return	ResponseStatus		
Notes:			

GIS XML Block

```
<GIS version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string --> </id>
  <AngleView>
    <horizontalValue/> <!-- req, xs:float -->
    <verticalValue/> <!-- req, xs:float -->
    <visibleRadius/> <!-- req, xs:float -->
  </AngleView>
  <MaxViewRadius>
    <mVisibleRadius/> <!-- req, xs:integer -->
  </MaxViewRadius>
  <AbsoluteHigh>
    <elevation> <!-- opt, xs:integer, -900..2700 --> </elevation>
    <azimuth> <!-- opt, xs:integer, 0..3600 --> </azimuth>
    <absoluteZoom> <!-- opt, xs:integer, 0.. 1000 --> </absoluteZoom>
  </AbsoluteHigh>
  <Sensor>
    <SensorType> <!-- opt, xs:string, " CCD,CMOS" --> </SensorType>
    <hor/> <!-- req, xs:float -->
    <ver/> <!-- req, xs:float -->
    <fold/> <!-- req, xs:float -->
  </Sensor>
  <longitudeType><!-- req,xs:string "经度" "E,W"--></longitudeType>
  <latitudeType><!-- req,xs:string "纬度" "S,N"--></latitudeType>
```

```

<Longitude><!--req,"经度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后6位"--></sec>
</Longitude>
<Latitude><!--req,"纬度"-->
    <degree><!--req,xs:interge--></degree>
    <minute><!--req,xs:interge--></minute>
    <sec><!--req,xs:float,"精确到小数点后6位"--></sec>
</Latitude>
<azimuth><!--req,xs: float "方位角"--></azimuth>
</GIS>

```

8.17 /ISAPI/Traffic

8.17.1 /ISAPI/Traffic/Capabilities

/ISAPI/Traffic/capabilities		General Resource	v2.0
GET			
Description	It is used to get device capability.		
Query	None		
Inbound Data	None		
Success Return	<TrafficCap>		
Notes:			

TrafficCap XML Block

```

<TrafficCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <plateCap><!-- opt --, >
        <supCustomStateOrProvince><!--opt, xs:boolean , --></supCustomStateOrProvince>
        <supCountry><!--opt ,xs:integer 1,2,3...-->
        </supCountry>
        <isSupportPlateList><!--opt --,xs:boolean></isSupportPlateList>
        <plateListNum><!--opt --, integer, ></plateListNum>
        <plateMaskLen><!--opt --, integer, ></plateMaskLen>
    </plateCap>
</TrafficCap>

```

8.17.2 /ISAPI/Traffic/plateList

/ISAPI/Traffic/plateList		General Resource v2.0		
GET				
Description	Export license plate of black and white black list			
Query	None			
Inbound Data	None			
Success Return	Opaque Data(.xls)			
PUT				
Description	Import license plate of black and white black list			
Query	None			
Inbound Data	Opaque Data(.xls)			
Success Return	<ImportplateError >			
Error Code	Status	statusCode	subStatusCode	description
		2	noMemory	noMemory
		2	importFail	importFail
		6	importErrorData	importErrorData
		2	configOperating	device importing or exporting
Notes:				
Configuration file is device-dependant – it may be binary or any other format.				

ImportplateError XML Block

```
<ImportResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">result
  <existError> <!-- req, xs:boolean --> </existError>
  <errorCode> <!-- opt, xs:string, importErrorData, importFail, configOperating, overLimit -->
  </errorCode>
  <PlateErrorList/> <!-- opt -->
</ImportResult>
```

```
<PlateErrorList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <plateError> <!-- opt -->
    <id> <!-- req, xs:string, --> </id>
    <errorRowNo> <!-- req, xs:integer --> </errorRowNo>error number
    <errorType> <!-- req, xs:string, invalidGroup() --> </errorType>
  </plateError>
</PlateErrorList>
```

8.17.3 /ISAPI/ITC/capability

/ISAPI/ITC/capability		General Resource	v2.0
GET			
Description	GET ip traffic Capabilities		
Query	None		
Inbound Data	None		
Success Return	ITCCap		

ITCCap XML Block

```
<ITCCap version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <isSupportITC> <!-- dep, xs: boolean> </isSupportITC>
  <isSupportVehicleDetection> <!-- dep, xs: boolean> <isSupportVehicleDetection>
  <isSupportlicencePlateAuditData> <!-- opt, xs: boolean> <isSupportlicencePlateAuditData>
  <isSupportSearchLPListAudit><!--opt, xs: boolean></isSupportSearchLPListAudit>
</ITCCap>
```

8.17.4 /ISAPI/Traffic/channels/<ID>/CurVehicleDetectMode

/ISAPI/Traffic/channels/<ID>/CurVehicleDetectMode		General Resource	v2.0
GET			
Description	It is used to get the current vehicle detection type.		
Query	None		
Inbound Data	None		
Success Return	CurVehicleDetectMode		
PUT			
Description	It is used to update the current vehicle detection type		
Query	None		
Inbound Data	CurVehicleDetectMode		
Success Return	ResponseStatus		
Notes:			

VehicleDetectCfg XML Block

```
<CurVehicleDetectMode version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <CurMode><!--req, xs:string,"hvtVehicleDetection","vehicleDetection"--></CurMode>
</CurVehicleDetectMode>
```

8.17.5 /ISAPI/Traffic/channels/<ID>/vehicleCalibration

/ISAPI/Traffic/channels/<ID>/vehicleCalibration		General Resource	v2.0
GET			
Description	It is used to get the Vehicle Calibration.		
Query	None		
Inbound Data	None		
Success Return	Calibration Region		
Notes:			
/ISAPI/Traffic/channels/<ID>/vehicleCalibration/capabilities			

Calibration Region XML Block

```
<Calibration version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <CalibrationRegionList size="1">
    <CalibrationRegion>
      <id> <!-- ro, req, xs:string --> </id>
      <RegionCoordinatesList size="4">
        <RegionCoordinates> <!-- ro, req, -->
          <positionX> <!-- ro, req, xs:integer;coordinate --></positionX>
          <positionY> <!-- ro, req, xs:integer;coordinate --></positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </CalibrationRegion>
  </CalibrationRegionList>
</Calibration>
```

8.17.6 VehicleDetection

8.17.6.1 /ISAPI/Traffic/channels/<ID>/vehicleDetect

/ISAPI/Traffic/channels/<ID>/vehicleDetect		General Resource	v2.0
GET			
Description	It is used to get the configuration of vehicle detection .		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectCfg		
PUT			
Description	It is used to update the configuration of vehicle detection.		
Query	None		

Inbound Data	VehicleDetectCfg
Success Return	ResponseStatus
Notes: The number of PlateRecogRegion should be same with the number of lane.	

VehicleDetectCfg XML Block

```

<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled>          <!-- req, xs:boolean -->          </enabled>
  <stateOrProvinceName> <!-- opt, xs:string --> </stateOrProvinceName>
  <VehicleDetectSceneList>
    <VehicleDetectScene/>
  </VehicleDetectSceneList>
  <RodeType><!--opt, -->
    <type><!--opt,xs:string,"entrance,city,custom"--> </type>
    <Custom><!--dep, custom -->
      <delayTime><!--opt,xs:interger,[0,15000]--></delayTime>
      <delayTimeUnit><!--opt,xs:string,"ms"></delayTimeUnit>
    </Custom>
  </RodeType>
</VehicleDetectCfg>

```

8.17.6.2 /ISAPI/Traffic/channels/<ID>/vehicleDetects/<SID>

/ISAPI/Traffic/channels/<ID>/vehicleDetects/<SID>		General Resource	v2.0
GET			
Description	It is used to get the configuration of vehicle detection.		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectScene		
PUT			
Description	It is used to update the configuration of vehicle detection.		
Query	None		
Inbound Data	VehicleDetectScene		
Success Return	ResponseStatus		
Notes:			
The number of PlateRecogRegion should be same with the number of lane.			

VehicleDetectScene XML Block

```

<VehicleDetectScene xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:interger -->          </id>
  <sceneName> <!-- opt, xs:string --> </sceneName>

```

```

<enabled>                <!-- req, xs:boolean -->                </enabled>
<PlateRecogParam>
  <PlateRecogRegionList>
    <PlateRecogRegion>
      <id> <!-- req, xs:string--> </id>
      <RegionCoordinatesList>
        <RegionCoordinates> <!-- req, -->
          <positionX>        <!-- req, xs:integer;coordinate -->    </positionX>
          <positionY>        <!-- req, xs:integer;coordinate -->    </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </PlateRecogRegion>
  </PlateRecogRegionList>
</PlateRecogParam>
<LaneConfig>
  <LaneList>
    <Lane>
      <laneId>    <!-- req xs:integer--> </laneId>
      <RegionCoordinatesList> <!-- req -->
        <RegionCoordinates>    <!-- minoccurs=2,maxoccurs=2-->
          <positionX> <!-- req, xs:integer> </positionX>
          <positionY> <!-- req, xs:integer> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </Lane>
  </LaneList>
</LaneConfig>
</VehicleDetectScene>

```

8.17.6.3 /ISAPI/Traffic/channels/<ID>/vehicleDetect/capabilities

/ISAPI/Traffic/channels/<ID>/vehicleDetect/capabilities		General Resource	v2.0
GET			
Description	It is used to get the configuration capabilities of vehicle detection .		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectCfg		
Notes:			

VehicleDetectCfg XML Block

```
<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <stateOrProvinceName opt=""> <!-- opt, xs:string --> </stateOrProvinceName>
  <VehicleDetectSceneList size="">
    <VehicleDetectScene>
      <id> <!-- req, xs:integer --> </id>
      <sceneName min="" max=""> <!-- opt, xs:string --> </sceneName>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <PlateRecogParam>
        <PlateRecogRegionList size="">
          <PlateRecogRegion>
            <id> <!-- req, xs:string --> </id>
            <RegionCoordinatesList size="">
              <RegionCoordinates> <!-- req, -->
                <positionX> <!-- req, xs:integer;coordinate -->
</positionX>
                <positionY> <!-- req, xs:integer;coordinate -->
</positionY>
              </RegionCoordinates>
            <RegionCoordinatesList>
              </PlateRecogRegion>
            <PlateRecogRegionList>
          <PlateRecogParam>
          <LaneConfig>
            <LaneList size="">
              <Lane>
                <laneId min="" max=""> <!-- req xs:integer --> </laneId>
                <RegionCoordinatesList size=""> <!-- req -->
                  <RegionCoordinates> <!-- minoccurs=2,maxoccurs=2 -->
                    <positionX> <!-- req, xs:integer --> </positionX>
                    <positionY> <!-- req, xs:integer --> </positionY>
                  </RegionCoordinates>
                </RegionCoordinatesList>
              </Lane>
            </LaneList>
          </LaneConfig>
        </VehicleDetectScene>
      </VehicleDetectSceneList>
      <RodeType><!--opt, -->
        <type opt="entrance,city,custom"><!--opt,xs:string,""--> </type>
        <Custom><!--dep, custom -->
          <delayTime min="" max=""><!--opt,xs:integer,[0,15000]--></delayTime>
          <delayTimeUnit opt="ms"><!--opt,xs:string,"ms"></delayTimeUnit>
```

```
</Custom>
</RodeType>
</VehicleDetectCfg>
```

8.17.6.4 /ISAPI/Traffic/channels/<ID>/licensePlateAuditData

/ISAPI/Traffic/channels/<ID>/licensePlateAuditData		General Resource v2.0	
GET			
Description	Get device's licencePlateAudit data.		
Query	None		
Inbound Data	None		
Success Return	Opaque Data		
PUT			
Description	Update device's licencePlateAudit data.		
Query	None		
Inbound Data	Opaque Data		
Success Return	<ResponseStatus>		
Error Status Code	statusCode	subStatusCode	description
	2	upgrading	Device upgrading
	3	badFlash	Flash error
	6	badVersion	Version mismatch
	6	badDevType	Device type mismatch
	6	badLanguage	Language mismatch
Notes:			

8.17.6.5 /ISAPI/Traffic/channels/<ID>/searchLPListAudit

/ISAPI/Traffic/channels/<ID>/searchLPListAudit		General Resource	v2.0
POST			
Description	Get Vehicle Audit List Info		
Query	None		
Inbound Data	<LPListAuditSearchDescription>		
Success Return	<LPListAuditSearchResult>		
Notes:			
channels/<ID>: video Channel			
LP:License Plate			

LPListAuditSearchDescription XML Block

```
<LPListAuditSearchDescription version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!--req,xs:string; --></searchID>
  <searchResultPosition><!-- req, xs: integer--></searchResultPosition>
  <maxResults><!-- req, xs: integer --></maxResults>
</LPListAuditSearchDescription>
```

LPListAuditSearchResult XML Block

```
<LPListAuditSearchResult version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<searchID><!--req,xs:string; --></searchID>
<responseStatus>true</responseStatus>
<responseStatusStr>OK</responseStatusStr>
<numOfMatches><!-- req, xs: integer --></numOfMatches>
<totalMatches><!-- req, xs: integer --></totalMatches>
<LicensePlateInfoList>
  <LicensePlateInfo>
    <id><!-- req, xs:string --></id>
    <LicensePlate><!--opt,xs:string,--></LicensePlate>
    <type><!--opt,xs:string,"blackList,whitelist,allVehicleList,otherVehicleList"--></type>
    <createTime><!--opt,xs:time, ISO8601 time --></createTime>
    <direction><!--opt,xs:string, "forward,reverse,unknown" --></direction>
    <laneNo><!--opt,xs:integer, "1" --></laneNo>
  </LicensePlateInfo>
</LicensePlateInfoList>
</LPListAuditSearchResult>
```

8.17.6.6 /ISAPI/Traffic/channels/<ID>/picParam

/ISAPI/Traffic/channels/<ID>/picParam		General Resource	v2.0
GET			
Description	It is used to get the parameters of picture to be capture capabilities		
Query	None		
Inbound Data	None		
Success Return	PicParam		
PUT			
Description	It is used to set the parameters of picture to be capture capabilities		

Query	None
Inbound Data	PicParam
Success Return	ResponseStatus
Notes: <picQulity> is requested when <mode> is set to “qulity”,on the contrary, <picSize> is requested when <mode> is set to “size”. <item> values are: positionNo,positionInfo, cameraNo, captureTime, plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo	

PicParam XML Block

```

<PicParam version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PictureCfg>
    <mode> <!--req, xs:string,"quality,size"--> </mode>
    <pictureQuality> <!--dep, xs:integer,1-100 --> </pictureQuality>
    <pictureSize> <!--dep, xs:integer,unit:kb --> </pictureSize>
  </PictureCfg>
  <Overlap>
    <enabled> <!-- req, xs: boolean> </enabled>
    <OverlapItem opt=""><!--req, xs:string,
"positionNo,positionInfo,cameraNo,captureTime,plateNo,vehicleColor,sceneName,
carType,vehicleLogo,sceneNo"--></OverlapItem>
    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
  </Overlap>
</PicParam>

```

8.17.6.7 /ISAPI/Traffic/channels/<ID>/picParam/capabilities

/ISAPI/Traffic/channels/<ID>/picParam/capabilities		General Resource	v2.0
GET			
Description	It is used to get the parameters of picture to be capture capabilities		
Query	None		
Inbound Data	None		
Success Return	PicParam		
Notes:			
<picQulity> is requested when <mode> is set to “qulity”,on the contrary, <picSize> is requested when <mode> is set to “size”.			
<item> values are: positionNo,positionInfo, cameraNo, captureTime, plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo			

PicParam XML Block

```
<PicParam version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PictureCfg>
    <mode opt="quality,size"> <!--req, xs:string,""--> </mode>
    <pictureQuality min="1" max="100"> <!--dep, xs:integer,1-100 --> </pictureQuality>
    <pictureSize> <!--dep, xs:integer,unit:kb --> </pictureSize>
  </PictureCfg>
  <Overlap>
    <enabled> <!-- req, xs: boolean> </enabled>
    <OverlapItem
opt="positionNo,positionInfo,cameraNo,captureTime,plateNo,vehicleColor,sceneName,
carType,vehicleLogo,sceneNo"><!--req, xs:string, "
"--></OverlapItem>
    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
  </Overlap>
</PicParam>
```

8.17.6.8 /ISAPI/Traffic/channels/<ID>/eventTrigger

/ISAPI/Traffic/channels/<ID>/eventTrigger		General Resource	v2.0
GET			
Description	Get Traffic Event Trigger		
Query	None		
Inbound Data	None		
Success Return	TrafficEventTrigger		

TrafficEventTrigger XML Block

```
<TrafficEventTrigger version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <EventType><!--req,-->
    <allVehicleList><!--opt,xs:boolean--></allVehicleList>
  </EventType>
</TrafficEventTrigger>
```

8.17.6.9 /ISAPI/System/Network/ftp/uploadInfo

/ISAPI/System/Network/ftp/uploadInfo		General Resource	v2.0
GET			
Description	Get ftp Upload info Param		

Query	None
Inbound Data	None
Success Return	FtpUpload
PUT	
Description	Set ftp Upload info Param
Query	None
Inbound Data	FtpUpload
Success Return	ResponseStatus
Notes:	
<item> values are: capture_time,plate_No,alarm_type,camera_name	

FtpUpload XML Block

```
<FtpUpload version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <vehiclePicName>
    <mode><!--req, xs:string,"default,custom"--></mode>
    <NameRuleType><!--dep," customType"-->
      <RuleTypeItemList >
        <RuleTypeItem>
          <id><!-- req, xs: interger --></id>
          <item><!-- req, xs: string --></item>
          <cameraName><!-- dep, xs: string "dep camera_name
node"--></cameraName>
        </RuleTypeItem>
      </RuleTypeItemList>
    </NameRuleType>
  </vehiclePicName>
</FtpUpload>
```

8.17.6.10/ISAPI/Event/schedules/vehicledetects

/ISAPI/Event/schedules/vehicledetects		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	VehicleDetectScheduleList		
Success Return	ResponseStatus		

Notes:**VehicleDetectScheduleList XML Block**

```
<VehicleDetectScheduleList xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</VehicleDetectScheduleList>
```

/ISAPI/Event/schedules/vehicledetects/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID>          <!-- ro, dep, xs:string; id -->          </inputIOPortID>
  <outputIOPortID>         <!-- ro, dep, xs:string; id -->         </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>          <!-- req -->
        <beginTime>        <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>          <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
      <CustomExtension>
        <vehicleDetectSceneID><!-- req, xs:interger --></vehicleDetectSceneID>
      </CustomExtension>
    </TimeBlock>
  </TimeBlockList>
</Schedule>
```

8.17.6.11/ISAPI/System/Network/ftp/capabilities

Pay attention to the key of XML

New XML nodes of URL (/ISAPI/System/Network/ftp/capabilities)

<FtpUpload>

8.17.7 HVTVehicleDetection

8.17.7.1 8.17.7.1/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects

/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects		General Resource	v2.0
GET			
Description	It is used to get the configuration of hvt vehicle detection .		
Query	None		
Inbound Data	None		
Success Return	HVTVehicleDetectCfg		
PUT			
Description	It is used to update the configuration of hvt vehicle detection.		
Query	None		
Inbound Data	HVTVehicleDetectCfg		
Success Return	ResponseStatus		
Notes:			
The number of PlateRecogRegion should be same with the number of lane.			

VehicleDetectCfg XML Block

```
<HVTVehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled>                <!-- req, xs:boolean -->          </enabled>
  <stateOrProvince><!--   opt, xs:interger --> </stateOrProvince>
  <HVTVehicleDetectSceneList>
    <HVTVehicleDetectScene/>
  </HVTVehicleDetectSceneList>
</HVTVehicleDetectCfg>
```

8.17.7.2 /ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/<SID>

D>

/ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/<SID>		General Resource	v2.0
GET			
Description	It is used to get the configuration of hvt vehicle detection.		
Query	None		
Inbound Data	None		
Success Return	HVTVehicleDetectScene		
PUT			
Description	It is used to update the configuration of hvt vehicle detection.		
Query	None		
Inbound Data	HVTVehicleDetectScene		
Success Return	ResponseStatus		
Notes:			
The number of PlateRecogRegion should be same with the number of lane.			

VehicleDetectCfg XML Block

```
<HVTVehicleDetectScene xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:integer -->      </id>
  <sceneName> <!-- opt, xs:string --> </sceneName>
  <enabled>      <!-- req, xs:boolean -->      </enabled>
  <PlateRecogParam>
    <PlateRecogRegionList>
      <PlateRecogRegion>
        <id> <!-- req, xs:string--> </id>
        <RegionCoordinatesList>
          <RegionCoordinates> <!-- req, -->
            <positionX>      <!-- req, xs:integer;coordinate -->    </positionX>
            <positionY>      <!-- req, xs:integer;coordinate -->    </positionY>
          </RegionCoordinates>
        </RegionCoordinatesList>
      </PlateRecogRegion>
    </PlateRecogRegionList>
  </PlateRecogParam>
  <LaneConfig>
    <LaneList>
      <Lane>
        <laneId>    <!-- req xs:integer--> </laneId>
```



```

"positionNo,positionInfo,cameraNo,captureTime,plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo"--></OverlapItem>
    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
</Overlap>
</PicParam>

```

8.17.7.5 /ISAPI/Traffic/channels/<ID>/HVTVehicleDetects/camera

Info

/ISAPI/Traffic/channels/<ID>/HVTVehicleDectects/camera		General Resource	v2.0
Info			
GET			
Description	It is used to get the identify parameters of camera		
Query	None		
Inbound Data	None		
Success Return	CameraInfo		
PUT			
Description	It is used to set the identify parameters of camera		
Query	None		
Inbound Data	CameraInfo		
Success Return	ResponseStatus		
Notes:			

CameraInfo XML Block

```

<CameraInfo version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <positionNum> <!-- opt, xs: string,0-48 --> </positionNum>
    <positionInfo> <!-- opt, xs: string,0-48 --> </positionInfo>
    <cameraNum> <!-- opt, xs: string,0-48 --> </cameraNum>
</CameraInfo>

```

8.17.8 EventTrigger

Pay attention to the key of XML

New XML nodes of URL (/ISAPI/Event/triggersCap)

<BlackListTriggerCap>

<WhiteListTriggerCap>

<AllVehicleListTriggerCap>

<OtherVehicleListTriggerCap>

New Info with XML node of URL (/ISAPI/Event/triggers/ID)

vehicledetection,HVTVehicleDetection,blackList,whitelist ,allVehicleList,otherVehicleList

8.18 /ISAPI/Intelligent

8.18.1 /ISAPI/Intelligent/channels/ID/capabilities

/ISAPI/Intelligent/channels/ID/capabilities		General Resource	v2.0
GET			
Description	Get supported intelligent types by device channel		
Query	None		
Inbound Data	None		
Success Return	IntelliCap		

IntelliCap XML Block

```
<IntelliCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isFaceSupport> <!--req, xs:string "true,false"--> </isFaceSupport>
  <isBehaviorSupport> <!--req, xs:string "true,false"--> </isBehaviorSupport>
  <isLineDetectionSupport> <!--req, xs:string "true,false"--> </isLineDetectionSupport>
  <isFieldDetectionSupport> <!--req, xs:string "true,false"--> </isFieldDetectionSupport>
  <isRegionEntranceSupport> <!--req, xs:string "true,false"--> </isRegionEntranceSupport>
  <isRegionExitingSupport> <!--req, xs:string "true,false"--> </isRegionExitingSupport>
  <isLoiteringSupport> <!--req, xs:string "true,false"--> </isLoiteringSupport>
  <isGroupSupport> <!--req, xs:string "true,false"--> </isGroupSupport>
  <isRapidMoveSupport> <!--req, xs:string "true,false"--> </isRapidMoveSupport>
  <isParkingSupport> <!--req, xs:string "true,false"--> </isParkingSupport>
  <isUnattendedBaggageSupport> <!--req, xs:string "true,false"-->
  </isUnattendedBaggageSupport>
  <isAttendedBaggageSupport> <!--req, xs:string "true,false"--> </isAttendedBaggageSupport>
  <isTeacherSupport> <!--req, xs:string "true,false"--> </isTeacherSupport>
  <isStudentSupport> <!--req, xs:string "true,false"--> </isStudentSupport>
  <isFaceCaptureStatisticsSupport> <!--req, xs:string "true,false"-->
</isFaceCaptureStatisticsSupport>
</IntelliCap>
```

8.18.2 /ISAPI/Intelligent/channels/ID/intelliResource

/ISAPI/Intelligent/channels/ID/intelliResource		General Resource	v2.0
GET			
Description	Get basic configurations of intelligent resources by channel		
Query	None		
Inbound Data	None		
Success Return	IntelliResource		
PUT			
Description	Set basic configurations of intelligent resources by channel		
Query	None		
Inbound Data	IntelliResource		
Success Return	ResponseStatus		
Notes:			

IntelliResource XML Block

```
<IntelliResource>
  <BehaviorInfo> <!--dep-->
    <IntelliImage>
      <isUpload> <!--req, xs:string "true,false" --> <!--whether to upload pictures
--></isUpload>
      <imgQuality> <!--req, xs:string "best,good,general" --> <!--image
quality--></imgQuality>
      <imgResolutionWidth> <!--req, xs:integer --> <!--image resolution-->
</imgResolutionWidth>
<imgResolutionHeight> <!--req, xs:integer --> <!--image resolution --> </imgResolutionHeight>
<isImgTargetOverlap> <!--req, xs:string "true,false" --> <!--Alarm capture overlay object
information--> </isImgTargetOverlap>
<isImgRuleOverlap> <!--req, xs:string "true,false" --> <!--Alarm capture overlay rules
information--> </isImgRuleOverlap>
    </IntelliImage>
  <VideoOverlapInfo>
    <isOverlapIntelli> <!--req, xs:string "true,false" -->
</isOverlapIntelli>
    <isOverlapTarget> <!--req, xs:string "true,false" --> </isOverlapTarget>
<isOverlapRule> <!--req, xs:string "true,false" --> </isOverlapRule>
  </VideoOverlapInfo>
  <IntelliAnalysisEnable> <!--req, xs:string "true,false" --> </IntelliAnalysisEnable> <!--Enable
intelligent analysis-->
```



```

</BehaviorInfo>
<FaceCaptureInfo> <!--dep-->
    <imgQuality> <!--req, xs:string"best,good,general" --> <!--Image quality--></imgQuality>
<Professional face parameters>
    <isImgTargetOverlap> <!--req, xs:string "true,false" --> <!-- ipc Alarm capture overlay
object information --> </isImgTargetOverlap>
<VideoOverlapInfo>
    <isOverlapIntelli><!--req, xs:string "true,false"--> </isOverlapIntelli>
    <isOverlapTarget> <!--opt xs:string "true,false"--> </isOverlapTarget>
<isOverlapRule> <!--opt, xs:string "true,false" --> </isOverlapRule>
</VideoOverlapInfo>
<backgroundUpload> <!-- opt, xs: boolean --> </backgroundUpload>

</FaceCaptureInfo>
<AlgVersionInfo>
    <AlgItem>
        <id> <!--ro, xs:string --> </id>
        <algName> <!--ro, xs:string --> </algName>
    </AlgItem>
</AlgVersionInfo>
</IntelliResource>

```

8.18.3 /ISAPI/Intelligent/channels/ID/AlgParam

/ISAPI/Intelligent/channels/ID/AlgParam		General Resource	v2.0
GET			
Description	Get algorithm lib parameters by channel		
Query	None		
Inbound Data	None		
Success Return	AlgParam		
PUT			
Description	Set algorithm lib parameters by channel		
Query	None		
Inbound Data	AlgParam		
Success Return	ResponseStatus		
Notes:			

AlgParam XML Block

```

<AlgParam version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <BehaviorParam>
    <detectionSensitiveLevel> <!--req, xs: integer --> </detectionSensitiveLevel> <!--object
detection sensitivity: the values of ipc and speed dome are different, and can be got by
abilities-->
    <bgChangeSpeed> <!--req, xs: integer --> </bgChangeSpeed> <!--background changing
speed: the values of ipc and speed dome are different, and can be got by abilities -- >
    <minTargetSize> <!--opt, xs: integer --> </minTargetSize> <!--Target minimum size: only
for speed dome, 0-4(slow--fast), default value is 1 -- >
    <suppressionLevel> <!--opt, xs: integer --> </suppressionLevel> <!--suppression: only for
speed dome, 0-4(slow--fast), default value is 1-- >
    <lightSuppressionEnable> <!--req, xs: string "true, false"--> </lightSuppressionEnable>
<!--only for speed dome, whether to enablelight variation suppression-- >
    <antiSheildEnable> <!--req, xs: string "true,false" --> </antiSheildEnable> <!--only for
speed dome, whether to enable antisheild function-->
    <traceTime> <!--req, xs: integer --> </traceTime> <!--only for speed dome, the time when
tracking object stop: 2S---600S, default value is 8S -- >
    <outputMode> <!--opt - xs:integer --> </outputMode> <!--ipc 0-Target center(by
default),1-bottom center, 2-top center-->
    <singleAlarmEnable> <!--opt xs:string"true,false"--> </singleAlarmEnable> <!--ipc whether to
enable single alarm-->
    <leavesSuppressionEnable> <!--opt xs:string"true,false"--> </leavesSuppressionEnable> <!--ipc
-->
    <SizeFilter><!-- Global size filter ipc-->
      <enabled> <!--req, xs:string "true,false" --> </enabled>
      <mode> <!--req, xs:string,"pixels" --> </mode><!--Filter type: pixel size-->
    <MaxObjectSize><!--Max object size:float -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
      <width> <!-- req, xs:integer --> </width>
      <height> <!-- req, xs:integer --> </height>
    </MaxObjectSize>
    <MinObjectSize><!--Min object size:float -->
      <positionX> <!-- req, xs:integer;coordinate --> </positionX>
      <positionY> <!-- req, xs:integer;coordinate --> </positionY>
      <width> <!-- req, xs: integer --> </width>
      <height> <!-- req, xs: integer --> </height>
    </MinObjectSize>
  </SizeFilter>
  <isStop> <!--dep, xs: string"true,false"--> </isStop> <!--Stop tracking after detecting face,

```

```

default value is false(behavior analysis+face detection, it's effective when the two exist
simultaneously) -->
<gradeThreshold> <!--dep, xs: integer --> </gradeThreshold> <!--Threshold of end tracking:1-15,
default value is 6(behavior analysis+face detection, it's effective when the two exist
simultaneously)-->
<physiologyIdentifiTrigger> <!--opt, xs:boolean --> </physiologyIdentifiTrigger>
<horizontalTrackLimit> <!--opt, xs: integer --> </horizontalTrackLimit>
</BehaviorParam>
<FaceParam>
<enabled> <!--req, xs:string "true, false"--> </enabled> <!--enable face capture, not enabled by
default-->
<imgInterval> <!--req, xs:integer --> </imgInterval> <!--Capture interval: (1—255frame), default
value is 1 -->
<imgNum> <!--req, xs:integer --> </imgNum> <!-- Capture number of single object:1-10, default
value is 1-->
<sensitiveLevel> <!--req, xs:integer --> </sensitiveLevel> <!--Object detection sensitivity:1-5,
default value is 3 -->
<threshold> <!--req, xs:integer 0-20 --> </threshold> <!--Capture threshold: 0—20, default value
is 4 -->
<targetSpeed> <!--req, xs:integer 0-3 --> </targetSpeed> <!--, 1-5, default value is 3-->
<brightRef> <!--opt, xs:integer 0-100 --> </brightRef> <!--ipc bright reference,1-100, default is
50-->
<exposureEnabled> <!--opt, xs:string "true,false"--> </exposureEnabled> <!--ipc enable face
exposure-->
<expDurationTime> <!--opt, xs:integer 1-3600 --> </expDurationTime> <!--ipc the shortest
duration time of face exposure,1-3600s, 60s by default>
<ROIEnable> <!--opt, xs:string "true,false"--> </ROIEnable> <!--ipc whether to enable face ROI>
</FaceParam>
</AlgParam>

```

8.18.4 /ISAPI/Intelligent/channels/ID/AlgParam/ capabilities

ISAPI protocol interface definition

/ISAPI/Intelligent/channels/ID/AlgParam/ capabilities		General Resource	v2.0
GET			
Description	Get algorithm lib parameters by channel		
Query	None		

Inbound Data	None
Success Return	AlgParamCap

AlgParamCap XML Block

```
<AlgParamCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <detectionSensitiveLevel> <!--req, xs: string --> </detectionSensitiveLevel>
  <bgChangeSpeed> <!--req, xs: string --> </bgChangeSpeed>
  <physiologyIdentifiTrigger> <!--opt, xs:boolean --> </physiologyIdentifiTrigger>
  <horizontalTrackLimit min="1" max="5"> <!--opt, xs: integer --></horizontalTrackLimit>
</AlgParamCap>
```

8.18.5 /ISAPI/Intelligent/channels/ID/faceCaptureStatistics /search

/ISAPI/Intelligent/channels/ID/faceCaptureStatistics/search		General Resource	v2.0
h			
GET			
Description	人脸抓拍人员统计查询		
Query	None		
Inbound Data	FaceCaptureStatisticsDescription		
Success Return	FaceCaptureStatisticsResult		
POST			
Description	人脸抓拍人员统计查询		
Query	None		
Inbound Data	FaceCaptureStatisticsDescription		
Success Return	FaceCaptureStatisticsResult		
Notes:			
Capabilities URL			
/ISAPI/Intelligent/channels/ID/faceCaptureStatistics/search/capabilities			

FaceCaptureStatisticsDescription XML Block

```
<FaceCaptureStatisticsDescription version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <reportType>
    <!-- req, xs:string, "daily,weekly,monthly,yearly"-->
  </reportType>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:datetime --></startTime>
```

```

        <endTime><!-- req, xs:datetime --></endTime>
    <timeSpan>
</timeSpanList>
    <statType><!--req, xs:string, "age,gender,numberOfPeople,all"--></statType>
</FaceCaptureStatisticsDescription>

```

FaceCaptureStatisticsResult XML Block

```

<FaceCaptureStatisticsResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <responseStatus><!-- req, xs:boolean--></responseStatus>
    <responseStatusStrg><!-- req, xs:string--></responseStatusStrg>
    <numOfMatches><!-- req, xs:integer --></numOfMatches>
    <matchList> <!-- opt -->
        <matchElement> <!-- opt -->
            <id> <!-- req, xs:integer; id --> </id>
            <timeSpan> <!-- req -->
                <startTime><!-- req, xs:datetime --></startTime>
                <endTime><!-- req, xs:datetime --></endTime>
            </timeSpan>
            <Age><!--opt, -->
                <teenage> <!-- req, xs:integer --> </teenage>
                <youth> <!-- req, xs:integer --> </youth>
                <midlife> <!-- req, xs:integer --> </midlife>
                <elderly> <!-- req, xs:integer --> </elderly>
            </Age>
            <Gender><!--opt, -->
                <male> <!-- req, xs:integer --> </male>
                <female> <!-- req, xs:integer --> </female>
            </Gender>
            <NumberOfPeople><!--opt, xs:integer --></NumberOfPeople>
        </matchElement>
    </matchList>
</FaceCaptureStatisticsResult>

```

FaceCaptureStatisticsDescription Capabilities XML Block

```

<FaceCaptureStatisticsDescription version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
    <reportType opt="daily,weekly,monthly,yearly">
        <!-- req, xs:string, -->
    </reportType>
    <timeSpanList>
        <timeSpan>
            <startTime><!-- req, xs:datetime --></startTime>
            <endTime><!-- req, xs:datetime --></endTime>

```

```

    <timeSpan>
  </timeSpanList>
    <statType opt="age,gender,numberOfPeople,all"><!--req, xs:string,--></statType>
</FaceCaptureStatisticsDescription>

```

8.18.6 /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/rule/ID

/ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/rule/ID		General Resource	v2.0
GET			
Description	Get scene rules by channel		
Query	None		
Inbound Data	None		
Success Return	RuleInfo		
PUT			
Description	Set scene rules by channel		
Query	None		
Inbound Data	RuleInfo		
Success Return	ResponseStatus		
DELETE			
Description	Delete scene rules		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

RuleInfo XML Block

```

<RuleInfo>
  <ruleId> <!--req, xs:string --> </ruleId>
  <ruleName> <!--req, xs:string --> </ruleName>
  <enabled> <!--req, xs:string "true,false" --> </enabled>
  <eventType><!--req,xs:string "none,lineDetection,fieldDetection,regionEntrance,regionExiting,
loitering,group,rapidMove,parking,unattendedBaggage, attendedBaggage, teacher,student"-->
  </eventType>
  <ruleType> <!--req, xs:string "region, line"--> </ruleType>
  <LineDetectionParam/> <dep>
  <FieldDetectionParam/> <dep>
  <RegionEntranceParam/> <dep>

```

```

<RegionExitingParam/> <dep>
<LoiteringParam/> <dep>
<GroupParam/> <dep>
<RapidMoveParam/> <dep>
<ParkingParam/> <dep>
<UnattendedBaggageParam/> <!--dep-->
<AttendedBaggageParam/> <!--dep-->
<TeacherParam/> <!--dep-->
<StudentParam/> <!--dep-->
<SizeFilter><!--Dimension filter -->
  <enabled> <!--req, xs:string "true,false" --> </enabled>
  <mode> <!--req, xs:string,"pixels, actualSize" --> </mode><!--filter type: pixels-->
  <MaxObjectSize><!--Max size:float -->
    <positionX>      <!-- req, xs:integer;coordinate -->    </positionX>
    <positionY>      <!-- req, xs:integer;coordinate -->    </positionY>
    <width> <!-- req, xs:integer --> </width>
    <height> <!-- req, xs:integer --> </height>
  </MaxObjectSize>
  <MinObjectSize><!--Min size:float -->
    <positionX>      <!-- req, xs:integer;coordinate -->    </positionX>
    <positionY>      <!-- req, xs:integer;coordinate -->    </positionY>
    <width> <!-- req, xs: integer --> </width>
    <height> <!-- req, xs: integer --> </height>
  </MinObjectSize>
</SizeFilter>
<RuleRegion><!--Region-->
  <RegionCoordinatesList>
    <RegionCoordinates> <!-- req, -->
      <positionX>      <!-- req, xs:integer;coordinate -->    </positionX>
      <positionY>      <!-- req, xs:integer;coordinate -->    </positionY>
    </RegionCoordinates>
  </RegionCoordinatesList>
</RuleRegion>
</RuleInfo>

<LineDetectionParam> <dep>
  <directionSensitivity> <!--req, xs:string "left-right,
right-left,any"--> </directionSensitivity>

```

```

</LineDetectionParam>

<FieldDetectionParam> <!-- dep-->
    <durationTime> <!-- req, xs: integer --> </durationTime>
</FieldDetectionParam>

<RegionEntranceParam> <dep>
</RegionEntranceParam>

<RegionExitingParam> <dep>
</RegionExitingParam>

<LoiteringParam> <dep>
    <durationTime> <!-- req, xs: integer --> </durationTime> <!--Duration time 1-100seconds,
1s by default-->
</LoiteringParam>

<GroupParam> <dep>
    <populDensity> <!-- dep, xs:integer --> </populDensity> <!--population density 1-10-->
</GroupParam>

<RapidMoveParam> <dep>
    <rapidMoveMode> <!-- dep, xs:string "pixels,actualSize"--> </rapidMoveMode> <!--mode
pixel,actual size-->
    <distanceThreshold> <!-- dep, xs:integer --> </distanceThreshold> <!--distance 1.pixels 1-10
2.actual size 1-20>
</RapidMoveParam>

<ParkingParam> <dep>
    <durationTime> <!-- req, xs:integer --> </durationTime> <!--Duration time 5-100 second, 5
seconds by default -->
</ParkingParam>

<UnattendedBaggageParam> <dep>
    <durationTime> <!-- req, xs:integer --> </durationTime> <!--Duration time 5-100 second, 5
seconds by default -->
</UnattendedBaggageParam>

<AttendedBaggageParam> <!--dep-->

```



```

    <durationTime> <!-- req, xs:integer --> </durationTime> <!--Duration time 5-100 second, 5
seconds by default -->
</AttendedBaggageParam>

<TeacherParam> <!--dep -->
    <durationTime> <!-- req, xs: integer --> </durationTime>
</TeacherParam>

<StudentParam> <!--dep -->
</StudentParam>

```

8.18.7 /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/notifications

/ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/notifications		General Resource	v2.0
GET			
Description	Get tracking scene rules by channel		
Query	None		
Inbound Data	None		
Success Return	RuleNotification		
PUT			
Description	Set tracking scene rules by channel		
Query	None		
Inbound Data	RuleNotification		
Success Return	ResponseStatus		
Notes:			

RuleNotification XML Block

```

<RuleNotification version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sid> <!--req, xs:string --> </sid>
  <RuleList>
    <RuleInfo>
      <ruleId> <!--req, xs:string --> </ruleId>
      <EventTriggerNotificationList>
        <EventTriggerNotification> <!-- opt -->
          <id> <!-- req, xs:string;id --> </id>
          <notificationMethod> <!-- req, xs:string"IO,email,record,center,cloud"-->
          </notificationMethod>

```

```

        <notificationRecurrence><!-- opt, xs:string, "beginning,beginningandend,recurring"
-->

        </notificationRecurrence>
        <notificationInterval><!-- dep, xs:integer, milliseconds --> </notificationInterval>
        <outputIOPortID> <!-- dep, xs:string;id --> </outputIOPortID>
        <dynOutputIOPortID> <!-- dep, xs:string;id --> </dynOutputIOPortID>
    </EventTriggerNotification>
</EventTriggerNotificationList>
</RuleInfo>
</RuleList>
</RuleNotification>

```

8.18.8 /ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/schedules

/ISAPI/Intelligent/channels/ID/behaviorRule/<SID>/schedules		General Resource	v2.0
GET			
Description	Get arming time of scene rules by channel		
Query	None		
Inbound Data	None		
Success Return	RuleSchedule		
PUT			
Description	Set arming time of scene rules by channel		
Query	None		
Inbound Data	RuleSchedule		
Success Return	ResponseStatus		
Notes:			

RuleSchedule XML Block

```

<RuleSchedule version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
    <sid><!--req, xs:string --> </sid>
<RuleList><!--规则信息 -->
    <RuleInfo>
        <ruleId><!--req, xs:string --> </ruleId>
        <Schedule>
            <TimeBlockList><!-- req -->

```

```

    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
</Schedule>
</RuleInfo>
</RuleList>
</RuleSchedule>

```

8.18.9 /ISAPI/Intelligent/channels/ID/capabilities

/ISAPI/Intelligent/channels/ID/capabilities		General Resource	v2.0
GET			
Description	Get supported intelligent types by device channel		
Query	None		
Inbound Data	None		
Success Return	IntelliCap		

IntelliCap XML Block

```

<IntelliCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isFaceSupport> <!--req, xs:string "true,false" --> </isFaceSupport>
  <isBehaviorSupport> <!--req, xs:string "true,false" --> </isBehaviorSupport>
  <isLineDetectionSupport> <!--req, xs:string "true,false" --> </isLineDetectionSupport>
  <isFieldDetectionSupport> <!--req, xs:string "true,false" --> </isFieldDetectionSupport>
  <isRegionEntranceSupport> <!--req, xs:string "true,false" --> </isRegionEntranceSupport>
  <isRegionExitingSupport> <!--req, xs:string "true,false" --> </isRegionExitingSupport>
  <isLoiteringSupport> <!--req, xs:string "true,false" --> </isLoiteringSupport>
  <isGroupSupport> <!--req, xs:string "true,false" --> </isGroupSupport>
  <isRapidMoveSupport> <!--req, xs:string "true,false" --> </isRapidMoveSupport>
  <isParkingSupport> <!--req, xs:string "true,false" --> </isParkingSupport>
  <isUnattendedBaggageSupport> <!--req, xs:string "true,false" -->
  </isUnattendedBaggageSupport>
  <isAttendedBaggageSupport> <!--req, xs:string "true,false" --> </isAttendedBaggageSupport>

```

```

<isTeacherSupport> <!--req, xs:string "true,false"--> </isTeacherSupport>
<isStudentSupport> <!--req, xs:string "true,false"--> </isStudentSupport>
<isFaceCaptureStatisticsSupport> <!--req, xs:string "true,false"-->
</isFaceCaptureStatisticsSupport>
</IntelliCap>

```

8.19 /ISAPI/Compass

8.19.1 /ISAPI/Compass/channels/<ID>/capabilities

/ISAPI/Compass/channels/<ID>/capabilities		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	CompassCap		

CompassCap XML Block

```

<CompassCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <VandalProofAlarm> <!--req, -->
    <isSupportUpload><!-- req, xs:boolean ""--></isSupportUpload>
    <isSupportVoiceWarning><!-- req, xs:boolean ""--></isSupportVoiceWarning>
  </VandalProofAlarm>
  <isSupportCalibrate> <!-- opt, xs:boolean --> </isSupportCalibrate>
  <isSupportPointToNorth> <!-- opt, xs:boolean --> </isSupportPointToNorth>
</CompassCap>

```

8.19.2 /ISAPI/Compass/channels/<ID>/vandalProofAlarm

/ISAPI/Compass/channels/<ID>/vandalProofAlarm		General Resource	v2.0
GET			
Description			
Query	None		
Inbound Data	None		
Success Return	VandalProofAlarm		
PUT			
Description			
Query	None		

Inbound Data	VandalProofAlarm
Success Return	ResponseStatus
Notes:	

VandalProofAlarm XML Block

```
<VandalProofAlarm version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <sensitivityLevel><!--req, xs:integer, 1..100, 1 is the least sensitive --></sensitivityLevel>
  <upload><!-- req, xs:boolean ""--></upload>
  <voiceWarning><!-- req, xs:boolean ""--></voiceWarning>
</VandalProofAlarm>
```

8.19.3 /ISAPI/Compass/channels/<ID>/calibrate

/ISAPI/Compass/channels/<ID>/calibrate		General Resource	v2.0
PUT			
Description			
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

8.19.4 /ISAPI/Compass/channels/<ID>/pointToNorth

/ISAPI/Compass/channels/<ID>/pointToNorth		General Resource	v2.0
PUT			
Description			
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			

Description	Update the device time information.
Query	None
Inbound Data	Time
Success Return	ResponseStatus
Notes:	

If <timeMode> is present and set to “local”, the <localTime> and <timeZone> fields are required. The <localTime> block sets the device time.

If <timeMode> is present and set to “NTP”, only the <timeZone> field is required. The device time is set by synchronizing with NTP.

If <timeMode> is present and set to “satellite”, the <localTime> and <timeZone> fields are not required.

Time XML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode>    <!-- req, xs:string, "NTP, manual,satellite" -->    </timeMode>
  <localTime>    <!-- dep, xs:datetime -->                        </localTime>
  <timeZone>    <!-- dep, xs:string, POSIX time zone string -->    </timeZone>
</Time>
```

8.20 /ISAPI/ITC

8.20.1 /ISAPI/ITC/capability

/ISAPI/ITC/capability		General Resource	v2.0
GET			
Description	Base on supported ability(Capture camera, vehicle detection)		
Query	None		
Inbound Data	None		
Success Return	ITCCap		

ITCCap XML Block

```
<ITCCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportITC>    <!-- dep, xs: boolean> </isSupportITC>
  <isSupportVehicleDetection> <!-- dep, xs: boolean> <isSupportVehicleDetection>
  <isSupportHVTVehicleDetection> <!-- dep, xs: boolean> <isSupportHVTVehicleDetection>
</ITCCap>
```

8.20.2 /ISAPI/ITC/VideoEpolice

/ISAPI/ITC/VideoEpolice		General Resource	v2.0
GET			
Description	Get index by channel		

Query	None
Inbound Data	NONE
Success Return	VideoEpolice
PUT	
Description	Set index by channel
Query	None
Inbound Data	VideoEpolice
Success Return	ResponseStatus
Notes:	

VideoEpolice XML Block

```
<VideoEpolice version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <LaneCount>    <!-- req xs:integer,"1-2" --> </LaneCount>
  <LaneList>
    <Lane>
      <laneId>    <!-- req xs:integer--> </laneId>
      <RegionCoordinatesList> <!-- req -->
        <RegionCoordinates>  <!-- Note: only two coordinates are required -->
          <positionX> <!-- req, xs:integer> </positionX>
          <positionY> <!-- req, xs:integer> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </Lane>
  </LaneList>
</VideoEpolice>
```

8.21 /ISAPI/System/time/

8.21.1 /ISAPI/System/time/capabilities

/ISAPI/System/time/capabilities		General Resource	v2.0
GET			
Description	Get the device time information capabilities.		
Query	None		
Inbound Data	None		
Success Return	Time		

Time XML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode opt="NTP>manual,satellite,timecorrect" def="satellite"> <!-- req, xs:string -->
</timeMode>
  <localTime> <!-- dep, xs:datetime --> </localTime>
  <timeZone> <!-- dep, xs:string, POSIX time zone string --> </timeZone>
</Time>
```

8.21.2 /ISAPI/System/time

/ISAPI/System/time		General Resource	v2.0
GET			
Description	Get the device time information.		
Query	None		
Inbound Data	None		
Success Return	Time		
PUT			
Description	Udpate the device time information.		
Query	None		
Inbound Data	Time		
Success Return	ResponseStatus		
Notes:			
If <timeMode> is present and set to “local”, the <localTime> and <timeZone> fields are required. The <localTime> block sets the device time.			
If <timeMode> is present and set to “NTP”, only the <timeZone> field is required. The device time is set by synchronizing with NTP.			
If <timeMode> is present and set to “satellite”, the <localTime> and <timeZone> fields are not required.			

Time XML Block

```
<Time version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <timeMode> <!-- req, xs:string, "NTP, manual,satellite,timecorrect" --> </timeMode>
  <localTime> <!-- dep, xs:datetime --> </localTime>
  <timeZone> <!-- dep, xs:string, POSIX time zone string --> </timeZone>
</Time>
```


8.22 /ISAPI/System/fisheye/

8.22.1 /ISAPI/System/fisheye/

/ISAPI/System/fisheye/		General Resource	v2.0
GET			
Description	Get fisheye param		
Query	None		
Inbound Data	None		
Success Return	FishEye		
PUT			
Description	Set fisheye param		
Query	None		
Inbound Data	FishEye		
Success Return	ResponseStatus		
Notes:			
streamingMode:			
mode1: fisheye+panorama+3PTZ;			
mode2: fisheye +4PTZ;			
mode3: fisheye (primary)+ fisheye (secondary)+3PTZ;			
mode4: panorama (main stream + sub stream);			
mode5: 4PTZ			
mode6: fisheye			

FishEye XML Block

```
<FishEye version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<type><!--req, xs:string, "ceiling,wall,desktop" --></type>
<streamingMode> <!--opt, xs:string,
"mode1,mode2,mode3,mode4,mode5,mode6"--></streamingMode>
</FishEye>
```

8.22.2 /ISAPI/System/fisheye/capabilities

/ISAPI/System/fisheye/capabilities		General Resource	v2.0
GET			
Description	Set fisheye capabilities		
Query	None		
Inbound Data	None		
Success Return	FishEye		

Notes:**FishEye XML Block**

```
<FishEye version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
<type opt="ceiling,wall,desktop"><!--req, xs:string--></type>
<streamingMode                opt="mode1,mode2,mode3,mode4,mode5,mode6"><!--opt,
xs:string--></streamingMode>
<isSupportEPTZParam><!-- opt, xs:boolean --></isSupportEPTZParam>
</FishEye>
```

8.22.3 /ISAPI/System/fisheye/EPTZParam

ISAPI/System/fisheye/EPTZParam		General Resource	v2.0
GET			
Description	Get EPTZ param		
Query	None		
Inbound Data	None		
Success Return	EPTZParam		
PUT			
Description	Set EPTZ param		
Query	None		
Inbound Data	EPTZParam		
Success Return	ResponseStatus		
Notes:			

EPTZParam XML Block

```
<EPTZParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enableEPTZ><!-- req, xs:boolean --></enableEPTZ>
</EPTZParam>
```

8.22.4 /ISAPI/System/fisheye/EPTZParam/capabilities

/ISAPI/System/fisheye/EPTZParam/capabilities		General Resource	v2.0
GET			
Description	Get EPTZ capabilities		
Query	None		
Inbound Data	None		

Success Return	EPTZParam
----------------	-----------

EPTZParam XML Block

```
<EPTZParam version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <enableEPTZ><!-- req, xs:boolean --></enableEPTZ>
</EPTZParam>
```

8.23 /ISAPI/Thermal

8.23.1 /ISAPI/Thermal/capabilities

/ISAPI/Thermal/capabilities		General Resource	v2.0
GET			
Description	Get Fire thermal event capabilities.		
Query	None		
Inbound Data	None		
Success Return	ThermalCap		
Notes:			

ThermalCap XML Block

```
<ThermalCap version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <isSupportFireDetection> <!-- opt ,xs:boolean --> </isSupportFireDetection>
  <isFireFocusZoomSupport> <!-- opt ,xs:boolean--> </isFireFocusZoomSupport>
</ThermalCap>
```

8.23.2 /ISAPI/Thermal/channels/<ID>/fireDetection/capabilities

/ISAPI/Thermal/channels/<ID>/fireDetection/capabilities		General Resource	v2.0
GET			
Description	It is used to get Fire Detection capability. The interface is distinguished by channel ID		
Query	None		
Inbound Data	None		
Success Return	FireDetection		

Notes:

<fireFrameDis>: Display fire source frame around the fire source

<fireMaxTemp>: The maximum temperature

<fireMaxTempPosition>: Display the position of maximum temperature

<fireDistance>: The distance from maximum temperature

FireDetection XML Block

```
<FireDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req ,xs:boolean --> </enabled>
  <sensitivity min="1" max="100"> <!-- req ,xs:integer 1..10 --> </sensitivity>
  <fireComfirmTime min="0" max="120"> <!-- req ,xs:integer 0..120 -->
</fireComfirmTime>
  <fireRegionOverlay> <!-- opt ,xs:boolean --> </fireRegionOverlay>
  <fireFrameDis> <!-- opt ,xs:boolean, ro --> </fireFrameDis>
  <fireMaxTemp> <!-- opt ,xs:boolean, ro --> </fireMaxTemp>
  <fireMaxTempPosition> <!-- opt ,xs:boolean, ro --> </fireMaxTempPosition>
  <fireDistance> <!-- opt ,xs:boolean, ro --> </fireDistance>
</FireDetection>
```

8.23.3 /ISAPI/Thermal/channels/<ID>/fireDetection

/ISAPI/Thermal/channels/<ID>/fireDetection

General Resource v2.0

GET

Description	Get Fire Detection Param Info. The interface is distinguished by channel ID
Query	None
Inbound Data	None
Success Return	FireDetection

PUT

Description	Set Fire Detection Param Info.
Query	None
Inbound Data	FireDetection
Success Return	ResponseStatus

Notes:

Enabled: To enable fire detection or not.

Sensitivity: Adjust the sensitivity degree of dynamic fire source detection. The bigger the number is, the more sensitive the detecting would be.

fireComfirmTime: If suspicious fire source is found during speed dome moving, the time that speed dome keeps staying in this position can be set, then speed dome continuous to previous movement.

fireRegionOverlay: Choose to display a red frame around the fire source on stream or not

when fire occurs

FireDetection XML Block

```
<FireDetection version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req ,xs:boolean --> </enabled>
  <sensitivity> <!-- req ,xs:integer 1..100 --> </sensitivity>
  <fireComfirmTime> <!-- req ,xs:integer 0..120 --> </fireComfirmTime>
  <fireRegionOverlay> <!-- opt ,xs:boolean --> </fireRegionOverlay>
</FireDetection>
```

8.23.4 /ISAPI/Thermal/channels/<ID>/fireFocusZoom

/ISAPI/Thermal/channels/<ID>/fireFocusZoom		General Resource	v2.0
PUT			
Description	Set Fire focus zoom.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
Set focus and zoom when fire is detected.			

8.24 /ISAPI/System/lowPower

8.24.1 /ISAPI/System/lowPower

/ISAPI/System/lowPower		General Resource	v2.0
GET			
Description	It is used to get the LowPower configuration		
Query	None		
Inbound Data	None		
Success Return	LowPower		
PUT			
Description	It is used to configure LowPower.		
Query	None		
Inbound Data	LowPower		
Success Return	hik:ResponseStaus ResponseStatus		
Notes:			

LowPower XML Block

```
<LowPower version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode><!--opt,xs:string,"manual,schedule"--></mode>
  <enabled><!--dep, xs:boolean, "true,false" depending on the 'manual' in mode
--></enabled>
  <Schedule> <!--dep, depending on the 'schedule' in mode -->
    <TimeRange> <!-- req -->
      <beginTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </beginTime>
      <endTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </endTime>
    </TimeRange>
  </Schedule>
</LowPower>
```

8.24.2 /ISAPI/System/lowPower/capabilities

/ISAPI/System/lowPower/capabilities		General Resource v2.0
GET		
Description	It is used to get the LowPower configuration	
Query	None	
Inbound Data	None	
Success Return	LowPower	
Notes:		

LowPower XML Block

```
<LowPower version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <mode opt="manual,schedule"><!--opt,xs:string,--></mode>
  <enabled><!--dep, xs:boolean, "true,false" depending on the 'manual' in mode
--></enabled>
  <Schedule> <!--dep, depending on the 'schedule' in mode -->
    <TimeRange> <!-- req -->
      <beginTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </beginTime>
      <endTime> <!-- req, xs:time, ISO8601 time hh:mm:ss--> </endTime>
    </TimeRange>
  </Schedule>
</LowPower>
```

Revision History

Revision History	Description	Reviser	Date
Version 2.0 Revision 1	Initial version	Hong Meng	2012-04
Version 2.0 Revision 2	merge qi's document	Hong Meng	2012-06
Version 2.0 Revision 3	add bond and holiday service	Minglei Yu	2012-10
Version 2.0 Revision 4	Combine front-end devices and back-end devices together	Minglei Yu Linming He Guangmu Ma	2013-12
Version 2.0 Revision 5	New resource /ISAPI/System/Hardware/ABF is defined. The new <isSupportSpareException> and <isSupportPoePowerException> tag in service /ISAPI/Event/capabilities is optional. The new <intelliBackSearch> tag in service /ISAPI/Smart/FieldDetection/ID is optional.	Minglei Yu Linming He	2014-01
Version 2.0 Revision 6	The new <VideoInputList> tag in service /ISAPI/System/Network/SIP/<ID>/SIPInfo is optional.	Minglei Yu Linming He	2014-02
Version 2.0 Revision 7	Add email、ip、ftp、ntp test server. The new <frontColorMode> and <frontColor> tag in service /ISAPI/System/Video/inputs/channels/ID/overlays is optional. Add face detection trigger and schedule. New resource /ISAPI/System/Hardware/LED/ISAPI/System/Network/EZVIZ is defined.	Minglei Yu Linming He	2014-04
Version 2.1 Revision 1	Add /ISAPI/System/Video/inputs/channels/ID/heatMap server. Add	Minglei Yu Linming He	2014-05

	<p>/ISAPI/System/Video/inputs/channels/ID/counting server.</p> <p>Add /ISAPI/Security/serverCertificate server.</p> <p>New resource /ISAPI/Security/webCertificate is defined.</p>		
Version 2.2 Revision 1	<p>Update the /ISAPI/Security/previewLinkNum resources</p> <p>Update the /ISAPI/Streaming/channels/ID/dual VCA resources</p> <p>Update the /ISAPI/Event/triggersCap resources</p> <p>The new <audioSamplingRate> tag in service /ISAPI/System/TwoWayAudio/channels/ID is optional.</p> <p>Add /ISAPI/GIS server.</p>	Minglei Yu Linming He	2014-07
Version 2.3 Revision 1	<p>Add the</p> <p>/ISAPI/Smart/regionEntrance...</p> <p>/ISAPI/Smart/regionExiting...</p> <p>/ISAPI/Smart/loitering...</p> <p>/ISAPI/Smart/group...</p> <p>/ISAPI/Smart/rapidMove...</p> <p>/ISAPI/Smart/parking...</p> <p>/ISAPI/Smart/unattendedBaggage...</p> <p>/ISAPI/Smart/attendedBaggage...</p> <p>/ISAPI/Streaming/channels/<ID>/regionClip...</p> <p>/ISAPI/System/Network/WirelessDial</p> <p>...</p> <p>Update the <NetworkCap></p> <p><EventTriggersCap></p> <p>/ISAPI/Event/triggers</p> <p>/ISAPI/Smart/capabilities</p>	Jun Ying	2014-10

Version 2.4 Revision 1	<p>[add] /ISAPI/Streaming/channels/<ID>/ht tppreview /ISAPI/System/Video/inputs/chann els/ID/VCAResource /ISAPI/System/Audio/channels/<ID >/dynamicCap /ISAPI/Image/channels/<ID>/lensDi stortionCorrection (HIKVISION ISAPI_2.0-Image Service)</p> <p>[mod] /ISAPI/System/Video/capabilities /ISAPI/Smart/RegionEntrance/<ID>/ capabilities /ISAPI/Smart/regionEntrance/ID/re gions/ID /ISAPI/Smart/rapidMove/<ID>/capa bilities /ISAPI/Smart/rapidMove/ID/region s/ID /ISAPI/Smart/regionExiting/ID/regi ons/ID /ISAPI/Smart/regionExiting/<ID>/ca pabilities /ISAPI/Smart/FieldDetection/ID/reg ions/ID /ISAPI/Smart/LineDetection/ID/line Item/ID /ISAPI/Streaming/channels/<ID> /ISAPI/Security/capabilities</p>	Xiaomin wang	2015-2
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Version 2.5 Revision 1	[add] /ISAPI/System/Network/DDNS/CountryID/capabilities [mod] /ISAPI/System/Network/DDNS/ID /ISAPI/System/Network/EZVIZ	Zhenlei Zhu	2015-3
Version 2.5 Revision 2	[add] /ISAPI/System/Video/inputs/channels/<ID>/counting/capabilities [mod] /ISAPI/System/Video/inputs/channels/<ID>/counting [add] ISAPI/System/Video/inputs/channels/<ID>/counting/RecommendValue [add] /ISAPI/System/Video/inputs/channels/ID/heatMap/pictureInfo [mod] /ISAPI/System/Video/inputs/channels/<ID>/heatMap/capabilities	Xiaomin wang	2015-9
Version 2.5 Revision 3	[mod] /ISAPI/System/capabilities [mod] /ISAPI/System/Network/interfaces/<ID> [mod] /ISAPI/System/Video/inputs/channels/ID/overlays [add] /ISAPI/Streaming/channels/<ID>/capabilities /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition /ISAPI/GIS/channels/<ID>/reviseGPS/capabilities /ISAPI/GIS/channels/<ID>/reviseGPS	Xiaomin wang	2015-9

Version 2.5 Revision4	[add] /ISAPI/System/onlineUpgrade/serve r /ISAPI/System/onlineUpgrade/versi on /ISAPI/System/onlineUpgrade/upgr ade /ISAPI/System/onlineUpgrade/statu s /ISAPI/System/firmwareCode /ISAPI/System/onlineUpgrade/judg eVersion /ISAPI/System/onlineUpgrade/capa bilities	Zhenlei Zhu	2015-10
Version 2.5 Revision5	[add] /ISAPI/Image/channels/<ID>/supple mentLight /ISAPI/Image/channels/<ID>/capabi lities /ISAPI/Image/channels/<ID>/shutte r /ISAPI/Image/channels/<ID>/expos ure /ISAPI/System/Video/inputs/chann els/<ID>/roadInfo/<ID>/overlays/ca pabilities /ISAPI/Streaming/channels/<ID>/re freshFrame /ISAPI/Streaming/channels/<ID>/re freshFrame/capabilities /ISAPI/System/time/capabilities /ISAPI/System/time/ /ISAPI/Image/channels/<ID>/lensDi stortionCorrection /ISAPI/Event/schedules/HVTVehicle Detects /ISAPI/Event/schedules/HVTVehicle Detects/ID	ZhenbangShao	2015-10
	/ISAPI/Security/onlineUser /ISAPI/Event/schedules/storageDet ection /ISAPI/Smart/storageDetection /ISAPI/Smart/storageDetection/rwl ock	ZhenbangShao	2015-12

	/ISAPI/Smart/storageDetection/rwlock/capabilities /ISAPI/Smart/storageDetection/unlock /ISAPI/Smart/storageDetection/unlock/capabilities /ISAPI/System/Network/ftp/<ID> /ISAPI/System/externalDevice/supplementLight /ISAPI/System/Network/interfaces/<ID>/capabilities /ISAPI/System/Network/interfaces/ID/wireless/accessPointList/ID /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition		
	[mod]/ISAPI/Event/triggers/<ID>/notifications,add notificationMethod "cloud"	Hongshuai Wang	2016-02
Version 2.5 Revision 6	[mod] /ISAPI/Streaming/channels/<ID>/capabilities [add] /ISAPI/Streaming/channels/ID /ISAPI/Streaming/channels/ID/dynamicCap /ISAPI/Streaming/channels/<ID>/dynamicCapWithCondition /ISAPI/Streaming/channels/<ID>/capabilities /ISAPI/Streaming/channels/ID/refreshFrame /ISAPI/Streaming/channels/ID/refreshFrame/capabilities /ISAPI/System/Network/ANRArmingHost /ISAPI/Snapshot/channels/<ID>/capabilities Add a new error code: UnSupportCapture	Carrie Feng	2016.4

Version 2.5 Revision 7	[del] /ISAPI/ContentMgmt/search	Xiaomin Wang	2016.5
Version 2.5 Revision 8	[del] /ISAPI/ContentMgmt/RecordingHost/hostParam /ISAPI/ContentMgmt/RecordingHost/recordExport /ISAPI/ContentMgmt/RecordingHost/courses /ISAPI/ContentMgmt/RecordingHost/weeklySchedules /ISAPI/ContentMgmt/RecordingHost/eventSources /ISAPI/ContentMgmt/RecordingHost/courses/search /ISAPI/ContentMgmt/RecordingHost/courses/search/capabilities /ISAPI/ContentMgmt/RecordingHost/BackPic/uploadCfg?index= /ISAPI/RecordHost/BackPicCfg/picID/ID /ISAPI/ContentMgmt/RecordingHost/BackPic/capabilities /ISAPI/RecordHost/BackPicInfo /ISAPI/RecordHost/BackPicInfo/capabilities /ISAPI/RecordHost/BackPic/ID /ISAPI/ContentMgmt/RecordingHost/imageDiffDetection/channels/ID /ISAPI/ContentMgmt/RecordingHost/imageDiffDetection/channels/ID/capabilities /ISAPI/ContentMgmt/InputProxy/channels/status /ISAPI/ContentMgmt/InputProxy/channels/<ID>/status /ISAPI/RecordHost/PublishFile/batch/channels/ID /ISAPI/RecordHost/PublishFile/channels/ID	Yu Liu	2015.5

	/ISAPI/RecordHost/PublishFile/channels/ID/capabilities /ISAPI/RecordHost/PublishProgress/channels/ID?FileID= /ISAPI/RecordHost/PublishProgress/channels/ID?year=&week= ISAPI/ContentMgmt/RecordingHost/publishFileCfg/channels/ID?fileID= /ISAPI/ContentMgmt/RecordingHost/publishFileCfg/channels/ID/capabilities /ISAPI/RecordHost/FilmModeCfg/ISAPI/RecordHost/FilmModeCfg/capabilities /ISAPI/RecordHost/capabilities		
Version 2.5 Revision 9	[add] 8.5.78 /ISAPI/Smart/HiddenInformation/channels/<ID>/capabilities [add] 8.5.79 /ISAPI/Smart/HiddenInformation/channels/<ID>	KunZhang	2016.5.19
Version 2.5 Revision 10	[add] 8.1.32 /ISAPI/System/accessoryCardInfo/capabilities 8.1.33 /ISAPI/System/accessoryCardInfo [mod] 8.4.46 /ISAPI/System/Video/outputs/channels/<ID>	KunZhang	2016.5.25
Version 2.5 Revision 11	[add] 8.1.1 /ISAPI/System/capabilities 8.7.1 /ISAPI/System/Hardware 8.7.6 /ISAPI/System/Hardware/deicing 8.7.7 /ISAPI/System/Hardware/deicing/c	ZhenbangShao	2016.6.12

	apabilities 8.21 ISAPI/Thermal 8.22 /ISAPI/System/lowPower		
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