IGP-0501

5-Port Industrial Gigabit Ethernet PoE Switch,

4 PoE Outputs + 1 SFP/TX Combo, 126W

User Manual

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment   is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

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Introduction

This rugged designed Industrial Ethernet switch / Industrial Giga-bit 4 port POE Injectors, comply with IEEE802.3af and IEEE802.3at, has pass many rigorous environmental test. It delivers 30watts (Max 36watts) power per POE port. And it can generate total 126 watts power to PD devices. can extend your environment to a much larger area.With its multi-purpose design, it can also be used for Din-Rail or wall-mounted. It is an ideal unit for IP surveillance, traffic monitoring and Security application in critical environment. It can tolerate -40°C to 75°C in harsh environment to perform a reliable network.

Housing Dimension
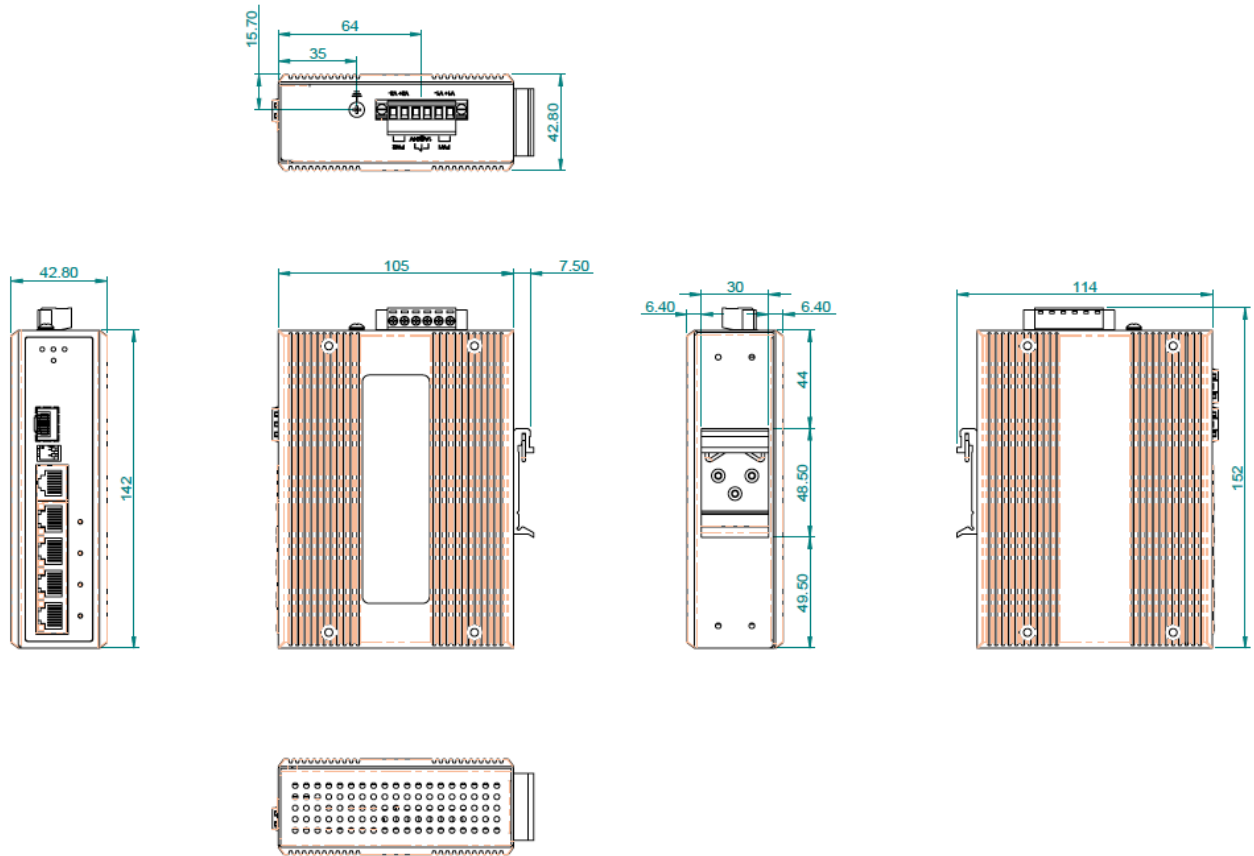
MODELS – Industrial Giga-bit POE 4 port Injector, 48VDC input
This industrial high power POE+ is designed for multiple applications, especially for vehicle surveillance , IP surveillance, and traffic monitoring and for a broad range of outdoor applications. It can be used as a stand-alone device for buses, trucks for Surveillance purposes. And it also can be used to cascaded/daisy-chain to other devices to cover wider area through the SFP connection.

Installation package

This unit can be installed by din-rail mounted or wall-mounted. Din-rail brackets and wall-mounted bracket are included.

Wall mount bracket x 2

Din Rail Bracket x 1

6 pin Terminal Block
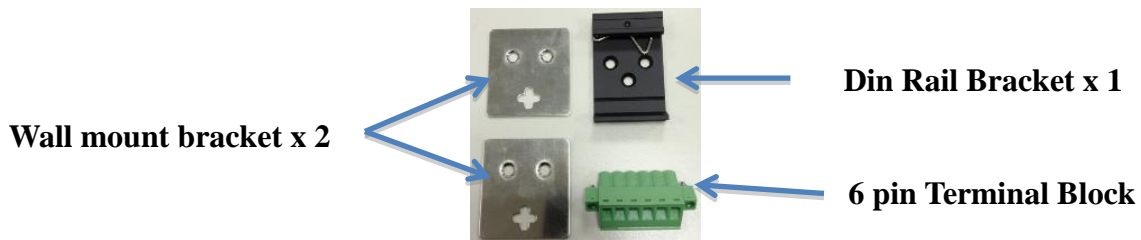
Power connection

This unit provides 6 pin terminal block. The POE port can be operated from 44-56VDC power source. The VDC power range can be 48VDC only or lower, or wide range from 44-56VDC. Always Make sure your input voltage is within this supported voltage range for each model.

WARNING – any exceeded input voltage will not make this unit function and may damage this unit.
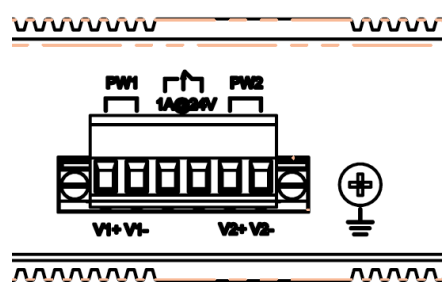
To make power connection – Follow the printed polarity for V1+, V1-, V2+, V2-, and ground. Connect positive wire to V+ , connect negative wire to V-, also connect neutral wire to the ground screw as shown .

Relay -- You may use 24V@1A relay connection to your external device for special purpose. When 2 powers are connected, the relay is in SHORT mode. When any power source fails, the relay change to OPEN status.

Power connecting procedure:

STEP 1 – Pull out 6 pin terminal block.
STEP 2 – Connect wire to V1+, V1-, or V2+, V2-, and Ground the neutral wire to the ground screw.
STEP 3– Plug back 6 pin terminal block to its place.

WARNING –
Always ground the power source to maintain a clean power input. Due to too many cheap made power supplies, it creates too much noise, and it will cause the power input fluctuates when connect to this unit. To avoid this, always ground the power source to gain a clean power input.

Dip switch function

This unit is equipped with dip switches, located on the front panel. Adjusting the dip switches will change the default function of this unit. This unit has set to manufacturer default as: Port 5 SFP and the speed is set to 1000M for both port 5 and port 6 SFP ports. you may adjust dip switch setting to select port 5 as TX (disable port 5 SFP) or set SFP speed to 100M. The detail setting as shown below:

Warning:
Dip switch function will not work if it is changed when power is connected. Always turn off or disconnect power supply to change dip switch settings.

OFF

DIP 1 to select port 5 TX or SFP	ON	TX
	OFF	SFP (default)
Dip 2 to select SFP speed	ON	100M
	OFF	1000M(default)

1   2

ON

LED indicator

PW1
ON -- when V1+, V1- is connected

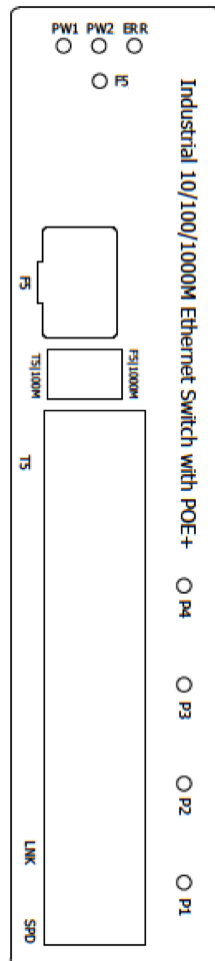PW2
ON -- when V2+, V2- is connected

ERR
ON –
connect only PW1 or PW2.
OFF-
both PW1 and PW2 are connected

F5
ON – port 5 SFP fiber is detected
OFF –port 5 SFP fiber is not detected.
Flashing – port 5 SFP fiber is active

PW1 PW2 ERR

○ F5

Industrial 10/100/1000M Ethernet Switch with POE+

F5

TS|100M   FS|1000M

T5

○ P4

○ P3

○ P2

○ P1

LNK

SPD

LNK
ON—TX link is detected
OFF – TX port is not detected
Flashing – TX port is active

SPD
ON – 1000M speed is detected.
OFF – 10M or 100M speed is detected

P1,P2,P3,P4
ON—PD is detected on designated port.
OFF – no PD is detected

Specification:

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE802.3x Flow Control and Back Pressure, IEEE802.3af for POE IEEE802.3at for POE+
Switch Architecture	Back-plane (Switching Fabric): 10Gbps
Data Processing	Store and Forward
Flow Control:	IEEE 802.3x Flow Control and Back Pressure
Jumbo Frame	9KB
MAC address Table Size	1K
Packet Buffer Size	1M
Network Connector :	5xRJ-45 10/100/1000BaseT(X) auto negotiation, 4 Giga POE+ 802.3at/af PSE port Auto MDI/MDI-X function, Full/Half duplex 1x SFP 100/1000M BaseX
Network Cable	UTP/STP above Cat.5e Cable
	EIA/TIA-568 10-ohm (100m)
	Fiber Cable (Multi-mode):50/125um,62.5/125um Fiber Cable (Single-mode): 9/125um
Protocol	CSMA/CD
LED	PW1(Power 1) Green, PW2(Power 2) Green, ERR(Fault) Amber,
	TX/RJ-45 port: LNK (Link/Active) Green, SPD(Speed) 10/100(OFF) ,1000 (Green)
	SFP Fiber Per port: Link (Green) Active Flash

DIP Switch	DIP 1: OFF: Port 5 SFP (DEFAULT)
	             ON: Port 5 TX
	DIP 2: OFF: SFP 1000M (DEFAULT)
	             ON: SFP 100M

Reserve polarity protection	Present
Overload current protection	Present
Power Supply	Redundant Dual DC 44V-56V Power Input POE input 44-56VDC Switch Input 9-56VDC
Power Consumption	5.76W@48 VDC full load, Without POE

Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC, Relay in short circuit mode when 2 powers are connected. in open circuit mode when only one power supply is connected
POE power	POE power per port 30watts. Maximum 36Watts Maximum total power 126Watts, Supports IEEE802.3af/at
Removable Terminal Block	Provide 2 Redundant power , Alarm relay contact ,6 Pin Wire range: 0.34mm^2 to 2.5mm^2 Solid wire (AWG):12-24/14-22 Stranded wire(AWG): 12-24/14-22 Torque:5lb-In/0.5Nm/0.56Nm Wire Strip length: 7-8mm
Operating Temperature	-40℃~75℃ fully tested.
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40℃~85℃
MTBF (mean time between failure)	510,304 hrs (MIL-HDBK-217F) at 25℃
Housing	Rugged Metal ,IP30 Protection
Case Dimension (L x W x D)	142mmx43mmx105mm (LxWxD)
Installation mounting	DIN Rail mounting and Wall Mounting
Certifications:	
EN55022/24	ITE equipment
EN50155	Railways Applications Electronic Equipment used on Rolling Stock
EN55011	Industrial, Scientific and Medical (ISM) equipment
EN50121-3-2	Railway Applications – Electromagnetic Compatibility – Part 3-2 Rolling Stock - Apparatus
EN50121-4	Railway Applications – Electromagnetic Compatibility – Part4 Emissions and Immunity of the Signaling and Telecommunications Apparatus
Safety	IEC EN60950-1
EMC/EMS	CE, FCC, VCCI
EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A
EN 50155 / EN 60068-2-6	Vibration
EN 50155 / EN 60068-2-27	Shock
EN 50155 / EN 60068-2-32	Free Fall