

## 4FXS and 4FXO H323/SIP Gateway

### Overview

The LevelOne VOI-8003 is a cost-effective VoIP telephone gateway for small and medium sized businesses, remote and branch offices that want to integrate a VoIP system into an existing office phone system. Its dual FXS and FXO ports allow users to plan their telephone network with more flexibility, integrating both VoIP and landline calls on one phone system.

The VOI-8003 VoIP gateway is both SIP and H.323 standard compliant enabling users to make calls in both standards at the same time through the different ports available. The Gateway also includes a NAT server and PPPoE capability for broadband Internet access, DHCP for automatic network setup, and a built-in firewall that secures the network from outside attacks and unauthorized access.

### Dual FSXS and FXO Ports

The VOI-8003 is equipped with 4 FXS and FXO interface ports which allow users to plan a flexible telephone network that incorporates both PTSN and IP telephony. This gateway can be installed as the backbone for any small to medium sized business phone system or it can add VoIP telephony to an existing analogue PBX.

The 4 FXS ports connect to normal phones and Fax machines and allow users to make toll quality voice calls and send real-time faxes to other VoIP gateways and IP phones through the VOI-8003 gateway. The 4 FXO ports connect to the traditional PTSN company PBX and telephone lines. This allows VoIP devices to communicate with the ordinary telephone system.

Incorporating both these ports into one device, the VOI-8003 is able to act as a link between traditional analogue and IP networks in any existing telephone system. The WAN port is the connection point between the gateway and the Internet that connects directly with an Internet Service Provider, a broadband router or a switch.

### Advanced Features

With a built-in Firewall, NAT server PPPoE and DHCP capability, the VOI-8003 protects the VoIP network from outside attacks and unauthorized access, connects to any broadband Internet service provider and establishes automatic network set-up and network connectivity.

It is also possible to configure IP addresses for each device connected to the VOI-8003 to ensure that every host is connected to the Local Area Network.

The Quality of Service feature enables users to define priority data traffic, such as VoIP data packets, to receive faster transmission rights above other data packets to ensure a high-quality telephony network.

The VOI-8003 further comes equipped with Auto-Provision support for remote management, provides the ability to make both SIP and H.323 calls simultaneously, while various voice codec and fax algorithms allows for toll-quality voice calls and real-time fax transmissions.

It also includes carrier tone generation and detection, Caller ID generation and detection and standard echo cancellation and comfort noise generation as well as DTMF relay for both outbound in inbound calls.

### Easy Deployment and Configuration

VOI-8003 is easy deployed within existing telephone systems and its Web browser management interface makes it easy to configure and manage the gateway's settings.



**VOI-8003**

### Related Products



**VOI-8001**  
8-Port FXS H.323/SIP  
VoIP Gateway



**VOI-8002**  
8-Port FXO H.323/SIP  
VoIP Gateway



**VOI-7000**  
SIP VoIP Phone

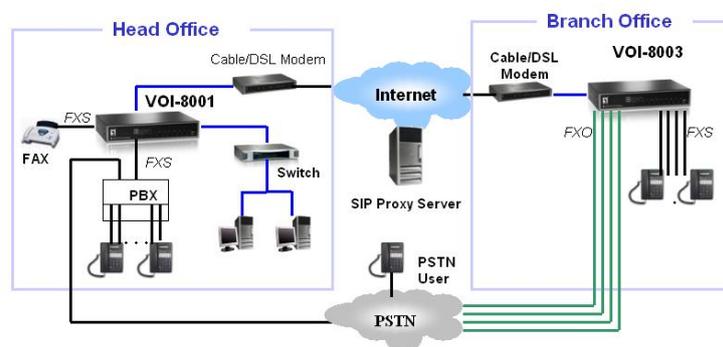
## Key Features

- Realize immediate cost-savings advantages of VoIP communication over the Internet
- Connect up to 8 telephones, fax machines or connect to a PBX for a VoIP telephone network
- 4 FXO and 4 FXS Ports for a complete VoIP solution
- Make Simultaneous SIP and H.323 Calls
- Register up to 4 SIP Proxy or Gatekeepers Simultaneously
- Includes a built-in Firewall, NAT server, PPPoE and DHCP Support
- Remote Manageable and upgradeable via the IP Provision System
- Configure and manage the gateway with its Web browser user-interface
- QoS for high priority VoIP Network traffic

## Technical Specification

- **Connection Ports**
  - 1 x RJ-45 10/100Mbps WAN Ethernet Port
  - 3 x RJ-45 10/100Mbps LAN Ethernet Ports
  - 4 x FXO Ports
  - 4 x FXS Ports
- **Voice Processing**
  - Voice CODEC
    - G.711 A-law / u-law (64kbps)
    - G.723.1 (5.3 or 6.3kbps)
    - G.726 (ADPCM 40, 32, 24, 16 kbps)
    - G.729a/G.729b (8kbps)
  - Supports T.38 FAX Relay (9.6k, 14.4k)
  - Carrier tone detection and generation
  - DTMF In/Out band relay
  - DTMF/Call progress detection and generation
  - Q.931 Fast Start
  - Supports Caller ID generation and detection
  - Supports VAD, H.225, H.245, CNG, G.168, Jitter buffer and programmable gain control
- **Voice Signaling**
  - Supports SIP & H.323 simultaneous VoIP calls
  - Supports SIP v2 Standard (RFC3261)
  - Outbound Proxy
  - STUN Server
  - Registers up to 4 servers simultaneously
  - Supports multiple dialing plan / Call hunting group
  - Adaptive Jitter Buffer function
  - Expandable by external IVR/CDR/Billing servers for value-added applications
  - Supports current drop and polarity reversal detection and generation on analog trunk interface
  - Selectable group- or sequence- PBX ring for VoIP call-in
  - IP screening table for authorized VoIP call-in
  - Flexible routing table and profile
- **Gateway Management**
  - Web Interface Management
  - Supports Auto-Provision System
  - Supports remote Gateway configuration and upgrade through by FTP/TFTP, Web UI or Auto Provision
  - Supports Call Detailed Records (CDR) function
  - WAN IP configure can be programmed by IVR via phone set
  - Built-in watchdog and auto-recovery function
- **Router Functions**
  - Static and dynamic IP from DHCP, PPPoE support
  - Build-in DHCP Server
  - Dynamic DNS Support
  - Support Network access rules (LAN to WAN & WAN to LAN)
  - Self-Protection against DoS Attacks
  - Support NAT-through function
  - Supported Protocols:
    - UDP, TCP, NAT, BOOTP, TFTP, FTP, HTTP, TELNET, IEEE 802.3/ IEEE 802.3u
  - Supported Servers:
    - SNMP, SNT, HTTP, FTP, NAT, DNS, uPnP, DDNS
  - NAT function:
    - Virtual Server, Port mapping, ALG, DMZ, Static routing table
  - Firewall option:
    - Client filtering, URL filtering, MAC control, Drop Port scans
  - VPN Pass-through (PPTP & IPSEC Pass Through)
  - Support IP TOS (Type of Service) for VoIP
- **Hardware Spec**
  - LED Indicators
    - READY, STATUS, POWER, PHONE, LINE, LAN and WAN
  - Power:
    - AC100V-240V, DC 12V/1.5A (Max)
  - Temperature:
    - 0°C to 45°C (Operation),
    - 20°C to 75°C (Storage)
  - Humidity:
    - Up to 90% non-condensing
- **EMI and Safety**
  - FCC, CE Mark

## Product Diagram



## Ordering Information

- VOI-8003: 4FXO and 4FXS H.323/SIP Gateway