



## 16 / 24 Analog Lines High Density VoIP Gateway



*The Soundwin S1600 / S2400 Series VoIP Gateway is fully SIP and H.323 standard compliant residential gateway that provides a total solution for integrating voice-data network and PSTN. By simple installation, this revolutionary compact voice over IP (VoIP) gateway could be configured as 16/24 channels high density FXS/FXO VoIP Gateway which provides voice connectivity over the IP network and to the Public Switched Telephone Network (PSTN). The Soundwin Gateway is equipped NAT router function that provides Internet access using only one IP address. Besides, it provides high voice quality and optimized packet voice streaming over managed and public (Internet) IP networks.*

### VoIP Key Features

- Both support SIP and H.323 protocols : H.323 Gatekeeper Registration, SIP Registration and Digest Authentication.
- Caller ID Delivery and Detection: FXS support DTMF&FSK Caller ID generation; FXO supports DTMF&FSK Caller ID detection.
- Stackable VoIP Architecture: Stackable SIP calls with multiple VoIP Gateways.
- Smart VoIP call Dialing Book: VoIP call Book could provide any application VoIP call to any type destination (Domain name/IP address, PSTN or PBX) or hunting number setting.
- AC termination Impedance : 600/900 OHM and complex impedance
- Polarity Reversal Detection: Type I and Type II
- NAT Traversal: This feature allow gateway to operate behind any NAT router device. There is no need to change any configuration of NAT router like setting virtual server.
- Smart-QoS Guaranteed: This bandwidth management feature provide good voice quality when user place VoIP call and access internet at the same time. The gateway will start reserve bandwidth for voice traffic automatically when VoIP call proceeds.
- Voice channels status display: This function display each port status like as onhook, offhook, calling number callee's number, talk duration, codec.
- Flash Detection and Generation Program: FXO support Flash Generation and FXS support Flash Detection.



### ◉ **Telephony Specification:**

- Voice Codec: G.711(A - law/  $\mu$  -law), G.729 AB, G.723 (6.3Kbps/5.3Kbps)
- FAX support : T.30 / T.38
- Echo Cancellation: G.168-2000 compliant Echo Cancellation
- FXO Caller ID detection : DTMF and FSK
- Adjustable AC Termination Impedance : 600 / 900 OHM and complex Impedance
- Polarity Reversal : Type I and Type II

### ◉ **IP Specifications:**

- H.323 v2/v3/v4 and SIP (RFC 3261) , SDP (RFC 2327), Symmetric RTP, STUN (RFC3489), ENUM (RFC 2916), RTP Payload for DTMF Digits (RFC2833), Outbound Proxy Support.
- LAN :NAT, Virtual Server, DHCP Server
- WAN: PPPoE client, DHCP client, Fix IP Address, DDNS client
- Network Address Translation: Providing build-in NAT router function.
- Smart QoS: Guarantee the voice bandwidth

### ◉ **Call Features**

- Voice channels status display
- Direct Dialing Mode : peer to peer call (Support IP Address Call or Domain Name Call)
- Register Call Mode : register to H.323 Gatekeeper or SIP Proxy Server
- Adjustable volume : -9 db ~ 9 db
- Silence Compression
- Auto Dial for speed
- 12K/16K Hz Metering Generation with Envelope Shaping
- VAD (Voice Activity Detector)
- Dynamic Jitter Buffer

### ◉ **Configuration & Management**

- Web-based Graphical User Interface
- RS232 for configuration
- Remote management over the IP Network
- FTP firmware upgrade
- Backup and Restore Configuration file
- Front LCD Panel for System Status and Management

### ◉ **General Specification**

- Standard 50 pin RJ-21 Telco connectors
- AC power : AC100V -240V, DC12V/1.5A,50/60 Hz
- Temperature: 0°C ~ 40°C (Operation)
- Humidity: up to 90% non-condensing
- Emission: FCC Part 15 Class B, CE Mark
- Dimension : 440 x 250 x 45 mm
- Weight: 2500 g



### S1600/S2400 Series VoIP Gateway Catalogue

	S1600	S1608	S1616	S2400	S2412	S2424
<i>Ethernet Interface</i>	1 WAN + 1 LAN					
<i>RS232 Console</i>	1 RS232 console for configuration					
<i>LCD Panel</i>	Front LCD Panel for System Status and Management					
<i>Telephony Interface</i>	Standard 50-pin Telco connector					
<i>FXS/FXO</i>	16 FXS	8 FXS + 8 FXO	16 FXO	24 FXS	12 FXS + 12 FXO	24 FXO
<i>Modules Combination</i>	1 SB800 + 1 SM800	1 SB804 + 1 SM804	1 SB808 + 1 SM808	1 SB800 + 2 SM800	1 SB804 + 2 SM804	1 SB808 + 2 SM808
<i>H.323 v2/v3/v4</i>	✓	✓	✓	✓	✓	✓
<i>SIP(RFC3261)</i>	✓	✓	✓	✓	✓	✓
<i>Smart-Qos</i>	✓	✓	✓	✓	✓	✓
<i>NAT Traversal</i>	✓	✓	✓	✓	✓	✓
<i>Echo Cancellation</i>	✓	✓	✓	✓	✓	✓
<i>G.711 a/u law</i>						
<i>G.723, G729AB</i>	✓	✓	✓	✓	✓	✓
<i>T.38/T.30</i>	✓	✓	✓	✓	✓	✓

### S1600/S2400 Series VoIP Modules Card Catalogue

Modules Card	Description and Function
<b>SB800</b>	Mother Board with 8 FXS Interface
<b>SB804</b>	Mother Board with 4 FXS + 4 FXO Interface
<b>SB808</b>	Mother Board with 8 FXO Interface
<b>SM800</b>	8 FXS Interface Module
<b>SM804</b>	4 FXS + 4 FXO Interface Module
<b>SM808</b>	8 FXO Interface Module
<b>ECM808</b>	8 channels Echo Cancellation Module ; Cancelable echo delay time : 55ms ; Echo attenuation : 30 db

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