



SMG2000/2000S Series VoIP Gateway



The Synway SMG2000 and SMG2000S are members of Synway's VoIP gateway family that enables service providers and enterprises to maximize value of their networks and services. It converts digital E1/T1 PSTN message into IP formats and secures sessions across IP and mixed network boundaries to support the seamless delivery of services.

The SMG2000/SMG2000S could connect IP and hybrid networks via telephony and Ethernet links in a compact 1U form factor appliance. It also transforms media and signaling to support efficient and reliable voice, fax and multimedia sessions for mobile, fixed and cloud-based applications.

Based on the state-of-art Telco's SMG2000 series VoIP gateway, enterprise-oriented SMG2000S series is more cost effective and compliant with PRI ISDN, R2 and other protocols(without SS7 packets). The newly released SMG2000S adopts the equivalent hardware architecture like Telco' grade SMG2000, with dedicated DSP chipsets processing IP/TDM signaling and optimizing voice quality. Compared to with rival products, SMG2000S features high reliability and unparalleled cost efficiency, and delivers a perfect alternative option for enterprises and system integrators.

Key Features

- Flexible and efficient VoIP Gateway Solution

With its scalable density and versatility, SMG can help enable wireless and wireline service providers to add new Value Added Services (VAS) quickly, and provide a clear migration path to an all-IP network. It can scale up to 120 simultaneous IP sessions and at the same time provide media transcoding and impressive sessions per second.

SMG2000/2000S support voice densities ranging from 30 to 120 channels, call routing, call translation and IP transcoding in a single 1U chassis for gateway operations. The integrated gateway functionality not only provides interworking between IP and TDM domains, but also automated failover from IP to TDM for outbound routing. These features help service providers looking to improve network and routing resiliency and lower TCO. These capabilities make the SMG2000/2000S an excellent option for mobile VAS, SIP trunking, contact center and emergency service deployments, as well as for retail, wholesale, business, and enhanced Voice over IP (VoIP) services.

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- Any-to-Any Signaling and Multimedia Connectivity

SMG2000 and SMG2000S provide any-to-any network connectivity through its ability to interwork multiple protocols used by telecommunications providers to deliver services to their retail, business and wholesale customers. It can provide interworking between ISDN, SS7 (SMG2000S Do Not Support SS7), SIP formats.

SMG2000/SMG2000S also support any-to-any media transcoding for popular voice codecs. T.38 and G.711 fax interworking and support for RTP, INBAND and SIPINFO method based tones and event handling complement the media transcoding capabilities to provide a high degree of flexibility to help deliver value added services economically.

- User-friendly management and configuration toolkits

The Web graphical user interface (WebUI) is a real-time web toolkit to configure, monitor SMG2000/2000S. It allows operators to configure and perform real-time monitoring and maintenance. Flexible SIP and Protocols configuration enable services providers and enterprises to seamlessly connect in hybrid networks, Helping configure SIP, SIP trunking, SIP Mediation, PCM, SS7(not for SMG2000S) and ISDN, Routing and more; And a broad range of gateway toolkits also help gateway's maintenance and software upgrading for Web UI, gateway services and firmware.

Key Features	Values
Flexible SIP and Protocols configuration enable services providers and enterprises to seamlessly connect in hybrid networks	Help configure SIP, SIP trunking, SIP Mediation, PCM and ISDN, Routing and more; a broad range of gateway toolkits help gateway's maintenance and software upgrading for Web UI, gateway services and firmware
480 simultaneous SIP sessions with multimedia transcoding, and 480 channels of ISDN signaling	Scalable IP and TDM connectivity solution provides high performance in a small footprint to help lower ownership cost and operational cost
Combined IP and TDM gateway features on a single platform	Integrated multimedia gateway features facilitate TDM and IP interworking to provide service delivery flexibility and automated failover between domains
Any-to-any signaling and media support	Support for ISDN, SIP signaling, and SIP interworking along with voice and transcoding provides a cost-effective platform to help service providers evolve from a TDM to an all-IP environment
SIP profiler and web based user configuration	Easy-to-use service configuration and management tools can help accelerate service deployment and simplify platform management
Integrated transcoding support for voice, tone and faxing	Eliminates the need to add separate hardware to support transcoding requirements helping to reduce CAPEX and number of platforms deployed
Carrier class solution	Carrier class design and features provide high availability, reliable throughput and enhanced service delivery

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Technical Parameters

Product models

SMG2000 series (1/2/4 E1/T1)

SMG2030 1E1/T1 and 30 SIP channels

SMG2060 2E1/T1 and 60 SIP channels

SMG2120 4E1/T1 and 120 SIP channels

SMG 2000S series (1/2/4/8/16 E1/T1)

SMG2030S 1 E1/T1

SMG2060S 2 E1/T1

SMG2120S 4 E1/T1

SMG3008S(Optional) 8 E1/T1

SMG3016S(Optional) 16E1/T1

Routing Features

Call routing and translation (from PCM to IP or reverse)

IP Bearer Features

Coder support: G.711A,G.711U, G.729 A/B,G723,G722, GSM, iLBC, RFC 2833,RF 3261,SIPINFO,INBOUND

Compliant with TCP/UDP, HTTP, ARP/RARP, DNS, NTP, TFTP, TELNET, STUN and more IP protocols

Echo cancellation: G.168 128 ms tail length

Voice activity detection and packet loss concealment

Comfort noise generation

T.38 real-time fax, T.38 – G.711 interworking

Digit transmission via RFC 2833 (SIP)

Hosted NAT

OAM&P

Network Time Protocol (NTP)

Web User Interface (WebUI) supports configuration via browser
SNMP MIBs

Power Requirements

AC Power Supply Range 100 – 240 VAC

The power supply will operate at frequencies between 47 Hz and 63 Hz

Power Consumption

About 167W

Operating temperature range

0 to +55 °C, 8-90% relative humidity non-condensing

Storage temperature range

-20 to +85 °C, 8-90% relative humidity non-condensing

Maintenance

Power supplies field installation

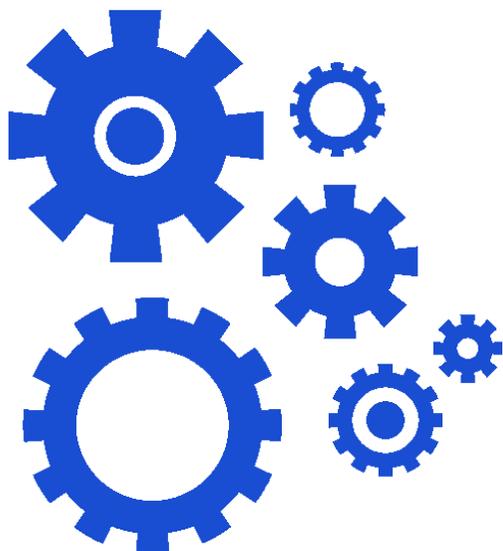
Physical Dimensions

High: 4.13 in (105 mm)

Wide: 14.37 in (365 mm)

Deep: 24.80 in (630 mm)

Weight 10.36 lb (Approx.4.7 kg)



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Resiliency

Redundant power supply(Optional)
Smart IP probing
Automated failover (Ethernet and Fiber Optical links)
Failover via automatic protection switching

Capacity

30~480 TDM channels per 1U shelf
30~480 VoIP channels per 1U shelf
I/O Interfaces — Rear I/O — T1/E1
Telephony Fiber Optical 1~16 T1/E1 for timing (BITS clock),
T1 and E1 signaling and bearer traffic (T1 - 100 ohms and E1 - 120 ohms)
Clock Sync Stratum

IP Interfaces

Dual redundant 2 *1000 Base-T Ethernet for VoIP payload and signaling

TDM Signaling Protocols

ISDN PRI
MF R2
SS7 ISUP
SS7 MTP1~3
SS7 SIGTRAN
SS7 TCAP
Notice: SMG2000S Do not Support SS7 packets

IP Protocols

Core SIP Specifications and Notable Extensions
RFC 3261 SIP Basic
RFC 3262 SIP PRACK
RFC 3265 SIP Subscribe/Notify

Notable SIP Extensions

RFC 3398 ISUP/SIP Mapping
RFC 3711 SRTP (for SIP)
Tel URI – RFC 3966
IP and ISUP interworking and more

QoS

Adaptive jitter buffer
Packet loss compensation
Configurable Type of Service (ToS) fields for packet prioritization and routing

Approvals and Compliance

For information about RoHS compliance and other approvals, please contact Synway directly.

EMC/EMI

Compliant with most international standards. For compliance documents, please contact Synway's sales representatives.

Safety

Compliant with most international standards, please ask Synway or its sales representatives worldwide. Synway would comply all new safety standard for different regions around the world while needed.

Telecom Approvals

(Partially approved)Compliant with most international standards, please ask Synway or its sales representatives worldwide.

Reliability/Warranty

Estimated MTBF per Telcordia Method 1: With Dual Redundant AC or DC Power Supplies
Rear I/O Type 1 — T1/E1
NO PSTN Interface: 150,000 hours

About Synway

As a major manufacturer and supplier of communication products and solutions, Synway specializes in providing superior Multimedia Gateway, Integrated Multimedia Switch, Telephony Hardware in use for Telecom communications. www.synway.net