# SMG4008
## GSM/CDMA VoIP Gateway

## Brief Introduction:

Built on decades of IP, multimedia processing and wireless technologies, Synway's GSM/CDMA wireless gateway, as a part of the Synway gateway family, is used for reliably bridging GSM/CDMA network with the VoIP network. With push-pull SIM card sockets for easily installing the SIM cards, it adopts advanced built-in VoIP processors and GSM/CDMA modules, and enables ISPs and VoIP solution providers to deliver highly available and versatile wireless-to-IP systems, effortlessly and cost-efficiently.

## Key Features and Benefits:

• **Complete Protocols Range**

Support standard Sip protocols, and could be used worldwide; Support both 2G/3G/4G wireless network, including both GSM/CDMA/LTE and More

• **High Voice Optimization Capability**

Adopt Synway's homegrown voice optimization technologies to ensure crystal clear communication, including DSP-based 128mc echo cancellation

• **High Flexibility and Scalability**

Could be configured from 2~32 Ports of Wireless-to-IP transmission, and support a diversity of wireless networks in a single system

• **User-friendly GUI**

Easy-to-use service Web based UI configuration and management tools could help accelerate service deployment and simplify platform management

• **High Interoperability with Terminals**

Compliant with all brands of terminal mobile devices and a complete range of SIP trunking worldwide, support auto-provision in complex network environment

• **Telco-Grade Reliability**

Adopts telco-grade standards and components to design and manufacture, and certified and approved by most telecom operators worldwide

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## GSM/CDMA VoIP Gateway

## Functional Description

- **Basic Features:**

GSM (850/900/1800/1900MHz) and CDMA (800Mhz) supported respectively by different models
Multiple voice encoding formats supported
SMS CODEC: ASCII/UCS2
Open and programmable API
PIN management
Call time restriction: SIM Card/Single Call
Operator locking
BCCH management
Call hold
Call transfer

- **Voice**

Silence suppression and detection
CNG (Comfort Noise Generator) support
VAD (Voice Activity Detection) support
Echo cancellation (G.168), up to 128ms
Self-adaptive dynamic buffering
Call progress tone generation
AGC (Automatic Gain Control) support

- **Protocol**

SIP V2.0 RFC3261
SDP RFC2327
Session Timer RFC4028
RTP/RTCP RFC3551
SIP registration
SIP trunk (Point-to-Point)
SIP trunk group
Ringback (Immediate/normal)
SIP/GSM release cause configurable
DNS SRV/A query
Out-of-stack agent
DTMF mode: Signal/RFC2833
NAT traversal
Dynamic NAT, Static NAT, STUN

- **Physical Interface**

SIM Card Socket: 8/4-port
Ethernet interface: RJ45, 2 ETH, 10/100M Base
CONSOLE: RJ45, RS232, 115200bps
Antenna interface: SMA
Status indicator: PWR, RUN, ALM, Channel state, Signal strength, ACT per network, LINK status.
Reset button

- **Network Protocol**

IP v4, UDP/TCP, PPPoE, DHCP
FTP/TFTP ARP, RARP, NTP
HTTP, Telnet

- **Management**

Configuration management based on WEB
Configuration backup/restore
Interface in Chinese/English
Firmware upgrade via HTTP/TFTP
Password modification for WEB sign-in
Factory settings restore
CDR and tracking information output
Syslog
Ping and Tracet tests based on WEB
Transport Protocol Count: TCP, UDP, RTP
VoIP Call Count
PSTN Count: ASR, ACD, PDD
Voice loopback test
IVR Customizable
System Log
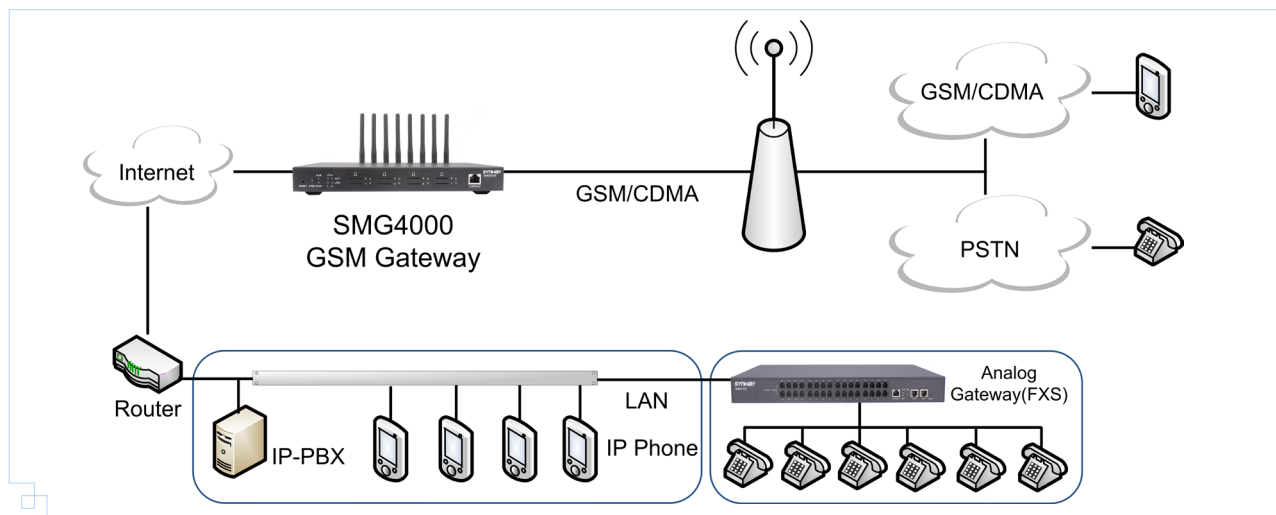Centralized cloud-platform integrated management

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## Typical Application:



## Functional Description

- **Dimensions**

260×153×30mm

- **Weight**

Net: 1.2kg
Gross: 1.8kg

- **Environment**

Operating temperature: 0℃ —55℃
Storage temperature: -20℃ —85℃
Humidity: 8%— 90% non-condensing
Storage humidity: 8%— 90% non-condensing

- **LAN**

Amount: 2 (10/100 BASE-TX (RJ-45))
Self-adaptive bandwidth supported
Auto MDI/MDIX supported

- **Console Port**

Amount: 1 RJ-45 (RS-232)
Baud rate: 115200bps
Data bits: 8 bits
Stop bit: 1 bit
Parity unsupported
Flow control unsupported

- **Power Requirements**

Input voltage: DC 12V ± 10%
Input current: ≥3A

- **Signaling Protocol:**

SIP V2.0 RFC3261

- **Network Protocol**

IP v4, UDP/TCP, PPPoE, DHCP
FTP/TFTP ARP, RARP, NTP
HTTP, Telnet

- **Audio Encoding & Decoding**

| | |
|---|---|
| G.711A | 64 kbps |
| G.711U | 64 kbps |
| G.729 A/B | 8 kbps |
| G.723 | 5.3/6.3 kbps |
| G.722 | 64 kbps |
| AMR | 4.75 kpbs |
| iLBC | 13.3/15.2 kbps |

- **Sampling Rate**

8kHz

- **Wireless Feature**

Frequency band:
GSM: 850/900/1800/1900MHz
CDMA: 800Mhz
SMS CODEC: ASCII/UCS2

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# www.synway.net

## Connect 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. Since 1995, over 3,000 service providers, software developers and system integrators have deployed Synway's offerings to deliver a broad range of TDM and VoIP-based applications worldwide, including Unified Communications, SIP Trunking, Call Center, Mobile VAS, Faxing, Conferencing, Call Recording as well as Asterisk-based Open Source Applications. With dedicated teammates and well-known premium services, Synway makes consistent efforts to deliver partners with a variety of customizable, high-performance and cost effective voice communications products.

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