# SMG3064R
# VoIP E1/T1 Gateway



The convergence of IP multimedia, TDM gateway and call classification functionality in a single chassis in the SMG3064R offers significant reductions in investment and operational cost when compared to less integrated alternatives. SMG3064R's call classification is vital for all high density OBD applications, including predictive dialing, dialer, telemarketing and more. It helps minimize dialing cost and maximize value of dialing (human and network) resources. With call classification, OBD applications could improve dialing efficiency by up to 60% and deliver high satisfaction for both agents and subscribers.

With a more efficient manner to interconnect and deliver large-scalability services, Synway's SMG3064R converts digital PSTN message into IP formats and connects and secures sessions across IP and mixed network boundaries to support the seamless delivery of services. Via telephony and Fiber Optical/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.

## Key Values and Benefits for telecom operators and SPs

- Build-in SS7, SIGTRAN, SIP, R2 & More Protocols

Complimentary standardized SS7 Packets(Up to 64 SS7 links, ISUP, MTP1~3, TCAP), SIGTRAN and SIP for any carrier networks worldwide; Field-proven by over 50 largest operators from European, China, USA, India, Brazil, South America;

- Dedicated DSP-Empowered Capability

Telecom-style DSP algorithm has been optimized for over decades, assuring seamless compliance with any network environment. Plentiful DSP resources are allocated for signaling, media processing, bandwidth optimization, Telco redundancy;

- Robust Telco-Grade Architecture

Dual power supply, 1U compact structure, industrial heating sink system, dual 1,000M Ethernet interfaces, and Telco' grade hardware architecture ensure 200,000Hr MTBF and 0-defective rate in long lifecycle ;

- Highly Adjustable For Diverse SoftSwitch

Homegrown core technologies to assure seamless compliance with diverse softswitch platform, including Mitel, Avaya, Broadsoft, Yate, OpenSIP, Asterisk, VECTRA, VSC, SIPPULSE, Tropico, FreeSwitch and more other softswitch;

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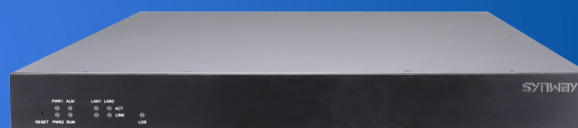
- 99.9999% Availability in Full Load

Support 64E1 (1,920Chs) per unit, with higher system responsiveness capability in extreme network for better operational results; High performance and stability in cases of unstable (low) bandwidth and high capacity;

- User-friendly WEB Management

With complete understanding about SPs and operator's headaches, SMG3064R adopts the simplest and straight-forward configuration to achieve SPs and Operators' most sophisticated objectives. Over 1,00 units of SMG3064R can run together;

- Improve Dialing Efficiency

In general database of OBD systems, unused numbers accounts for 10~30%, suspended numbers for 5~ 20%, shutdown number for 5~10%. It means around 20~ 60% dialing numbers are invalid. With call classification function, dialing systems (predictive dialer) could filter out all invalid numbers for best dialing results;

- Reduce Operational Expenditure (OPEX) by 20%

Unsuccessful dialing incurs higher operational costs while labor cost for telemarketing is specifically considered. According to analytical statistics from surveys, OPEX could be reduced by 20% or more if successful dialing ratio increases by 60%;

- Hi-Accuracy Call Classification

With call classification functionality, over 99.999 %( in some scenarios) of called number states could be accurately detected by analyzing telephone alert tones. Only in much noise conditions over the network, call classification may default ;

## Product model

SMG3064R 63E1/T1 With Built-in Call Classification

### Routing Features

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

### IP Bearer Features

Coder support: G.711A,G.711U, G.729 A/B, G.722, G.723,

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 47Hz and 63 Hz

### Power Consumption

About 167W

Environment

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: 1.72 in (44 mm)

Wide: 17.32in (440 mm)

Deep: 26.97in (690 mm)

Weight 26.32 lb (Approx.12 kg)

### Resiliency

SS7 signaling: 1+1 active/standby redundancy

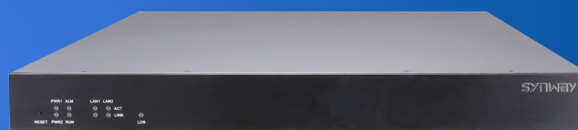Redundant power supply(Dual power system)

### Smart IP probing

Automated failover (Ethernet and Fiber Optical links)

Failover via automatic protection switching

### Capacity

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1,920 TDM channels per 1U shelf

1,920 VoIP channels per 1U shelf

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## I/O Interfaces — Rear I/O — T1/E1

Telephony   Fiber Optical 63 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

ISDN/SS7

SS7 ISUP

SS7 TCAP

Multiple SS7 links in standalone configuration

## IP Protocols

Core SIP Specifications and Notable Extensions

RFC 3261 SIP Basic

RFC 3262 SIP PRACK

RFC 3265 SIP Subscribe/Notify Approvals and Compliance

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

## 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

## 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 standardfor different regions around the world while needed.

## Telecom Approvals

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

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## 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