

- Scalable platform 1U
- Carrier-grade reliability
- Up to 768 VoIP channels
- Up to 16 E1 streams (RJ-48)
- Support for 2 HDD SATA 2.5"
- Hardware redundancy



Hybrid platform SMG-3016 is used as a digital gateway for interfacing of signal and media streams of TDM and VoIP networks. The wide function set, strict compliance with requirements and standards, as well as carrier-grade reliability allow service providers and carriers to solve most part of their objectives on the basis of SMG-3016.

Scalability

SMG-3016 provides the opportunity to evenly distribute investments for scaling throughout the entire project implementation period. The gateway supports up to 16 E1 streams (SS7, PRI, V5.2) and up to 768 VoIP channels.

Carrier-grade reliability

Uniform load distribution between submodules, redundant power supplies, as well as the use of modern technologies based on parallel computing provide a high level of fault tolerance of the SMG-3016 trunk gateway with automatic switching to a backup submodule in the event of any system submodule failure or the power source.

Functional compatibility

The strict compliance with requirements of up-to-date protocols, recommendations and standards provides functional compatibility of SMG-3016 with a variety of equipment: digital PBX, Softswitch, VoIP gateways, software SIP clients, etc.

Media streams transcoding

The hardware transcoding helps to negotiate media streams with different VoIP codecs which are used in up-to-date networks.

RADIUS routing

Intellectual call routing based on billing system responses via the RADIUS protocol allows you to create flexible methods of call processing.

Features and capabilities

Voice codecs

- G.711 (a-law, μ -law), G.729 (A/B), G.723.1, G.726 (32 Kbps), G.722

Fax transmission

- T.38 Real-Time Fax, G.711 (a-law, μ -law) pass-through

Voice standards

- VAD (Voice Activity Detection)
- CNG (Comfort Noise Generation)
- AEC (Acoustic Echo Cancellation, G.168 recommendation)
- AGC (Automatic Gain Control)

Quality of service (QoS)

- Diffserv and 802.1p priorities assignment for SIP and RTP
- Dynamic and static jitter buffer

DTMF

- INBAND, RFC 2833, SIP INFO, SIP NOTIFY transmission methods
- Auto-detection of the DTMF receiving method

Flexibility

- Multiple network interfaces creation for telephony (SIP, RTP) with different IP addresses
- Operation with multiple dialplans
- Signal SS7 channel redundancy
- Voice activity control (by the presence of RTP or RTCP)
- Individual routing for streams of a single SS7 linkset

TDM protocols

- SS7
- PRI (Q.931)
- Q.699 (PRI and SS7 interaction)
- V5.2 LE¹
- V5.2 AN²

Capacity and performance

- Up to 768 VoIP channels
- Up to 16 E1 streams (RJ-48)
- Maximum load intensity — 120 cps
- RAM:
 - 2 GB
 - 8 GB — for PCB rev. B

Interfaces

- 16 × E1 ports (RJ-48) C4E1 card
- 2 × 10/100/1000BASE-T ports (RJ-45)/1000BASE-X (SFP)
- 2 × 10/100/1000BASE-T ports (RJ-45)
- 2 × USB 2.0 ports
- 1 × SM-VP-M300

Management and monitoring

- E1 and VoIP channels monitoring via web interface
- Channels and SS7 links management via web interface
- Alarm logging with the opportunity to save entries to syslog server
- Storing traces on HDD and USB drives
- Emergency notification through SNMP
- Console port RS-232 (RJ-45)
- Allocated management port (OOB) 10/100/1000BASE-T (RJ-45)
- Automatically enable logging after the gateway restart
- Monitoring of web interface active user sessions
- Ability to launch and monitor tasks of the voice notification system from the subscriber's personal account¹

VoIP protocols

- SIP, SIP-T/SIP-I, SIP-Q
- H.323¹
- SIGTRAN (M2UA, IUA)²
- H.248²

¹Optional.

²Not supported in the current firmware version.

Features and capabilities (continued)

Physical specifications and environmental parameters

Operating temperature range	from 0 to +40 °C	
Relative humidity	up to 80 %	
Noise level	from 44 to 60 dB	
Power supply	AC: 100–240 V, 47–63 Hz DC: 36–72 V Power supply options: – AC/DC power supply; – 2 hot-swappable AC/DC power supplies.	
Power modules	AC, power module PM160-220/12 160 W	DC, power module PM100-48/12 100 W
Power consumption	up to 50 W	
Dimensions (W × H × D)	430 × 45 × 340 mm	
Form factor	19", 1U	
Weight	5.3 kg	

¹ Optional.

² Supported from 3.19.0 firmware version.