KHOMP

FXS and VoIP
User Media Gateway

Features

- 24 FXS channels
- Route failover
- Registering of up to 10 SIP accounts
- SBC - routing between VoIP channels*
- Stand-Alone Survivability - SAS*

* *Optional feature - optional items are available at an additional cost.*

Applications

- Connection of analog extensions to VoIP links with advanced features

Overview

The UMG FXS 240 is a voice gateway that is part of Khomp's line of media gateways. This gateway was designed for those who need to connect telephones and other analog devices to a VoIP network, eliminating the need to replace such devices and the corresponding cables. Thus, the UMG FXS 240 offers a better cost benefit relationship, as well as greater agility in installation.

This robust and effective device has 24 FXS channels and allows you to add up to 10 VoIP accounts, with or without registration. It features two Ethernet Gigabit ports, enabling the configuration of two distinct networks. Its processors are dedicated to handling critical telephony, signaling, and echo canceling tasks. It supports industryleading signaling and codec offerings, and it handles the control and routing of calls according to predefined rules.

Models

The UMG FXS 240 can be purchased with or without a frontal display, and the power supply can either be internal or external.

- **UMG FXS 240 D0P0** → No display; includes an external power supply.
- **UMG FXS 240 D0P1** → No display; includes an internal power supply.
- **UMG FXS 240 D1P0** → Includes a display and an external power supply.
- **UMG FXS 240 D1P1** → Includes a display and an internal power supply.

Route failover

The UMG offers route failover to avoid downtime in call processing in case of a VoIP server failure. The failover function is implemented by using routes along with VoIP server monitoring through the Keep Alive feature. When the Keep Alive function is active, the UMG sends OPTIONS messages to the VoIP server in order to monitor its status.

When this server does not respond to the OPTIONS command, the UMG then ignores the route through which this server is being used and searches for another compatible route.

Table of simultaneous calls

The UMG FXS 240 can make up to 24 simultaneous calls through the analog FXS channels. There are 57 VoIP channels available to be used in calls between an analog channel and VoIP, as well as in VoIP-VoIP calls (SBC), which makes the UMG a flexible voice gateway.

As indicated in the last line of the table below, if there are 24 physical channel calls in use, you can still make 16 additional simultaneous calls between VoIP channels using the G.711 codec, or 10 calls using transcoding, or 7 calls using the G.729 codec.

Maximum number of calls between a physical channel and VoIP (with G.711 codec)	Maximum number of simultaneous SBC calls**		
	With codec G.711 ↔ G.711	With codec G.729 ↔ G.711	With codec G.729 ↔ G.729
0	28	19	14
5	26	17	13
10	23	15	11
15	21	14	9
20	18	12	8
24	16	10	7

Technical specifications

Attention

- Product hardware may be replaced without notice.
- Replacement happens when raw material is not available on the market or when better hardware comes along.
- When the hardware is replaced, the product will operate at the same potential as the previous configuration.

FXS

- 24 channels
- 50-channel Centronics Connector
- Ring voltage: 50–70 Vpp/25 Hz
- Extension numbering plan
- Dialing time-out setup
- End-of-dial marker
- Known numbers registering (Dial Plan)
- Ring cadence configuration Distinctive ring
- Internal and external ring tone setting
- Caller ID generation through DTMF or FSK
- Flash validation time
- Operations available at extensions:
  - Call on-hold
  - Assisted transfer
  - Blind transfer
  - Alternate Call Answering

Security

- Password-protected access to the web interface
- Access via HTTP or HTTPS
- ACL - Access Control List for the web interface
- Network topology hiding for VoIP/VoIP routing (SBC)*

Stand-Alone Survivability (SAS)*

- Up to 120 extensions can be registered in this mode

* *Optional feature - optional items are available at an additional cost*

Other features

- Simplified web configuration
- Single-step initial configuration wizard
- Diagnostics interface
- Dashboard with channel status and call statistics
- Line volume setting
- DTMF suppression
- Customizable CDR
- SNMP Support
- Log recording on a remote server or local site
- FTP access

Warranties and Certifications

- Total warranty (legal + Khomp warranty): 3 years
  - Legal warranty: 90 days
  - Khomp warranty: 2 years and 9 months
- ISO 9001 certified industry

VoIP

- Up to 10 VoIP accounts with or without registration
- Supported Codecs:
  - G.711 (a-law and μ-law)
  - G.729A (up to 29 simultaneous calls in this configuration)
  - G.723
  - G.726
- Network port selection for SIP protocol and RTP for each
- VoIP account
- SIP using TCP
- RTP using SRTP
- Keep Alive support (SIP OPTIONS)
- Option to ignore source port
- Use of a destination number through URI
- Q.850 Cause Report
- DTMF sending mode selection:
  - In band
  - Out band – RTP (RFC 2833)
  - Out band – SIP Info
- Supports fax T.38 and pass-through
- Echo canceling:
  - Standard filter: G.168/2002
  - Dual filter: G.168/2004
  - Tail-length adjustment up to 128 ms
- VPN support
- NAT traversal using STUN
- NAT traversal by defining a fixed external IP

Smart modular routing

- Route selection by prefix
- Route selection by regular expressions
- Modification of destination and source numbers
- Imposing of the codec and the destination profile along the route with VoIP output
- Route failover
- Use of the "Display name" as the caller ID
- Registration of up to 50 routes

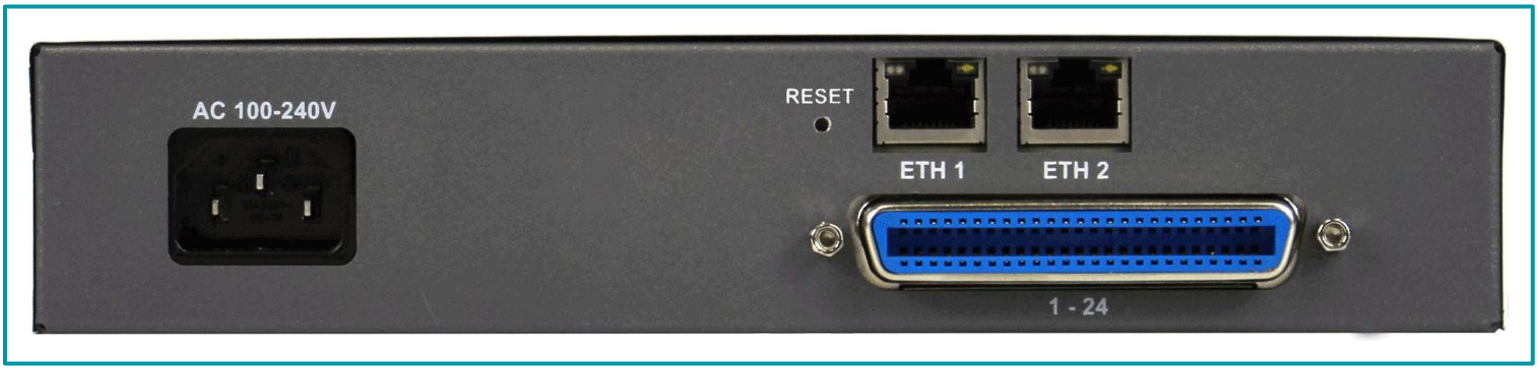
Physical/Environmental

- Internal power supply:
  - 100–240 VAC, 50/60 Hz
  - Maximum power consumption: 30 W
- External power supply:
  - Input: 100–240 VAC, 50/60 Hz
  - Output: 12 V, 5 A
  - Maximum power consumption: 30 W
- Dimensions (W x H x L): 8.7" x 1.75" x 11"
- Approximate weight: 3.7 lb (without packaging)
- Standard 1U module, 19" half-rack (includes ear for fixation onto the rack)
- 2x RJ45 Gigabit Ethernet 10/100/1000 Mbps
- Gateway status LED
- Telephony channel status LED
- Error warning LED
- Reset button

Product images

Legend: *Front view of model with no display.*

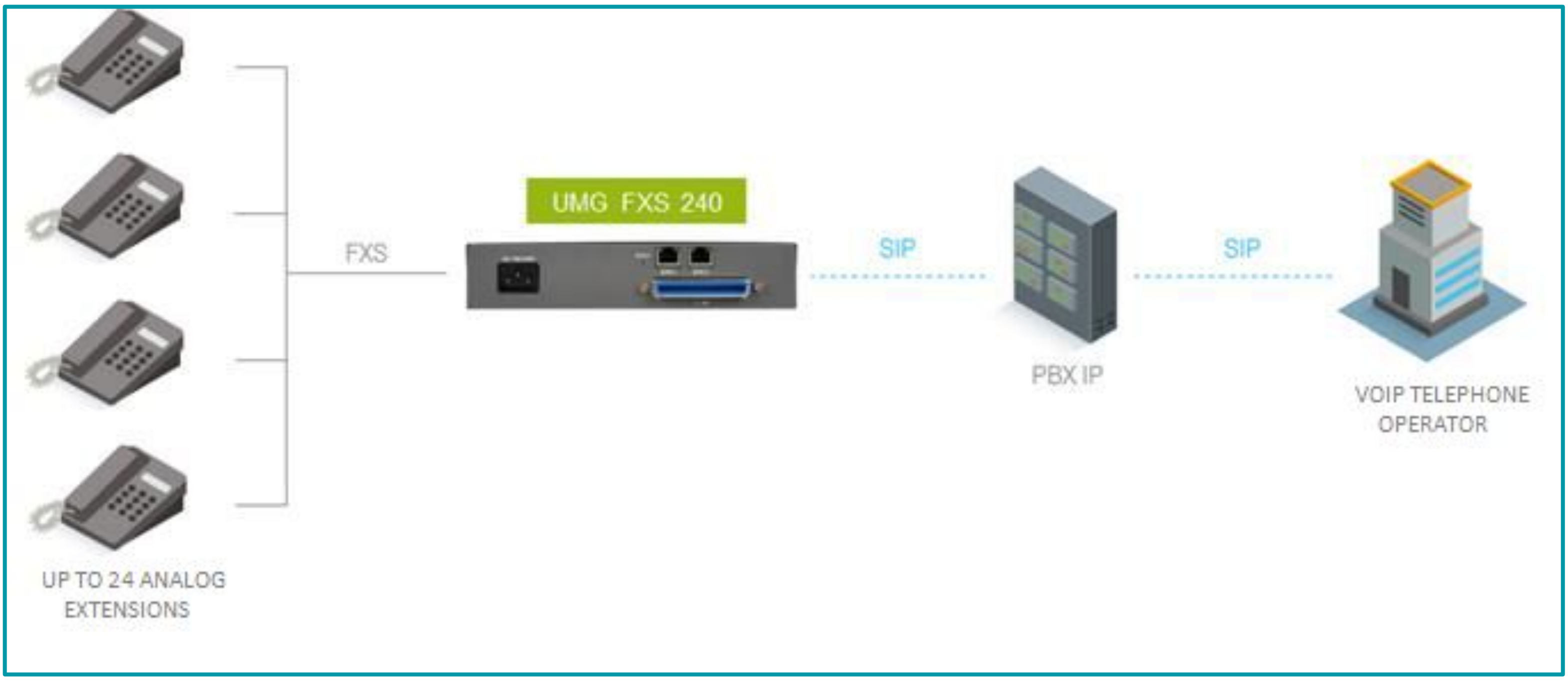
Legend: *Front view of model with display.*



Legend: *Rear view of model with external supply.*

Legend: *Rear view of model with internal supply.*

Application model



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