



# QXFXS24

Designed to be added to an IP network, the QXFXS24 Gateway allows existing analog phones to join the new VoIP network. The system is easily stacked for additional capacities and can be installed with any SIP-compliant IP PBX or plug-and-play with an Epygi QX IP PBX. This gateway is unique from other standard FXS gateways because of the numerous included features.

FXS ports	24
Ethernet LAN port	1
Ethernet WAN port	1
Call Routing capable of modifying caller ID or time of day routing	
Firewall, VPN Router, Stacking Options, Failover	

# FEATURES

## Telephony

Basic PBX Features in stand-alone mode

- Call waiting
- Call history
- Hot Line
- Dial plans (call routing), time of day routing
- G3 fax support: T.38 and clear channel fax

Additional PBX Features available when used with QX IP PBX

- Call blocking, forwarding, hold, transfer, Call Relay
- Caller ID detection and hiding caller ID
- Call park, call pickup
- Many Extension Ringing
- Call hunting
- Find Me / Follow Me
- Voicemail system
- Voicemail notification via SMS/email
- Caller ID-based voicemail profile
- Speed dial
- Hold music
- Alarm Service
- Dial & Announce
- Do Not Disturb
- Three-way conferencing
- Unified Fax Messaging
- Busy auto redial
- Directory assistance
- Class of Service
- Call queue

PC-Based Applications

- QX-Quadro Configuration Console (QCC)

Voice Features

Voice Coding:

- G.711, G.726 (16, 24, 32, 40 Kbps), G.729A, iLBC (13,33 kbit/s, 15,2 kbit/s); VAD, CNG, G.168 echo cancellation

VoIP Encryption:

SRTP

VoIP Signaling:

SIP v2, SIP/TLS

DTMF:

In band & out of band signaling support

VoIP Data and Signaling Protocols

- ITU-T G.711, G.726, G.729 Annex A, G.168-2000, 2002, Q.23, Q.24;
- IETF RFC 3951- iLBC;
- Telcordia (Bellcore) GR.506, GR.181;
- ETS\_300 659\_1,2,3;
- SIP, SIP/TLS (RFCs: 2246, 3261, 3263, 3265, 3311, 3323, 3428, 3515, 3578, 3581, 3842, 3856, 3863, 3891, 3892, 4028, 4235)
- SDP (RFC: 2327, 4568)
- RTP/SRTP (RFCs: 1889, 1890, 3389, 3550, 3551, 3555, 3711, 4733, 3952)

Fax over IP (ITU-T: T4, T30, T38, V17, V21, V27 ter, V29)

POTS Signaling

- Loop start
- FSK and DTMF Caller ID support
- FSK message waiting indicator support

## Connectivity

Physical Interfaces

Premise connections:

- 24 FXS short-loop FXS ports (RJ-21)
- 1 LAN Ethernet 10/100 BASE-T port (RJ-45)

Uplink connections:

- 1 WAN Ethernet 10/100 BASE-T port (RJ-45)

Phones

- 24 analog phones (or other analog devices) to connect via FXS ports

Virtual extensions:

- Up to 200 virtual extensions can be added\*

System Capacity

- Up to 24 simultaneous VoIP calls with external parties

## Network

STUN/Network Address Translation (NAT) traversal (RFC 3489)

IPSec VPN with 3DES and AES encryption in tunnel mode (RFCs: 2402, 2406, 2409)

Automatic Internet Key Exchange (IKE)

keying support

PPTP VPN, L2TP VPN

Firewall security via:

- Intrusion Detection System (IDS)
- Network Address Translation (NAT)
- Policy and service-based filtering
- Stateful inspection firewall
- SIP Intrusion Detection System (SIP IDS)
- DHCP server on the LAN side
- DHCP client on the WAN side
- DNS server with forwarding functionality
- Simple Network Time Protocol (SNTP) server/client for computer clock synchronization
- PPPoE connection to the ISP with PAP/MS CHAP authentication
- IP DIFFSERV for QoS
- SIP tunneling
- DNS (DYNDNS) support with third party
- NAT with port forwarding and translation

## System

Management

- Operation modes: as stand-alone or FXS expansion device
- Easy auto configuration and Plug-and-Play (PnP) with QX IP PBXs
- Multilingual web interface accessible from LAN and WAN (HTTP/HTTPS)
- Password control
- User rights management
- Remote diagnostics and software upgrade
- Download/restore configuration
- Legible and editable configuration files
- FXS Lines Gain Control
- SNMP monitoring and configuration
- Reset button with factory reset option
- Custom language pack
- System event notification via SMS/email
- Emergency recovery

Diagnostics/Testing

- System status LED
- Loop settings
- Network diagnostics
- Security diagnostics
- Remote testing
- System logs, SIP IDS logs
- Call capture

Billing and Statistics

- Radius Client (RFCs: 2865, 2866), Call Detail Records (CDR)

## Environmental

Physical Dimensions

Rack-mountable devices:

Measurements:

8.3" x 7.9" x 1.6" (21.0 x 20.0 x 4.0 cm)

Weight:

2.67 lbs. (1.21kg)

Conditions

Operating temperature:

41°F - 104°F (5°C - 40°C)

Storage temperature:

41°F - 140°F (5°C - 60°C)

Non-condensing humidity:

5% - 90%

Powering Options

Input: 85-264VAC, 47-63Hz, AC

Power Consumption

12.5W (idle), 32.25W (max)

\* The total number of extensions used for analog phones and virtual extensions in stand-alone mode can not exceed 200.