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 ports	1
Ethernet WAN ports	1
Call routing table	
Digit manipulation	

Telephony

PBX Features
- Call Waiting
- Call Detail Records
- Dial plans (call routing), time of day routing
- G3 fax support: T.38 and clear channel fax

PBX Features (supported with QX IP PBX)
- Call Blocking, Forwarding, Hold, Transfer, Call Relay and Call Waiting
- 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 dialing
- Hold music
- Do Not Disturb
- Call Statistics
- Unified Messaging
- Three-Way Conferencing
- G3 fax support: T.38 and clear channel fax
- Unified Fax Messaging
- Busy auto-redial
- Directory assistance
- Dial plans (call routing), time of day routing
- Class of Service
- Call Queue

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, 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, SIPS/TLS (RFCs: 2246, 3261, 3263, 3265, 3311, 3323, 3324, 3325, 3428, 3515, 3578, 3581, 3725, 3842, 3856, 3863, 3891, 3892, 4028, 4235)
- SDP (RFC: 2+*968/327, 4568)
- RTP/SRTP (RFCs: 1889, 1890, 2833, 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 (RJ45)

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

Virtual Extensions:
- Up to 400 Virtual Extensions can be registered*

*The total number of extensions used for analog phones and Virtual Extensions in stand-alone mode can not exceed 400.

System Capacity
- Up to 24 simultaneous VoIP calls with external parties
- Unlimited station-to-station calling for analog phones

Network

- STUN/Network Address Translation (NAT) traversal (RFC 3489)
- IPSec VPN with DES, 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: stand-alone and PnP
- Easy auto configuration with QX IP PBXs
- 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), CDRs

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%

Power Supply
- Input: 85-264VAC, 47-63Hz, AC 0.75A/115VAC, 0.5A/230VAC;

TD-QXFXS24-Let-01