



# QXFXO4

The QXFXO4 Gateway is designed to add four additional outside PSTN lines to a corporate phone network when paired with an Epygi QX IP PBX. Integrating this product with any QX IP PBX allows the Gateway to then be managed through the IP PBX’s GUI. The system includes a firewall and can be used to IP-enable a legacy analog PBX by connecting the FXO ports to FXS extensions.

Capabilities	
FXO PSTN ports	4
Ethernet LAN port	1
Ethernet WAN port	1
Call Routing capable of modifying caller ID or time of day routing	
Firewall, VPN Router, Auto Attendant, Stacking Options, Failover	

# FEATURES

## Telephony

### PBX Features

- Auto Attendant with standard and customizable scenarios
- Incoming/Outgoing Call blocking, Unconditional call forwarding
- Call history with archiving
- G3 fax support: T.38 and clear channel fax
- Call Routing with Local Authentication, Date/Time, Call Alert Settings, Filter on Source/Caller ID Modifying
- Gateway Hosted Survivability

### PC-Based Applications

- QX-Quadro Configuration Console (QCC)
- Epygi Media Streamer (EMS)

### 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:
  - S RTP
- VoIP Signaling:
  - SIP v2, SIP/TLS

### 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

## Connectivity

### Physical Interfaces

- Premise connections:
  - 1 LAN Ethernet 10/100 BASE-T port (RJ-45)
- Uplink connections:
  - 4 FXO ports to the central office (RJ11)
  - 1 WAN Ethernet 100 BASE T (RJ45)

### System Capacity

- 4 simultaneous IP-PSTN calls

### Extensions

- 24 extensions by default
- Up to 200 virtual extensions can be added

## 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
- Virtual LAN (VLAN/IEEE 802.1Q)
- DNS support with third party
- NAT with port forwarding and translation

## System

### Management

- Operation modes: Master/Slave
- Easy interconnection with QX IP PBXs
- Web interface accessible from LAN and WAN (HTTP/HTTPS), the WAN management access can be switched off
- Password control
- User rights management
- Remote diagnostics and software upgrade
- Download/restore configuration
- Reset button with factory reset option
- Custom language pack
- System event notification via SMS/email
- Emergency recovery

### Diagnostics/Testing

- System Status LED
- Remote testing
- FXO and network diagnostics
- Security diagnostics
- 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:
  - 8.0" x 4.0" x 1.6" (20.5 x 10.5 x 4.0 cm)
- Weight:
  - 1.28 lbs. (580g)

### 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
- Auxiliary output power: 12.0VDC, 0.6A (max)

### Power Consumption

- 2.2W (idle), 5.6W (max)