



**MICROTEL
TECHNOLOGY**

Simple solutions for your communication needs



QXFX04

The QXFX04 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.

FXO PSTN ports	4
Ethernet LAN ports	1
Ethernet WAN ports	1
VPN capability	
Firewall	
Stand-alone or paired with a QX IP PBX	

FEATURES

Telephony

PBX Features

- Multi-level Auto Attendant with Interactive Voice Response (IVR) and VoiceXML v2 support
- Call blocking, unconditional call forwarding
- Call history
- G3 fax support: T.38 and clear channel fax
- Dial plans (call routing), time of day routing

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

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

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. (580 g)

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

Power Consumption

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