



QX50

The QX50 IP PBX is designed for offices with as many as 50 users. The QX50 can support up to 48 IP phones and 16 concurrent calls, four of which can use a VPN tunnel. In addition, this system has two FXO analog PSTN connections and two FXS analog station ports. SIP trunking allows for the QX50 to connect directly to an ITSP with no additional equipment. The QX50 includes a firewall and SIP Intrusion Detection for optimal security. Additional E1, T1, FXO, ISDN BRI and FXS ports can easily be provided using the Epygi QX Gateways. When rack-mounted and paired with an Epygi QX Gateway, power redundancy provides added protection.

Interconnection with QX Gateways

Analog phones	2
IP phones	16
Additional IP phones with keys	32
Total phones	50
Concurrent calls	16
FXO PSTN ports	2
Ethernet LAN ports	1
Ethernet WAN ports	1
Audio In port	1
Audio Out port	1
SD slot	1

GATEWAYS	Recommended Number (max)
QXFXO4	4
QXISDN4	2
QXE1T1	1
QXFXS24	2

FEATURES

Telephony

PBX Features

Multi-level Auto Attendant with Interactive Voice Response (IVR) and VoiceXMLv2 support
Call Blocking, Forwarding, Hold, Transfer, Call Relay and Call Waiting
Caller ID Detection and Hiding Caller ID
Voicemail system
Voicemail notification via SMS/email
Caller ID-based voicemail profile
Call Park, Call Pickup, Paging, Intercom
Distinctive ringing
Speed dialing
Many Extension Ringing
Receptionist
Call Hunting
Automated Call Back from Auto Attendant
Hold music
Call Detail Records
Do Not Disturb
Global speed dial
Find Me/Follow Me
Unified Messaging
Three-Way Conferencing
Hotline service
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
Redundancy
Automatic Call Distribution*
Call Recording (12 ports)*
Barge-In*
Audio (16 ports) / Video (8 ports)
Conference Server*
Mobile Toggling*

Licensable PC-Based Applications
Desktop Communication Console (DCC)*
Auto Dialer*

*Requires a software license key

Voice and Video 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
G.722 pass-through point-to-point
HD call

Video Coding:

H.263 and H.264 pass-through
point-to-point video call

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: 2327, 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:

2 FXS short-loop FXS ports (RJ-11)
1 LAN Ethernet 10/100 BASE-T port
(RJ-45)

Uplink connections:

2 FXO ports to the central office (RJ11)
1 WAN Ethernet 10/100 BASE-T (RJ45)

Audio port connections:

Line-in/line-out (line-in signal level - 0.5V
RMS, Line-out $R_{load} > 600\Omega$ to
10K Ω)

Phones

IP phones:

16 SIP phones by default
32 additional SIP phones may be added
with feature keys
All SIP phones can be connected both
from LAN or WAN side
Plug-and-Play (PnP) with select IP Phone
manufacturers

Analog phones:

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

Auto Attendants and Virtual Extensions

Auto Attendants:

Up to 200 standard and custom Auto
Attendants can be registered

Virtual Extensions:

Up to 200 Virtual Extensions can be
registered**

**The total number of extensions used for IP
phones, analog phones, Auto Attendants and
Virtual Extensions can not exceed 200.

System Capacity

Up to 16 simultaneous VoIP calls with
external parties
Unlimited station-to-station calling for
IP phones
Unlimited station-to-station calling for
analog phones
Two analog PSTN calls with external parties

Memory Storage

SD card

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
Virtual LAN (VLAN/IEEE 802.1Q)
Mail client to send voice and fax messages
as email attachments (.wav and .tif
respectively) and system notifications
DNS (DYNDNS) support with third party
NAT/router with port forwarding and port
translation

System

Management

Multilingual web interface accessible from
LAN and WAN (HTTP/HTTPS)
Password control
User rights management
Remote diagnostics and software upgrade
VoIP Carrier Wizard
Download/restore configuration
Legible and editable configuration files
Auto configuration of IP phones via TFTP
and HTTP
SNMP monitoring and configuration
Third Party Call Control (3PCC) XML RPC*
Reset button with factory reset option
Extension status watching (with DCC)
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), CDRs

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:

1.26 lbs. (570 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
0.4A/115VAC, 0.2A/230VAC;
Auxiliary output power: 12.0VDC,
0.6A (max)