



QX200

With the ability to support 64 concurrent calls, the QX200 IP PBX is designed for offices with up to 200 employees. The system has four FXO ports in order to connect to the PSTN and two FXS ports for analog phones and fax machines. SIP trunking allows for the QX200 to connect directly to an ITSP with no additional equipment. The QX200 includes a firewall and SIP Intrusion Detection for optimal security. Additional E1, T1, FXO 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.

Capabilities	
Analog phones	2
IP phones	24
Additional IP phones with keys	176
Total phones	202
Concurrent calls	64
FXO PSTN ports	4
Ethernet LAN port	1
Ethernet WAN port	1
Audio In port	1
Audio Out port	1
SD slot	1

Interconnection <i>with</i> QX Gateways	
GATEWAYS	Recommended Number (max)
QXFXO4	16
QXE1T1	2 (E1 mode), 3 (T1 mode)
QXFXS24	8

FEATURES

Telephony

PBX Features

Auto Attendant with standard and customizable scenarios
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 dial
Many Extension Ringing
Receptionist
Call hunting
Call back from Auto Attendant
Emergency Call Alert
Hold music
Call history
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
Universal Extension Recordings
Busy auto redial
Directory assistance
Dial plans (call routing), time of day routing
Scheduling, Day/Night Switching
Alarm
Dial & Announce (D&A)
Class of Service
Calling Cost Control*
Call queue
Redundancy*
Automatic Call Distribution (ACD)*
Epygi ACD Console (EAC)*
Call Recording (20 ports)*
Barge-In*
Conference Server*
Audio (32 ports) / Video (16 ports)
iQall Mobile Toggling*

PC-Based Applications

Desktop Communication Console (DCC)*
QX-Quadro Configuration Console (QCC)
Epygi Media Streamer (EMS)
Epygi Hotel Console (EHC)*
Auto Dialer*

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 and G.722.1 pass-through point-to-point HD call
Video Coding:
H.263, H.263+ and H.264 pass-through point-to-point video call
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;
SDP (RFC: 2327, 4568)
SIP, SIP/TLS (RFCs: 2246, 3261, 3263, 3265, 3311, 3323, 3428, 3515, 3578,

3581, 3842, 3856, 3863, 3891, 3892, 4028, 4235)
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:
2 FXS short-loop FXS ports (RJ-11)
1 LAN Ethernet 10/100 BASE-T port (RJ-45)

Uplink connections:

4 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:
24 IP phones by default
176 additional IP phones may be added with feature keys
All IP phones can be connected both from LAN or WAN side or as remote extensions
Auto provisioning support for all IP phones from selected manufacturers
PnP configuration support for the most of IP phones from selected manufacturers
Auto configuration using OpenVPN service for some of selected IP phones

Analog phones:

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

Auto Attendants and virtual extensions

Auto Attendants:
Up to 400 Auto Attendants can be added

Virtual extensions:

Up to 400 virtual extensions can be added**

System Capacity

Up to 64 simultaneous VoIP calls with external parties
Unlimited station-to-station calling for IP phones
Four analog PSTN calls with external parties

Memory Storage

SD card

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)
Mail client to send voice and fax messages as email attachments (.wav and .tif/.pdf 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), 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%

Powering Options

Input: 85-264VAC, 47-63Hz, AC
Auxiliary output power: 12.0VDC, 0.6A (max)

Power Consumption

2.8W (idle), 6.7W (max)

* Requires a software license key

** The total number of extensions used for IP phones, analog phones, Auto Attendants and virtual extensions can not exceed 400.