



# QX200

The QX200 IP PBX is designed for small to mid-sized businesses, supporting up to 258 users and 64 concurrent calls. It provides integrated VoIP, PSTN connectivity, and advanced security features, making it a reliable and scalable communication solution. 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 the QX200 to connect directly to an ITSP with no additional equipment. The QX200 includes a firewall and SIP Intrusion Detection & Protection System 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 by default	24
Additional IP phones with keys	232
Total phones	258
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 *with* QX Gateways

GATEWAYS	Recommended Number (max)
QXFXO4	16
QXE1T1	2 (E1 mode), 3 (T1 mode)
QXFXS24	8

# FEATURES

## Telephony (Default)

Auto Attendant with standard and customizable scenarios and call history  
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, multicast paging, intercom  
Distinctive ringing  
Speed dial  
Many Extension Ringing, Call hunting  
Receptionist  
Call Park with Paging  
Call Park on Auto Attendant  
Call back from Auto Attendant  
Emergency Call Alert  
Hold music  
Call history with archiving  
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 by Name  
Phone Book  
Authorized Phones  
Dial plans (call routing), time of day routing  
Scheduling, Day/Night Switching  
Alarm  
Dial & Announce (D&A)  
Class of Service  
Call queue  
Hot Desking  
Media Streamer  
Parent-Child extension configuration  
Local Authentication for making call  
PIN code Barring

## Telephony (Key Required)

Calling Cost Control  
Redundancy  
Automatic Call Distribution (ACD)  
Epygi ACD Console (EAC)  
Epygi Automatic Outbound Calling (AOC)  
AI Transcription

- Voice Mail (VM)/Call Recording (CR) Transcription (with Diarization)
- Voice-Enabled Auto Attendant (IVR)
- Epygi Virtual Intelligent Assistant (EVIA)

Text-to-Speech  
CRM Integration  
Call Recording (32 ports)  
Barge-In  
Conference Server  
Audio (32 ports) / Video (16 ports)  
uCall Softphone  
uCall SMS/WhatsApp Messaging  
uCall Receptionist Console  
Third Party Call Control (3PCC) XML RPC

## PC-Based Applications

QX-Quadro Configuration Console (QCC)  
Auto Dialer

## Voice/Video Protocols

### Voice Coding:

G.711, G.726 (16, 24, 32, 40 Kbps), G.729A, iLBC (13,33 kbit/s, 15,2 kbit/s), VAD, CNNG, G.168 echo cancellation, G.722 and G.722.1 pass-through point-to-point HD call, OPUS

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### 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;  
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  
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  $\Omega$ )

## Phones

### IP phones:

24 IP phones by default  
232 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  
IP phones Proxy Connection

### 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 & Protection System (IDS/IPS)  
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  
Monitoring via ecMON  
Download/restore configuration  
Legible and editable configuration files  
Auto configuration of IP phones via TFTP and HTTP  
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  
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)

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

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