



# QX5000

The QX5000 is designed for offices of up to 5,000 users supporting up to 700 concurrent calls to/from external networks. Any number of required FXS, FXO, E1 and T1 analog or digital ports can be easily added by interconnecting with Epygi QXFXO4, QXE1T1, QXISDN4 and QXFXS24 Gateways. It can connect to the PSTN using Gateways or directly with SIP trunks through an ITSP.

## Capabilities

IP phones	500
Additional IP phones with keys	4,500
Total IP phones	5,000
Concurrent calls	700
Ethernet LAN port	1
Ethernet backup	1

## Interconnection *with* QX Gateways

<b>GATEWAYS</b>	Recommended Number (max)
<b>QXFXO4</b>	32
<b>QXISDN4</b>	32
<b>QXE1T1</b>	20 (E1 mode) 24 (T1 mode)
<b>QXFXS24</b>	100

# 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
- G3 fax support: T.38 and clear channel fax
- Universal Extension Recordings
- Busy auto redial
- Directory assistance
- Phone Book
- Dial plans (call routing), time of day routing
- Scheduling, Day/Night Switching
- Alarm
- Dial & Announce (D&A)
- Class of Service
- Call queue
- Calling Cost Control\*
- Redundancy\*
- Automatic Call Distribution (ACD)\*
- Epygi ACD Console (EAC)\*
- Epygi Automatic Outbound Calling (AOC)\*
- Call Recording (320 ports)\*
- Barge-In\*
- Conference Server\*
  - Audio (288 ports)/Video (104 ports)
- Auto Dialer application support\*
- iQall Advanced Features\*
- eQall Softphone\*

### 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, CNR, G.722 and G.722.1 pass-through point-to-point HD call, OPUS

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; IETF RFC 3951- iLBC;  
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)

## Connectivity

### Physical Interfaces

Network connections:  
2 Ethernet 10/100/1000 BASE T (RJ45)

### IP Phones

500 IP phones by default  
Up to 4,500 additional IP phones may be added with feature keys  
All IP phones can be connected both from LAN 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

### Auto Attendants and virtual extensions

Auto Attendants:  
Up to 5,000 Auto Attendants can be added\*\*

Virtual extensions:  
Up to 5,000 virtual extensions can be added\*\*

### System Capacity

Up to 700 simultaneous VoIP calls with external parties  
Unlimited station-to-station calling for IP phones

### Emergency Repair Boot-up Device

DVD-ROM

## Network

STUN/Network Address Translation (NAT) traversal (RFC 3489)  
Firewall security via:

- Policy and service-based filtering
- Stateful inspection firewall

SIP Intrusion Detection System (SIP IDS)  
DHCP server on the LAN side  
DNS server with forwarding functionality  
Simple Network Time Protocol (SNTP) server/client for computer clock synchronization  
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

## System

### Management

- Multilingual web interface accessible from LAN (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\*
- Extension status watching (with DCC)
- Custom language pack
- System event notification via SMS/email
- Emergency recovery

### Diagnostics/Testing

- System logs
- Remote testing
- 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:  
16.8" x 14" x 1.7" (42.6 x 35.6 x 4.3cm)  
Weight:  
15 lbs (6.8 kg)

### Conditions

Operating temperature:  
50°F - 95°F (10°C - 35°C)  
Storage temperature:  
-31°F - 140°F (-35°C - 60°C)  
Non-condensing humidity:  
5% - 90%

### Power Supply

100 - 240V, 50-60Hz, 4A (max)  
Hot plug power supplies with full redundancy option

### Regulatory Compliance

- Power Supply Safety/EMC
- USA - UL listed, FCC
- Canada - CUL listed
- Germany - TUV Certified
- Europe/CE Mark
- EN 60950/IEC 60950-Compliant

\* Requires a software license key

\*\* The total number of extensions used for IP phones, Auto Attendants and virtual extensions can not exceed 5,400.