



## QX500L

The QX500L 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. The QX500L includes a firewall and SIP Intrusion Detection & Protection System for optimal security. It can connect to the PSTN using Gateways or directly with SIP trunks through an ITSP with no additional equipment.

### 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

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

# FEATURES

## Telephony

### PBX Features

- 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
- G3 fax support: T.38 and clear channel fax
- Universal Extension Recordings
- Busy auto redial
- Directory assistance, Dial by Name
- Phone Book
- Dial plans (call routing), time of day routing
- Scheduling, Day/Night Switching
- Alarm
- Dial & Announce (D&A)
- Class of Service
- Call queue
- Hot Desking
- Parent-Child extension configuration
- Local Authentication for making call
- PIN code Barring
- Calling Cost Control\*
- Redundancy\*
- Automatic Call Distribution (ACD)\*
- Epygi ACD Console (EAC)\*
- Epygi Automatic Outbound Calling (AOC)\*
- Voicemail Transcription\*
- CRM Integration\*
- Call Recording (320 ports)\*
- Barge-In\*
- Conference Server\*
  - Audio (288 ports)/Video (104 ports)
- Auto Dialer application support\*
- eQall Softphone\*
- eQall SMS/WhatsApp Messaging\*
- eQall Receptionist Console\*

### PC-Based Applications

- 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

Intrusion Detection & Protection System (IDS/IPS)

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  
Monitoring via ecMON  
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\*  
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.