



QX500

The QX500 IP PBX is designed for businesses, supporting up to 500 users and 80 concurrent calls. SIP trunking allows the QX500 to connect directly to an ITSP with no additional equipment. The QX500 includes a firewall and SIP Intrusion Detection & Protection System for optimal security. E1, T1, FXO and FXS ports can easily be provided using the Epygi QX Gateways.

Capabilities	
IP phones by default	100
Additional IP phones with keys	400
Total phones	500
Concurrent calls	80
Ethernet LAN port (10/100/1000)	2
Ethernet WAN port (10/100/1000)	1
Audio In port	1
Audio Out port	1
SD slot	1

Interconnection <i>with</i> QX Gateways	
GATEWAYS	Recommended Number (max)
QXFXO4	20
QXE1T1	3 (E1 mode), 4 (T1 mode)
QXFXS24	16

FEATURES

Telephony (Default)

Auto Attendant with 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
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 (48 ports)
Barge-In
Conference Server

- Audio (48 ports)/Video (24 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, CNG, G.168 echo cancellation
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, 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)

Connectivity

Physical interfaces
Premise connections:
1 LAN Ethernet 10/100/1000 BASE-T port (RJ-45)
1 Ethernet 10/100 BASE-T port (RJ-45) for dedicated SIP trunk connection
Uplink connections:
1 WAN Ethernet 10/100/1000 BASE-T port (RJ-45)
Audio port connections:
Line-in/line-out (line-in signal level - 0.5V RMS, Line-out $R_{load} - 600\Omega$ to 10K Ω)
USB connections:
USB host, type A
USB OTG, mini type AB
IP Phones
100 IP phones by default
400 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
Auto Attendants and Virtual extensions
Auto Attendants:
Up to 800 Auto Attendants can be added*
Virtual extensions:
Up to 800 virtual extensions can be added*
System Capacity
Up to 80 simultaneous VoIP calls with external parties
Unlimited station-to-station calling for IP phones
Memory Storage
microSD 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
OpenVPN
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
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:
1.26 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%
Powering Options
Input: 85-264VAC, 47-63Hz, AC
Input from type AB mini-USB,
Input from 5VDC/2A adapter
Power Consumption
2.7W (idle), 6.5W (max)

* The total number of extensions used for IP phones, Auto Attendants and virtual extensions can not exceed 800.