QX500

The QX500 IP PBX is designed for offices with as many as 500 users. The QX500 can support up to 500 IP devices and 80 concurrent calls. SIP trunking allows for 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	100
Additional IP phones with keys	400
Total phones	500
Concurrent calls	80
Ethernet LAN port (10/100/1000)	1
Ethernet WAN port (10/100/1000)	1
Audio In port	1
Audio Out port	1
SD slot	1

Interconnection with QX Gateways

GATEWAYS	Recommended Number (max)
QXFXO4	20
QXISDN4	10
QXE1T1	3 (E1 mode), 4 (T1 mode)
QXFXS24	16

FEATURES

Telephony

PBX Features
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, global speed dialing
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
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)*
CRM Integration*
Call Recording (48 ports)*
Barge-In*
Conference Server*
  Audio (48 ports)/Video (24 ports)
eQall Softphone*
eQall SMS 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, 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.729, 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 redundancy 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} - 600Ohm to 10K Ohm)

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

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
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
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)

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

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