QX50

The QX50 IP PBX is designed for offices with as many as 50 users. The QX50 can support up to 48 IP devices and 16 concurrent calls. In addition, this system has two FXO analog PSTN connections and two FXS analog station ports. SIP trunking allows for the QX50 to connect directly to an ITSP with no additional equipment. The QX50 includes a firewall and SIP Intrusion Detection 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	16
Additional IP phones with keys	32
Total phones	50
Concurrent calls	16
FXO PSTN ports	2
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	4
QXISDN4	2
QXE1T1	1
QXFXS24	2

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 Park with Paging
Call Park on Auto Attendant
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
Hotline Service
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)*
CRM Integration*
Call Recording (12 ports)*
Barge-In*
Conference Server*
 Audio (16 ports) / Video (8 ports)
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, 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)

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:
2 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} - 600Ohm to 10K Ohm)

Phones
IP phones:
16 IP phones by default
32 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

Analog phones:
2 analog phones (or other analog devices) to connect via FXS ports

Auto Attendants and Virtual extensions
Auto Attendants:
Up to 200 Auto Attendants can be added

Virtual extensions:
Up to 200 virtual extensions can be added**

System Capacity
Up to 16 simultaneous VoIP calls with external parties
Unlimited station-to-station calling for IP phones
Two 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 System (IDS)
 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
Extension status watching (with DCC)
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:
1.26 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
Auxiliary output power: 12.0VDC, 0.6A (max)

Power Consumption
2.7W (idle), 6.5W (max)

* Requires a software license key
** The total number of extensions used for IP phones, analog phones, Auto Attendants and virtual extensions can not exceed 200.

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