



QXE1T1

The QXE1T1 Gateway features 30 channels (E1) or 24 channels (T1) of voice and conforms to a wide variety of signaling protocols. The primary function of this system is to bridge traditional E1 or T1 trunking from the PSTN to a QX IP PBX. Alternatively, it can connect legacy PBXs to the Internet to take advantage of cost-saving SIP trunks. The QXE1T1 has VPN capability and an Auto Attendant with standard and customizable scenarios. Integrating this product with any QX IP PBX allows the Gateway to then be managed through the IP PBX's GUI.

Capabilities	
E1/T1 port	1
Ethernet LAN port	1
Ethernet WAN port	1
Call Routing capable of modifying caller ID or time of day routing	
Firewall, VPN Router, Auto Attendant, Stacking Options, Failover	

FEATURES

Telephony

PBX Features

- Auto Attendant with standard and customizable scenarios
- Call blocking, unconditional call forwarding
- Call history
- G3 fax support: T.38 and clear channel fax
- Dial plans (call routing), time of day routing
- Gateway Hosted Survivability

PC-Based Applications

- QX-Quadro Configuration Console (QCC)
- Epygi Media Streamer (EMS)

Voice 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

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;
- 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)

Primary Rate ISDN (PRI) Signaling

- ITU-T: Q.921, Q.931 (DSS1), Q.951;
- ETSI ETS 300 102 (NET5);
- ECMA-143-(QSIG);
- SR-NWT-002120 (NI2);
- NTT INS1500 for Japan
- PRI switch types: DSS1, NET5, QSIG, 5ESS, NTT INS1500, DMS 100

CAS Signaling

- CAS (MELCAS, ITU, ITU-T2, ITU-T: Q.400, Q.411, Q.421, Q.422, Q.440-Q.442, Q.450-Q.452, Q.454, Q.455, Q.457, Q.458, Q.460-Q.468, Q.470-Q.476;
- Types: E&M Delay Dial, E&M Wink Start, E&M Immediate Start, E&M FGD R2 DTMF, R2 compelled, R2 non-compelled, R2 compelled with ANI, R2 non-compelled with ANI; R2 parameters for Brazil, Mexico etc.)
- ANSI T1.403.02-199, T1.403.02a-2001

Connectivity

Physical Interfaces

Premise connections:

- 1 Ethernet 10/100BASE TX port to connect a PC for configuration purposes (RJ45)

Uplink connections:

- 1 E1/T1 ports to the central office (RJ45)
- 1 Ethernet 10/100BASE TX (RJ45)

System Capacity

- 30 or 24 IP-PSTN calls via E1 or T1 respectively with external parties

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)

DNS (DYNDNS) support with third party

NAT with port forwarding and translation

System

Management

- Operation modes: Master/Slave
- Easy interconnection with QX IP PBXs
- 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
- 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
- E1/T1 and network diagnostics
- Security diagnostics
- Remote testing
- 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:

1.28 lbs. (580 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

4.75W (idle), 8.2W (max)