



# 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 for two-stage dialing. Integrating this product with any QX IP PBX allows the Gateway to then be managed through the IP PBX's GUI.



E1/T1 port	1
Ethernet LAN ports	1
Ethernet WAN ports	1
Call Routing capable of modifying caller ID or time of day routing	

# FEATURES

## Telephony

### PBX Features

- Multi-level Auto Attendant with Interactive Voice Response (IVR) and VoiceXML v2 support
- Call blocking, unconditional call forwarding
- Call history
- G3 fax support: T.38 and clear channel fax
- Dial plans (call routing), time of day routing

### 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%

### Power Supply

- Input: 85-264VAC, 47-63Hz, AC
- Auxiliary output power: 12.0VDC, 0.6A (max)

### Power Consumption

- 4.75W (idle), 8.2W (max)