

Quadro[®]M-E1/T1

THE VOICE OVER IP GATEWAY



QuadroM-E1/T1: The Voice over IP Gateway

The QuadroM-E1/T1 is the complete PSTN/VoIP Gateway for small businesses that want to establish a corporate telephone network that gives them a larger appearance and grows as they do

Users can make up to (48T1) or 60 (E1) concurrent calls by connecting to a PBX over an E1/T1 voice trunk. The same results can be achieved by connecting directly to the local PSTN and the Internet via Ethernet. The QuadroM-E1/T1 seamlessly combines the cost reducing benefits of IP technology with the still widely used PSTN. This opens a multitude of scenarios for free phone calls all over the world

Integrated Internet Access

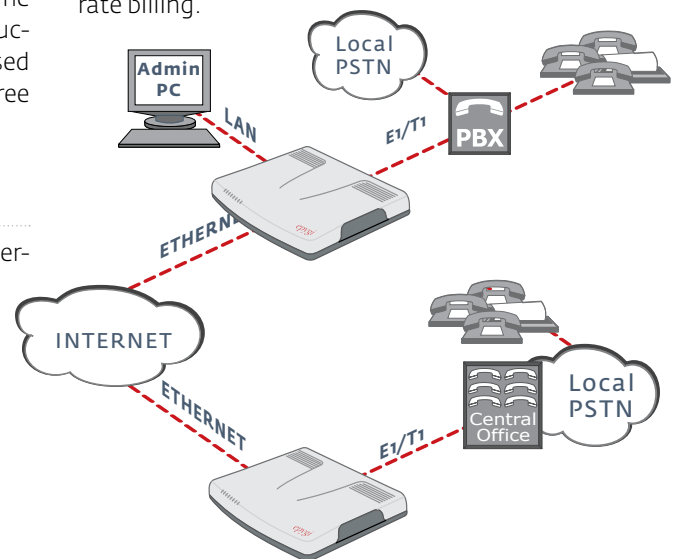
The QuadroM-E1/T1 VoIP Gateway allows voice Internet access with firewall security, including NAT, policy and service based filtering .

The QuadroM-E1/T1 shapes network traffic by prioritizing voice over data to ensure optimal voice

quality at all times and is compatible with legacy equipment configurations like standard PBXs and routers.

Broad Management Features

The included RADIUS client gives detailed statistics about the current and former IP traffic. The information you receive on every call allows for easy and accurate billing.



Telephony

Voice Features

Voice Coding G.711, G.726 (16, 24, 32, 40 Kbps), G.729, iLBC (13, 33 kbit/s, 15, 2 kbit/s); (RFC 3951, ITU-T: G.711, G.726, G.729 Annex A; IETF; ITU-T Q.23, Q.24, Bellcore GR.506, GR.181; ITU-T G.168-2000, 2002; ETS_300659_1, 2, 3; A-law, μ -law coding)
NAT traversal (both manually and STUN)
VAD, CNR, G.168 echo cancellation

Bandwidth Requirements

Per call WAN bandwidth requirements for the following codecs (non-encrypted):

G.711a/G.711u	20 msec	84 kbps
G.726-16	20 msec	37 kbps
G.726-24	20 msec	45 kbps
G.726-32	20 msec	52 kbps
G.726-40	20 msec	60 kbps
G.729a	20 msec	29 kbps
iLBC	30 msec	27 kbp

PBX Features

Call statistics
Call routing
Auto Attendant
T.38 fax relay and clear channel fax

Call Signaling

SIP (RFCs: 3261, 3263, 3265, 3311, 3323, 3324, 3325, 3428, 3515, 3578, 3581, 3725, 3891, 3892, 3842, 3856, 3863, 4028, 4235)
SDP (RFC 2327)
RTP (RFCs: 1889, 1890, 2833, 3389, 3550, 3551, 3555, draft-ietf-avt-rtc2833bis-05, draft-ietf-avt-rtcp-ilbc-05),
H.323 (ITU-T: H.225, H.235, H.245, H.323, H.450.x, Q.931, Q.932)
Fax over IP (ITU-T: T.4, T.30, T.38, V.17, V.21, V.27 ter, V.29)

POTS Signaling

Loop start

CCS Signaling

ITU-T: Q.921, Q.931 (DSS1), Q.951; ETSI ETS300 102 (NET5); ECMA-143-(QSIG); SR-NWT-002120 (NI2)
NTT INS1500 for Japan
PRI switch types: DSS1, NET5, QSIGg, sESS, NTT ins1500 DMS 100

CAS Signaling

CAS (MELCAS, ITU, ITU-T2, IUT-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: Loop Start, Ground Start;
E&M Delay Dial, E&M Wink Start, E&M Immediate Start,
R2 DTMF, R2 compelled, R2 non-compelled, R2 compelled with ANI, R2 non-compelled with ANI; R2 Parameters for Brazil, Guatemala and Mexico etc.)
ANSI T1.403, 02-199, T1.403, 02a-2001

DTMF

In band and out of band signaling support

Connectivity

Premise Connections

1 short-loop FXS port (RJ11)
1 Ethernet 10/100BASE-T port to connect a PC for configuration purposes (RJ45)

Uplink Connection

2 E1/T1 ports to the Central Office (RJ45)
1 Ethernet 10BASE-T (RJ45)

Billing

Radius Client (RFCs: 2865, 2866)

Internet

STUN/NAT traversal (RFC 3489)
Firewall security via:
NAT (Network Address Translation)
Policy and service-based filtering
DHCP server on the LAN side
DHCP client on the WAN side
DNS server with forwarding functionality
SNTP (Simple Network Time Protocol) server/client for computer clock synchronization
PPPoE connection to the ISP with PAP/(MS)CHAP authentication
IP DIFFSERV for QoS
DNS support
Port forwarding
Port translation

System

Management

WEB interface accessible from LAN and WAN (HTTP/HTTPS), the WAN management access can be switched off
Password control
Remote diagnostics and software upgrade
Download/restore configuration
Reset button with factory reset option
Custom Language Pack

Diagnostics/Testing

LEDs: Busy, Info, Fault, LAN, WAN, Line
E1/T1 diagnostics, Loop settings
Remote testing
Power-up diagnostics

Environmental

Physical Dimensions

Desktop devices, wall-mountable:
Measurements: 10.04" x 8.27" x 1.77"
(25.5 x 21.0 x 4.5 cm)
Weight: 22.6 ounces (640 g)
Rack-mountable devices:
Measurements: 19" x 7.56" x 1.77"
(48.0 x 19.2 x 4.5 cm)
Weight: 2.47 lbs. (1090 g)

Conditions

41°F - 104°F (5°C - 40°C) operating temperature
41°F - 140°F (5°C - 60°C) storage temperature
5% - 90% non-condensing humidity

Power Supply

Input 100 - 240 VAC; 50/60 Hz; 0.5 A
Output 12.0 VDC; 1.5 A

Please contact:

