



Quadro *E1T1*

The VoIP Gateway



The Quadro product line, designed and manufactured by Epygi Technologies, Ltd., begins a new era in telecommunications.

The Quadro2x, the Quadro4x and the Quadro16x already set the standard for easy, flexible, secure and inexpensive telephony around the globe.

Now, the QuadroE1/T1 gateway completely unites both PSTN and VoIP technologies, even in legacy equipment configurations. Just install the QuadroE1/T1 gateway between your Internet access router and your existing PBX to start making IP phone calls anywhere in the world. In addition, the QuadroE1/T1 can connect to a PSTN service provider via an E1/T1 to provide access and virtual local phone numbers to foreign users.

It's Easy

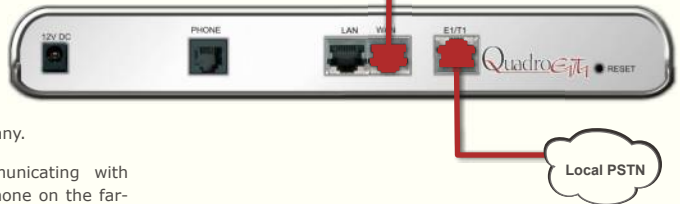
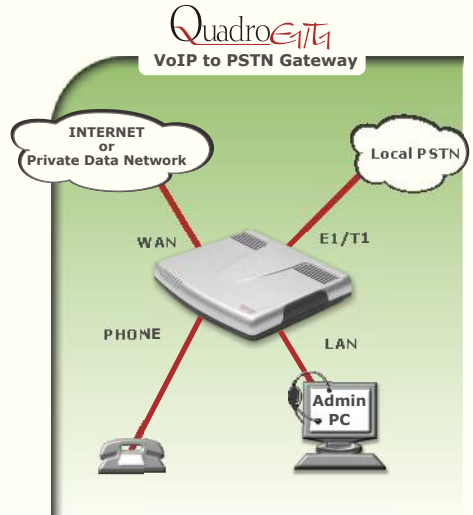
Just connect the QuadroE1/T1 to your E1/T1 trunk or to your PBX. In minutes, you are able to make voice over IP calls from your standard phones and receive IP calls from a local PSTN number. The voice quality produced by the Quadro's digital signal processor (DSP) will almost always be better than that of your current long distance company.

If the QuadroE1/T1 is communicating with another Quadro device or IP phone on the far-end, the calls will be nearly free. If you connect to a VoIP service provider, you can make long-distance calls to any phone number on the public phone network for pennies a minute.

It's Flexible

The Quadro unites the cost-reducing benefits of IP telephony with the ubiquity of the PSTN, which opens many scenarios for free phone calls. Connect PBXs of geographically dispersed departments of a company wherever they are in the world over IP. Free calls between the departments can quickly increase communication and effectiveness.

Since the QuadroE1/T1 contains call routing information, employees who are out of the office can still be reached automatically. The world becomes your virtual office. In addition, a pair of QuadroE1/T1 units can be deployed to provide virtual local numbers to parties anywhere in the world. Communication has never been so flexible.



It's Secure

Like other Quadro devices, the QuadroE1/T1 is packed with an array of network security features including a stateful inspection firewall. The STUN feature allows the QuadroE1/T1 to be connected directly to the Internet or behind a NAT router.

It's Inexpensive

The purchase price of the Quadro is more than justified by the quantifiable long-distance cost savings on calls made through the Quadro. You will realize a quick payback on your initial investment and enjoy recurring cost savings every time you use your Quadro. No obsolescence. No upgrades. No maintenance fees. No license fees.

And Revolutionary, Of Course

Interfaces

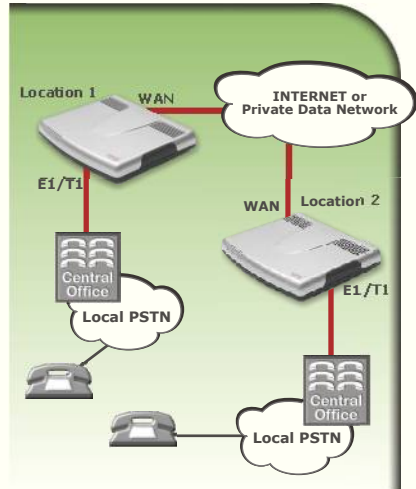
The QuadroE1/T1 has one port for an E1/T1 phone trunk that allows up to 24 T1 or 30 E1 calls in parallel. This port may be connected to a PBX or directly to the local PSTN. An Ethernet 10/100BASE-T port connects the QuadroE1/T1 to your local area network, and a 10BASE-T port connects to your wide area network (WAN). A FXS port is included to facilitate testing and setup.

The interfaces alone do not convey the power of the QuadroE1/T1 or the abundance of diverse missions it accomplishes. The Quadro shapes network traffic by prioritizing voice over data to ensure optimal voice quality at all times.

How does the Quadro do it?

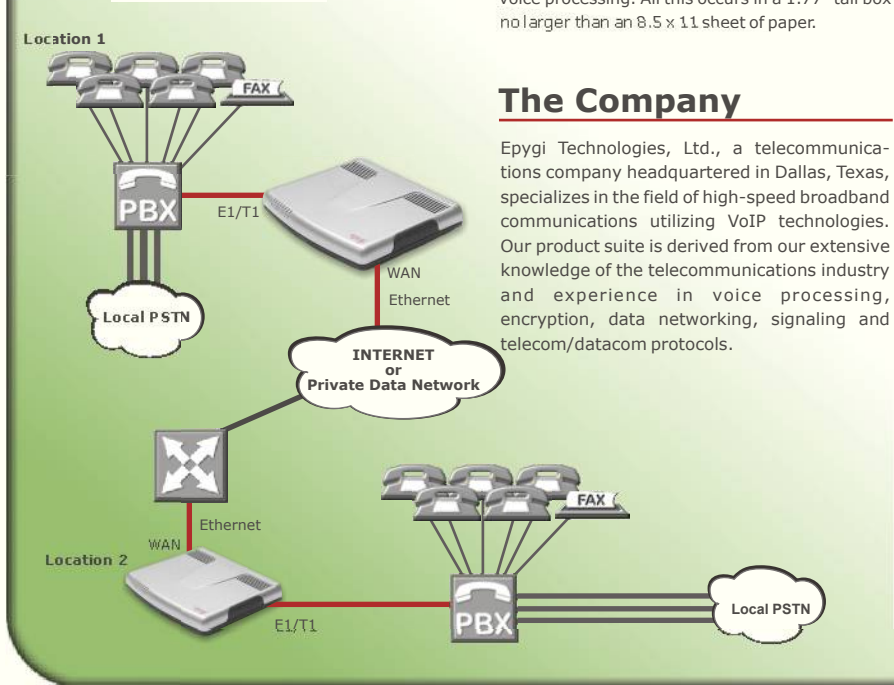
Although using the QuadroE1/T1 is easy, it is built on a very sophisticated and complex system. Inside the QuadroE1/T1 device, two communications infrastructures come together - the tradi-

QuadroE1/T1 VoIP to Central Office Gateway



itional telephone network and the Internet. At the core of the Quadro is the Call Manager running on Linux software. The Call Manager sends voice streams through the digital signal processor for voice processing. All this occurs in a 1.77" tall box no larger than an 8.5 x 11 sheet of paper.

QuadroE1/T1 VoIP to PBX Gateway



The Company

Epygi Technologies, Ltd., a telecommunications company headquartered in Dallas, Texas, specializes in the field of high-speed broadband communications utilizing VoIP technologies. Our product suite is derived from our extensive knowledge of the telecommunications industry and experience in voice processing, encryption, data networking, signaling and telecom/datacom protocols.

Connectivity

Premise Connections

- 1 Ethernet 10/100BASE-T port (RJ45)
- 1 short-loop FXS port (RJ11)

Uplink Connection Options

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

Telephony

Voice Features

- Voice Coding G.711 (a, u; 64 kbit/s) G.726 (16, 24, 32, 40 Kbps), G.729
- NAT traversal (both manually and STUN)
- VAD, CNG, G.168 echo cancellation
- Out-of-band DTMF transport

PBX Features

- Call statistics
- Call routing
- Auto attendant

Call Signaling

- SIP

E1/T1-Signaling

- T1-CAS
- T1-PRI (T1-CCS)
- E1 PRI
- E1 CAS

Internet

System Configuration

- HTTP (Hyper Text Transfer Protocol) server; WEB browser based configuration
- HTTPS (Hyper Text Transfer Protocol Secure server)
- Password control
- Remote configuration

IP Services

- NAT address translation
- Firewall security via:
 - NAT (Network Address Translation)
 - Policy and service-based filtering
 - Stateful inspection firewall
- DHCP server on the LAN side
- DHCP client on the WAN side
- DNS server with forwarding functionality
- SNTP (Simple Network Time Protocol) for computer clock synchronization
- PAP/(MS)CHAP authentication for PPPoE connection to the ISP
- IP DIFFSERV for QoS
- Mail client to send system notifications
- DNS support with third party

Environmental

Physical Dimensions

- Measurements: 10.05" x 8.27" x 1.77" (25.5 x 21.0 x 4.5 cm)
- Weight: 4.070 lbs, (1,848 kg)

Environmental

- 41°F - 95°F (5°C - 35°C) operating temperature
- 5% - 90% non-condensing humidity

Power Supply

- Input 100 - 240 VAC; 50/60 Hz; 0.5 A
- Output 12.0 VDC; 1.0 A

Regulatory Compliance/Environmental

- FCC Part 68, UL 1950, CSA 22, FCC Part 15 Class B

Testing Capabilities

- Remote testing and VoIP diagnostics
- Power-up diagnostics

