



Narrowband Voice Enhancement Platform

QVP E1



QVP E800/T800 Carrier Shelf



QVP E800/T800 Enterprise Shelf



Built with Ditech Networks' industry-proven voice processing technology, the Quad Voice Processor (QVP) supports a wide range of Ditech's Hybrid Echo Cancellation (HEC), Voice Quality Assurance (VQA™), and Experience Intelligence™ (EXi) solutions to provide superior voice calls for multiple network applications. Available with two digital signal processing power configurations and support for seamless local or remote software upgrades, the QVP allows future feature developments as they become available. The QVP ensures optimal voice quality performance in the network without the need for expensive overbuilds.

Up to 20 QVP cards with 4 E1s each can reside in a Ditech Carrier shelf, providing a very high density, low power, narrowband solution. Ditech also offers an Enterprise shelf for a single QVP card.

Performance and Cost Optimization

Ditech's QVP enables carriers to optimize performance and reduce the cost of their voice networks by eliminating low-density echo cancellation equipment. Ditech's versatile platform supports a wide range of applications. Ditech's VQA software suite for the QVP E1 offers a range of application-specific packages to meet the needs of any network.

Future-Proof Platform

As voice technologies and central office requirements change, the QVP can be reconfigured, upgraded while in service, or redeployed. Simplified remote management eliminates the time and expense of performing costly onsite configuration, maintenance, and upgrades. The QVP is backed by a dedicated Ditech support team providing 24x7 service.

Enterprise Solution

When installed in the 4sa Enterprise shelf, the QVP E1 provides a cost-effective solution for Enterprise or Remote Office applications, providing voice processing for between 1 and 4 E1s in a compact, tabletop or rack-mountable, AC- or DC-powerable chassis with RJ-48, wire-wrap, or BNC connectors.

Carrier Solution

When installed in the 80sa Carrier shelf, the QVP E1 provides a high-density narrowband echo cancellation solution that easily scales from 1 to 80 E1s per rack-mount shelf assembly. The 80sa Carrier shelf is available with either BNC or wire-wrap connector options and is engineered with dual redundant -48 VDC power and forced-air cooling for central office deployments. Up to 6 Carrier shelves can fit in a 2200 mm rack, for up to 480 E1s per rack.

PRODUCT FEATURES

- 4 E1s per card and per Enterprise shelf
- 80 E1s per Carrier shelf, 480 E1s per rack
- BNC, wire-wrap, and RJ-48 connectivity
- Powering for -48 VDC or 110/240 VAC
- Failsafe metallic bypass
- Alarm relay for facility and equipment
- Local or remote software upgrades
- Easy-to-use local and remote management

APPLICATIONS

- **Capacity Enhancement**
 - GSM
 - CDMA
 - iDEN
- **Voice Enhancement and Monitoring**
 - GSM
 - CDMA
 - iDEN
 - 3G Wireless
 - Wireline
 - Conferencing
 - VoIP-PSTN Gateway

Platform**QVP E800**

Processing Power
8 DSPs per card

Power Consumption
13W maximum per card
<0.27A @ -48 VDC
<110mW per DSO

Dimensions (H x W x D)
QVP card: 241 x 21 x 229 mm

Weight
QVP card: 0.55 kg

Shelf Options**Carrier Shelf (80sa High Density)**

20 QVP cards, 80 E1s maximum
per shelf

4 BNC shelves maximum per
2200 mm rack

6 Wire Wrap shelves maximum
per 2200 mm rack

Mounts for 19"/23" ANSI/EIA,
600 mm ETSI racks

Power Consumption
260W (fully loaded shelf)
Fan assembly: 18W (per shelf)

Input Voltage
Dual A&B -48 VDC source:
-36 to -60 VDC

Dimensions (H x W x D)

BNC shelf (15 U):

375 x 440 x 340 mm

Wire Wrap shelf (10 U):

250 x 440 x 310 mm

Fan assembly (2.4 U):

59 x 440 x 310 mm

Weight

Empty BNC shelf: 10.0 kg

Empty Wire Wrap shelf: 8.6 kg

Enterprise Shelf (4sa)

1 QVP card, 4 E1s maximum
per shelf

Mounts for 19" or 23"
ANSI/EIA racks

Rubber feet for tabletop mounting

Power Consumption

13W (fully loaded shelf)

Input Voltage

-48 VDC source: -36 to -60 VDC
110/240 VAC, 50/60 Hz auto-
sensing, universal

Dimensions (H x W x D)

BNC shelf (1.8 U):

44 x 440 x 240 mm

RJ-48C/Wire Wrap shelf (1.8 U):

44 x 440 x 240 mm

Weight

Empty BNC shelf: 0.9 kg

Empty RJ-48C/Wire Wrap shelf:

0.9 kg

TECHNICAL SPECIFICATIONS**Monitoring****Alarm Monitoring**

Local, distant, AIS, multiframe,
distant multiframe

Dry contacts for Alarms and E2A Interface

Performance Monitoring

Referencing ANSI T1.231-1997

Front Panel Control**Alarm Indicators**

LEDs for power/logon, ACO, and urgent
and deferred facility and equipment alarms

Terminal Control**Serial Interface**

3 V.24 (RJ-11) ports (1 on faceplate,
2 on backplane)

Data transfer selectable up to 19200 baud

Local and Remote Provisioning

Local: CLI, WinMAP™ GUI

Multisite: NetConsul™ EMS

Network Interface**Line Rate**

CEPT 2.048 Mbps

30/31 channel modes

Framing Format

Per ITU-T G.704: CAS or CAS + CRC-4

Encoding

HDB3 per ITU-T G.703, G.704

PCM Encoding

A-law per ITU-T G.711 (Segmented 13)

Jitter Tolerance

Per ITU-T G.823

Signaling

CAS, CCS, Q.50 (AB/CD)

Line Impedance (Card Types)

75 Ohm nominal, unbalanced for BNC

120 Ohm balanced for Wire Wrap

Maximum Cable Length

200 m using 75 Ohm cable

200 m using 120 Ohm cable

Synchronization

Through-timing

Redundancy**Power Input**

Carrier shelf: A&B fused inputs for failsafe
source redundancy

Protection

Metallic bypass relays for failsafe operation

Fans alarmed; no single fan critical

Environmental**Operational**

Temperature: 5° to 40°C

Short Term: -5° to 55°C

Humidity: 5 to 90%, non-condensing

Non Operational

Temperature: -40° to 70°C

Humidity: 5 to 95%, non-condensing

Heat Output

Carrier shelf: 890 BTU/hour

Reliability

MTBF Per Telcordia SR-332 Issue 1

May 2001

QVP card: 42 years at 40°C

Regulatory Information

UL 60950 / EN 60950

CAN/CSA-C22.2

EN 300 386-1 and -2

ETS 300 132-2 / EN 61000

EN 55022 (CISPR 22) Class B

CE Mark

Telcordia GR-1089-CORE

NEBS Level 3 per Telcordia SR-3580

RoHS 5/6



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