



Narrowband Voice Enhancement Platform

QVP T1



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 T1s 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 T1 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 T1 provides a cost-effective solution for Enterprise or Remote Office applications, providing voice processing for between 1 and 4 T1s in a compact, tabletop or rack-mountable, AC- or DC-powerable chassis with RJ-48 or wire-wrap connectors.

Carrier Solution

When installed in the 80sa Carrier shelf, the QVP T1 provides a high-density narrowband echo cancellation solution that easily scales from 1 to 80 T1s per 19" rack-mount shelf assembly. The 80sa Carrier shelf is available with either wire-wrap or Amphenol 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 7' rack, for up to 480 T1s per rack.

PRODUCT FEATURES

- 4 T1s per card and per Enterprise shelf
- 80 T1s per Carrier shelf, 480 T1s per rack
- Amphenol Telco, 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 T800**

Processing Power
8 DSPs per card

Power Consumption
13W maximum per card
<0.27A @ -48 VDC
<135mW per DSO

Dimensions (H x W x D)
QVP card:
9.46 x 0.84 x 9.03 inches

Weight
QVP card: 1.2 lbs (0.54 kg)

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

20 QVP cards, 80 T1s maximum
per shelf
6 shelves maximum per 7-foot rack
(480 T1s)
Mounts for 19" or 23" ANSI/EIA
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)

Wire Wrap shelf or Amphenol
Telco RJ-21X shelf (5.6 RU):
9.8 x 17.3 x 12.0 inches
Fan assembly (1.3 RU):
2.3 x 17.3 x 12.4 inches

Weight
Empty shelf: 19 lbs (8.6 kg)
Fully loaded shelf: 43 lbs (19.5 kg)

Enterprise Shelf (4sa)

1 QVP card, 4 T1s 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)
RJ-48C/Wire Wrap shelf (1 RU):
1.75 x 17.3 x 9.4 inches

Weight
Empty shelf: 1.9 lbs (0.86 kg)
Fully loaded shelf: 3.1 lbs (1.4 kg)

TECHNICAL SPECIFICATIONS**Monitoring**

Alarm Monitoring
Per GR-499-CORE

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 major and
minor facility and equipment alarms

Terminal Control

Serial Interface
3 RS-232 (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
1.544 Mbps

Framing Format
SF (D3/D4) per ITU-T G.733,
ESF per AT&T CB142

Line Encoding
AMI-B7, B8ZS, Bipolar AMI

PCM Encoding
Segmented -15 μ -255 per ITU-T G.711

Jitter Tolerance
Per AT&T 62411, GR-499-CORE

Signaling
CCS (C6, C7), RBS (E&M, PLR, FXS-GS, FXO-GS,
FXS-LS, FXO-LS)

Line Impedance
100 Ohm nominal, balanced per ITU-T G.703

Maximum Cable Length
655 feet using 100 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
FCC part 15 Class A
CE Mark
Telcordia GR-1089-CORE
NEBS Level 3 per Telcordia SR-3580
RoHS 5/6



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