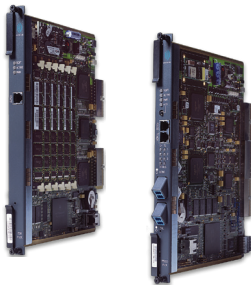


**BVP Flex Shelf****ECR Flex and
Telco Flex Cards**

Ditech's Broadband Voice Processor (BVP) Flex adds a new dimension in voice quality improvement for telecommunications service providers. Supporting "any-to-any" OC-3, DS-3, and STS-1 connectivity as well as STM-1 to STM-1 connectivity, BVP Flex allows operators to mix and match multiple interface types on the same platform, without the need for external multiplexing equipment.

With a series of processing power options, the BVP Flex platform supports a wide range of Ditech's Hybrid Echo Cancellation (HEC) and Voice Quality Assurance (VQA™) solutions for multiple network topologies, all of which are manageable from a single, easy-to-use, local and remote management system.

PERFORMANCE AND COST OPTIMIZATION

Ditech's BVP Flex enables carriers to optimize performance and to reduce the cost of their voice networks by eliminating low-density echo cancellation equipment and expensive multiplexing gear. With the BVP Flex's "any-to-any" connectivity, carriers can reclaim central office space and preserve their investment in electrical DSX/DACS ports while migrating to OC-3 at no additional cost.

RANGE OF PLATFORM OPTIONS

Ditech's Voice Quality software suite for the BVP Flex offers a range of application-specific packages to meet the needs of any network. The BVP Flex hardware and software are matched to application requirements, providing a "custom tailored" solution for specific carrier needs.

FUTURE-PROOF PLATFORM

As voice technologies and central office connectivity requirements change, the BVP Flex can be reconfigured or upgraded while in-service to adapt to new requirements. Simplified remote management eliminates the time and expense of performing costly onsite configuration, maintenance, and upgrades. The BVP Flex is backed by a dedicated Ditech support team providing 24 x 7 service.

NARROWBAND CONNECTIVITY OPTIONS

For added flexibility and easy retrofit of outdated narrowband echo cancellation equipment, Ditech's BVP Flex platform can be installed with DS-1 interface options that interconnect with existing DSX/DACS equipment and cabling.

PRODUCT FEATURES

- Any-to-any OC-3, DS-3, and STS-1, or STM-1 to STM-1 connectivity
- Optional DS-1 connectivity
- Up to 12 OC-3/STM-1 or 36 DS-3/STS-1 per rack
- Full redundancy: Telco Flex Card 1:1, and Echo Cancellation Resource (ECR) Flex Card 1:3
- Easy-to-use local and remote management

APPLICATIONS

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

PLATFORM OPTIONS

BVP FLEX F600 SYSTEM

2 Telco Flex cards
 4 ECR Flex cards with
 6 DSP modules
 Power Consumption
 Per Telco Flex card: 22W
 Per ECR Flex card: 38W
 Full shelf of 3 systems, fans:
 660W (13.8A @ -48VDC)

BVP FLEX F400 SYSTEM

2 Telco Flex cards
 4 ECR Flex cards with
 4 DSP modules
 Power Consumption
 Per Telco Flex card: 22W
 Per ECR Flex card: 29W
 Full shelf of 3 systems, fans:
 555W (11.6A @ -48VDC)

BVP FLEX F200 SYSTEM

2 Telco Flex cards
 4 ECR Flex cards with
 2 DSP modules
 Power Consumption
 Per Telco Flex card: 22W
 Per ECR Flex card: 20W
 Full shelf of 3 systems, fans:
 450W (9.4A @ -48VDC)

BVP FLEX F100 SYSTEM

2 Telco Flex cards
 4 ECR Flex cards with
 1 DSP module
 Power Consumption
 Per Telco Flex card: 22W
 Per ECR Flex card: 16W
 Full shelf of 3 systems, fans:
 400W (8.3A @ -48VDC)

Technical Specifications

DS-3 INTERFACE

Line Rate
 DS-3 at 44.736 Mbps

DS-3 Framing
 M13 or C-Bit

DS-1 Payload Framing
 SF (D3/D4) per G.733, ESF per AT&T CB142, per ITU-T G.704 with CRC-6

STS-1 INTERFACE

Line Rate
 STS-1 at 51.84 Mbps

SPE Mappings
 28 DS-1s, 1 DS-3

STS-1 Framing
 Per Telcordia GR-253-CORE

DS-1 Payload Framing
 SF (D3/D4) per G.733, ESF per AT&T CB142, per ITU-T G.704 with CRC-6

OC-3 INTERFACE

Line Rate
 OC-3 at 155.52 Mbps

SPE Mappings
 28 DS-1s, 1 DS-3

OC-3 Framing
 Per Telcordia GR-253-CORE

DS-1 Payload Framing
 SF (D3/D4) per G.733, ESF per AT&T CB142, per ITU-T G.704 with CRC-6

Optical Interface
 1310nm single mode fiber, LC style connectors
 Short/Intermediate Reach

STM-1 INTERFACE

Line Rate
 STM-1 at 155.52 Mbps

STM-1 Framing
 Per ITU-T G.707

E1 Payload Framing
 CAS, CAS + CRC4, per ITU-T G.704

Optical Interface
 1310nm single mode fiber, LC style connectors
 Short/Intermediate Reach

SYNCHRONIZATION

Dual BITS clock inputs
 Line timing from any input
 Local oscillator (ST3/TNC clock)

NETWORK INTERFACE

Line Encoding
 AMI-B7, B8ZS, Bipolar AMI
 HDB3 per ITU-T G.703, G.704

PCM Encoding
 A-law or μ -law
 Segmented μ -255, A-law per ITU-T G.711

Jitter Tolerance
 Per AT&T 62411, GR-499-CORE, GR-253-CORE

Signaling
 E1: CAS, CCS, Q.50 (AB/CD)
 T1: CCS (C6, C7), RBS (E&M, PLR, FXS-GS, FXO-GS, FXS-LS, FXO-LS)

Connectors/Cabling
 BNC unbalanced 75 Ohm connectors
 450 feet (138m) 75 Ohm coaxial cable
 Balanced 100/120 Ohm BITS clocks
 AT&T 728, 734, or equivalent

REDUNDANCY

A & B power: -39 to -60 VDC
 Electrical per GR-499-CORE
 Optical APS per GR-253-CORE
 Fans alarmed; no single fan critical
 Telco Flex cards 1:1 spared
 ECR Flex cards 1:3 spared
 Auto-switching to standby cards
 Hot-swappable

MONITORING

Alarm Monitoring
 Per GR-499-CORE, GR-253-CORE, ITU-T G.707
 Dry contacts for Alarms and E2A Interface

Performance Monitoring
 Referencing ANSI T1.231-1997

FRONT PANEL CONTROL

Push button for alarm cutoff (ACO)
 LEDs indicate power, major, minor, facility, maintenance, and equipment alarms

TERMINAL CONTROL

Serial Interface
 RS-232/V.24 port for each Telco Flex card
 Data transfer selectable to 38400 baud

LAN 10/100Base-T
 Backplane port for each BVP Flex system
 TCP/IP address per BVP Flex system

Local and Remote Provisioning
 Local: CLI, NetConsul™ CST GUI
 Multisite: NetConsul EMS

PHYSICAL ATTRIBUTES

Dimensions (H x W x D)
 Shelf (10 RU): 17.5 x 17.3 x 13.3 inches
 (445 x 440 x 340 mm)
 Mounts for 19" or 23" ANS/EIA,
 600 mm ETSI racks

Weight
 Empty shelf (with fans): 45 lbs (20 kg)
 Shelf with 1 BVP Flex system: 53 lbs (24 kg)
 Fully loaded shelf: 72 lbs (33 kg)
 Telco Flex card: 1.4 lbs (0.6 kg)
 ECR Flex card, 1 DSP module: 1.5 lbs (0.7 kg)

CAPACITY

1 OC-3/STM-1, 3 DS-3/STS-1 per BVP Flex system
 3 BVP Flex systems per shelf
 (3 OC-3 equivalents or up to 6,048 DS0s)
 4 BVP Flex systems per 7-foot rack
 (12 OC-3 equivalents or up to 24,192 DS0s)

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
 Full f600 shelf: 2100 BTU/hour
 Full f400 shelf: 1800 BTU/hour
 Full f200 shelf: 1500 BTU/hour
 Full f100 shelf: 1300 BTU/hour

RELIABILITY

MTBF Per Telcordia SR-332 Issue 1 May 2001
 Telco Flex card: 33 years at 40°C
 ECR Flex f600 card: 25 years at 40°C
 ECR Flex f400 card: 29 years at 40°C
 ECR Flex f200 card: 34 years at 40°C
 ECR Flex f100 card: 37 years at 40°C

REGULATORY INFORMATION

UL 60950 / EN 60950
 CAN/CSA-C22.2
 EN 300 386-1 and -2
 EN 55022 (CISPR 22) Class B
 EN 55024
 FCC part 15 Class A
 CE Mark
 Telcordia GR-1089-CORE
 NEBS Level 3 per Telcordia SR-3580



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