

# Ascend

## Multiband VSX T1



You need a compact inverse multiplexing system with large-scale possibilities. The Multiband VSX T1, with integrated CSU, is a cost-effective solution for growing your multimedia network.

### Multimedia Access ▾ Videoconferencing ▾ Digital Dial Backup

The Multiband™ VSX T1 is a notebook-sized inverse multiplexer that extends your corporate videoconferencing network to remote sites using T1/PRI. The bandwidth on demand capabilities of the VSX T1 allow you to operate your video network at substantial savings by using only the bandwidth that is needed. An expansion module may be added to allow voice traffic from your PBX and video traffic to share bandwidth over the same T1/PRI access line.

The Multiband VSX T1 fits into any room system rack or on any desktop and provides inverse multiplexing, dial-up videoconferencing, call and device management, and global connectivity. These features are well-suited for applications such as group and desktop videoconferencing, distance learning, electronic banking, telemedicine file transfer and dial backup. The Multiband VSX T1 is a powerful tool that helps you build flexible and cost-effective multimedia solutions.



## Videoconferencing and Multimedia Solutions

### Bandwidth on demand maximizes performance and decreases cost

Dial-up connections are transparently established and removed as required. The expansion module can be added to give you the option to transmit voice and video traffic over the same T1/PRI access line.

- Bandwidth on demand technology allows inverse multiplexing of multiple 56- or 64-Kbits/s channels for a maximum data rate of 1.54 Mbits/s
- Nx56, Nx64, Nx384, Multirate
- Ascend Inverse Multiplexing (AIM) offers feature-rich bandwidth management among Ascend Multiband units
- Conforms to Bandwidth ON Demand Interoperability Group (BONDING) standards for interoperability with other vendors' inverse multiplexers
- Expansion module for the T1 Drop-and-Insert or the T1/PRI conversion capability allows voice traffic from a PBX to share bandwidth with videoconferencing traffic over a single T1/PRI access line
- Optional CSU for direct network line connections

### Communicates with multiple switched services for flexible network access

The Multiband VSX T1 is fully compatible and can communicate with a broad range of existing network access equipment. Applications can choose a switched service on a call-by-call basis.

- Switched 56 Kbits/s DSUs
- ISDN terminal adapters

- Inverse multiplexers conforming to the BONDING standard
- Integrates seamlessly with the Ascend Multiband and MAX product families

### Ensures compatibility with a broad range of videoconferencing manufacturers

Special dial-access features allow the Multiband VSX T1 to interoperate with any manufacturers' videoconferencing equipment.

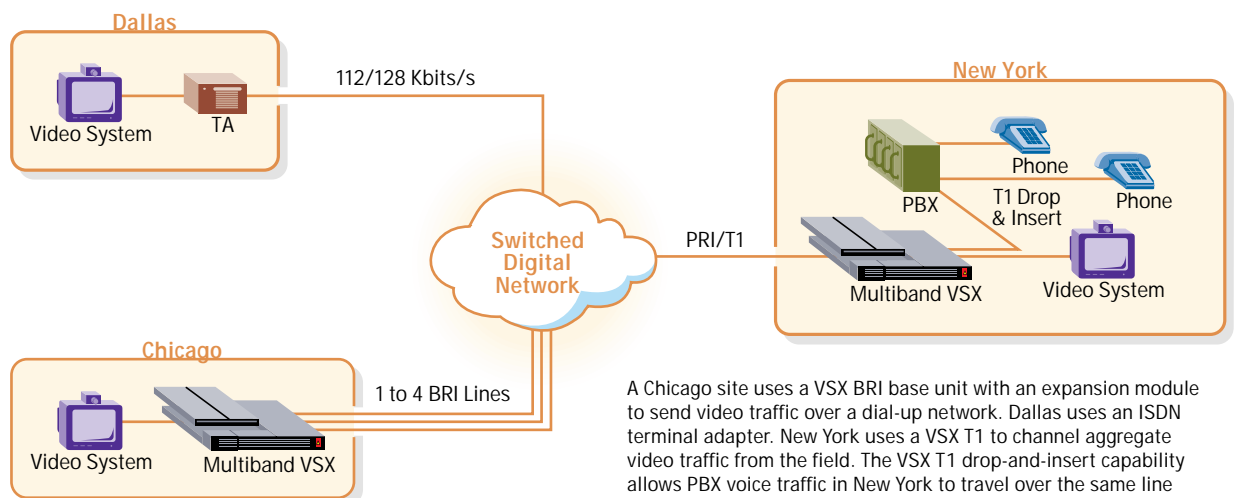
- Field-selectable dual V.35, RS-449/422 or X.21 data ports
- RS366, V.25 bis, X.21 and control-lead dialing
- Exact clocking and 56-64 Kbits/s rate adaption
- Speed dialing and stored call profiles
- Supports high-speed desktop videoconferencing

### Operates with domestic and international services for global connectivity

Ascend's Multiband products are certified in 30 countries and provide global connectivity with switched services from multiple vendors.

- AT&T ACCUNET Services
- AT&T Switched Digital International
- MCI VPDS 56/64 Kbits/s
- Sprint VPN 56/64 Kbits/s
- Local Exchange Carrier 56/64 Kbits/s
- International PTT 64 Kbits/s

### Network Solution



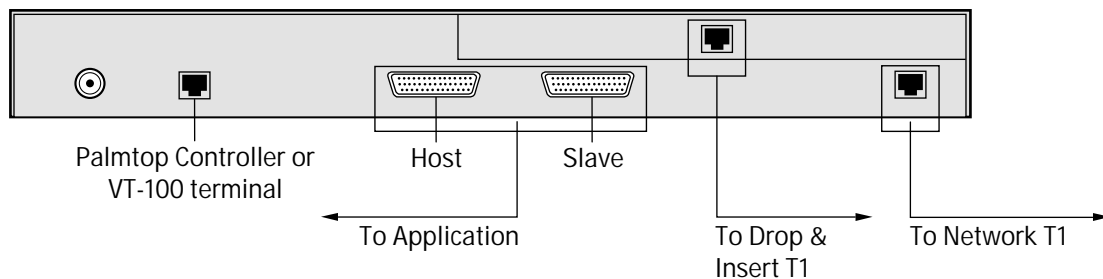
A Chicago site uses a VSX BRI base unit with an expansion module to send video traffic over a dial-up network. Dallas uses an ISDN terminal adapter. New York uses a VSX T1 to channel aggregate video traffic from the field. The VSX T1 drop-and-insert capability allows PBX voice traffic in New York to travel over the same line with videoconferencing traffic. Multiband products are compatible with any vendors' ISDN terminal adapter.

### Extensive management features offer simplified setup and administration

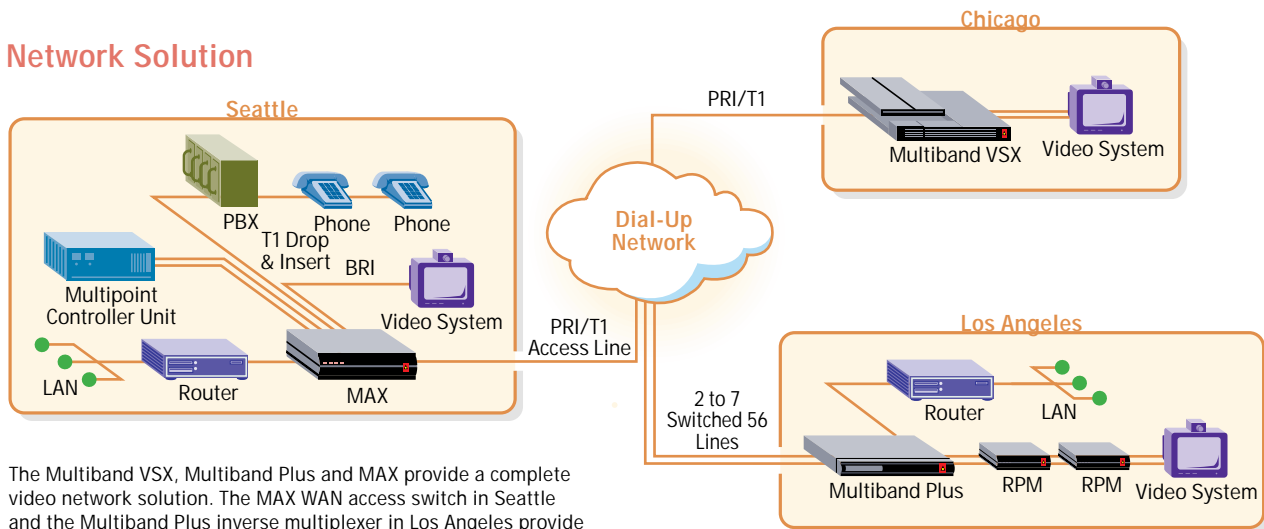
An inband remote management capability allows you to modify and control your system remotely or from the central site. Features support local or remote diagnostics and provide menu-driven management.

- Dial-up remote management from any Ascend Multiband product
- Local and remote loopbacks
- Channel bit error rate testing
- Configuration backup
- Password security
- Field software upgradability
- Controllable from a palmtop or VT-100 terminal

### Multiband VSX T1 Back Panel



### Network Solution



The Multiband VSX, Multiband Plus and MAX provide a complete video network solution. The MAX WAN access switch in Seattle and the Multiband Plus inverse multiplexer in Los Angeles provide videoconferencing access to a global dial-up network over switched 56 and T1 circuits. They also provide dial-up access for LAN routers. The VSX inverse multiplexer connects a customer's video system in Chicago to the video network over T1 lines. Remote Port Modules (RPMs) extend the Multiband's ports to videoconferencing rooms at distances up to 3,400 feet.

## Hardware Specifications

Dimensions	Base Unit: 12.63 x 12.25 x 1.75 in (1U) [32.1 x 31.1 x 4.5 cm]
	Module: 7.38 x 11 x 0.88 in [18.7 x 27.9 x 2.2 cm]
Weight	Base Unit: 4 lbs 4.1 oz
	Module: 14.2 oz
Power Requirements	90-130VAC, 0.2-0.4A/220-40VAC, 0.1-0.2A
Operating Requirements	Operating temperature: 32-104°F [0-40°C]
	Storage temperature: 40-176°F [-71.4-80°C]
	Humidity: 0-90% (non-condensing)
Base System	Multiband VSX T1 with one T1 interface, 2 host ports, D-channel signaling for ISDN, RS366/V.25 bis/ X.21 dialing protocols, Ascend Inverse Multiplexing, and BONDING
Modules	Expansion module adds Drop-and-Insert functionality and T1-to-PRI conversion capabilities to T1
Cabling	Palmtop to DB9 for terminal access
DTE Connectors	Two DB-44 connectors support V.35, RS449/422 standard and X.21
Control Terminal	Palmtop hand-held terminal VT-100 access

## Ascend's Remote Networking Products

### MAX™ Family

Designed specifically for remote access server applications. Supports ISDN BRI, ISDN PRI, T1/E1 and Ethernet on the base unit.\* Allows simultaneous calls from ISDN BRI, frame relay and/or modem users over ISDN PRI, channelized T1/E1, or ISDN BRI lines.

### Pipeline™ Family

Pipeline products are designed to connect users in small or home offices to backbone networks and/or the Internet. Pipeline models support Ethernet to ISDN, Switched 56 or Leased 56 services, and Ethernet to 56 Kbits/s or 64 Kbits/s frame relay services.\*

### Multiband™ Family

Multiband bandwidth-on-demand controllers are designed primarily for videoconferencing applications and let users dial-up bandwidth in increments of 56/64 Kbits/s up to 4 Mbits/s, using all types of digital access lines\*—Switched 56, T1/E1, ISDN BRI, ISDN PRI and network carrier services.

\* Depending on model and configuration

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Ascend Communications, Inc. (NASDAQ: ASND) develops, manufactures, markets, sells and supports a broad range of high-speed digital wide area network access products. These products use bandwidth on demand to enhance existing corporate networks for applications such as remote LAN access, telecommuting, SOHO and Internet access, and videoconferencing/multimedia access.

Ascend markets the MAX, Pipeline and Multiband families of products. Ascend products are available in more than 30 countries worldwide.

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Remote Networking  
Solutions That Work.™