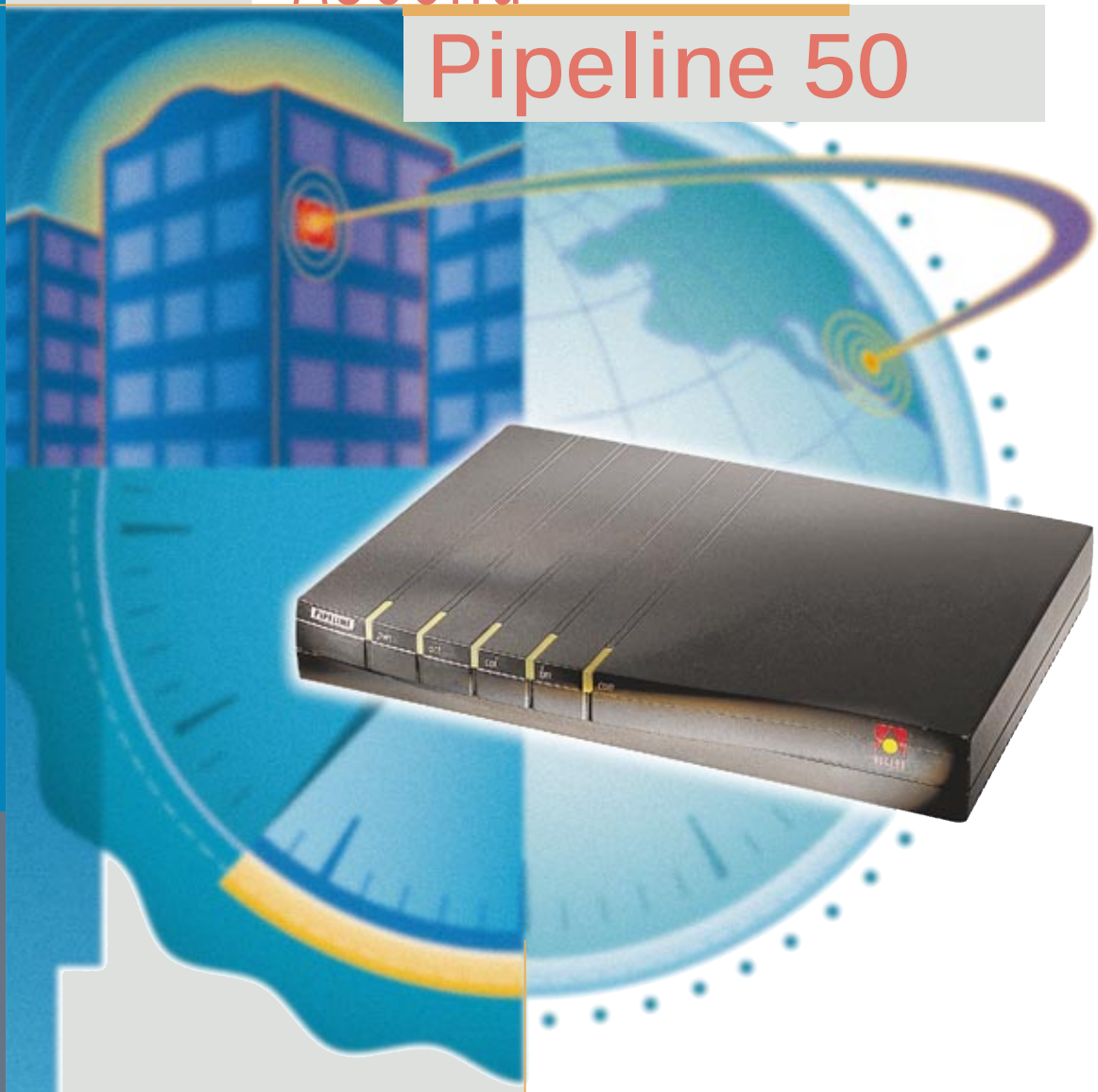
product information

Ascend Pipeline 50



Remote users demand a networking solution powerful enough to handle the complexities of accessing a coporate LAN or the Internet. Ascend's Pipeline 50 delivers the performance needed to make reliable high-speed connections.

Remote Access ▾ Internet Access ▾ Small Office

The award-winning Pipeline™ 50 is an Ethernet-to-ISDN router/bridge that uses a high-speed ISDN line and bandwidth on demand technology to connect remote locations to a corporate site or the Internet. The high-performance Pipeline 50 capitalizes on digital technology to provide transparent connections that are free of the corruption and noise found with analog-only solutions. With the Pipeline 50, remote users access corporate resources or dial into Internet services as easily as if they were at the central site.

Bandwidth optimization features in the Pipeline 50 minimize recurring network operating costs while increasing performance. The Pipeline 50 offers a broad range of advanced remote management features that enable network managers to achieve maximum control over their entire network—from the central site to remote offices. The Pipeline 50 delivers all the features and functionality needed for making high-quality, cost-effective remote network connections.

ASCEND

Advanced Remote Networking Solution for Small and Remote Offices

Bandwidth on demand maximizes performance and decreases costs

High-speed dial-up connections are established and removed as required without any interruptions to the user. Costs are minimized because you pay for bandwidth only when you need it.

- Inverse multiplexing uses both ISDN B-channels for 128 kbps data throughput
- Dynamic Bandwidth Allocation™ varies channel usage by utilizing both B-channels for high performance tasks and dropping one channel when throughput is not needed
- Data compression boosts bandwidth up to 512 kbps

Digital technology provides reliable remote network connections

The Pipeline 50 uses an ISDN BRI line to make resilient remote connections to the corporate LAN or the Internet. Simultaneous connections to different locations can be made using a single digital line.

- Standard U interface (National ISDN 1 compliant) eliminates the need for an external NT1 device (S/T model also available)
- Certified for operation in more than 30 countries worldwide

Manage remote locations as if they were part of the central site

Remote management capabilities reduce the cost of installation and ongoing support by enabling network managers to monitor and troubleshoot remote user problems directly from the central site. Network managers can continuously "fine tune" the network at any time, either locally or remotely.

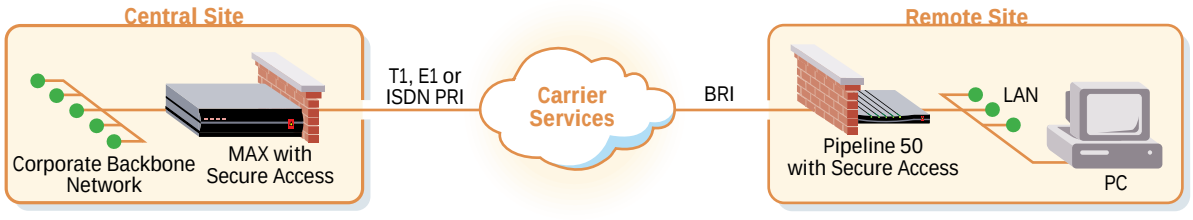
- SNMP MIB II support
- Telnet remote management
- Ascend remote management protocol
- SYSLOG
- WAN loopback
- Flash memory for easy software upgrades

Concurrent routing and bridging ensures efficient connectivity to all LANs and the Internet

Concurrent routing and bridging eliminates the need for two separate devices by providing one configurable solution for accessing any LAN and the Internet.

- IP and IPX routing
- BCP standard multiprotocol bridging
- PPP, Multilink PPP, Multilink Protocol Plus™ (MP+)

LAN to LAN Access



The Pipeline 50 connects to a central site over an ISDN BRI line. Multiprotocol routing and bridging allows remote users to simultaneously access corporate resources.

Ascend Secure Access Firewall

Comprehensive security for iron-clad remote networking

Support for user authentication makes it easy to manage the security of large-scale remote access applications.

- Authentication profiles: PAP, CHAP, Calling Line ID (CLID)
- Token-based security with support for multiple vendors' products
- Callback assures connections are made with known users
- Transmit and receive packet filtering
- Ascend Secure Access™ Firewall option provides complete network protection
- Telnet password

Built-in Ethernet interface maximizes performance and compatibility

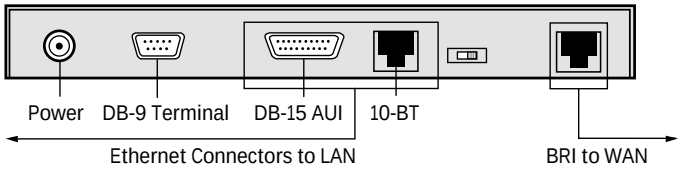
The Ethernet interface gives you the flexibility to connect any type of computer directly to the Pipeline 50. With 10 mbps Ethernet, you can take advantage of the full throughput of an ISDN BRI line.

- Supports multiple platforms (PC, UNIX workstation, or Apple)
- Supports varying software configurations

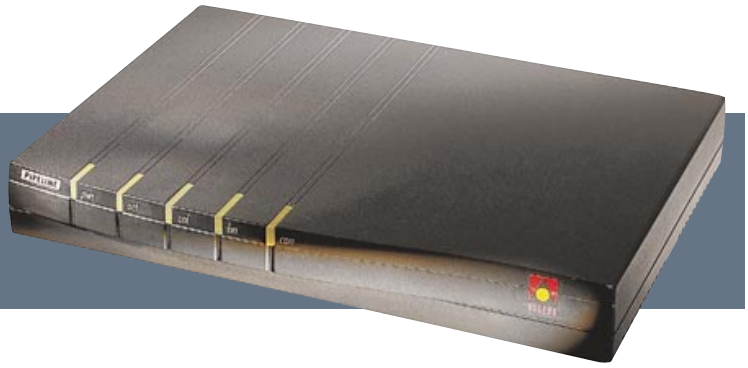
Ascend's Secure Access™ Firewall is a software option on the Pipeline 50 that uses state-of-the-art firewall technology and delivers a comprehensive, fully integrated security solution for corporate networks. It protects your company's information assets at the corporate LAN, remote offices and telecommuters' home offices. It also integrates the standard security features that are offered on your Ascend remote networking system with comprehensive security features such as transparency, dynamic firewall, and monitoring and logging.

Secure Access Firewall provides a cost-effective single vendor solution for securing your company's remote network against attacks on sensitive data.

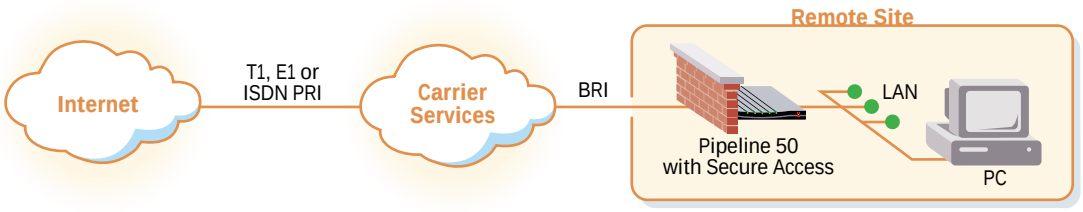
Pipeline 50 Back Panel



Pipeline 50



Internet Access



The Pipeline 50 connects remote users to the Internet over an ISDN BRI line. At speeds up to 512 kbps, it's a breeze to download high-resolution graphics and video clips or to just simply surf the Internet.

Hardware Specifications

Dimensions	8.63 in x 6.19 in x 1.25 in [22 cm x 15.7 cm x 3.2 cm]
Weight	2.25 lbs [1.13 kg]
LAN Interface	10 mbps Ethernet (AUI, 10Base-T)
WAN Interfaces	BRI U Interface (model: P50-1UBRI) BRI S/T Interface (model: P50-1SBRI)
Software Upgrade	Via built-in flash RAM
Power Requirements	90-130VAC, 0.4A 22-24VAC, 0.2A 47-63Hz
Operating Requirements	Temperature: 32-104˚F [0-40˚C] Altitude: 0-14,800 feet [0-4,500 meters] Relative Humidity: 5-9o% (non-condensing)
Safety Certifications	FCC Class B,CSA, UL
EMI/RF	FCC Part 68, FCC Part 15

Software Specifications

Protocols Supported	TCP/IP, IPX routing, BCP standard bridging of all protocols
WAN Protocols Supported	PPP, Multilink PPP (MP), Multilink Protocol Plus (MP+)
Bandwidth Management	Multilink PPP (MP), Multilink Protocol Plus (MP+), TCP header compression, STAC data compression
Security	PAP, CHAP, Callback, Telnet, password, token-based security, CLID, packet filtering, optional Secure Access Firewall
Firewall	Integrated dynamic firewall (optional)
Management	SNMP, Telnet, SYSLOG, Ascend's remote management protocol, direct serial cable connection (Db9)

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 kbps or 64 kbps 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 kbps up to 4 mbps, 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) is a leading, worldwide provider of remote networking solutions for corporate central sites, Internet Service Provider points of presence, remote offices, mobile workers and telecommuters. Ascend develops, manufactures, markets, sells and supports products with bandwidth on demand to extend existing corporate networks for applications such as remote LAN access, Internet access, telecommuting, SOHO connectivity and videoconferencing/multimedia access. Detailed information on Ascend products, news announcements, seminars, service and support is available on Ascend's home page at the World Wide Web site http://www.ascend.com.

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

Dynamic Bandwidth Allocation™ (U.S. Patent No. 5,231,649), MAX™, Multiband™, Multilink Protocol Plus™, Pipeline® and Secure Access™ are trademarks of Ascend Communications, Inc. Other trade names mentioned in this publication belong to their respective owners.

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