PRODUCT INFORMATION

Ascend SDSL



Remote Access ▾ **Internet/Intranet Access** ▾ **Telecommuting**

Voice and data meet with Ascend's SDSL—high-bandwidth MultiDSL solutions over the local loop

Ascend's Single Pair HDSL (SDSL) products are part of a broad range of MultiDSL™ innovations that let carriers, service providers and corporations enter the DSL market immediately. This integrated offering includes the Central Office Equipment (COE) and the Customer Premises Equipment (CPE) required for high-bandwidth applications such as remote access, Internet/intranet access, and telecommuting. Ascend's SDSL product line enables users to transmit voice and data over a single pair of copper wires at speeds to 1.54 Mbps and at distances to 12,000 feet over the same local loop.

An Ascend DSLTNT™ multiservice xDSL concentrator with SDSL data and voice line cards supports SDSL applications. Carriers can extend CPE capabilities by adding MultiDSL technologies such as IDSL, RADSL-CAP and RADSL-DMT to the same platform.

End-users can take advantage of high-speed SDSL services using Ascend's DSLPipe™ products. These powerful routers let them access multiple destinations simultaneously to download high-resolution graphics, access multimedia applications, or transmit large files from a corporate intranet.

ASCEND Where Network Solutions Never End™

Integrated, High-Speed Central Office Solutions

DSLTNT delivers complete support for a variety of subscriber services

The DSLTNT gives carriers support for more services than any other platform in the industry. It supports all xDSL technologies—DSL to RADSL—in a single high-density solution. By inserting SDSL cards into a DSLTNT, carriers get the benefit of Ascend features, such as integrated voice and data over the same local loop. They can take advantage of Ascend's broad range of system capabilities—from Frame Relay PVC concentration to comprehensive user and security management. In addition, carriers get:

- Highest port density from 360 to 2,160 SDSL ports in a 7-foot rack.
- T1/E1 services, WAN, remote and server access, Internet/intranet access, video on demand, simplex video and interactive multimedia
- Extensive accounting records
- Multiprotocol support for IP, IPX, PPP, MP, and MP+
- Compatibility with existing authentication servers such as RADIUS, TACACS, TACACS+ and Ascend Access Control™
- Secure Access™ Firewall
- Client software including IntragyAccess™ and DeskDial™
- Virtual Private Network features (Frame Relay Direct, IP Direct, ATMP and PPTP)

Network administrators can manage SDSL lines directly from the central office

Using Ascend's SDSL technology, network administrators can reduce on-site maintenance costs and subscriber interruptions by managing the SDSL lines directly from the central office. They can manage functions either locally or remotely through a choice of interfaces. SDSL line cards offer several loopback tests designed to test and verify the integrity of each MultiDSL line.

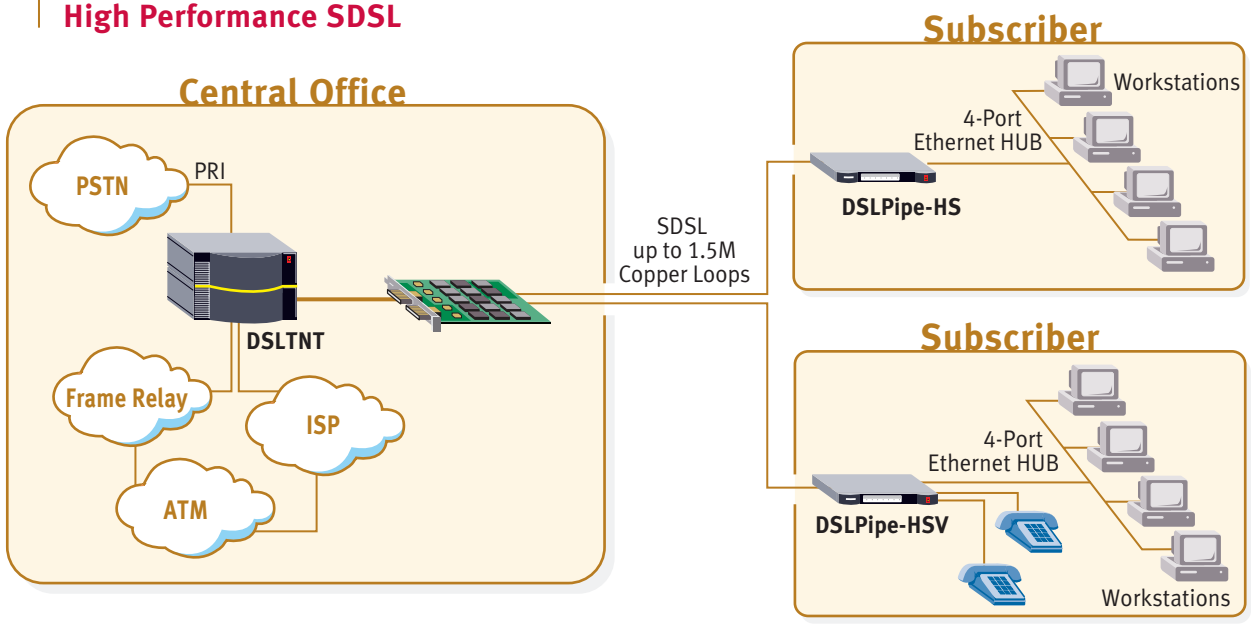
- Local loopback and remote loopback
- Monitoring and reporting line quality
- Network management (NavisAccess™, SNMP, console port)
- Password protected Telnet remote management

Compatibility with telephone company network equipment protects investment

A DSLTNT with integrated SDSL cards offers carriers, service providers and corporations a high-speed, cost-effective solution that requires no changes to current networks. By using the existing copper wiring on the local loop, they can protect their capital outlays while offering high-speed services to subscribers. The 24-port cards multiplex the pipes to multiple T1 interfaces that connect to a TDM voice network.

- Requires no upgrade to CO switch
- Avoids building multiple overlay networks

High Performance SDSL



Ascend's SDSL solutions enable users to transmit voice and data over a single pair of copper wires at speeds to 1.54 Mbps and at distances to 12,000 feet over the same local loop.

Flexible bandwidth management provides a full range of service options

Ascend's SDSL solution lets carriers, service providers and corporations adjust bandwidth and rates based on the throughput required by their subscribers. Users can offer their subscribers a speed of the full 1.54 Mbps. Using the high-performance SDSL products, subscribers can request up to six different rates varying from 144 Kbps to 1.54 Mbps. Subscribers who don't require large amounts of bandwidth pay only for what they need.

Direct data network connections eliminate switch congestion

SDSL calls are directly connected from the end-user location to the carrier services data network. In the past, both analog and ISDN calls were first processed through the central office switch before arriving at the data network. The end result was PSTN congestion. With Ascend's SDSL solution, data calls are routed directly to the data network, leaving the switch free to handle voice calls without bottlenecks and delays.

- Provides direct connection to data network
- Alleviates voice network congestion

Cost-effective solution for offering competitive flat rate services

In the past, carriers and service providers were forced to charge subscribers usage rates based on the duration of a call. Because SDSL calls do not require central office switch and voice infrastructure resources, they now have the option to offer subscribers services at a flat rate.

- Offers high-speed services at competitive rates
- Ensures all bandwidth is available for users on the network
- Requires a modest initial investment at the central office

DSLPipe products offer remote users access to high-speed DSL services

Ascend's DSLPipe products offer end-users a high-speed router/bridge for connecting to a corporate site, the Internet or another remote site at speeds to 1.54 Mbps for full duplex data over the local loop.

- The DSLPipe-S lets users connect to as many as eight different locations simultaneously to send files, browse the web, upload graphics or to simply read e-mail at speeds to 768 Kbps.
- The DSLPipe-2S lets users increase data speed to 1.54 Mbps using Multilink PPP (MP) or Multilink Protocol Plus™ (MP+) by adding another pair of copper wires when needed.
- The DSLPipe-HS has a built-in 4-port Ethernet hub. It offers multi-rate support and lets users increase data speed to 1.54 Kbps.
- The DSLPipe-HSV includes two voice channels and provides users with voice speeds up to 1.28 Kbps leaving 1.42 Mbps for data.

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
- Standard multiprotocol 802D Spanning Tree bridging
- Frame Relay, PPP, Multilink PPP (MP), Multilink Protocol Plus™ (MP+)

Comprehensive security ensures iron-clad remote networking

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

- Authentication profiles such as PAP, CHAP
- Token-based security including support for multiple vendors' products
- Transmit and receive packet filtering
- Ascend Secure Access Firewall option provides complete network protection
- Telnet password

SDSL



Features

DSL Support	SDSL
Multiservice Support	SDSL, IDSL, RADSL-CAP, RADSL-DMT
Loopback Testing	Local loopback test, remote loopback, monitoring and reporting line quality
Network Management System	**Central Office Equipment (COE)** SNMP management, Console port management NavisAccess network management software **Customer Premises Equipment (CPE)** Java-based DSLPipe Configurator Console port management NavisAccess network management software
Network Interface Specifications	12,000 (SDSL) feet over a single twisted copper pair 2B1Q signaling compatible, data at 1.54 Mbps (symmetric)
Multiprotocol Functionality	IP/IPX, PPP, MP, MP+, Frame Relay
Software Product Function	PPP, Frame Relay, IP/IPX, MP, MP+
Authentication	RADIUS, Access Control, TACACS, TACACS+
Security	Secure Access Firewall, PAP, CHAP, Callback, Token Card

SDSL Line Card Specifications

Transfer rate	1.54 Mbps (symmetric)
Transmission distance	12,000 feet
Interfaces per card	
Data card	24 ports per card, up to 15 cards per 14″ shelf for a total of 360 ports (DSLTNT)
Data and Voice card	24 ports per card, up to 15 cards per 14″ shelf for a total of 360 ports (DSLTNT)
Physical connectors	50 pin-Telco connectors
Connector requirements	Must meet JIS C 5973 standards
Card dimensions	8.8 in. x 10.6 in (22.35 cm x 26.92.cm)
Card weight	~3 pounds (1.37 kg)
Operating humidity	0% to 90%, non-condensing
Operating temperature	32°–104°F (0°–40°C)
NEBS Level 3 compliance	Bellcore SR-3580, Bellcore GR-1089-CORE, Bellcore GR-63-CORE

DSLPipe Specifications

Dimensions	8.63 in x 6.19 x 1.25 in [22 cm x 15.7 cm x 3.2 cm]
Weight	2.5 lbs [1.13 kg]
LAN Interface	10 Mbps Ethernet (10Base-T)
WAN Interface	RJ-11 SDSL port
Software Upgrade	Via built in flash RAM
Power Requirements	90-130VAC, 0.2A, 220-240VAC, 0.2A, 47-63 Hz
Operating Requirements	Temperature: 32°–104°F [0°–40°C] Altitude: 0-14,800 feet [0-4500 meters] Relative Humidity: 5-90% (non-condensing)
Safety Compliance	UL/CSA 1950, EN 60950, AS/NZS 3260
EMC/RFI Compliance	FCC 15 Class B, VCCI Class II, AS.NZS 3548 Class B EN 55022 Class B, EN 55082-1
Network Compliance	FCC Part 68 FCC Part 15, IC CS-03

Ascend's SDSL Products

Central Office Equipment	DSLTNT with SDSL line cards
Customer Premises Equipment	DSL Pipe-S, Pipe-2S, DSL Pipe-HS, DSL Pipe-HSV

Ascend's MultiDSL Products

Central Office Equipment	MAX 4000, 4002, 4004 (IDSL line cards) DSLTNT (IDSL, SDSL, RADSL-CAP and RADSL-DMT line cards)
Customer Premises Equipment	Pipeline -50, -75, -85, -130 (IDSL), DSLPipe-S (SDSL), DSLPipe-C (RADSL-CAP), DSLPipe-D (RADSL-DMT)

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Ascend Communications, Inc. develops, manufactures and sells wide area networking solutions for telecommunications carriers, Internet service providers, and corporate customers worldwide. For more information about Ascend and its products, please visit the Ascend Web site at http://www.ascend.com, or e-mail info@ascend.com.

Ascend markets the B-STDX, CBX, GRF, GX, IP, MAX, Multiband, MultiDSL, Navis, Pipeline, SA, SecureConnect and STDX families of products. Ascend products are available in more than 40 countries worldwide.

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