Ascend

Competitive Bulletin

Ascend Pipeline Series - 25-Fx/25-Px/50/75

ASCEND

Purpose

The purpose of this Bulletin is to provide a comprehensive analysis of the Ascend Pipeline® 25-*Fx*/25-*Px*/50/75 vs
5 key competitors: 3Com, Bay Networks, Cisco, Motorola, and Shiva.

Brief Product Descriptions:	*Pricing*

Bay Networks Nautica Clam

The Corporate LAN Access Module (CLAM) Nautica Series is an ISDN router without bridging functionality. This is the Xylogics product with a few new features such as: a voice card that enables users to use the analog port for voice/fax; an integrated NT1; and standard Multilink PPP.

- 1 Ethernet 10Base-T

- 1 ISDN BRI

    — Product is also available with a "Leased Line configuration":

Base Price: $1,195
Configured with Voice Card: $1,395

3Com OfficeConnect 520

Introduced in early 1996, the OfficeConnect Remote 520 is an access router that performs ISDN bridging and IP/IPX routing. Recently, 3Com introduced the OfficeConnect NetBuilder line as a Internet ready (leased line connectivity) extension to this line.

- 1 Ethernet (10Base-T)

- 1 ISDN BRI

- 1 POTS

Base Price: $1,295

3COM AccessBuilder 500

The AccessBuilder (formerly Arpeggio) line features ISDN bridging and routing; targeted at branch offices and small businesses, the AccessBuilder 500 is distinguished from the OfficeConnect 520 by the addition of a serial WAN port.

- 1 Ethernet (10Base-T or 10Base5)

- 1 ISDN BRI

- 1 POTS

- 1 serial WAN

Base Price: $1,595

Brief Product Descriptions:	*Pricing*

Cisco 766

The Cisco 766 is an ISDN router with an NT1, and two POTS interfaces. Unlike other products in the 760 line, the Cisco 766 can use Cisco's call priority feature to drop one or both channels.

- 1 Ethernet (10Base-T)

- 1 ISDN BRI (S/T or U Interface)

- 2 POTS

- Optional: built-in NT1 device

Base Price: $799

Configured for over 4 users with STAC compression: $1,099

Remote user software: $300

Cisco 770 Series Access Hub

The Cisco 770 is a multiprotocol ISDN router with an integrated four port Ethernet hub and a call connect/disconnect switch. The 775 and 776 models include two POTS interfaces. The 770 Series supports Cisco's proprietary CiscoIOS Port and Address Translation feature that allows a single IP address to be assigned to the LAN

- 4 Ethernet (10Base-T)

- 1 ISDN BRI (S/T or U Interface)

- 2 POTS (models 775 & 776 only)

- Built-in NT1 device (model 772 & 776 only)

Base Price Model 771: $749

Base Price Model 776: $949

Additional charge for mulitprotocol routing and compression software: $150

Cisco 1004

The Cisco 1004 is a desktop router with transparent bridging capability, designed to connect small, remote sites with Ethernet LANs to ISDN WANs. The Cisco 1004 router includes an integrated NT1.

- 1 Ethernet 10Base-T (RJ-45)

- 1 ISDN BRI (RJ-45)

Base Price: $1,400

Motorola Vanguard 311

The Vanguard 310 line is an IP-only router designed for the SOHO market. The "Plus" version adds frame relay support, network wide software downloading, and optional AppleTalk and IPX routing.

- 1 Ethernet (10Base-T) or (10Base-2)

- 1 BRI (U or S/T Interface)

Base Price: $995

"Plus" model: $1,295

Motorola Vanguard 312

The Vanguard 312 product is the 311 with the addition of bridging capability and a POTS port, targeted at the telecommuter market. As with the 311, the 312 "Plus" version adds frame relay support, network wide software downloading, and optional AppleTalk and IPX routing.

- Ethernet 10BaseT (RJ-45) or 10Base2 (BNC)

- 1 ISDN BRI (U or S/T Interface)

- 1 POTS

Base Price: $1,195

"Plus" model: $1,495

Brief Product Descriptions:	***Pricing***

Shiva Access Port

Introduced in June, 1996, the Shiva AccessPort ISDN Router has one BRI connection and two analog lines. In February, Shiva incorporated Network Address Translation functionality. Nortel and IBM resell the AccessPort via an OEM program.

Base Price: $995

- 1 Ethernet (10BaseT)

- 1 BRI (S/T or U Interface)

- 2 POTS

The Ascend Pipeline Competitive Advantages

More Features and Capability For Less Money
- Pipeline 25-*Fx* - ISDN bridging solution with integrated analog and digital support for up to four users, with features such as security and remote network management - at a price comparable with external ISDN terminal adapters.
- Pipeline 25-*Px* - ISDN Router Solution with integrated analog and digital support for a single user at a price comparable with external ISDN terminal adapters
- Pipeline 50 - PC/Computing's Most Valuable Product for two years running, and the world's best selling remote office ISDN router. Integrates proven performance, robust security options, and remote management capabilities (SNMP, Telnet, Syslog) with multiprotocol routing at an extremely competitive price.
- Pipeline 75 - Features the high-performance, management capabilities and router functionality of the Pipeline 50, with the benefit of two analog ports to accommodate additional devices, such as fax, phone, or answering machine - an ideal cost effective telecommuting or SOHO solution.
- Integrated Secure Access™ Firewall - The first fully-integrated router firewall delivers outstanding perimeter protection and simplified security management for only $500 MSRP for the Pipeline 50 and 75—a fraction of the cost of less secure and non-integrated security solutions. Certified by the National Computer Security Association (NCSA); rigorous testing by NCSA provides independent assurance to customers in the firewall selection process.
- Network Address Translation (NAT) allows the Pipeline 25-*Px*, 50 and 75 to connect a LAN to another network even if the devices on the LAN do not have valid addresses for the remote network. NAT can assist a company that is not able to get official addresses for their entire network because the supply of IP addresses is rapidly diminishing or for remote sites that want access to the Internet.

A Total Solution From the Market Leader
- Internet compatible - Ascend dominates the industry with a 42.5% share of the total access concentrator asynchronous ports, and over 76% share of the ISDN PRI access concentrator ports1
- A scalable product family providing end-to-end remote access solutions
- Products which are cost-effectively tailored for specific applications
- Ascend's remote management protocol allows Internet Service Providers and network managers using Ascend's equipment to remotely monitor the Pipeline. They can check configurations or change settings directly from the central site when it is required.

Easy and economical for all users
- The new Java-based Pipeline Configurator allows users and administrators to configure Ascend's Pipelines over Ethernet in a graphical "point-and-click" environment. Easy for technical and non-technical users alike, the Java-capable browser is compatible with Windows, Macintosh, and UNIX operating systems, and enables users to be up and running in 15 minutes
- Dynamic Bandwidth Allocation™ monitors bandwidth needs, and minimizes line costs by initiating and disconnecting ISDN channels as needed

Selling Against the Competition

Competition Weaknesses	The Ascend Advantage

Bay/Xylogics CLAM

Only a single (optional) analog port for sharing an ISDN line with either a phone, fax machine, or modem.	• The Pipeline 25-*Fx/-Px*/75 comes with two analog ports
No advanced calling features (call hold, transfer conference) on the analog port option.	• Ascend's Pipeline 25-*Fx/-Px*/75 has advanced calling features
Limited status feedback with only one status LED.	• The Pipeline products show 5 status modes on the LED display
No Network Address Translation capability	• Ascend's Pipeline products feature NAT for conserving IP addresses across the enterprise
No integrated router/dynamic firewall solution for Internet security.	• Ascend has the secure firewall option for Pipeline 50/75
Lacks support for token-based security - limits security in corporate LAN access applications.	• All Ascend Pipeline products support token-based security

3Com OfficeConnect Router 520

Only one analog telephone jack - forces user to chose between having a phone or fax line.	• The Pipeline 25-*Fx/-Px*/75 comes with two analog ports
Lack of Multilink (MP) support limits effectiveness in Internet access applications.	• Pipeline provides MP as well as Multilink Protocol Plus™ (MP+) support as a standard
Lacks Stac data compression to limit potential throughput..	• Ascend Pipeline 50/75 supports Stac data compression for up to 4:1 throughput improvement
Lacks advanced calling features on analog phone port (e.g. call hold, transfer, conference) - users are forced to give up features they normally get with analog phones.	• Ascend's Pipeline 25-*Fx/-Px*/75 has advanced calling features
No Network Address Translation capability	• Ascend's Pipelines feature NAT for conserving IP addresses across the enterprise
Lacks an optional integrated, dynamic firewall solution for maximum Internet security.	• Dynamic firewall software option is available on Pipeline 50/75
Lacks support for token-based security - limits security in corporate LAN access applications.	• All Ascend Pipeline products support token-based security

Competition Weaknesses	The Ascend Advantage

3Com AccessBuilder Remote Office 500

Large, bulky design	• Ascend Pipeline products are compact and convenient for desktop use
Only one analog telephone jack - forces user to chose between having a phone or fax line.	• Ascend's Pipeline 25-*Fx*/-*Px*/75 have two analog phone jacks
Lacks advanced calling features on analog phone port as with Pipeline products (e.g., call hold, transfer, conference) - users are forced to give up features they normally have with analog phones.	• Ascend's Pipeline 25-*Fx*/-*Px*/75 has advanced calling features
No Network Address Translation capability	• Ascend's Pipeline products feature NAT for conserving IP addresses across the enterprise
Lacks an optional integrated, dynamic firewall solution for maximum Internet security.	• Dynamic firewall software option is available on Pipeline 50/75
Lacks support for token-based security - limits security in corporate LAN access applications.	• All Ascend Pipeline products support token-based security

CiscoPro 766

Extra charge for features ($300 for support of 4 or more users, $150 for compression)	• Multi-user support and compression are standard features in Pipeline 50/75
Lacks integrated, dynamic firewall solution for Internet security.	• Dynamic firewall software option is available on Pipeline 50/75
Large footprint takes over precious desk space.	• Pipeline products are compact and convenient for desktop use.
Unproved design with little shipping history.	• Pipeline products have been shipping for years with a solid field track record.

Competition Weaknesses	*The Ascend Advantage*
Cisco 770 Series	
CiscoIOS enables proprietary Port and Address Translation	• Pipelines support open standards Network Address Translation protocol
Extra charge for features ($150 for multiprotocol routing and compression)	• Mulitprotocol routing and compression are standard features in Pipeline 50/75
Extra charge for DRAM memory upgrade	• Pipelines do not require memory upgrades
Lacks integrated, dynamic firewall solution for Internet security.	• Dynamic firewall software option is available on Pipeline 50/75
Extra charge for multiple user software upgrades	• Pipelines do not require multi-user upgrades
Unproved design with no shipping history.	• Pipeline products have been shipping for years with a solid field track record.

CiscoPro 1004	
Software other than basic bridging is sold separately as an expensive FLASH memory upgrade.	• Ascend Pipeline 50/75 bundle in router software at one low price.
Only has 10BaseT Ethernet support.	• Ascend Pipeline products provide AUI and 10Base-T Ethernet — offering greater cabling flexibility.
RJ45 console port uses a custom cable.	• Ascend uses industry standard RS232 DB9 terminal port connector.
Cisco charges extra for cabling (e.g., 10BaseT cabling, ISDN connection cable).	• Ascend provides industry standard cabling in the box for quick connection.
Cisco 1004 routers are twice the size and weight of the Pipeline products.	• Pipeline products are compact and light for easy desk or wall placement.

Competition Weaknesses	*The Ascend Advantage*
Motorola Vanguard 311/312	
IPX routing is $300 extra.	• Ascend Pipeline 50/75 bundle in router software at one low price
Lacks advanced calling features on analog phone port as provided in Pipelines (e.g., call hold, transfer, conference) - users are forced to give up features they normally have with analog phones.	• Ascend's Pipeline 25-*Fx/-Px*/75 has advanced calling features
No Network Address Translation capability	• Ascend's Pipelines feature NAT for conserving IP addresses across the enterprise
Lacks an optional integrated, dynamic firewall solution for maximum Internet security.	• Dynamic firewall software option is available on Pipeline 50/75
Lacks support for token-based security — limits security in corporate LAN access applications.	• All Ascend Pipeline products support token-based security
TFTP support for network-wide software downloading is an option.	• TFTP support for network-wide software downloading is a standard in the Pipeline family

Shiva AccessPort	
Lacks an optional integrated, dynamic firewall solution for maximum Internet security.	• Dynamic firewall software option is available on Pipeline 50/75.
Lacks advanced calling features on analog phone port as in Pipeline products (e.g., call hold, transfer, conference) - users are forced to give up features they normally have with analog phones.	• Ascend's Pipeline 25-*Fx/-Px*/75 has advanced calling features
Lacks support for token-based security — limits security in corporate LAN access applications.	• All Ascend Pipeline products support token-based security.
Unproved design with little shipping history.	• Pipeline products have been shipping for years with a solid track record in the field

Additional Information
Quick Glance Competitive Matrices follow

Any feedback or suggestions are welcome. Please send any pertinent competitive information to the attention of the Competitive Marketing group in Alameda (x2081)

Competitive Matrix - Pipeline 25-*Fx* and Pipeline 75

	Ascend Pipeline 25-*Fx*	Ascend Pipeline 25-*Px*	Ascend Pipeline 75	Bay Networks Clam	3Com OCR 520**	Cisco 766	Cisco 776	Motorola Vanguard 312	Shiva
AccessPort									
Price (MSRP)									
Price range -	$595	$695	$995 - $1,495	$1,195 - $1,395	$1,295	$799 - $1,099	$799 - $1,299	$1,195 - $1,495	$995 - $1,495
Key Features									
Bridging	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
IP Routing	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IPX Routing	No	No	Yes	Yes	Yes	Yes	Yes	$300 Option	Yes
Analog (POTS) (RJ11)	2	2	2	1 ($200)	1	2	2	2	2
Advanced Calling	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Limited
Multi-User/Unlimited	4	1	Unlimited	Yes	Yes	Extra Charge	Extra Charge	Yes	Yes
Multilink PPP Support	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
SNMP Support	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stac Data Compression	No	No	Yes	Yes	Proprietary	$150	Extra Charge	Proprietary	No
Network Address Translation	No	Yes	Yes	No	No	Yes	Yes	No	No
GUI Configurator	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Security									
PAP & CHAP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Token-based Security	Yes	No	Yes	No	No	No	No	No	No
Dynamic Firewall Support	No	No	Optional	No	No	No	No	No	No

** Office Connect Remote 520

Competitive Matrix - Pipeline 50

	Ascend Pipeline 50	Bay Networks Clam	3Com AB 500	3Com OCR 520**	Motorola Vanguard 311	Cisco 1004	Shiva AccessPort
Price (MSRP)							
Price Range	$895 - $1,395	$1,195	$1,595	$1,295	$995 - $1,295	$1,400	$995 - $1,495
Key Features							
Bridging	Yes	Yes	No	Yes	No	Yes	Yes
IP Routing	Yes	Yes	No	Yes	Yes	Optional $	Yes
IPX Routing	Yes	Yes	No	Yes	$300 Option	Optional $	Yes
Multi-User/Unlimited	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PPP Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MP Support	Yes	No	No?	No	Yes	Yes	Yes
SNMP Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stac Data Compression	Yes	Yes	No	Not Stac	Not Stac	No	No
Network Address Translation	Yes	No	No	No	No	Yes	No
GUI Configurator	Yes	No	No	No	Yes	Yes	No
Security							
PAP & CHAP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Token-based Security	Yes	No	No	No	No	No	No
Dynamic Firewall Support	Optional	No	No	No	No	No	No

Prices as of April 1997. Prices subject to change.

ASCEND

Remote Networking Solutions That Work.™

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