

Ascend

Competitive Analysis

Ascend MAX 4048 vs. Key Competitors

Product Descriptions:

Shiva LanRover Access Switch

The LanRover access switch is an eight-slot remote access server that can support integrated modems, T1 and ISDN PRI. The LanRover also supports LAN-to-LAN routing for IP, IPX and AppleTalk. Remote client software also is available for the user-to-LAN applications. The LanRover access switch started shipping in July 1996, and it supports up to 60 modems and three T1s or PRIs. Future support is announced for up to 72 modems and four T1s or PRIs.

Pricing

Price per port (48 modem configuration)\$ 1,225

Cisco Systems AS5200

The AS5200 is a three-slot access server that is designed to support modems and direct T1/PRI terminations. It supports IP, IPX and AppleTalk routing for LAN-to-LAN sessions while supporting user network access via a remote client software package. The AS5200 provides one Ethernet, two serial interfaces and two T1/PRI ports with the capability to support up to 48 digital modems.

Pricing

Price per port (48 modem configuration)\$ 756*

*Includes modem management and additional DRAM cost.

Livingston PortMaster 3

The PortMaster 3 is an integrated Network Access Server which consolidates analog, ISDN BRI and ISDN Primary Rate Interface (PRI) T1 or E1. The product began shipping in fall of 1996, and it is sold with Livingston's centralized management software. It is a two T1 box with a capacity to support 46 concurrent sessions.

Pricing

Price per port (48 modem configuration)\$ 639

US Robotics Total Control

USR's Total Control product is a 16-slot modular product that supports up to five dual port T1/PRI modules and up to 12 quad modem modules. The product is designed to support LAN-to-LAN routing for IP and IPX and user-to-LAN via a client software application. With a configuration of two PRIs, the Total Control chassis is capable of supporting a maximum of 48 modems.

Pricing

Price per port (48 modem configuration)\$ 920



Ascend MAX 4048™ Competitive Advantages

- High-performance multiservice access concentrator at a low entry price
- Easy to use Java-based configurator
- Support for ISDN, Frame Relay and leased lines
- Most comprehensive set of security features including extended RADIUS dictionary (over 120 enhancements)
- Guaranteed interoperability with a wide number of modem manufacturers and carrier networks including carriers in over 36 countries
- Proven track record and investment protection; Ascend has the largest installed base of integrated access switches and has been shipping high-density access concentrators for over three years; Ascend has installed over 2.2 million digital ports and over 1.5 million digital modems worldwide; customers can be assured of investment protection because of Ascend's commitment to developing scalable, compatible and high-performance platform solutions
- Integrated, open 56K modem technology
- Hybrid Access™ 4000 support; Ascend provides this software to enable flexible connectivity from any access line; it provides integrated digital sessions via the T1 or ISDN PRI interface; with Hybrid Access, users have integrated remote networking access for ISDN, Switched 56 as well as Frame Relay
- Dynamic, integrated firewall capability
- MP+ and Multi/chassis MP+ support; MAX Stack, a feature which maximizes bandwidth availability by enabling multiple MAX WAN access switches to function together as one logical switch for Multilink PPP (MP), Multilink Protocol Plus™ (MP+) and Bandwidth Allocation Control Protocol (BACP) calls; Ascend has clearly established itself as the only remote access vendor providing comprehensive bandwidth management features. For example, a single incoming MP call that requests greater bandwidth is given additional unused channels anywhere in the stack. MAX Stack reduces the complexity and increases the simplicity of provisioning access to multiple central site WAN access switches

Major Weaknesses of Competitor's Products

Shiva LanRover Access Switch

- No Frame Relay support
- High price, low value
- No MP or MP+
- No integrated, dynamic firewall capability
- Limited RADIUS capability; no extensions
- Not part of a scalable family, single-product solution
- No bridging support for non-routable protocols
- No proven track record

Cisco AS5200

- High price, low value
- No support for MP or MP+
- Very new to RADIUS arena; no extensions
- One product portfolio: Not scalable
- No core competence in modem technology, all OEM — loosely integrated technology
- No integrated, dynamic firewall capability
- No proven track record with remote access switches
- Requires separate modem management software
- Current modems lose calls beyond 28.8 Kbps (33.6 Kbps, etc.)

Livingston PortMaster 3

- No STAC hardware compression
- No fax dial-out capability
- No idle timer
- No integrated, dynamic firewall capability
- No RIP2
- No NFAS
- Not part of a scalable family, single product solution

US Robotics Total Control

- PRI shipping but ISDN is not their core competence
- High price, low value
- No MP or MP+
- No integrated, dynamic firewall capability
- No Frame Relay support
- Limited ISP Experience
- Not part of a scalable family, single product solution
- Proprietary 56K (x2) architecture

Comparison of Key Features

Feature	MAX 4048	Shiva LanRover Access Switch	Cisco AS5200	Livingston PortMaster 3	USR Total Control
List Price per port/Density					
Modem configuration/box	48	48	48	48**	48
Price/modem@48 modems	\$550	\$1,225	\$756*	\$639	\$920
WAN Connectivity/ Bandwidth Management					
T1	Yes	Yes	Yes	Yes	Yes
V.34	Yes	Yes	Yes	Yes	Yes
ISDN PRI	Yes	Yes	Yes	Yes	Yes
PPP	Yes	Yes	Yes	Yes	Yes
Frame Relay Option	Yes	NO	Yes	Future	Yes
MP	Yes	Yes	Yes	Yes	Yes
MP+	Yes	NO	NO	NO	NO
MultiChassis MP	Yes	NO	Yes	Yes	NO
MultiChassis MP+	Yes	NO	NO	NO	NO
Hardware Data Compression	Yes	NO	NO	Future	NO
Security					
PAP/CHAP	Yes	Yes	Yes	Yes	Yes
Dynamic Firewall	Yes	NO	NO	NO	NO
RADIUS	Yes	Yes	Yes	Yes	Yes
Extended RADIUS	Yes	NO	NO	NO	NO
Integrated Firewall Capability	Yes	NO	NO	NO	NO
VPN Tunneling support	Yes	NO	Yes	NO	NO
Management and Control					
Full SNMP MIB Support	Yes	Yes	Yes	Yes	Partial
Client Software	Yes	Yes	NO	NO	Yes
Modem Round-Robin Allocation	Yes	NO	NO	NO	NO
GUI configurator	Yes	Yes	Yes	Yes	Yes
Routed Protocol Support					
IP	Yes	Yes	Yes	Yes	Yes
IPX	Yes	Yes	Yes	Yes	Yes
AppleTalk	Yes	Yes	Yes	NO	NO

*includes modem mgmt software/DRAM

**46 concurrent sessions

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