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Ascend MAX 2012/2024 vs. Key Competitors

Product Description:

3Com Access Builder 4000

3Com's Access Builder 4000 is not an integrated server; the 16-port chassis can be purchased either as a Async base system or an ISDN base system. The Async system can support two eight-port asynchronous modules; the ISDN system can support two four-port ISDN BRI modules or two single-port fractional T1/E1 synchronous modules. The product supports IP, IPX and AppleTalk, and either Ethernet or Token Ring configurations. The Access Builder is targeted at the enterprise market and does not provide a firewall.

Estimated Base List Price: $5,925

Estimated List Price per modem port: $574

Bay Networks Remote Annex 6300

The Remote Annex 6300 can support 24 B-channels for a T1/PRI interface (30 B-channels for a E1/PRI interface), and up to 32 analog modems. The product ships with Bay Network's FastLink II software that supports IPX, and IP/AppleTalk software support is provided at an extra charge. The Remote Annex line is targeted at the corporate enterprise and service provider POP.

Base List Price with 24 B-channels and 16 analog ports: $20,995
Base List Price with 24 B-channels and 32 analog ports: $28,995

List Price per modem port: (16 modem configuration): $1,312
List Price per modem port: (32 modem configuration): $ 906

Cisco 3640

The Cisco 3600 series is a digital-only modular remote access server line; the 3620 has two slots that support one Ethernet PRI or four Ethernet BRI, and the 3640 has four slots that support up to six PRI or 24 BRI interfaces. Analog access would require the purchase of a separate access server. Software, additional memory upgrades, and security features are additional cost items.

Base List Price for 3640 chassis: $6,500
Base List Price per Single port PRI module with integrated CSU/DSU: $2,800
Base List Price for additional 8MB DRAM: $700
Base List Price for IP/IPX Software: $600
Base List Price at maximum configuration: $24,600

List Price per modem port: Not Applicable

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Shiva LanRover/E Plus

The LanRover/E Plus is an eight-port remote access server that supports integrated analog modems or ISDN BRI. The system can support up to a maximum of eight ports—eight analog or four BRI interfaces or a combination of both. The LanRover supports IP, IPX and AppleTalk. This product is primarily targeted at the corporate departmental access market. The system comes with Shiva client software and Windows configurator, but firewall software is an additional cost option.

Base List Price with eight analog modem ports and software: $8,999
Base List price with four BRI S/T ports and software: $7,119

List price per modem port: $1,125

US Robotics Total Control NETServer I-modem

The Total Control NETServer I-modem is an integrated remote access server aimed at office environments. The NETServer includes analog modem and ISDN support to accommodate eight or 16 analog or ISDN calls. The system supports IP and IPX, and comes bundled with Auto Configuration Wizard and Stampede Client software.

The NETServer comes in two configurations: the NETServer/8 I-modem supports up to eight combinations of analog and ISDN calls, and the NETServer/16 I-modem supports up to 16 combinations of analog or ISDN calls.

Base List Price for NETServer/8 I-modem: $8,995
Base List Price for NETServer/16 I-modem: $13,995

List Price per modem for 8-I: $1,125
List Price per modem for 16-I: $875

Ascend MAX 2012/2024 Competitive Advantages

- High-speed WAN connectivity over T1/PRI at a low entry price
- Scalable from 12 to 24 sessions
- Bundled software to include Multiprotocol support, MAXlink Pro™ client, MAXDial™ and integrated, dynamic firewall; software also includes easy-to-use Java configurator
- Support for Frame Relay and leased lines
- Most comprehensive set of security features including RADIUS and Ascend Access Control (extended RADIUS dictionary with over 120 extensions)
- Support for 56K modem connection
- Guaranteed V.34 and 56 Kbps 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 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
- Hybrid Access™ support: Ascend provides this software option to enable flexible connectivity from any access line. Hybrid Access provides integrated digital sessions via the T1 or ISDN PRI interface; in addition, users have integrated remote networking access for ISDN, Switched 56 as well as Frame Relay
- Dynamic, integrated firewall capability
- MP+ and Multichassis MP+ support: With MAX Stack, a feature which maximizes bandwidth availability by enabling multiple MAX WAN access switches to function together as one logical switch for MP, MP+ and 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:

3Com Access Builder 4000
- Not an integrated server - analog and digital capabilities must be purchased separately
- No 56K support
- No Frame Relay support
- High cost per port—Analog cost per port is 20-30% higher
- Does not include RADIUS or an integrated firewall
- Limited expansion capability—maximum of 16 dial-in ports versus 24 for MAX 2024
- Not scalable—lacks MP+ and MultiChassis MP/MP+ support
- Incomplete routing support—no AppleTalk Routing.
- No cross-platform configuration utility—Ascend provides a free Java Configurator.
- Lacks Integrated VPN tunneling support
- No modem round-robin allocation
- Future support for the Access Builder 4000 is uncertain because of the pending US Robotics merger

Bay Networks Remote Annex 6300
- Extremely high cost per port—double the cost per analog port
- No 56K support
- Lacks Frame Relay support
- No firewall support
- IPX and AppleTalk routing are extra cost options
- Not scalable—lacks MP+ and Multichassis MP/MP+ support
- No cross-platform configuration utility
- Lacks integrated VPN tunneling support

Cisco 3640
- No integrated analog modem support- forces customers to purchase analog and digital access solutions separately, and results in expensive, complex and unmanageable external modem solution
- High cost per port—Cisco's analog cost per port is 70% higher than the MAX 2012 and 2024
- Unproved design—Cisco 3640 has been shipping for less than six months
- No 56K support
- IP, IPX and AppleTalk routing are extra cost software options
- No Frame Relay support
- No integrated dynamic firewall
- Does not provide bundled client software (MAX 2012 and 2024 includes full complement of client application software)
- Not scalable—lacks MP+ and MultiChassis MP+ support
- No modem round-robin allocation

Shiva LanRover /E Plus
- No high-speed WAN connectivity—analog (up to 56K) or ISDN BRI only
- High price, low value, with an extra charge for firewall software
- External CSU/DSU support required
- No 56K support
- Not scalable—lacks MP+ and MultiChassis MP+ support
- No integrated, dynamic firewall support
- No transparent bridging support for non-routable protocols
- No modem round-robin allocation

US Robotics Total Control NETServer I-modem
- High price, low value; also, extra charge for firewall software
- No proven track record in the integrated access server arena
- Limited RADIUS support
- No dial-out functionality

- Product is not scalable—lacks MP+ and MultiChassis MP/MP+ support, and requires separate boxes for eight and 16-port configurations
- No integrated, dynamic firewall support
- No transparent bridging support for non-routable protocols
- Proprietary 56K solution—will not interoperate with over 70% of the client modem market
- No modem round-robin allocation
- Future support this product is uncertain because of the pending 3Com - US Robotics merger

Comparison of Key Features

FEATURE	MAX 2012/2024	3Com AccessBuilder 4000	Bay Networks Remote Annex 6300	Cisco 3640	Shiva LanRover/ E Plus	USR NETServer I-8 or I-16
LIST PRICE PER PORT/DENSITY						
Max. modems/box	12 or 24	N/A*	32	N/A*	8	8 or 16
Price/modem	$700 (2012)	$~918 (8 port)	$1312 (16)	$~1392 (12)	$1,125	1,125 (I-8)
Price/modem	$580 (2024)	$~700 (16 port)	$906 (32)	$~980 (24)		$875 (I-16)
WAN CONNECTIVITY/ BANDWIDTH MANAGEMENT						
T1	Yes	Yes	Yes	Yes	No	Yes
Integrated V.34	Yes	No	Yes	No	Yes	Yes
Integrate 56K	Yes	No	No	No	No	Yes (Proprietary)
ISDN PRI	Yes	No	Yes	Yes	No	Yes
PPP	Yes	Yes	Yes	Yes	Yes	Yes
Frame Relay	Yes	No	No	No	No	No
Multilink Protocol (MP)	Yes	Yes	Yes	Yes	Yes	No
Multilink Protocol Plus (MP+)	Yes	No	No	No	No	No
MultiChassis MP	Yes	Yes	No	Yes	No	No
MultiChassis MP+	Yes	No	No	No	No	No
Hardware Data Compression	Yes	No	No	No	No	No
SECURITY						
PAP/CHAP	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic Firewall	Yes	No	No	No	No	No
RADIUS	Yes	Future	Yes	Yes	Yes	No
Extended RADIUS	Yes	No	No	No	No	No
Integrated Firewall	Yes	No	No	No	No	No
VPN Tunneling support	Yes	No	No	Yes	No	No
MANAGEMENT AND CONTROL						
Comprehensive SNMP	Yes	Yes	Yes	Yes	Yes	No
Client Software	Yes				Yes	Yes
Modem Round-Robin Allocation	Yes	No	Yes	No	No	No
GUI Configurator	Yes	No	No	Yes	Yes	Yes
ROUTED PROTOCOL SUPPORT						
IP	Yes	Yes	Optional	Optional	Yes	Yes
IPX	Yes	Yes	Yes	Optional	Yes	Yes
AppleTalk	Yes	No	Optional	Optional	Yes	No

* Product requires external modems: 3Com AccessBuilder price assumed at $200 per external modem
Cisco 3620 price assumed at $200 per external modem

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