PRODUCT INFORMATION

Ascend

MAX 4048/4060



Ascend MAX™ 4048 and 4060 WAN access switches fulfill the needs of small- to mid-sized network service providers and the remote networking needs of enterprises of all sizes. Based on theTrue Access™ Operating System (TAOS), the MAX 4048 and 4060 are easy to configure. They offer scalability, robust software features and the high-performance digital modems needed for building high-density remote networks.

The MAX 4048 has two T1 interfaces with 48 digital modems. The MAX 4060 has two E1 interfaces with up to 60 digital modems. Both products combine the functionality of a router, a terminal server, an ISDN switch and a Frame Relay concentrator. Enhanced system capabilities provide a migration path from analog modem access to ISDN BRI access. NavisAccess™ network management software provides extensive wide area network (WAN) and service management. Integrated security enables service providers to offer reliable, secure access to the Internet, a corporate intranet or a virtual private network (VPN).

High-speed digital modems enhance performance and reduce operating costs

MAX Series56™ Digital Modem slot cards provide high speed V.90 access to analog modem callers. Analog calls come in over any of the DS channels carried by the ISDN BRI interfaces, and are demodulated in the slot cards.

- V.90, K56flex, V.34, V.FC, V.32bis, V.23, V.22A/B, V.21, Bell 212A and Bell 103 compatible
- MNP 2-4, MNP 10 EC (error correction)
- V.42bis, MNP 5 data compression, fax modem dial-out up to 14.4 Kbps
- Remote downloadable modem firmware

Integrated software protects investment

The MAX 4048 and 4060 both offer scalable platforms that let network service providers add functionality without incurring additional expense. Software enhancements and MAX Stack capabilities allow them to integrate users and additional MAX units seamlessly into their networks.

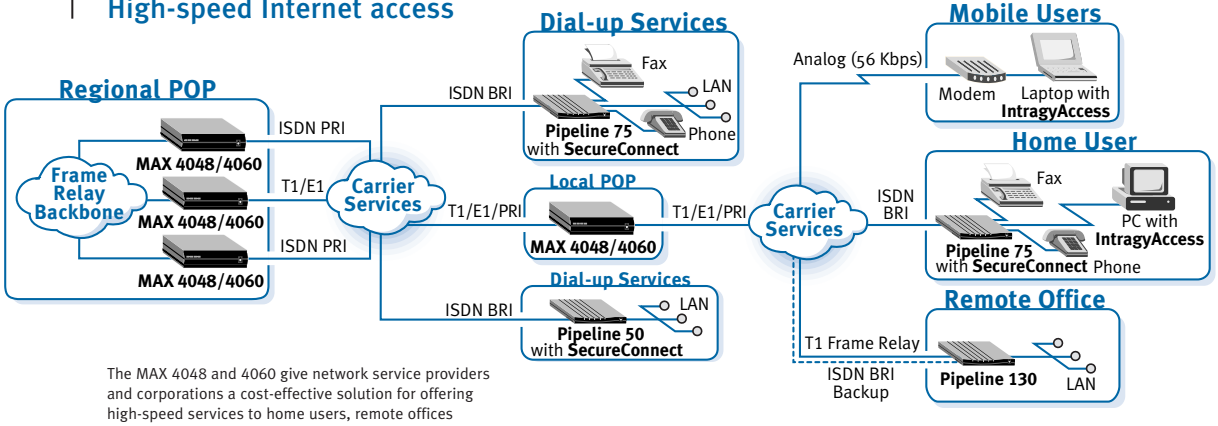
- Global Digital Access™ adds functionality (ISDN PRI signaling, HDLC processing, Frame Relay support)
- MAX Stack allows MAX systems to function as a single WAN access switch for Multilink PPP (MP) Multilink Protocol Plus (MP+), and Bandwidth Allocation Control Protocol (BACP)

Iron-clad security ensures privacy, integrity and confidentiality to all applications

The security provisions of the MAX integrate seamlessly into existing network security architectures. These built-in features also make it easy to manage large-scale remote access applications from a central site.

- User authentication compatible with RADIUS, NavisRadius™, TACACS and TACACS+
- Encrypted token-card security, callback (for digital connections), Calling Line ID (CLID) and transmit/receive packet filtering
- SecureConnect™ ICSA-certified firewall (optional)
- Ascend Tunneling Management Protocol (ATMP), Point-to-Point Tunneling Protocol (PPTP), Layer-2 Tunneling Protocol (L2PT)

High-speed Internet access



The MAX 4048 and 4060 give network service providers and corporations a cost-effective solution for offering high-speed services to home users, remote offices and mobile users over a variety of interface lines.

Centralized management and service capabilities enhance business offerings

The Navis™ service management suite of powerful network management applications lets service providers deliver new networking services to business and enterprise customers more quickly and profitably.

- NavisAccess offers extensive WAN and service management capabilities
- NavisConnect™ adds GUI configuration tools for all TAOS devices
- Capabilities include remote management from a central site, including change control and update validation

Managed by Navis™

Hardware Specifications

Dimensions	7.6 cm X 43.2 cm x 30.5 cm [3 in x 17 in x 12]
Weight	6.8 kg [15 lbs]
LAN Interface	Ethernet 10Base-T via RJ-45 jack Ethernet AUI via DB-15 Connector
WAN Interfaces	
MAX 4048	2 T1 ports with integrated CSU, V.35 interface
MAX 4060	2 E1 ports and a serial interface
Software Upgrade	Via built-in flash RAM, remote downloadable
Power Requirements	47 – 63 Hz, 90-240 VAC, 680 BTU/hour Maximum Designed Power Draw: 385 watts Maximum Operating Power Draw: 200 watts (with 6 MX-SL-120MOD-S56) Min. Operating Power Draw: 80 watts (no cards installed)
Environmental	Temperature: 0 – 40°C [32 – 104°F] Altitude: 0 – 4500 meters [0 – 14,800 feet] Relative Humidity: 5 – 90% (non-condensing)
Safety Certifications	CSA 950, NRTL/UL 1950, TUV EN 60 950
EMI/RF	FCC Part 68, FCC Part 15, E55022, EN50082-1

MAX 4048 is available only in specific countries. Please check with your local Ascend representative for availability.

Key Features

Routed LAN Protocols	TCP/IP via RIP, RIP2, OSPF, AppleTalk and IPX (with Intragy™)
Bridged LAN Protocols	All (with Intragy)
WAN Protocols	ARA (with Intragy) PPP, SLIP, C-SLIP, Async PPP, Sync PPP, X.25 PAD, X.25 over B-channel, V110, V.120, D4 framing (T1/E1), G703/732 framing (R1), FR PVC, PPP-FR gateway, FR NNI, ISDN signaling, ITU-T R2 on E1
Modem Support	V.90, K56flex, V.34, V.FC,V.32, V.23, V.22A/B, V.21, Bell 212A and 103, MNP 2-4, MNP 10-EC, V.42bis.MNP 5 data compression, fax modem dial out to 14.4 Kbps
Bandwidth Management	Multilink PPP (MP), Multilink Protocol Plus™ (MP+), Bandwidth Allocation Control Protocol (BACP), TCP header compression, data compression (Ascend/Microsoft/STAC V9)
Security	SecureConnect Firewall, RADIUS, NavisRadius (extended RADIUS), TACACS, TACACS+,Password Authentication Protocol (PAP), Challenge Authentication Protocol (CHAP), MS-CHAP, token card, Calling Line ID (CLID), packet filtering, SNMP, console management (VT-100), PPP callback, user authentication
Operating System	True Access Operating System
Virtual Private Networking	Ascend Tunneling Management Protocol (ATMP), Point-to-Point Tunneling Protocol (PPTP), Layer-2 Tunneling Protocol (L2TP)
Remote Networking Software	Transparent Bridging, Multiprotocol routing (adds routing support for IPX and AppleTalk), Multiprotocol Access (Async IPX with local spoofing, AppleTalk Remote Access 1.0 & 2.0), Intragy and IntragyAccess™
Management	NavisAccess, NavisConnect, Java Configurator, Telnet, NASI, SNMP MIBSII, PPP, LQM, Frame Relay Annex D, Frame Relay ITU Annex A, Frame Relay ANSI Annex D, ISDN event log, Syslog support

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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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