

Ascend

Multiband MAX Family



Arnold Lim





Table of Contents

- Introduction
- Multiband MAX™ Product Family
 - Positioning
- Product Overview
- Multiband MAX Applications
- Physical Interfaces
- Modules
- Upgrade Features
- Pricing and Models
- Availability

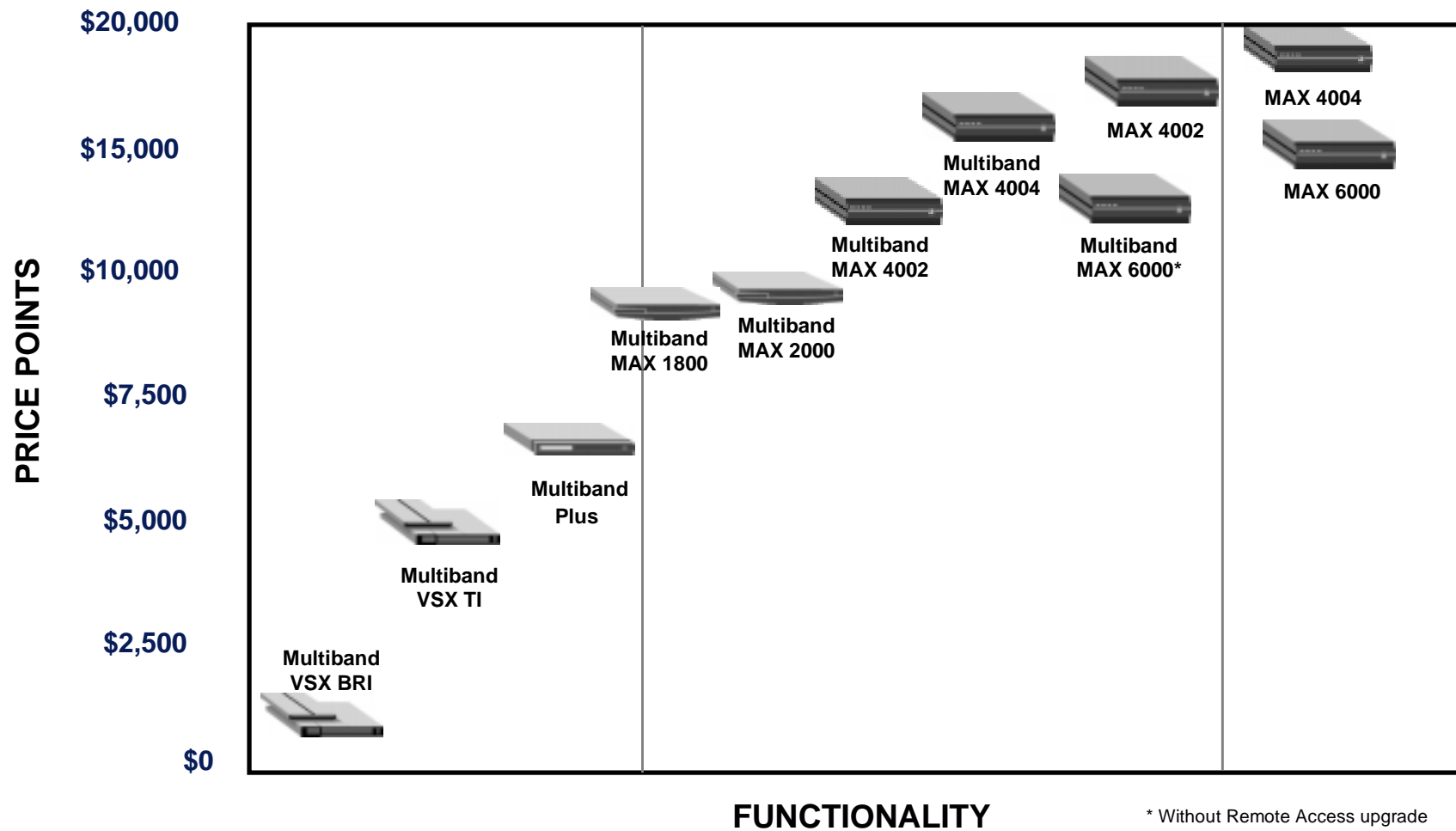


Multiband MAX Family Introduction

- Scalable product family
- Fits different network access needs
- Lower cost entry point
- Focused for the videoconferencing and backup/overflow market
- SNMP and Telnet management
- Provide remote access as an upgrade option.



Market Positioning





Multiband MAX Family Overview

Multiband MAX 1800

Scalable bandwidth-on-demand controller
Two expansion slots supporting AIM and BRI modules
Two-port AIM module with prebundled software package
Telnet and SNMP management
Up to Eight BRIs or 1.024 Kbps to the WAN



MAX 1800

Multiband MAX 2000

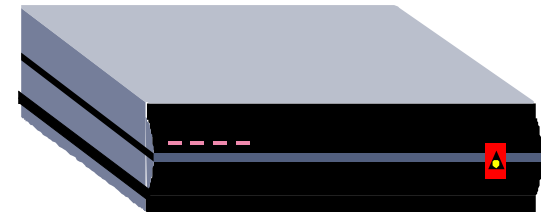
Scalable bandwidth-on-demand controller
Two Expansion slots supporting AIM and BRI modules
Two-port AIM module with prebundled software package
Telnet and SNMP management
One T1 for 1.544 Kbps to the WAN



MAX 2000

Multiband MAX 4002 and Multiband MAX 4004

Scalable bandwidth-on-demand controller
Six expansion slots supporting AIM and BRI modules
Two-port AIM module with prebundled software package
Telnet and SNMP management
Up to 6 Mbps (four T1s) to the WAN



MAX 4002 and MAX 4004



Multiband MAX Family Overview

Multiband MAX 6000

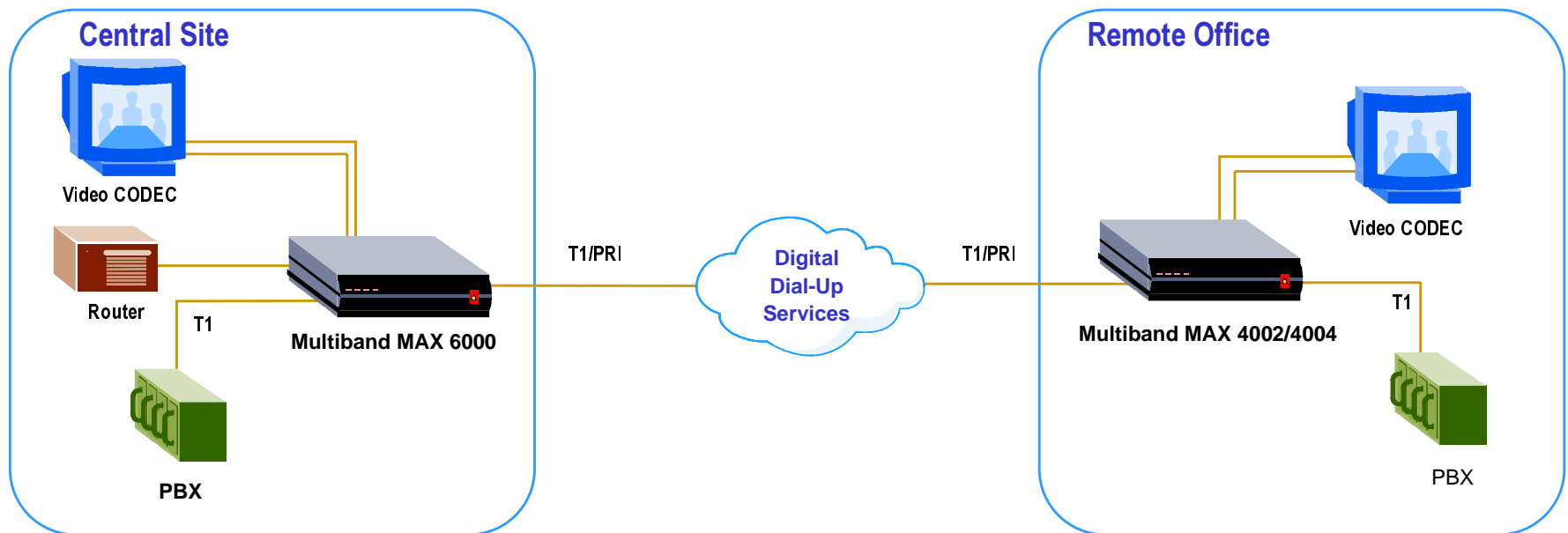
- Scalable bandwidth-on-demand controller
- Dynamic channel cross connection
- Six expansion slots supporting AIM and BRI modules
- Two-port AIM module with prebundled software package
- Telnet and SNMP management
- Up to 6 Mbps (four T1s) to the WAN



Multiband MAX 6000



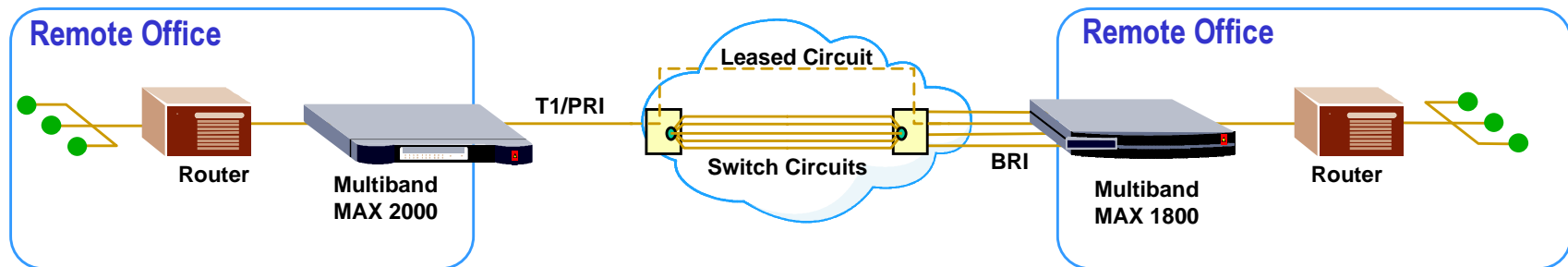
Multiband MAX Family Corporate Multimedia Network





Multiband MAX Family

Backup and Overflow Application

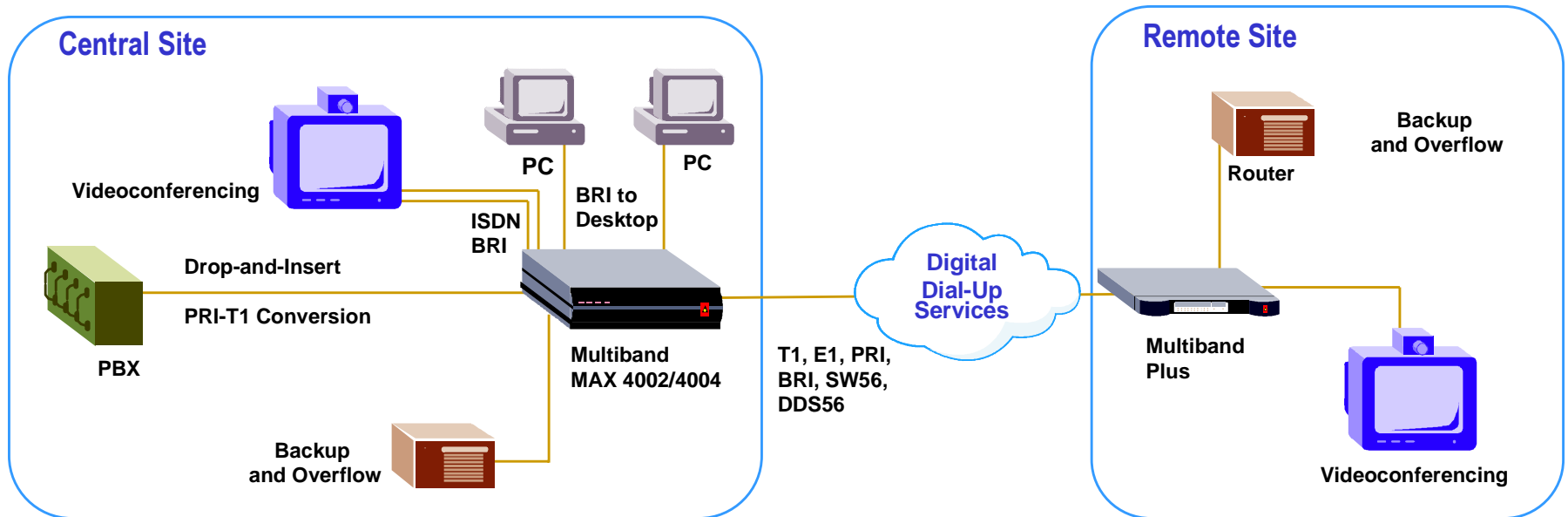


- Used with router applications75
- Provides backup for failed leased lines using dial-up switched lines
- Provides varying amounts of digital dial-up bandwidth to bridges and routers
- Bandwidth adjusted manually, via time-of-day windows, or via real-time traffic patterns
- Pay only for bandwidth when it's needed
- Provides overflow for a fully utilized leased line using dial-up switched lines



Multiband MAX 4000 and MAX 6000

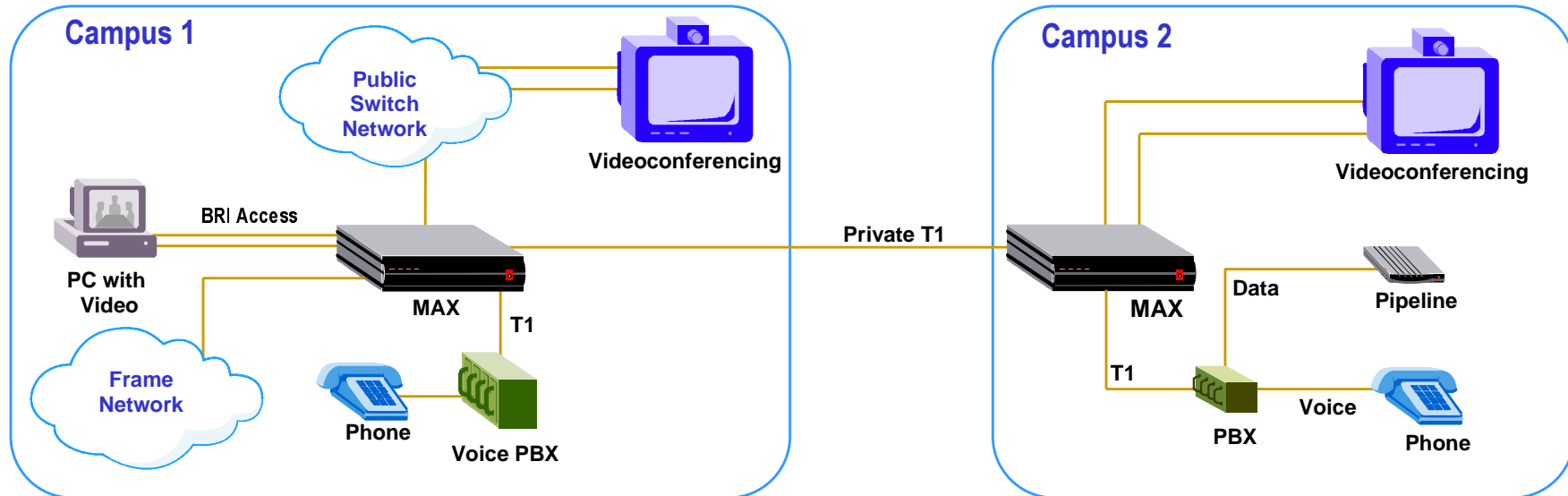
Video, Voice and Data Concurrent Applications



- Multi-application bandwidth-on-demand controller
- PRI-T1 conversion or drop-and-insert for voice circuits
- BRI terminal module for local switching and public access
- All Multiband features, including BONDING, DBA, integral CSU, international, remote management, dedicated circuits and extensive applications support



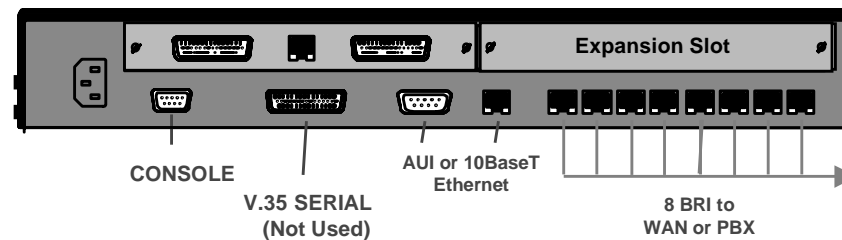
MB MAX 4000 or MB MAX 6000 Extended Network Applications



- Multi-application bandwidth-on-demand controller
- Using MAXDAX – which provides “cross connections” capability between DS0s on the dialed switch.
- Allows Voice and Data calls to intelligently cross network boundaries
- Provide alternative local dial data paths for long distance location



Multiband MAX Family Interfaces

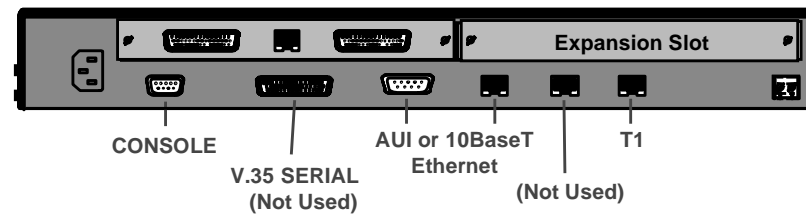


Multiband MAX 1800

- Eight BRI S/T OR U network trunks
- Supports AIM and BRI terminal modules
- Standard two-port AIM module
- Expansion slots for custom requirements
- Ethernet port (10Base-T) for Telnet or SNMP management
- Console port for unit configuration



Multiband MAX Family Interfaces

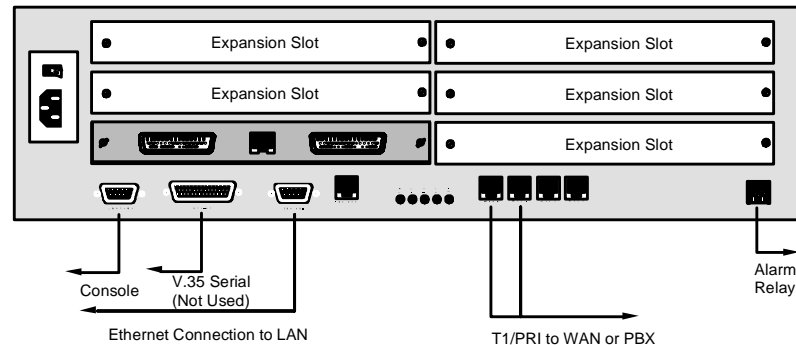


Multiband MAX 2000

- T1/PRI with integrated CSU
- Supports AIM and BRI terminal modules
- Standard two-port AIM module
- Expansion slots for custom requirements
- Ethernet port (10Base-T) for Telnet or SNMP management
- Console port for unit configuration



Multiband MAX Family Interfaces

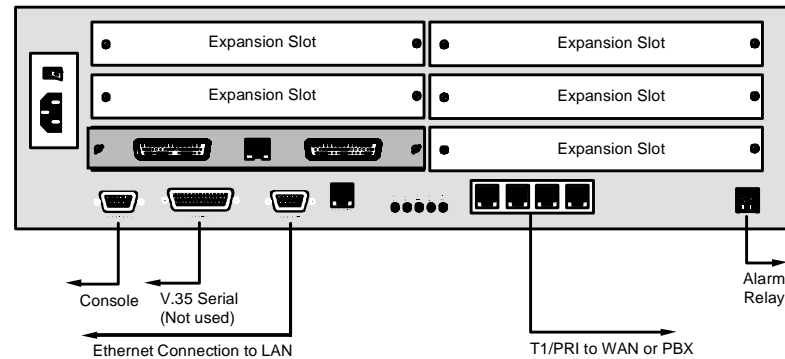


Multiband MAX 4002

- Two T1/PRI with integrated CSUs
- Supports AIM, BRI terminal and network modules
- Standard two-port AIM module
- Six expansion slots for custom requirements
- Ethernet port (10Base-T) for Telnet or SNMP management
- Console port for unit configuration



Multiband MAX Family Interfaces

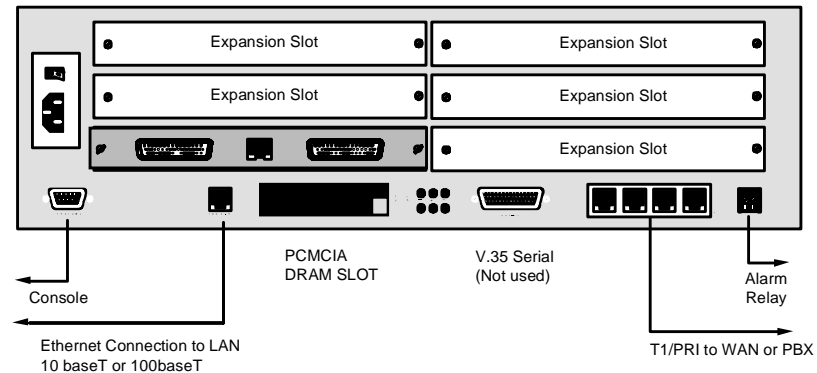


Multiband MAX 4004

- Four T1/PRI with integrated CSUs
- Supports AIM, BRI terminal and network modules
- Standard two-port AIM module
- Six expansion slots for custom requirements
- Ethernet port (10Base-T) for Telnet or SNMP management
- Console port for unit configuration



Multiband MAX Family Interfaces



Multiband MAX 6000

- Four T1/PRI with integrated CSUs
- Supports AIM, MAXDAX, BRI terminal and network modules
- Standard two-port AIM module
- Six expansion slots for custom requirements
- Ethernet port for Telnet or SNMP management, 10Base-T or 100Base-T
- Console port for unit configuration
- Memory slot for future upgrades



Multiband MAX Family Application Modules



- **AIM two-port module**
 - Videoconferencing and backup and overflow
 - Up to 64 DSOs aggregate
- **AIM six-port module**
 - Videoconferencing and dial-backup
 - Up to 32 DSOs aggregate
- **BRI terminal module**
 - Delivers local BRI with S/T interface
 - Emulates AT&T 5ESS custom signaling
 - Port-to-port switchable
- **BRI network module**
 - S/T interface network access for Multiband MAX 4002/4004, Multiband MAX 6000



Multiband MAX Family

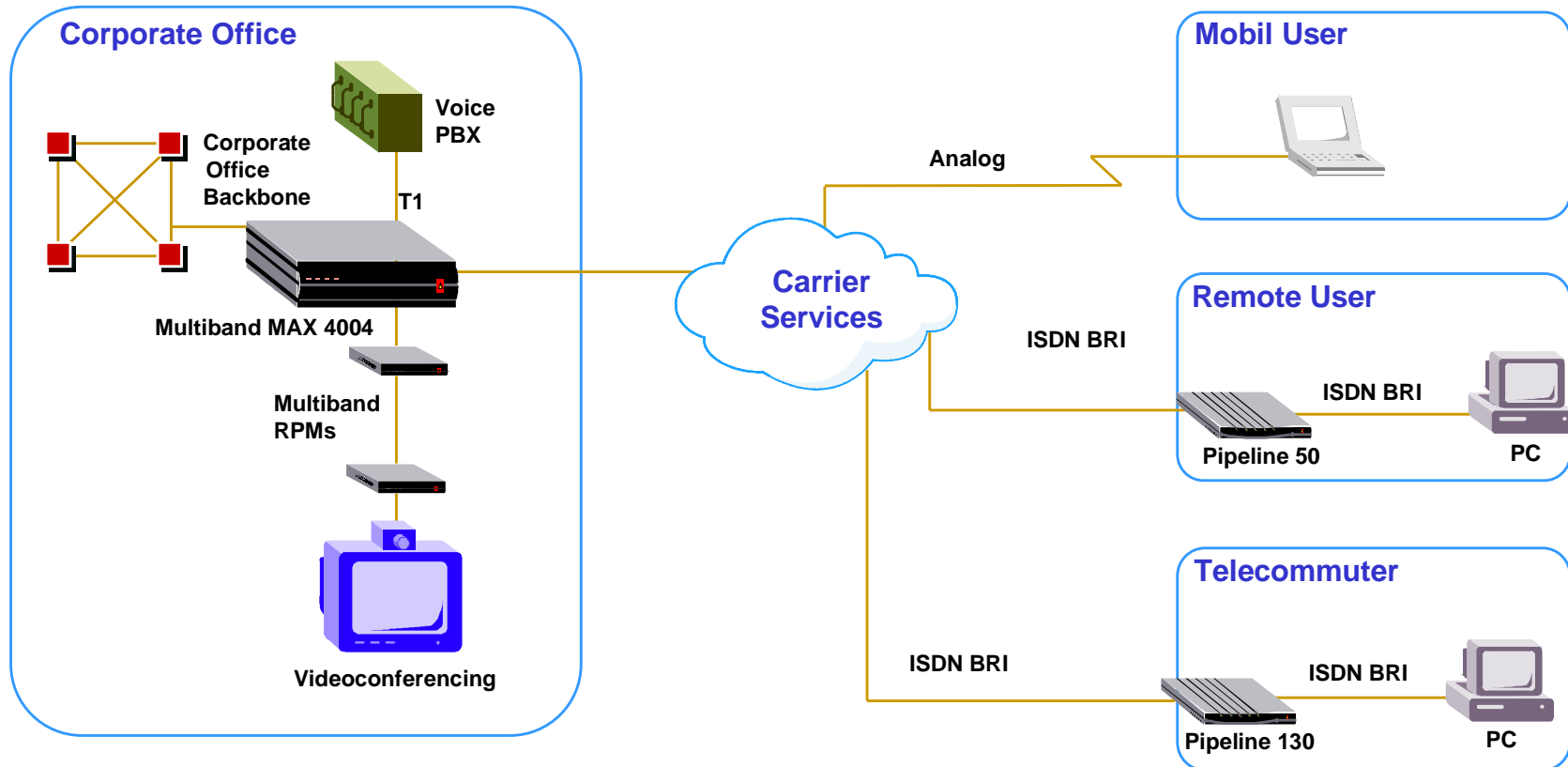
Remote Access Features (optional)

- **Becomes fully-featured WAN access switch:**
 - Corporate telecommuting
 - Corporate remote office networking
- **Modular software and hardware for simple network planning:**
 - Analog access connections
 - Global Digital Access™ connections
 - Cellular access connections
 - Data and fax modem dialout
 - Remote access client software
- **Proven technology in carrier, ISP and corporate remote networks**



Multiband MAX Family

Corporate Remote Office Connectivity



- Shared bandwidth for voice, video and data
- High-speed connection to headquarters backbone network
- Reduced operating costs



Multiband MAX Family

Features

- **Access lines:** DDS 56, T1 switched and dedicated access, fractional T1, E1, ISDN Basic Rate Interface (BRI), ISDN Primary Rate Interface (PRI).
- **Network Services:** Switched 56, Switched 64, Switched 384 (H0), Switched 1536 (H11), Multirate, GloBand, as well as fractional T1 and full T1 dedicated circuits.
- **Application Ports:** V.35, RS-449, or X.21 interfaces, with RS-366, V.25 bis, X.21, manual or control-lead dialing.
- **Inverse Multiplexing:** BONDING and AIM protocols. Dynamic Bandwidth Allocation™ ("rubber bandwidth").
- **Integrated ESF CSU interface** for T1 and PRI access lines.
- **19" rack mountable.**



Multiband MAX Family Features (Cont'd)

- **Management Features:** Remote management, SNMP and Telnet over TCP/IP, password security, loopbacks, channel-by-channel BERT testing, Call Detail Reporting (CDR), software configuration (no DIP switches), VLSI design for reliability.
- **Supports multiple network carriers:** for disaster recovery and cost savings.
- **Drop-and-Insert, T1-to-PRI conversion, MAXDAX:** puts PBX, video, and data on one access line – saves line costs.
- **Automatic leased line backup:** identifies faulty dedicated circuits and replaces with switched bandwidth.
- **Exact clocking/rate adaptation:** guarantees exact end-to-end application data rate, even if network rate is different.
- **Global bandwidth on demand:** Available in over 30 countries worldwide.



Multiband MAX Family Models and Pricing

<u>Model</u>	<u>Description</u>	<u>Price</u>
MBX18-8BRIU	Multiband MAX 1800 with B U interfaces	\$9900
MBX18-8BRIS	Multiband MAX 1800 with B S/T interfaces	\$9900
MBX20-1T	Multiband MAX 2000 with one T1 with integrated CSUs	\$11000
MBX-4T1-2	Multiband MAX 4002 with two T1s with integrated CSUs	\$13500
MBX-4T1-4	Multiband MAX 4004 with four T1s with integrated CSUs	\$16500
MBX-6KT1-4	Multiband MAX 6000 with four T1s with integrated CSUs	\$14500
MBX-SU-4T1	Two T1 upgrade for Multiband MAX4002	\$3500
MBX-HO-6PM	Six-port module upgrade to two-port base module	\$2000
MBX-HO-8BRIT	BRI Desk module upgrade to two-port base module	\$0



Multiband MAX Family Modules and Pricing

<u>Model</u>	<u>Description</u>	<u>Price</u>
MBX18-SU-RA	Remote Access Upgrade for Multiband MAX 1800	\$5000
MBX20-SU-RA	Remote Access Upgrade for Multiband MAX 2000	\$5000
MBX42-SU-RA	Remote Access Upgrade for Multiband MAX 4002	\$7000
MBX44-SU-RA	Remote Access Upgrade for Multiband MAX 4004	\$8500
MBX424-SU-RA	Remote Access & 2 T1 Upgrade for Multiband MAX 4002	\$10000
MBX-SU-6KRA	Remote Access Upgrade for Multiband MAX 6000	\$6290
MX-SL-2PMHP	Two-port AIM Module	\$4000
MX-SL-6PMHP	Six-port AIM Module	\$6500
MX-SL-8BRIN	Eight BRI Network Module with S/T interface	\$4500
MX-SL-8BRIT	Eight BRI Terminal Module with S/T interface	\$4000
MBX-SO-DAX	MAXDAX DS0 Channel Cross Connection Feature (Prebundled on Multiband MAX 6000)	\$3000



Availability

Ordering: NOW

Shipping: May 1, 1998