



DATA SHEET

CISCO MGX 8850/B ADVANCED ATM MULTISERVICE SWITCH

The Cisco MGX[®] 8850/B Advanced ATM Multiservice Switch helps service providers deliver a complete portfolio of differentiated service offerings while scaling from DS-0 to OC-48c/STM-16 speeds.

Based on the industry's most extensible architecture, the Cisco MGX 8850/B Advanced ATM Multiservice Switch supports enormous versatility at the service provider edge. Multiple, simultaneous control planes provide flexibility and scalability for deploying, managing, and modifying a complete range of ATM, Multiprotocol Label Switching (MPLS), and voice services.

The Cisco MGX 8850/B chassis differs from the original Cisco MGX 8850 by its ability to support 1:N redundancy without the use of the Cisco MGX Service Resource Module. Specially-designed redundancy connectors (RCONs) accommodate this function for the B chassis.

Figure 1. Cisco MGX 8850/B Multiservice Switch



KEY FEATURES

- Full range of Frame Relay, ATM, circuit emulation, voice, and IP services
- Scalable from 1.2 to 45 Gbps of nonblocking throughput
- Innovative architecture for supporting multiple control planes and dynamically allocating services mix
- Choice of switching fabric for price/performance optimization
- High network availability

KEY APPLICATIONS

- Frame Relay
- Frame Relay-to-ATM network interworking
- Frame Relay-to-ATM service interworking
- IP-enabled Frame Relay
- ATM
- IP VPNs

- Voice over IP (VoIP), voice over ATM (VoATM)
- DSL aggregation
- Circuit emulation

TECHNICAL SPECIFICATIONS

Support for permanent virtual circuits (PVCs) and permanent virtual paths (PVPs), soft PVCs and soft PVPs, switched virtual circuits (SVCs) and switched virtual paths (SVPs), label virtual circuits (LVCs), and connectionless routing are all offered on a single platform.

SCALABLE CONFIGURATIONS

The Cisco PXM-1E Processor Switching Card option allows service providers to support a complete set of narrowband services with 1.2 Gbps of non-blocking switching for low-density deployments. Its Private Network-Network Interface (PNNI) routing capability adds another dimension to the traditional aggregation function of small edge switches, allowing the Cisco MGX 8850/B with a PXM-1E processor to operate as a full-fledged 1.2 Gbps layer-2 routing node.

Using the Cisco PXM-45 Processor Switching Card option, service providers can implement over a powerful PNNI routing node a complete range of narrowband services for high-density edge applications and broadband aggregation with 45 Gbps of non-blocking switching. The Cisco PXM-45 can also be used exclusively for broadband aggregation and backbone functions.

NETWORK MANAGEMENT

The Cisco MGX 8850/B is managed by Cisco WAN Manager software using Simple Network Management Protocol (SNMP). Cisco WAN Manager provides telecommunications network-element management functions, as well as standard network management functions, such as connections management and network topology GUI.

The Cisco WAN Manager Service Agent can also be used to provide a northbound SNMP API for smooth integrations with operations support systems (OSSs) and third-party network- and service-management systems. The Cisco WAN Manager Service Agent supports the flow-through provisioning and fault-management capabilities that service providers demand.

Mechanical Configuration

- 32 single-height (16 double-height) function module slots
 - The single-height slots can be in-service slots converted to double-height slots by removal of midrail dividers
 - Two double-height slots are reserved for redundant processor switch modules
 - Four single-height (two double-height) slots are reserved for optional value-added service resource modules
- 24 single-height (12 double-height) slots for service modules

Physical Specifications

- Dimensions: (H x W x D): 29.75 x 17.72 x 21.5 inches (75.6 x 45.0 x 54.6 cm)
- Rack-mountable in 19- and 23-inch (48.2- x 58.4-cm) EIA/RETMA and ETSI racks

Capacity

- 1.2 or 45 Gbps of redundant, bidirectional, nonblocking throughput

Switching Card Options

- 1.2 Gbps shared memory fabric (Cisco PXM-1)
- 1.2 Gbps shared memory fabric (Cisco PXM1-E)
- 45 Gbps crosspoint fabric (Cisco PXM-45)

Network Interfaces

- OC-48c/STM-16
- OC-12c/STM-4
- OC-3c/STM-1
- T3
- E3
- Channelized T3 (down to DS0)
- n x T1/E1
- T1/E1
- Channelized T1 (DS0)
- Channelized E1
- High-Speed Serial Interface (HSSI), X.21, V.35
- High-density mix of OC-3 and T3/E3 ports

OPTIONAL REDUNDANCY

All components (including the control processor, IP modules, switching fabric, network interfaces, service interfaces, critical backplane signals, power supplies, power modules, and cooling fans) are optionally redundant, offering a 100 percent system-redundancy capability.

Node Synchronization

- Internal Stratum 3 clock source
- External T1/E1 Building Integrated Timing Supply (BITS) source
- External source received in band over the network
- Synchronization to software-programmable primary and secondary sources, with automatic switchover

Electrical Specifications

- Input power required: -48 VDC
- Optional AC powering
- Typical power consumption: 1000W

Electrical and Safety Compliance

- EMI/ESD compliance
 - FCC Part 15
 - Bellcore GR1089-CORE
 - IEC 801-2
 - EN55022
- Safety compliance
 - EN 60950
 - UL 1950
 - Bellcore NEBS: Level 3-compliant
 - Optical safety: IEC 825-1 (Class 1)

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