

## Cisco PXM45/C Processor Switch Module

### Product Overview

The Cisco® MGX® family of multiservice switches provides industry-leading scalability with 1.2 Gbps to 180 Gbps redundant switching capacity and DS-0 to OC-192/STM-64 interface capacity. This scalability provides exceptional savings and efficiency for network operations and services growth. The Cisco MGX family includes the Cisco MGX 8880 Media Gateway and the Cisco MGX 8830/B, MGX 8850, MGX 8850/B, and MGX 8950 Multiservice Switches.

The Cisco PXM-45/C Processor Switch Module is a combination of ATM switching fabric and processor card used in the Cisco MGX 8880 Media Gateway and multiservice switches (Cisco MGX 8850, MGX 8850/B, MGX 8830/B, and MGX 8950). When used in the Cisco MGX 8800 Series chassis, the module provides for a 45-Gbps nonblocking switch fabric and a 1.2 Gbps cell-bus. The processor portion of the module provides the control and data planes that deliver IP and ATM networking software, shelf-management activities such as diagnostics, and performance monitoring. When configured in a Cisco MGX 8950 chassis, the module functions as a processor card only.

The Cisco PXM-45/C Processor Switch Module meets service providers' demand for carrier-class availability by offering hot-standby 1:1 card redundancy. (Refer to Figure 1.)

**Figure 1.** Cisco MGX 8850 PXM-45/C Processor Switch Module



## Technical Specifications

### Key Features

- 64-bit MIPS-based processor operating at 700 MHz
- 45-Gbps switch fabric and 1.2-Gbps cell-bus (when used with chassis other than the Cisco MGX 8950)
- Cisco PXM-45/C used only as processor in Cisco MGX 8950; Cisco MGX-XM-60 provides switch-fabric function in that chassis
- Hot swappable
- 1:1 hot-standby redundancy
- User-selectable primary and secondary clock sources with graceful switchover
- Internal Stratum-3, external Building Integrated Timing Supply (BITS), or in-band clock sources
- In-band or out-of-band management using EIA/TIA-232 or 10BASE-T control ports
- Support for narrowband and broadband service modules scaling from DS-0 to OC-48c/STM-16 or DS-3/E3 to OC-192/STM-64 (depending on the chassis used)

**Table 1.** Product Specifications

Description	Specification
<b>Chassis compatibility</b>	Cisco MGX 8830/B, MGX 8850, MGX 8850/B, MGX 8880, and MGX 8950
<b>Software compatibility</b>	Minimum Cisco MGX software release supporting Cisco PXM-45/C: <ul style="list-style-type: none"> <li>• Cisco MGX 8850 Software Release 4.0.15</li> <li>• Cisco MGX 8950 Software Release 4.0.15</li> <li>• Cisco MGX Software Release 5.0.20 (for Cisco MGX 8880 and MGX 8850/B)</li> <li>• Cisco MGX Software Release 5.2.00 (for Cisco MGX 8830/B)</li> </ul>
<b>Upper back card (Cisco PXM-UI-S3/B) Functions</b>	User and management interfaces: <ul style="list-style-type: none"> <li>• EIA/TIA-232 control port</li> <li>• EIA/TIA-232 maintenance port</li> <li>• 10BASE-T Ethernet port</li> </ul> Network synchronization for the shelf: <ul style="list-style-type: none"> <li>• T1/E1 BITS synchronization ports</li> <li>• Stratum-3 clocking</li> <li>• Conformance to ATT Pub. 624.11</li> </ul> Central office - compatible critical, major, and minor alarm interface: <ul style="list-style-type: none"> <li>• DB-15 connector</li> <li>• Major alarm audio</li> <li>• Critical alarm visual</li> <li>• Minor alarm audio</li> <li>• Minor alarm visual</li> </ul>
<b>Lower back card (Cisco PXM-HD) Functions</b>	Hard drive
<b>Network Management</b>	<ul style="list-style-type: none"> <li>• Managed by Cisco WAN Manager Software suite</li> <li>• Based on Simple Network Management Protocol (SNMP)</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>• Input power required: -48 VDC</li> <li>• Power consumption: 128 W</li> </ul>
<b>Physical Dimensions</b>	H x D: 15.75 x 16.5 in. (40.00 x 41.91 cm)
<b>Weight</b>	6.5 lbs

Description	Specification
<b>Environmental Conditions</b>	<p>Storage temperature: –40 to 158°F (–40 to 70°C)</p> <p>Operating temperature:</p> <ul style="list-style-type: none"> <li>• Normal: 41 to 104°F (5 to 40°C)</li> <li>• Short-term: 23 to 122°F (–5 to 50°C)</li> </ul> <p>Relative humidity:</p> <ul style="list-style-type: none"> <li>• Normal: 5% to 85%</li> <li>• Short-term: 5% to 90% but not to exceed 0.024 kg water/kg of dry air</li> </ul> <p>Short-term refers to a period of not more than 96 consecutive hours and a total of not more than 15 days in 1 year. (This refers to a total of 360 hours in any given year, but no more than 15 occurrences during that 1-year period.)</p>

## Approvals and Compliance

**Table 2.** Compliance and Agency Approvals

Compliance Type	Description
<b>Safety Standards</b>	<ul style="list-style-type: none"> <li>• UL/CSA/IEC/EN 60950-1</li> <li>• IEC/EN 60825 Laser Safety</li> <li>• ACA TS001</li> <li>• AS/NZS 60950</li> <li>• FDA-Code of Federal Regulations Laser Safety</li> </ul>
<b>EMI</b>	<ul style="list-style-type: none"> <li>• FCC Class A</li> <li>• ICES 003 Class A</li> <li>• AS/NZS 3548 Class A</li> <li>• CISPR 22 (EN55022) Class A</li> <li>• VCCI Class A</li> <li>• BSMI Class A</li> <li>• IEC/EN 61000-3-2: Power Line Harmonics</li> <li>• IEC/EN 61000-3-3: Voltage Fluctuations and Flicker</li> </ul>
<b>Immunity (Basic Standards)</b>	<ul style="list-style-type: none"> <li>• IEC/EN-61000-4-2: Electrostatic Discharge Immunity (8kV Contact, 15kV Air)</li> <li>• IEC/EN-61000-4-3: Radiated Immunity (10V/m)</li> <li>• IEC/EN-61000-4-4: Electrical Fast Transient Immunity (2kV AC Power, 1kV DC Power)</li> <li>• IEC/EN-61000-4-5: Surge AC Port (2kV CM, 2kV DM)</li> <li>• IEC/EN-61000-4-5: Signal Ports (1kV)</li> <li>• IEC/EN-61000-4-5: Surge DC Port (1kV)</li> <li>• IEC/EN-61000-4-6: Immunity to Conducted Disturbances (10Vrms)</li> <li>• IEC/EN-61000-4-8: Power Frequency Magnetic Field Immunity (30A/m)</li> <li>• IEC/EN-61000-4-11: Voltage DIPS, Short Interruptions, and Voltage Variations</li> </ul>
<b>Network Equipment Building Systems (NEBS)</b>	<p>This product is designed to meet the following requirements (qualification in progress):</p> <ul style="list-style-type: none"> <li>• SR-3580: NEBS Criteria Levels (Level 3)</li> <li>• GR-1089-CORE: NEBS EMC and Safety</li> <li>• GR-63-CORE: NEBS Physical Protection</li> </ul>
<b>Telcordia CLEI</b>	<ul style="list-style-type: none"> <li>• GR-485-CORE – CLEI coding</li> <li>• GR-383-CORE – CLEI code product label</li> <li>• GR-209-CORE – PCN Process</li> </ul>

## Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#).

**Table 3.** Ordering Information

Product Part Number	Product Name
PXM45/C	1 PXM45/C, 1 PXM-UI-S3/B and 1 PXM-HD in system
PXM45/C-R	2 PXM45/C, 2 PXM-HD, 2 PXM-UI-S3/B
PXM45/C=	45 Gbps, Switch/Cntrl, PXM45 Ver. C (no PXM-UI-S3/B or PXM-HD)

Product Part Number	Product Name
PXM-UI-S3/B	PXM User Interface BC - Stratum 3, PXM1E and PXM45/C
PXM-HD	PXM Hard Disk Backcard
CAB-5607-10	DB15/Y Cable /M15-F15 10ft
CAB-5686-04	ASSY CBL RJ48(M) to RJ48(F) Y CABLE, 4
CAB-5686-06	ASSY CBL RJ48(M) to RJ48(F) Y CABLE, 6

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