

Cisco SPA Interface Processor for the 1-Gbps Wideband Shared Port Adapter for the Cisco uBR10012 Universal Broadband Router

The Cisco® SPA Interface Processor for the 1-Gbps wideband shared port adapter (SPA), supported in the Cisco uBR10012 Universal Broadband Router, enables cable operators to offer high-speed broadband connectivity at scale and to enable new IP services. This product facilitates supporting the SPA in the Cisco uBR10012 I/O chassis slots.

Figure 1. Cisco SPA Interface Processor with Two SPA Line Cards Installed



PRODUCT OVERVIEW

The distributed and scalable architecture of the Cisco uBR10012 Universal Broadband Router can be expanded using the Cisco SPA Interface Processor for the 1-Gbps wideband SPA to meet the most challenging large-scale IP service needs of cable operators. More specifically, the Cisco SPA Interface Processor provides the following functions for the Cisco uBR10012 cable modem termination system (CMTS): (See Figure 1.)

- Supports up to two Cisco 1-Gbps wideband SPAs
- Utilizes two I/O chassis slots
- Supports online insertion and removal (OIR)

PRIMARY FEATURES AND BENEFITS

Table 1 describes product features and benefits.

Table 1. Product Features and Benefits

Feature	Benefit
Enables the Cisco uBR10012 to use half-height SPA line cards	The carrier for the Cisco uBR10012 can hold up to two half-height SPA line cards
Enables the Cisco uBR10012 to provide modularity for flexible deployment options	Modularity options for the Cisco uBR10012 provide customers with increased configuration options as well as density and price-point improvements
Enables half-height line card OIR	Half-height SPA cards support OIR, such that a single half-height card can be removed from the carrier without interrupting system availability

CONFIGURATIONS

A Cisco uBR10012 chassis has four I/O slots; slots 1 and 2 can be used to support the carrier card.

PRODUCT SPECIFICATIONS

Physical

- Occupies two slots (3 and 4) in the I/O portion of the Cisco uBr10012 chassis
- Hot-swappable; no slot dependency
- Weight: 10.0 lb (4.6 kg)
- Dimensions (H x W x D): 16 x 2.44 x 10.4 in. (41.5 x 6.32 x 27 cm)

Power

- Unit power: 75W (without SPAs)

Reliability and Availability

- Mean time between failure (MTBF): 380,625 hr

Environmental

- Operating altitude: -197 to 13,123 ft (-60 to 4000m)
- Conforms to IEC/EN/UL/CSA 60950 requirements up to 2000m
- Storage temperature: -4 to 149°F (-20 to 65°C)
- Operating temperature, nominal: 41 to 104°F (5 to 40°C)
- Storage relative humidity: 5 to 95%
- Operating relative humidity: 10 to 90%

REGULATORY COMPLIANCE

Safety

- UL60950 and CAN/CSA-C22.2 No. 60950
- IEC/EN 60950
- 73/23/EEC/IEC/EN 60950
- AS/NZS 60950

Electromagnetic Emissions

- EN55022: 1998 Class B
- CISPR 22: 1997 Class B
- CFR 47 Part 15 Class B
- ICES -003, Issue 2, Class B, April 1995
- VCCIV-3/2000.04
- AS/NZS 3548: 1995 Class B
- CNS-13438 Class B—BSMI (BCIQ) in Taiwan

Electromagnetic Immunity

- EN50082-1: 1992
- EN50082-1: 1997
- EN55024: 1998
- EN61000-3-2: 1995
- EN61000-3-3: 1995
- EN61000-4-2: 1995 [including AMD1 + AMD2] ESD immunity
- EN61000-4-3: 1997 Radiated RF field immunity
- EN61000-4-4: 1995 Immunity to electrical fast transients
- EN61000-4-5: 1995 Surge immunity
- EN61000-4-6: 1996 [including AMD1] RF conducted immunity

Network Equipment Building Systems

Designed to meet the requirements of:

- Level 3 compliant
- GR-63 Core
- GR-1089 Core

Mechanical

- IEC 68-2-1, IEC 68-2-2, IEC 68-2-56: Operational temperature and humidity
- IEC 68-2-27: Operating shock
- IEC 68-2-64, IEC 68-2-6, IEC 68-2-47: Operating and nonoperating vibration
- IEC 68-2-32: Nonoperating freefall drop
- IEC 68-2-40: Nonoperating altitude
- IEC 68-2-27, IEC 68-2-32: Nonoperating mechanical shock
- IEC 68-2-3: Nonoperating humidity
- IEC 68-2-14, IEC 68-2-33: Nonoperating temperature shock

NETWORK MANAGEMENT

MIBs

Standard MIBs

- IF-MIB (RFC-2233)
- ENTITY-MIB (RFC-2737)
- MIBII (RFC1213)
- EtherLike-MIB (RFC-2665)
- IGMP-MIB (RFC-2993)
- RMON-MIB (RFC-1757)

Expression MIBs SNMPv2-SMI

- SNMPv2-TC
- SNMPv2-MIB
- IANAifType-MIB

Simple Network Management Protocol (SNMP) v3 MIBs

- SNMP-FRAMEWORK-MIB (RFC-2571)
- SNMP-MPD-MIB (RFC-2572)
- SNMP-NOTIFICATION-MIB (RFC-2573)
- SNMP-TARGET-MIB (RFC-2573)
- SNMP-USM-MIB (RFC-2574)
- SNMP-VACM-MIB (RFC-2575)

DOCSIS[®] and EuroDOCSIS MIB

- DOCS-IF-MIB (v2 Rev04)
- DOCS-CABLE-DEVICE-MIB (RFC-2669)
- DOCS-BPI-PLUS-MIB (Rev 5)
- DOCS-QOS-MIB (Rev 4)
- DOCS-CABLE-DEVICE-TRAP-MIB
- DOCS-SUBMGT-MIB (Rev 2)

Cisco DOCSIS MIBs

- CISCO-CABLE-WIDEBAND-MIB
- CISCO-DOCS-EXT-MIB
- CISCO-DOCS-REMOTE-QUERY-MIB
- CISCO-DOCS-QOS-EXT-MIB
- CISCO-CABLE-SPECTRUM-MIB
- CISCO-CABLE-AVAILABILITY-MIB
- CISCO-DOCS-EXT-CAPABILITY-MIB

Cisco Generic MIBs

- CISCO-SYSLOG-MIB
- CISCO-SMI-MIB
- CISCO-TC-MIB
- CISCO-PRODUCTS-MIB
- CISCO-FLASH-MIB
- CISCO-CONFIG-MAN-MIB
- CISCO-CONFIG-COPY-MIB
- CISCO-MEMORY-POOL-MIB
- CISCO-BULK-FILE-MIB

- CISCO-SONET-MIB
- CISCO-TCP-MIB
- CISCO-RTTMON-MIB
- CISCO-FTP-CLENT-MIB
- CISCO-IPMROUTE-MIB
- CISCO-QUEUE-MIB
- CISCO-IMAGE-MIB
- CISCO-ENVMON-MIB
- CISCO-ENTITY-VENDORTYPE-OID-MIB
- CISCO-PRODUCTS-MIB

PRODUCT SYSTEM REQUIREMENTS AND COMPATIBILITY

Hardware Requirements

- Cisco uBR10012 chassis.
- Cisco uBR10012 Performance Routing Engine 2 is required
- The carrier card only supports the 1-Gbps wideband SPA.

ORDERING INFORMATION

Visit <http://www.cisco.com/en/US/ordering/index.shtml> to place an order.

Table 2 details the product part numbers for the SPA Interface Processor.

Table 2. Part Numbers for Cisco and Associated Options

Product Part Number	Product Description
UBR10-2XDS-SIP	2 bays I/O slot SPA Interface Processor
UBR10-2XDS-SIP =	2 bays I/O slot SPA Interface Processor, spare
SPA-BLANK	Blank cover for regular SPA
SPA-BLANK=	Blank cover for regular SPA, spare

All Cisco uBR10012 1-Gbps wideband half-height SPAs requires a carrier (product number UBR10-2XDS-SIP). Each carrier holds two half-height line cards; a blank (product number SPA-BLANK) is shipped with any carrier with open half-height SPA slots.

Cisco recommends that customers who order spare carrier or half-height SPAs also order enough blanks to ensure that the configured system has no empty slots.

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FOR MORE INFORMATION

For more information about the Cisco SPA Interface Processor for the 1-Gbps wideband SPA, visit <http://www.cisco.com/en/US/products/hw/cable/ps2209/index.html> or contact your local account representative.



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