Quick Start Guide

Installing the Cisco uBR10012 OC-48 DPT/POS Interface Module

⚠ **Warning** **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

⚠ **Caution** This is an ESD-sensitive product.

1 Overview

This quick start guide shows how to install or remove a Cisco uBR10012 OC-48 dynamic packet transport (DPT) packet-over-SONET (POS) interface module in the Cisco uBR10012 universal broadband router.
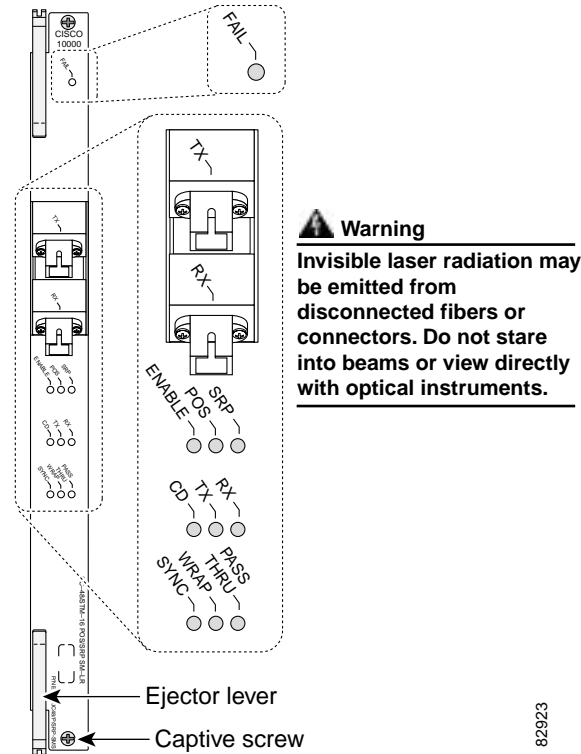
2 Feature Description

The Cisco uBR10012 OC-48 DPT/POS interface module provides DPT and POS capabilities for the Cisco uBR10012 router. Two interface modules per chassis are required for DPT support.

The Cisco uBR10012 OC-48 DPT/POS interface module supports online insertion and removal (OIR).

⚠ **Warning** **Class 1 laser product.**

Figure 1 *Cisco uBR10012 OC-48 DPT Faceplate*

⚠ **Warning**
Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments.

Ejector lever
Captive screw

82923

3 Removing the Module

Step 1 Make sure that you are grounded. An ESD-preventive strap is provided.

Step 2 Remove all cabling from the module.

⚠ **Warning** **Laser radiation is present when the system is open.**

Step 3 Loosen the top and bottom captive screws on the module.

Step 4 Simultaneously pivot both ejector levers away from the module.

Step 5 Slide the module out of the slot and place it on an antistatic surface.

Step 6 Install a blank slot cover if you are not installing a replacement interface module.

⚠ **Caution** Do not operate any chassis with an open slot. To provide proper cooling and air circulation, always install a blank slot cover in a slot that is not being used.

4 Installing the Module

🔍 **Tip** Insert or remove one module at a time and wait at least 15 seconds before inserting another module to allow the system time to reinitalize.
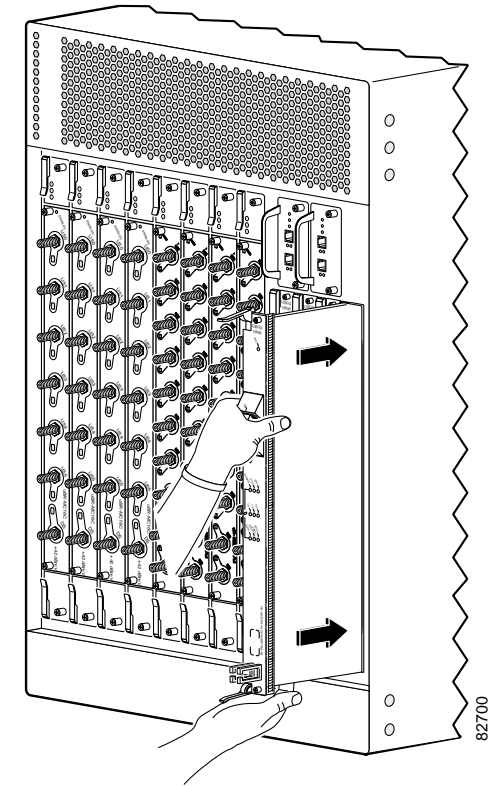
✎ **Note** For DPT resilient packet ring protection, install the modules in adjacent slots.

Step 1 Make sure that you are grounded.

Step 2 Open the ejector levers on the module.

Step 3 Hold the faceplate with one hand and place your other hand under the module.

Figure 2 *Installing the Interface Module*

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Step 4 Align the upper and lower edges of the module with the guides in the chassis.

Step 5 Slide the module into the chassis until you feel it seat in the backplane connectors.

Step 6 Simultaneously pivot the ejector levers toward each other to secure the module in the chassis.

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The FAIL LED stays on for approximately 1 second and then goes off after the module cycles through the self-test.

Step 7 Tighten the captive screws.

🔎
Tip Properly tightened captive screws ensure proper EMI shielding.

Making the Optical Connections

Step 1 Remove the transmit (TX) dust cover from the bulkhead connector.

Step 2 Clean the TX bulkhead connector.

Step 3 Measure the transmit output power using an optical power meter. Make sure that the TX power is at or above the minimum guaranteed output level. See Table 2 for specifications.

⚠️
Caution Excessive transmit signal levels at the receiver port can damage the module.

Step 4 Clean the TX connector plug and bulkhead.

Step 5 Insert the TX plug into the TX bulkhead gently but firmly until the plug fully engages.

Step 6 Repeat Step 2 through Step 3 for the receive (RX) plug and RX bulkhead.

Step 7 Install an optical attenuator if the signal is out of range.

Step 8 Continue with Step 4 and Step 5.

🔎
Tip For more information about cleaning the optical connections and cable attenuation requirements, refer to *Cisco uBR10012 OC-48 DPT/POS Interface Module*.

Configuring the Interface Module

See the *Cisco uBR10012 Universal Broadband Router Software Configuration Guide* and related Cisco IOS release notes for information about configuring the Cisco uBR10012 OC-48 DPT/POS interface module.

🔎
Tip It is not necessary to configure the interface module if you are installing a replacement module in the same slot. The system automatically downloads the necessary configuration information.

5 Troubleshooting

1. Verify that there is power to the system. See Table 1 LED Status and Description.
2. Verify that the module is properly seated in the backplane—the ejector levers and captive screws are secure.
3. Check the interface module connector and the backplane in the chassis for debris or damage.
4. Clean the optical connections.
5. Verify the input and output optical levels with an optical power meter.
6. Verify that the module is configured properly. Refer to the Cisco IOS release notes.
7. For more information and help, contact the Cisco TAC website, at the following URL:

   http://www.cisco.com/tac

Table 1   LED Descriptions

LED Status	Description
FAIL—Yellow FAIL—Off	Disabled Operational
ENABLE—Green ENABLE—Off	Port is enabled Port is disabled
POS—Green POS—Off	In POS mode Not in POS mode
SRP—Green SRP—Off	In SRP/DPT mode Not in SRP/DPT mode

Table 1   LED Descriptions (continued)

LED Status	Description
CD—Green CD—Off	Carrier detected No carrier detected
TX—Green TX—Off	Packets transported No packets transported
RX—Green RX—Off	Packets received No packets received
SYNC—Green	Module synchronized to mate module
WRAP—Yellow	Interface is wrapped
PASS THRU—Yellow	DPT port line is in a pass-through state

6 Technical Specifications

Table 2   Order Numbers and Specifications

Description	Order Number/Specification
Single mode, short reach modules[1] Single spare[2]	UBR10-SRP-OC48SMS= ESR1OC48/P/SRPSMS=
Single mode, long reach modules[1] Single spare[2]	UBR10-SRP-OC48SML= ESR1OC48/P/SRPSML=
Blank slot cover	ESR-LC-COVER=
Weight	4 3/4 lb (2.155 kg)
Power budget	28W (95.54 BTU/hr))
Optical TX power	SMS (–10 to –3 dBm) SML (–2 to +3 dBm))
Optical RX power	SMS (–18 to –3 dBm) SML (–28 to –9 dBm)
Cable (yellow)—single-mode fiber-optic cable with simplex SC/PC type connectors	
Wavelength, nm Core size, microns Cable link budget	SMS—1310, SML–1550 8 to 10 SMS—7dB typical SML—24 dB typical

1. Use this number to order the dual interface modules.
2. Use this number to order a single interface module.

7 Related Documentation

For more information, see the following:

- *Cisco uBR10012 Universal Broadband Router Hardware Installation Guide*

  http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/hig/index.htm

- *Cisco uBR10-OC48-DPT/POS Interface Module*

  http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/frus/ub_oc48.htm

- *Cisco uBR10012 Universal Broadband Router Software Configuration Guide*

  http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/scg/index.htm

- *Cisco uBR10000 Series Universal Broadband Router Release Notes*

  http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ub10krns/index.htm

- *Cisco uBR10012 Regulatory Compliance and Safety Information*

  http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/index.htm

- For information about cleaning procedures for fiber optic connectors and cables, go to the following URL:

  http://www.cisco.com/pcgi-bin/Support/browse/index.pl?i=Technologies&f=1365

- For information about the 1 year warranty, enter 78-10747-01C0 at the following URL:

  http://www.cisco.com/univercd/cc/td/doc/es_inpck/cetrans.htm

- For more Cisco cable products information, go to the following URL:

  http://www.cisco.com/warp/public/44/jump/cable.shtml