



Installing a Cable Interface Line Card in the Cisco uBR10-LCP2 Adapter Card

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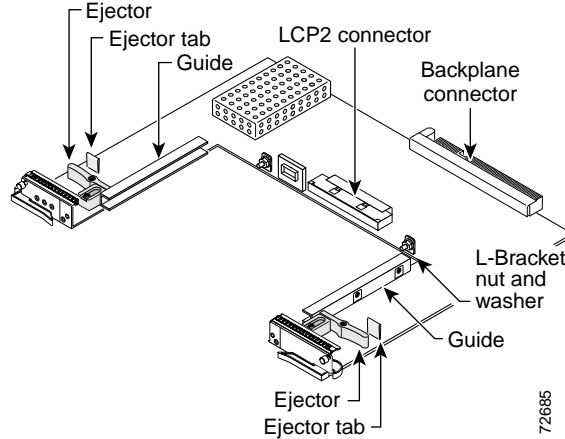


Caution This is an ESD-sensitive product. Make sure that you are properly grounded before handling this adapter card.

1 Overview

This quick start guide shows you how to install a Cisco cable interface line card in the Cisco uBR10-LCP2 adapter card (Figure 1).

Figure 1 Cisco uBR-LCP2 Adapter Card



Note This installation information applies to both line card processor (LCP) adapter card types, Cisco uBR10-LCP and Cisco uBR10-LCP2.

2 Feature Description

The Cisco uBR10-LCP2 adapter card provides the mechanical and electrical interfaces necessary for cable interface line cards to fit the form factor used in the Cisco uBR10012 chassis.

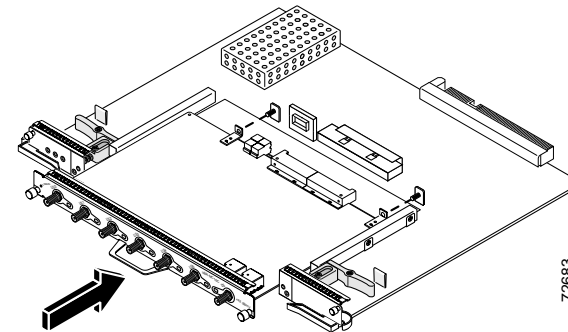
The adapter cards are identical except that the Cisco uBR10-LCP2 has a faster CPU and faster SDRAM access. Both adapter cards support N+1 requirements when they are used for redundancy (protection).

The Cisco uBR10-LCP originally shipped with the Cisco uBR10-LCP-MC16C/MC16E and Cisco uBR10-LCP-MC28C cards. Both types (LCP and LCP2) can be used in the same chassis, or the Cisco uBR10-LCP can be replaced with the Cisco uBR10-LCP2 adapter card, if needed.

3 Installing the Line Card

- Step 1** Verify that you are properly grounded.
- Step 2** Place the Cisco uBR10-LCP2 adapter card and the cable interface line card on a flat antistatic surface or workbench.
- Step 3** Remove the retaining nuts and washers from the adapter card brackets. See Figure 1.
- Step 4** Align the line card with the guide rails on the adapter card. Ensure that the bottom of the line card is flush with the bottom of the adapter card.
- Step 5** Slowly slide the line card into the adapter card. Make sure that the line card slides under the spring guides and into the guides. See Figure 2.

Figure 2 Installing the Cable Interface Card



- Step 6** Verify that the connectors are aligned with those on the adapter card.
- Step 7** Make sure that the screws on the adapter card brackets slide cleanly into the holes in the L-brackets on the line card.



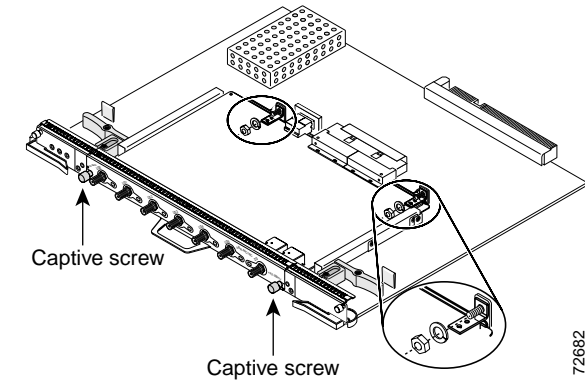
Note The brackets align the adapter card and line card connectors and hold the line card in place.

- Step 8** Push on the front of the line card until the connectors on the line card are firmly seated in the connectors on the adapter

card. When the card is fully inserted, the two ejector levers on the adapter card snap into place.

- Step 9** Tighten the captive screws on the line card to secure it to the adapter card.
- Step 10** Replace the retaining washers and nuts on the L-brackets (Figure 3). Make sure that the nuts are finger-tight, and then turn them a half turn with a wrench to secure the line card to the adapter card.

Figure 3 Replacing the Washers and Nut



- Step 11** Install the combined adapter card and cable interface line card in the Cisco uBR10012 chassis.

For more information see *Installing a Cisco uBR10-LCP2-MCXX Cable Interface Line Card Quick Start Guide*.

Corporate Headquarters
 Cisco Systems, Inc.
 170 West Tasman Drive
 San Jose, CA 95134-1706
 USA
<http://www.cisco.com>
 Tel: 408 526-4000
 800 553-NETS (6387)
 Fax: 408 526-4100



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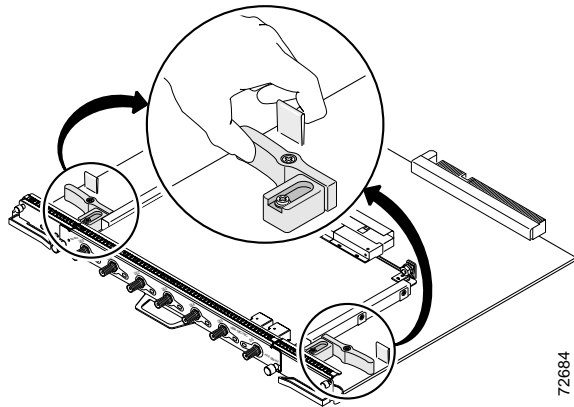
4 Removing the Line Card



Caution Do not attempt to separate or remove the cable interface line card from the adapter card while the combined cards are inserted in the chassis. The cards must be removed as a unit and then separated on a lab bench or other area that protects against ESD damage.

- Step 1** Verify that you are properly grounded.
- Step 2** Place the cable interface line card on an antistatic surface with the component side facing up.
- Step 3** Remove the two sets of retaining nuts and washers from the L-brackets on the line card and set the nuts and washers aside.
- Step 4** Loosen the two captive screws on the line card.
- Step 5** To disengage the line card from the adapter card, simultaneously grip the ejector levers and the ejector tabs with your thumb and index finger. See Figure 4.
- Step 6** Press the ejector levers back against the ejector tab. The line card will snap loose from the adapter card.

Figure 4 Ejecting the Cable Interface Line Card



- Step 7** Pull the line card straight out of the adapter card and place the card on an antistatic surface.

5 Troubleshooting

1. Verify that the adapter card and the cable interface line card are securely attached to each other.



Note To troubleshoot power or interface problems the combined cards must be in the Cisco uBR10012 router chassis.

2. Verify that the adapter card is secure in the chassis.
3. Is the POWER LED on?
If yes, the adapter card is getting power.
If no, contact TAC (see 5.)
4. Check the STATUS LEDs (Table 1).

Table 1 Cisco LCP2 Adapter Card LEDs

LED/Status	Description
Power	
Green	Receiving power
Off	Not receiving power
Status	
Yellow	In bootup process, self test, or download mode
Green	Process complete
Blinking Green ¹	In Standby or Protect card mode
Maintenance	
Off	No action required
Yellow	It is safe to remove the combined cards from the chassis.

1. Status LED on N+1 or redundant cards in the chassis.

If the power LED is on and the status LED is green, then the problem is with the cable interface line card or the system.

5. Contact TAC for further information and help.
To access the TAC website, go to the following URL:
<http://www.cisco.com/tac>

6 Technical Specifications

Table 2 Cisco uBR10-LCP2 Adapter Card Specifications

Description	Specification
Product order number	
LCP version	UBR10-LCP UBR10-LCP=
LCP2 ¹ version	UBR10-LCP2 UBR10-LCP2=
Weight with cable interface line card installed	12 lb (5.44 kg)
Power consumption with cable interface line card installed	110 Watts (375.59 BTU ²)

1. Faster CPU, faster SDRAM access
2. British thermal units

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-LCP2-MC16C/MC16E Cable Interface Card for the Cisco uBR10012 Router*
http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/frus/ublcp_16.htm

- *Cisco uBR10-LCP2-MC28C Cable Interface Line Card for the Cisco uBR10012 Router*
<http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/frus/ub10clcp.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 uBR10012 Router Software Features*
<http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/ub10ksw/index.htm>
- *Cisco uBR10000 Series Universal Broadband Router Release Notes*
<http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10krns/index.htm>
- *Cisco CMTS Feature Guide*
http://www.cisco.com/univercd/cc/td/doc/product/cable/cab_rout/cmtsfg/index.htm
- *Installing a Cisco uBR10-LCP2-MCXX Cable Interface Line Card Quick Start Guide*
<http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/index.htm>
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