



CHAPTER 3

Removing and Installing the Clock Card

This chapter describes how to remove the Cisco Cable Clock Card from a Cisco uBR7246 VXR and also how to install a new or replacement clock card. This chapter contains the following sections:

- [Installation Overview, page 3-1](#)
- [Handling the Clock Card, page 3-2](#)
- [Online Insertion and Removal, page 3-2](#)
- [Warnings and Cautions, page 3-2](#)
- [Clock Card Removal and Installation, page 3-3](#)
- [Connecting a Clock Card Interface Cable, page 3-6](#)

Installation Overview

Each clock card circuit board is mounted to a metal carrier and is sensitive to electrostatic discharge (ESD) damage.



Note

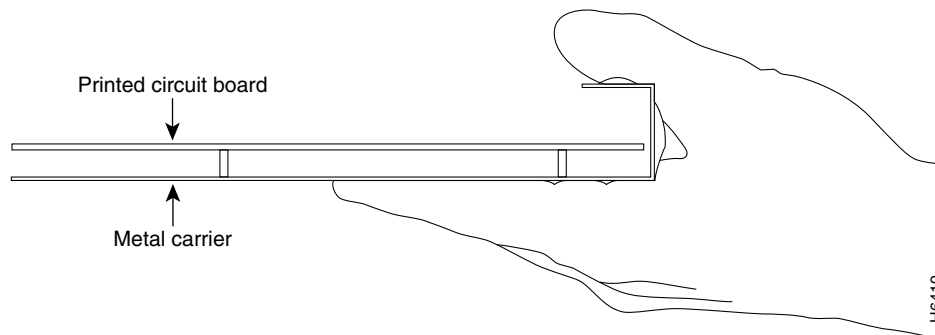
When the clock card slot is not in use, a blank clock card must fill the empty slot to allow the router or switch to conform to electromagnetic interference (EMI) emissions requirements and to allow proper airflow across all of the universal broadband router's components. If you plan to install a new clock card in a slot that is not in use, you must first remove the blank clock card.

Handling the Clock Card

**Caution**

Always handle the clock card by the carrier edges and handle; never touch the clock card's components or connector pins. (See [Figure 3-1](#).)

Figure 3-1 Handling a Clock Card



Online Insertion and Removal

The Cisco uBR7246 VXR supports online insertion and removal (OIR), however, the clock card cannot be “hot-swapped” in the chassis. You must power down the Cisco uBR7246 VXR when removing and/or replacing a clock card. Removing the clock card from the chassis before powering off will cause the router to crash.

**Note**

Before you begin installation, read [Chapter 2, “Preparing for Installation”](#) for a list of parts and tools required for installation.

Warnings and Cautions

Observe the following warnings and cautions when installing or removing the clock card.

**Caution**

Do not attempt to remove or install the clock card unless you have first powered off the Cisco uBR7246 VXR.

**Caution**

Do not connect the primary and/or secondary DB-15 T1 cables until the clock card has been installed in the Cisco uBR7246 VXR.

**Note**

If the clock card installation screws do not appropriately assume a locked position, the clock card is not completely seated in the midplane. Carefully pull the clock card halfway out of the slot, reinsert it, and tighten the captive installation screws.

**Caution**

To prevent jamming the carrier between the upper and the lower edges of the clock card slot, and to ensure that the edge connector at the rear of the clock card mates with the connection at the rear of the clock card slot, make certain that the carrier is positioned correctly, as shown in the cutaway in the following illustrations.

**Warning**

When performing the following procedures, wear a grounding wrist strap to avoid ESD damage to the card. Some platforms have an ESD connector for attaching the wrist strap. Do not directly touch the midplane or backplane with your hand or any metal tool, or you could shock yourself.

**Warning**

To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

Clock Card Removal and Installation

In this section, the illustrations that follow give step-by-step instruction on how to remove and install the clock card. This section contains the following illustrations:

- [Cisco uBR7246 VXR—Removing a Clock Card, page 3-4](#)
- [Cisco uBR7246 VXR—Installing a Clock Card, page 3-5](#)

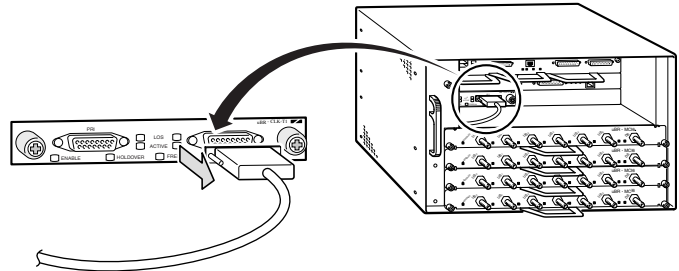
Cisco uBR7246 VXR—Removing a Clock Card

Step 1

Power off the Cisco uBR7246 VXR.

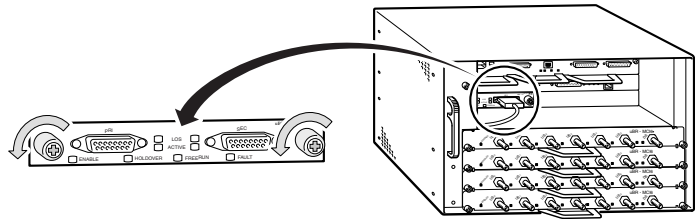
Step 2

Disconnect the DB-15 T1 cable(s) from the front of the clock card.



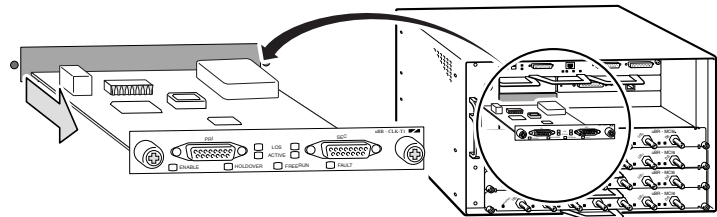
Step 3

Unscrew the captive installation screws on the front of the clock card.



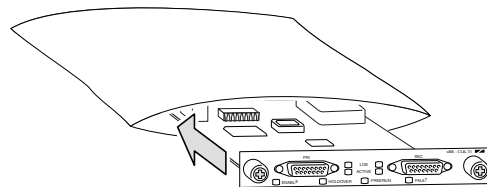
Step 4

Carefully pull the clock card out of its chassis slot.



Step 5

Place the clock card on an antistatic surface with its components facing upward, or in a static shielding bag. If the clock card will be returned to the factory, immediately place it in a static shielding bag.



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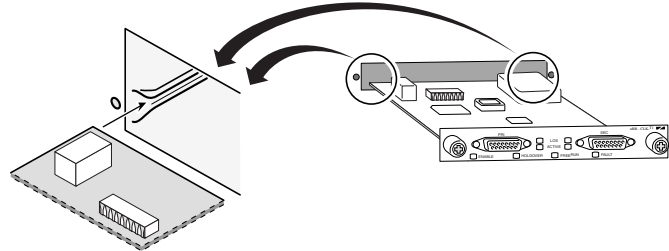
Cisco uBR7246 VXR—Installing a Clock Card

Step 1

Ensure that the Cisco uBR7246 VXR is powered off.

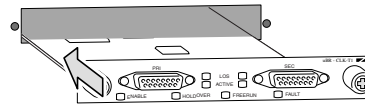
Step 2

Align the left and right edges of the clock card printed circuit board between the guides in its chassis slot.



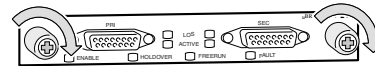
Step 3

With the printed circuit board aligned in the slot guides, gently slide the clock card into its chassis slot.



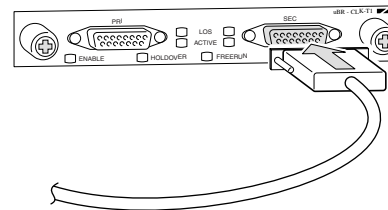
Step 4

Tighten the captive installation screws on the clock card.



Step 5

Connect the DB-15 T1 cable(s) to the front of the clock card.



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Connecting a Clock Card Interface Cable

You can use up to two DB-15 T1 connections on the clock card. They are available from Cisco Systems and outside commercial cable vendors.

To connect DB-15 T1 cables to the clock card, follow these steps:

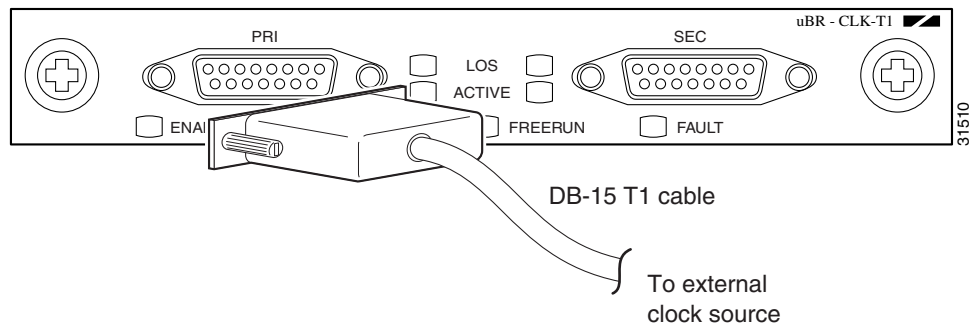
- Step 1** Attach the DB-15 T1 cable directly to either the primary or secondary DB-15 interface port on the clock card. (See [Figure 3-2](#).)



Note

When attaching the cable receptacle on the clock card, use the cable-management bracket that shipped with your router for extra strain relief.

Figure 3-2 Connecting a Clock Card Cable—Front View



- Step 2** Attach the network end of your DB-15 T1 cable to your CSU/DSU, DTE, or other external equipment.
- Step 3** Repeat Steps 1 and 2 for the other DB-15 T1 interface.

This completes the procedure for attaching a DB-15 T1 cable to the clock card. Proceed to [Chapter 4](#), “Configuring the Clock Card.”