



CHAPTER 2

Channelized T3 Digital Feature Card

Revised: August 4, 2008, OL-16081-01

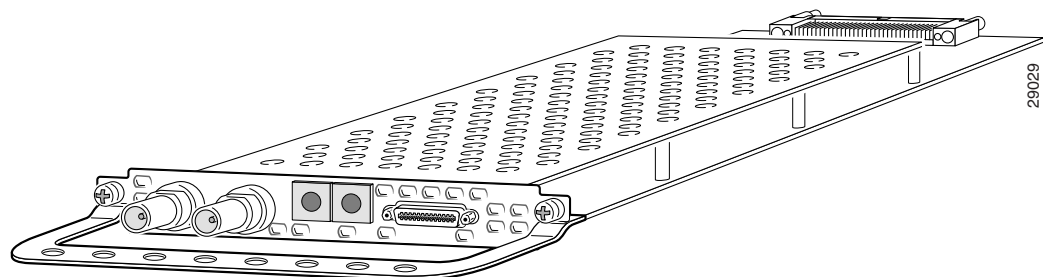
This chapter describes the channelized T3 (CT3) feature card and includes the following sections:

- [Overview, page 2-1](#)
- [Online Insertion and Removal of the CT3 Digital Feature Card, page 2-2](#)
- [Getting Help, page 2-6](#)
- [Where to Go Next, page 2-6](#)

Overview

The CT3 digital feature card provides physical line termination for a channelized T3 ingress trunk line. It uses an onboard multiplexer to multiplex 28 channelized T1 lines into a single channelized T3 line. (See [Figure 2-1](#).)

Figure 2-1 *CT3 Digital Feature Card*



Note

The Cisco VGD 1T3 Voice Gateway supports only one type of WAN feature card at a time. See [Chapter 4, “Troubleshooting,”](#) for more information.

The CT3 digital feature card provides physical line termination for up to 672 DS0 channels and uses onboard High-Level Data Link Control (HDLC) controllers to terminate digital (ISDN) calls.

You can use the bantam jack ports on the feature card to monitor a T1 line or to test any of the individual T1 channels in drop and insert mode.

You can install a CT3 digital feature card in any feature card slot in a Cisco VGD 1T3 Voice Gateway chassis.

Online Insertion and Removal of the CT3 Digital Feature Card

To remove a feature card without dropping any calls or connections, you will need to take the feature card out of service by using the **busyout** command to disable the feature card. The **busyout** command is executed on a per-feature card basis and will disable the card after waiting for the active services to terminate.

If there are active calls on the feature card after you execute the **busyout** command, wait for the calls to drop. To view the status of the termination process, use the **show busyout** command.



Caution

The online installation and removal (OIR) of new cards should be done *only* during times of low CPU utilization, such as during maintenance.



Caution

To avoid erroneous failure messages, remove or insert only one feature card at a time.

When you replace a feature card in a slot with a new feature card of the same type, the system software recognizes the new feature card and brings up the trunk interfaces automatically.

If you replace the existing feature card with a new feature card of a different type, you must reconfigure the system. For configuration details, see the [Cisco VGD 1T3 Voice Gateways Software Configuration Guide](#).

Removing the CT3 Digital Feature Card

To remove the CT3 digital feature card, follow these steps.

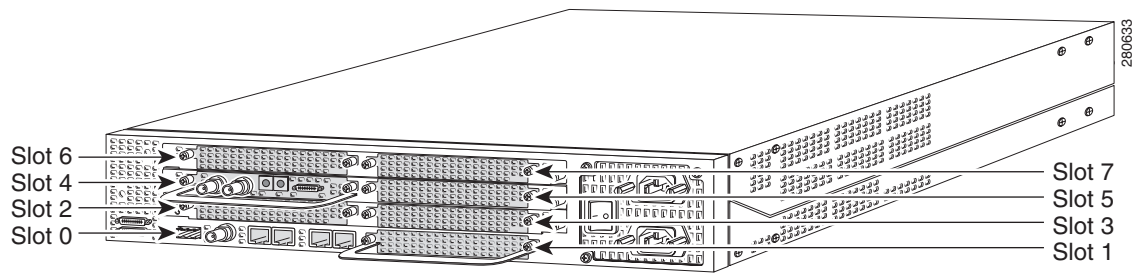
- Step 1** Determine which slot the feature card is in (see [Figure 2-2](#)) by entering the **show chassis slot** command in privileged EXEC mode:

```
Router# show chassis slot
```



Note

These commands are not valid for slot 0. Slot 0 is the motherboard.

Figure 2-2 Slot Numbering on the Cisco VGD 1T3 Voice Gateway Chassis

Step 2 Initialize the software busyout procedure by entering the **busyout** command:

```
Router# busyout slot-number
```

Step 3 Check busyout status for the slot, by entering the **show busyout** command.

```
Router# show busyout slot-number
```

Step 4 You can use the **clear voice dsp** command to immediately disable active calls on the voice feature card. For more information on the voice digital feature card, see [Chapter 3, “Voice Digital Feature Card.”](#) Use the **show controller** command to show the feature card that is associated with the CT3 digital feature card.

```
Router# show controller t3 controller-slot-number/controller-port-number
```

```
Router# clear voice dsp
```



Note The **clear voice dsp** command applies only to voice digital feature cards.

Step 5 Verify that the OK/MAINT LED is off; this indicates that the feature card is offline and ready to be removed.



Note The OK/MAINT LED is green before you enter the **busyout** command. After you enter the **busyout** command, the LED changes to yellow. The LED turns off after all calls are disconnected and resources are taken out of service, indicating that busyout is complete.

Step 6 Attach an ESD-preventive wrist strap.

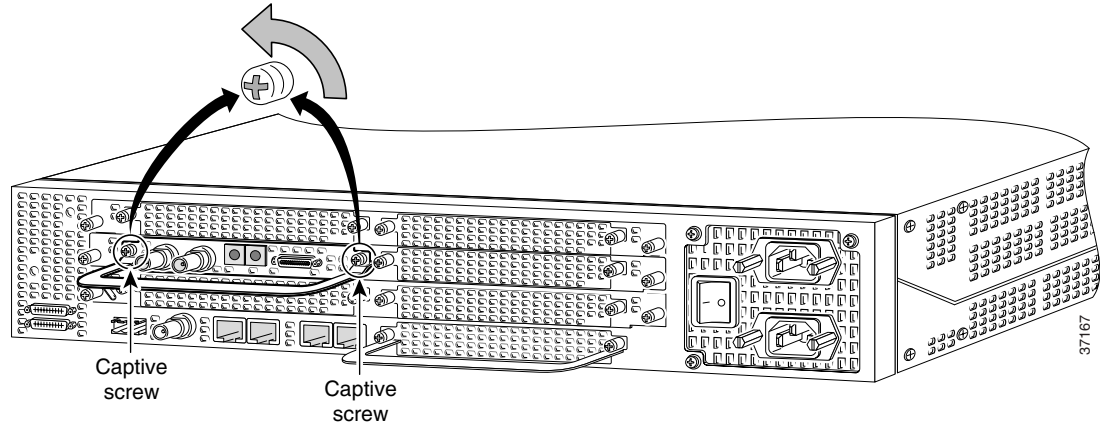


Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.
Statement 1001

Step 7 Disconnect all interface cables from the feature card and secure them out of the way.

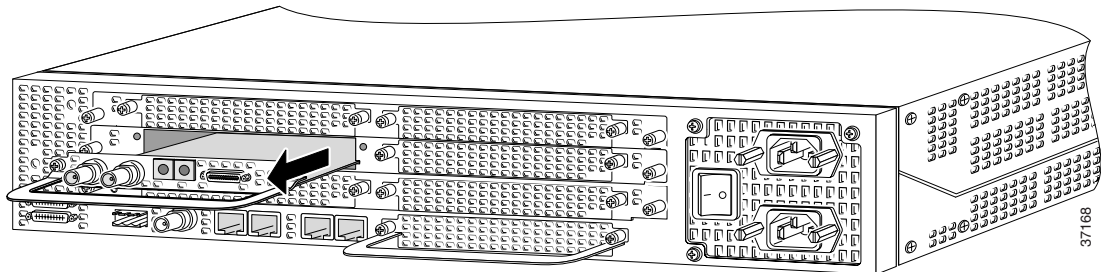
Step 8 Loosen the two captive screws that secure the feature card to the chassis until each screw is free of the chassis. (See [Figure 2-3.](#))

Figure 2-3 *Loosening the Captive Screws on the Cisco VGD 1T3 Voice Gateway*

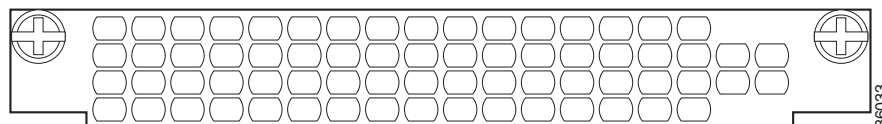
- Step 9** Grasp the feature card handle with one hand. Pull the card toward you until the card slides free of the chassis. Grasp the ventilated metal cover with your other hand to support and guide the feature card out of the slot. (See [Figure 2-4](#).)

**Caution**

Avoid touching any pins or circuit board components when you remove or install a feature card.

Figure 2-4 *Removing the Feature Card from the Cisco VGD 1T3 Voice Gateway*

- Step 10** After you remove the feature card from the chassis, set it aside on an ESD-preventive mat.
- Step 11** If a feature card slot on the carrier card is to remain empty, install a blank cover over the open feature card slot to ensure proper airflow inside the chassis. (See [Figure 2-5](#).)

Figure 2-5 *Blank Feature Card Cover*

Installing the CT3 Digital Feature Card



Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.
Statement 1001



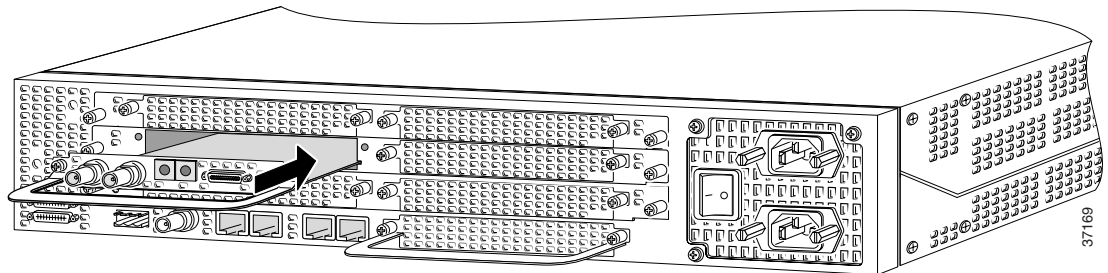
Note

When you replace a feature card with a new feature card of the same type in the same slot, the system software recognizes the new feature card and brings up the trunk interfaces automatically. If you replace the existing feature card with a new feature card of a different type, you must reconfigure the system. For configuration details, see the [Cisco VGD 1T3 Voice Gateways Software Configuration Guide](#).

To install the CT3 digital feature card, follow these steps:

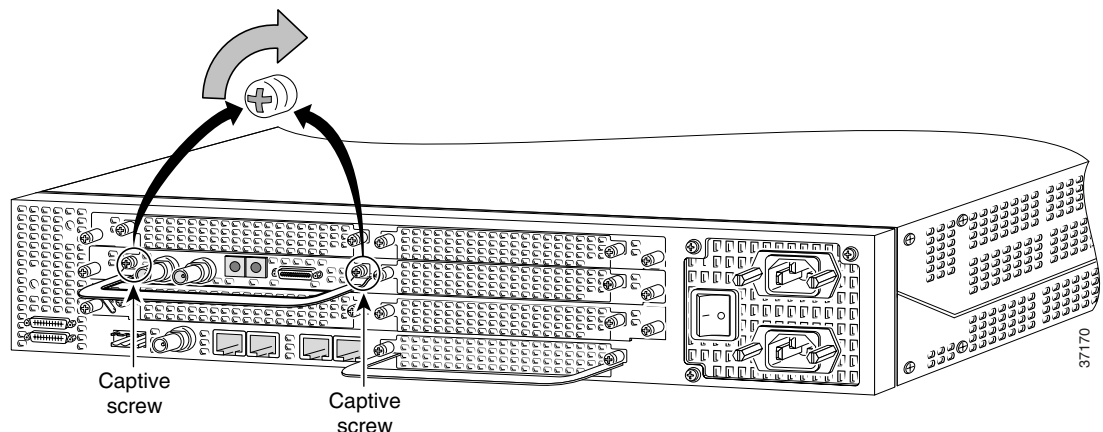
- Step 1** Attach an ESD-preventive wrist strap.
- Step 2** Slide the feature card into the slot until the connector pins make contact with the carrier card backplane connector. (See [Figure 2-6](#).)

Figure 2-6 Installing the CT3 Digital Feature Card in the Cisco VGD 1T3 Voice Gateway



- Step 3** Align the captive screws with their holes, and seat the card completely.
- Step 4** Tighten the screws to secure the feature card to the chassis. (See [Figure 2-7](#).)

Figure 2-7 Tightening the Captive Screws on the Cisco VGD 1T3 Voice Gateway



- Step 5** Check the card LEDs to verify that the card is working properly. For information about feature card LEDs, see [Chapter 4, “Troubleshooting.”](#)
-

Getting Help

For information about technical support, onsite service, and exchange and repair services, see the [“Technical Assistance” section on page xii](#).

Where to Go Next

The remaining chapters of this guide include information about installing and troubleshooting feature cards and about building cables.

- [Chapter 3, “Voice Digital Feature Card”](#)
- [Chapter 4, “Troubleshooting”](#)
- [Appendix A, “Cabling Specifications”](#)