DSU/CSU WAN Interface Cards

Overview

This chapter describes DSU/CSU WAN interface cards (WICs) and how to connect DSU/CSU (WICs) to a network and contains the following sections:

For an overview of Cisco interface cards used for Cisco access routers refer to *Cisco Interface Cards for Cisco Access Routers*.
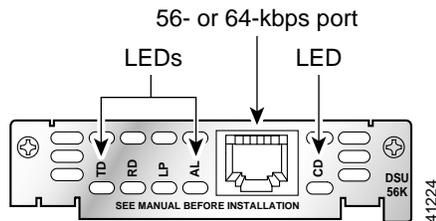
56/64-kbps DSU/CSU WAN Interface Card

This section describes 56/64-kbps DSU/CSU WICs and how to connect 56/64-kbps DSU/CSU WICs to a network and contains the following sections:

56/64-kbps DSU/CSU WICs Overview

The 1-port 56/64-kbps DSU/CSU WIC (WIC-1DSU-56K4) includes an integral DSU/CSU and can be configured to provide circuit-switched, dedicated, or leased-line service at 56 kbps. This WIC also supports 64-kbps dedicated lines. (See Figure 56.)

Figure 56   WIC-1DSU-56K4 Front Panel

56/64-kbps DSU/CSU WIC LEDs

The 56/64-kbps DSU/CSU WIC LEDs, are shown in Figure 56. The functions of the LEDs are described in Table 12.

Table 12   56/64-kbps DSU/CSU WIC LEDs

LED	Description
TD	Data is being transmitted to the DTE interface.
RD	Data is being received from the DTE interface.
LP	Internal DSU/CSU is in loopback mode.
AL	One of these alarm conditions is present: no receive signal, loss of frame signal from the remote station, or out of service signal from the remote station. This LED is off during normal operation.
CD	Internal DSU/CSU in the WIC is communicating with another DSU/CSU.

Prerequisites for Connecting 56/64-kbps DSU/CSU WICs to a Network

Before connecting a WIC to the network, ensure that the WIC is installed in the router, the equipment is properly grounded, and you have the proper cables for connecting the WIC to the network. This section describes the preparation necessary before connecting a 56/64-kbps DSU/CSU WIC to the network.

Installing a Cisco Serial WAN Interface Card

Install the Cisco serial wan interface card according to the instructions in *Installing Cisco Interface Cards in Cisco Access Routers*.

Grounding

Ensure that the equipment you are working with is properly grounded. For instructions on grounding your serial WIC, refer to *Installing Cisco Interface Cards in Cisco Access Routers*.

Cables

Use a straight-through RJ-48S-to-RJ-48S cable (not included) to connect a 56/64-kbps DSU/CSU WIC to a network.

Connecting the 56/64-kbps DSU/CSU WIC to a Network

To connect a 56/64-kbps DSU/CSU WIC to a network, follow these steps:

Step 1   Confirm that the router is turned off.

Step 2   Connect one end of the straight-through RJ-48S-to-RJ-48S cable to the RJ-48S port on the 56/64-kbps DSU/CSU WIC.

Step 3   Connect the other end of the cable to the 56/64-kbps services wall jack, as shown in Figure 57.

Figure 57   Connecting the 56/64-kbps DSU/CSU WIC to a 56/64-kbps Services Wall Jack
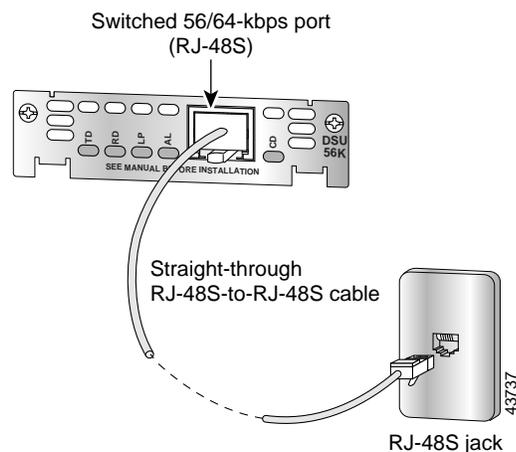
Step 4   Turn on power to the router.

Step 5   Check that the CD LED comes on, which indicates that the internal DSU/CSU is communicating with the DSU/CSU at the 56/64-kbps service provider's central office.

T1/FT1 DSU/CSU WAN Interface Card

This section describes how to connect T1/fractionalized T1 (FT1) DSU/CSU WICs to the network and contains the following sections:

- T1/FT1 DSU/CSU WICs Overview
- T1/FT1 DSU/CSU WIC LEDs and Loopback Button
- Enabling Wetting Current on T1/FT1 DSU/CSU WICs
- Prerequisites for Connecting a T1/FT1 DSU/CSU WIC to a Network
- Connecting a T1/FT1 DSU/CSU WIC to a Network

T1/FT1 DSU/CSU WICs Overview

The 1-port T1/fractionalized T1 (FT1) DSU/CSU WIC includes an integrated data service unit/channel service unit (DSU/CSU). The WIC can be configured for either full T1 services or fractionalized T1 services. There are two T1/FT1 DSU/CSU WICs:

- 1-port T1/fractionalized T1 (FT1) DSU/CSU WIC (WIC-1DSU-T1) (see Figure 58)

- 1-port T1/fractionalized T1 (FT1) DSU/CSU WIC, version 2 (WIC-1DSU-T1-V2) (see Figure 59)

⚠ **Caution** To comply with the Telcordia GR-1089 NEBS standard for electromagnetic compatibility and safety, connect the 1-port T1/FT1 DSU/CSU WIC, version 2 (WIC-1DSU-T1-V2) only to intra-building or non-exposed wiring or cabling. The intrabuilding cable must be shielded and the shield must be grounded at both ends.

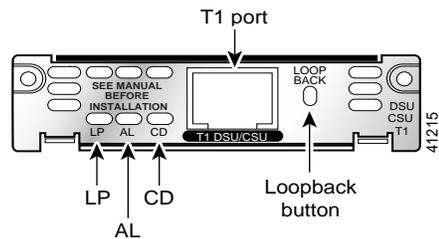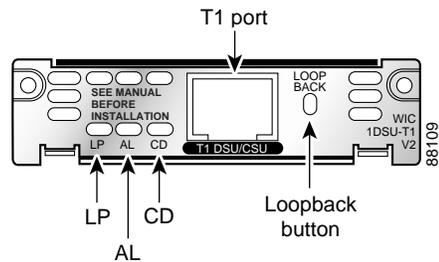*Figure 58*   *WIC-1DSU-T1 Front Panel*

Figure 59   *WIC-1DSU-T1-V2 Front Panel*

T1/FT1 DSU/CSU WIC LEDs and Loopback Button

The T1/FT1 DSU/CSU WIC LEDs and loopback button are shown in Figure 58 and Figure 59. The functions of the LEDs and loopback button are described in Table 13.

Table 13   *T1/FT1 DSU/CSU WIC LEDs and Loopback Button*

Feature	Color	Description
LP LED	Yellow	Line or loopback state is detected or is manually set by the user.
	Off	Normal operation.

Table 13   *T1/FT1 DSU/CSU WIC LEDs and Loopback Button (continued)*

| Feature	Color	Description
AL LED	Yellow	Remote station has an alarm condition.
	Off	Normal operation.
CD LED	Green	Internal DSU/CSU in the WIC is communicating with another DSU/CSU. This LED is on during normal operation.
Loopback button	—	Push this button to place the WIC into loopback mode. The service provider can send a signal to test the connection from your site to the central office switch.
		Push this button again to turn off loopback mode.

Enabling Wetting Current on T1/FT1 DSU/CSU WICs

The WIC-1DSU-T1-V2 interface card supports wetting current. Wetting current is a small amount of electrical current (60 to 140 milliamps) sent from the central office to the card to prevent the corrosion of electrical contacts in the card's network connection.

Wetting current may be enabled or disabled by the user. It is controlled by the placement of a jumper on connector J2 on the card. Figure 60 shows the J2 connector and the jumper.

The feature is enabled by connecting pins 1 and 2 of the J2 connector with a jumper. It is disabled either by removing the jumper or by connecting pins 2 and 3 of the J2 connector.

The card is shipped with the jumper connecting pins 2 and 3 on the J2 connector, which disables the wetting current.

Figure 60   *Jumper Settings for Controlling Wetting Current on the WIC-1DSU-T1 V2 Card*
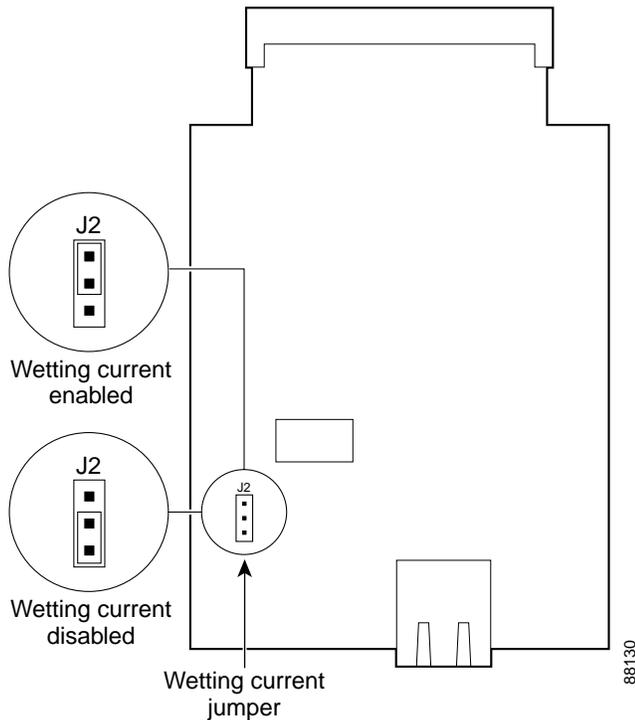
Prerequisites for Connecting a T1/FT1 DSU/CSU WIC to a Network

Before connecting a WIC to the network, ensure that the WIC is installed in the router, the equipment is properly grounded, and you have the proper cables for connecting the WIC to the network. This section describes the preparation necessary before connecting a T1/FT1 DSU/CSU WIC to the network.

Installing a Cisco Serial WAN Interface Card

Install the Cisco serial wan interface card according to the instructions in *Installing Cisco Interface Cards in Cisco Access Routers*.

Grounding

Ensure that the equipment you are working with is properly grounded. For instructions on grounding your serial WIC, refer to *Installing Cisco Interface Cards in Cisco Access Routers*.

Cables

Use a straight-through RJ-48C-to-RJ-48C cable to connect a T1/FT1 DSU/CSU WIC to a network.

Connecting a T1/FT1 DSU/CSU WIC to a Network

To connect a T1/FT1 DSU/CSU WIC to a network, follow these steps:

Step 1   Confirm that the router is turned off.

> ⚠️
>
> **Caution**   To comply with the Telcordia GR-1089 NEBS standard for electromagnetic compatibility and safety, connect the 1-port T1/FT1 DSU/CSU WIC, version 2 (WIC-1DSU-T1-V2) only to intra-building or non-exposed wiring or cabling. The intrabuilding cable must be shielded and the shield must be grounded at both ends.

Step 2   Connect one end of the straight-through RJ-48C-to-RJ-48C cable to the RJ-48C port on the T1/FT1 DSU/CSU WIC.

Step 3   Connect the other end of the cable to the T1 wall jack, as shown in Figure 61.

Figure 61   Connecting the T1/FT1 DSU/CSU WIC to a T1 Wall Jack
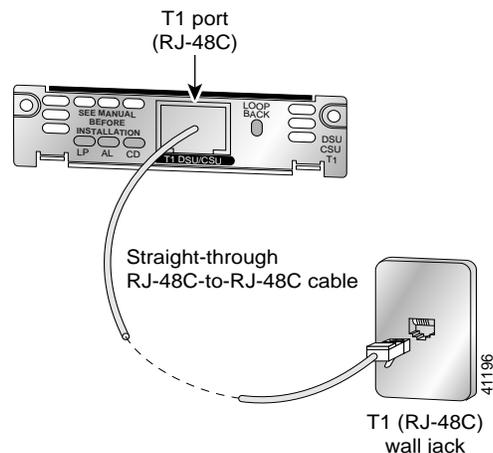
Step 4   Turn on power to the router.

Step 5   Check that the CD LED comes on, which means that the internal DSU/CSU is communicating with the DSU/CSU at the T1 service provider's central office.

Supported Platforms

For a list of the platforms supported by a Cisco interface card refer to *Platform Support for Cisco Interface Cards*.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at http://www.cisco.com/go/fn. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

Related Documentation

Related documentation is available on Cisco.com or on the Product Documentation DVD. For more information, see the "Obtaining Documentation, Obtaining Support, and Security Guidelines" section on page 8.

- *Understanding the 1-Port 4-Wire 56/64 Kpbs CSU/DSU WAN Interface Card (WIC-1DSU-56K4)*, tech note

- *Cisco Network Modules and Interface Cards Regulatory Compliance and Safety Information*

- *Configuring Cisco Integrated Data Service Unit/Channel Service Unit (DSU/CSU) Modules and WAN Interface Cards*, tech note

- "Configuring Serial Interfaces" chapter in the *Cisco IOS Interface Configuration Guide* for your Cisco IOS software release

- *56K CSU Support for the Cisco Signaling Link Terminal,* Cisco IOS Release 12.2(2)T feature module

- *Cisco Signaling Link Terminal*, Cisco IOS Release 12.1(1)T feature module

- *1-Port DSU/CSU T1 WIC for the Cisco 1700, Cisco 2600, Cisco 3600, and Cisco 3700 Series Routers*, Cisco IOS Release 12.2(15)ZL feature module

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html