



6-Port Channelized T3 Line Card Overview

This chapter describes the Cisco 10000 series 6-port channelized T3 line card (referred to as the 6-port channelized T3 line card), and contains the following sections:

- [Line Card Summary, page 8-1](#)
- [Software and Hardware Compatibility, page 8-2](#)
- [Line Card, Router, and Processor Compatibility, page 8-2](#)
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Line Card Summary

Table 8-1 **6-Port Channelized T3 Line Card Summary**

Product Number	Description	Minimum Cisco IOS Release
ESR-6CT3=	6-port channelized T3 line card	<p>Initial Cisco IOS releases for PRE-1: 12.0(9)SL and later releases of Cisco IOS 12.0SL 12.0(17)ST and later releases of Cisco IOS 12.0ST 12.0(22)S and later releases of Cisco IOS 12.0S 12.2(8)BZ and later releases of Cisco IOS 12.2BZ</p> <p>Initial Cisco IOS releases for PRE-2: 12.2(15)BX and later releases of Cisco IOS 12.2BX 12.2(28)SB and later releases of Cisco IOS Release 12.2(28)SB 12.3(7)XI and later releases of Cisco IOS 12. XI</p> <p>For registered Cisco.com users, use Software Advisor to determine the software releases for this line card.</p>

The 6-port channelized T3 line card provides the Cisco 10000 series routers with six DS3 ports of high-density T3 service.

The Cisco 10008 router can support up to seven channelized T3 line cards, with a maximum capacity of 42 T3 connections or 1176 T1 connections per chassis. A fully loaded 7-foot rack can support up to 126 T3 connections, or 3528 T1 connections. This configuration assumes at least one slot is used for an uplink.

- You can channelize the T3 line into 28 independent DS1 data channels. You can channelize DS1 channels down to DS0 time slots (56 kbps or 64 kbps) with a maximum of 128 channels per DS3.
- Alternatively, the T3 line may supply some or all of the T3 payload (full-rate DS3) to a single end user.

If you are a registered Cisco.com user, see [Feature Navigator](#) for supported features.

Software and Hardware Compatibility

To check the minimum software requirements of Cisco IOS software with the hardware installed on your router, Cisco maintains the Software Advisor tool on Cisco.com. This tool does not verify whether line cards within a system are compatible, but does provide the minimum Cisco IOS requirements for individual hardware line cards, modules, or options.



Note

Access to this tool is limited to users with Cisco.com login accounts.

To access [Software Advisor](#), click **Login** at Cisco.com, type “Software Advisor” in the SEARCH box, and click **GO**. Click the link for the Software Advisor tool.

Choose a product family or enter a specific product number to search for the minimum supported software release needed for your hardware.

Line Card, Router, and Processor Compatibility

[Table 8-2](#) lists router model, line card, and processor compatibility.

Table 8-2 Line Card, Router, and Processor Compatibility

Line Card	Cisco 10008	Cisco 10005	PRE-2	PRE-1	PRE
6-port channelized T3 line card	Yes	Yes	Yes	Yes	Yes



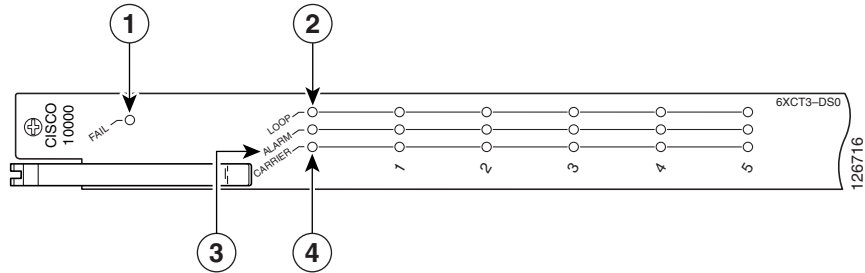
Note

If you are using the 6-port channelized T3 line card with a Cisco 10005 router, you must use the Cisco 10005 extender card. See [Appendix A, “Cisco 10005 Extender Card Information”](#) for more information on the extender card.

LEDs

The 6-port channelized T3 line card LEDs are [Figure 8-1](#).

Figure 8-1 6-Port Channelized T3 Line Card Faceplate Description



1	Fail LED	3	Alarm LED
2	Loop LED	4	Carrier (carrier detect) LED

[Table 8-3](#) provides a description of the 6-port channelized T3 line card LEDs.

Table 8-3 LEDs Description

LED Label	Color	State	Meaning
FAIL	Yellow	Off	Off when line card is working properly.
		On	A major failure has disabled the line card.
LOOP	Yellow	Off	Port is in a loopback state and not enabled for data traffic.
		On	On when some portion of the corresponding port data is in a loopback state (T3 or T1) and is not enabled for data traffic.
ALARM	Yellow	Off	Off when there is no alarm condition.
		On	On when an alarm condition (T3 or T1) exists at DS1, AIS, DS1 remote, DS1 OOF, DSE OOF, DSE AIS, or DS3 FERF 1 level.
CARRIER (carrier detected)	Green	Off	No carrier is detected; the port is not able to pass traffic.
		On	On when a carrier is detected; the port is able to pass traffic.

Physical Specifications

The 6-port channelized T3 line card physical specifications appear in [Table 8-4](#).

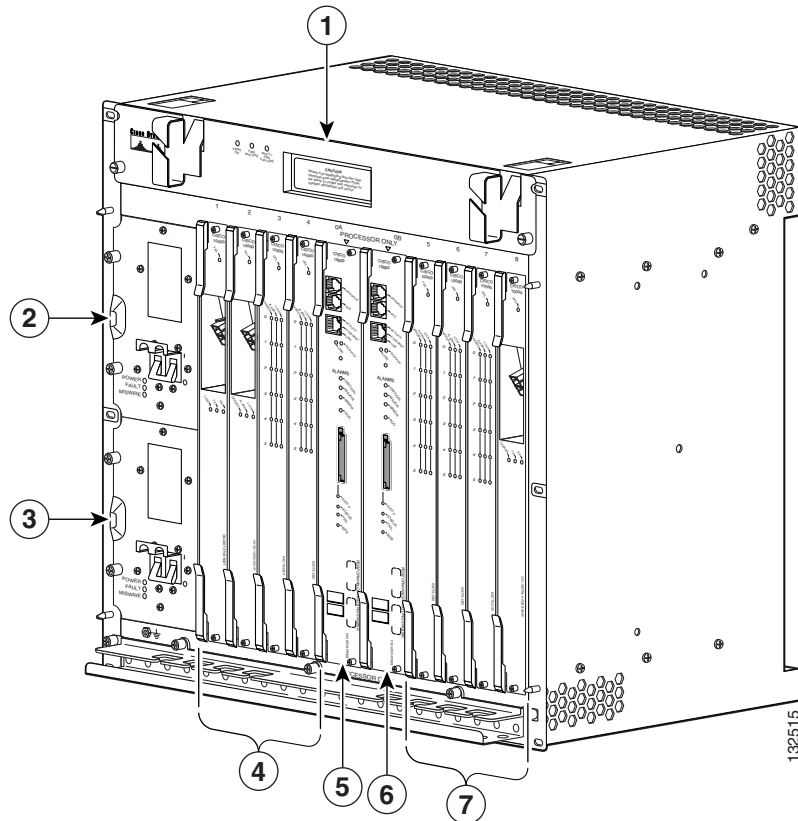
Table 8-4 6-Port Channelized T3 Line Card Physical Specifications

Description	Specifications
Physical dimensions	Height: 16.0 in. (40.64 cm) Depth: 9.97 in. (25.32 cm) Width: 1.12 in. (2.83 cm)
Shipping weight	Approximately 4.75 lb (2.16 kg)
Operating temperature	41°F to 104°F (5°C to 40°C) Short-term operating temperature is limited to 131°F (55°C) in compliance with Bellcore GR
Relative humidity	Operating—nominal: 5% to 85% Operating—short term: 5% to 90% Storage: 5% to 95%
Storage temperature	−40°F to 158°F (−40°C to 70C °)

Slot Locations

The line card slot designations are shown in this section. See [Figure 8-2](#) for line card slot designations for the Cisco 10008 router and [Figure 8-3](#) for line card slot designations for the Cisco 10005 router.

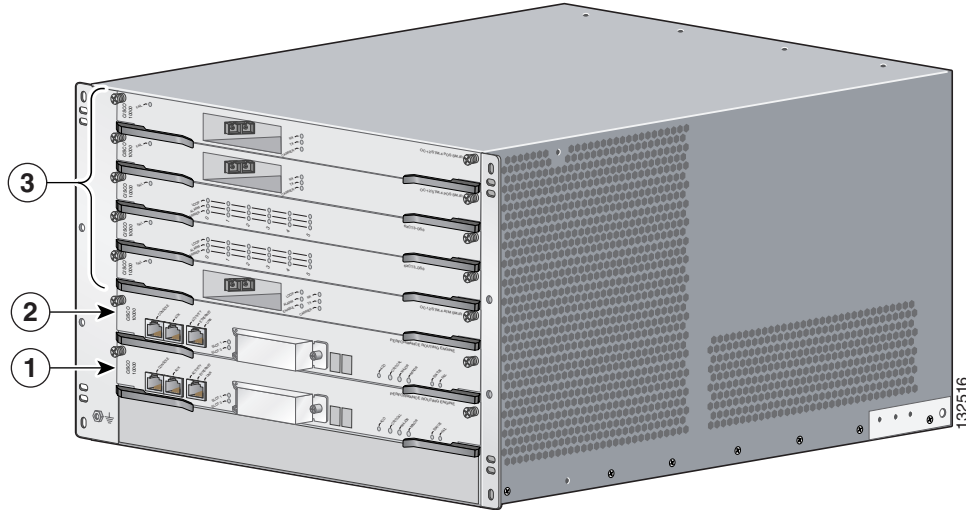
Figure 8-2 Line Card Slot Designations for the Cisco 10008 Router



1	Blower module	5	PRE slot 0A
2	Primary PEM	6	PRE slot 0B
3	Redundant PEM	7	Line card slots 5 to 8
4	Line card slots 1 to 4		

The 6-port channelized T3 line card can be installed in line card slot 1 through slot 8.

Figure 8-3 Line Card Slot Designations for the Cisco 10005 Router



1	PRE slot A	3	Line card slots 1 (top) to 5 (bottom)
2	PRE slot B		

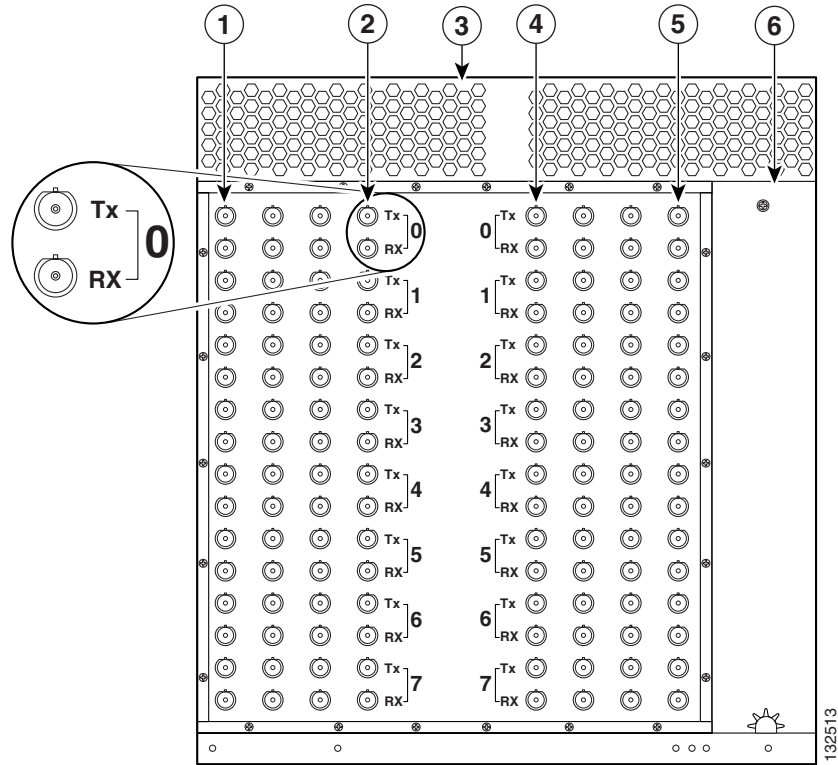
The 6-port channelized T3 line card can be installed in line card slot 1 through slot 5.

Cables and Connectors

External network connections to the 6-port channelized T3 line card are made through the BNC connectors mounted on the rear of the Cisco 10000 chassis, using 75-ohm coaxial cable. The approved cables for use with the 6-port channelized T3 line card are cables conforming to WECO standards 728A, 734A, or 734D. Use cable lengths up to 900 ft (274.32 m). 735A cables can be used with lengths up to 225 ft (68.58 m).

See [Figure 8-4](#) for the BNC connectors on the rear of the Cisco 10008 router, and [Figure 8-5](#) for the BNC connectors on the rear of the Cisco 10005 router.

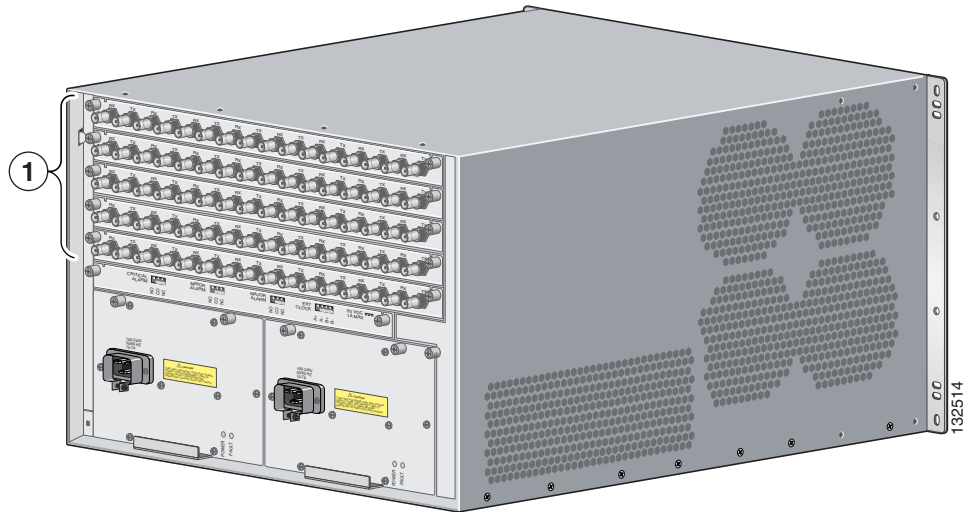
Figure 8-4 Cisco 10008 Chassis Rear—BNC Connectors



1	Line card slot 8	4	Line card slot 4
2	Line cards slot 5	5	Line card slot 1
3	Blower module	6	Power supply

The BNC connectors on the rear of the chassis, which use coaxial cable, are used with the 6-port channelized T3 line card.

Figure 8-5 Cisco 10005 Chassis Rear—BNC Connectors



1	Line card slots 1 (top) to 5 (bottom)
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Also see [Appendix A, “Cisco 10005 Extender Card Information”](#) for information about the extender card which must be used with the 6-port channelized T3 line card in the Cisco 10005 chassis.

All Cisco 10005 line cards connect to a backplane in the center of the chassis, and require extender cards to deliver the alarm, BITS clock, and DS3 signals to the rear of the chassis to make them accessible. The Cisco 10005 alarm extender card and T3/E3 extender card extend and terminate these signals.

Go to [Chapter 16, “Preparing for Installation”](#) to begin the installation or replacement of the line card.

For troubleshooting information, see [Chapter 18, “Troubleshooting the Installation.”](#)