

Quick Start Guide

CISCO 90i IDSL CHANNEL UNIT INSTALLATION GUIDE

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Cisco 90i Description

The Cisco 90i is a single-width D4 channel unit that is compatible with existing D4 channel banks, using standard common equipment. The Cisco 90i transforms the D4 channel bank digroup from its traditional use as a time division multiplexer into a high-performance Frame Relay multiplexer. It supports four Integrated Services Digital Network (ISDN) Digital Subscriber Loops (IDSLs) running user data at 56, 64, 128, or 144 kbps.

Each subscriber has access to the full bandwidth of the T1 on a statistically multiplexed basis. Each of the four subscriber interfaces supports a standard twisted-pair 2B1Q loop of up to 18 kilofeet (5486.4 m) The Cisco 90i only supports dedicated leased-line subscriber connections, not switched or dialup ISDN connections.

Note: A D4 channel bank can have two T1 interfaces, each of which can be installed for Frame Relay service or used as a time-division multiplexed (TDM) T1 for other applications. Do not mix Cisco 90i IDSL channel units and ordinary channel units in the same digroup.

The Cisco 90i faceplate is shown in Figure 1. Table 1 describes the Cisco 90i faceplate LEDs.

Figure 1. Cisco 90i Faceplate

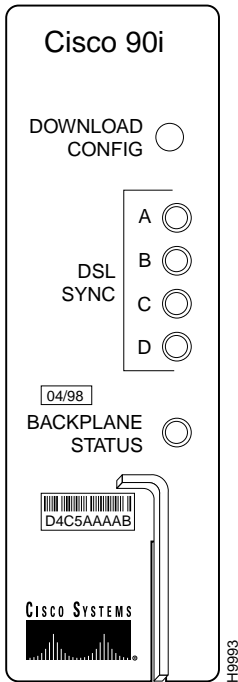


Table 1. Cisco 90i LEDs

LED	When On, Indicates...
DSL SYNC A	Subscriber loop A (0) is out of sync.
DSL SYNC B	Subscriber loop B (1) is out of sync.
DSL SYNC C	Subscriber loop C (2) is out of sync.
DSL SYNC D	Subscriber loop D (3) is out of sync.
BACKPLANE STATUS	Receive T1 is out of sync, a voice channel unit has been detected in the same digroup as the Cisco 90i, or another Cisco 90i in the same digroup has failed and is incorrectly transmitting on the backplane.

Table 2 describes the Cisco 90i faceplate DOWNLOAD CONFIG pushbutton.

Table 2. Cisco 90i Pushbutton

Pushbutton	When Pushed...
DOWNLOAD CONFIG	Sends a message to the Cisco 90 Series DSL Management Agent requesting configuration data.

More detailed information is available in the document *D4 Carrier System Cisco 90i—ISDN Digital Subscriber Line (IDSL) Channel Unit*.

Table 3 describes the Cisco 90i manufacture date label and CLEI code label.

Table 3. Cisco 90i Labels

Label	Description of Label
04/98	Date Cisco 90i Channel Unit was manufactured (for example, 04/98 indicates unit was manufactured in April 1998).
D4C5AAAAB	CLEI (Common Language Equipment Coding) label. CLEI codes are used by communications companies to track circuit design and layout versions and manage inventory. In this case, the CLEI code identifies and catalogs the version of the Cisco 90i Channel Unit card and firmware.

Table 4 lists the settings for the D4 channel bank common equipment.

Table 4. D4 Channel Bank

Parameter	Setting
Line coding	B8ZS
Framing	ESF
Channel counting	Sequential (SEQ)
Timing source	Configure the appropriate timing source—external, loop, or local timing
T1 equalizer	Set by the distance from DSX-1 cross-connect

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry.

ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures.

Always follow ESD-prevention procedures when you remove and replace Cisco 90i Channel Units. Ensure that the D4 channel bank is electrically connected to earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the grounding clip to an unpainted surface of the equipment frame to safely ground unwanted ESD voltages. To guard against ESD damage and shocks, the wrist strap and cord must operate

properly. If no wrist strap is available, ground yourself by touching the metal part of the channel bank.

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Installing Cisco 90i Channel Units

To install the Cisco 90i, perform the following steps:

- 1** Insert a Cisco 90i Channel Unit into the designated open slot in the D4 channel bank. Push the channel unit into its slot until the locking lever on the front panel of the unit engages.
- 2** Ensure all LEDs on the front panel of the Cisco 90i Channel Unit blink three times before the Backplane Status LED goes off.
- 3** Press the recessed **DOWNLOAD CONFIG** pushbutton on the Cisco 90i Channel Unit to download the default configuration.

You can change the default configuration for the Cisco 90i Channel Unit by using an SNMP manager.

- 4** Connect the loop side of the channel unit to the subscriber loop as follows:

Port	Connection	Backplane
Port A (0)	T & R	24 & 51
Port B (1)	T1 & R1	20 & 47
Port C (2)	E & EG	45 & 19
Port D (3)	M & MB	46 & 48

If the loop side is properly terminated in a BRITE card or a network terminator (NT1), the associated DSL sync LED will go out.

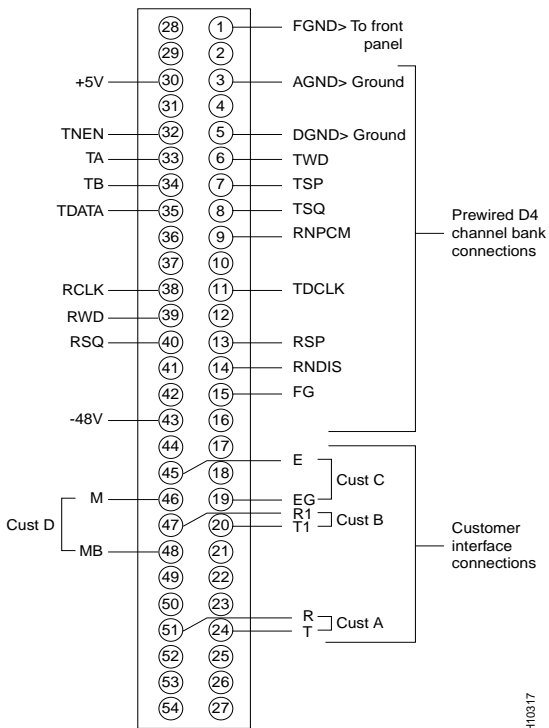
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Cisco 90i Maintenance

The Cisco 90i requires no routine maintenance. Field repair of defective units should be limited to replacement of the unit only. Refer to your *Cisco Information Packet* for more information on service and support.

Connector pin assignments are detailed in Figure 2. All channel banks are pre-wired.

Figure 2. Connector Pin Assignments



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Customer Service

If you need technical assistance with a Cisco 90i Channel Unit that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com.

Cisco Connection Online (CCO) is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.


You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

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