Dual T1 DS-1

Network Interface Card
Getting Started Guide

Part No. 1.024.1303-00

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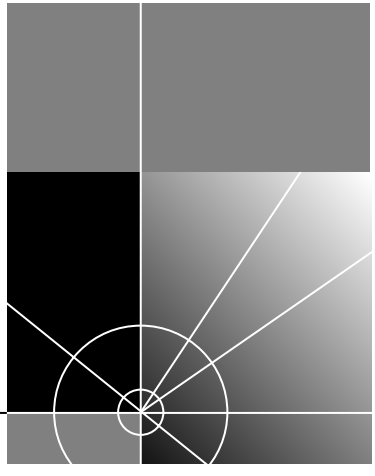

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Part No. 1.024.1303-00

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1 OVERVIEW

This chapter provides an overview of:

- Contacting 3Com
- Document conventions
- Product description
- Product compatibility

Contacting 3Com

Call the appropriate toll free number listed below for technical support.

For European countries that do not have a toll free number listed, call +31 30 602 9900.

Country	Toll Free Number	Country	Toll Free Number
Austria	06 607468	**Netherlands**	0800 0227788
Belgium	0800 71429	**Norway**	800 11376
Canada	1800 2318770	**Poland**	00800 3111206
Denmark	800 17309	**Portugal**	0800 831416
Finland	0800 113153	**South Africa**	0800 995014
France	0800 917959	**Spain**	900 983125
Germany	0800 1821502	**Sweden**	020 795482
Hungary	00800 12813	**Switzerland**	0800 553072
Ireland	1800 553117	**UK**	0800 966197
Israel	0800 9453794	**United States**	1800 2318770
Italy	1678 79489	***All Other Locations (Outside Europe)***	1847 7976600

Refer to the Total Control Hub Documentation CD-ROM for more information regarding product warranty.

For information about Customer Service, including support, training, contracts, and documentation, visit our website at ***http://totalservice.3com.com***

Document Conventions

These tables list conventions used throughout this guide.

Icon	Notice Type	Description
	Information note	Information that contains important features or instructions.
	Caution	Information to alert you to potential damage to a program, system, or device.
	Warning	Information to alert you to potential personal injury or fatality. May also alert you to potential electrical hazard.
	ESD	Information to alert you to take proper grounding precautions before handling a product.

Convention	Description
Text represented as a `screen display`	`This typeface` represents displays that appear on your terminal screen, for example: `Netlogin:`
Text represented as **`commands`**	**`This typeface`** represents commands that you enter for example: **`setenv TCMHOME directory`** *This guide always gives the full form of a command in uppercase and lowercase letters. However, you can abbreviate commands by entering only the uppercase letters and the appropriate value. Commands are not case-sensitive.*
Text represented as **menu** or **sub-menu names**.	**This typeface** represents all menu and sub-menu names within procedures, for example: On the **File** menu, click **New**.

Product Description

The Dual T1 DS-1 Network Interface Card (NIC), also known as the Long Haul NIC, performs critical functions of a channel service unit (CSU) within the 3Com Total Control Enterprise Network Hub.

Used in conjunction with the Dual T1 Network Application Card (NAC), the DS-1 NIC terminates two T1 span lines that equate to 48 DSOs. This NIC supports span lengths of 655 feet or greater.

Product Compatibility

The Dual T1 DS-1 NIC is compatible with the following NACs:

- Dual T1/E1 (186-based)
- Dual PRI (386-based)

2 INSTALLATION

This chapter contains Dual T1 DS-1 Network Interface Card (NIC) installation information.

Installation Tools

To install this NIC in the Total Control chassis, you need a #2 Phillips and flat-head screwdriver.

Installation Procedure

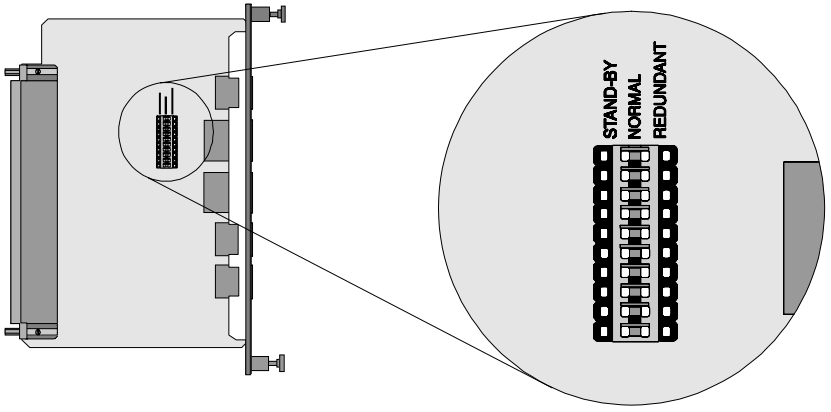
To install this NIC:

ESD: *To reduce the risk of electrostatic discharge (ESD), take proper grounding precautions before handling the NIC.*

Install the NIC with or without power applied to the chassis.

1 Configure the NIC via the jumpers.

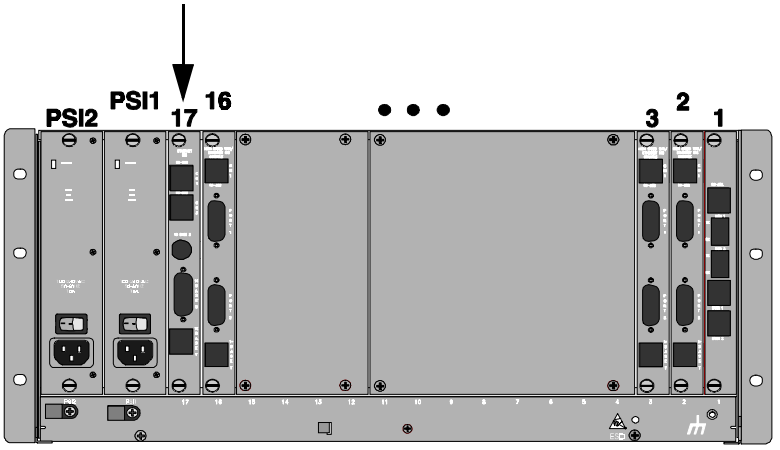
For proper operation, confirm that the 10-position jumper is at NORMAL.



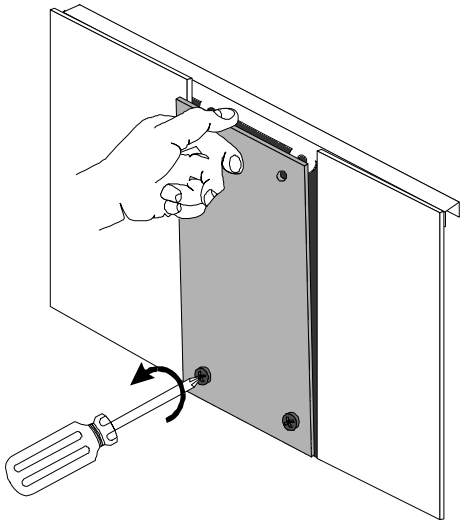
2 Select a slot at the rear of the Total Control chassis for installing the NIC.

Install this NIC in slot(s): 1–17

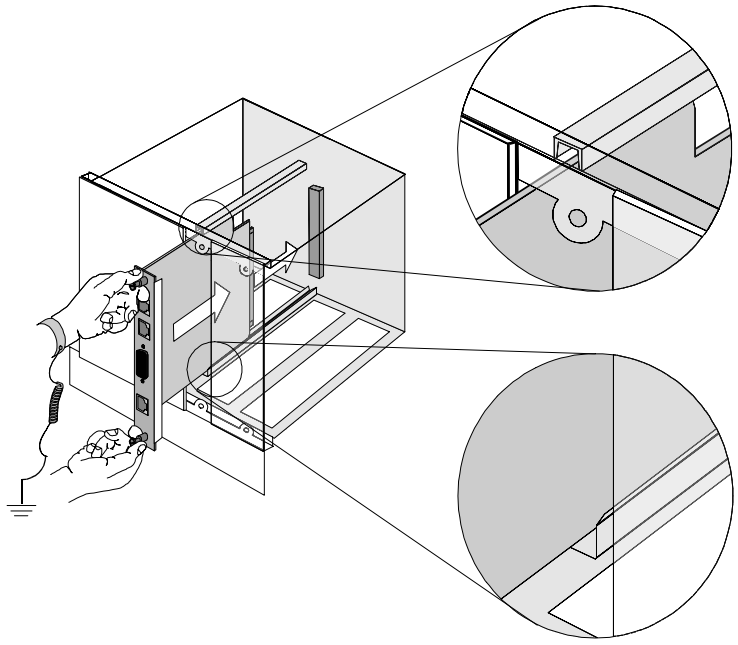
For managed chassis, slot 17 is reserved for the Network Management Card (NMC) NIC.



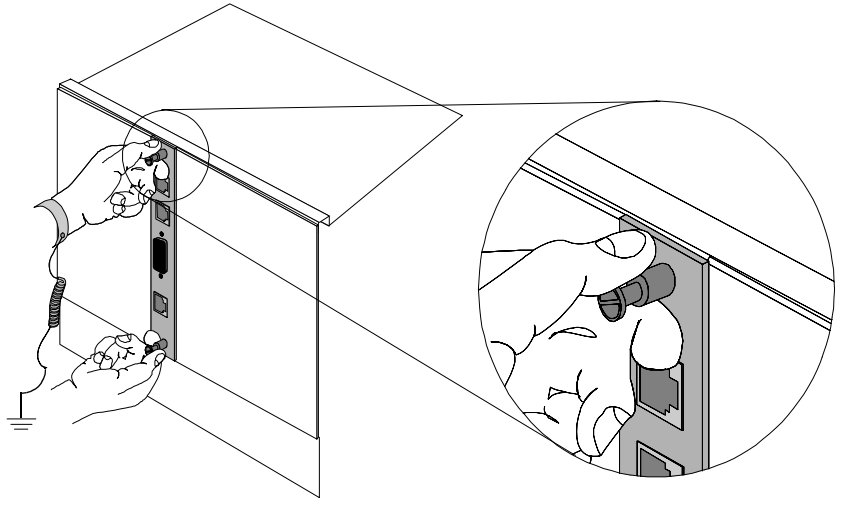
3 Use a #2 Phillips screwdriver to remove the safety panel covering this slot.



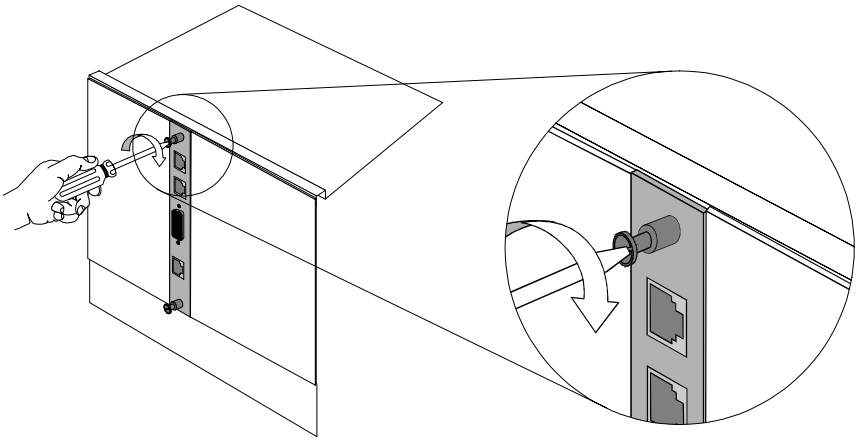
4 Insert the NIC between the slot's upper and lower card guides.



5 Slide the NIC into the chassis, until the front of the NIC is flush with the chassis.



6 Use a flat-head screwdriver to tighten the screws on the front panel.



7 Cover any unused chassis slots with safety panels.

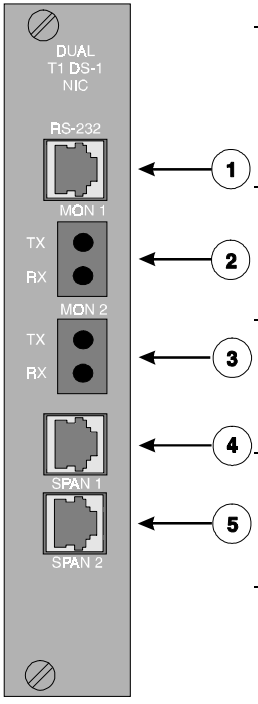
8 Install the Network Application Card (NAC) corresponding to this NIC. Refer to the NAC's Getting Started Guide for more information.

3 NETWORK INTERFACE CARD CABLING

This chapter provides information about the physical interfaces of the Dual T1 DS-1 Network Interface Card (NIC) and instructions for accessing the corresponding Network Application Card (NAC) through the user interface (UI).

Physical Interfaces

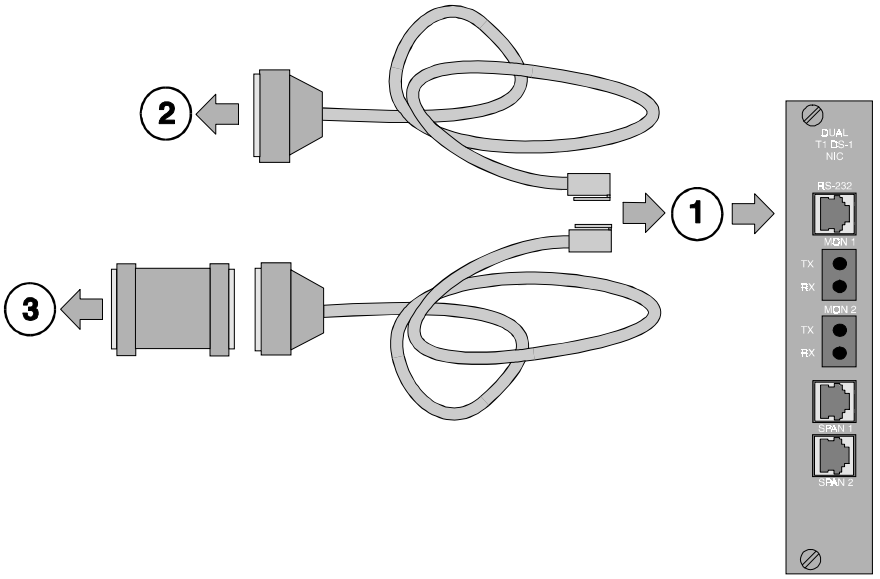
The Dual T1 DS-1 NIC has the following physical interfaces:



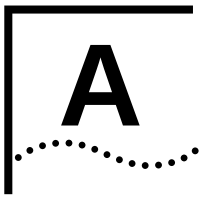
Callout Number	Interface Description
1	**RS-232:** RJ-45 RS-232 port ■ Connect to this port to access the corresponding NAC's UI console. This port's speed is determined by DIP switch settings on the NAC.
2	**MON1:** Bantam Jack ■ Connect span line monitoring equipment to this port for span 2 diagnostics.
3	**MON2:** Bantam Jack ■ Connect span line monitoring equipment to this port for span 1 diagnostics.
4	**Span 1:** RJ-48C E1 Span Line 1 Interface ■ Connect the T1 span line to this port.
5	**Span 2:** RJ-48C E1 Span Line 2 Interface ■ Connect a secondary T1 span line to this port.

Accessing the User Interface

To access the UI of the corresponding NAC, connect the following cables to the NIC's console port.



Callout Number	Description
1	RJ-45 connector to NIC's console port
2	DB-25 male connector to modem for remote operations
3	DB-25 female-to-female null modem adapter to PC or terminal COM port



TECHNICAL SPECIFICATIONS

Certification

EMI/RFI	■ FCC 15A ■ EN55022A
Safety	■ UL 1950 ■ C-UL ■ EN 60950 ■ JATE
Telco	■ FCC 68 ■ IC CS-03

Regulatory Compliance Statements

United States

FCC Part 15 Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Interface Specifications

Serial Ports

Electrical Specification:	RS-232-C (EIA/TIA-232-E standard)
Connector:	RJ-45, 8 position modular jack
Configuration:	Data Terminal Equipment (DTE)
Transmission Method:	Unbalanced RS-232
Transmission Rate:	38,400 bps maximum

Span 1 Port

Electrical Specification:	T1/E1 span line interface
Connector:	RJ-48C, 8 position modular jack
Specifications:	■ I.431/ETSI ETS 300 011 ■ ANSI T1.403 ■ ITU G.703 ■ ITU G.775 ■ AT&T Pub 62411 ■ ITU G.736 ■ ETSI 300-166 ■ ANSI T1.408 ■ ITU G.823 ■ ETSI 300-233 ■ TBR-12 ■ TBR-13

Channelized T1 (CH T1) and T1/PRI Application

Framing:	■ Super Frame (SF), also known as D4 ■ Extended Super Frame (ESF)
Line Coding:	**CH T1** ■ Binary Eight Zero Code Supression (B8ZS) ■ Alternate Mark Inversion (AMI) ■ Zero Code Supression (ZCS) **T1/PRI** ■ B8ZS
Interfaces:	**DS1 (Long Haul Applications)** ■ Connecting CPE equipment to the Telco's T1 or Smart Jack up to 6000 feet away

Current Draw

+5.2 vDC @ 500 mA typical maximum

Typical maximum refers to the maximum current draw under most typical configurations.

Environment

Shipping and Storage

Temperature:	-25 to 75° C, -13 to 167° F
Relative Humidity:	0 to 100%, Non-condensing

Operating

Temperature:	0 to 40° C, 32 to 104° F
Relative Humidity:	0 to 95%, Non-condensing

Physical Dimensions

	Inches	Centimeters
Length:	5.30	13.46
Width:	0.79	2.00
Height:	6.90	17.53

Monitor Port

Connector:	Bantam Jack
Configuration:	Non-intrusive Bridge Mode
Isolation Resistance:	430 ohms
Attenuation:	-6 to -10 dB

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