Total Access 850 DSX-1 Module
Installation and Maintenance Practice

Contents

Figures

1. GENERAL

This document provides installation and maintenance procedures for the DSX-1 Module (see Figure 1).
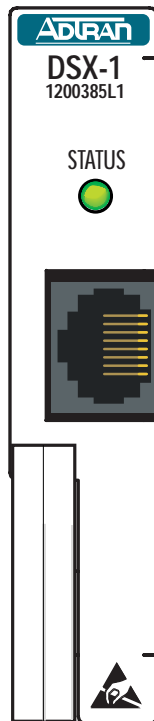

Figure 1. DSX-1 Module

Revision History

This is the first revision of this practice.

2. INTRODUCING THE MODULE

The Total Access 850 DSX-1 is an access module that provides the means of supporting applications with PBXs and other equipment with DSX-1/FT1 interfaces. The modules functions are very similar to those of the Total Access 850 integrated DSX-1 interface.

Features

The Total Access 850 DSX-1 Module includes the following features:

- Single port, single slot module with DSX-1 interface
- Allows for support of multiple PBXs or other equipment with DSX-1/FT1 interface
- Installs in any slot one through six
- RCU support only

Functional Description

The DSX-1 Module installs into the Total Access 850 system to provide an additional DSX-1 interface for support of multiple PBXs or other equipment with a DSX-1/FT1 interface. The module is functional in any of the six slots. The DSX-1 Module is only operational with the RCU commons.

Physical Description

The faceplate of the Total Access 850 DSX-1 Module displays the module name, part number, CLEI code and status LEDs. The module name, part number, and CLEI code may also be found through the terminal menus. The dimensions of the card itself are approximately 9.5 inches x 6 inches.

3. INSTALLING THE MODULE

Carefully unpack and inspect the Total Access 850 DSX-1 Module for shipping damages. If you suspect damage has occurred during shipping, immediately file a claim with the carrier, then contact ADTRAN Technical Support (see *Warranty and Customer Service* on page 4). If possible, keep the original shipping container for returning the Total Access 850 DSX-1 Module for repair or for verification of shipping damage.

Shipping Contents

The contents include the following items:

- *Total Access 850 DSX-1 Module*
- *Total Access 850 DSX-1 Module Quick Start Guide*

Instructions for Installing the Module

Follow the steps below to install the module.

> **NOTE** *Hot insertion of the module is permissible.*

1. If present, remove the cover plate from the appropriate option slot of the Total Access 850 chassis.
2. Position the module to fit in the lower and upper grooves.
3. Slide the module into the option slot pressing equally on the top and bottom of the faceplate until the module is firmly positioned against the back of the chassis.
4. Push in the ejector on the lower left-hand side of the module to finish seating the module.

Auto-detection of Modules
The Total Access 850 RCU automatically detects the presence of the Total Access 850 DSX-1 Module when the module is installed into the system. You are not required to reboot.

Wiring Connections
The Total Access 850 DSX-1 Module connects to two 64-pin Champ connectors located on the backplane. (Pinouts are given in the System Manual, Section 2, Engineering Guidelines.)

Faceplate LEDs
The faceplate LED colors are described below.

ONLINE LED Colors	Description
Off	No power present
Amber	Channel test in progress
Blinking Amber	Card initializing during startup
Green	DSX-1 signal present & synchronized; channel is configured for use
Red	Channel alarm present

4. USING THE MODULE
You can configure and control the Total Access 850 DSX-1 Module from a variety of sources, including the following:

*   The terminal menus, allowing detailed configuration, status, and diagnostics via the DB-9 craft port on the front of the card, the RJ-45 craft port on the rear of the chassis, or telnet.

NOTE   *The remainder of this document describes the menu items available when managing the Total Access 850 DSX-1 Module via the terminal menus.*

The Terminal Menus
The terminal menus are available by using either a VT-100 terminal attached to the Total Access 850 active RCU's craft port, the chassis' ADMIN port, or a Telnet session established through the RCU's Ethernet port. The Total Access 850 System Manual provides detailed instructions on using any of these management approaches.

Terminal Menu Structure
The Total Access 850 uses a hierarchical menu structure to provide access to all of its features. The top-most menu level leads to submenus which are grouped by functionality. All menu items display in the terminal window.

Accessing the Module Terminal Menus
Once you are connected to a terminal, press **Enter** several times until a **LOGIN** prompt displays. Enter the default, *password*, in lowercase characters (the login system is case sensitive). TheTotal Access 850 upper-level **SYSTEM INFO** menu opens.

To access the terminal menu for the Total Access 850 DSX-1 Module:

1. Use the arrow keys to navigate to the **MODULES** menu and press **Enter**.
2. Select the module by using the arrow keys to highlight the specific module.
3. Press **Enter** while the module slot is highlighted.

Menu options for the module now display on the terminal.

NOTE   *Refer to the Total Access 850 System Manual for detailed instructions on navigating through the terminal menu.*

Passwords
To edit fields in the terminal menus, you must have the appropriate password level. Each menu description in this section indicates the password level required for write and read access. Security level **FULL** users can view and edit every available field. Security level **STATUS** users can view most fields but cannot edit.

INTERFACES MENU
DSX card identifies the Total Access 850 DSX-1 Module. The following sections describe the **INTERFACES** menu options: **INTERFACE**, **CONFIG** and **TEST**.

INTERFACES
Write security: Config; Read security: Status
Displays either the type of module currently installed in the slot or the type of module you plan to install in the slot. If an Total Access 850 DSX-1 Module is installed, the **TYPE** field automatically defaults to DSX card.

> **NOTE** *If a module is installed, **INTERFACES** automatically displays the name of the installed module. To change this name, remove the installed module, set **INTERFACES** to **EMPTY** and then select another module.*

CONFIG
Displays additional configuration menus for the selected module. To access the submenus for this item, use the arrow keys to scroll to the **CONFIG** column for the module you want to edit, then press **Enter**. For detailed information on each submenu item, see *Total Access 850 DSX-1 Module Config Options* on page 3.

Total Access 850 DSX-1 Module Config Options
The following sections describe the menus options: **CONFIG AND TEST**.

CONFIG
Write security: Config; Read security: Status
Allows users to provision the following options for the DSX-1 interface.

FORMAT
This sets the frame format for the T1 interface. The setting must match the frame format of the circuit to which the interface is connected. Choices are ESF and SF. Extended Superframe (ESF) provides a non-disruptive means of full-time monitoring on the facility datalink (FDL). Default is ESF.
Configuration Path: INTERFACES (DSX-1) > CONFIG > FORMAT)

LINE CODE
This sets the line code for the T1 interface. The setting must match the line code of the circuit to which the interface is connected. Choices are B8ZS (bipolar with 8-zero substitution) and AMI (alternate mark inversion). Default is B8ZS.
Configuration Path: INTERFACES (DSX-1) > CONFIG > LINE CODE

> **NOTE** *SF is equivalent to the D4 frame format.*

> **NOTE** *Contact ADTRAN Technical Support to enable this feature.*

TEST
Write security: Voice; Read security: Status
Initiates different types of tests and displays test results. This menu includes the following submenu: **LOC LB**

> **NOTE** *When activated, these test command will temporarily disrupt service.*

LOC LB
*Write security: **VOICE**; Read security: **STATUS***
Causes line loopback (LB) on the near-end (local) port. The following options are available:

- **LINE** - metallic loopback
- **PAYLD** - payload loopback; regenerates framing and clocking
- **NONE** - default setting which means no loopback

RUN SELF-TEST
To run a self-test on the module, go to the **SYSTEM UTILITY** menu and select **RUN SELF-TEST**. This menu allows you to run individual self-tests on all modules.

5. SPECIFICATIONS
Each port of the Total Access 850 DSX-1 Module conforms to the following specifications:

Capacity	T1: 1 to 24 DS0s
Framing	ESF and SF(D4)
Line Build Out	DSX-1: 0 to 655 feet in 133-foot increments
Line Coding	AMI (alternate mark inversion) or B8ZS (bipolar 8 zero substitution)
Line Rate	1.544 Mbps, $\pm$ 75 bps
Relative Humidity	Up to 95% noncondensing
Terminating Impedance	100 ohms $\pm$ 5%
Temperature	Operate at -0°C to +50°C Store at -40°C to +70°C
Tests	Self-test, local line, local payload

6. MAINTENANCE

The Total Access 850 DSX-1 Module requires no routine maintenance to operate properly.

> **CAUTION**
>
> *ADTRAN cautions against performing repairs in the field. Repair services are available if you return damaged units to ADTRAN. Refer to the following section, "Warranty and Customer Service," for further information.*

7. WARRANTY AND CUSTOMER SERVICE

ADTRAN will replace or repair this product within ten years of the date of shipment if it does not meet its published specifications or fails while in service.

Return Material Authorization (RMA) is required prior to returning equipment to ADTRAN.

For service, RMA requests, or further information contact one of the following numbers:

ADTRAN Sales	**(800) 827-0807**
ADTRAN Technical Support	**(888) 4ADTRAN**
CAPS Department	**(256) 963-8722**

Clearly identify the RMA number on the package and return to the following address:

ADTRAN Customer and Products Service
901 Explorer Blvd.
Huntsville, AL 35806

RMA # _____