



Dialogic® DSI SS7MDL440Q Network Interface Board Installation Guide

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1. Product Description

The Dialogic® DSI SS7MDL440Q Network Interface Board ("DSI SS7MDL440Q board" or "board") is a high performance, low profile, PCI Express form factor SS7 signaling board designed for use in telecommunications environments.

The board supports configurations of up to 124 SS7 signaling links, 4 framed HSL links, or 4 ATM cell streams.

The DSI SS7MDL440Q board includes the following components, shown in the **Physical Layout** illustration:

End Bracket: Bracket supplied for both low profile and full height installation.

Port 0 to Port 3: Four primary rate telecommunication interface connectors that are run-time configurable to operate as T1, E1, or J1 ports, with selectable line code and frame format.

LEDs: Each port is provided with a Green/Red bi-color LED to indicate status:

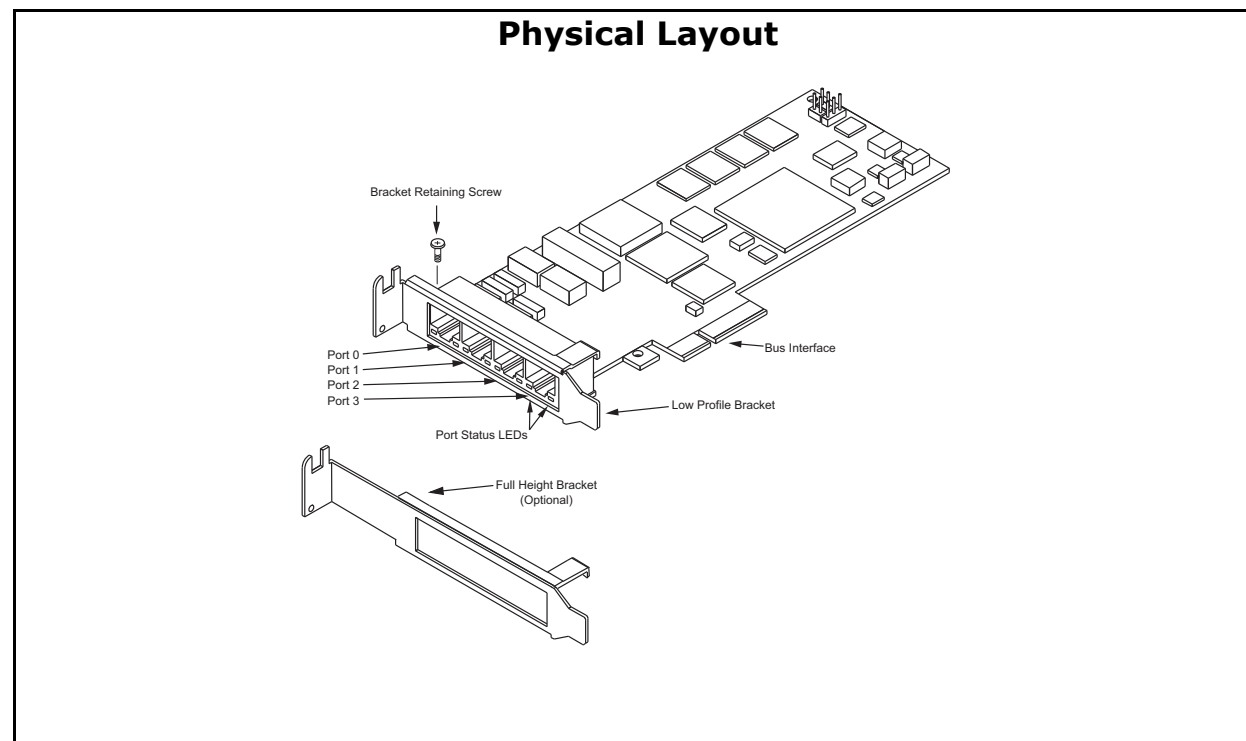
- Green = Line Ok
- Red = Line Alarm

Bus Interface: The DSI SS7MDL440Q board is a 4 lane PCI Express physical form factor with a single lane connected, which can be installed in 4, 8, or 16 lane PCI Express slots.

Additional Information

Additional information about each DSI SS7MDL440Q board and the specifications to which it conforms is available in the following documents:

- The *Regulatory Notices* document, packed with each DSI SS7MDL440Q board, contains safety warnings and international and national requirements for proper installation and operation of telecommunications equipment.
- *Dialogic® DSI SS7MD Network Interface Board Programmer's Manual*, available at <http://www.dialogic.com/support/helpweb/signaling>, provides information about the software used with each DSI SS7MDL440Q board, including



configuration parameters and command descriptions.

- The product data sheet, available at <http://www.dialogic.com/products/list.asp>, provides a functional description as well as information about applications and configurations, features, and technical specifications.
- The latest software, available at <http://www.dialogic.com/support/helpweb/signaling>.
- *PCI Express Base Specification Rev 1.0a*, available at <http://www.pcisig.com>.

2. Before You Begin

Familiarize yourself with the safety aspects and other essential or national requirements in the *Regulatory Notices* document.

Protecting the Board from Damage

CAUTION: All computer boards are sensitive to electrostatic discharge ("ESD"). Handle all static-sensitive boards and components at a static-safe work area, and observe anti-static precautions at all times.

If you are not familiar with ESD safety precautions, visit <http://www.dialogic.com/support/hwinstall> to learn more.

Unpacking the Board

CAUTION: Do not remove the board from the anti-static packaging until you are ready to install it. Observe proper anti-static precautions at all times.

Inspect the packaging for any signs of damage that may have occurred during transit. In the event of damage or missing items notify both the carrier and the supplier immediately.

Unpack the DSI SS7MDL440Q board according to the following steps:

1. Prepare a static-safeguarded work area.
2. Carefully remove the board from the shipping carton and anti-static packaging. Handle the board by the edges and avoid touching the board's components.
3. Lay the board on the static-dissipative work surface.

Note: Place board in static-shielding bag when carrying board from station to station.

3. Configuring the Board

Software configurable parameters must be set, as described in the *DSI SS7MD Network Interface Board Programmer's Manual*. These include parameters relating to T1/E1/J1 ports, pulse shape, line code, and frame format.

4. Choosing a Slot

For restrictions, refer to the *DSI SS7MD Network Interface Board Programmer's Manual* and the host computer documentation. Ensure that the creepage and clearance requirements are met, as specified in the *Regulatory Notices* document.

5. Installing the Board

CAUTION: These procedures assume familiarity with the general terminology associated with electronic equipment and with the safety practices and regulatory compliance required for using and modifying electronic equipment. These procedures should be performed only by qualified technical personnel.

WARNING! Unplug the equipment before performing the procedures described here. Failure to disconnect the power before you open the chassis can result in personal injury. Ensure that the system is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the system with the cover removed.

CAUTION: Observe proper anti-static precautions at all times while handling and installing the board.

To install the DSI SS7MDL440Q board, perform the following steps:

1. Turn off the computer and disconnect the power cable and network connections.
2. Remove the cover from the computer.
3. Select an empty, PCI Express slot and remove the blanking plate (if fitted) by removing the retaining screw at the top of the plate. Keep the blanking plate for future use.

CAUTION: To prevent damage to the board or computer, care should be taken to ensure correct alignment of the connector and board guide before final insertion.

4. The end bracket on the board may need to be changed between either low profile or full height to match the selected host PCI Express slot. Instructions on how to do this are provided in Section 6, Changing the End Bracket.
5. Using the board guides in the computer, align the board with the slot and press the board firmly until fully seated.
6. Secure the board using the retaining screw at the top of the end bracket.
7. Replace the cover on the computer and reconnect the power cable and network connections.
8. Turn on the computer.

6. Changing the End Bracket

Change the end bracket as follows:

1. Remove the retaining screw from the top of the board and retain for re-use.
2. Rotate the top of the end bracket away from the board to clear the underside of the connector.
3. Slide the end bracket down until the retaining hook releases the connector.
4. Follow the reverse procedure to fit the new end bracket.
5. Replace the retaining screw.

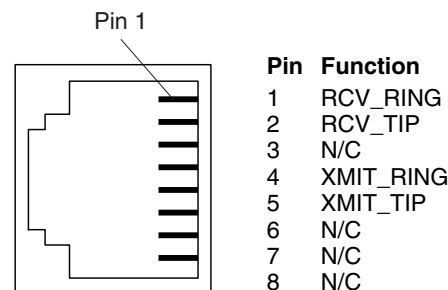
7. Connecting to External Equipment

Connecting T1, E1, or J1 Cables

Connect T1, E1, or J1 cables to the Port 0 to Port 3 connectors on the end bracket. Connector pinouts for the Port 0 to Port 3 connectors are shown in the following figure.

Note: Cables must be twisted pair.

Port 0 to Port 3 Connector Pinouts



8. After Installing the Board

After installing the DSI SS7MDL440Q, refer to the *DSI SS7MD Network Interface Board Programmer's Manual* for software installation and configuration instructions. Ensure that the configuration is compliant with all local requirements.

Refer to the *DSI SS7MD Network Interface Board Programmer's Manual* for software licensing instructions.

9. Removing the Board

CAUTION: Components may be hot.

When the board is removed from a system, the board may contain hot components. To avoid risk of burns, the board should only be handled by the end bracket until the components have had time to cool.

Removal of the board is essentially the reverse of the installation procedure described in Section 5,

Installing the Board, as summarized in Step 1 through Step 6 below:

1. Observe anti-static precautions.
2. Disconnect the telephony cables.
3. Remove the computer's power cord.
4. Remove the computer's cover.
5. Remove and set aside the board's retaining screw.
6. Remove the board and place it in static protective packaging.

10. Warranty and Return Information

Warranty Period

For specific warranty information for this board, refer to the Warranty section of the Products page, located at this URL: <http://www.dialogic.com/warranties/>.

Contacting Technical Support

Dialogic provides technical support for its products through a network of value added distributors who are trained to answer technical questions on installing and configuring Dialogic® products. If you are unsure how to contact your support channel, please call Dialogic in the United States at 973-967-6600 (9am-5pm EST) and we will assist in obtaining the appropriate support channel.

Outside the United States please refer to <http://www.dialogic.com/support/contact> to obtain local contact information. Dialogic also provides direct support via Dialogic® Pro™ Services agreements. For more details of direct support from Dialogic please refer to: <http://www.dialogic.com/support/DialogicPro>.

Returning a Product

To return a board for warranty repair or any other returns, please refer to the following: <http://www.dialogic.com/support/hwfaults>.

11. Sales Assistance

If you have a sales question, please contact your local Sales Representative or the Regional Sales Office for your area. Address, telephone and fax numbers, are available at the Dialogic website located at: <http://www.dialogic.com/contact.htm>.

To purchase Dialogic® products, please refer to the following website to locate the appropriate supplier: <http://www.dialogic.com/purchase.htm>.

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