



Dialogic® SS7HDP & SS7HDE Boards

Installation Guide

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1. Product Description

The Dialogic® SS7HDPD4TEW and SS7HDED4TEQ boards ("board" or "boards") are high-density, high-performance, multi-port, SS7 signaling interface boards designed for use in telecommunications environments.

The boards have dual signal processors and support multiple HDLC-based signaling channels, including up to 64 SS7 links that can operate at 64, 56, and 48 kbits/s.

The boards include the following components:

End Bracket: Bracket containing external interface connectors.

Port L1 to Port L4: 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.

ENET Port: Connection to a 10/100BASE-TX Ethernet network.

Base Board: The main board of the assembly.

ADDR: A switch used to set the board address.

LEDs: Three general purpose LEDs that are available to user applications.

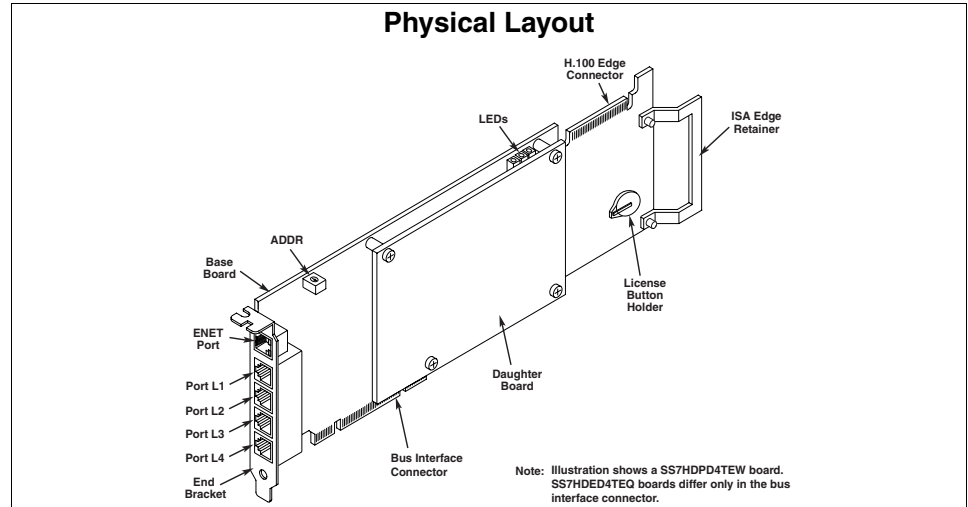
H.100 Connector: A CT Bus interface connector that allows connection to other H.100-compatible boards. Each board can operate as a CT Bus master or CT Bus slave.

ISA Edge Retainer: Mounting bracket used in systems that accommodate both PCI and ISA boards.

License Button Holder: A holder for a software license button, a device used to enable the software running on the board.

Daughter Board: Contains the signal processors.

Bus Interface: The SS7HDPD4TEW board is a 64 bit PCI board, but can also be installed in 32 bit PCI slots. The SS7HDED4TEQ board is a 4 lane PCI Express board, but can also be installed in 8 or 16 lane PCI Express slots.



Additional Information

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

- The *Regulatory Notices* document, packed with each board, contains safety warnings and international and national requirements for proper installation and operation of telecommunications equipment.
- *SS7HD Programmer's Manual*, available at <http://www.dialogic.com/support/helpweb/signaling>, provides information about the software used with each 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>
- *ECTF H.100 Hardware Compatibility Specification: CT Bus* available at <http://www.ectf.org>.
- *PCI Local Bus Specification Rev 2.1* available at <http://www.pcisig.com>
- *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 electrostatic discharge (ESD) safety precautions, visit <http://www.dialogic.com/support/hwinstall/esd.pdf> 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.

Software License Button

All software running on the boards is enabled by a removable software license button. Prior to installing a board, the correct license button must be fitted.

The license button may be supplied in a separate package and therefore may require installation.

To install the license button, locate the license button holder (see the Physical Layout Figure overleaf) and carefully slide the button into the holder ensuring that the contacts of the holder make good contact with the button casing.

The software enabled by the license button is indicated by a symbol engraved in the top of the button casing.

3. Configuring the Board

The boards include one hardware configurable component, the ADDR switch. This switch can be used to set the board address, but is normally set to 0.

Software configurable parameters must be set, as described in the *SS7HD Programmer's Manual*. These include parameters relating to T1/E1 ports, pulse shape, line code and frame format, plus H.100 bus termination.

4. Choosing a Slot

For restrictions, refer to the *SS7HD 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.

Install the board as follows:

1. Turn off the computer and disconnect the power cable and network connections.
2. Remove the cover from the computer.
3. Select an empty, full-size PCI bus slot for SS7HDPD4TEW boards, or a full-size PCI Express slot for SS7HDED4TEQ boards, 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. Using the board guides in the computer, align the board with the slot and press the board firmly until fully seated.
5. Secure the board using the retaining screw at the top of the end bracket.
6. Use the CT Bus cable to connect the board to other boards that use the CT Bus. Refer to the *Regulatory Notices* document.
7. Replace the cover on the computer and reconnect the power cable and network connections.
8. Turn on the computer.

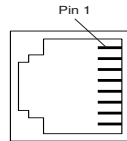
6. Connecting to External Equipment

Connecting T1, E1 or J1 Cables

Connect T1, E1 or J1 cables to the Port L1 to Port L4 connectors on the end bracket. Connector pinouts for the Port L1 to Port L4 connectors are shown in the following figure.

Note: Cables must be twisted pair, shielded, and grounded at both ends.

Port L1 to Port L4 Connector Pinouts

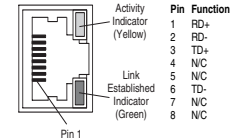


Pin	Function
1	RCV_RING
2	RCV_TIP
3	N/C
4	XMIT_RING
5	XMIT_TIP
6	N/C
7	N/C
8	N/C

Connecting an Ethernet Cable

Connect a shielded Ethernet cable to the ENET Port connector on the end bracket. Connector pinouts for the ENET Port are shown in the figure following.

ENET Port Connector Pinouts



7. After Installing Board

After installing the board, refer to the software installation instructions in the *SS7HD Programmer's Manual*. Ensure that the configuration is compliant with all local requirements.

8. Removing the Board

Removal of the board is a straight forward process. Remove the board using the reverse of the procedure described in Section 5, Installing the Board above.

9. 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>.

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