Dialogic® DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP Digital Network Interface Boards

Installation Guide

1. Product Description

The Dialogic® DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards are high-density, high-performance, network interface boards with one, two, four or eight T1/E1 digital network interfaces respectively, in a half-length PCI Express form factor.

The DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards include the following components, shown in the Physical Layout illustration:

J1 RJ-48C Jacks: Four connectors, each of which connects to two T1 or E1 network interfaces via an optional splitter cable for the DNI2410TEPE2HMP board. Refer to the Physical Layout illustration for the network interfaces supported by each connector. For the DNI1210TEPE2HMP board, each connector connects to only one T1 or E1 network interface. The DNI310TEPE2HMP uses the jack for trunk 1 only, and the DNI610TEPE2HMP uses the jacks for trunks 1 and 2 only.

CR2 General Network Interface Alarm LED: When the yellow LED is lit, it indicates that an alarm condition is present on one or more of the network interfaces. When unlit, alarm conditions are cleared.

CR1 Reset/Power Dual Green/Red LED: When the green LED is lit, it indicates that board power is good. When the green LED is unlit, either power has not been applied to the board, or the board has detected that one or more of the on-board-generated voltages are not correct.

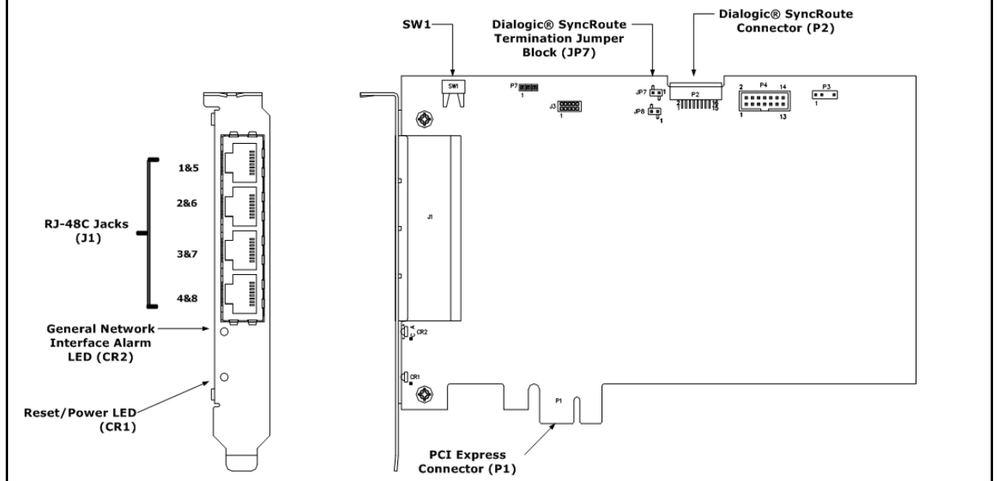
When the red LED is lit, it indicates that the board is in a reset state because either a PCIe Reset from the edge connector is active, or one or more of the on-board-generated voltages are not correct.

SW1: Rotary switch used when setting board ID.

P2: Dialogic® SyncRoute connector.

Part number: 64-1122-03

Physical Layout



JP7: SyncRoute termination jumper block. Only the boards in the end positions of a SyncRoute connector should be terminated. Factory default is not terminated (clip installed over only one pin).

P1: PCI Express connector, host bus connector. Compatible with x1 or larger PCI Express Link connectors.

Note: P3, JP8, J3, P7, and P4 in the physical layout figure are not user configurable.

Additional Information

Additional information about the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards is available from a number of sources, such as via its product data sheet, which is accessible at http://www.dialogic.com/products/list.asp. The product data sheet provides a functional description of the boards as well as information about its applications, configurations, features, and technical specifications. Please note that Dialogic may make changes to specifications, product descriptions, and plans at any time, without notice.

Refer to the Release Guide and the online Release Update for your Dialogic software release to verify that the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board is supported in the release, and for information on any new features or issues that may relate to it.

The Regulatory Notices document that is packed with each DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board contains safety warnings and national requirements for proper operation of telecommunications equipment. Please read the document carefully before any handling, installation, connection or other usage or implementation of the board.

2. Before You Begin

Protecting the Board from Damage

CAUTION: All computer boards are sensitive to electrostatic discharge. 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

Unpack the 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.

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.

3. Configuring the Board

The DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards use Plug and Play technology to simplify installation. No user configuration is required for IRQ or memory address.

The DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards have the following manually configurable options:

- Board ID
- SyncRoute termination

Setting the Board ID

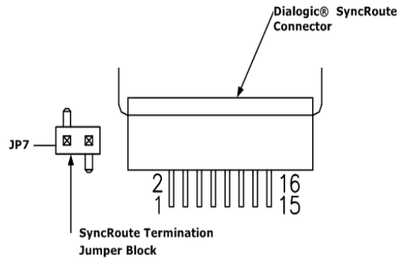
When the system is started, each Dialogic® board is assigned a board instance ID number that programs can use to identify individual boards in a multi-board system. The setting of SW1 controls the generation of the instance numbers.

Linux Systems: In a Linux system, you must explicitly specify the board ID numbers by setting SW1 on each board to a different position (0-9 or A-F). After the hardware and the Dialogic software are installed, use the appropriate board configuration tool for the target release to retrieve the assigned board instance ID number(s). For more information about Linux board configuration tools, see the Dialogic software release documentation.

Setting Dialogic® SyncRoute Termination

If you are connecting multiple boards via a SyncRoute connector, the bus signal should be terminated on the boards that are located at the ends of the cable. All other boards should be left in their factory default configuration with the SyncRoute termination pins not linked.

To terminate the SyncRoute, install a link clip over the pair of JP7 pins indicated in the following figure.



4. Choosing a Slot

If the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board is connected to one or more other boards via a Syn-

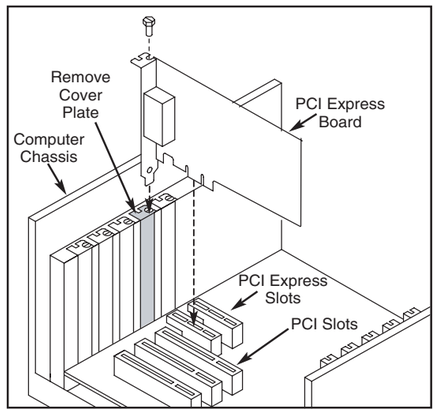
cRoute connector, you should install the boards to minimize unused connectors on the cable (in addition to ensuring that the power requirements are met):

- Install boards in adjacent slots whenever possible.
- If the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board is connected to one or more PCI boards, use the PCI Express slot(s) located closest to the PCI slots.

5. Installing the Board

WARNING! Unplug the equipment before performing the procedures described in this section. 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.

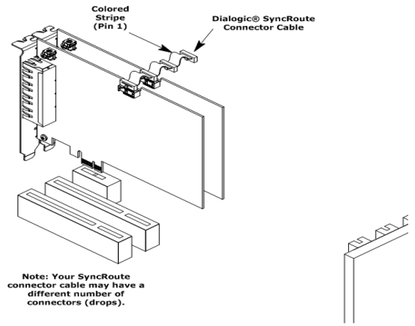
CAUTION: To avoid possible damage to the board, remove power from the computer before beginning installation. Observe proper anti-static precautions at all times while handling and installing the board.



To install the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board, perform the following steps:

1. Turn off all power to the system and disconnect the system's power cords.
2. Remove the computer's cover.
3. Choose an empty PCI Express expansion slot and remove that slot's retaining screw and access cover plate.
4. Insert the board's edge connector into the bus slot, and apply firm pressure to the top edge of the board until the board is fully seated in the edge connector.
5. Reinstall the retaining screw.
6. Repeat Step 3 through Step 5 for any additional boards you are installing.
7. If applicable, connect the boards together with a SyncRoute connector of the appropriate size (not included). If possible, use a cable assembly that matches the total number of boards in your system. If the cable has more than one unused connector, install the cable so that all the unused connectors are at one end of the cable.

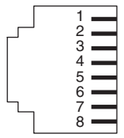
   Note: An Optional Transition Cable Assembly used for connecting the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board to boards that have a standard 68-pin CT Bus interface is available.
8. Replace the computer's cover.
9. Reconnect the computer's power cord.



6. Connecting to External Equipment

Each RJ-48C jack on the DNI2410TEPE2HMP board supports two T1 or E1 digital network interfaces, that is 1&5, 2&6, 3&7, and 4&8. A splitter cable set consisting of four splitter cables is optional for the board. Each RJ-48C jack on the DNI1210TEPE2HMP board supports one T1 or E1 digital network interface, that is 1, 2, 3, and 4. The DNI310TEPE2HMP uses the jack for trunk 1 only, and the DNI610TEPE2HMP uses the jacks for trunks 1 and 2 only. The following figure illustrates the pinouts of the four RJ-48C jacks on the DNI2410TEPE2HMP board. For the DNI310TEPE2HMP, DNI610TEPE2HMP, or DNI1210TEPE2HMP board, only the pins with the "A" suffix are used.

Pinout for RJ–48C Jacks (4) on DNI2410TEPE2HMP Bracket



1	RCV_RING A
2	RCV_TIP A
3	RCV_RING B
4	XMIT_RING A
5	XMIT_TIP A
6	RCV_TIP B
7	XMIT_RING B
8	XMIT_TIP B

Note: "A"= lower interface number and "B"= higher interface number for each connector. For example, interface 1&5, 2&6, 3&7, 4&8.

For DNI2410TEPE2HMP board connections to other network termination equipment, the splitter cable breaks out the two T1/E1 network interfaces on a single RJ-48C connector to the standard wire pairs of two separate RJ-48C modular connectors. On the Y-adapter end of the splitter cable, the connector labeled "A" is for the lower network interface number and the connector labeled "B" is for the higher network interface number supported by each cable, for example, network interfaces 1&5, 2&6, 3&7, and 4&8. Each connector in the splitter has the following pinouts:

1	RCV_RING	4	XMIT_RING	7	Not used
2	RCV_TIP	5	XMIT_TIP	8	Not used
3	Not used	6	Not used		

7. After Installing the Board

The DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards require the use of a Dialogic software release that specifically supports it.

If this is the first Dialogic board you have installed in your system, you will need to install an appropriate version of the Dialogic software and to configure the software for the specific board(s) you are using. For instructions, refer to the installation and configuration documentation that accompanies the release.

If you are installing the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board in a system that already has Dialogic software installed, you should verify that your installed software version supports the board. If it does not support the board, you will need to obtain and install a different Dialogic software, or a Service Update for the Dialogic Software installed, before configuring the system for the newly installed board(s).

Please refer to the Release Update document for your Dialogic software version for up-to-date information about support for the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP and DNI2410TEPE2HMP boards and any known issues relating to their use.

8. Removing the Board

Removal of the DNI310TEPE2HMP, DNI610TEPE2HMP, DNI1210TEPE2HMP or DNI2410TEPE2HMP board is essentially the reverse of the installation procedure, as summarized in Step 1 through Step 7 below:

1. Observe anti-static precautions.
2. Disconnect the telephony cables and optional splitter cables (if used).
3. Remove the computer's power cord.
4. Remove the computer's cover.
5. Disconnect the SyncRoute cable (if applicable).
6. Remove and set aside the board's retaining screw.
7. Remove the board and place it in static-protective packaging.

9. Contacting Technical Support

For Dialogic technical support issues, refer to the Dialogic Service Center at www.dialogic.com/support.

10.Returning a Product

To return a board for warranty repair or for any other returns, please refer to www.dialogic.com/support/hwfaults.