



# Dialogic® DISI 16-EW, DISI 24-EW, and DISI 32-EW Installation Guide

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## 1. Product Description

The Dialogic® DISI switching boards are full-size, single-slot PCI Express boards. They provide connectivity for up to 16, 24, or 32 station interfaces and include conferencing, voice play/record, tone detection and generation, and Caller ID capabilities.

### Additional Information

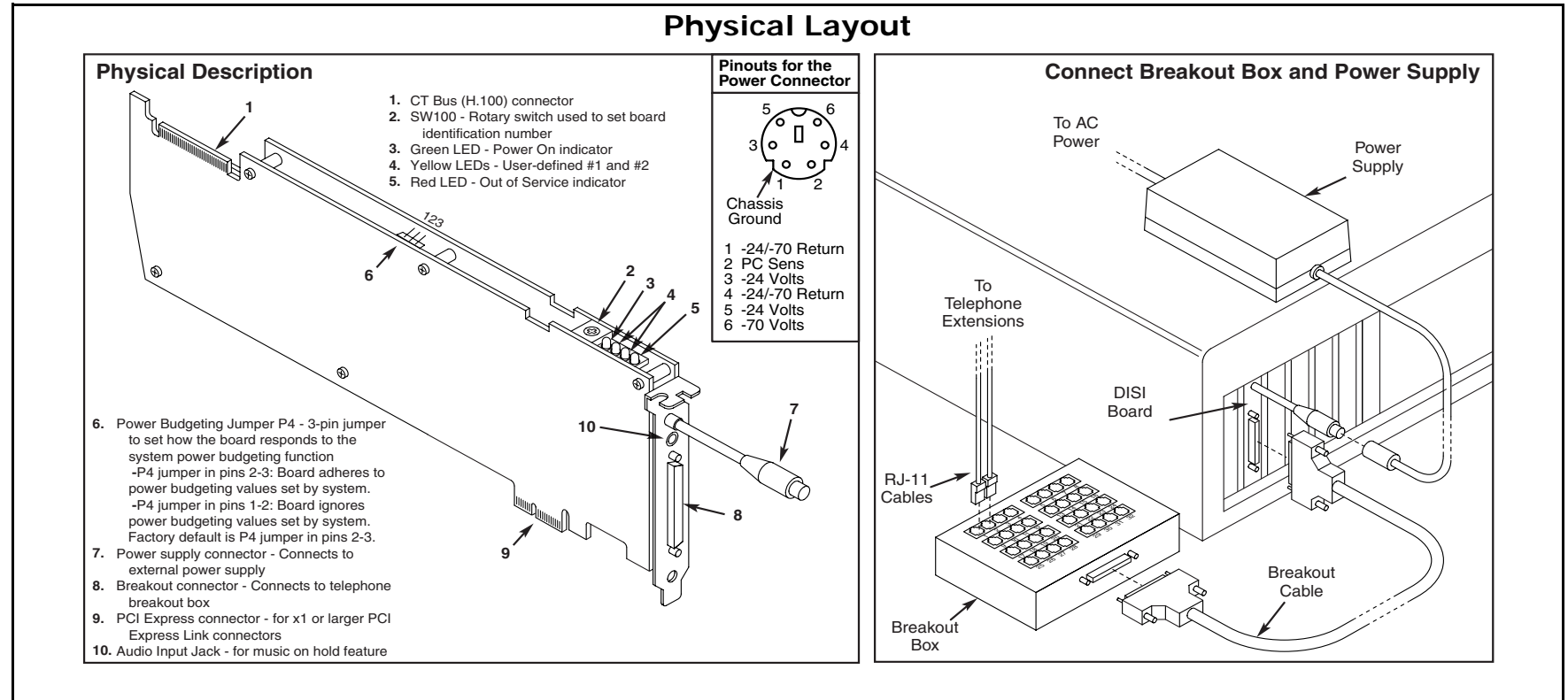
Additional information about the DISI is available from a number of sources.

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.

Refer to the Release Guide and the online Release Update for your Dialogic system software release to verify that the DISI 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 DISI board contains safety warnings and national requirements for proper operation of telecommunications equipment.

**WARNING! This analog station interface product is designed to be used only within the walls of a single stand-alone building or structure (i.e., on-premise). It is not designed to sustain electrical overstress from external sources and factors such as severe weather conditions. Severe electrical overstress caused by misuse of this interface product with cables extending outside of the walls of a single stand-alone building or structure could cause property damage and/or personal injury and/or death. Such misuse voids the warranty for this interface product.**



## 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 static-shielding bag. 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 boards in static-shielding bags when carrying boards 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 Setting the Board ID

When the system is started, each Dialogic telecom board is assigned a board instance ID number that programs can use to identify individual boards in a multi-board system. The setting of SW100 controls the generation of the instance numbers.

**Windows\* Systems:** In a Windows system, leave SW100 set to the 0 position (the factory default setting) on all Dialogic telecom boards. This setting causes the system software to assign instance numbers geographically, based on the bus and slot numbers. Note that there is no way to know what the instance numbers will be until the system is started and configured, and the instance number for any given board is likely to change when there is any change in the number or arrangement of boards in the system.

You can read the ID numbers assigned to the boards in the Configuration Manager tool after you start the system.

**Linux\* Systems:** In a Linux system, you must explicitly specify the board ID numbers by setting SW100 on each board to a different position (0-9 or A-F). Refer to the Configuration Guide in your System Software documentation for further information about the board ID numbers.

## 4. Choosing a Slot

The DISI board is a full length x1 form factor PCI Express board that requires 25W of power. The following explanation and guidelines are provided to ensure proper configuration of the product.

Power Budgeting is a new feature, introduced in the PCI Express Specification, that provides a mechanism to enable a system to negotiate power consumption requirements for add-in devices.

Per PCI Express Card Electromechanical Specification Revision 1.0a or higher, a x1 add-in card can draw no more than 10W in a x1 slot unless the board's required power is successfully negotiated and allocated by the system (power budgeting). However, implementation of power budgeting by a vendor's system is not a compliance requirement per the PCI Express Card Electromechanical Specification Revision 1.0a or higher. Therefore, some chassis may

not support this feature. Power Budgeting jumper P4 is designed to ensure proper configuration of the product.

The DISI board must be installed in a slot that can be allocated 25W.

If Power Budgeting is **not** implemented by a vendor's system, the DISI board **must** be plugged into a x4 or higher slot with the P4 jumper in position 1-2 (power budgeting ignored). This is allowed per PCI Express Card Electromechanical Specification Revision 1.0a or higher because a x4 or greater slot must be able to support a minimum of 25W.

If Power Budgeting is implemented by a vendor's system, the DISI board **can** be plugged into a x1 slot but the P4 jumper must be in position pins 2-3 (power budgeting adhered to).

**WARNING! Installing the DISI board in a x1 slot with the P4 jumper in position 1-2 will void the warranty of the DISI board.**

If the DISI will be connected to other telephony boards via a CT Bus cable, you should install the boards to minimize unused connectors on the CT Bus cable (in addition to ensuring that the power requirements are met):

- Install boards in adjacent slots whenever possible.
- If the DISI board will be connected to one or more PCI boards, use the PCI Express slot(s) closest to the PCI slots.

## 5. Installing the Board

**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:** 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 DISI 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 the 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 steps 1 through 5 for any additional boards you are installing.

7. Connect the telephony boards together with a CT Bus cable of the appropriate size (not included). If possible, use a cable assembly that matches the 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.

8. Replace the computer's cover.
9. Reconnect the computer's power cord.

### Audio Cable and Ferrite Clamp

A ferrite clamp is required on the audio cable to reduce RFI emissions from the PCB audio jack and to comply with the EN55022 Class B radio frequency interference limits. Follow these instructions to properly install the ferrite clamp:

1. Loop the cable once around the ferrite clamp, keeping cable snug and as close as possible to the plug to be installed into audio jack on the PCB.
2. Snap the ferrite clamp closed onto the cable.
3. Insert the plug into the audio jack.

### Connect to Power Supply

The DISI board must be connected to an external power supply. The power module is the MSISCGBLPWRMOD MSI Global Power Module Assembly. One power module is required per DISI baseboard.

The external power module generates -24 volts to power the station interface loop and -70 volts for ringing. The power module connects to a pre-wired power cable attached to the DISI board.

### 6. Telephony Connection Options

The station ports on the DISI board are accessed using a telephony connection box such as the breakout box provided with the DISIBOBKIT breakout box and cable kit. Alternatively, the CBLTACOX32 Telco Adapter Cable can be used for installations with a wall-mounted distribution frame and split 50 pair telephone punch down blocks, or with a standard rack-mount breakout solution (RJ121X to RJ11). Follow the instructions for the two possible connection scenarios:

#### Connect Board Using DISIBOBKIT Breakout Box and Cable Kit

The breakout box can be mounted using screws or double-sided tape. Follow one of the two sets below to connect the breakout box to the board.

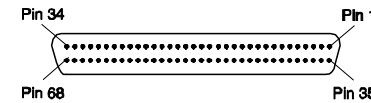
- Mounting Breakout Box Using Screws
- Mounting Breakout Box Using Double-Sided Tape

#### Connect Board Using CBLTACOX32 Telco Adapter Cable

The CBLTACOX32 Telco Adapter Cable converts the 68-pin connector on the DISI board into two standard RJ21X Amphenol\* connectors. Each RJ21X connector carries up to 16 stations, depending on the DISI analog station port density (16, 24, 32).

The CBLTACOX32 is approximately 12 inches in length. Standard 25 pair Amphenol\* cables should be used to extend the reach.

## 7. Pinouts for the Breakout Connector



**Note:** On the DISI24 (24-port board), only tip and ring pins 1-24 are active. On the DISI16 (16-port board), only tip and ring pins 1-16 are active.

### Breakout Connector Pin Designations

Pin	Signal	Pin	Signal
1	RING2	35	TIP2
2	RING1	36	TIP1
3	RING4	37	TIP4
4	RING3	38	TIP3
5	RING6	39	TIP6
6	RING5	40	TIP5
7	RING8	41	TIP8
8	RING7	42	TIP7
9	RING18	43	TIP18
10	RING20	44	TIP20
11	RING19	45	TIP19
12	RING17	46	TIP17
13	RING21	47	TIP21
14	RING22	48	TIP22
15	RING23	49	TIP23
16	RING24	50	TIP24
17	NOT USED	51	NOT USED
18	NOT USED	52	NOT USED
19	RING26	53	TIP26
20	RING25	54	TIP25
21	RING28	55	TIP28
22	RING27	56	TIP27
23	RING30	57	TIP30
24	RING29	58	TIP29
25	RING32	59	TIP32
26	RING31	60	TIP31
27	RING14	61	TIP14
28	RING13	62	TIP13
29	RING16	63	TIP16
30	RING15	64	TIP15
31	RING10	65	TIP10
32	RING9	66	TIP9
33	RING12	67	TIP12
34	RING11	68	TIP11

## 8. After Installing the Board

The DISI requires the use of a System Software version that specifically supports it. Required Dialogic System Software: System Release 6.0 PCI for Windows Service Update 137 or higher; System Release 6.1 for Linux Service Update 241 or higher.

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

If you are installing the DISI in a system that already has System Software installed, you should verify that the installed software version supports the board. If not, you will need to obtain and install a Service Update that does support the DISI before configuring the system for the newly installed board(s).

Please refer to the Release Update document for up-to-date information about support for PCI Express boards and any known issues relating to their use.

## 9. Removing the Board

Removal of the DISI board is essentially the reverse of the installation procedure:

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

## 10. 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>.

## 11. 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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