



Dialogic® D/82JCT-EW PBX Integration Board Installation Guide

Copyright © 2007 Dialogic Corporation. All rights reserved.

1. Product Description

The Dialogic® D/82JCT-EW PBX integration board ("D/82JCT-EW" or "board") is an 8-port voice processing board in a PCI Express form factor. It offers advanced digital connectivity to many of today's most popular private branch exchanges (PBXs) for unified and Internet-ready call, voice, and fax processing in small- to medium-sized enterprises. The D/82JCT-EW includes the following components, shown in the Physical Layout illustration:

J1: 36-position mini-D plug connector.

Board ID display: Displays the board ID (following download). When errors are present, they are displayed for 2 seconds, alternating with the board ID for 2 seconds. See "Setting the Board ID" section for further information.

Power Budgeting Jumper P11: 3-pin jumper to set how the board responds to the system power budgeting function.

- P11 jumper in pins 2-3: Board adheres to power budgeting values set by system.
- P11 jumper in pins 1-2: Board ignores power budgeting values set by system.

Factory default is P11 jumper in pins 2-3. See "Choosing a Slot" section for further information.

P8: CT Bus termination jumpers. See "Setting the CT Bus Termination" section for further information.

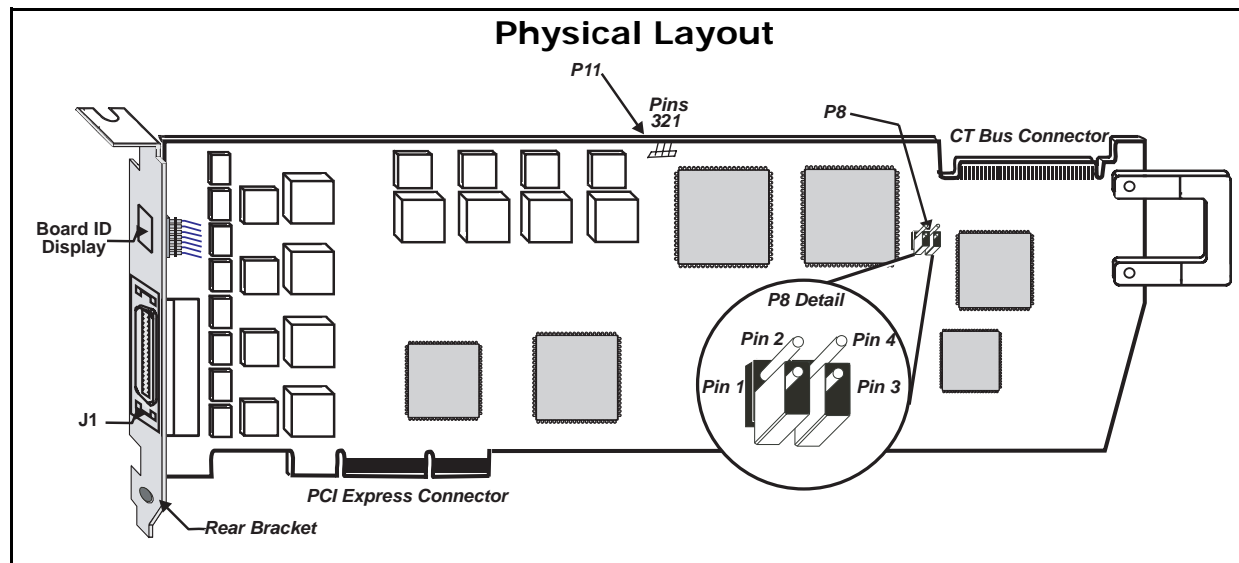
CT Bus connector: H.100 computer telephony bus connector.

PCI Express connector: Host bus connector. Compatible with x1 or larger PCI Express Link connectors.

Additional Information

Additional information about the D/82JCT-EW 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 D/82JCT-EW, 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 D/82JCT-EW 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 D/82JCT-EW 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 (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

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 the 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 D/82JCT-EW uses hardware auto-configuration for IRQ and memory address. It allows you to use the

factory default hardware settings for quick installation and operation. However, you should review the following information to determine if any of the optional configuration items apply to your system:

- Board ID
- CT Bus termination
- Power budgeting (see "Choosing a Slot" section below)

Setting the Board ID

When the system is started, each Dialogic® board is assigned a board instance ID number ("Board ID") that programs can use to identify individual boards in a multi-board system.

All Dialogic® PCI boards and Dialogic® PCI Express boards with a rotary switch can share the factory default switch setting and board ID of 0. To give a board with a rotary switch a board ID other than 0, the rotary switch is set to the desired number.

Because the D/82JCT-EW has no rotary switch, the DCM configuration manager software that is provided with the Dialogic software release automatically assigns board IDs, beginning with 0, unless there are other boards with rotary switch settings of 0, 1, 2, etc. In that case, DCM assigns the first available board ID not in use.

The board ID of the D/82JCT-EW can only be changed by using DCM. See the DCM help files for more information about changing board IDs.

Note: If you add PCI or PCI Express boards with rotary switches to your system after D/82JCT-EW boards have been assigned, boards may share the same ID, depending on the rotary switch settings of the new boards. For example, if DCM assigned board IDs 01, 02, and 03 to existing D/82JCT-EW boards, and then the rotary switches on three new boards are

set to 1, 2, and 3, the D/82JCT-EW and new boards will share board IDs 01, 02, and 03.

The D/82JCT-EW board ID appears on the 2-character LED display on the rear bracket of the board, along with error codes when appropriate.

Board ID Display

Display	Meaning
00-xx	Board ID (in hexadecimal)
88	PCI Express bus reset active
D0	Front-end download or initialization failed
E1-E8	Error on PBX port 0-7 (channel 1-8)

Setting the CT Bus Termination

Jumpers are used to terminate signals on the CT Bus. These settings apply to boards located at physical ends of the bus.

For CT Bus or SCbus, the signals CT_C8_A, CT_C8_B, CT_FRAME_A*, and CT_FRAME_B* are terminated using pins 1 and 2 of the P8 termination jumpers. For MVIP, C_2 and C_4* are terminated using pins 3 and 4 of the P8 termination jumpers. Bus signals are terminated when a jumper clip is installed over the indicated pins.

Note: Only the two boards at the ends of the CT Bus ribbon cable must have their terminations enabled. All other boards must not have the jumper clips installed.

4. Choosing a Slot

The D/82JCT-EW is a full length x1 form factor PCI Express board that requires 25W of power. The following explanation and guidelines are provided for 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 of power 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 P11 is designed to ensure proper configuration of the product.

The D/82JCT-EW must be installed in a slot that can be allocated 25W of power.

If Power Budgeting is **not** implemented by a vendor's system, the D/82JCT-EW **must** be plugged into a x4 or higher slot with the P11 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 of power.

If Power Budgeting is implemented by a vendor's system, the D/82JCT-EW **can** be plugged into a x1 slot but the P11 jumper must be in position pins 2-3 (power budgeting adhered to).

WARNING! Installing the D/82JCT-EW in a x1 slot with the P11 jumper in position 1-2 will void the warranty of the D/82JCT-EW.

If the D/82JCT-EW will be connected to one or more other 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 D/82JCT-EW will be 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.

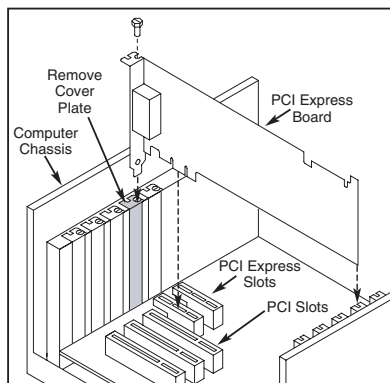
CAUTION: To avoid possible damage to the board, remove power from the computer before beginning installation. Observe proper anti-static precautions at all times while handling and installing the board.

To install the D/82JCT-EW, perform the following steps:

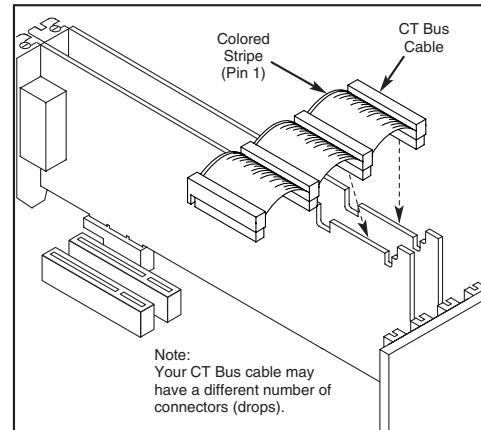
1. Turn off all power to the system and disconnect the system's power cords.
2. Remove the computer's cover.
3. Choose an empty PCI Express expansion slot and remove the slot's retaining screw and access cover plate.

Note: If you are not installing the board in a full-length form-factor PCI Express slot, remove the slot retainer bracket from the end of the board before installation.

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.



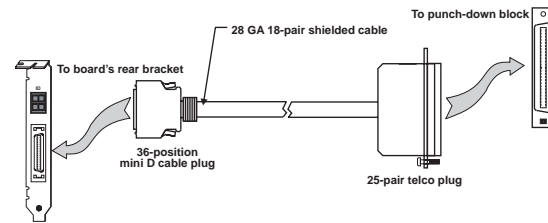
5. Reinstall the retaining screw.
6. Repeat Step 3 through Step 5 for any additional boards you are installing.
7. If applicable, connect the boards together with a CT Bus cable of the appropriate size (not included). If possible, use a cable assembly that matches the total number of boards in your system. 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.



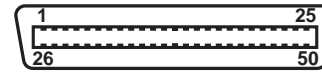
8. Replace the computer's cover.
9. Reconnect the computer's power cord.

6. Connecting to External Equipment

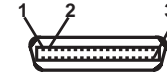
A PBX station interface cable assembly that is specific to the D/82JCT-EW (available separately) is used to connect the board to a punch-down block.



The station interface cable terminates at the punch-down block end with a 25-pair, 57-series Amphenol plug to allow available type-66 punch-down blocks to be used to terminate the PBX station wiring. A 36-position mini-D connector is used on the D/82JCT-EW end of the cable.



25-pair connector
(attaches to the punch-down block)

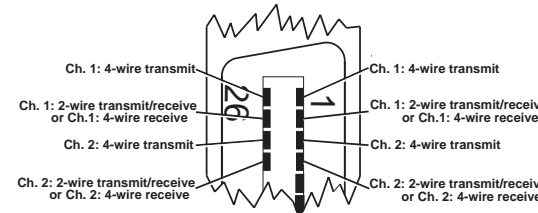


36-position connector
(attaches to the board)

To connect the D/82JCT-EW to a punch-down block:

1. Connect the station interface cable's 36-position mini-D cable plug to the connector on the rear bracket of the D/82JCT-EW.
 2. Connect the station interface cable's 25-pair telco plug to the connector on the punch-down block.
- Hardware installation is now complete.

The telco plug cable connector tabulation is arranged so that the four conductors of one station set circuit are adjacent on a standard type-66 punch-down block. The pattern shown in the following figure continues down the connector to encompass all eight channels with two pairs of conductors per channel, for a total of 16 twisted conductor pairs.



7. After Installing the Board

The D/82JCT-EW requires the use of a Dialogic software release that specifically supports it.¹

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 D/82JCT-EW 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 Service Update that does support the D/82JCT-EW before configuring the system for the newly installed board(s).

When configuring the system for the D/82JCT-EW, use the same menu selections and configuration settings that are documented for the PCI version of the D/82JCT.

¹ Required Dialogic® System Software: System Release 6.0 PCI for Windows Service Update 140 or higher; System Release 6.1 for Linux Service Update 257 or higher.

Please refer to the Release Update document for your Dialogic software version for up-to-date information about support for the D/82JCT-EW and any known issues relating to its use.

8. Removing the Board

Removal of the D/82JCT-EW 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.
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 in static-protective packaging.

9. 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>.

10. Returning a Product

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

All contents of this document are furnished for informational use only and are subject to change without notice and do not represent a commitment on the part of Dialogic Corporation or its subsidiaries ("Dialogic"). Reasonable effort is made to ensure the accuracy of the information contained in the document. However, Dialogic does not warrant the accuracy of this information and cannot accept responsibility for errors, inaccuracies or omissions that may be contained in this document. INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH DIALOGIC® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN A SIGNED AGREEMENT BETWEEN YOU AND DIALOGIC, DIALOGIC ASSUMES NO LIABILITY WHATSOEVER, AND DIALOGIC DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF DIALOGIC PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF A THIRD PARTY.

Dialogic products are not intended for use in medical, life saving, life sustaining, critical control or safety systems, or in nuclear facility applications. It is possible that the use or implementation of any one of the concepts, applications, or ideas described in this document, in marketing collateral produced by or on web pages maintained by Dialogic may infringe one or more patents or other intellectual property rights owned by third parties. Dialogic does not provide any intellectual property licenses with the sale of Dialogic products other than a license to use such product in accordance with intellectual property owned or validly licensed by Dialogic and no such licenses are provided except pursuant to a signed agreement with Dialogic. More detailed information about such intellectual property is available from Dialogic's legal department at 9800 Cavendish Blvd., Montreal, Quebec, Canada H4M 2V9. **Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement any concepts or applications and does not condone or encourage any intellectual property infringement and disclaims any responsibility related thereto. These intellectual property licenses may differ from country to country and it is the responsibility of those who develop the concepts or applications to be aware of and comply with different national license requirements.**

Dialogic, Diva, Eicon, Eicon Networks, Eiconcard and SIPcontrol, among others, are either registered trademarks or trademarks of Dialogic. Dialogic's trademarks may be used publicly only with permission from Dialogic. Such permission may only be granted by Dialogic's legal department at 9800 Cavendish Blvd., 5th Floor, Montreal, Quebec, Canada H4M 2V9. Any authorized use of Dialogic's trademarks will be subject to full respect of the trademark guidelines published by Dialogic from time to time and any use of Dialogic's trademarks requires proper acknowledgement. The names of actual companies and products mentioned herein are the trademarks of their respective owners.