



Dialogic® D/600JCT-2E1-120-EW Installation Guide

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1. Product Description

The Dialogic® D/600JCT-2E1-120-EW combined media board provides up to 60 channels of voice and media resources and two, 120-ohm E1 telephony interfaces in a single, full-length PCI Express slot.

Additional Information

Additional information about the D/600JCT-2E1-120-EW 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 D/600JCT-2E1-120-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/600JCT-2E1-120-EW board contains safety warnings and national requirements for proper operation of telecommunications equipment.

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.

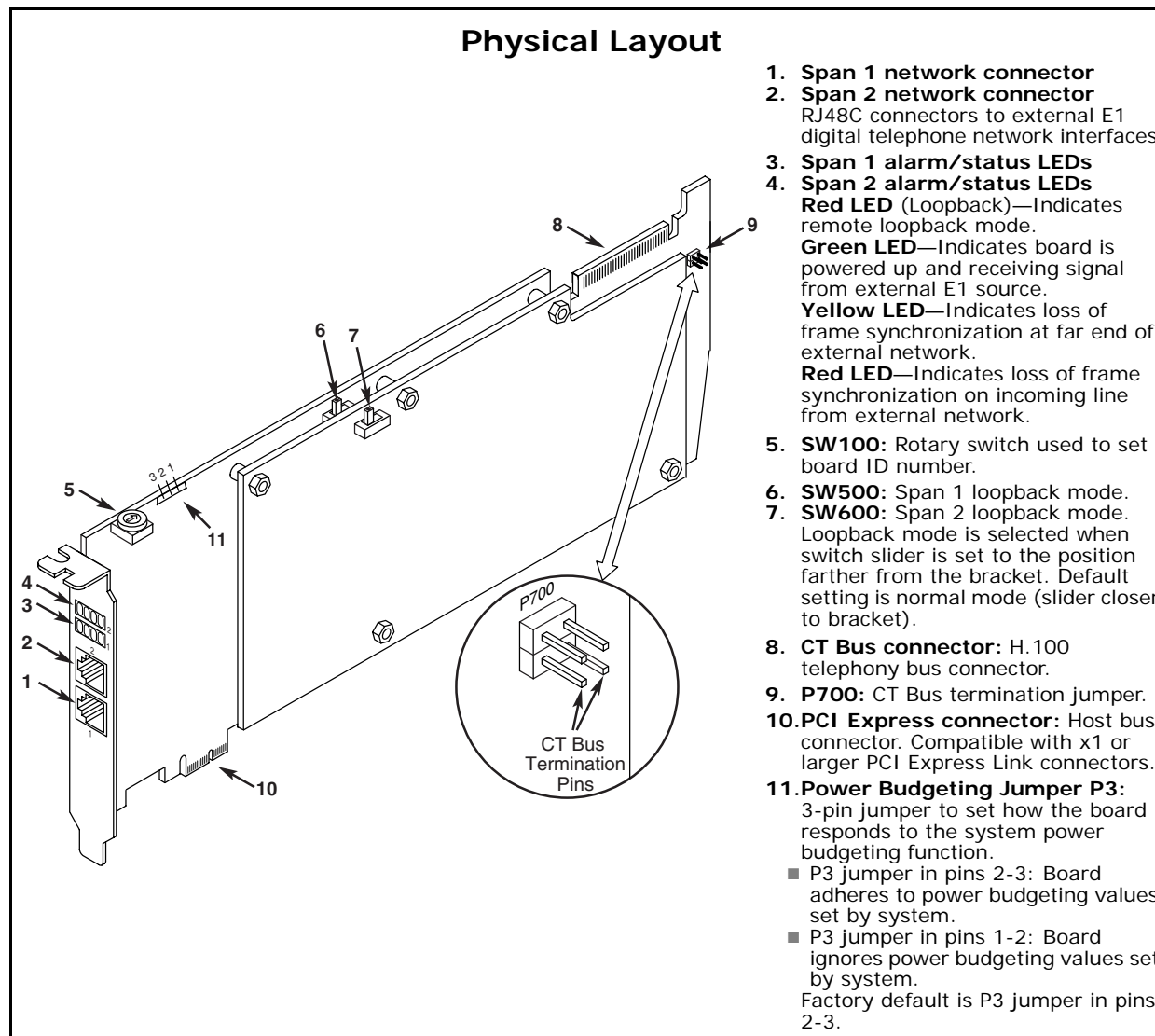
If you are not familiar with ESD safety precautions, visit <http://www.dialogic.com/support/hwinstall> to learn more.

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

Part number: 64-0103-02



Physical Layout

1. **Span 1 network connector**
2. **Span 2 network connector**
RJ48C connectors to external E1 digital telephone network interfaces.
3. **Span 1 alarm/status LEDs**
4. **Span 2 alarm/status LEDs**
Red LED (Loopback)—Indicates remote loopback mode.
Green LED—Indicates board is powered up and receiving signal from external E1 source.
Yellow LED—Indicates loss of frame synchronization at far end of external network.
Red LED—Indicates loss of frame synchronization on incoming line from external network.
5. **SW100:** Rotary switch used to set board ID number.
6. **SW500:** Span 1 loopback mode.
7. **SW600:** Span 2 loopback mode. Loopback mode is selected when switch slider is set to the position farther from the bracket. Default setting is normal mode (slider closer to bracket).
8. **CT Bus connector:** H.100 telephony bus connector.
9. **P700:** CT Bus termination jumper.
10. **PCI Express connector:** Host bus connector. Compatible with x1 or larger PCI Express Link connectors.
11. **Power Budgeting Jumper P3:**
3-pin jumper to set how the board responds to the system power budgeting function.
 - P3 jumper in pins 2-3: Board adheres to power budgeting values set by system.
 - P3 jumper in pins 1-2: Board ignores power budgeting values set by system. Factory default is P3 jumper in pins 2-3.

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

The D/600JCT-2E1-120-EW board uses Plug and Play technology to simplify installation. No user configuration is required for IRQ or memory address.

The D/600JCT-2E1-120-EW board has three manually configurable items:

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

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, leaving SW100 set to the 0 position (the factory default setting) on all Dialogic telecom boards causes the system software to assign instance numbers geographically, based on the bus and slot numbers. Note that when using this method, 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.

As an alternative, you may set SW100 on each board to a different position (0-9 or A-F) to explicitly assign specific ID numbers to the boards. Note that each board must be set to a different ID number.

In either case, you can read the ID numbers assigned to the boards in the Dialogic Configuration Manager after you start the system and invoke that tool.

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 for Springware architecture products in your Dialogic system software documentation for further information about the board ID numbers.

Setting the CT Bus termination

In some systems that connect multiple boards with a CT Bus cable, it is desirable to terminate the bus signal on the boards that are connected at each end of the cable, but this is generally not necessary. If your system requires termination and this board will be the end-most board on the CT Bus cable, install a jumper link (not supplied) over the bottom pair of pins of P700 as indicated in the Physical Description section. Use any standard 2mm pitch jumper link, such as Methode item number 8610-202-70.

Setting Remote Loopback Mode

The D/600JCT-2E1-120-EW board is shipped with SW500 and SW600 set for normal operation, with the switch sliders in the position closer to the board's bracket. Setting either switch to the opposite position selects the loopback mode for the corresponding network interface and overrides any board modes set by your application. Loopback mode is commonly used to check the network connection after the firmware has been downloaded to the board.

4. Choosing a Slot

The D/600JCT-2E1-120-EW 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 P3 is designed to ensure proper configuration of the product.

The D/600JCT-2E1-120-EW board must be installed in a slot that can be allocated 25W.

If Power Budgeting is **not** implemented by a vendor's system, the D/600JCT-2E1-120-EW board **must** be plugged into a x4 or higher slot with the P3 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 D/600JCT-2E1-120-EW board **can** be plugged into a x1 slot but the P3 jumper must be in position pins 2-3 (power budgeting adhered to).

WARNING! Installing the D/600JCT-2E1-120-EW board in a x1 slot with the P3 jumper in position 1-2 will void the warranty of the D/600JCT-2E1-120-EW board.

If the D/600JCT-2E1-120-EW 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 D/600JCT-2E1-120-EW 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

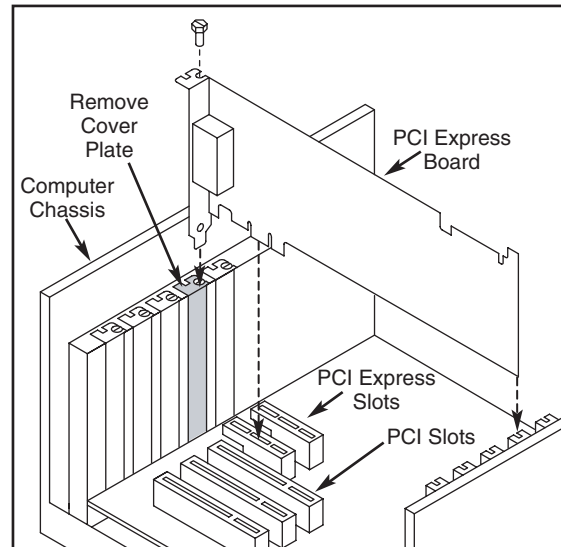
WARNING! Unplug the equipment before performing the procedures described here. Failure to disconnect the power before you open the chassis can result in personal injury. Ensure that the system is disconnected from its

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.

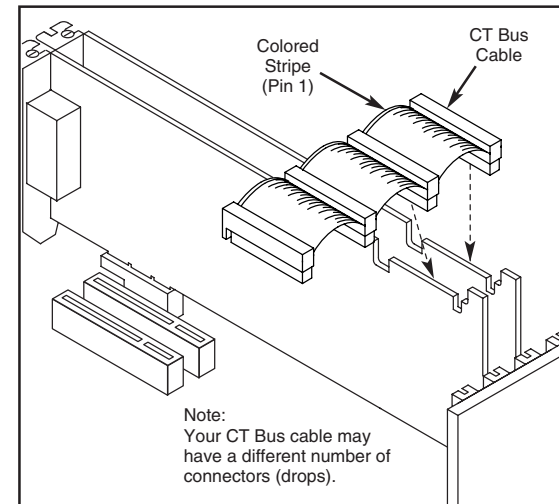
CAUTION: To avoid possible damage to the board, remove power from the computer before beginning installation. Observe proper anti-static precautions at all times while handling and installing the board.

To install the D/600JCT-2E1-120-EW 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.



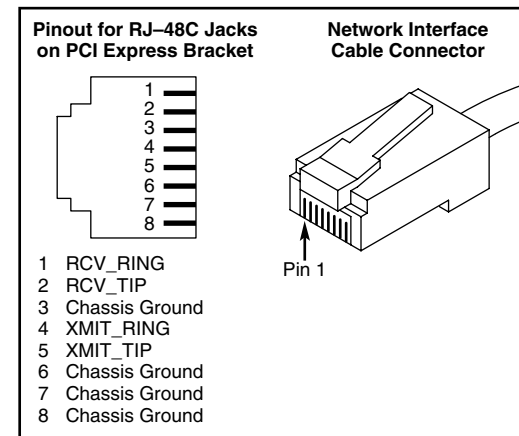
5. Reinstall the retaining screw.
6. Repeat steps 1 through 5 for any additional boards you are installing.
7. Connect the telephony boards together with a CT Bus cable of the appropriate size (not included). If possible, use a cable assembly that matches the number of boards in your system. If the cable 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.



6. Connecting to External Equipment

Each RJ-48C jack on the rear bracket of the D/600JCT-2E1-120-EW board supports a single 120-ohm E1 digital telephony network interface. Use appropriate cables to connect the RJ-48C jacks on the bracket to your CSU or other network termination equipment. The bottom RJ-48C connector is for span 1, the top connector is for span 2.

The following figure illustrates the pinout of the RJ-48C jacks.



7. After Installing the Board

If you are installing the D/600JCT-2E1-120-EW in a system that already has the Dialogic system software installed, you may not need to install a new or upgraded software release to support the board. The D/600JCT-2E1-120-EW has been designed to be

compatible with existing System Release 6.x software versions that support PCI boards. Please refer to the Release Update document for your release version for up-to-date information about support for PCI Express boards and any known issues relating to their use.

If this is the first Dialogic telecom board you have installed in your system, you will need to install an appropriate version of the Dialogic system software 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.

When configuring the system for the D/600JCT-2E1-120-EW board, use the same menu selections and configuration settings that are documented for the PCI version of the D/600JCT-2E1.

8. Removing the Board

Removal of the D/600JCT-2E1-120-EW 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.

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 any other returns, please refer to the following: <http://www.dialogic.com/support/hwfaults>

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