



# Dialogic® DM/V600BTEPEQ Media Board Installation Guide

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## 1. Product Description

The Dialogic® DM/V600BTEPEQ Media Board ("board") is a high-density, high-performance, network interface board with two T1/E1 digital network interfaces in a full-length PCI Express form factor.

The DM/V600BTEPEQ Media board includes the following components, shown in the Physical Layout illustration:

**RJ-48C jacks:** Two connectors to T1 or E1 trunks.

**General Network Interface Alarm LED:**

Indicates when an alarm condition is present on one or both of the trunks.

**Reset LED:** Indicates when the board is in the reset state.

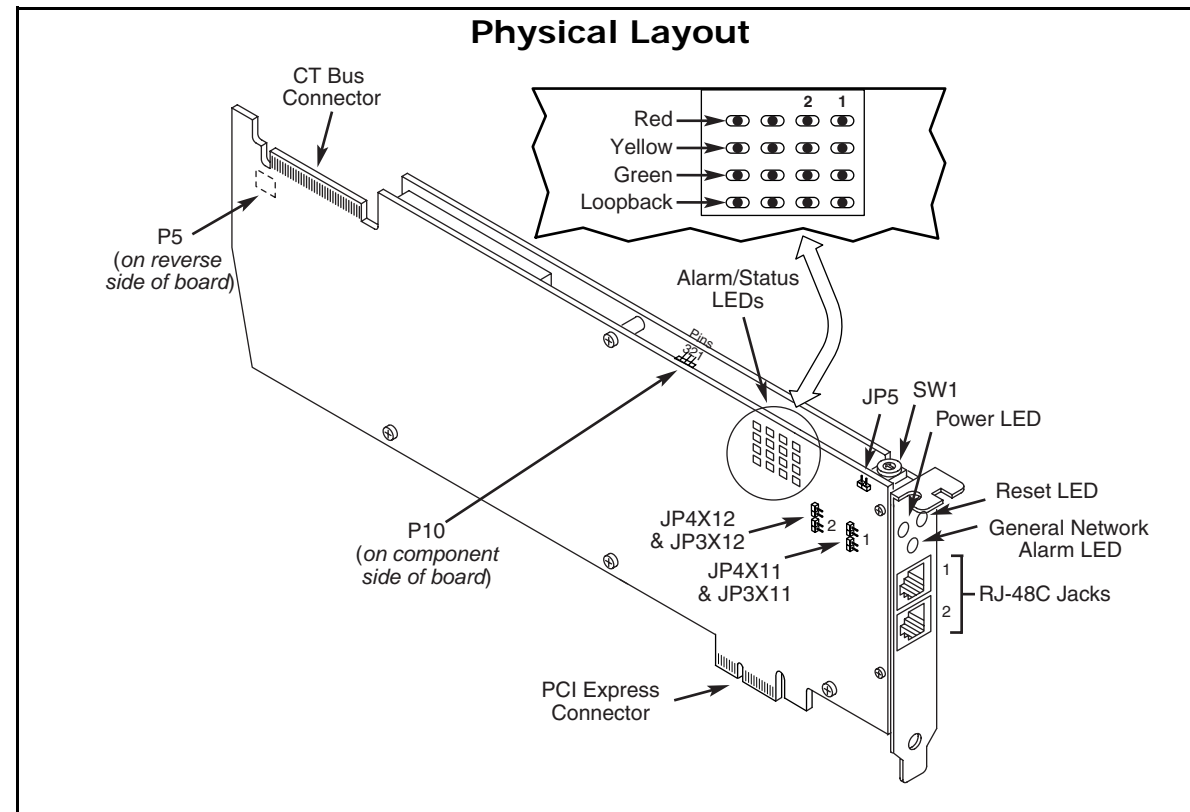
**Power LED:** Indicates when board power is good.

**SW1:** Rotary switch used when setting board ID.

**JP5:** Boot-up Loopback Mode jumper. When unlinked, all trunks are in loopback mode from power-on until download completion. Factory default is loopback enabled (pins not linked, clip installed over one pin only).

**Alarm/status LEDs:** During power-up, the 16 LEDs indicate Power-On Self Test (POST) status. After the board is started, the first two columns of LEDs indicate status for each trunk. The green, yellow, and red LEDs indicate normal operation or Carrier Failure Alarms (CFAs) for each trunk as shown in the following table, and the Loopback LED indicates when the respective trunk is in loopback mode.

Green	Yellow	Red	Indicated Condition
ON	OFF	OFF	Normal operation
OFF	OFF	ON	Loss of Signal (LOS)
ON	OFF	ON	Red Alarm
ON	ON	OFF	Yellow Alarm/Remote Alarm Indicator (RAI)
ON	ON	ON	Alarm Indicator Signal (AIS)



**Power Budgeting Jumper P10:** 3-pin jumper to set how the board responds to the system power budgeting function.

- P10 jumper in pins 2-3: Board adheres to power budgeting values set by system.
- P10 jumper in pins 1-2: Board ignores power budgeting values set by system. Factory default is P10 jumper in pins 2-3.

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

**P5:** CT Bus termination jumper block. Only the boards in the end positions of a CT Bus cable should be terminated. Factory default is unterminated (clip installed over one pin only).

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

**Power-off Loopback Mode jumpers:** Pairs of jumpers to set the power-off loopback mode for each trunk. Factory default is loopback enabled for all trunks (all pairs of pins linked).

- JP3X11 & JP4X11: Trunk 1 loopback mode.
- JP3X12 & JP4X12: Trunk 2 loopback mode.

## Additional Information

Additional information about the DM/V600BTEPEQ Media board 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 DM/V600BTEPEQ Media board, as well as information about its applications, 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 DM/V600BTEPEQ Media 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 DM/V600BTEPEQ Media 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 ("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://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 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 DM/V600BTEPEQ Media board uses Plug and Play technology to simplify installation. No user configuration is required for IRQ or memory address.

The DM/V600BTEPEQ Media board has the following manually configurable options:

- Board ID
- CT Bus termination
- Power-off loopback mode
- Boot-up 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 SW1 controls the generation of the instance numbers.

**Windows Systems:** In a Windows system, leave SW1 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.

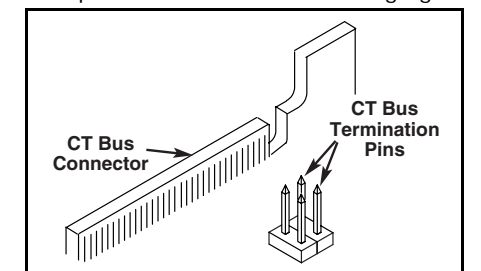
You can read the ID numbers assigned to the boards in the Dialogic® Configuration Manager (DCM) tool after you start the system.

**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). Refer to the Configuration Guide for DM3 architecture products in your Dialogic® System Software documentation for further information about the board ID numbers.

### Setting CT Bus Termination

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

To terminate the CT Bus, install a link clip over the pair of P5 pins indicated in the following figure.



### Setting Power-off Loopback

Each T1/E1 trunk on the DM/V600BTEPEQ Media board can be independently configured for front end loopback when the system is not powered up. As shipped from the factory, power-off loopback is enabled for all trunks. To disable power-off loopback on either trunk, remove the appropriate pair of jumper clips for the trunk as indicated in the Product Description section.

### Setting Boot-up Loopback

The board's loopback configuration during the boot-up interval (from power-on to completion of download) is set on a board-wide basis by jumper JP5. As shipped from the factory, the pins of JP5 are not linked (the clip is installed over one pin only), enabling loopback during boot-up. To disable boot-up loopback, install the clip over both pins of JP5.

## 4. Choosing a Slot

The DM/V600BTEPEQ Media 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 P10 is designed to ensure proper configuration of the product.

The DM/V600BTEPEQ Media board must be installed in a slot that can be allocated 25W.

If Power Budgeting is **not** implemented by a vendor's system, the DM/V600BTEPEQ Media board **must** be plugged into a x4 or higher slot with the P10 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 DM/V600BTEPEQ Media board **can** be plugged into a x1 slot but the P10 jumper must be in position pins 2-3 (power budgeting adhered to).

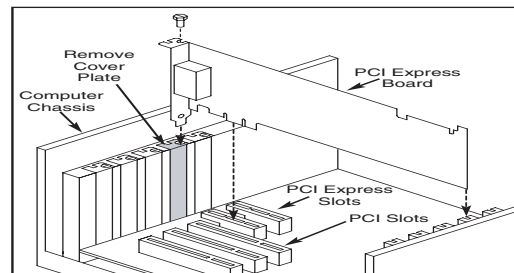
**WARNING! Installing the DM/V600BTEPEQ Media board in a x1 slot with the P10 jumper in position 1-2 will void the warranty of the DM/V600BTEPEQ Media board.**

If the DM/V600BTEPEQ Media board 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 DM/V600BTEPEQ Media 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**

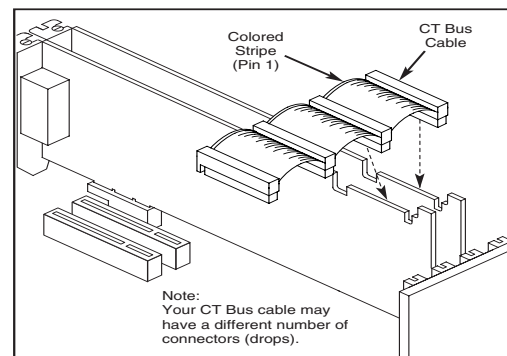


**telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the system with the cover removed.**

**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 DM/V600BTEPEQ Media 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 Step 3 through Step 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 DM/V600BTEPEQ Media board supports a single T1 or E1 digital network interface. Use an appropriate cable to connect each RJ-48C jack on the bracket to your CSU or other network termination equipment.

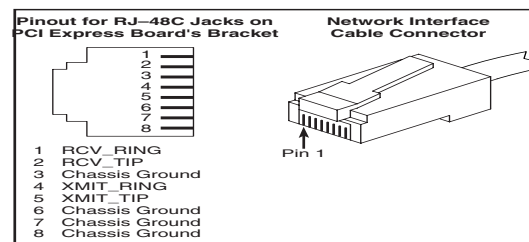
The following figure illustrates the pinout of the RJ-48C jack.

## 7. After Installing the Board

The DM/V600BTEPEQ Media board requires the use of a Dialogic® System Software version that specifically supports it.

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.

If you are installing the DM/V600BTEPEQ Media board in a system that already has the Dialogic® System Software installed, you should verify that your installed software version supports the board. If not, you will need to obtain and install a Service Update that does support the DM/V600BTEPEQ



Media board before configuring the system for the newly installed board(s).

Please refer to the Release Update document for your release version (on the Dialogic Telecom Support Resources web page) for up-to-date information about support for PCI Express boards and any known issues relating to their use.

For technical specifications and product information go to: <http://www.dialogic.com/products.htm>.

## 8. Removing the Board

Removal of the DM/V600BTEPEQ Media 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 in static-protective packaging.

## 9. Warranty and Return Information Warranty Period

For specific warranty information for this board, refer to the Warranty section of the Products page, located at this URL: <http://www.dialogic.com/warranties/>.

### 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/Dialogic Pro>

### 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>.

## 10. Sales Assistance

If you have a sales question, please contact your local Sales Representative or the Regional Sales Office for your area. Address, telephone and fax

numbers, are available at the Dialogic website located at: <http://www.dialogic.com/contact.htm>.

To purchase Dialogic® products, please refer to the following website to locate the appropriate supplier: <http://www.dialogic.com/purchase.htm>.

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