Dialogic®

Dialogic® D/41JCT-LS-EW and VFX/41JCT-LS-EW

Installation Guide

1. Product Description

The Dialogic® D/41JCT-LS-EW and VFX/41JCT-LS-EW boards are combined media analog boards with H.100 connectivity and four ports of voice, fax, and speech in a full-length PCI Express form factor. The D/41JCT-LS-EW board supports basic fax, while the VFX/41JCT-LS-EW board supports enhanced fax.

The D/41JCT-LS-EW and VFX/41JCT-LS-EW boards include the following components:

J1-J4 jacks: Four RJ-11 jacks to connect to PBX or telephone network (Central Office) lines.

SW30: Rotary switch used when setting board ID.

SW4: Slide switch used to set hook state at startup.

CT Bus connector: H.100 telephony bus connector.

JP2 jumper: CT Bus termination jumper.

JP1 jumper: Not used.

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

Additional Information

Additional information about the D/41JCT-LS-EW and VFX/41JCT-LS-EW boards 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/41JCT-LS-EW and VFX/41JCT-LS-EW are 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/41JCT-LS-EW and VFX/41JCT-LS-EW

Part number: 64-0177-02

Physical Layout
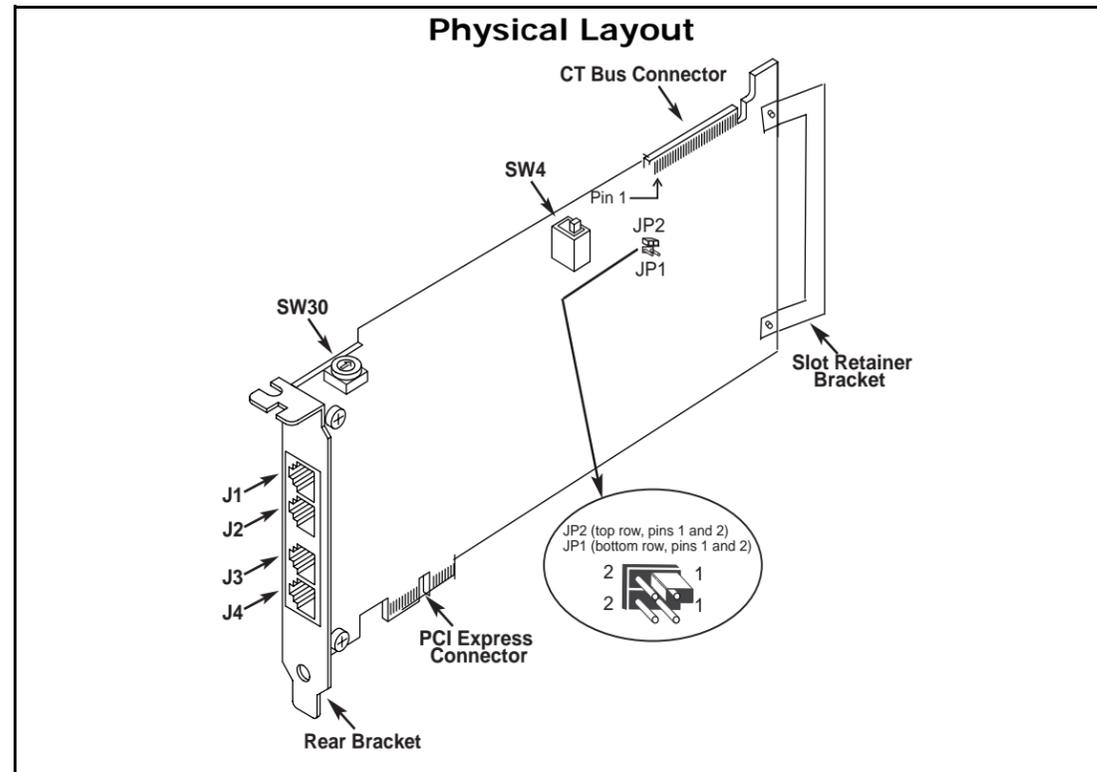
board contains safety warnings and national requirements for proper operation of telecommunications equipment.

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 D/41JCT-LS-EW and VFX/41JCT-LS-EW boards use Plug and Play technology to simplify installation. No user configuration is required for IRQ or memory address.

The D/41JCT-LS-EW and VFX/41JCT-LS-EW boards have the following manually configurable options:

- Board ID
- Initial hook state
- CT Bus termination

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 SW30 controls the generation of the instance numbers.

Windows Systems: In a Windows system, leaving SW30 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 SW30 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 (DCM) 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 SW30 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 Initial Hook State

The position of slide switch SW4 determines how the board responds to an incoming call when the chassis power is on but the board is not initialized. Set the SW4 slide switch as follows:

- SW4 = off (default): Callers hear ringing (on-hook).

- SW4 = on: Callers hear a busy signal (off-hook).
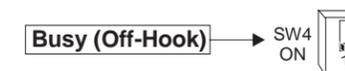
Note: If the chassis power is off, callers hear ringing (on-hook) regardless of the setting of SW4.

Setting the CT Bus Termination

The Computer Telephony bus (CT Bus) provides communication and flexible resource sharing among the boards connected to the bus. The D/41JCT-LS-EW and VFX/41JCT-LS-EW boards have a CT Bus connector that complies with the ECTF H.100 specification, and as such can be connected to the CT Bus with a CT Bus cable. To connect the boards to the CT Bus, set the CT Bus jumpers according to instructions in this section.

If you do not require media sharing or switching across the CT Bus, you may use the D/41JCT-LS-EW or VFX/41JCT-LS-EWby itself with no CT Bus cable. If you are not using a CT Bus connection, you do not need to set the CT Bus jumpers and you can proceed to Section 4, Choosing a Slot."

Note: If you are operating the board without a CT Bus connection, you must configure the board to H.100 bus mode. Otherwise, all attempts to download to the board will fail because the CT Bus clock is absent.

The following instructions apply only to the boards at each end of the CT Bus cable. Boards that are in the middle of the CT Bus cable should **not** be terminated.

Note: If these boards are operating in SCbus mode, CT Bus (H.100) termination is not required.

JP1 jumper is reserved and unused. **Do not** install a jumper link across the pins of JP1.

JP2 is a 2-pin jumper that is used to terminate the CT Bus, ensuring that proper electrical characteristics exist on the CT Bus. By factory default, this jumper is not terminated on the board.

To use the CT Bus:

- Install a jumper link on the JP2 jumper of a board to terminate the CT Bus at that board.
- Only terminate the first and last boards (the boards located at each end) on the CT Bus cable.
- **Do not** install a jumper link across the pins of JP2 on boards located between the end boards on the CT Bus cable (the jumper link must be disconnected on the JP2 jumper to disable termination).

The JP2 jumper terminates the following H.100 signals: CT_FRAME_(A&B) and CT_C8_(A&B).

4. Choosing a Slot

The D/41JCT-LS-EW and VFX/41JCT-LS-EW boards implement a PCI Express x1 lane configuration, allowing them to be used in any full-length PCI Express slot that fully meets PCI Express Card Electromechanical Specification Revision 1.0a or higher.

If the D/41JCT-LS-EW or VFX/41JCT-LS-EW is the only Dialogic® telecom board in the system, you may choose any slot for the installation.

If the D/41JCT-LS-EW or VFX/41JCT-LS-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:

- Install boards in adjacent slots whenever possible.
- If the D/41JCT-LS-EW or VFX/41JCT-LS-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 a D/41JCT-LS-EW or VFX/41JCT-LS-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.

   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.

Remove Cover Plate
PCI Express Board
Computer Chassis
PCI Express Slots
PCI Slots
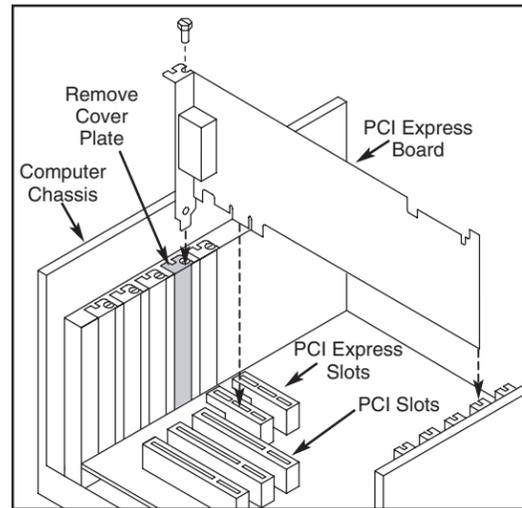
5. Reinstall the retaining screw.
6. Repeat steps 1 through 5 for any additional boards you are installing.
7. If applicable, connect the telephony boards together with a CT Bus cable of the appropriate size (not included). If possible, use a cable assembly that matches the number of boards in your system. 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.

Colored Stripe (Pin 1)
CT Bus Cable

Note:
Your CT Bus cable may have a different number of connectors (drops).
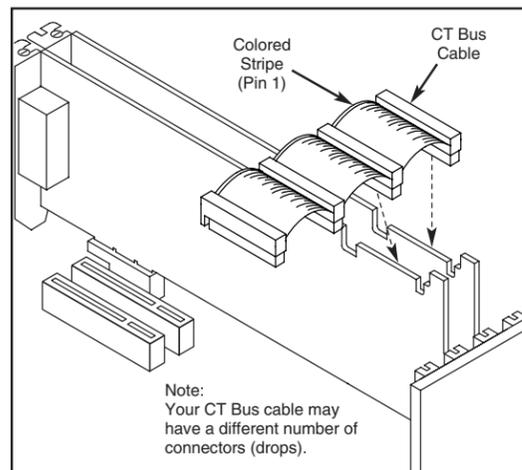
6. Connecting to External Equipment

Each RJ-11 jack on the rear bracket of the D/41JCT-LS-EW and VFX/41JCT-LS-EW boards supports a single channel. Use RJ-11 connectors and telephone cable to connect each channel to an analog PBX or standard telephone outlet.

Note: Since these boards emulate a standard telephone, a standard telephone will **not** function when directly connected to the board.

Rear bracket on board
Channel 1
Channel 2
Channel 3
Channel 4
To analog PBX or standard telephone outlet

J1-J4 on the D/41JCT-LS and VFX/41JCT-LS Board RJ-11 Connector

123456

Pin	Signal
1	Unused
2	Station - Earth Recall
3	Station - Ring
4	Station - Tip
5	Unused
6	Unused
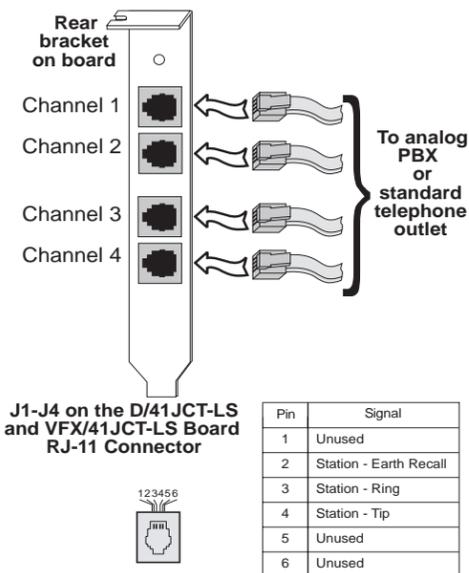
Note: Connect the Earth Recall signal to pin 2. Do not connect Tip or Ring lines to pin 2, or improper operation of the D/41JCT-LS-EW or VFX/41JCT-LS-EW will result.

7. After Installing the Board

The D/41JCT-LS-EW and VFX/41JCT-LS-EW boards require the use of an Dialogic® System Software version that specifically supports it.[1]

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.

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1. Required Dialogic® System Software: System Release 6.0 PCI for Windows Service Update 131 or higher; System Release 6.1 for Linux Service Update 232 or higher.

If you are installing the 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 D/41JCT-LS-EW and VFX/41JCT-LS-EW boards 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.

8. Removing the Board

Removal of the D/41JCT-LS-EW and VFX/41JCT-LS-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 in static-protective packaging.

9. Warranty and Return Information

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/DialogicPro

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.