D/41EPCI and VFX/PCI

- ■ **Installation**
- ■ **Warranty Period**
- ■ **RMA Procedure**
- ■ **Regulatory Notices**

Read Your Software Documentation: Be sure to read all software documentation (including Dialogic software release information) for special installation and configuration instructions or requirements.

1. Protect the Boards from Damage
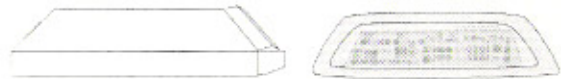
⚠ **Warning!** Computer boards are static-sensitive and can be damaged by touching or handling them. To prevent damage from static electricity, do the following:

- Wear a grounded, static-dissipative wrist strap for the entire hardware installation.
- Work at a static-safeguarded work station (see below).

Grounded Static-Dissipative Wrist Strap
Ground
Grounded Static-Dissipative Mat
Common Ground Point
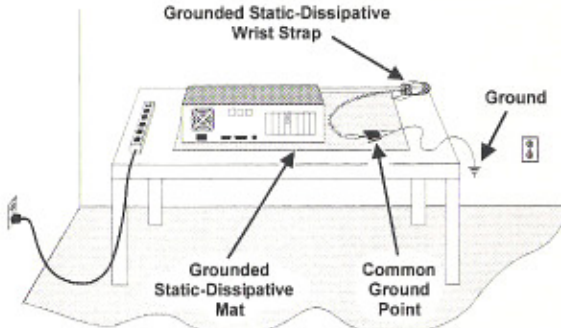
The work surface drains electrical charges from conductive materials when the materials are placed on the surface. The grounded, static-dissipative wrist strap drains static charge from the person wearing the strap. Both components ensure that static charges are drained at a rate and current level that are safe. Both must be used any time a person is handling a board or component.

2. Set the Hardware Switches (Optional)

These Dialogic boards use Plug and Play technology, including hardware auto-configuration for IRQ and memory address. These boards allow you to use the factory default hardware settings for quick installation and operation. However, Dialogic recommends that you review the following information and select options as desired.

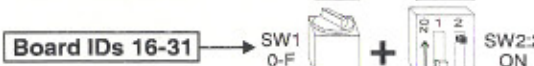### A. Set the Board Sequence (Optional)

Board Numbering: When you start Dialogic boards, each board is assigned a sequential number for identification and use by the application program. The board number is based on the board ID that is set through hardware switches on the SW2 slide switch (rotary switch SW1 and microswitch 2 on the SW2 slide switch).

Set the board ID switches to select the board sequencing method as follows:

- **Geographical Sequence (by PCI Bus and Slot Number): Board ID 0 (factory default)**
  All Dialogic PCI boards can share the factory default setting of board ID 0. Board numbers will be assigned in ascending order based on the PCI bus and slot number. **Note:** If you add a board to the system, it could change the Dialogic board numbering, depending upon the PCI bus and slot number where you install it. Also, PCI boards that use ID 0 for the geographical numbering sequence will be numbered before boards that use board IDs 1–31. The geographical method is not available for ISA bus boards.

  Board ID 0 → SW1 0 + SW2:2 OFF
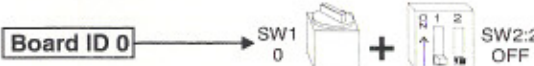
- **Programmable Sequence (by Dialogic Board ID): Board IDs 1–31**
  If you change the board ID from the factory default of 0 to any other number, the board numbering will be in ascending order based on the board ID. **Important!** The board ID must be unique (it must not conflict with the board ID of any other Dialogic ISA or PCI board). If you use this method, Dialogic recommends that you assign sequential numbers starting at 1. This method is also used for all ISA bus boards.

  Board IDs 1-15 → SW1 1-F + SW2:2 OFF

  Board IDs 16-31 → SW1 0-F + SW2:2 ON

Precedence in Mixed Systems: In systems using both methods, boards that use geographical sequence will be numbered before boards that use programmable sequence.

B. Set the Hook-Switch State for Start-Up (Optional)

Set microswitch 1 on the SW2 slide switch as follows to select how the voice board responds to an incoming call when the PC power is on but the board is not initialized.

Ringing (On-Hook) → SW2:1 OFF
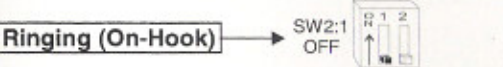
SW2:1 = Off (default): Callers hear ringing (on-hook).

Busy (Off-Hook) → SW2:1 ON

SW2:1 = On: Callers hear a busy signal (off-hook).

Note: If the PC power is off, callers hear ringing (on-hook).
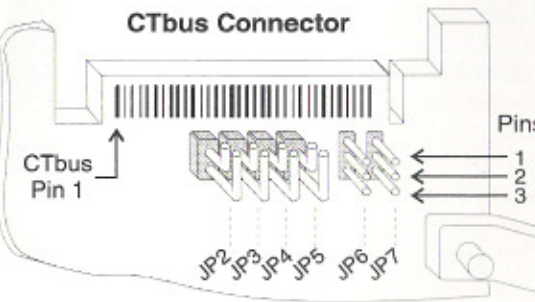
3. Set the CTbus Jumpers

The Computer Telephony bus (CTbus) provides communication and flexible resource sharing among the boards connected to the bus. These Dialogic boards have CTbus connectors that are compliant with the ECTF H.100 specification, and as such, can be connected to the CTbus with a CTbus ribbon cable.

Depending upon how the D/41EPCI and VFX/PCI boards are used by the application program, the boards can either be connected to the CTbus or can be used in "stand-alone" mode (without the CTbus).

- ■ **Stand-Alone Mode (CTbus Jumpers Ignored):** Skip the instructions in this section to set the CTbus jumpers if the Dialogic board is going to be used in "stand-alone" mode (the board will not be connected to other boards with a CTbus or SCbus ribbon cable).

- ■ **CTbus Mode (CTbus Jumpers Needed):** If the boards use the CTbus (the board will be connected to the CTbus by ribbon cable), you must set the CTbus jumpers according to the following instructions.

The CTbus Jumpers: The jumpers consist of 2 groups:
- Jumpers JP2, JP3, JP4, and JP5 terminate the CTbus.
- Jumpers JP6 and JP7 select the CTbus clock signals.

CTbus Connector

CTbus Pin 1

Pins
1
2
3

JP2 JP3 JP4 JP5 JP6 JP7

A. Select the CTbus Clock Signals

Jumpers JP6 and JP7 are 3-pin jumpers that are used to select the CTbus clock signals (either SCbus or MVIP) by installing the shunts, or jumper clips, on pin pairs 1+2 or 2+3. The shunts must be installed on the same pair of pins for both jumpers.

SCbus Clock → Pins 1+2 → JP6 JP7
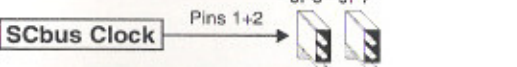
SCbus Clock (default): Install shunts on jumper JP6 pins 1+2 (SCLK) and jumper JP7 pins 1+2 (SCLKx2).
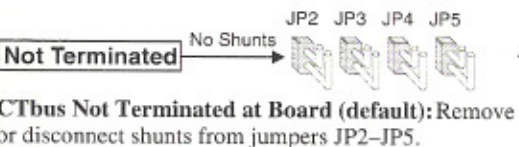
MVIP Clock → Pins 2+3 → JP6 JP7

MVIP Clock: Install shunts on jumper JP6 pins 2+3 (C2) and jumper JP7 pins 2+3 (C4).

B. Set the CTbus Termination Jumpers

Jumpers JP2, JP3, JP4, and JP5 are 2-pin jumpers that are used to terminate the CTbus, ensuring that proper electrical characteristics exist on the CTbus. (The jumpers terminate the H.100 signals CT_FRAME_A, CT_FRAME_B, CT_C8_A, and CT_C8_B, respectively.)

Note: The CTbus termination jumpers are irrelevant (ignored) when the boards are used in an SCbus configuration without a CTbus master board (i.e., using only SCbus master/slave boards). In this case, skip the remaining instructions in this section.

- The shunts must be installed on all 4 jumpers to terminate the CTbus at that board.
- Terminate the board at each end of the CTbus cable.
- Do not terminate boards located between other CTbus boards on the cable (the shunts must be disconnected on all 4 jumpers to disable termination).

Not Terminated → No Shunts → JP2 JP3 JP4 JP5

CTbus Not Terminated at Board (default): Remove or disconnect shunts from jumpers JP2–JP5.

Terminated → 4 Shunts In → JP2 JP3 JP4 JP5

CTbus Terminated at Board: Install shunts on jumpers JP2–JP5.

4. Install the Boards in the PC

⚠ **Caution!** To reduce the risk of electric shock:
- Switch off the power and remove power cords before opening the computer case.
- Do not re-attach power cords or switch on power to the computer while the computer case is removed.

Install each board in the PC chassis using adjacent PCI slots according to the following instructions.

1. Turn off all power to the system, and disconnect the system's power cords from electrical outlets.
2. Remove the PC cover.
3. Select an empty PCI expansion bus slot, and remove the slot's retaining screw and access coverplate.
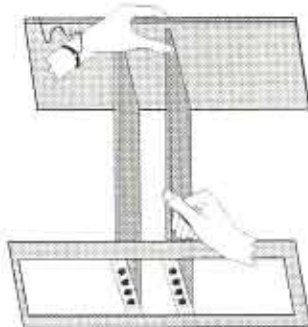
Retaining Screw
Metal Coverplate for Slot
16-Bit ISA Slots   32-Bit PCI Slots
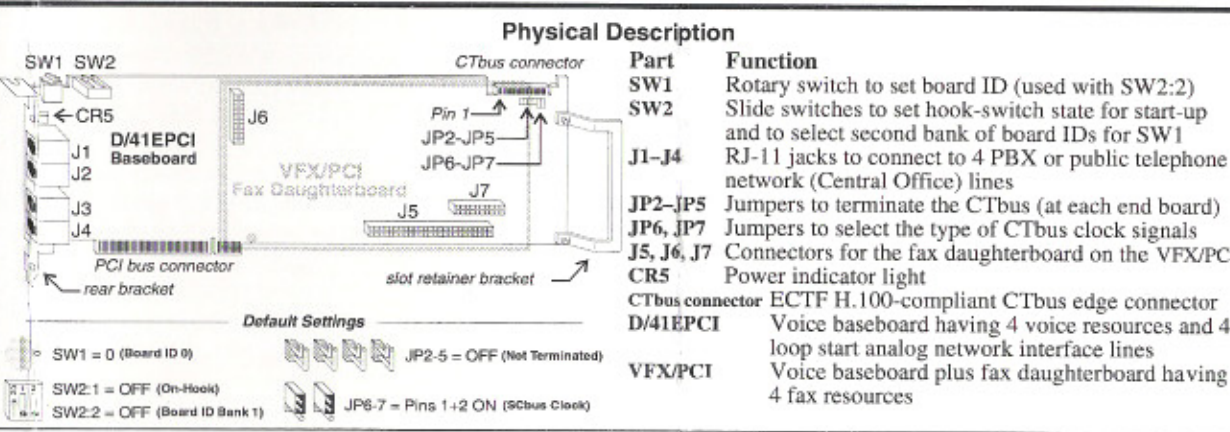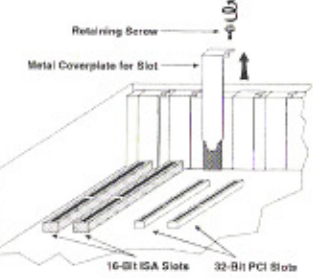
Physical Description

Part	Function
SW1	Rotary switch to set board ID (used with SW2:2)
SW2	Slide switches to set hook-switch state for start-up and to select second bank of board IDs for SW1
J1–J4	RJ-11 jacks to connect to 4 PBX or public telephone network (Central Office) lines
JP2–JP5	Jumpers to terminate the CTbus (at each end board)
JP6, JP7	Jumpers to select the type of CTbus clock signals
J5, J6, J7	Connectors for the fax daughterboard on the VFX/PCI
CR5	Power indicator light
CTbus connector	ECTF H.100-compliant CTbus edge connector
D/41EPCI	Voice baseboard having 4 voice resources and 4 loop start analog network interface lines
VFX/PCI	Voice baseboard plus fax daughterboard having 4 fax resources

SW1 SW2
CR5
J1
J2
J3
J4
D/41EPCI Baseboard
VFX/PCI Fax Daughterboard
J6
J5
J7
CTbus connector
Pin 1
JP2–JP5
JP6–JP7
PCI bus connector
rear bracket
slot retainer bracket

Default Settings
SW1 = 0 (Board ID 0)
SW2:1 = OFF (On-Hook)
SW2:2 = OFF (Board ID Bank 1)
JP2-5 = OFF (Not Terminated)
JP6-7 = Pins 1+2 ON (SCbus Clock)

Note: If the PC is designed for PCI boards only, remove the slot retainer bracket from the end of the board before installing the board. The slot retainer bracket allows you to install the board in a PC chassis that contains both ISA and PCI slots (where the PCI slots use the ISA form-factor).

4. Insert the board's edge connector into the bus slot. Apply pressure only to the top edge of the board, and gently rock the board forward and backward to seat the edge connector into the slot.

5. Install the retaining screw. (If the screw is not installed and you attach a CTbus cable, it can unseat the board from the slot.)

5. Attach the CTbus Ribbon Cable to Boards

Colored Stripe (Pin 1)
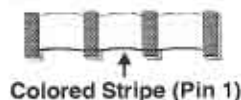
The CTbus cable (not included) connects Dialogic boards to the H.100-compliant Computer Telephony bus (CTbus). Follow the instructions in this section depending upon whether the board will be connected to the CTbus or used in "stand-alone" mode (without the CTbus).

■ **Stand-Alone Mode (CTbus Cable Not Needed):** Skip the instructions in this section if the Dialogic boards are used in "stand-alone" mode (where the application does not use time-slot routing).

■ **CTbus Mode (CTbus Cable Needed):** Attach the CTbus cable to the Dialogic boards as follows if the boards use the CTbus (the application program controls resources on the boards through time-slot routing).

1. Attach the end connector on the ribbon cable to the CTbus edge connector on the top edge of the first board. The connectors are designed to fit together one way only. If the connector does not seat fully on the board, turn the cable around and try again. Make sure that the colored stripe on the cable faces toward the rear bracket. (The stripe should be adjacent to pin 1 on the board connector.)

2. Attach the ribbon cable to the next board until all boards are connected by the cable.

Note: To connect the CTbus to an SCbus, attach a Dialogic CTbus/SCbus Adapter (not included) to one of the boards and connect the SCbus cable to this adapter. See the hardware installation instructions for the CTbus/SCbus Adapter for more information.

Colored Stripe (Pin 1)

Note: **Your CTbus cable may have a different number of connectors.**
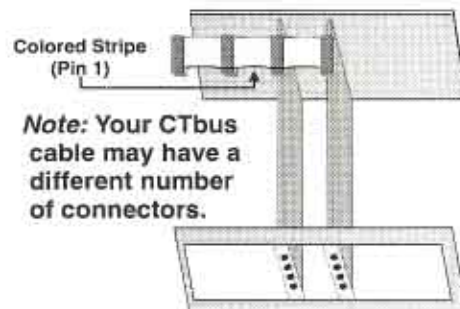
3. If the ribbon cable has extra connectors or loose cable, tuck the cable down so that it does not snag when you replace the PC cover.

4. After installing and connecting all the boards, replace the PC cover, cables, and cords.

6. Connect External Cables

- Each RJ-11 jack on the rear bracket of the voice board supports a single voice channel. Use RJ-11 connectors and phone cable to connect each voice channel jack to a PBX or the CO.

- A standard telephone will not function when directly attached to the board.
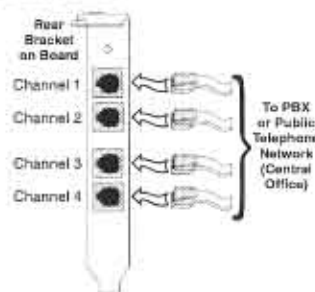
Warranty, Returns & Regulatory Information

For technical specifications and product information, see the Dialogic *WorldView* website, http://www.dialogic.com, or use the Dialogic On-Line Information Retrieval System (fax on demand) at 1-800-755-5599 or 1-973-993-1063.

Warranty Period

The Dialogic D/41EPCI and VFX/PCI boards have a 3-year warranty. See the *Hardware Limited Warranty* card for coverage details.

Return Material Authorization (RMA) Process

If you suspect you have a problem board, you can return the board to Dialogic for servicing. The following outlines the procedures that make up the Return Material Authorization (RMA) Process.

1. Check to see if the problem is due to a mistake or oversight in the installation process. Be sure to run the UDD diagnostic utility if you have not already done so.

2. Call Dialogic Technical Support at 1-973-993-1443 to confirm that it is a problem board.

3. Call Dialogic Corporation at 1-973-993-3000 x6374. Telephone lines are open from 9 a.m. to 5:30 p.m. EST. Give the board's serial number (begins with two letters and is located on a label attached to the board) and a brief description of the problem to the RMA coordinator. The RMA coordinator will give you an RMA number and an estimated return date.

4. While observing correct static-handling procedures, disconnect power, communications, and telephone cables, and remove the board from the chassis.

5. Repack the board, observing correct static-handling procedures. Place the board in an anti-static container, and then put it in a shipping carton using appropriate packing material. Use the original shipping materials if possible. Include diagnostic printouts (for example, UDD) when applicable.

6. Write the RMA number on the outside of the box you are shipping (for example, RMA #2201), and send the package to the attention of the RMA number assigned.

7. Ship the board to Dialogic at the following address. Dialogic is not responsible for loss or damage in transit.

Dialogic Corporation
1515 Route 10
Parsippany, New Jersey 07054

Regulatory Notices

United States
Federal Communications Commission (FCC)

FCC Part 15 Rules, Subpart B § 15.105

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Part 68 Rules, Subpart § 68.218

The Dialogic boards are registered with the Federal Communications Commission, which places several restrictions on their use.

1. Connection of this equipment to party lines is subject to state tariffs. Contact your state public service commission for information.

2. This equipment cannot be connected to a coin service (Central Office implemented systems).

3. This equipment complies with Part 68 of the FCC rules. On the mounting bracket (or enclosure) of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. The FCC Registration Number is EBZUSA-75385-VM-TE and the REN is 0.2B. The Facility Interface Code (FIC) is 02LS2 and the boards use USOC jacks RJ-11C. There is no Service Order Code (SOC).

   NOTE: The REN is used to determine the number of devices you may connect to your telephone line and still have assurance that all of those devices will ring properly when your number is called. In most, but not all areas, the sum of the RENs of all devices should not exceed five (5.0). To be certain of the number of devices you may connect to your line as determined by the RENs, call your local telephone company and request information on the maximum REN for your calling area.

   If requested, the FCC Registration Number and REN must be provided to the telephone company.

4. The telephone company may make changes in its technical operation or procedures. If these changes affect the use of this equipment, the telephone company is required to give you advance notice.

5. If you experience any trouble with the telephone line during or after installing this equipment, disconnect the equipment from the telephone line to determine if the equipment is causing difficulties. Once the equipment has been disconnected, by either you or the telephone company, do not reconnect it until the problem has been corrected or the Dialogic equipment repaired by Dialogic Corporation as defined below.

6. Any repairs to this equipment must be carried out by Dialogic Corporation or our designated agent. This stipulation is required by the FCC and applies during and after the warranty period. If you suspect the equipment is malfunctioning, check the appropriate part of the manual to see that all installation procedures have been followed correctly.

If checking the installation procedures does not locate the problem, contact your field service representative or our home office. The home office address is:

Dialogic Corporation
1515 Route 10
Parsippany, NJ 07054
(973) 993-3000

Canadian Department of Communications
CS-03: Equipment Attachment Limitations

CP-01, Part I, Section 10.1

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

CP-01, Part I, Section 10.2

The Load Number (LN) associated to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100.

This equipment (each Dialogic board) has a Load Number of 2.

Canadian Department of Communications ICES-003 Issue 2:

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Dialogic and the Dialogic logos are registered trademarks, and D/41EPCI, VFX/PCI, SCbus, and CTbus/SCbus Adapter, are trademarks of Dialogic Corporation. CT bus is a trademark of Enterprise Computer Telephony Forum. MVIP is a trademark of GO-MVIP Inc.