# Intel® Dialogic® D/41JCT-LS

**Quick Install Card for PCI**
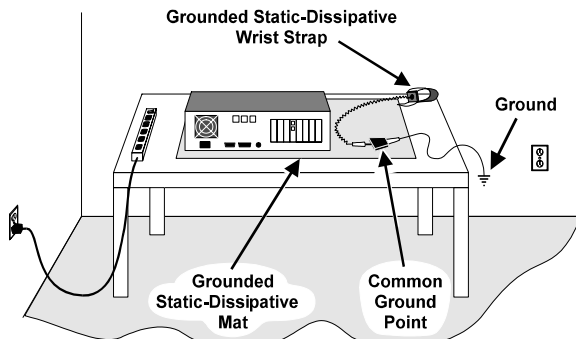
intel®

## 1. Protect Boards from Damage

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

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



The work surface drains electrical charges from conductive materials when the materials are placed on the surface. The grounded 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 Hardware Switches

The D/41JCT-LS board includes hardware auto-configuration for IRQ and memory address. This technology lets you use the factory default hardware settings for quick installation and operation. However, we recommend that you review the following information before installing your board and select any options as desired.

### A. Set the Board ID Number

When you start Intel telephony boards, each board is assigned a sequential number for identification and use by the system software. This sequential number specifies the device and channel name(s) for each board. The board number is based on the board ID that you set using the SW30 rotary switch on the board.

Use the SW30 rotary switch to specify board sequencing as follows:

- **Automatic Assignment: Board ID 0**
  Also called geographical method. All Intel PCI telephony boards can share the factory default setting of board ID 0. In this case, boards are automatically sorted by PCI bus and slot number.
  **Note:** Adding or removing a board can cause the renumbering of boards in the system. Consequently, the assignment of device names may change during the next system start-up.
- **Manual Assignment: Board IDs 1–9, A-F**
  In addition to the automatic assignment method, you can use the manual or discrete assignment method to further identify boards in your system.

  If you change the board ID from the factory default of 0 to any other number, the software will use that setting to identify the board.

  **Note:** When not set to 0, the board ID must be unique. It must not conflict with the board ID of any other Intel ISA or PCI telephony board. If you use this method, we recommend that you assign sequential numbers starting at 1. This method is also used for all ISA bus boards.

### Numbering Precedence in Mixed Systems

In systems using both automatic and manual assignment methods, or where both ISA and PCI boards exist, PCI boards take precedence and are numbered before an ISA board that uses board IDs 1-9 or A-F.

**Note:** The Intel Dialogic software can correctly register your boards for proper operation; however, due to variations among computer chassis, it is not possible for the software to determine where each board is physically placed. For more information on board ID numbering issues, see the *Configuration Guide* for your system software or refer to the following page on the Intel Telecom Support website: *http://resource.intel.com/telecom/support/tnotes/tnbyos/winnt/tn18htm*

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

Set the SW4 switch as follows to select how the board responds to an incoming call when the computer power is on but the board is not initialized.

**Ringing (On-Hook)** → SW4 OFF
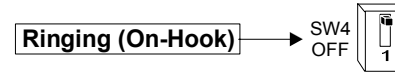
**SW4 = Off (default):** Callers hear ringing (on-hook).

**Busy (Off-Hook)** → SW4 ON
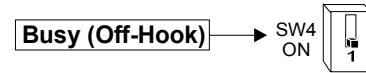
**SW4 = On:** Callers hear a busy signal (off-hook).

**Note:** If the computer power is off, callers hear ringing (on-hook) regardless of the setting of the SW4 switch.

## 3. Set CT Bus Jumpers

The Computer Telephony bus (CT Bus) provides communication and flexible resource sharing among the boards connected to the bus. The D/41JCT-LS board has 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 by 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 "Install the Board."*

**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 only apply 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 shunt 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 the shunt 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 shunt across the pins of JP2 on boards located between the end boards on the CT Bus cable (the shunt must be disconnected on the JP2 jumper to disable termination).

The JP2 jumper terminates the H.100 signals listed in the following table.

| Shunt | H.100 signal terminated |
|---|---|
| JP2, Pins 1 and 2 (used on boards at each end of CT Bus cable only) | CT_FRAME_(A&B) CT_C8_(A&B) |

## 4. Install the Board

⚠ **Warning!** To reduce the risk of electric shock:

- Switch off the power and disconnect all power cords.
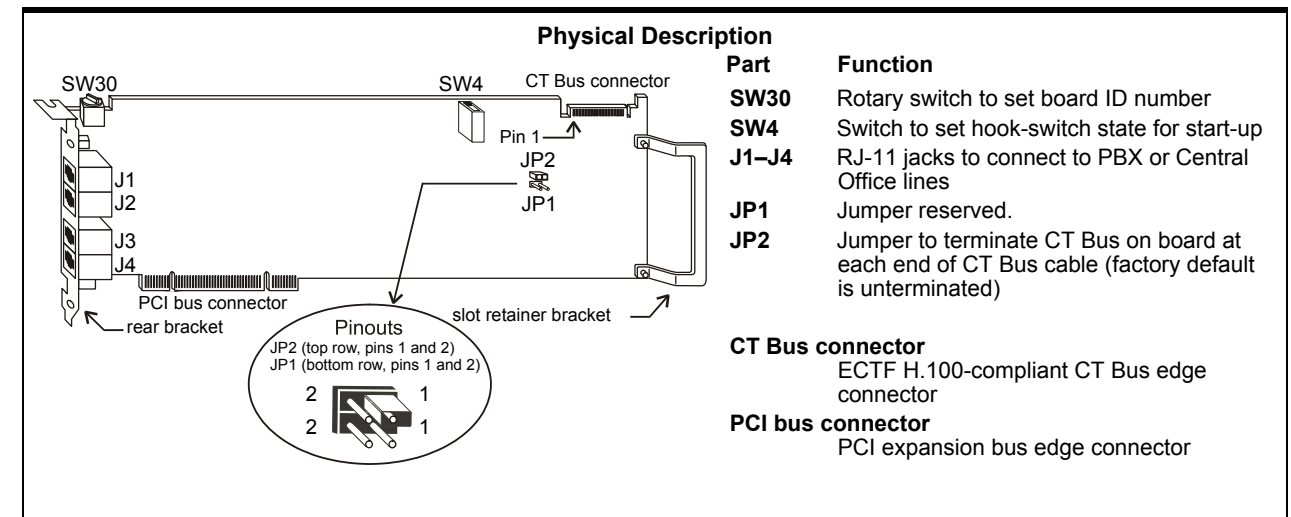- Do not re-attach power cords or switch on power to the computer while the computer cover is removed.

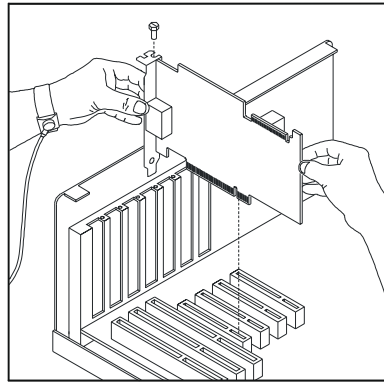Install the board in the computer chassis according to the following instructions:

1. Remove the computer cover.
2. Select an empty PCI bus slot, and remove the slot's retaining screw and access coverplate.

   **Note:** If you are not installing your board in an ISA form-factor PCI slot, remove the slot retainer bracket from the end of the board before installation.
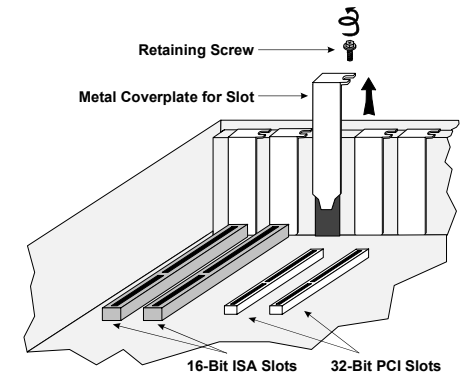


3. Insert the board's edge connector into the bus slot. Use the slot's board guides as you insert the board edge connector into the slot. Apply pressure only to the top edge of the board, and press firmly until the edge connector is securely seated in the slot.



**Physical Description**

| Part | Function |
|---|---|
| SW30 | Rotary switch to set board ID number |
| SW4 | Switch to set hook-switch state for start-up |
| J1–J4 | RJ-11 jacks to connect to PBX or Central Office lines |
| JP1 | Jumper reserved. |
| JP2 | Jumper to terminate CT Bus on board at each end of CT Bus cable (factory default is unterminated) |

**CT Bus connector**
ECTF H.100-compliant CT Bus edge connector

**PCI bus connector**
PCI expansion bus edge connector

4. Replace and tighten the retaining screw to secure the board. If the screw is not installed and you attach a CT Bus cable to the board, the board may be accidentally unseated from the slot.

5. To install an additional board, select an empty PCI slot adjacent to the location of the previous board, and repeat (the second part of) step 2 through step 4.

## 5. Attach CT Bus Cable to Board

The instructions in this section only apply if you are using CT Bus to connect boards. If you are using the board without a CT Bus connection, skip this section.



**Colored Stripe (Pin 1)**
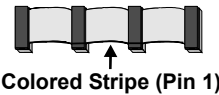
Use a CT Bus cable to connect your board to other CT Bus form-factor boards in the system.

⚠ **Caution!** To preserve the electrical integrity of the CT Bus, use a CT Bus cable with the appropriate number of connectors ("drops"). It is recommended that no more than two connectors be left unused at either end of the cable. In addition, it is preferable to distribute the installed boards in slots along the length of the CT Bus cable rather than clustered in one area.

Attach the CT Bus cable to the Intel telephony boards as follows:

1. Attach the end connector on the CT Bus cable to the CT Bus edge connector on the top edge of the first board in the sequence. 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 the rear bracket.

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

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**Colored Stripe (Pin 1)**

**Your CT Bus cable may have a different number of connectors (drops).**
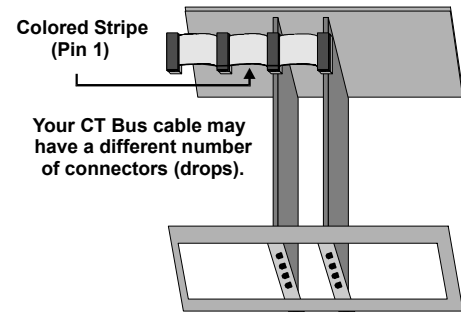
3. If the cable has extra connectors or is loose, tuck the cable down so that it does not snag when you replace the computer cover. See the **Caution** given earlier in this section.

## 6. Connect CT Bus/SCbus Adapter (optional)

If you are using only CT Bus boards, or are using the board without a CT Bus connection, skip the instructions in this section.

To connect your board to SCbus form-factor boards, use the CT Bus/SCbus adapter. You may use **only one CT Bus/SCbus adapter per system**.

1. Before installing the adapter, the Dialogic boards in your chassis must be positioned in the correct order. The board on which the adapter is installed must be inserted in the first PCI slot adjacent to an ISA slot. Locate this board.

2. Align pin 1 of the adapter with pin 1 of the edge connector on the board. Press the adapter onto the board with the SCbus cable connector facing the rear edge of the board.
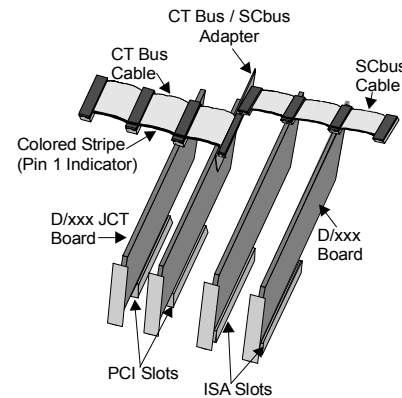


For more information, see the hardware installation instructions for the CT Bus/SCbus Adapter.

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## 7. Complete Board Installation

After you have installed the board(s) and connected the CT Bus cable (and SCbus adapter, if appropriate) replace the computer cover and re-connect power cord.

## 8. Connect External Cables

Each RJ-11 jack on the rear bracket of the voice board supports a single voice channel. Use each RJ-11 jack and phone cable to connect each channel to an analog PBX or standard telephone outlet.

Since this board emulates a standard telephone, a standard telephone will not function when directly attached to the board.
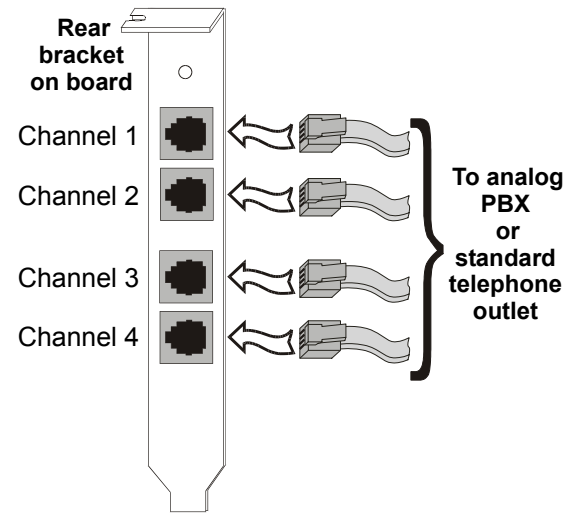


| Pin | Signal |
|-----|--------|
| 1 | Unused |
| 2 | Station - Earth Recall |
| 3 | Station - Ring |
| 4 | Station - Tip |
| 5 | Unused |
| 6 | Unused |

**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 will result.

## 9. Install Software, Configure and Test

Install the Intel Dialogic software release and configure the boards as described in the Installation Guide and Configuration Guide for your system software release.

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Your application software or Intel Dialogic software release may have special installation or configuration requirements. Be sure to read your software documentation including release note information before you install the software.

**Note:** If you are adding hardware to an existing system, you do not need to uninstall existing Intel Dialogic software.

For technical specifications and product information, see the Intel Telecom Products website at *http://www.intel.com/design/network/products/telecom*.

## Direct Return Authorization (DRA)

If you are a reseller and are located in the Americas, you may return a board for warranty repair by using the online DRA form at *http://www.intel.com/support/motherboards/draform.htm*.

For all other returns, contact your vendor or Intel Customer Support (for more information, see *http://www.intel.com/support/9089.htm*).