



# Installing the Dialogic® Brooktrout® TruFax® BRI PCI Express Board

Part Number: 931-163-02

The TruFax® BRI (Basic Rate Interface ISDN) PCI Express board (“TruFax® BRI board” or “board”) is a half-sized, single-slot PCI Express-bus compatible fax processing boards. They provide the following:

- On-board BRI connections
- Up to four V.17 fax channels per board

The TruFax® BRI PCI Express Series boards are single lane (x4 form factor) cards.

You need a fax application to use a TruFax® BRI board. Dialogic does not provide the application or a driver for this board. A driver comes with the application that you purchase.

This installation guide provides information about:

- System Requirements (including telephone service)
- Setting the Module Number
- Setting Termination Jumpers for the BRI Line
- Installing the Dialogic® Brooktrout® Board
- Recognizing PCIe Slots
- Connecting the Phone Service
- Understanding LED Signals
- Using the Dialogic® Brooktrout® Board
- Getting Help

## System Requirements

This board must be installed in an enclosure that meets the following specifications:

- Chassis Requirement: Compliant to the PCI Express Base Specification, Rev 1.0a
- A Pentium or later host processor
- A PCIe x4, x8, or x16 bus slot. See [Recognizing PCIe Slots](#) for more information.
- Temperature: 0 C - 50 C
- Humidity: 10% - 95% (non-condensing)
- Power Requirement (Maximum Load): :

Board	+ 3.3 V	+ 12 V	Total Power
Single Channel	1.1 A	0.A	3.63 W
Dual Channel	1.2 A	0.A	3.96 W

The following is also required:

- Telephone service: BRI interface

Options are provided for one or two BRI (2B+D) S/T interfaces with B and D-channel HDLC support. Compliant with I.430 ITU S/T ISDN support in Terminal Equipment (TE) and network terminator (NT) mode.

## Setting the Module Number

Set each board to a unique module number to easily identify the resources associated with a specific board in a multi-board system.

Use the SW-1 rotary switch (Figure 1) to set a unique module number for each Dialogic® Brooktrout® board. See Figure 5 for the switch location. Select a number from 2 - F on the rotary switch. Settings 0 and 1 are reserved and cannot be used.

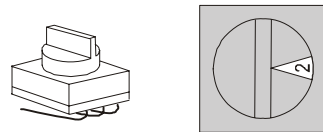
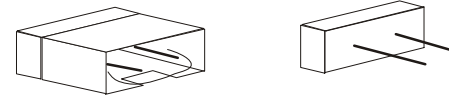


Figure 1. Rotary Switch (SW-1)

## Setting Termination Jumpers for the BRI Line

Before installing your board, set termination for the BRI line if necessary. See Figure 5 for the location of the termination switches.

Set jumpers as follows (See Figure 2 for details):



Jumper is in place (ISDN BRI line is terminated)      Jumper is removed (ISDN BRI line is not terminated)

Figure 2. Termination Jumpers

- When the jumpers are removed from both switches for the appropriate port, there is no termination.
- When jumpers are present, the lines are terminated with 100 ohms (this is how the boards are shipped).
- Dialogic does not support any configuration except the two illustrated in Figure 2.

## Installing the Dialogic® Brooktrout® Board

To install your board:

- Turn off your PC and remove the cover.

Caution: A small amount of static electricity can destroy the sensitive components on your board. To prevent static damage, always connect yourself to ground using a ground strap before touching a circuit board. Handle boards only by the edges or metal mounting brackets and transport boards in an anti-static bag.

- If the system has a PCI Express expansion hold-down bar, remove it.
- Locate a free PCI Express bus slot that is x4 or larger.
- Carefully align the board with the slot and firmly seat the board into the slot.
- Tighten the mounting bracket screw to secure the board to the chassis.

Warning: When installing the board, be sure that the mounting bracket is securely fastened to the chassis and the chassis is plugged into a grounded three prong plug. Improper chassis or bracket grounding can result in harmful or fatal electrical shock as well as component damage.

- Replace the cover.
- Turn on your computer.

**Note:** Dialogic® Brooktrout® boards should not be present in the computer during the installation of any operating system. The operating system might misinterpret the board as being some other device, with unpredictable consequences.

## Recognizing PCIe Slots

The PCI Express connectors in the computer chassis usually appear as white slots. The TruFax® BRI board has a PCIe board edge connector. It can be inserted into any of the PCIe slots shown in Figure 3.

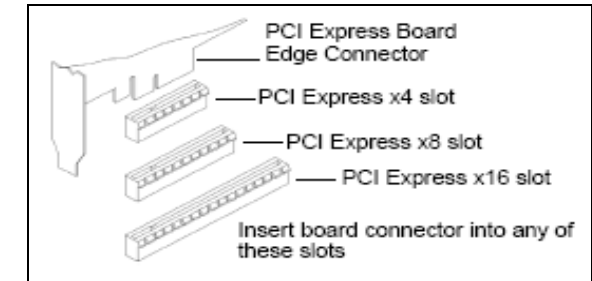


Figure 3. PCIe Slots

## Connecting the Phone Service

You must install the appropriate telephone service and hookups at your site to connect to telephone service. The following table shows the channel/port relationship:

Channel Number	RJ-45 Port	Type of Service
0	A	BRI S/T
1	A	BRI S/T
2	B	BRI S/T
3	B	BRI S/T

Use the cable supplied with the board. Use these instructions to connect your board to BRI service:

- Plug one end of the cable into the telephone connector on the board.  
Connect to Port A for channels 0 and 1 or to Port B for channels 2 and 3 (see Figure 5 to locate ports).
- Plug the other end into the wall connector for your BRI service.

**Note:** Port B is not present on the TruFax® BRI single port version.

Before using your BRI service, you must configure certain parameters. See your LAN Fax documentation for details.

See Figure 4 for pinout details for your board:

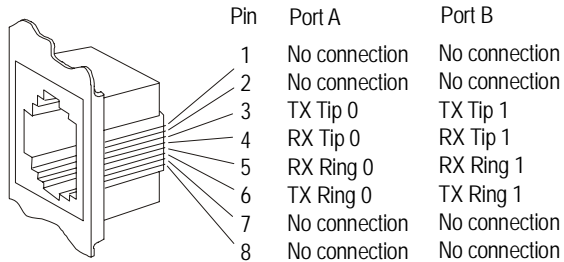


Figure 4. Connector Pinouts

## Understanding LED Signals

### LEDs on the Mounting Bracket

The LEDs on the mounting bracket provide information about the status of the different systems on the board. To identify and locate these LEDs, see Figure 5.

The following tables describe how the end panel LEDs provide information:

#### BRI Status LED

BRI LED	Meaning
Red	Layer 1 is down. This can occur if the cable is wired incorrectly or the CPE or CO emulation is wrong.
Yellow	Layer 1 is up, but layer 2 is down. This state can occur if the protocol has not been initialized, the D channel has not been enabled, or the clocks have not synchronized.
Green	Layer 1 is up, and layer 2 is up.
Red/green	The board is currently receiving CRC errors.

#### Channel LEDs

Channel LEDs	Meaning
Off	Channel is idle.
Flashing green	Channel is being set up or is connected.

### Board Status LED

Board Status LED	Meaning
Flashing yellow	Board is powered up and is passing self test checks.
Steady red	Board is powered up, and the self test has failed.
Flashing yellow and green	Board is powered up and is downloading firmware.
Flashing green	Firmware is downloaded, and the board is in service.
Solid green or Flickering red	Invalid states. Please reinstall your board and call Tech Support, if the condition persists.
Off	Board is not powered up.

## LEDs on the Dialogic® Brooktrout® Board

The LEDs on the board provide information about the status of the board. To locate these LEDs, see Figure 5.

The following table describes how the LEDs on the board provide information:

LED	Meaning
DSP	Displays the status for the DSP. After the firmware is loaded and during normal execution, this LED blinks about every second. If the LED is not blinking, the DSP firmware is not running.
Power	Steady green indicates good board power.

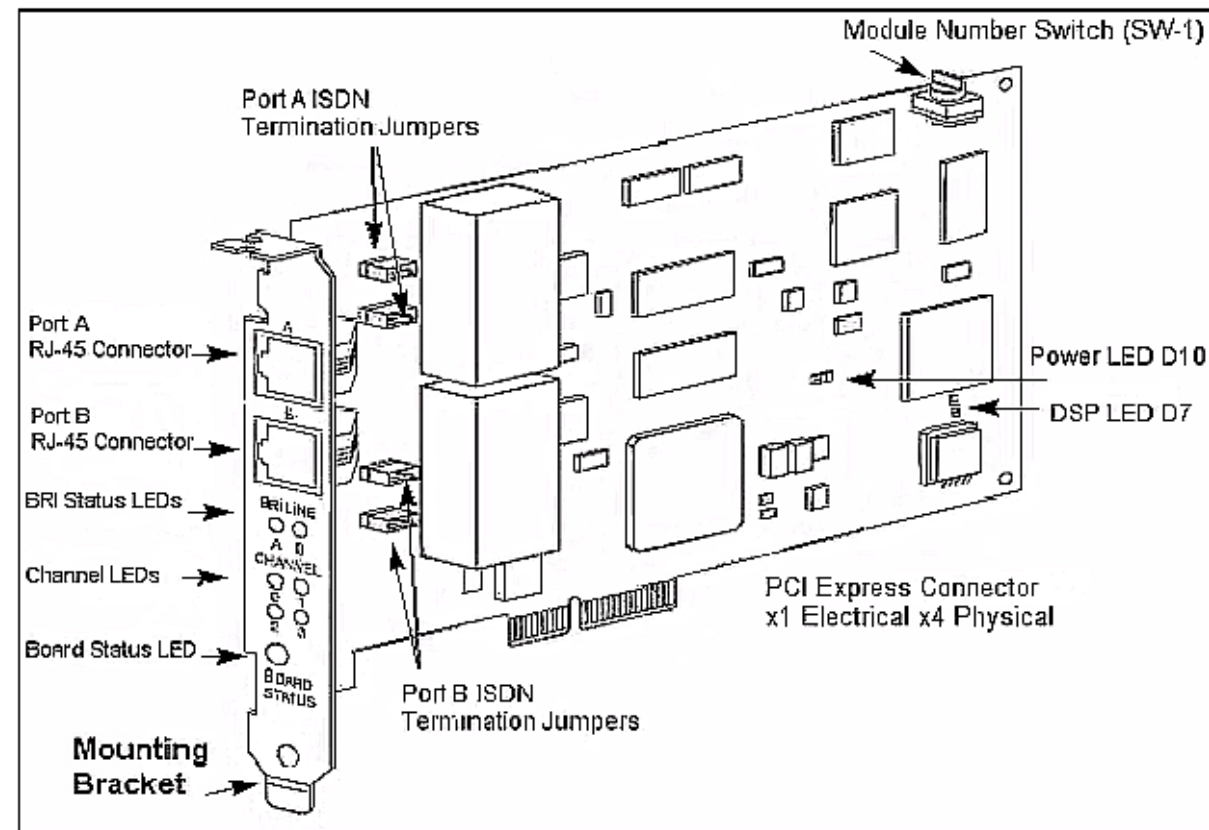


Figure 5. Dialogic® Brooktrout® TruFax® BRI PCI ExpressSeries Board

## Using the Dialogic® Brooktrout® Board

Once you have installed the TruFax® BRI board, install and configure your fax software application according to instructions included with the software. After you have set up your software to support the board, your board provides support for your specific application.

### Getting Help

Dialogic provides technical support for customers who have purchased hardware or software products from Dialogic. If you purchased products from a reseller, please contact that reseller for technical support. This equipment contains no user serviceable parts and is not intended for repair by unauthorized personnel.

If you experience problems with the board, please use the web site below for repair or warranty information. If the equipment is causing harm to the telephone network, the telephone company might request that you disconnect the equipment until the problem is resolved:

[www.dialogic.com/support/](http://www.dialogic.com/support/)

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