Installing the Dialogic® Brooktrout® TR1034 BRI PCI Fax Board

Part Number: 931-106-05

The Dialogic® Brooktrout® TR1034 BRI (Basic Rate Interface ISDN) PCI boards (“TR1034” or “TR1034 fax board(s)”)are half-sized, single-slot PCI-bus compatible fax boards. They provide the following:

- On-board BRI connections
- V.34 (33.6 Kbps) fax transmission speeds
- Up to four fax and voice channels per board

The TR1034 BRI PCI Series boards can be used in either 3.3V or 5V bus (signaling) slots.

You need a fax or voice application to use a TR1034 BRI Fax 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

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

- A Pentium or later host processor
- A PCI bus slot that runs at least 33 MHz and is 32 or 64 bits wide. See ***Recognizing PCI Slots*** for more information.
- Temperature: 0 C - 50 C
- Humidity: 10% - 95% (non-condensing)
- Power Requirements:

Board	+5 V	+3.3 V	+12 V	-12 V	Total Power
Single channel	0.8A	0A	0A	0A	4.0 W
Dual channel	0.9A	0A	0A	0A	4.5 W

The following is also required:

- Telephone service: BRI interface

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® fax 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.

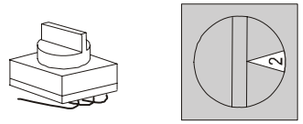
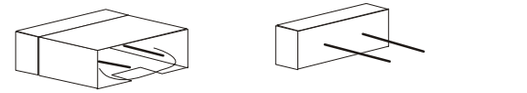


Figure 1. Rotary Switch (SW-1)

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 Fax Board

To install your board:

1. 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.

2. If the system has a PCI expansion hold-down bar, remove it.
3. Locate a free PCI bus slot and remove the slot cover.
4. Carefully align the board with the slot and firmly seat the board into the slot.
5. 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.

6. Replace the cover.
7. Turn on your computer.

Note: Dialogic® Brooktrout® fax 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 PCI Slots

The PCI connectors in the computer chassis usually appear as white slots. The TR1034 BRI Fax Board has a PCI board edge connector. It can be inserted into any of the PCI slots shown in Figure 3.

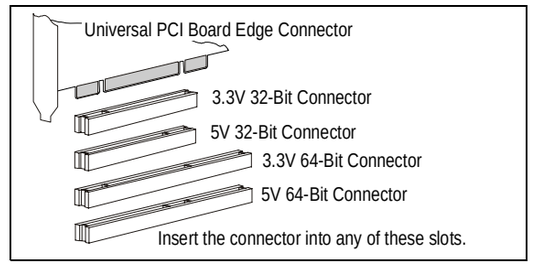


Figure 3. PCI Slots

Connecting the Phone Service

The appropriate telephone service and hookups must be installed at your site in order 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. Do the following to connect your board to BRI service:

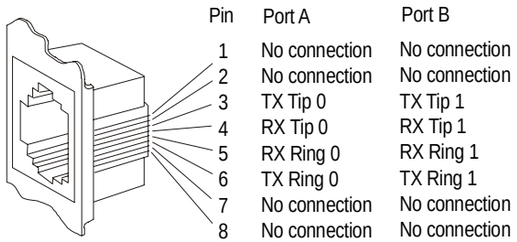
1. Plug one end of the cable into the telephone connector on the board.

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

Note: Port B is not present on the TR1034 BRI single port version.

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

See Figure 4 for pinout details for your board:



Pin	Port A	Port B
1	No connection	No connection
2	No connection	No connection
3	TX Tip 0	TX Tip 1
4	RX Tip 0	RX Tip 1
5	RX Ring 0	RX Ring 1
6	TX Ring 0	TX Ring 1
7	No connection	No connection
8	No connection	No connection

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	Board is hung, needs to be reset.
Flickering red	Board has failed, needs to be reset.
Off	Board has no power, or board is hung and needs to be reset.

LEDs on the Dialogic® Brooktrout® Fax 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.

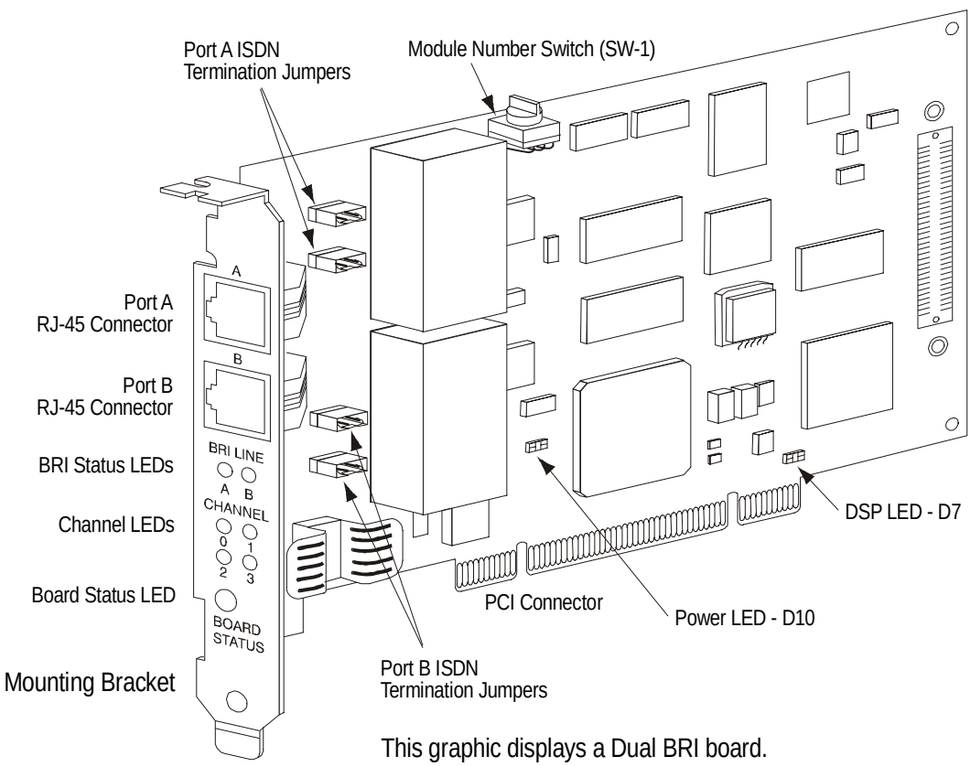


Figure 5. Dialogic® Brooktrout® TR1034 BRI PCI Series Fax Board

Using the Dialogic® Brooktrout® TR1034 BRI Fax Board

Once you have installed the TR1034 BRI Fax Board, install and configure your voice or fax software application according to instructions included with the software.

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 TR1034 BRI Fax Board, for repair or warranty information, please use the web site below. 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