Dialogic®

Installing the Dialogic® Brooktrout® TR1034 Analog PCI Express Board

Part Number: 931-159-05

The Dialogic® Brooktrout® TR1034 Analog PCI Express boards ("TR1034" or "TR1034 Board(s)") are full-sized, single-slot, PCI Express serial I/O bus-compatible fax boards. They provide the following:

- On-board analog loop start connections
- V.34 (33.6 Kbps) fax transmission speeds
- Up to eight fax and voice channels per board

The TR1034 Analog PCI Express Series boards use 3.3V and 12.0V power from the serial bus and can be inserted into the x4, x8, or x16 bus (signaling) slot.

You need a voice or fax application to use a TR1034 Analog board. Dialogic does not provide the application or a driver for this board. Normally, you purchase the application and driver from a third party vendor.

This installation guide provides information about:

Safety Compliance Statements

- Install this board only in UL Listed equipment that has instructions stating that the user may install and remove accessory boards.
- Disconnect any TNV circuit connectors (telephone line cords) from this board before removing the cover of the equipment.

System Requirements

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

- A Pentium or later host processor
- A PCI Express serial I/O bus slot that is at least x4 wide. See ***Recognizing PCI Express Slots*** for more information.
- Temperature: 0 C - 50 C
- Humidity: 10% - 90% (non-condensing)
- Power Requirements:

Board	+3.3V	+3.3 Aux	+12V	Total Power
2 chan	1.4A	0.050A	0.025A	5.1W
4 chan	1.45A	0.050A	0.050A	5.5W
8 chan	1.5A	0.050A	0.10A	6.3W

The following is also required:

- Telephone service: analog loop start 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 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.

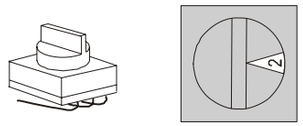

Figure 1. Rotary Switch (SW-1)

Installing the TR1034 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. Locate a free PCI Express bus slot (see Figure 2).
3. Carefully align the board with the slot and firmly seat the board into the slot.
4. 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.

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

Note: 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 Express Slots

The PCI Express slots in the computer chassis appear as black slots. The TR1034 Analog board has a PCI Express board edge connector. It can be inserted into any one of the PCI Express slots shown in Figure 2.

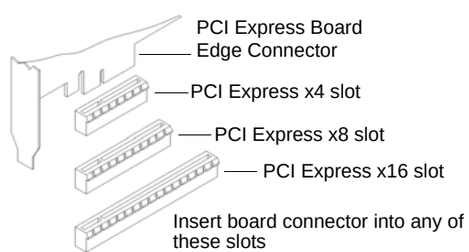

Figure 2. PCI Express Serial Bus Slots

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/connector relationship:

Channel Number	RJ-45 Connector	Type of Service
0	A	Analog Loop Start
1	A	Analog Loop Start
2	A	Analog Loop Start
3	A	Analog Loop Start
4	B	Analog Loop Start
5	B	Analog Loop Start
6	B	Analog Loop Start
7	B	Analog Loop Start

Use the cable supplied with the board. Use the following instructions to connect your board to Analog Loop Start service:

1. Plug one end of the cable into the RJ-45 telephone connector on the board.

   Connect to Connector A for channels 0-3 or to Connector B for channels 4-7 (see Figure 4 to locate connectors).
2. Plug the other end into the wall connector for your telephone service.

See Figure 3 for pinout details for your board:

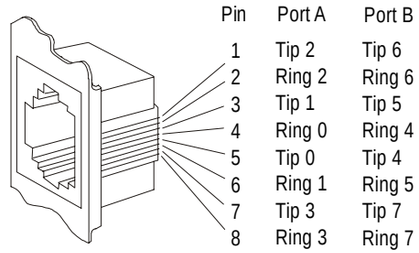

Figure 3. Analog Connector Pinouts

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 4.

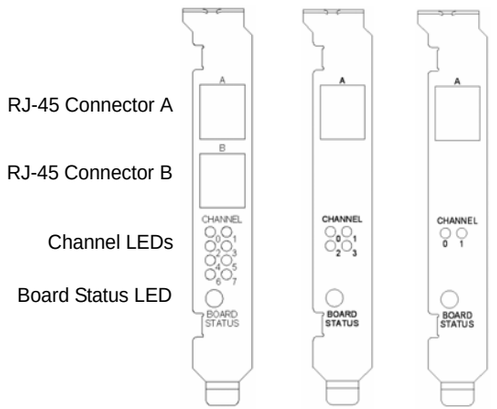

Figure 4. End Panel LEDs

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

Board Status LED

Board Status LED	Meaning
Flashing yellow (1.5 second rate)	Board is powered up and is passing self-test checks.
Steady red	Board is powered up, but the self-test has failed.
Flashing yellow and green	Board is powered up and is downloading firmware.
Flashing green (1 second rate)	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.

Channel LEDs

Channel LEDs	Meaning
Off	Channel is on hook.
Flashing at 0.5 second rate	Channel is off hook.
Flashing at Ring Cadence*	Incoming ring signal.

* Ring Cadence varies country by country.

LEDs on the 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
DSP0	Displays the status for DSP0 that supports the four ports on the A connector (RJ-45). After the firmware is loaded and during normal execution, this LED blinks about every second. If the LED is not blinking, the DSP0 firmware is not running.
DSP1*	Displays the status for DSP1 that supports the four ports on the B connector (RJ-45). After the firmware is loaded and during normal execution, this LED blinks about every second. If the LED is not blinking, the DSP1 firmware is not running.
Power	Steady green indicates good board power.

* DSP1 and its associated LED are only loaded on the 8-channel version of the board.

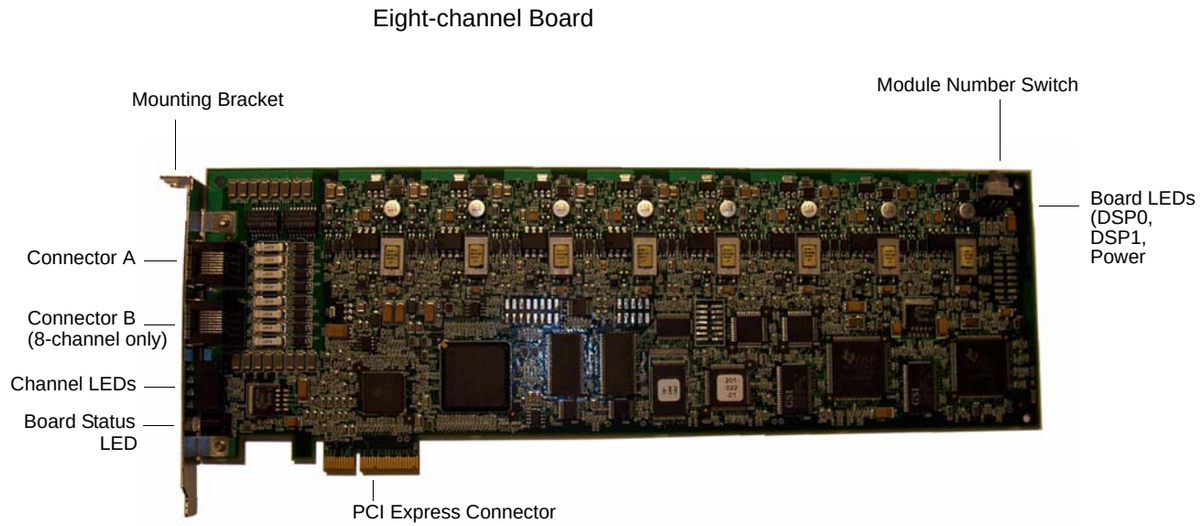

Figure 5. Dialogic® Brooktrout® TR1034 Analog PCI Express Series Board

Using the TR1034 Analog Board

Once you have installed the TR1034 Analog board, install and configure your fax or voice 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 Analog 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/

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