



Installing the TR1034 Analog PCI Board

Part Number: 934-020-82

The TR1034™ Analog PCI boards are full-sized, single-slot, PCI-bus compatible fax and voice processing boards. They provide the following:

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

The TR1034 Analog 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 Analog board. Brooktrout 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 on:

- ◆ System Requirements
- ◆ Setting the Module Number
- ◆ Installing the Board
- ◆ Recognizing PCI Slots
- ◆ Connecting the Phone Service
- ◆ Understanding LED Signals
- ◆ Using the TR1034 Analog Board
- ◆ Getting Help

For detailed information about installing and configuring your board, see the TRxStream Analog and BRI Boards Hardware Manual on the support website:

www.brooktrout.com/support

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 | +5V | +3.3 V | +12 V | -12 V | Total Power |
|--------|-------|--------|-------|-------|-------------|
| 2 chan | 0.95A | 0A | 0A | 0A | 4.75 W |
| 4 chan | 1.0A | 0A | 0A | 0A | 5.0 W |
| 8 chan | 1.08A | 0A | 0A | 0A | 5.4 W |

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 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.

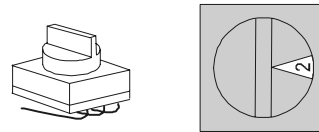


Figure 1. Rotary Switch (SW-1)

Installing the 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: 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 PCI Slots

The PCI connectors in the computer chassis usually appear as white slots, unlike ISA connectors which are usually dark brown or black. The TR1034 Analog board has a PCI board edge connector. It can be inserted into any of the PCI slots shown in Figure 2.

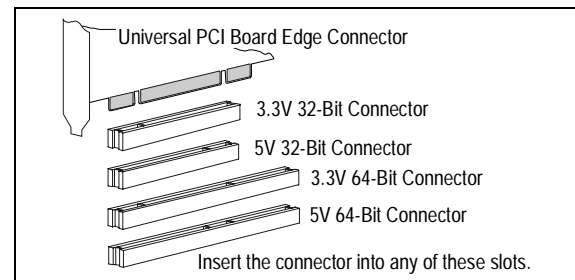


Figure 2. PCI Slots

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/connector relationship:

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

Use the cable supplied with the board. Use the following instructions to connect your board to Analog service (POTS [plain old telephone 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:

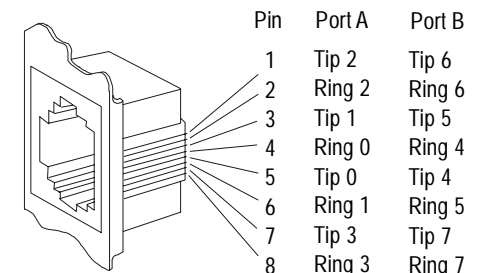


Figure 3. Analog Connector Pinouts

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.

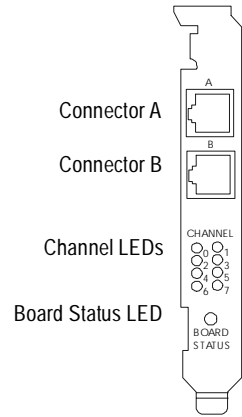


Figure 4. End Panel LEDs

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, and 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. |

LEDs on the 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 port version of the 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. After you have set up your software to support the board, your board provides support for your specific application.

Getting Help

Brooktrout provides technical support for customers who have purchased hardware or software products from Brooktrout. 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, for repair or warranty information, please use the contact information 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.

To obtain technical support, please use one of the following methods:

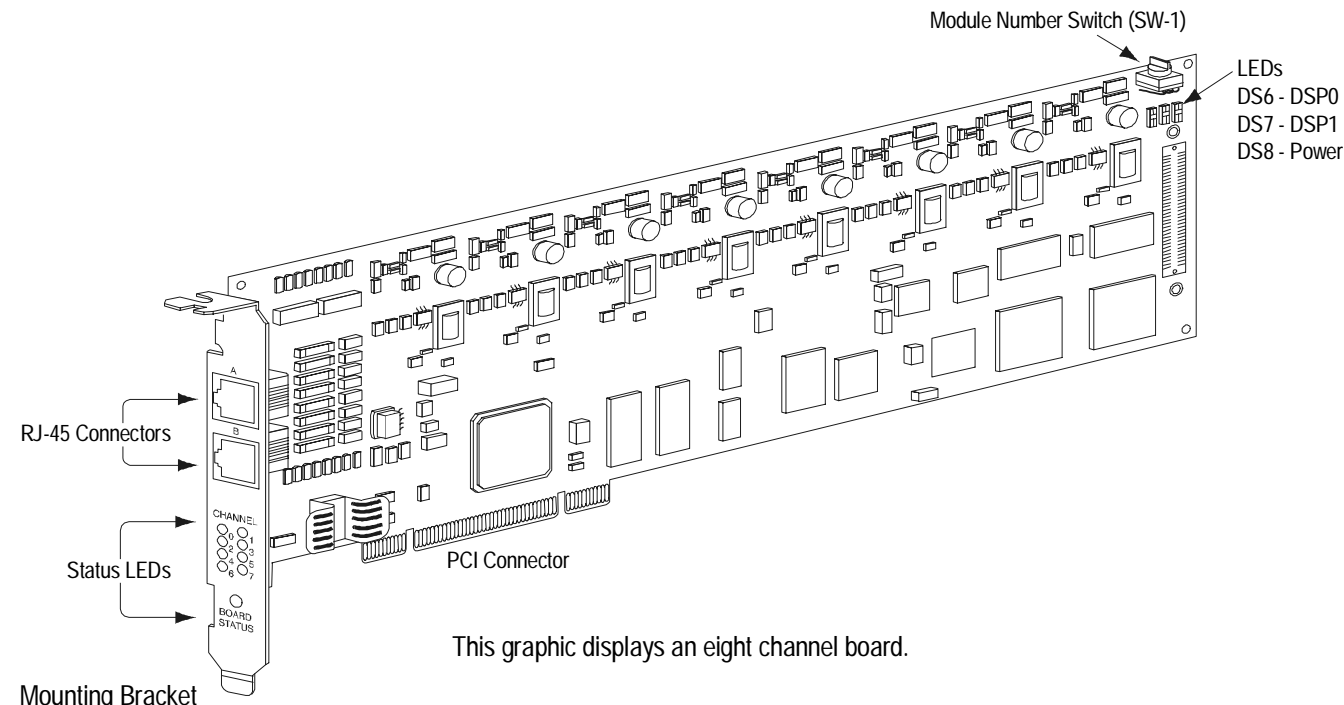
Web: www.brooktrout.com/support

Email: techsupport@brooktrout.com

Phone: North America: +1 781-433-9600

Europe and U.K.: +32 2658 0170

Japan: +81 3-3518-3954



This graphic displays an eight channel board.

Mounting Bracket

Figure 5. TR1034 Analog PCI Series Board