PROMISE®
TECHNOLOGY, INC.

FASTTRAK S150 TX2PLUS
QUICK START GUIDE

Version 1.2

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You should back up all data before installing any drive controller or storage peripheral. Promise Technology is not responsible for any loss of data resulting from the use, disuse or misuse of this or any other Promise Technology product.

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Contents

Step 1: Unpack Your FastTrak Card

When you receive the FastTrak S150 TX2plus card, the package should contain the items listed below:

- FastTrak S150 TX2plus RAID Controller Card
- Quick Start Guide
- FastTrak S150 TX2plus driver diskette
- Two internal 4-wire Serial ATA hard drive data cables
- One internal 40-pin Parallel ATA data cable
- One Y power splitter cable
- CD with Drivers, Promise Array Management (PAM) utility, PAM User Manual and FastTrak S150 TX2plus User Manual

If ANY of the contents are missing or appear to be damaged, please contact your dealer or distributor immediately.

Warning

Before installing the adapter into an existing system, backup any important or useful data. Failure to follow this accepted PC practice could result in data loss.

Warning

The FastTrak S150 TX2plus Ultra ATA/Serial ATA RAID Controller card, like other parts of your system, is subject to damage by static electricity. Be sure that you're properly grounded (Promise recommends that you wear an anti-static strap or touch a grounded object) and that you unplug your system before installing FastTrak.

Step 2: Install the FastTrak Card

The FastTrak TX2plus Serial ATA RAID card fits into any available PCI slot on your PC's motherboard (see Figure 1, below):

- 32-bit PCI slot (must be PCI 2.2 or 2.3 compliant)
- The 32-bit portion of a 64-bit PCI slot

1. Remove the cover of your system.

2. Remove the inside slot cover of an available 32-bit PCI slot on the motherboard.

3. Install the FastTrak Serial ATA RAID card into the open slot (see Figure 1 below). Secure the bracket to the system's frame.

4. Attach your system case's 2- or 4-pin LED cable to the LED connector on the FastTrak S150 TX2plus RAID card (see Figure 2, on page 6). Make sure that pin 1 on the connector is aligned with pin 1 of the cable.

5. Fasten the controller card bracket to the system case (see below).
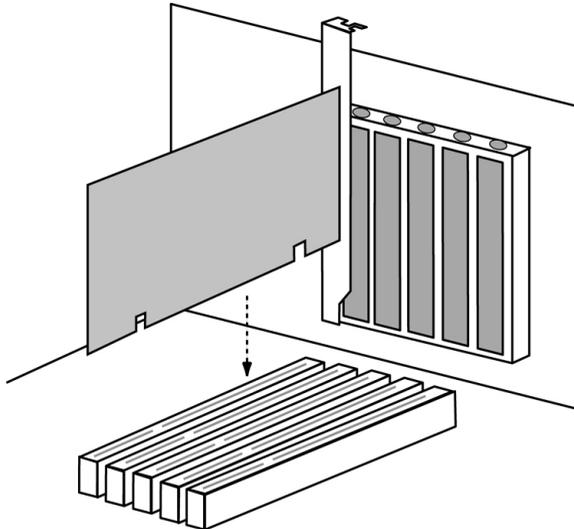

Figure 1. **Insert the FastTrak card into an open PCI slot**

Step 3: Install the Hard Drives

Important

If you wish to include your current bootable Serial ATA drive using the Windows NT 4.0, Windows 2000, or Windows XP operating system as part of a bootable Mirrored (RAID 1) array on your FastTrak Serial ATA RAID card, do NOT connect the hard drive to the FastTrak yet.

You MUST install the Windows NT4, 2000, or XP driver software first onto this drive while it is still attached to your existing hard drive controller.

The FastTrak Serial ATA RAID card supports up to two Serial ATA hard drives and up to two Ultra ATA/133 drives. For optimal performance, install two identical Serial ATA drives and two identical Ultra ATA drives of the same model and capacity. The drives' matched performance allows the array to function better as a single drive.

If you are striping (RAID 0) for performance, use up to four new drives. If mirroring (RAID 1) for protection, you can use two new drives OR use an existing drive and a new drive (the new drive must be the same size or larger than the existing drive).

1. Install the hard drives into the hard drive bays of your system, including the power cables.

Caution

Use of removable hard drive enclosures other than Promise Technology's SuperSwap is not supported and may result in performance loss or other undesired results.

2. Attach one Serial ATA data cable to each Serial ATA hard drive. Then attach the other ends of the cables to the connectors on the FastTrak TX2plus RAID card.

3. Attach a black connector of the Ultra ATA cable to each Parallel ATA hard drive.

4. Attach the blue cable connector to the Port 3 Parallel connector on the FastTrak S150 TX2plus controller card. The colored edge of the cable(s) indicates pin 1 (see Figure 2).
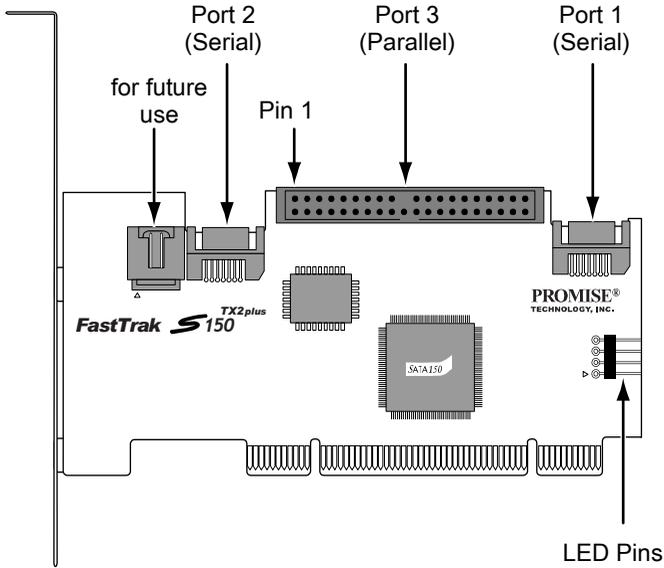
Figure 2. **FastTrak S150 TX2plus card**

5. Attach the Y-cable power splitters to the Serial ATA hard drives.

6. Use existing power cables for the Parallel ATA hard drives.

	Note
	The FastTrak S150 TX2plus RAID controller is a PCI Plug-n-Play (PnP) device. No changes are necessary in the Motherboard CMOS Setup for resources or drive types in most applications.

Step 4: Create Your Disk Array

You will now use the onboard FastBuild™ BIOS utility to create your array using the attached drives. There are three different scenarios in creating this array. You can create an array for:

• Performance

• Security, using new hard drives (recommended)

• Security, using an existing hard drive and a new one

• Security, using Quick Initialization

The first three steps are the same for all three choices. After that, follow the steps for the array you want to create.

1. Boot your system. If this is the first time you have booted with the FastTrak S150 TX2plus card and drives installed, the Promise onboard BIOS will display the following screen.

```
FastTrak S150 TXx (tm) BIOS Version 1.aa (Build xxxx)
(c) 2002-2005 Promise Technology, Inc. All Rights Reserved


No array defined . . .


Press <Ctrl-F> to ender FastBuild (tm) Utility
Or press <ESC> key to continue booting the system
```

2. Press the Ctrl-F keys to display the FastBuild Utility Main Menu.

3. Press "1" to display the Auto Setup Menu below. This is the fastest and easiest method to creating your first array.

```
FastBuild (tm) Utility 2.xx (c) 2002-2005 Promise Technology, Inc.
                    [Auto Setup Options Menu]


    Optimize Array for:                          Performance

                    [ Auto Setup Configuration ]


    Mode ........................................................ Stripe
    Spare Drive ............................................. 0
    Drives used in Array ................................. 2
    Array Disk Capacity ................................ 160048


                        [ Keys Available ]

[↑] Up [↓] Down [←, →, Space] Change Option [ESC] Exit [Ctrl-Y] Save
```

Creating a Performance Array

FastTrak S150 TX2plus enables you to create striped or mirrored arrays with 1, 2, 3, or 4 drives.

To create an array for best performance, follow these steps:

1. Press the Spacebar to choose *Performance* under the Optimize Array for section.
2. Press Ctrl-Y to Save and create the array.
3. Reboot your system.
4. Once the array has been created, you will need to FDISK and format the array as if it were a new single hard drive.
5. Once the arrayed drives have been formatted, proceed to Chapter 4 of this Manual to install your operating system and/or FastTrak driver.

Creating a Security Array with New Drives

Caution

With some models of hard drives, if the Master hard drive fails, it may cause the Slave hard drive to be unrecognized by the computer's operating system. Where a RAID 1 (Mirroring) array exists on the Master/Slave pair, this condition may cause the operating system to freeze.

Do NOT create a RAID 1 (Mirroring) array with two Parallel ATA hard drives using the Master/Slave arrangement on Channel 3 (the Parallel ATA port).

You can create a RAID 1 (Mirroring) array by combining hard drives on:

• Channels 1 and 2 (Serial ATA only)
• Channels 1 and 3 (one Serial, one Parallel)
• Channels 2 and 3 (one Serial, one Parallel)

Under the Security setting, FastTrak S150 TX2plus permits two drives to be used for a single Mirrored array or four drives to be used for a Mirrored/Striped array in Auto Setup.

Note

When creating a Security array with new drives, a feature called Gigabyte Boundary will automatically be set to ON. For a description of this feature, see page 27 of the *User Manual* on the software CD.

To create an array for data protection using new hard drives, follow these steps:

1. Press the Spacebar to choose *Security* under the Optimize Array for section.

2. Press Ctrl-Y to Save your selection.

3. The window below will appear.

> Do you want the disk image to be duplicated to another or do quick initialize or create only?
>
> Y - Create and Duplicate
>
> N - Create Only
>
> I - Create and Quick Initialize

4. Press N for the Create Only option.

5. A window will appear almost immediately confirming that your Security array has been created. Press any key to reboot the system.
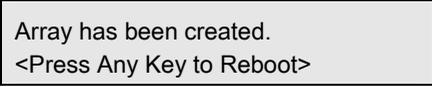
> Array has been created.
> <Press Any Key to Reboot>

6. Proceed with normal FDISK and format procedures as if you had just installed a new hard drive.

7. Once the arrayed drives have been formatted, proceed to Chapter 4 of this Manual to install your operating system and/or FastTrak driver.

Creating a Security Array with an Existing Data Drive

	Caution
	With some models of hard drives, if the Master hard drive fails, it may cause the Slave hard drive to be unrecognized by the computer's operating system. Where a RAID 1 (Mirroring) array exists on the Master/Slave pair, this condition may cause the operating system to freeze.
	Do NOT create a RAID 1 (Mirroring) array with two Parallel ATA hard drives using the Master/Slave arrangement on Channel 3 (the Parallel ATA port).
	You can create a RAID 1 (Mirroring) array by combining hard drives on:

- Channels 1 and 2 (Serial ATA only)
- Channels 1 and 3 (one Serial, one Parallel)
- Channels 2 and 3 (one Serial, one Parallel)

Under the Security setting, FastTrak S150 TX2plus permits two drives to be used for a single Mirrored array or four drives to be used for a Mirrored/Striped array in Auto Setup.

You would use this method if you wish to use a drive that already contains data and/or is the bootable system drive in your system. You will need another drive of identical or larger storage capacity.

	Warning
	If you are creating a Security array using an existing hard drive, backup any important data. Failure to do so could result in data loss.

	Important
	If you wish to include your current bootable drive using the Windows NT 4.0, Windows 2000, or Windows XP operating system as part of a bootable Mirrored (RAID 1) array on your FastTrak S150 TX2plus, do NOT connect the hard drive to the FastTrak yet.
	You MUST install the Windows NT4, 2000, or XP driver software first to this drive while it is still attached to your existing hard drive controller. See chapter 4 of this Manual.

Follow these steps:

1. Press the Spacebar to choose *Security* under the Optimize Array for section.

2. Press Ctrl-Y to Save your selection. The window below will appear.

> Do you want the disk image to be
> duplicated to another or do quick
> initialize or create only?
> Y - Create and Duplicate
> N - Create Only
> I - Create and Quick Initialize

3. Press Y for the Create and Duplicate option. The window below will appear asking you to select the Source drive to use. FastBuild will copy all data from the Source drive to the Target drive.

	Source Disk	
Channel:ID	Drive Model	Capacity (MB)
-----	-----	-----
	Target Disk	
Channel:ID	Drive Model	Capacity (MB)
-----	-----	-----
	[Please Select A Source Disk]	
Channel:ID	Drive Model	Capacity (MB)
1 :	SEAGATE S380023AS	80024
2 :	SEAGATE S380023AS	80024

[↑] Up [↓] Down [ESC] Exit [Ctrl-Y] Save

4. Use the arrow keys to choose which drive contains the existing data to be copied.
5. Press Ctrl-Y to Save selection and start duplication. The following progress screen will appear.

> Start to duplicate the image . . .
> Do you want to continue? (Yes/No)
> Y – Continue N - Abort

6. Select Y to continue. If you choose N, you will be returned to step 1.

7.   Once complete, the following screen will appear confirming that your Security array has been created. Press any key to reboot the system.
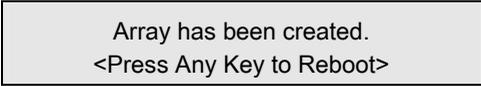
> Array has been created.
> <Press Any Key to Reboot>

8.   Once the arrayed drives have been formatted, proceed to Chapter 4 of this Manual to install your operating system and/or FastTrak driver.

Creating a Security Array with Quick Initialization

Caution

With some models of hard drives, if the Master hard drive fails, it may cause the Slave hard drive to be unrecognized by the computer's operating system. Where a RAID 1 (Mirroring) array exists on the Master/Slave pair, this condition may cause the operating system to freeze.

Do NOT create a RAID 1 (Mirroring) array with two Parallel ATA hard drives using the Master/Slave arrangement on Channel 3 (the Parallel ATA port).

You can create a RAID 1 (Mirroring) array by combining hard drives on:

• Channels 1 and 2 (Serial ATA only)
• Channels 1 and 3 (one Serial, one Parallel)
• Channels 2 and 3 (one Serial, one Parallel)

Under the Security setting, FastTrak S150 TX2plus permits two drives to be used for a single Mirrored array or four drives to be used for a Mirrored/Striped array in Auto Setup.

You would use this method if you wish to create a mirrored array and erase the early block from your existing drives.

Warning

Using the Quick Initialization option on existing drives will result in the loss of all data on those drives.

Note

When creating a Security array with new drives, a feature called Gigabyte Boundary will automatically be set to ON. For a description of this feature, see page 27 of the *User Manual* on the software CD.

To create an array for data protection using new hard drives, follow these steps:

1. Press the Spacebar to choose *Security* under the Optimize Array for section.

2. Press Ctrl-Y to Save your selection.

3. The window below will appear.

> Do you want the disk image to be
> duplicated to another or do quick
> initialize or create only?
> Y - Create and Duplicate
> N - Create Only
> I - Create and Quick Initialize

4. Press I for the Create and Quick Initialize
5. A window will appear almost immediately confirming that your Security array has been created. Press any key to reboot the system.

> Array has been created.
> <Press Any Key to Reboot>

6. Proceed with normal FDISK and format procedures as if you had just installed a new hard drive.
7. Once the arrayed drives have been formatted, proceed to Chapter 4 of this Manual to install your operating system and/or FastTrak driver.

Step 5: Install Software Drivers

Drivers for the Windows operating systems are included on the software CD and driver diskette that came with your FastTrak S150 TX2plus Controller.

Windows systems usually recognize the FastTrak Controller, prompt you for the CD or diskette and perform the driver installation automatically.

If you are installing the FastTrak Controller at the same time as your operating system or you prefer to read step-by-step directions, see Chapter 4 of the *User Manual* on the software CD.

Drivers and installation instructions for other Operating Systems are downloadable from the Promise website at www.promise.com.