3 (Cont.) Use the LSI MPT SAS BIOS Configuration Utility* to Create a RAID Virtual Drive
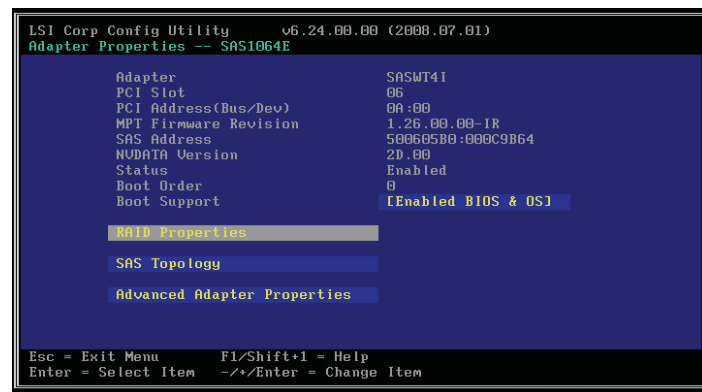
9 Select **Save changes then exit this menu**, then press <**Enter**>.
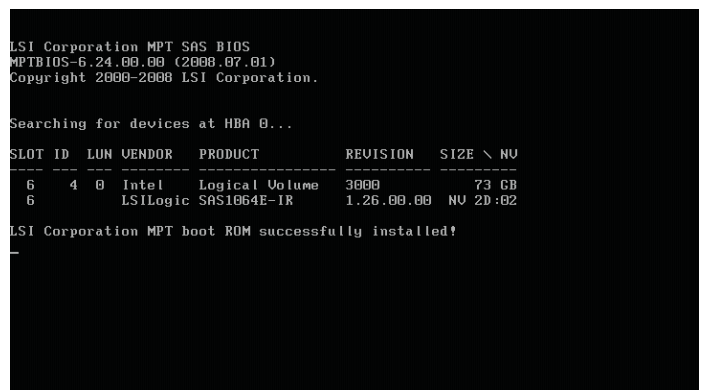
```
LSI Corp Config Utility      v6.24.00.00 (2008.07.01)




               Create and save new array?
               Cancel Exit
               Save changes then exit this menu
               Discard changes then exit this menu
               Exit the Configuration Utility and Reboot




Esc = Exit Menu       F1/Shift+1 = Help
```

10 After the RAID array is created, the following screen will appear. Press <**Esc**> to return to the main menu.

```
LSI Corp Config Utility      v6.24.00.00 (2008.07.01)
Adapter Properties -- SAS1064E

      Adapter                    SAS4T4I
      PCI Slot                   06
      PCI Address(Bus/Dev)       06:00
      MPT Firmware Revision       1.26.00.00-IR
      SAS Address                500605B0-000C9B64
      NVDATA Version             28.00
      Status                     Enabled
      Boot Order                 0
      Boot Support               [Enabled BIOS & OS]

      RAID Properties

      SAS Topology

      Advanced Adapter Properties


Esc = Exit Menu       F1/Shift+1 = Help
Enter = Select Item   -/+/Enter = Change Item
```

11 Choose **Exit the Configuration Utility and Reboot** and press <**Enter**> to reboot the system.

```
LSI Corp Config Utility      v6.24.00.00 (2008.07.01)




               Are you sure you want to exit?
               Cancel Exit
               Save changes and reboot.
               Discard changes and reboot.
               Exit the Configuration Utility and Reboot




Esc = Exit Menu       F1/Shift+1 = Help
```

12 During system reboot, verify that Logical Volume is displayed in the Product column.

```
LSI Corporation MPT SAS BIOS
MPTBIOS-6.24.00.00 (2008.07.01)
Copyright 2000-2008 LSI Corporation.

Searching for devices at HBA 0...

SLOT ID  LUN VENDOR   PRODUCT           REVISION  SIZE \ NV
-------------------------------------------------------------
  6    4  0   Intel    Logical Volume   3000        73 GB
  6           LSILogic SAS1064E-IR      1.26.00.00 NV 2B:02

LSI Corporation MPT boot ROM successfully installed†
```

Creation of a RAID volume is now complete.

---

4 Install the Server Operating System

| Microsoft Windows Server 2008* / Microsoft Windows Server 2003* / Microsoft Windows 2000* Advanced Server Installation | OR | Linux Installation |

Microsoft Windows Server 2008* / Microsoft Windows Server 2003* / Microsoft Windows 2000* Advanced Server Installation

Microsoft Windows Server 2008*

1 Start the installation by booting from the Microsoft Windows* DVD-ROM.

2 Select **Load Driver** when prompted to select a location to install Microsoft Windows*, then click **Next**.

3 Insert the disk containing the Microsoft Windows* device driver when prompted and press <**Enter**>.

4 When choosing to load the driver from a USB Flash Drive, the INF path must be provided.

• Highlight the Microsoft Windows* device driver, then click **Next**.
• Continue the Microsoft Windows* installation procedure.

Microsoft Windows Server 2003* or Microsoft Windows 2000* Advanced Server

IMPORTANT: When the blue setup screen appears, press <**F6**>.

1 Create installation medium. See the instructions at the right.

2 Boot the system with the Microsoft Windows Server 2003* or Microsoft Windows 2000* Advanced Server CD-ROM.

3 Press <**F6**> as soon as the first blue screen appears. This will bypass mass storage detection.

4 When prompted to specify a mass storage controller:

• Select **S** to specify additional storage devices.
• Insert the Microsoft Windows Server 2003* or Microsoft Windows 2000* Advanced Server installation driver disk (created in step 1 above).
• Press <**Enter**> to select the "Installation Driver" and continue with the Microsoft Windows* installation.

Install Intel® RAID Web Console 2

Install the Intel® RAID Web Console 2 package from the Resource CD. For details, see the Software Guide.

To manage a RAID array from Microsoft Windows*

Choose Start | Programs | RAID WebConsole | RAID WebConsole 2 to launch the Intel® RAID Web Console 2 application. For details, see the Software Guide.

Linux Installation

IMPORTANT: Complete the steps on the reverse side before beginning your operating system installation. If you are installing a version other than Red Hat* Enterprise Linux, see http://support.intel.com/support/motherboards/server for installation instructions.

Install Red Hat* Enterprise Linux

1 Create installation medium. See the instructions at the right.

2 Read the Red Hat* documentation to understand the disk space / size requirements for Red Hat* Enterprise Linux.

3 Boot the system with the Red Hat* Enterprise Linux CD.

4 At the boot prompt, insert the Linux installation disk that you created in Step 1 above. Type `linux dd`. Press <**Enter**>.

5 Follow the on-screen instructions to complete the installation. The RAID controller driver will be automatically detected and installed.

Install Intel® RAID Web Console 2

Install the Intel® RAID Web Console 2 package from the Resource CD. For details, see the Software Guide.

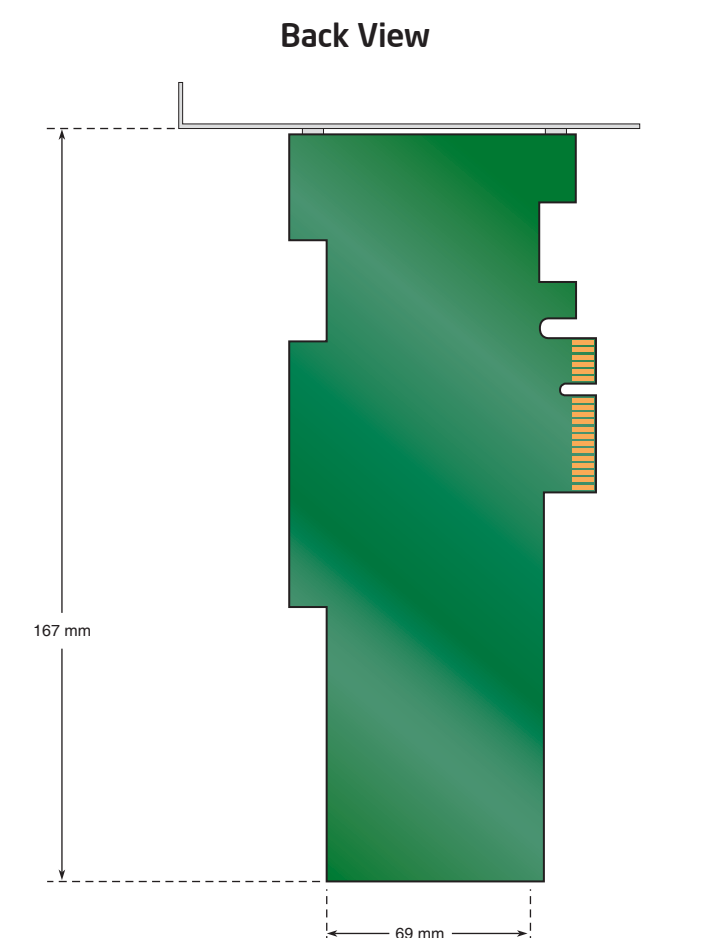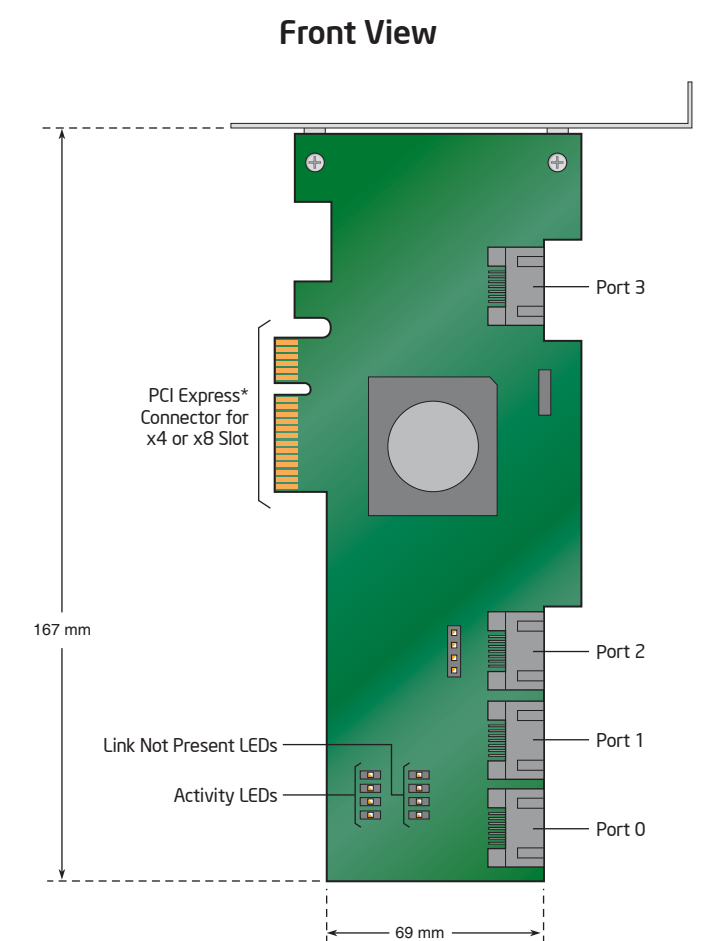### To manage a RAID array from Red Hat* Enterprise Linux

Choose Start | Programs | RAID WebConsole | RAID WebConsole 2 to launch the RAID Web Console 2 application. For details, see the Software Guide.

For other operating system installations, see the Software Guide or readme files on the Resource CD for the driver being installed.

Creating Installation Media

1 Insert the Resource CD.

2 Non-Microsoft Windows* system: Open the index.html file at the root of the Resource CD.

3 From the top menu of the Welcome screen, select "Drivers and Utilities", then select the appropriate operating system.

4 Microsoft Windows* drivers:
• Select the driver link.
• Open the driver.zip file to extract the driver files to a floppy disk or other user-specified location.

Linux or other operating system drivers:
• Select the driver link.
• Save the compressed driver files to a floppy disk or other user-specified location.

Intel® RAID Controller SASWT4I Diagram

Front View

Port 3
PCI Express* Connector for x4 or x8 Slot
167 mm
Link Not Present LEDs
Activity LEDs
Port 2
Port 1
Port 0
69 mm

Back View

167 mm
69 mm

Choosing the Right RAID Level

RAID 0 (IS)

D1 D2
Disk 1 Disk 2

Minimum Disks:	2
Read performance:	Excellent
Write performance:	Excellent
Fault tolerance:	None

Striping of data across multiple drives in an array. This provides high performance, but no data protection.

RAID 1 (IM)

D1 D2
D1 D2
Disk 1 Disk 2

Number of Disks:	2
Read performance:	Excellent
Write performance:	Good
Fault tolerance:	Excellent

Disk mirroring, meaning that all data on one disk is duplicated on another disk. This is a high availability solution, but only half the total disk space is usable.

RAID 1E (IME)

D1 D2 D3
D3 D1 D2
D4 D5 D6
D6 D4 D5
Disk 1 Disk 2 Disk 3

Minimum Disks:	3
Read performance:	Excellent
Write performance:	Good
Fault tolerance:	Excellent

Enhanced disk mirroring, meaning that all data on one disk is duplicated on other disks. This is a high availability solution, but only half the total disk space is usable.