

PCIe SATA 6G Card

Model: SI-PEX40064



User Manual
Ver. 2.01

Chipset: Marvell 88SE9215

Product Introduction

This board is a single-chip, PCI Express to four SATA Gen III 6Gb/s channels host controller that brings server-class features to the desktop. This board enables the use of the industry's newest and fastest hard drives at 6GB/s while providing backward compatibility to legacy SATA 1.5Gb/s or 3Gb/s drives. It uses the same cables and connectors as previous SATA generations to ease integration. PCI Express 2.0 doubles the bandwidth of the existing PCI Express bus for faster data throughput. It will enhance system performance for every type of computer user. Each PCI Express 2.0 lane provides up to 500MB/s of throughput. It's also backwards compatible with previous generations of PCI Express 1.0 technology. Using the onboard RAID firmware, the SATA drives attached to this controller can be easily configured as 4 individual ports with no RAID or with RAID 0, Raid 1, RAID 10, and HyperDuo.

Features

- Compliant with PCI Express Specification v2.0 and backwards compatible with PCI Express 1.x
- Compliant with Serial ATA Specification 3.0
- PCI Express x2 Interface and, compatible with PCI Express x4, x8, and x16 slots.
- Supports communication speeds of 6.0Gb/s, 3.0Gb/s, and 1.5Gb/s
- Hot Plug and Hot Swap
- Support Native Command Queue (NCQ)
- Supports Port Multiplier FIS based switching or command based switching
- Compatible with SATA 6G, 3G, and 1.5G Hard Drives

Package Contents

- 1 x SATAIII (6Gbps) 4-port PCI Express Controller Card
- 1 x User Manual
- 2 x SATA Cable
- 1 x Driver CD
- 1 x Low Profile Bracket

System Requirements

- Supports Windows® XP/Vista/7/8/Server 2003/2008 R2/8, Linux 2.6.x and above

Hardware Installation

1. Turn off the power to your computer
2. Unplug the power cord and remove your computers cover
3. Locate an empty PCI Express x4, x8, or x16 slot on the motherboard
4. To install, carefully align the cards bus connector with the selected PCIe slot on the motherboard. Push the board down firmly.
5. Attach your internal device to the SATAIII (6Gbps) PCIe Controller Card
6. Replace the slot brackets holding screw to secure the card
7. Replace the computer cover and reconnect the power cord

Driver Installation

Installing drive for supported Windows vista, Server 2008, Windows 7, 8, Server 2008 R2 OS:

1. Start Windows and insert the driver CD into the CD-ROM drive.
2. Windows will automatically detect the SATA card, Right-click **Marvell Console ATA Device** with the yellow mark in the **Other Devices** and select **Update Driver Software**.
3. Select **Browse my computer for driver software**.
4. Browse to the following folder on the driver CD according to your operating system:
 - > Windows Vista, Server 2008, Windows 7, 8 32-bit:
(CD Drive):\2012A2\marvell\92XX\Windows Vista_2008_7_8\i386
 - > Windows Vista, Server 2008, Windows 7, 8 32-bit:
(CD Drive):\2012A2\marvell\92XX\Windows Vista_2008_7_8\amd64
5. Follow the on-screen instructions to install the driver.
6. After successful installation, the device is listed in the **Device Manager** as

Marvell Unify Configuration under System Devices

Installing driver for supported Windows XP, Server 2003 OS:

1. Start Windows and insert the driver CD into the CD-ROM drive.
2. Windows will automatically detect the SATA card, elect “No, not this time” and click the Next button to continue.
3. Select “Install from a list or specific location (Advance)” and click on the Next button.

4. Browse to the following folder on the driver CD according to your operating system:

> Windows XP 32-bit and Server 2003 32-bit:

(CD Drive):\2010A2\Marvell\92XX\Windows 2003_XP\i386

> Windows XP 64-bit and Server 2003 64-bit:

(CD Drive):\2010A2\Marvell\92XX\Windows 2003_XP\amd64

5. Follow the on-screen instruction to install the driver.

6. After successful installation, the SATA controller is listed in the **Device Manager** as **Marvell 92xx SATA 6G Controller** (under SCSI and RAID controllers).

7. For this controller an additional device **Marvell Console SCSI Processor Device** is detected, select “No, not this time” and, click the Next button to continue.

8. Select “**Install from a list of specific location (Advanced)** “ and, click on the Next button.

9. Browse to the following folder on the driver CD according to your OS:

> Windows XP 32-bit and Server 2003 32-bit:

(CD Drive):\2010A2\Marvell\92XX\Windows 2003_XP\i386

> Windows XP 64-bit and Server 2003 64-bit:

(CD Drive):\2010A2\Marvell\92XX\Windows 2003_XP\amd64

10. Follow the on-screen instruction to install the driver.

11. After successful installation the device is listed in the **Device Manager** as **Marvell Unify Configuration** (under System devices).

12. Once driver installation is completed, you can now connect your external device to the SATA card. To install the driver for the external devices please refer to the external device user manuals.

Note: Drivers may need to be installed manually in certain situations

1. Navigate to Device Manager
2. In the IDE ATA/ATAPI controllers sections, find "Standard SATA AHCI Controller" Or is recognized as "RAID Controller"
3. Right-click and Update Driver Software.
4. Select: Browse my computer for driver software.
5. Select: Let me pick from list of device drivers on my computer.
6. Check in: Show compatible hardware.
7. Click Standard SATA AHCI Controller
8. Click Have Disk button
9. Click Browse, navigate to Driver Windows files:
10. Marvell > 92xx > Operating Sytem > (Select BIt version; AMD64 = Windows 64bit and i386 = Windows 32bit) > mvs91xx.inf ; click next

Drivers should be installed.

Installing Driver for Linux OS

Note: Marvell does not provide Linux drivers for AHCI and IDE/ATA devices.

Drivers for AHCI Devices

Linux distributions contain in-box drivers for AHCI devices. These drivers are installed automatically during the Linux OS installation.

Drivers for IDE/ATA Devices

Linux distributions with kernel version 2.6.19 and above include inbox drivers for IDE/ATA device. In most distributions, the kernel does not load the drivers for the inbox IDE/ATA devices by default. The procedure for enabling support for IDE/ATA device in Linux is as follows:

Enabling support for IDE/ATA devices during a Clean Installation of Linux

To enable support during a Clean Installation of Linux:

1. Boot from the Linux Installation CD/DVD
2. Select Installation and press Enter
3. Type the following command into the Boot Options command line:
`ata_generic.all_generic_ide=1`
4. Press Enter to continue with the Linux OS installation

Enabling Support for IDE/ATA Device on an Existing Installation of Linux

To enable support during a Existing Installation of Linux:

1. Login as root.
2. Right-click the Desktop and select **Open in Terminal**.
3. Type the following commands:
`ls`
`cd/boot/grub`
`vim menu.lst`
4. Type the following command at the end of the kernel line for the title paragraph that lists the version information for the Linux distribution.
`ata_generic.all_generic_ide=1`
5. Browse to File and select Save.
6. Reboot the system for the changes to take effect.

FAQ

Question: *“I installed the device but the connected drives are undetectable.”*

Answer: You must manage the Virtual Disk partitions of the connected drives.

Navigate to Disk Management utility.

(Start button > Right-click Computer > Manage > Disk Management)

The Disks may need to be initialized to MBR/GPT.

Once confirmed, continue.

You may see the health of the disks you connected to be black.

This means the Disks are offline or has unallocated data.

Right-click the name of the Disk# and select 'online' to initialize disk.

Right-click the black Health data to create a 'simple volume' which creates a partition for the OS to see.

Question: I installed the card but it is not recognized in my system?

Answer: Try reseating the card into another PCIe slot if available. If that fails try updating the motherboard/BIOS. Also ensure that any optional system updates have been applied.

Question: I installed the card and the drivers but the device is still not working?

Answer: Uninstall the device and drivers from the system. Reinstall the device and, manually install the drivers.

Question: I try to install the drivers for the device but receive a Code: 10 error?

Answer: This indicates a failure with the drivers being installed. Please download the latest drivers of the device and try again.

Question: The device installed properly but keep disconnecting and reconnecting?

Answer: Certain device will install properly yet act buggy. To remedy this problem download and, install the latest drivers for the device from the manufacturer website.

Question: Is this device a hardware RAID controller?

Answer: No.

Version Information

Version: 2.0

Date Updated: 3/11/2014

Changes/Fixes:

- Compiled manual information into .pdf format.
- Cleaned up wording and text throughout the previous 1.0 manual.
- Added documentation for manual driver install

Version: 2.01

Date Updated: 3/19/2014

Changes/Fixes:

- Added chipset model to document.
- Added FAQ of general information.
- Removed Incorrect RAID functionality specs.