



DP SATA 6Gb/s 2S1P PCIe Installation Guide

Introduction

The *DP SATA 6Gb/s 2S1P PCIe* will add 2 SATA 6Gb/s & a PATA connectors to PCIe-equipped computers.

Features and Benefits

- Adds two SATA 6Gb/s and one PATA (IDE) connectors to your PCIe-enabled desktop PC enhancing existing systems with the latest SATA 6Gb/s technology
- Ideal for bandwidth-hungry applications, such as multimedia content processing, video editing, port multiplier connectivity and fast transfers of large size files
- Dual profile design to work with full height and low profile chassis with the included brackets
- Compliant with Serial ATA Specification 3.0
- Compliant with PCI Express Base Specification, Revision 2.0
- Supports data transfer rate up to 6Gb/s on SATA 6Gb/s and 150Mb/s on PATA (IDE) connector
- Supports hardware RAID 0 and 1

System Requirements

- Desktop PC with an available PCIe slot
- Windows® 8 (32-/64-bit) / 7 (32-/64-bit) / Vista (32-/64-bit) / XP (32-/64-bit) / Server 2003 & 2008 (32-/64-bit) / Server 2008 R2 / Server 2012

Package Contents

- DP SATA 6Gb/s 2S1P PCIe adapter
- Spare low profile bracket
- SATA and Ultra ATA data cables
- Dual-connector SATA power cable
- Software CD and Installation guide

Layout

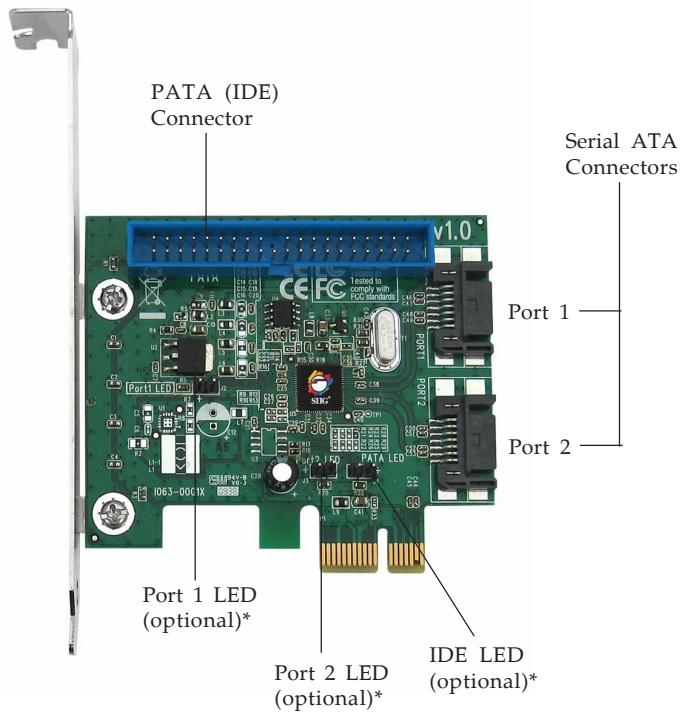


Figure 1: DP SATA 6Gb/s 2S1P PCIe

*** Note:** Connect the hard disk drive activity LED of the system case to the pins horizontally. This connection is optional.

Hardware Installation

General instructions for installing the card are provided below. Since the design of computer cases and motherboards vary, refer to your computer's reference manual for further information, if needed.

Static Electricity Discharge may permanently damage your system. Discharge any static electricity build up in your body by touching your computer case for a few seconds. Avoid any contact with internal parts and handle cards only by their external edges.

1. Turn OFF the power to your computer and any other connected peripheral devices.
2. Unplug the power cord from the back of the computer.
3. Remove your computer cover.
4. Remove the slot bracket cover from an available PCI Express slot.
5. To install the card, carefully align the card's bus connector with the selected PCI Express slot on the motherboard. Push the board down firmly, but gently, until it is well seated.
6. Replace the slot bracket holding screw to secure the card.

Device Connection

The *DP SATA 6Gb/s 2S1P PCIe adapter* has a two channel Serial ATA controller that supports two Serial ATA hard disk drives and one PATA (IDE) channel that supports two IDE disk drives.

This controller supports hardware RAID 0 and 1. It is recommended to use identical hard drives for all RAID configurations, however, it's possible to combine hard drives of different sizes and makes. PATA (IDE) physical disks cannot be used to create a RAID set.

SATA Hard Disk Connector

1. Install your hard disk drive(s) in the chassis.
2. Connect the Serial ATA hard disk drive to the system power supply using the included *Dual Connector Serial ATA power cable*.

Note: For hard drives with both SATA power connector and legacy 5-pin connector, use either the SATA power connector or the legacy 5-pin power connector. Using both power connectors may damage the hard drive.

3. Connect one end of the *Serial ATA data cable* to the hard disk drive.

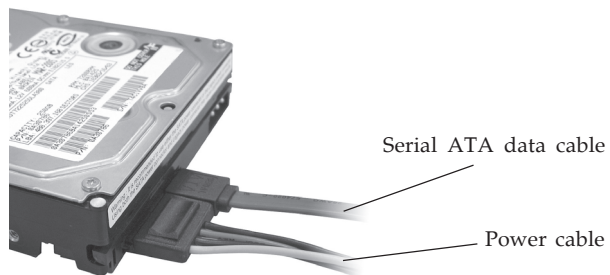


Figure 2. Hard disk drive connections

4. Attach the other end of the *Serial ATA data cable* to the Serial ATA connector on the *DP SATA 6Gb/s 2S1P PCIe adapter*.

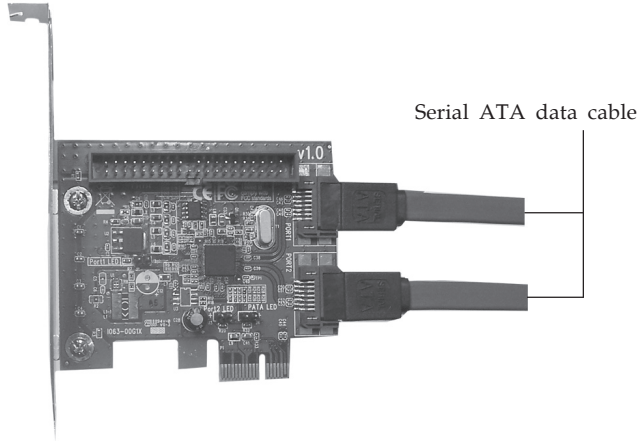


Figure 3. Connecting the Serial ATA data cable(s)

5. Follow the same instructions to connect the second hard drive. Device connection is now complete.

Note: If it is your desire to monitor disk activity of the Serial ATA hard drives, you may at this time connect the hard disk LED of the system case to the **Hard Disk LED Pins** on the Serial ATA controller.

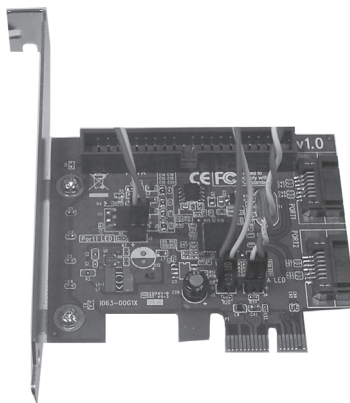


Figure 4. Connecting HDD LED

PATA (IDE) Hard Disk Connection

The *PATA (IDE) connector* is a single channel Ultra ATA/133 channel that supports up to two IDE hard disk drives or ATAPI devices.

In order to achieve high-speed data transfer, a 40-pin/80-wire Ultra ATA ribbon cable is recommended. Also, do not mix Ultra ATA hard disks with slower IDE or ATAPI devices on the same cable.

1. Attach one connector on the long end of the Ultra ATA ribbon cable to the board's **PATA** connector and the other connector(s) to your IDE drive(s). Make sure pin 1 on the cable (indicated by the colored stripe) matches pin 1 on the board's **IDE** connector and your IDE drive(s).
2. When two drives are installed, make sure one drive is set up as *Master* and the other as *Slave*.
3. The Ultra ATA ribbon cable has two connectors. If you install only one IDE drive, connect it to the end connector of the cable and set it as *Master*. On the other hand, if you install two IDE drives, connect the *Master* drive to the end connector of the cable and the *Slave* drive in the middle connector.
4. Replace the computer cover and reconnect the system power and other peripherals to your computer.

RAID Arrays

This controller can be configured for hardware RAID 0 and 1, if needed. The PATA channel cannot be used for RAID setup. If you don't need RAID 0 or 1 and only use this controller as a stand alone controller, please proceed to **Driver Installation** in page 9. RAID Arrays are setup in the *DP SATA 6Gb/s 2S1P PCIe adapter* BIOS.

RAID 0 (Striping)

This RAID array to be used on **New/Blank** hard drives. Striping will destroy existing data on the hard drive.

1. As the BIOS boots press **Ctrl+M** when prompted to enter the **RAID BIOS**.
2. At the next screen select **HBA Marvell 0**, press **Enter**. Select **Configuration Wizard**, then press **Enter**.
3. Use **Up** or **Down** arrow key to choose hard drive. Press **Spacebar** to select the hard drive. Perform the same procedure with the other hard drive. Once both hard drives are selected, press **Enter**.
4. Select **RAID Level**, press **Enter**. Select **RAID 0**, then press **Enter**.

Note: You can rename the VD Name. This is optional.

5. Select **Next**, press **Enter**. When asked **Do you want to create this virtual disk?** press **Y** to select **Yes**.
6. Press **F10** to exit the BIOS. When asked **Do you want to exit from Marvell BIOS Setup?** press **Y** to exit and reboot.

RAID 1 (Mirror)

1. As the BIOS boots press **Ctrl+M** when prompted to enter the **RAID BIOS**.
2. At the next screen select **HBA Marvell 0**, press **Enter**. Select **Configuration Wizard**, press **Enter**.
3. Use **Up** or **Down** arrow key to choose hard drive. Press **Spacebar** to select the hard drive. Perform the same procedure with the other hard drive. Once both hard drives are selected press **Enter**.

4. Select **RAID Level**, press **Enter**. Select **RAID1**, then press **Enter**.

Note: You can rename the VD Name. This is optional.

5. Select **Next**, press **Enter**. When asked **Do you want to create this virtual disk?** press **Y** to select **Yes**.
6. Press **F10** to exit the BIOS. When asked **Do you want to exit from Marvell BIOS Setup?** press **Y** to exit and reboot.

Rebuilding a Failed Mirror Set

When a failure to one member occurs, you will be notified either by the **RAID BIOS** during boot up. The steps below will guide you in rebuilding a failed mirror set.

1. Replace the failed drive with one of equal or greater capacity, then power on the computer.
2. As the BIOS boots press **Ctrl+M** when prompted to enter the **RAID BIOS**.
3. Select **VD 0**, press **Enter**. Select **Rebuild** then press **Enter**.
4. Select new hard drive under **Free Physical Disks**.
5. Press **Spacebar** to select hard drive, then press **Enter**.
6. When asked **Do you want to rebuild with selected physical disk on this vd?** press **Y** to select **Yes**. The mirror will begin rebuilding. Do not interfere with the process until completion. Continue to step 7 after completion.
7. Press **F10** to exit the BIOS. When asked **Do you want to exit from Marvell BIOS setup?** press **Y** to exit and reboot.

Deleting RAID Arrays

1. As the BIOS boots press **Ctrl+M** when prompted to enter the **RAID BIOS**.
2. Select **VD 0** press **Enter**. Select **Delete** then press **Enter**.
3. When asked **Do you want to delete this virtual disk?** press **Y** to select **Yes**.
4. When asked **Do you want to delete MBR from this virtual disk?** press **Y** to select **Yes**.
5. Press **F10** to exit the BIOS. When asked **Do you want to exit from Marvell BIOS setup?** press **Y** to exit and reboot.

Driver Installation

This section provides information on how to install the *DP SATA 6Gb/s 2S1P PCIe adapter* drivers.

Server 2012

For Server 2012, driver was already embedded in the system. Simply insert the card and boot up Windows, the card is ready for use, no extra driver installation is needed.

Windows 8 (32-/64-bit) / 7 (32-/64-bit) / Server 2008 R2

For New Installation

1. Setup the RAID array prior to Windows installation. If RAID is not required, go directly to step 2.
2. Follow Windows installation procedure.
3. At the Windows desktop, insert the driver CD, close the CD autoplay window if prompted.

4. Press and release the **Windows** key and **R** key simultaneously, type **D:\Drivers\drvSetup.exe**, click **OK**. (Change **D:** to match your CD-/DVD-ROM drive letter)
5. At the User Account Control, click **Yes**. Skip this step if not prompted.
6. At Magni driver Setup, click **Next**, and click **Next** again.
7. Change the Destination Folder if you want to change it; otherwise, click **Install**.
8. Click **Finish**, then restart the computer to complete the installation.

For Existing Installation

1. Setup the RAID array prior to driver installation and boot up to Windows. If RAID is not required, boot up to Windows and go directly to step 2.
2. Insert the driver CD, close the CD autoplay window if prompted.
3. Click **Windows** key and **R**, type **D:\Drivers\drvSetup.exe**, click **OK**. (Change **D:** to match your CD-/DVD-ROM drive letter)
4. At the User Account Control, click **Yes**. Skip this step if not prompted.
5. At Magni driver Setup, click **Next**, and click **Next** again.
6. Change the Destination Folder if you want to change it; otherwise, click **Install**.
7. Click **Finish**, then restart the computer.

Windows Vista (32-/64-bit) / Server 2008 (32-/64-bit)

For A New Installation

1. Setup the RAID array prior to Windows installation.
2. Follow Windows installation procedure.
3. After booting up the Windows, click **Cancel** at the Found New Hardware window.
4. Insert the driver CD, close the CD autoplay window if prompted.
5. Click **Start**, at the **Start Search**, type **D:\Drivers\drvSetup.exe**, click **Enter**. (Change **D:** to match your CD-/DVD-ROM drive letter)
6. At the User Account Control, click **Continue**. Skip this step if not prompted.
7. At Magni driver Setup, click **Next**, and click **Next** again.
8. Change the Destination Folder if you want to change it; otherwise, click **Install**.
9. Click **Finish**, then restart the computer.

For Existing Installation

1. Setup the RAID array prior to driver installation and boot up to Windows. If RAID is not required, go directly to step 2.
2. Click **Cancel** at the Found New Hardware window.
3. Insert the driver CD, close the CD autoplay window if prompted.
4. Click **Start**, at the **Start Search**, type **D:\Drivers\drvSetup.exe**, click **Enter**. (Change **D:** to match your CD-/DVD-ROM drive letter)
5. At the User Account Control, click **Continue**. Skip this step if not prompted.

6. At Magni driver Setup, click **Next**, and click **Next** again.
7. Change the Destination Folder if you want to change it; otherwise, click **Install**.
8. Click **Finish**, then restart the computer.

Windows XP (32-/64-bit) / Server 2003 (32-/64-bit)

For A New Installation (32-bit)

A new installation requires a floppy disk for the driver installation. To make this floppy disk, copy the contents of the **Floppy32** folder which is under **Drivers/ miniport** folder on the driver CD onto a blank floppy disk, then follow the directions below.

1. Setup the RAID array prior to Windows installation. If RAID is not required, go directly to step 2.
2. Follow Windows installation procedure.
3. At the **Windows Setup** screen, press **F6** to install the RAID driver.
4. When prompted, press **S** to specify the location of the driver.
5. Insert the floppy disk, then press **Enter**.
6. Select **Marvell shared library (install first)**, then press **Enter**.
7. Press **S** to specify the location of the driver. Select **Marvell 91xx SATA controller 32bit Driver**, then press **Enter**.

Note: Do not remove the floppy diskette from the floppy drive. You need to install the driver again during the installation.

8. Press **Enter** again to finish the driver installation, then follow the on-screen instructions to complete your Windows installation.
9. After the installation, insert the driver CD. Close the CD autoplay window if prompted.
10. Click **Start , Run**, type **D:\Drivers\drvSetup.exe**, click **OK**. (Change **D:** to match your CD-/DVD-ROM drive letter)
11. At Magni driver Setup, click **Next**, and click **Next** again.
12. Change the Destination Folder if you want to change it; otherwise, click **Install**.
13. Click **Finish**, then restart the computer to complete the installation.

For A New Installation (64-bit)

A new installation requires a floppy disk for the driver installation. Copy the contents of the **Floppy64** folder which is under **Drivers/ miniport** on the driver CD, onto a blank floppy disk, then follow the directions below.

1. Setup the RAID array prior to Windows installation. If RAID is not required, go directly to step 2.
2. Follow Windows installation procedure.
3. At the **Windows Setup** screen, press **F6** to install the RAID driver.
4. When prompted, press **S** to specify the location of the driver.
5. Insert the floppy disk, then press **Enter**.
6. Select **Marvell shared library (install first)**, then press **Enter**.

7. Press **S** to specify the location of the driver. Select **Marvell 91xx SATA controller 64bit Driver**, then press **Enter**.

Note: Do not remove the floppy diskette from the floppy drive. You need to install the driver again during the installation.

8. Press **Enter** again to finish the driver installation, then follow the on-screen instructions to complete your Windows installation.
9. After the installation, insert the driver CD. Close the CD autoplay window if prompted.
10. Click **Start , Run**, type **D:\Drivers\drvSetup.exe**, click **OK**. (Change **D:** to match your CD-/DVD-ROM drive letter)
11. At Magni driver Setup, click **Next**, and click **Next** again.
12. Change the Destination Folder if you want to change it, otherwise, click **Install**.
13. Click **Finish**, then restart Windows.

For Existing Installation

1. Setup the RAID array prior to driver installation and boot up to Windows. If RAID is not required, boot up to Windows and go directly to step 2.
2. Click **Cancel** at the **Found New Hardware**.
3. Insert the driver CD, close the CD autoplay window if prompted.
4. Click **Start , Run**, type **D:\Drivers\ drvSetup.exe**, click **OK**. (Change **D:** to match your CD-/DVD-ROM drive letter)

5. At Magni driver Setup, click **Next**, and click **Next** again.
6. Change the Destination Folder if you want to change it; otherwise, click **Install**.
7. Click **Finish**, then restart Windows.

To Verify Windows Installation

1. Use Device Manager to verify installation.
For Windows 8 / 7 / XP / Server 2003: Right click **Computer** or **My Computer**, click **Manage**, then click **Device Manager**.
For Windows Vista: Right click **Computer**, click **Manage**, click **Continue**. Click **Device Manager**.
For Windows Server 2008 / 2008 R2 / 2012: Right click **Computer**, click **Manage**. Double click **Diagnostics**, click **Device Manager**.
2. Double click **Storage controllers** or **SCSI and RAID controllers**, **Marvell 91xx SATA 6G Controller** should be displayed.

Marvell Storage Utility

Follow the instructions below to install the **Marvell Storage Utility** GUI.

1. Double click **MSUSetup** in the GUI folder on your software CD.
2. At the User Account Control, click **Yes** or **Continue**. Skip this step if not prompted.
3. At Welcome to the Marvell MSU V4 Setup Wizard, click **Next**.
4. At License Agreement, select **I accept the terms of the License Agreement**, click **Next**.

5. Click **Next** again.
6. Change the Destination folder if you want to change it; otherwise, click **Install**.
7. Click **Allow access** at the Windows Security Alert. Skip this step if not prompted.
8. At the Completing the Marvell MSU V4 Setup Wizard, click **Finish**.
10. After successful installation, the MSU GUI is ready for use. Enable the software by double click on it.
11. Type in the Username and Password to log in. Username and Password are your Windows user name and password. If you have a user name but no password, please leave the password field blank. See **Figure 5**.

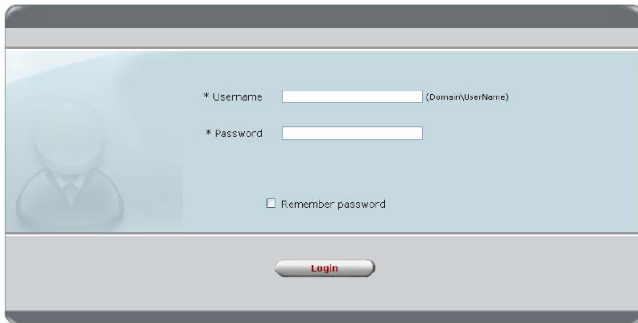


Figure 5

12. After log in, you can access to the MSU user interface for further VD management. See **Figure 6**. Refer to your UserGuide on the software CD for more details.

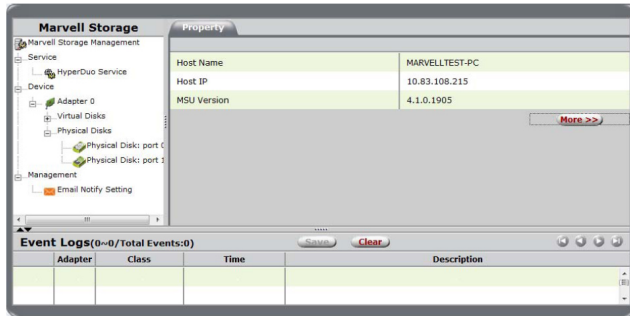


Figure 6

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Technical Support and Warranty

QUESTIONS? SIIG's **Online Support** has answers! Simply visit our web site at www.siig.com and click **Support**. Our online support database is updated daily with new drivers and solutions. Answers to your questions could be just a few clicks away. You can also submit questions online and a technical support analyst will promptly respond.

SIIG offers a lifetime manufacturer warranty with this product. This warranty covers the original purchaser and guarantees the product to be free of any defects in materials or workmanship for the life of the product.

SIIG will, at our discretion, repair or replace (with an identical product or product having similar features and functionality) the product if defective in materials or workmanship. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Please see our web site for more warranty details.

If you encounter any problems with this product, please follow the procedures below.

- A) If it is within the store's return policy period, please return the product to the store where you purchased it.
- B) If your purchase has passed the store's return policy period, please follow these steps to have the product repaired or replaced.

Step 1: Submit your RMA request. Go to www.siig.com, click **Support**, then **Request A Product Replacement** to submit a request to [SIIG RMA](#) or fax a request to 510-657-5962. Your RMA request will be processed, if the product is determined to be defective, an RMA number will be issued.

Step 2: After obtaining an RMA number, ship the product.

- Properly pack the product for shipping. All software, cable(s) and any other accessories that came with the original package must be included.
- Clearly write your RMA number on the top of the returned package. SIIG will refuse to accept any shipping package, and will not be responsible for a product returned without an RMA number posted on the outside of the shipping carton.
- You are responsible for the cost of shipping to SIIG. Ship the product to the following address:

SIIG, Inc.
6078 Stewart Avenue
Fremont, CA 94538-3152, USA
RMA #: _____

- SIIG will ship the repaired or replaced product via Ground in the U.S. and International Economy outside of the U.S. at no cost to the customer.

About SIIG, Inc.

Founded in 1985, SIIG, Inc. is a leading manufacturer of IT connectivity solutions (including Serial ATA and Ultra ATA Controllers, FireWire, USB, and legacy I/O adapters) that bridge the connection between Desktop/ Notebook systems and external peripherals. SIIG continues to grow by adding A/V and Digital Signage connectivity solutions to our extensive portfolio. All centered around the distribution and switching of A/V signals over CAT5/6, these products include matrix switches, distribution amplifiers, extenders, converters, splitters, cabling, and more.

SIIG is the premier one-stop source of upgrades and is committed to providing high quality products while keeping economical and competitive prices. High-quality control standards are evident by one of the lowest defective return rates in the industry. Our products offer comprehensive user manuals, user-friendly features, and most products are backed by a lifetime warranty.

SIIG products can be found in many computer retail stores, mail order catalogs, and e-commerce sites in the Americas, as well as through major distributors, system integrators, and VARs.

PRODUCT NAME

DP SATA 6Gb/s 2S1P PCIe

FCC RULES: TESTED TO COMPLY WITH FCC PART 15, CLASS B OPERATING ENVIRONMENT: FOR HOME OR OFFICE USE

FCC COMPLIANCE STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

THE PARTY RESPONSIBLE FOR PRODUCT COMPLIANCE

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