## Intel® RAID Controller RS2WC040 Quick Start User's Guide

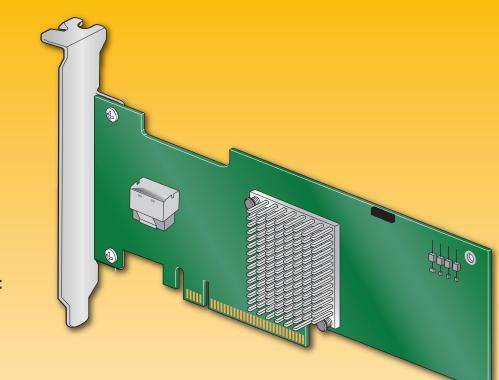
This guide contains step-by-step instructions for installing the Intel® RAID Controller RS2WC040 and information on using the BIOS setup utility to configure a single logical drive array and install the driver into the operating system.

For more advanced RAID configurations, or to install with other operating systems, please refer to the Software User's Guide and the Hardware User's Guide.

These guides and other supporting documents (including a list of supported server boards) are also located on the web at: http://support.intel.com/support/motherboards/server.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, see your Hardware Guide for complete ESD procedures. For more details on Intel® RAID controllers, see: www.intel.com/go/serverbuilder.

Read all cautions and warnings first before starting your RAID Controller integration.





### Warning

Read all caution and safety statements in this document before performing any of the instructions. Also see the *Intel®* Server Board and Server Chassis Safety Information document at: http://support.intel.com/support/ motherboards/server/sb/cs-010770 .htm for complete safety information.

this product should only be performed by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

[Electrostatic Discharge] integration to avoid possible damage to server board and/or other components.

### Tools Required



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E64402-002

- SAS 2.0 or SATA II hard disk drives (backward compatible to support)
- Intel® RAID Controller RS2WC040
- Server board with an x8 PCI Express\* Generation 2 slot (backward compatible

### Warning

Installation and service of

Observe normal ESD procedures during system

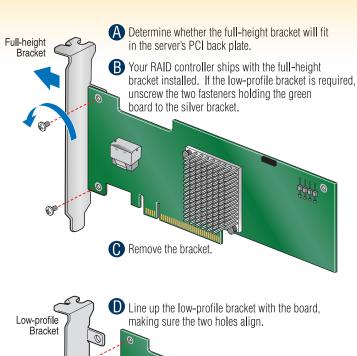


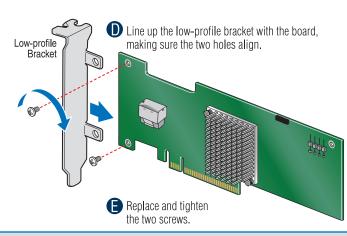


## What you will need to begin

- SAS 1.0 hard disk drives)
- to support an x8 or x16 PCI Express\* Generation 1 slot)
- Intel® RAID Controller RS2WC040 Resource CD
- Operating system installation media: Microsoft Windows Server 2003\*, Microsoft Windows Server 2008\*, Microsoft Windows Vista\*, Red Hat\* Enterprise Linux, or SUSE\* Linux Enterprise Server

## Check the Bracket Height





# Install the RAID Controller A Power down the system and disconnect the power cord. **B** Remove the system cover and any other pieces to access the PCI Express\* slot. Firmly press the RAID Controller into an available x8 or x16 PCI Express\* Slot. Secure the RAID Controller bracket to the system back panel.

## Connect the RAID Controller A Connect the wide end of the provided cable to the silver connector (ports 0-3). **B** Push the cable into the silver connector until it makes a slight click. Connect the other ends of the cables to SATA drives or to the ports on a SATA or SAS backplane. Notes: Both non-expander backplanes (one cable per drive) and expander backplanes (one or two total cables) are supported. Drive power cables (not shown) are required. Rear view of four SATA drives connected to ports 0-3 on the Intel® RAID Controller RS2WC040. Go to Step 4 on Side 2

## Choosing the Right RAID Level

F	RAID		Minimum Physical Drives	Fail PDs Allowed	Method	Capacity	Read Speed	Write Speed	Good Usage
	0	D1 D2 D4 D6 D8 Disk 2	2	NONE	Striping (speed)	100%	Excellent	Excellent	High throughput workstation
	1	D1 D2 D2 D3 D4 Disk 1 Disk 2	2	1	Mirroring (redundancy)	50%	Very good	Good	OS, apps entry level
	5	D1 D2 P D4 D5 D6 P Disk 3	3	1	Striping and distributed parity (fault tolerance)	n-1 (67-94%)	Very good	Good	Data, web/media server
	10	R1 R1 R1 D1 D2 D2 D4 D4 D6 D8 Disk 3 Disk 4	4	1 per mirror set	Striping across mirrors	50%	Very good	Good	Database, file, mail servers

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<sup>1</sup>Available only to Intel® Channel Program Members, part of Intel® e-Business Network

## Intel RAID Controller RS2WC040 Reference Diagram **Back View** Front View Bracket Screw (2) J4 Ports 0-3 x8 PCI Express\* Interface

For more information on the jumpers referenced in this diagram, refer to user guide located on the web at: