Intel® RAID Controller RS2WG160
# Quick Start User's Guide

This guide contains step-by-step instructions for installing the Intel® RAID Controller RS2WG160 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 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://www.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.

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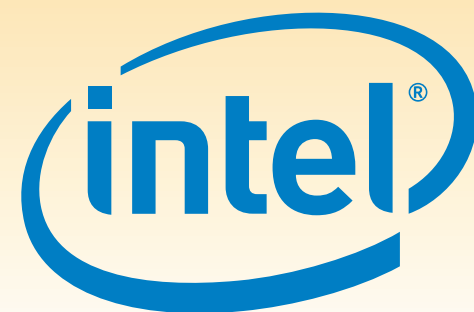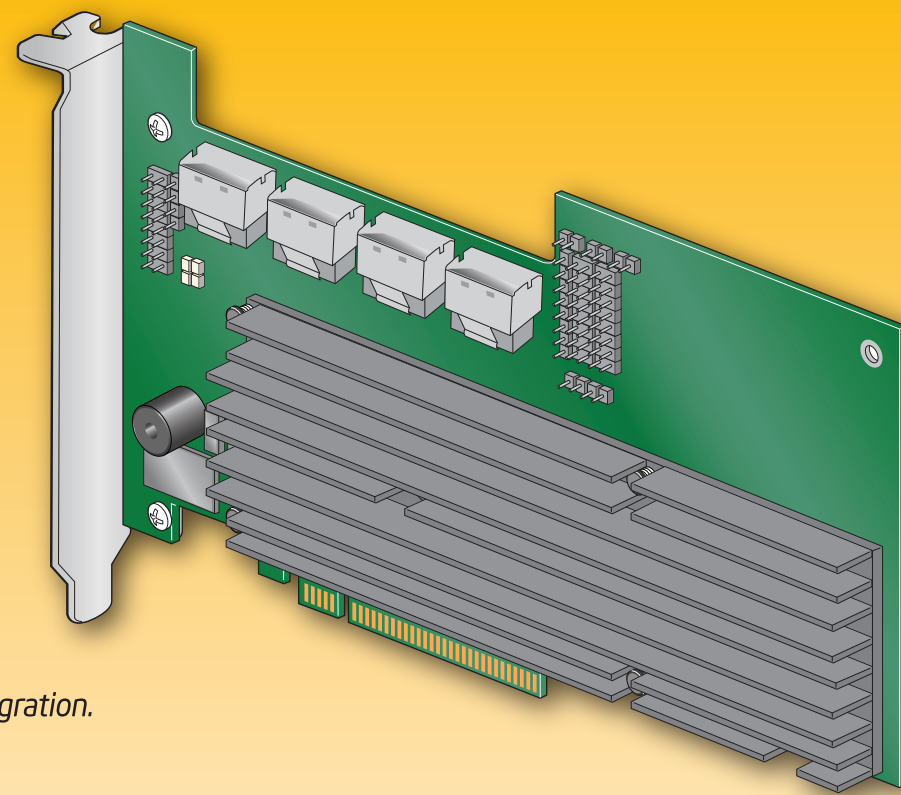
Choosing the Right RAID Level

RAID		Minimum Physical Drives	Fail PDs Allowed	Method	Capacity	Read Speed	Write Speed	Good Usage
0		2	NONE	Striping (speed)	100%	Excellent	Excellent	High throughput workstation
1		2	1	Mirroring (redundancy)	50%	Very good	Good	OS, apps entry level
5		3	1	Striping and distributed parity (fault tolerance)	n-1 (67-94%)	Very good	Good	Data, web/media server
6		3	2	Striping with dual distributed parity	n-2 (33-88%)	Good	Good	High fault tolerance
10		4	1 per mirror set	Striping across mirrors	50%	Very good	Good	Database, file, mail servers
50		6	1 per R5 set	Striping across R5 arrays	n-2 (67-94%)	Excellent	Very Good	Database, file, mail servers
60		6	2 per R6 set	Striping across R6 arrays	n-4 (33-88%)	Very good	Good	Critical data

Tools Required

Phillips* screwdriver   Anti-static wrist strap

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What you will need to begin

- SAS 2.0 or SATA II hard disk drives (backward compatible to support SAS 1.0 hard disk drives)
- Intel® RAID Controller RS2WG160
- Server board with a x8 or x16 PCI Express* slot (this controller is designed to meet the x8 PCI Express* Generation 2 specification and is backward compatible with generation 1 slots)
- Intel® RAID Controller RS2WG160 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

1 Check the Bracket Height

A This RAID controller requires a full-height slot. Please make sure your server's PCI Express slot fits this card.

B Your RAID controller ships with the full-height bracket, as shown below.
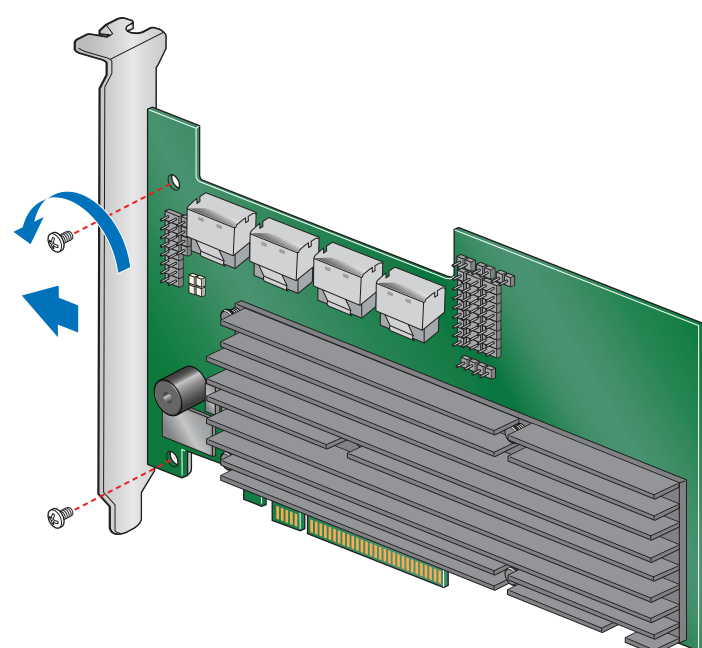
2 Install the RAID Controller

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.

C Firmly press the RAID Controller into an available x8 or x16 PCI Express* Slot.

D Secure the RAID Controller bracket to the system back panel.
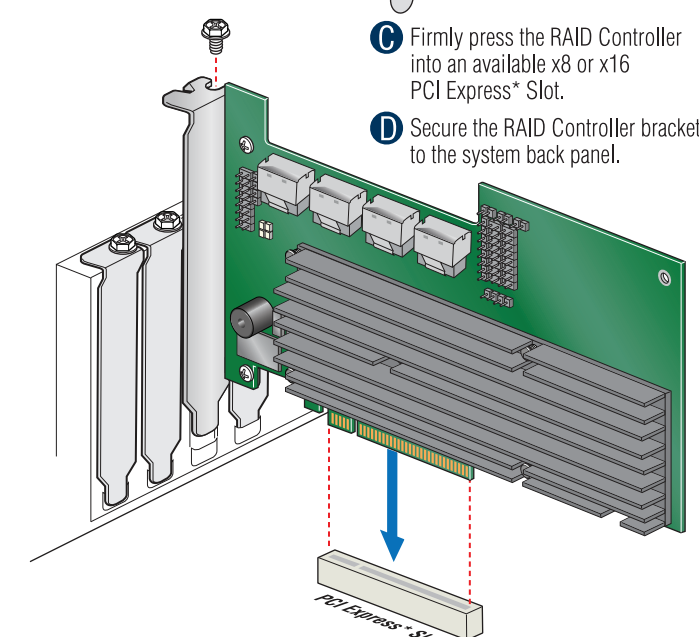
Audible Alarm Information

For information about the audible alarm and how to silence or disable it, see the reverse side of this document.

3 Connect the RAID Controller

A For internal drives, connect the wide end of the provided cable to the left silver connector (Ports 0-3).

B Push the cable into the silver connector until it makes a slight click.

Note: This controller is shipped together with multiple mini-SAS to mini-SAS cables. Both non-expander backplanes (one cable per drive) and expander backplanes (one or two total cables) are supported. For direct drive connection, a third party mini-SAS to single drive SAS or SATA drive cable is required.
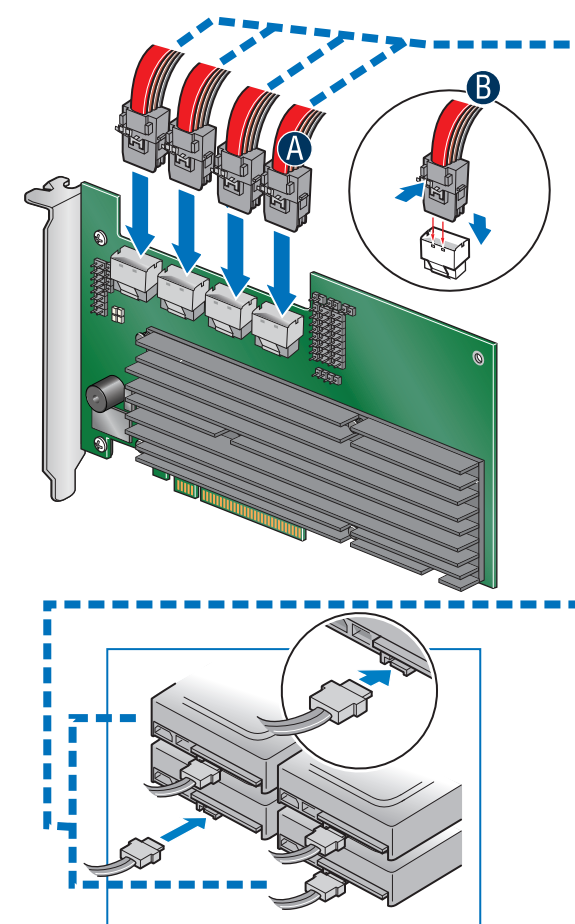
Rear view of four SATA drives connected to ports 0-3 on the Intel® RAID Controller RS2WG160.

Go to Step 4 on Side 2

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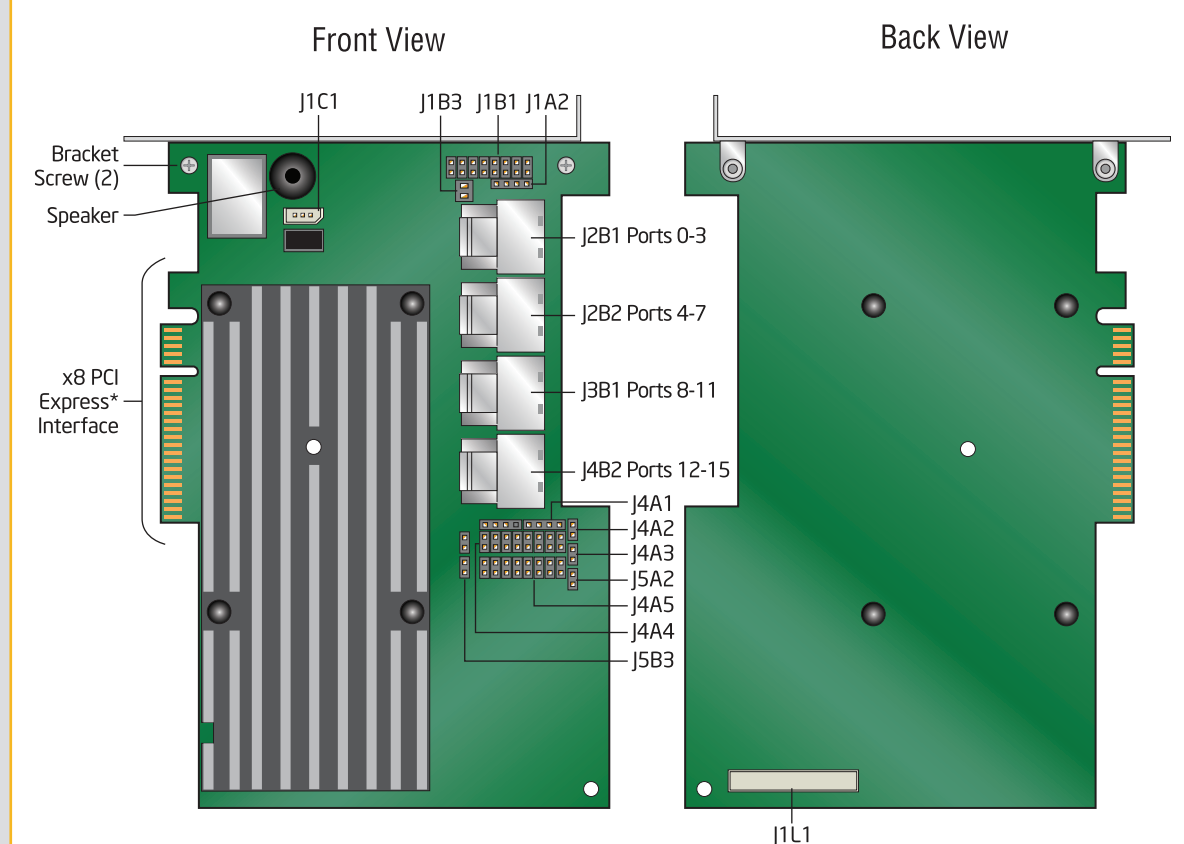- Worldwide 24x7 technical support (AT&T Country Code + 866-655-6565)[1]
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[1]Available only to Intel® Channel Program Members, part of Intel® e-Business Network.

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Intel® RAID Controller RS2WG160 Reference Diagram

Front View   Back View

Bracket Screw (2)
Speaker
x8 PCI Express* Interface

J1C1   J1B3 J1B1 J1A2

J2B1 Ports 0-3
J2B2 Ports 4-7
J3B1 Ports 8-11
J4B2 Ports 12-15
J4A1
J4A2
J4A3
J5A2
J4A5
J4A4
J5B3

J1L1

For more information on the jumpers referenced in this diagram, refer to user guide located on the web at: http://www.intel.com/support/motherboards/server.