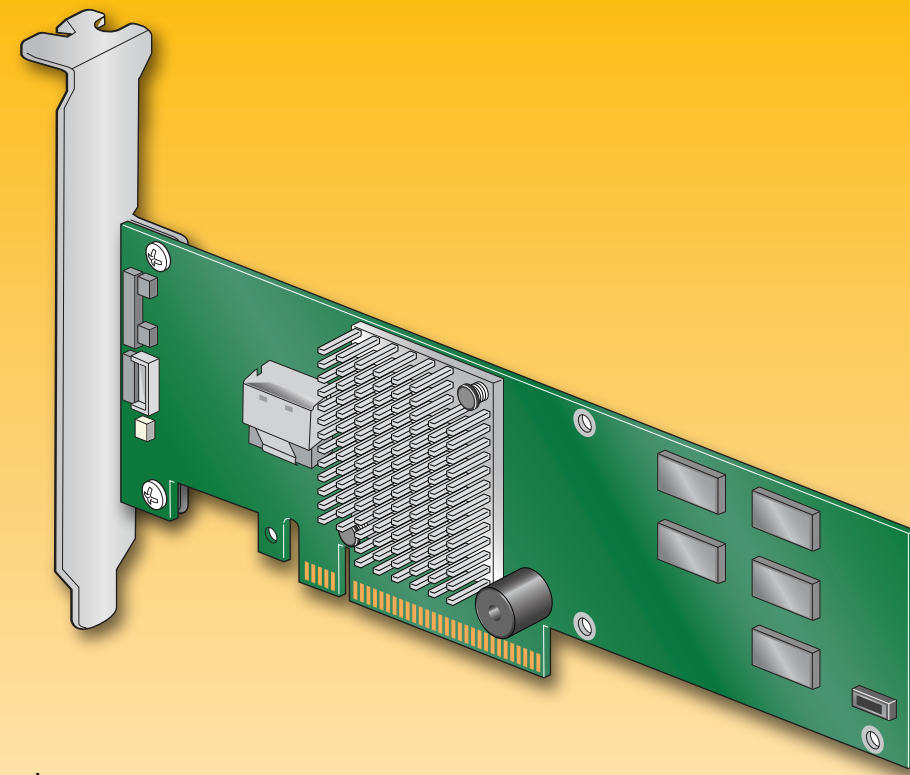# Intel® RAID Controller RS2BL040
# Quick Start User's Guide

This guide contains step-by-step instructions for installing the Intel® RAID Controller RS2BL040 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://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.

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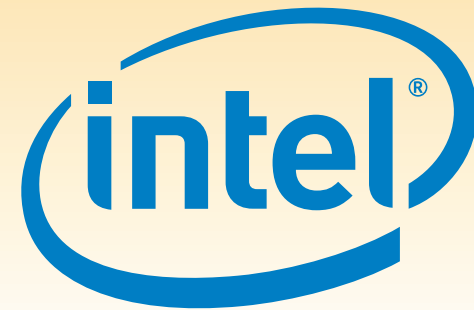
Choosing the Right RAID Level

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		4	2	Striping with dual distributed parity	n-2 (50-88%)	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		8	2 per R6 set	Striping across R6 arrays	n-4 (50-88%)	Very good	Good	Critical data

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Tools Required

Phillips* screwdriver   Anti-static wrist strap

E64390-001

What you will need to begin

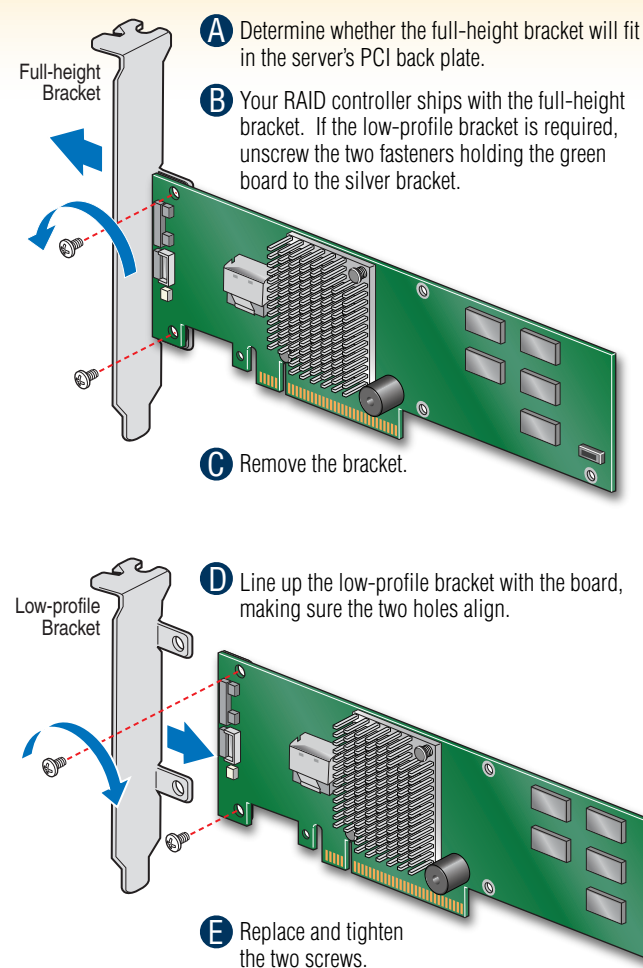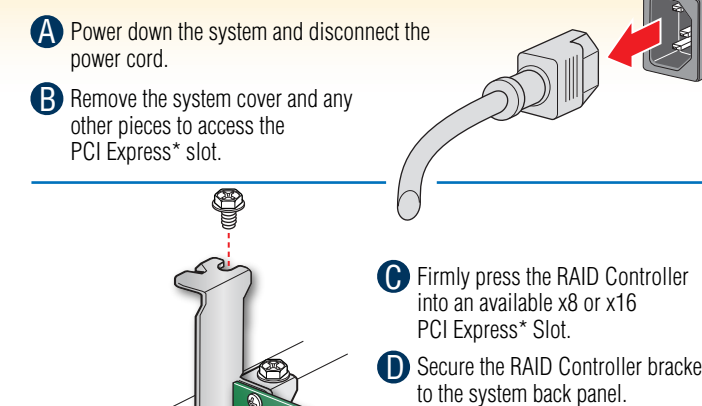- SAS 2.0 or SATA II hard disk drives (backward compatible to support SAS 1.0 hard disk drives)
- Intel® RAID Controller RS2BL040
- Server board with an x8 PCI Express* Generation 2 slot (backward compatible to support an x8 or x16 PCI Express* Generation 1 slot)
- Intel® RAID Controller RS2BL040 Resource 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. Determine whether the full-height bracket will fit in the server's PCI back plate.

B. Your RAID controller ships with the full-height bracket. If the low-profile bracket is required, unscrew the two fasteners holding the green board to the silver bracket.

Full-height Bracket

C. Remove the bracket.

Low-profile Bracket

D. Line up the low-profile bracket with the board, making sure the two holes align.

E. Replace and tighten the two screws.

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.

PCI Express* Slot (3.3 V)

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. 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.

C. 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.

Ports 0-3

Rear view of four SATA drives connected to ports 0-3 on the Intel® RAID Controller RS2BL040.
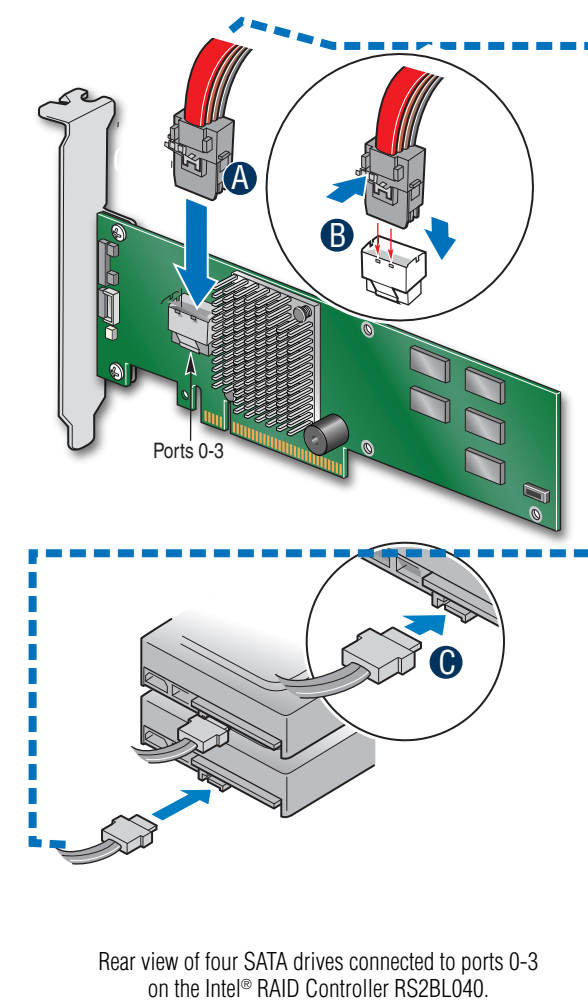
Go to Step 4 on Side 2

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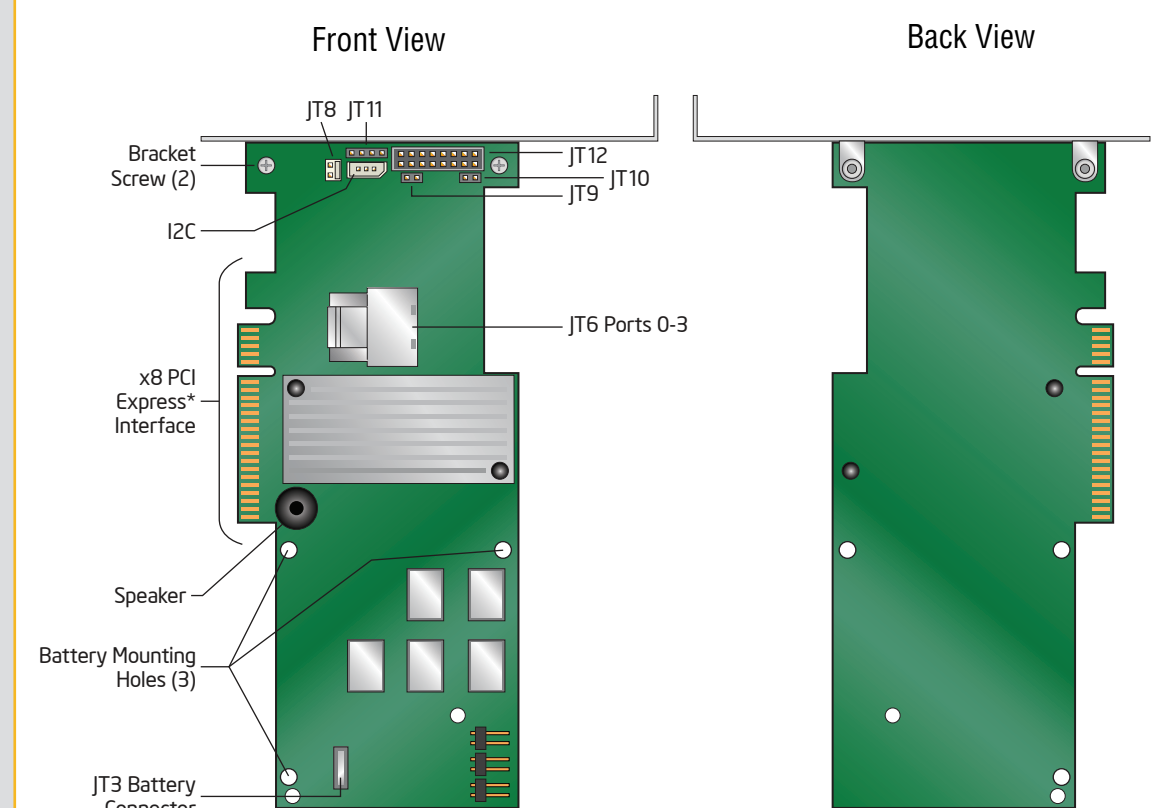- World-class service, including a three-year limited warranty and Advanced Warranty Replacement[1]

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[1] Available only to Intel® Channel Program Members, part of Intel® e-Business Network.

Intel® RAID Controller RS2BL040 Reference Diagram

Front View   Back View

JT8 JT11
Bracket Screw (2)
JT12
JT9 JT10
I2C
JT6 Ports 0-3
x8 PCI Express* Interface
Speaker
Battery Mounting Holes (3)
JT3 Battery Connector

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