

# Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 User's Guide

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**A Guide for Technically Qualified Assemblers of Intel® identified  
Subassemblies/Products**

Intel Order Number: G49043-005



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# Safety Information

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## Important Safety Instructions

Read all caution and safety statements in this document before performing any of the instructions. See also Intel® Server Boards and Server Chassis Safety Information on the *Intel® Server Deployment Toolkit 3.0 CD* and/or at <http://www.intel.com/support/motherboards/server/sb/cs-010770.htm>.

## Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warn- und Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel®-Serverplatinen und Servergehäusen auf der *Intel® Server Deployment Toolkit 3.0 CD* oder unter <http://www.intel.com/support/motherboards/server/sb/cs-010770.htm>.

## Consignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez Intel® Server Boards and Server Chassis Safety Information sur le *Intel® Server Deployment Toolkit 3.0 CD* ou bien rendez-vous sur le site <http://www.intel.com/support/motherboards/server/sb/cs-010770.htm>.

## Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea Intel® Server Boards and Server Chassis Safety Information en el *Intel® Server Deployment Toolkit 3.0 CD* y/o en <http://www.intel.com/support/motherboards/server/sb/cs-010770.htm>.

## 重要安全指导

在执行任何指令之前，请阅读本文档中的所有注意事项及安全声明。和/或 <http://www.intel.com/support/motherboards/server/sb/cs-010770.htm> 上的 *Intel® Server Boards and Server Chassis Safety Information*（《Intel 服务器主板与服务器机箱安全信息》）。

## Warnings

**Heed safety instructions:** Before working with your server product, whether you are using this guide or any other resource as a reference, pay close attention to the safety instructions. You must adhere to the assembly instructions in this guide to ensure and maintain compliance with existing product certifications and approvals. Use only the described, regulated components specified in this guide. Use of other products/components will void the UL listing and other regulatory approvals of the product and will most likely result in noncompliance with product regulations in the region(s) in which the product is sold.

**System power on/off:** The power button DOES NOT turn off the system AC power. To remove power from the system, you must unplug the AC power cord from the wall outlet. Make sure the AC power cord is unplugged before you open the chassis, add, or remove any components.

**Hazardous conditions, devices and cables:** Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cord, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

**Electrostatic discharge (ESD) and ESD protection:** ESD can damage disk drives, boards, and other parts. We recommend that you perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—on your server when handling parts.

**ESD and handling boards:** Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

**Installing or removing jumpers:** A jumper is a small plastic encased conductor that slips over two jumper pins. Some jumpers have a small tab on top that you can grip with your fingertips or with a pair of fine needle nosed pliers. If your jumpers do not have such a tab, take care when using needle nosed pliers to remove or install a jumper; grip the narrow sides of the jumper with the pliers, never the wide sides. Gripping the wide sides can damage the contacts inside the jumper, causing intermittent problems with the function controlled by that jumper. Take care to grip with, but not squeeze, the pliers or other tool you use to remove a jumper, or you may bend or break the pins on the board.

# Table of Contents

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<b>1</b>	<b>About the Intel® RAID Maintenance Free Backup Unit AXRMFBU2.....</b>	<b>1</b>
<b>2</b>	<b>Installing the Hardware.....</b>	<b>2</b>
	Remote Connecting Cables .....	2
	Important Pre-installation Considerations .....	3
	Installing the Intel® RAID Maintenance Free Backup Unit AXRMFBU2.....	3
	Removing the RAID Module.....	3
	Installing the Intel® RAID Maintenance Free Backup Unit AXRMFBU2.....	3
	Connecting the Plastic RMFBU2 Holder to the Chassis .....	6
	Attaching the Connecting Cable to the Server System .....	6
	Installing the Intel® Integrated RAID Module in the Server System.....	6
<b>3</b>	<b>Monitoring RAID Maintenance Free Backup Unit .....</b>	<b>9</b>
	Monitoring the SuperCap with the Intel® RAID BIOS Configuration Utility .....	9
	Using Intel® RAID Web Console 2 .....	10
<b>4</b>	<b>RAID Maintenance Free Backup Unit Specifications.....</b>	<b>11</b>
	MegaRAID CacheVault™ Technology .....	11
<b>5</b>	<b>Regulatory and Compliance Information .....</b>	<b>12</b>
	Product Regulatory Compliance .....	12
	Product EMC Compliance – Class A Compliance.....	12
	Product Environmental Compliance .....	12
	Product Regulatory Compliance Markings.....	13
	Electromagnetic Compatibility Notices.....	14
	Europe (CE Declaration of Conformity).....	14
<b>6</b>	<b>Getting Help .....</b>	<b>15</b>
<b>7</b>	<b>Intel® Server Issue Report Form .....</b>	<b>17</b>

# List of Figures

---

Figure 1. Top View of the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 .....	2
Figure 2. Connecting AXXRMFBU2 to the RAID Module .....	4
Figure 3. Connect the cable.....	5
Figure 4. Installing the Cable Twist Tie .....	5
Figure 5. Connecting the Plastic RMFBU2 Holder to the Chassis .....	6
Figure 6. Seating the RAID Module .....	7
Figure 7. Tie Together the Cables with the Strap Tie .....	7
Figure 8. Installing the Barrel Standoff.....	8
Figure 9. Installing the Intel® Integrated RAID Module.....	8
Figure 10. Monitoring the RMFBU2 with Intel® RAID BIOS Console .....	9
Figure 11. RMFBU2 Information in Intel® RAID Web Console 2.....	10

# List of Tables

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Table 1. Cable Compatibility ..... 2  
Table 2. RMFBU2 Specifications ..... 11





# 1 About the Intel® RAID Maintenance Free Backup Unit AXRMFBU2

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Intel® Integrated RAID (Redundant Array of Inexpensive Disks) Modules provide reliability, high performance, and fault-tolerant disk subsystem management. A complete fault-tolerant strategy requires protection of all data, including the unwritten cached data in the RAM cache. If power is lost, the data in the RAM cache is lost. To avoid data loss, a RAID Maintenance Free Backup Unit (RMFBU) can be added to store unwritten cached data from the RAID RAM during an AC power outage or if the AC power cord is removed.

A RAID Maintenance Free Backup Unit protects the integrity of the cached data on Intel® Integrated RAID Modules by offloading data stored in the RAM cache to the NAND flash if there is a complete AC power failure or a brief power outage. The Intel® RAID Maintenance Free Backup Unit provides an alternative to use an uninterruptible power supply (UPS) or it can act as a second level of fault tolerance when used with a UPS. Furthermore, it eliminates the need for lithium ion (Li-ion) batteries traditionally used to protect DRAM cache memory on PCI RAID controllers. Therefore this is a greener and lower total cost cache protection solution.

The cache memory available on Intel® Integrated RAID Modules can improve the overall system performance. Writing data to the controller's cache memory is much faster than writing it to a storage device. Write operations appear to complete very quickly at the software application level. The Intel® Integrated RAID Module writes the cached data to the storage device when system activity is low or when the cache is getting full. The risk of using write-back cache is that the cached data can be lost if the AC power fails before it is written to the storage device. This risk factor is eliminated when the Intel® Integrated RAID Module has a RMFBU installed.

The Intel® RAID Maintenance Free Backup Unit AXRMFBU2 consists of Cache Offload Module and SuperCap2. It monitors the voltage level of the DRAM modules of the Intel® Integrated RAID Module. If the voltage drops below a predefined level, the RMFBU offloads the data from the RAID RAM to the NAND flash of RMFBU2 Cache-offload Module and SuperCap2 provides sufficient power to complete the data transferring. When the voltage level returns to an acceptable level, the RAID RAM is recovered from flash, and all pending writes to storage devices are completed without losing any data.

The Intel® RAID Maintenance Free Backup Unit AXRMFBU2 has a built-in functionality to charge the SuperCap2 automatically and to communicate entire unit status information such as voltage, temperature, and current to the host server system.

The Intel® RAID Maintenance Free Backup Unit AXRMFBU2 is a smart backup module and uses MegaRAID CacheVault™ Technology. It is compatible with a backup auxiliary power source. The SuperCap2 is charged automatically.

## 2 Installing the Hardware

The Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 pack attaches to the RAID modules remotely. Figure 1 displays the top view of the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2. The 26-pin connector (see letter A for the location of this connector) is used to remotely connect to an Intel® Integrated RAID module using the supplied cable.

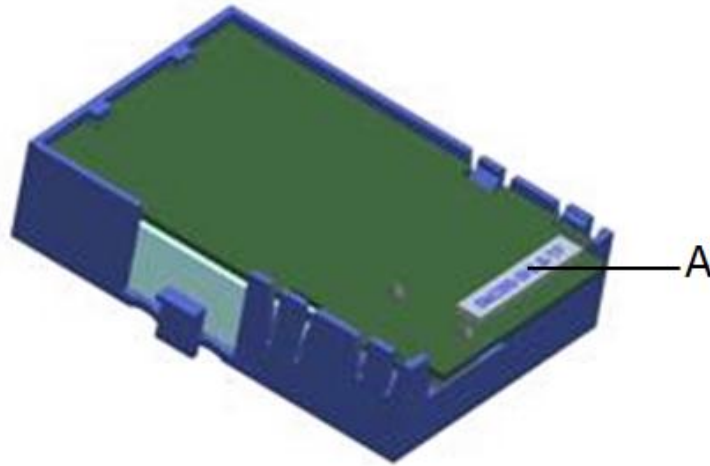


Figure 1. Top View of the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2

### Remote Connecting Cables

Two 26-pin to 30-pin RMFBU2 Cache-offload Module cables (20-inch and 40-inch) are provided in the AXXRMFBU2 kit to remotely connect the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 to the Intel® Integrated RAID Module.

Table 1. Cable Compatibility

Intel® RAID Controller or Server System	20-inch Cable	40-inch Cable
Intel® Integrated RAID Module RMS25PB080	X	X
Intel® Integrated RAID Module RMS25PB040	X	X
Intel® Integrated RAID Module RMT3PB080	X	X
Intel® Integrated RAID Module RMS25CB080	X	X
Intel® Integrated RAID Module RMS25CB040	X	X
Intel® Integrated RAID Module RMT3CB080	X	X
Intel® pedestal chassis		X
Intel® rack mount chassis	X	

## Important Pre-installation Considerations

**Warning:** Make sure that you are grounded and/or use a ground strap before touching the RAID module or the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2. Perform all installation work at an ESD-safe workstation. Use an ESD-safe Phillips\* screwdriver set to a maximum torque of 2.25 inch-pounds, and be sure the screwdriver is centered in the screw to avoid damaging the screw head. If you exceed the maximum torque specification, you may damage the board, connectors, or screws, and you will void the warranty of the board.

## Installing the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2

**Warning:** After the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 is installed, do not disconnect it from the Intel® Integrated RAID Module RMS25PB080, RMS25PB040, RMT3PB080, RMS25CB080, RMS25CB040, or RMT3CB080 when system has an unclean shutdown (that is, AC lost during operating system is running). Doing so will cause AXXRMFBU2 unrecoverable failure and replacement is required.

To install the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 on the Intel® Integrated RAID Module, you must perform the following steps:

1. Remove the RAID Module if it is already installed in the server system. For information, see [Removing the RAID Module](#).
2. Install Intel® RAID Maintenance Free Backup Unit AXXRMFBU2 on the RAID Module using the following method:
  - Set up a remote connection through the remote RMFBU connector. For information, see [“Installing the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2”](#).
3. Install the RAID Module in the server system. For information, see [Installing the Intel® Integrated RAID Module in the Server System](#).

## Removing the RAID Module

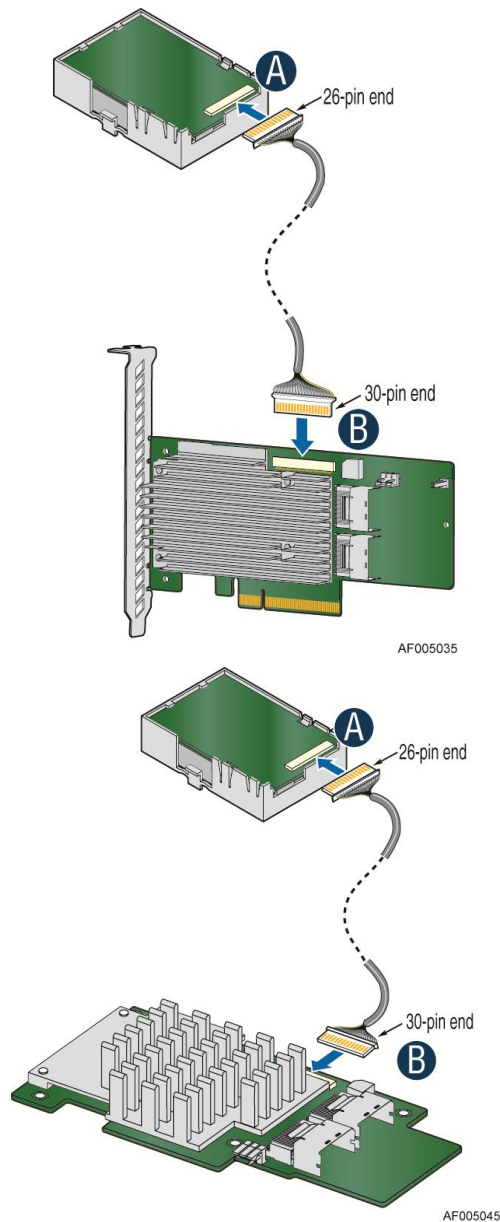
If the RAID module is already installed in a system, do the following to remove it before you install the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2:

1. Shutdown the system. Turn off the power and unplug the power cord(s).
2. Remove the chassis cover. Make sure that you are grounded before touching the RAID module. Carefully unplug all cables connected to the RAID module.
3. Carefully remove the RAID module from the server board. For more information on removing Intel® Integrated RAID module, refer to *Quick Start User's Guide* shipped with Intel® Integrated RAID module.
4. Place the RAID controller on a flat, clean, static-free surface.

## Installing the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2

A remote connection to the RAID module is required. To install the Intel® RAID Maintenance Free backup Unit AXXRMFBU2 on the RAID Module through 26-pin connector, do the following:

1. Make sure that you are grounded and take the Intel® RAID Maintenance Free backup Unit AXXRMFBU2 out of the package.
2. Verify that the RMFBU2 Cache Offload Module and SuperCap2 are installed in the plastic bracket already.
3. Select a suitable cable from two cables provided for your system.
4. Carefully and lightly grasp the base of the cable. Make sure the yellow pin 1 of the cable is in alignment with the yellow mark on the board connector. Press the connector with your finger and insert with the connector parallel.

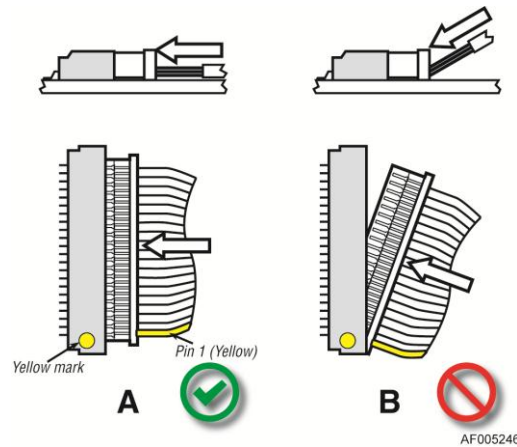


**Figure 2. Connecting AXXRMFBU2 to the RAID Module**

**Note:** Carefully observe how the cable connectors are keyed and avoid asserting unnecessary force when plugging in the cable. Do not insert at an angle. Doing so will cause connector deformation or damage.

**Warning:**

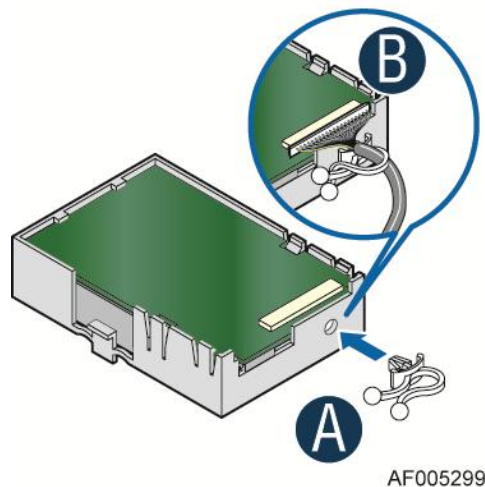
1. Make sure the yellow pin 1 of the cable is in alignment with the yellow mark on the board connector. Press the connector with your finger and insert with the connector parallel (see **A** in Figure 3). Do not try to insert cable backwards. Doing so will cause damage to the Intel® RAID Maintenance Free backup Unit AXXRMFBU2 and Intel® Integrated RAID Module.
2. Do not insert at an angle. Doing so will cause connector deformation or damage, even hardware damage to the Intel® RAID Maintenance Free backup Unit AXXRMFBU2 and Intel® Integrated RAID Module (see **B** in Figure 3).



**Figure 3. Connect the cable**

5. Secure the cable at 26-pin end with a provided Cable Twist Tie as shown in Figure 4.

**Note:** This step is optional depends on the chassis design. Please refer to your server chassis documentation to determine if the Cable Twist Tie is needed.



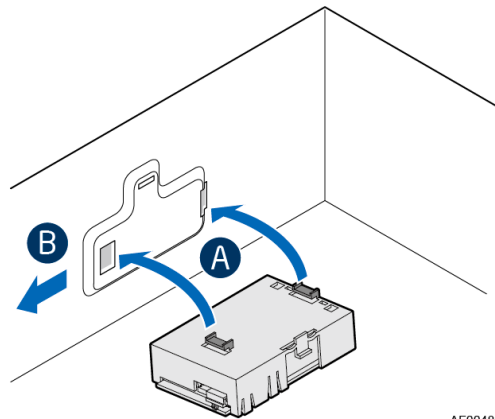
**Figure 4. Installing the Cable Twist Tie**

## Connecting the Plastic RMFBU2 Holder to the Chassis

The Intel® RAID Maintenance Free Backup Unit AXSRMFBU2 is designed for easy attachment to either an Intel® pedestal or rack mount chassis. Complete the following instructions for your server.

If you are installing this component into a third-party chassis, you must first install an attachment mechanism, such as industrial-grade Velcro\*. Refer to your server chassis documentation or discuss an appropriate attachment mechanism with your server chassis manufacturer to ensure the attachment mechanism complies with the chassis requirements.

1. Locate the installation clips inside the chassis. For the location of the installation clips, see your server system documentation. Remove the Mylar\* pad if there is a Mylar\* pad covering the mounting hole.
2. Align the tabs on the plastic RMFBU2 holder with the clips on the chassis (See **A** in Figure 5).
3. Slide the plastic RMFBU2 holder toward the front of the system until the tabs engage with the clips in the chassis (See **B** in Figure 5).



AF004830

**Figure 5. Connecting the Plastic RMFBU2 Holder to the Chassis**

## Attaching the Connecting Cable to the Server System

Follow the appropriate set of instructions below for your server:

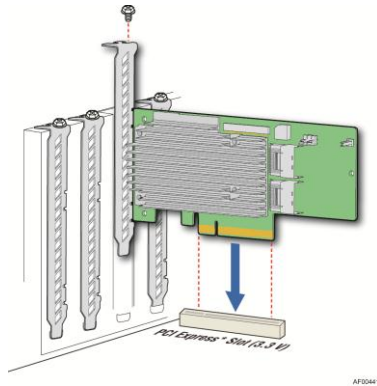
1. Route the cable through the cable holder on the edge of the chassis.
2. Connect the cable to the RAID module.

## Installing the Intel® Integrated RAID Module in the Server System

To install the Intel® Integrated RAID Module back into the server system, do the following:

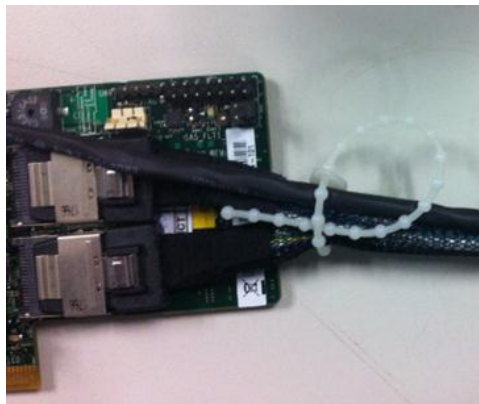
Intel® Integrated RAID Module RMS25PB040, RMS25PB080, RMT3PB080

1. Align the RAID module with the PCI Express\* slot. To locate an appropriate slot and for instructions on installing an add-in card, see your server system documentation.
2. Press down gently, but firmly, to ensure that the RAID module is properly seated in the slot. The bottom edge of the RAID module must be flushed with the slot.



**Figure 6. Seating the RAID Module**

3. Connect the proper cables into the adapter using the 4-port combined end. Make sure the module and cables are properly attached and plug the cable into connector at the inside edge of the adapter.
4. Tie the RMFBU2 Cache-offload Module cable and the data cable together with a strap tie that is provided, as shown in Figure 7.



**Figure 7. Tie Together the Cables with the Strap Tie**

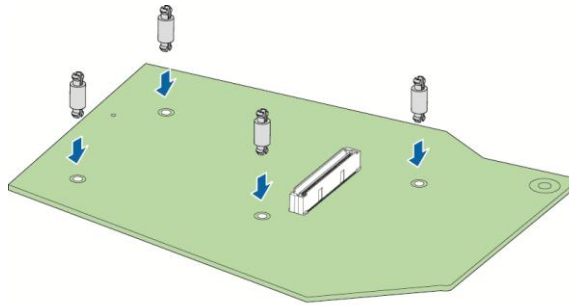
**Note:** Please secure the cables with the strap tie to avoid unexpected RMFBU2 Cache-offload Module cable detaching from the RAID module during the system transportation.

5. Install the server system cover back and connect the power cords. See your server system documentation for instructions.

#### Intel® Integrated RAID Module RMS25PB040, RMS25PB080, RMT3PB080

1. Insert the four barrel standoffs into the matching holes in the server board. To locate the matching module card slot on your server board, see your server board documentation. The Intel® Server Board S2600IP is shown for illustrative purpose. Actual standoff hole locations could be different (see Figure 8).

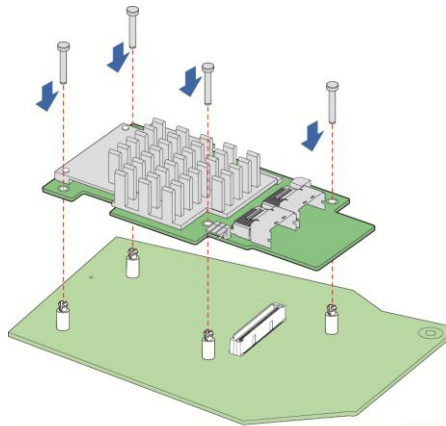




AF004406

**Figure 8. Installing the Barrel Standoff**

2. Attach the RAID to the matching server board connector, and press the module card firmly to engage the barrel standoffs installed in step 1. Press down gently but firmly to ensure that the card is properly seated in the connectors, and then insert the four pin standoffs into the barrel standoffs respectively. The Intel® RAID Module RM25PB080 is shown for illustrative purpose (see Figure 9).



AF004407

**Figure 9. Installing the Intel® Integrated RAID Module**

3. Connect the proper cables into the adapter using the 4-port combined end. Make sure the module and cables are properly attached and plug the cable into connector at the inside edge of the adapter.
4. Tie together the RMFBU2 Cache-offload Module cable and the data cable with a provided strap tie as shown in Figure 7.
 

*Note: Please secure the cables with the strap tie to avoid unexpected RMFBU2 Cache-offload Module cable detaching from the RAID module during the system transportation.*
5. Install the server system cover back and connect the power cords. See your server system documentation for instructions.



## 3 Monitoring RAID Maintenance Free Backup Unit

Multiple utilities are available to display and configure the RMFBU2 information.

*Note:* This chapter describes only the RMFBU2 related features of the utility programs. For complete information on these utilities, see the Intel® RAID Software User's Guide.

### Monitoring the SuperCap with the Intel® RAID BIOS Configuration Utility

The Intel® RAID BIOS Console can be used to configure disk arrays and logical drives. It is independent of the operating system and can be accessed at server start up by pressing <Ctrl>+<G>.

To view the RMFBU2 information, do the following:

1. At boot, press <Ctrl> + <G> when prompted.
2. Once the Intel® RAID BIOS Console loads and the main menu is displayed, choose **Adapter Properties**.
3. Click **Next** to view the second **Adapter Properties** screen.
4. In the **Battery Backup** field at the top left of the **Adapter Properties** screen, click **Present**.
5. The **Battery Module** screen appears, as shown in Figure 10. This screen contains the following information:
  - Battery information
  - Design information
  - Capacity information
  - Properties

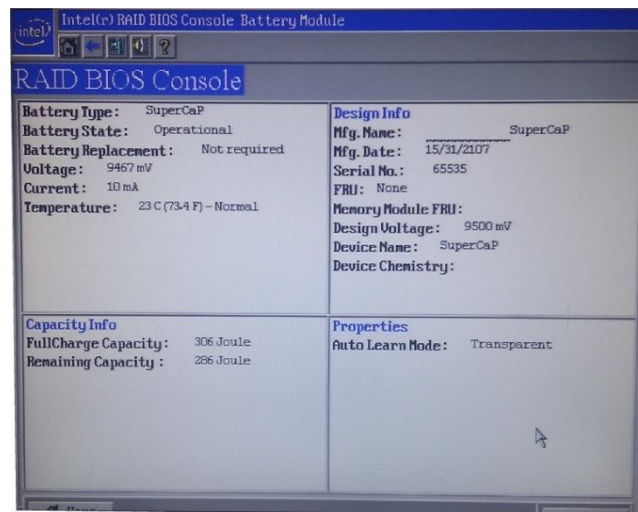


Figure 10. Monitoring the RMFBU2 with Intel® RAID BIOS Console

*Note:* The RMFBU2 properties are view only.

## Using Intel® RAID Web Console 2

To view the status of all RMFBU2 connected to RAID modules in the server, select the Physical tab in the left panel of the Intel® RAID Web Console 2. To see the RMFBU2, select the controller. The RMFBU2 appears as the last item on the list under that module (see Figure 11). An icon (small green or red icon) appears in the left pane to indicate the RMFBU2 status. The green indicates normal operation and the red indicates the RMFBU2 has failed.

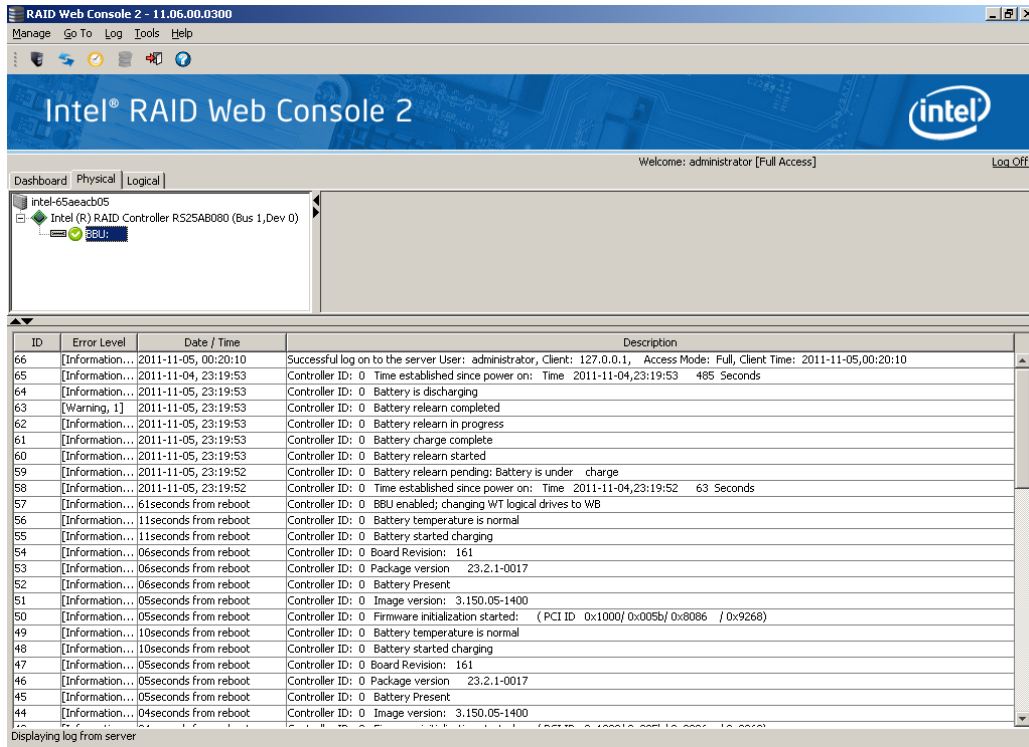


Figure 11. RMFBU2 Information in Intel® RAID Web Console 2

## 4 RAID Maintenance Free Backup Unit Specifications

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### MegaRAID CacheVault™ Technology

LSI\* MegaRAID CacheVault™ flash cache protection uses NAND flash memory powered by a super-capacitor to protect data stored in the MegaRAID controller cache. This module eliminates the need for a lithium ion battery traditionally used to protect DRAM cache memory on PCI RAID controllers. The RAID controller automatically writes the data in cache to flash when a power failure occurs, while the super-capacitor keeps the current going during the process. When the power comes back, the DRAM is recovered from flash and the system goes on without loss of data. The benefits of this technology are elimination of hardware maintenance associated with LiON batteries, lower total cost of ownership over the life of the adapter, and more environmentally friendly cache protection.

**Table 2. RMFBU2 Specifications**

Specifications	RMFBU2
SuperCap2 Operating Environment	0°C to 55°C
SuperCap2 Storage Temperature	0°C to 70°C
Fast Charge Rate	500 mA
SuperCap2 Voltage	Maximum Voltage: 13.2 V Nominal Voltage: 9.5 V
SuperCap2 Capacity	6.4 F (where F is the unit Farad)
SuperCap2 Mechanical	65 mm x 52 mm
RMFBU2 Mechanical	87 mm x 57 mm
SuperCap2 Charge Time	Typical: Approximately two minutes
RMFBU2 Shelf Life	Two years
RMFBU2 Warranty	Intel® provides a three year warranty on the Intel® RAID Maintenance Free Backup Unit AXXRMFBU2.
RMFBU2 Cache-offload Module Capacity	2 GB NAND Flash
Smart Monitoring	Temperature is monitored using the I <sup>2</sup> C interface.

## 5 Regulatory and Compliance Information

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Intel's RAID products typically have a variety of individual component level certifications; however final regulatory compliance is based on the combination of the RAID card being integrated within an Intel system product. For combination regulatory compliance, please refer to Product Regulatory Compliance for Intel's Server Chassis/System.

**Intended Application** – The RAID products are evaluated as Information Technology Equipment (ITE), which are intended to be integrated into Intel system products that will be installed in offices, schools, computer rooms, and similar commercial type locations. The suitability of this product for other product categories and environments (such as: medical, industrial, telecommunications, NEBS, residential, alarm systems, test equipment, etc.), other than an ITE application, may require further evaluation.

### **IMPORTANT COMPLIANCE NOTICE:**

**Final EMC, Safety and Environmental compliance and testing may be required of the final integrated server platform configured using Intel Server building blocks. It is the responsibility of the final integrator and representatives placing product into the market place to ensure compliance is maintained when any additional components and/or parts are added.**

**For more information on Final Compliance and Testing please contact your local Intel Representative.**

## Product Regulatory Compliance

Intel's server chassis and system component level products must be tested and comply with the following safety, electromagnetic compatibility (EMC), and product environmental regulations and requirements.

**Intended Application** – The server chassis and system component products are evaluated as Information Technology Equipment (ITE), which may be installed in offices, schools, computer rooms, and similar commercial type locations. The suitability of this product for other product categories and environments (such as: medical, industrial, telecommunications, NEBS, residential, alarm systems, test equipment, etc.), other than an ITE application, may require further evaluation.

## Product EMC Compliance – Class A Compliance

EN55022 - Emissions (Europe)

EN55024 - Immunity (Europe)

CE – EMC Directive 2004/108 EC (Europe)

## Product Environmental Compliance

Intel has a system in place to restrict the use of banned substances in accordance with worldwide regulatory requirements. A Material Declaration Data Sheet is available for Intel products. For more reference on material restrictions and compliance you can view Intel's Environmental Product Content Specification at <http://supplier.intel.com/ehs/environmental.htm>.

- Europe - European Directive 2002/95/EC -(who owns submitting declaration.

Restriction of Hazardous Substances (RoHS)

Threshold limits and banned substances are noted below.

Quantity limit of 0.1% by mass (1000 PPM) for:





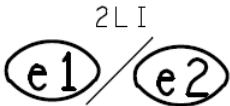
Lead, Mercury, Hexavalent Chromium,  
Polybrominated Biphenyls Diphenyl Ethers  
(PBB/PBDE)

Quantity limit of 0.01% by mass (100 PPM) for:

Cadmium (who owns submitting declaration.

- California Code of Regulations, Title 22, Division 4.5, Chapter 33:  
Best Management Practices for Perchlorate Materials
- China – Restriction of Hazardous Substances (China RoHS)
- WEEE Directive (Europe)
- Packaging Directive (Europe)
- REACH Directive (Europe)

## Product Regulatory Compliance Markings

Regulatory Compliance	Country	Marking
CE Mark	Europe	
Waste of Electronic and Electrical Equipment Recycling Mark	Europe	
China Restriction of Hazardous Substance Environmental Friendly Use Period Mark	China	
Lead free J-Std 609 Mark	Europe	<p>2nd Level Interconnect</p>  <p>Or</p> 

# Electromagnetic Compatibility Notices

## Europe (CE Declaration of Conformity)

This product has been tested in accordance to, and complies with the Low Voltage Directive (2006/95/EC) and EMC Directive (2004/108/EC). This product has been marked with the CE Mark to illustrate its compliance.

# 6 Getting Help

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## World Wide Web

[http://www.intel.com/p/en\\_US/support/server/](http://www.intel.com/p/en_US/support/server/)

## Telephone

All calls are billed US \$25.00 per incident, levied in local currency at the applicable credit card exchange rate plus applicable taxes. (Intel® reserves the right to change the pricing for telephone support at any time without notice).

Before calling, fill out the [Intel® Server Issue Report Form](#). A sample form is provided on the following pages. However, for the fastest service, please submit your form over the Internet.

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<b>In U.S. and Canada</b>		1-800-404-2284	
<hr/>			
<b>In Europe</b>			
UK	0870 6072439	Finland	9 693 79297
France	01 41 918529	Denmark	38 487077
Germany	069 9509 6099	Norway	23 1620 50
Italy	02 696 33276	Sweden	08 445 1251
Spain	91 377 8166	Holland	020 487 4562
Belgium	02 714 3182		
<hr/>			
<b>In Asia-Pacific region</b>			
Australia	1800 649931	Indonesia	803 65 7249
Hong Kong	852 2 844 4456	Malaysia	1 800 80 1390
Korea	822 767 2595	New Zealand	0800 444 365
China	800 820 1100 (toll-free) 8 621 33104691 (not toll-free)	Pakistan	632 63684 15 (IDD from Philippines)
Singapore	65 6213-1311	Philippines	1 800 1 651 0117
India	0006517 2 68303634 (manual toll-free. From India, you need an IDD-equipped telephone)	Thailand	1 800 631 0003
Taiwan	2 2545-1640	Vietnam	632 6368416 (IDD from Philippines)
		Myanmar	63 2 636 9796 (from Philippines)
		Cambodia	63 2 636 9797 (from Philippines)
<hr/>			
<b>In Japan</b>			
0120 868686 (Domestic)		81 298 47 0800 (outside country)	

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**In Latin America**

Brazil	001-916 377 0180	Ecuador (Andimate)	Contact AT&T USA at 1 999 119. Once connected, dial 800 843 4481
Mexico	Contact AT&T USA at 001 800 462 628 4240. Once connected, dial 800 843 4481	Ecuador (Pacifictel)	Contact AT&T USA at 1 800 225 528. Once connected, dial 800 843 4481
Colombia	Contact AT&T USA at 01 800 911 0010. Once connected, dial 800 843 4481	Guatemala	Contact AT&T USA at 99 99 190. Once connected, dial 800 843 4481
Costa Rica	Contact AT&T USA at 0 800 0 114 114. Once connected, dial 800 843 4481	Venezuela	Contact AT&T USA at 0 800 2255 288. Once connected, dial 800 843 4481
Panama	Contact AT&T USA at 00 800 001 0109. Once connected, dial 800 843 4481	Argentina	Contact AT&T USA at 0-800 222 1288. Once connected, dial 800 843 4481
Chile (Easter Island)	Contact AT&T USA at 800 800 311. Once connected, dial 800 843 4481	Paraguay	001 916 377 0114
Chile (Mainland and Juan)	Contact AT&T USA at 800 225 288. Once connected, dial 800 843 4481	Peru	001 916 377 0114
Miami	1 800 621 8423	Uruguay	001 916 377 0114

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For an updated support contact list, see <http://www.intel.com/support/9089.htm/>.



# 7 Intel<sup>®</sup> Server Issue Report Form

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**Date Submitted:** \_\_\_\_\_  
**Company Name:** \_\_\_\_\_  
**Contact Name:** \_\_\_\_\_  
**Email Address:** \_\_\_\_\_  
**Intel<sup>®</sup> Server Product:** \_\_\_\_\_  
**Priority (Critical, Hot, High, Low):** \_\_\_\_\_

**Brief Problem Description.** Provide a brief description below. See the last page for space to include a detailed problem description.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Board/Chassis Information

Baseboard Revision – PBA#:	DIMM Configuration
Baseboard Serial Number:	DIMM1A MB:
CPU1 Speed/Stepping/Spec:	DIMM1A Vendor/part number:
CPU2 Speed/Stepping/Spec:	DIMM1B MB:
System BIOS Version:	DIMM1B Vendor/part number:
HSC Firmware Version:	DIMM2A MB:
Chassis Model	DIMM2A Vendor/part number:
<input type="checkbox"/> Intel <sup>®</sup> SC5200 Base	DIMM2B MB:
<input type="checkbox"/> Intel <sup>®</sup> SC5200 Base Redundant Power	DIMM2B Vendor/part number:
<input type="checkbox"/> Intel <sup>®</sup> SC5250-E	
<input type="checkbox"/> Intel <sup>®</sup> SR1350-E	
<input type="checkbox"/> Other (Vendor/Model):	

## Operating System Information

**Operating System** \_\_\_\_\_

**Version** \_\_\_\_\_

**Service Pack** \_\_\_\_\_

## Peripheral Information

Check each box below that is used, and provide the requested information.

Peripheral	Card Or Peripheral Description	Driver Revision	IRQ #	I/O Base Address	FW Rev#
<b>P64 Segment C (PCI-X 64/133)</b>					
<input type="checkbox"/>	PCI Slot 1				
<input type="checkbox"/>	PCI Slot 2				
<b>P64 Segment B (PCI-X 64/100)</b>					
<input type="checkbox"/>	PCI Slot 3				
<input type="checkbox"/>	PCI Slot 4				
<b>P32 Segment A (PCI 32/33)</b>					
<input type="checkbox"/>	PCI Slot 5				
<input type="checkbox"/>	PCI Slot 6				
<b>Video</b>					
<input type="checkbox"/>	On-Board Video				
<input type="checkbox"/>	Add-in Video				
<b>NIC</b>					
<input type="checkbox"/>	On-Board NIC1 (10/100 Mb)				
<input type="checkbox"/>	On-Board NIC2 (1.0 Gb)				

## Hard Drive Information:

IDE # of drives installed: \_\_\_\_\_  
Make/Model/Firmware Revision \_\_\_\_\_

SCSI # of drives installed: \_\_\_\_\_  
Make/Model/Firmware Revision \_\_\_\_\_

SATA # of drives installed: \_\_\_\_\_  
Make/Model/Firmware Revision \_\_\_\_\_

