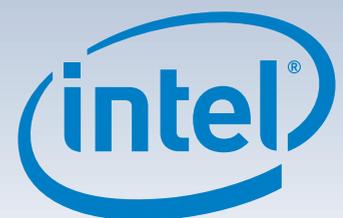


# Intel® RAID Maintenance Free Backup Unit 4 Quick Installation User's Guide

Thank you for buying an Intel® RAID Maintenance Free Backup Unit 4. The Intel® RAID Maintenance Free Backup Unit 4 supports the Intel® RAID Controller RS3DC040 and RS3DC080. The following information will help you assemble your Intel® RAID Maintenance Free Backup Unit 4 and install components.

Perform all installation work at an electrostatic discharge (ESD)-safe workstation that meets the requirements of EIA-625, *Requirements for Handling Electrostatic Discharge Sensitive Devices*. You must perform all actions in accordance to the latest revision of the IPC-A-610 ESD-recommended practices.

This guide and other supporting documents are located on the web at:  
<http://www.intel.com/support>.



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## 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://www.intel.com/support/motherboards/server/sb/cs-010770.htm> for complete safety information.

## Warning



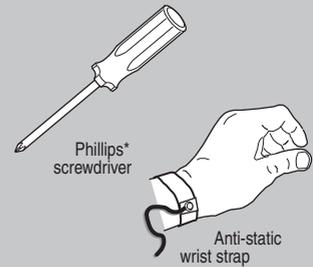
Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

## Caution



Observe normal ESD [Electrostatic Discharge] procedures during system integration to avoid possible damage to server board and/or other components.

## Tools Required



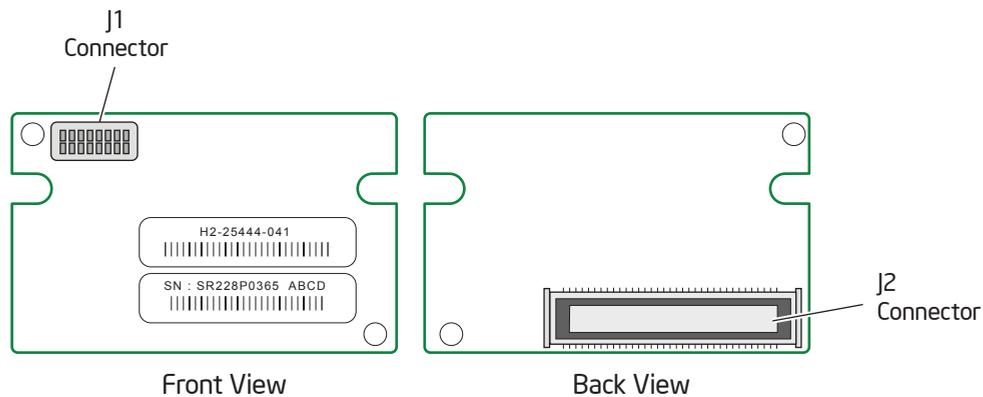
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# Product Overview

The Intel® RAID Maintenance Free Backup Unit 4 (RMFBU4) is an Open NAND Flash Interface (ONFI) flash module that provides cache off-load capability to protect cached data in case of host power loss or server failure. The RMFBU4 module connects to a Super Capacitor Pack module, which provides power for the backup of your data.

The RMFBU4 module attaches directly to the RAID controller, and then it connects by cable to a Super Capacitor Pack module that is attached to a remote mount board or an Intel® Server Chassis.

The following figure shows the front view and the back view of the RMFBU4 module. The front view is the side that you can see when the unit is installed on a RAID controller.



J1: 9-pin Connector to the Remote Super Capacitor Pack Module  
J2: 70-pin Board-to-Board Connector

# General Installation Process

## 1 Unpack the RMFBU4 Module



**CAUTION:** It is good practice to back up your data before adding hardware, such as an RMFBU4 module, to your system.

Unpack the RMFBU4 module in a static-free environment. Remove the module from the antistatic bag, and inspect it for damage. If the module appears to be damaged, contact Intel or your reseller support representative.

## 2 Prepare the Host Computer



**CAUTION:** Before you install the RMFBU4 module, make sure that the host computer is disconnected from the power and from any networks.

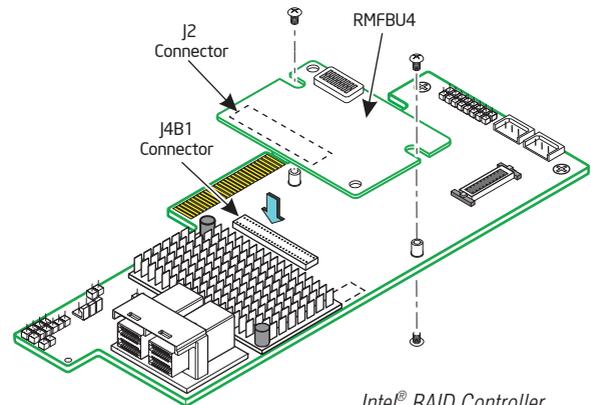
Turn off the host computer, and unplug the power cords from the rear of the power supply. Remove the cover from the host computer to permit access to the RAID controller.

## 3 Remove the RAID Controller from the Computer

- Unplug all cables from the RAID controller, remove the screw that attaches the bracket to the computer chassis, and carefully remove the RAID controller from the slot.
- Place the RAID controller on a flat, clean, static-free surface.

## 4 Attach the RMFBU4 Module to the RAID Controller

- Ground yourself, and make sure that the system is grounded.
- Place the RMFBU4 module front-side-up on a flat, clean, static-free surface.
- Mount the two standoffs on the front side of the RAID controller by screwing in two screws from the back side of the RAID controller, as shown in the following figure. The standoffs are threaded at both ends, and the screws thread from the back side of the RAID controller into the board-to-board standoffs. Center the screwdriver carefully to avoid stripping the screw heads. Do not over-tighten the screws.
- Hold the RMFBU4 module so that the front side faces upward, and align the J2 connector on the RMFBU4 module with the connector on the RAID controller.



Intel® RAID Controller  
RS3DC080 as shown

- Carefully press the RMFBU4 module onto the RAID controller so that the two connectors are firmly joined.
- Secure the RMFBU4 module to the RAID controller by screwing in the two screws from the top side of the RAID controller. The standoffs are threaded at both ends, and the screws thread from the back side of the RAID controller into the board-to-board standoffs. Center the screwdriver carefully to avoid stripping the screw heads. Do not over-tighten the screws.



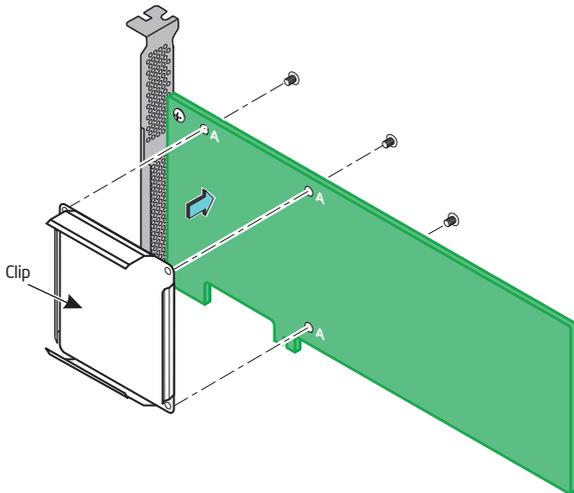
**NOTE:** If the Super Capacitor Pack module is to be attached to a remote mount board, continue to follow the steps 5 to 9. If the Super Capacitor Pack module is to be attached to an Intel® Server Chassis, continue to follow the steps 10 to 12.

# General Installation Process

## 5

### Install the Clip on the Remote Mount Board

- A** Ground yourself, and make sure that the system is grounded.
- B** Place the clip and the remote mount board module front-side-up on a flat, clean, static-free surface.
- C** Hold the clip so the screw holes on the clip line up with the screw holes on the remote mount board, as shown in the following figure.

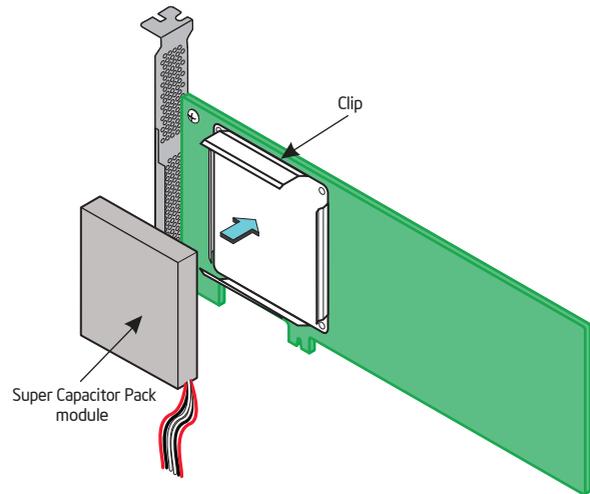


- D** Secure the clip to the remote mount board in three screw holes with the screws and the nuts.
- E** The screws thread through the front of the clip and the remote mount board. Center the screwdriver carefully to avoid stripping the screw heads. Do not over-tighten the screws.

## 6

### Attach the Super Capacitor Pack Module to the Clip

- A** Ground yourself, and make sure that the system is grounded.
- B** Place the Super Capacitor Pack module and the clip front-side-up on a flat, clean, static-free surface.
- C** Press the Super Capacitor Pack module into the clip until the module clicks firmly into place, as shown in the following figure.

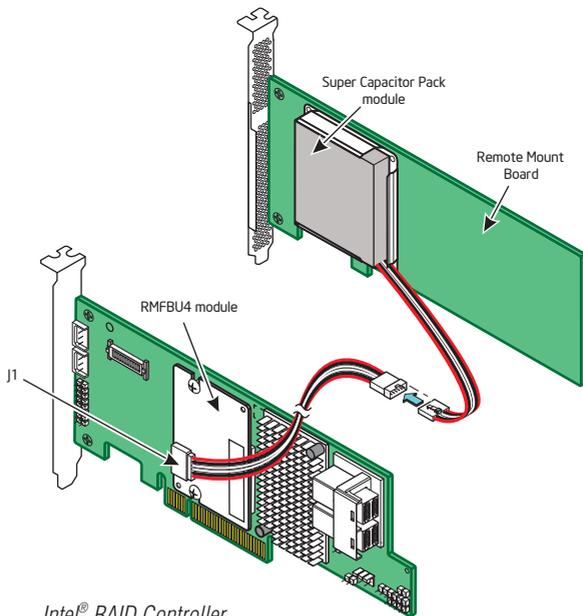


# General Installation Process

## 7

### Connect the RMFBU4 Module to the Remote Super Capacitor Pack Module (Valid for Remote Mount Board)

- A** Ground yourself, and make sure that the system is grounded.
- B** Place the RAID controller on a flat, clean, static-free surface.
- C** Remove the cable that is included in the RAID controller box.
- D** Insert one 9-pin cable connector on the cable into the 9-pin J1 connector on the RMFBU4 module, as shown in the following figure (the cable is blue).
- E** Insert the other 9-pin cable connector into the 9-pin connector on the remote Super Capacitor Pack module. Align the cable connectors to make sure that they are connected correctly.



Intel® RAID Controller RS3DC080 as shown

## 8

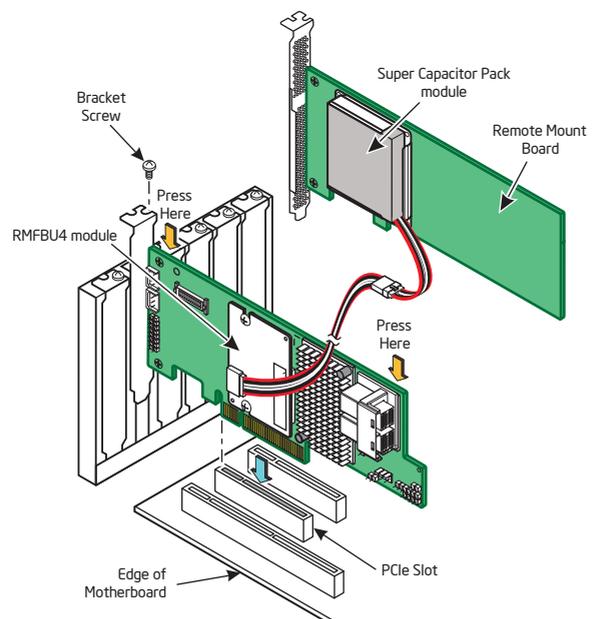
### Reinstall the RAID Controller on the Motherboard (Valid for Remote Mount Board)

- A** Make sure that the power to the chassis is still turned off, the power cords are unplugged, and the chassis is grounded and has no AC power.
- B** Install the RAID controller in a PCIe slot on the motherboard, as shown in the following figure.



**NOTE:** This RAID controller is a PCIe x8 card, and it can operate in x8 or x16 slots. Some PCIe slots, however, support only PCIe graphics cards; if a RAID controller is installed in one of these slots, the RAID controller will not function. Refer to the guide for your motherboard for information about the PCIe slot.

- C** Press down gently, but firmly, to seat the card correctly in the slot.
- D** Secure the RAID controller to the computer chassis with the bracket screw.



Intel® RAID Controller RS3DC080 as shown

# General Installation Process

## 9 Install the Remote Mount Board on the Motherboard

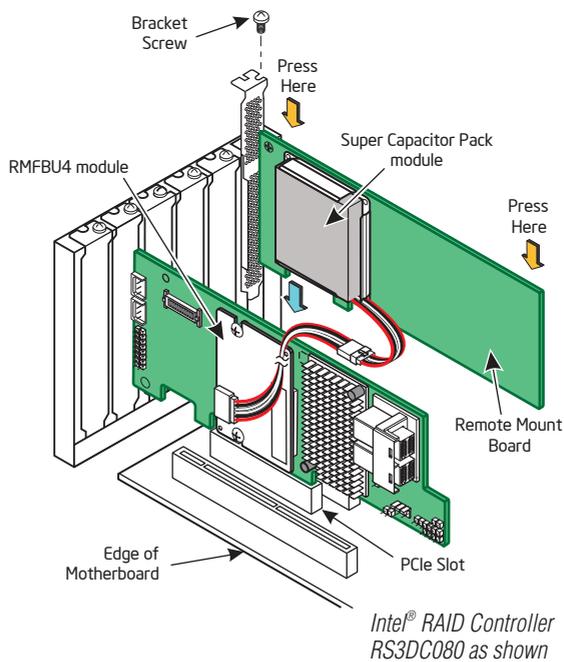
**A** Make sure that the power to the chassis is still turned off, the power cords are unplugged, and the chassis is grounded and has no AC power.

**B** Insert the remote mount board in a PCIe slot on the motherboard, as shown in the following figure.

**!** NOTE: Some PCIe slots support only PCIe graphics cards. If a remote mount board is installed in one of these slots, the remote mount board will not function. Refer to your computer documentation for information about the PCIe slot.

**C** Press down gently, but firmly, to seat the board correctly in the slot.

**D** Use the bracket screw to secure the remote mount board to the system chassis.



**E** Reinstall the computer cover, and reattach the power cords.

**F** Turn on the power to the computer.

Refer to the *Intel® RAID Software User Guide* for information about running the RAID configuration utility and installing the software drivers.

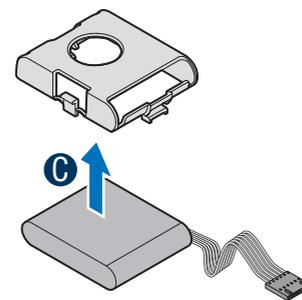
## 10 Mount the Super Capacitor Pack Module to the Intel® Server Chassis

**!** NOTE: Most of the Intel® Server Chassis provide a position to mount the Super Capacitor Pack module clip; the remote mount board is not needed in this kind of scenario. Refer to the *Intel® Server System User Guide* for details of the position where the Super Capacitor Pack module clip can be mounted.

**A** Ground yourself, and make sure that the system is grounded.

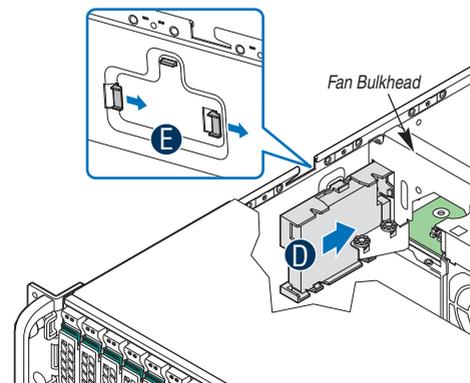
**B** Place the Super Capacitor Pack module and the clip front-side-up on a flat, clean, static-free surface.

**C** Press the Super Capacitor Pack module into the clip until the module clicks firmly into place, as shown in the following figure (for reference only; actual shape of the product may vary from the figure).



**D** Locate the mounting holes for the Super Capacitor Pack module clip in the Intel® Server Chassis.

**E** Align the tabs on the clip with the mounting holes in the Intel® Server Chassis and slide the clip until the clip engages with the mounting holes.



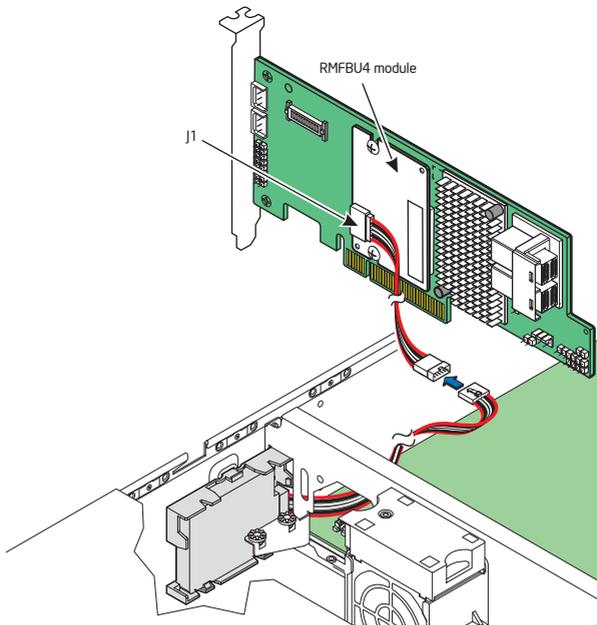
# General Installation Process

## 11

### Connect the RMFBU4 Module to the Remote Super Capacitor Pack Module (Valid for Intel® Server Chassis)

- A** Ground yourself, and make sure that the system is grounded.
- B** Place the RAID controller on a flat, clean, static-free surface.
- C** Remove the cable that is included in the RAID controller box.
- D** Insert one 9-pin cable connector on the cable into the 9-pin J1 connector on the RMFBU4 module, as shown in the following figure (the cable is blue).
- E** Insert the other 9-pin cable connector into the 9-pin connector on the remote Super Capacitor Pack module. Align the cable connectors to make sure that they are connected correctly.

Intel® RAID Controller RS3DC080 as shown



## 12

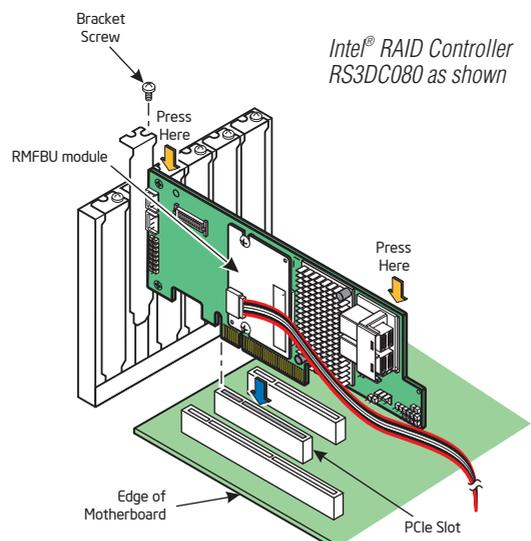
### Reinstall the RAID Controller on the Motherboard (Valid for Intel® Server Chassis)

- A** Make sure that the power to the chassis is still turned off, the power cords are unplugged, and the chassis is grounded and has no AC power.
- B** Install the RAID controller in a PCIe slot on the motherboard, as shown in the following figure.



**NOTE:** This RAID controller is a PCIe x8 card, and it can operate in x8 or x16 slots. Some PCIe slots, however, support only PCIe graphics cards; if a RAID controller is installed in one of these slots, the RAID controller will not function. Refer to the guide for your motherboard for information about the PCIe slot.

- C** Press down gently, but firmly, to seat the card correctly in the slot.
- D** Secure the RAID controller to the computer chassis with the bracket screw.



- E** Reinstall the computer cover, and reattach the power cords.
- F** Turn on the power to the computer.

Refer to the *Intel® RAID Software User Guide* for information about running the RAID configuration utility and installing the software drivers.

# Reference Documents

If you need more information about any topic covered in this guide, refer to the following documentation on the Intel website at <http://www.intel.com/support>:

- *Intel® RAID Controller RS3DC040/RS3DC080 Quick Installation User's Guide*
- *12Gb/s Intel® RAID Controllers User Guide*
- *Intel® RAID Software User Guide*
- *Software license agreement*

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