Intel® RAID Premium Feature Keys AXXRPFKSSD2, AXXRPFKDE2, and AXXRPFKSNSH2 Installation Guide

Order Number: E29824-001

G29824-001

IMPORTANT: Your Intel® RAID Controller must be programmed with the latest Intel® RAID Controller firmware to enable Intel® RAID Premium Features. Please check http://www.intel.com/ and verify that your Intel® RAID Controller is programmed with the latest firmware. Current RAID controller firmware can be downloaded at http://www.intel.com/. If needed, please update your RAID controller before proceeding with any instructions in this Installation Guide.

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Important Safety Instructions

Important Safety Instructions

Read all caution and safety statements in this document before performing any of the instructions. See *Intel Server Boards and Server Chassis Safety Information* 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 unter 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》）。

Important Safety InstructionsConsignes 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* 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 http://www.intel.com/support/motherboards/server/sb/cs-010770.htm.

WARNINGS

Server power on/off: The push-button on/off power switch on the front panel of the server does not turn off the AC power. To remove AC power from the server, you must unplug the AC power cord from either the power supply or wall outlet.

Hazardous conditions—power supply: Hazardous voltage, current, and energy levels are present inside the power supply enclosure. There are no user-serviceable parts inside it; servicing should only be done by technically qualified personnel.

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

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Intel® RAID Premium Feature Key Compatibility

The Intel® RAID Premium Feature Keys in this document do not fit Intel® RAID Controllers RS2BL080, RS2BL040, RS2BL080DE, RS2BL080SNGL, RS2MB044, RS2PI008, RS2PI008DE, RMS2MH080, RS2SG244, RS2WG160, RT3WB080, RS2VB080, RS2VB040. Details of the supported keys for these controllers can be found in *Intel® RAID Premium Feature Key AXXRPFKSSD, AXXRPFKDE, and AXXRPFKSNSH Installation Guide* from http://www.intel.com.

Intel® RAID Premium Feature Keys are used to enable premium RAID features on Intel® RAID Controllers. Several Intel® RAID Premium Feature Key models are available.

This guide is specific to the Intel® RAID Premium Feature Keys with the order code, AXXRPFKSSD2, AXXRPFKDE2, and AXXRPFKSNSH2.

- The Feature key is designed to plug onto an Intel® RAID Controller that has RAID Premium Feature Key connector on it. The Intel® RAID Premium Feature Key must remain attached to the connector in order to enable the premium feature.
- RAID premium features enabled through the use of the key include SSD Cache with Fastpath, Encryption Management, and Snapshot.
- Please refer to the *Intel® RAID Software User's Guide* on http://www.intel.com for more detailed information.

Intel® RAID Premium Feature Key AXXRPFKSSD2, AXXRPFKDE2, or AXXRPFKSNSH2 Kit Contents

- One Intel® RAID Premium Feature Key (AXXRPFKSSD2, AXXRPFKDE2 or AXXRPFKSNSH2)
- These instructions

Intel® RAID Premium Feature Key AXXRPFKSSD2, AXXRPFKDE2, or AXXRPFKSNSH2 Requirements

The Intel® RAID Premium Feature Key AXXRPFKSSD2, AXXRPFKDE2 or AXXRPFKSNSH2 is the only hardware required to add the RAID Premium Feature to a selected Intel® RAID Controller. Please refer to *Intel® RAID Software User's Guide* on http://www.intel.com/support/motherboards/server/ for the list of Intel® RAID Controllers that are supported by the Intel® RAID Premium Feature Keys.

Installing the Hardware

Install the Intel® RAID Premium Feature Key AXXRPFKSSD2, AXXRPFKDE2, or AXXRPFKSNSH2

1. Carefully remove the RAID Premium Feature Key from its packaging.
2. Locate the RAID Premium Feature Key connector on the Intel® RAID Controller. This is a 2-pin shielded connector. The following figure shows the location of the RAID Premium Feature Key connector on the Intel® RAID Controller RS25DB080. In the figure, the arrow points to the location of the RAID Premium Feature Key connector. The location of RAID Premium Feature Key connector on your Intel® RAID Controller may vary. Please refer to the User Guide for your Intel® RAID Controller for the location of this connector.

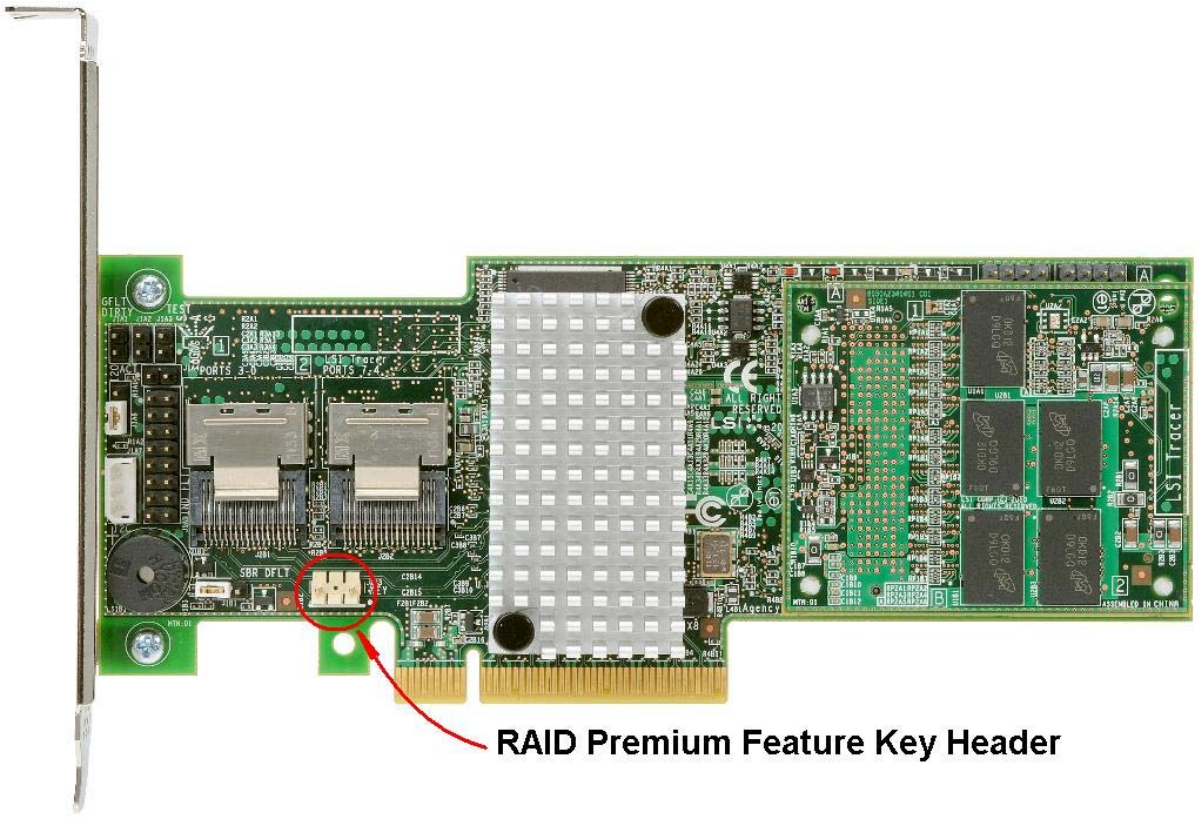

Figure 1. Locating RAID Premium Feature Key connector on Intel® RAID Controller RS25DB080

3. With the 3-hole edge of the RAID Premium Feature key pointing to the RAID Premium Feature Key 2-pin connector of the RAID controller, push the key onto the connector on the RAID controller.

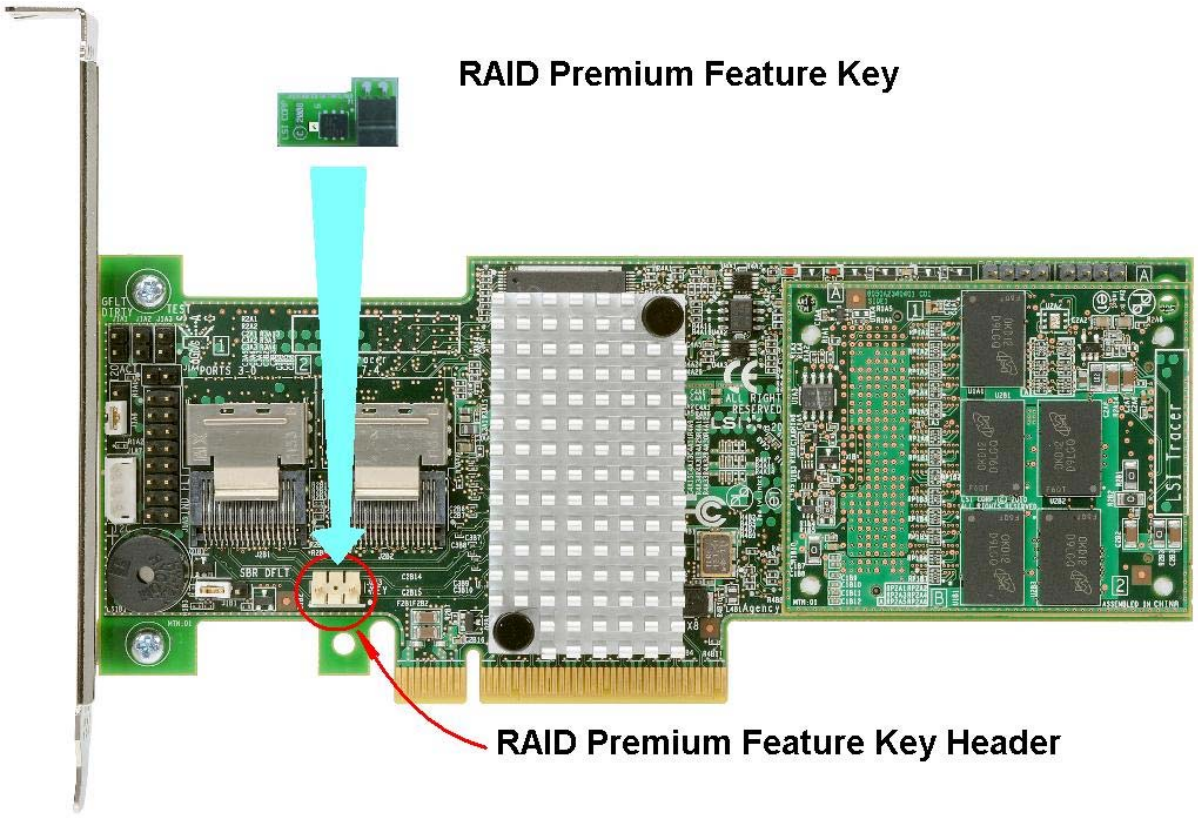

Figure 2. Installing RAID Premium Feature Key on Intel® RAID Controller RS25DB080

Finish Up the Hardware

1. Refer to documentation of the Intel® RAID Controller from http://www.intel.com/support/motherboards/server/ to finish installing the RAID controller into an Intel® Server Board, or qualified third party server board.

Removing the Intel® RAID Premium Feature Key AXXRPFKSSD2, AXXRPFKDE2, or AXXRPFKSNSH2

1. Follow steps in documentation of the Intel® RAID Controller to remove the RAID controller from server board.
2. Firmly hold the RAID controller on table, and pull the Intel® RAID Premium Feature Key from the connector.

Intel® RAID Premium Feature Introduction

This section introduces Intel® RAID Premium Features that can be enabled by the Intel® RAID Premium Feature Key. For details on how to use above features, please refer to *Intel® RAID Software User's Guide* which can be downloaded at http://www.intel.com/support/motherboards/server/.

- Intel® RAID Premium Feature Key AXXRPFKSSD2 enables a form of Flash Tiering called SSD Cache and Fastpath features.
  - SSD Cache uses Solid State Devices as secondary cache for Intel® RAID Controllers and is designed to improve read performance of Intel® RAID Controller.
  - Fastpath feature can support full optimization of SSD Virtual Disk groups. With this premium feature enabled, Solid State Drive configurations tuned for small, random block-size IO activity (typical of transactional database applications) can sustain up to over 450,000 IO READS Per Second.

  Note: The Fastpath feature is automatically enabled when the Intel® RAID Premium Feature Key AXXRPFKSSD2 is present.
- Intel® RAID Premium Feature Key AXXRPFKDE2 enables Full Disk Encryption feature. This feature enables the Intel® RAID Controller to manage data security protection for Self Encrypting Drives (SED).
- Intel® RAID Premium Feature Key AXXRPFKSNSH2 enables the Snapshot feature. This feature automatically creates snapshots for stored data on a scheduled basis. Lost data could be restored from a known good previous snapshot.

With the Feature Key installed, unless noted specifically, the added feature must be enabled and/or configured using the RAID BIOS Console utility or RAID Web Console 2 utility. For detailed information on enabling and configuring the feature key option, please refer to the *Intel® RAID Software User's Guide* available under your selected controller at http://www.intel.com.