# Intel® RAID Quick Reference Guide



# Intel® RAID Options

### Intel® RSTe

Intel® RSTe (also known as Intel® Rapid Storage
Technology-Enterprise) is an embedded software RAID solution based on the Intel Chipset RAID Stack for on-server board SAS and SATA ports. It provides pass-through drive support as well as host based RAID 0/1/10 support and RAID 5 support for the SATA ports.

### Intel® Integrated RAID Modules

Intel® Integrated RAID Modules connects to the on-board SAS Module Connector or a module enabled PCI-E slot. This is a cost-effective RAID solution providing more system design flexibility.

Must be purchased separately

### Intel® ESRT2 (LSI\*)

Intel® ESRT2 (also known as Intel® Embedded Server RAID Technology 2) is an embedded software RAID solution based on the LSI MegaRAID\* Stack for on-server board SAS and SATA ports. It supports RAID 0/1/10 and optional RAID 5 with the proper Intel® RAID C600 upgrade keys (must be purchased separately).

### **RAID Adapters**

Standard SAS or RAID HBA available from Intel® or 3<sup>rd</sup> Party suppliers. See Intel® Server Configurator Tool (http://serverconfigurator.intel.com) for the most up-to-date adapter support list for your system.

Must be purchased separately

# Intel® RAID C600 Upgrade Keys

Embedded RAID functions for both On-board SATA/SAS Capable Controller and AHCI Capable SATA Controller can be upgraded by installing one of the Intel® RAID C600 Upgrade keys listed below.

Item	Product Code	Color	On-Board SATA/SAS Capable Controller	On-Board AHCI Capable SATA Controller
1	No Key (Default)	N/A	Intel® RSTe 4 ports SATA R0,1,10,5 or Intel® ESRT2 (LSI*) 4 ports SATA R0,1,10	Intel® RSTe SATA R0,1,10,5 or Intel® ESRT2 (LSI*) SATA R0,1,10
2	RKSATA4R5	Black	Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode	Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode
3	RKSATA8	Blue	Same as item 1 but activate all 8 ports	Same as item 1
4	RKSATA8R5	White	Same as item 3 but add RAID 5 support in Intel® ESRT2 (LSI*) mode	Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode
5	RKSAS4	Green	Intel® RSTe 4 ports SAS R0,1,10 or Intel® ESRT2 (LSI*) 4 ports SAS R0,1,10	Same as item 1
6	RKSAS4R5	Yellow	Same as item 5 but add RAID 5 support in Intel® ESRT2 (LSI*) mode	Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode
7	RKSAS8	Orange	Same as item 5 but activate all 8 ports	Same as item 1
8	RKSAS8R5	Purple	Same as item 7 but add RAID 5 support in Intel® ESRT2 (LSI*) mode	Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode

Note: Some of above Intel® RAID C600 Upgrade Keys may be not suitable for your Intel® platforms. See Intel® Server Configurator Tool (http://serverconfigurator.intel.com) for the key support list for your system.

# **On-board RAID Options**

# Add-in RAID Controller Options

# Intel® RAID Options

### Step 1

Choose a RAID Option

### On-board AHCI Capable **SATA Controller** (SATA Ports)

1. Intel<sup>®</sup> RSTe 2. Intel<sup>®</sup> ESRT2 (LSI\*)

### **On-Server board SAS/SATA Controller** (SAS Ports)

Supported RAID option: 1. Intel® RSTe 2. Intel<sup>®</sup> ESRT2 (LSI\*)

### Intel® Integrated RAID Module

See Intel® Server Configurator your system.

### RAID Adapters

See Intel® Server Configurator Tool for supported RAID Adapters for your system.

### Step 2

Choose proper hardware

### Intel® RAID C600 **Upgrade Keys**

Refer to the key description table on previous page to populate a proper key on your

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Refer to the key description table on previous page to populate a proper key on your

### Intel® Integrated RAID **Module**

**Entry Modules** = R0.1.1E Mainstream Modules = R0,1,10,5,50,6,60

### **Optional Premium Feature Keys**

AXXRPFKSSD = SSD Cache AXXRPFKDE = Disk Encryption AXXRPFKSNSH = Snapshot For Details See Intel® Server Configurator Tool.

### Intel® RAID Controllers

**Entry Adapters** = R0,1,1E Mainstream Adapters = R0,1,10,5,50,6,60

### **Optional Premium Feature Keys**

AXXRPFKSSD = SSD Cache AXXRPFKDE = Disk Encryption AXXRPFKSNSH = Snapshot For Details See Intel® Server Configurator Tool

### Step 3

**Enable RAID** Option

- 1. During system post, press F2 to enter System BIOS Setup
- 2. Under Advance tab, select **Mass Storage Controller Configuration** and press Enter
- 3. Select Intel(R) RSTe or Intel(R) ESRT2 (LSI\*) for AHCI Capable SATA Controller
- 1. During system post, press F2 to enter System BIOS Setup
- 2. Under Advance tab, select **Mass Storage Controller Configuration** and press
- 3. Select Intel(R) RSTe or Intel(R) ESRT2 (LSI\*) for SATA/SAS Capable Controller

Follow the Quick Start User's Guide that shipped with the module to install the Intel® Integrated RAID Module in the server system.

Follow the Quick Start User's Guide (shipped with the adapter) to install the Intel® RAID controller in the server system.

### Step 4

Configure RAID

### Intel® RSTe:

During system post, press Ctrl+I to enter RAID BIOS console.

See Intel® Rapid Storage Technology Enterprise Software User's Guide for configuration

### Intel® ESRT2 (LSI\*):

During system post, press Ctrl+E to enter RAID BIOS See Intel® RAID Software User's Guide for configuration

These guides and other supporting documents are located on the web at:

### **Entry Modules**

During system post, press Ctrl+E

### **Mainstream Modules** During system post, press Ctrl+G

See Intel® RAID Software User's Guide for RAID configuration and maintenance assistance.

### **Entry Adapters**

During system post, press Ctrl+E

### **Mainstream Adapters** During system post, press Ctrl+G

See Intel® RAID Software User's Guide for RAID configuration and maintenance assistance.