PRODUCT BRIEF
Intel® Integrated RAID Module RMS25CB and RMT3CB Family

Intel® Integrated RAID Module RMS25CB and RMT3CB Family

6Gb/s SAS/SATA Intelligent Hardware RAID Modules for Select Intel® Server Boards based on the Intel® Xeon® Processor E5 Family

Intel® Integrated RAID Modules RMS25CB and RMT3CB Family

6Gb/s SAS/SATA Full Hardware RAID Modules for Select Intel® Server Boards

Product Overview:

The new Intel® RAID Modules RMS25CB080, RMS25CB040 and RMT3CB080 are uniquely designed to offer advanced RAID and configuration flexibility to select Intel® server boards based on the Intel® Xeon® processor E5 family. Their 1U capable, mezzanine board form factor affords configuration flexibility by delivering intelligent hardware RAID 0/1/5/6 functionality without taking up a standard add-in card slot.

The Intel RMS25CB and RMT3CB family of products, powered by LSI* MegaRAID* technology, include two 800MHz processor cores and up to 1GB DDR3 1333MHz cache memory to drive exceptional storage performance and scalability. Furthermore, the modules come with an option for either traditional battery-based cache backup or a Maintenance Free Backup Unit (MFBU). The MFBU utilizes a super-capacitor to copy data in flight from dynamic memory to NAND flash-based memory when a server loses power or crashes. Also, the MFBU eliminates maintenance associated with Lithium Ion (LiON) batteries, is more environmentally friendly, and is expected to offer a lower total cost of ownership over the life of the RAID module.

Target Market:

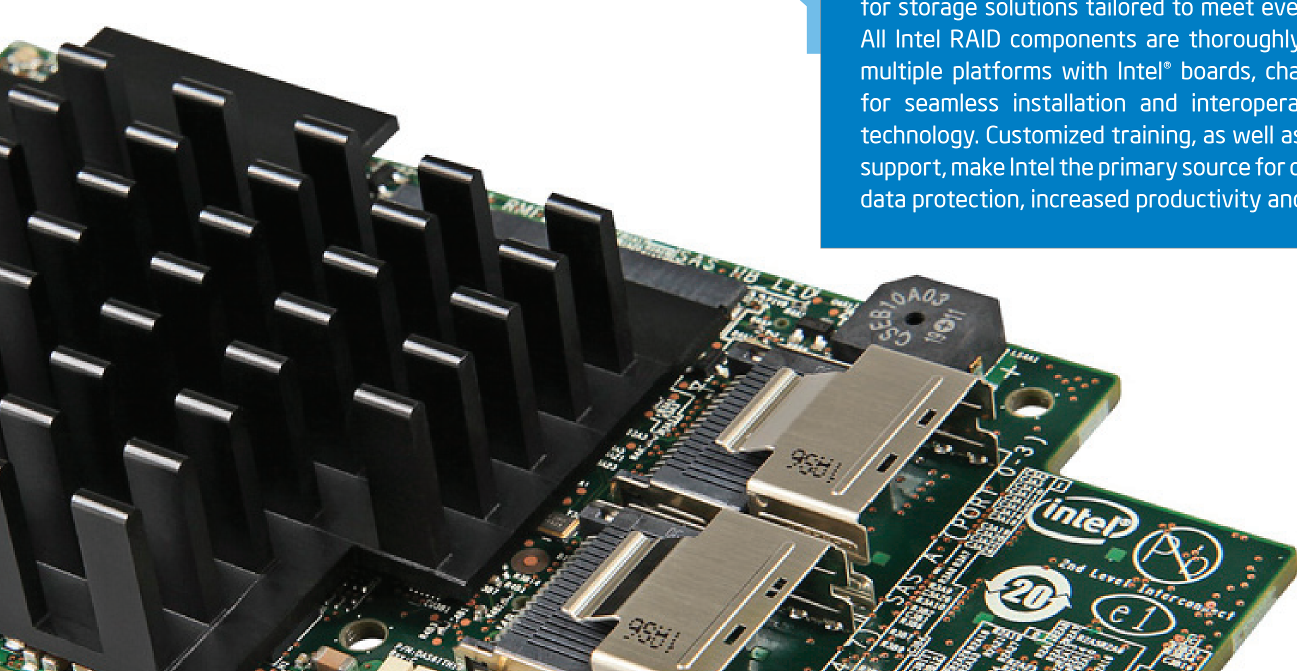
The Intel RMS25CB and RMT3CB family of products are best deployed in mainstream server environments to help optimize the performance and reliability of applications such as database servers, e-mail servers, and web servers. Alternatively, these modules can be teamed with a SAS expander board such at the Intel® RAID Expander RES2CV360 to offer scalable performance solutions for applications such as streaming media. In addition, by connecting one or more SSD's to these modules and adding the SSD Cache 2.0 with FastPath* I/O upgrade feature, the performance of most applications can be further enhanced.

Key Advantages:

- **System design flexibility –** 1U capable system boards connect to the Storage I/O expansion slot on select Intel server boards based on the Intel Xeon processor E5 family. These modules can be used with Intel and 3rd party chassis without taking up a standard add-in card slot and without the need for a riser card or low profile chassis cutout.
- **Exceptional data protection and performance –** Supports data redundancy using SAS or SATA hard disk drives through mirroring, parity and double parity (RAID levels 1, 5, and 6). It also provides striping capability for spans (RAID levels 10, 50, and 60). Plus, the dual-core LSI SAS2208 ROC technology, x8 PCI Express* Generation 3[1] host interface and DDR3 cache enhance the performance of mainstream applications.
- **Improved serviceability with an optional MFBU –** The Maintenance Free Backup Unit (MFBU) is built using NAND flash that can retain data for up to ten years. It provides near-instant optimal RAID performance versus traditional LiON battery backup units (BBUs), which are limited to just days of retention and can take up to eight hours to charge. In addition, this longer-lasting technology allows for the same standard three year warranty as other Intel RAID products.
- **Support for premium feature upgrades –** The RMS25CB080 includes a connector for an optional hardware-based key which unlocks one or more advanced software algorithm designed to improve performance and enhance data protection. For instance, the SSD Cache with FastPath* I/O upgrade enables the use of one or more SSD as a large cache pool for the RAID controller. This can significantly improve the performance of many server applications.

Why Intel® RAID?

Intel provides a broad portfolio of RAID products to allow for storage solutions tailored to meet every business need. All Intel RAID components are thoroughly validated across multiple platforms with Intel® boards, chassis and systems for seamless installation and interoperability with other technology. Customized training, as well as Intel service and support, make Intel the primary source for customers seeking data protection, increased productivity and simplified IT.

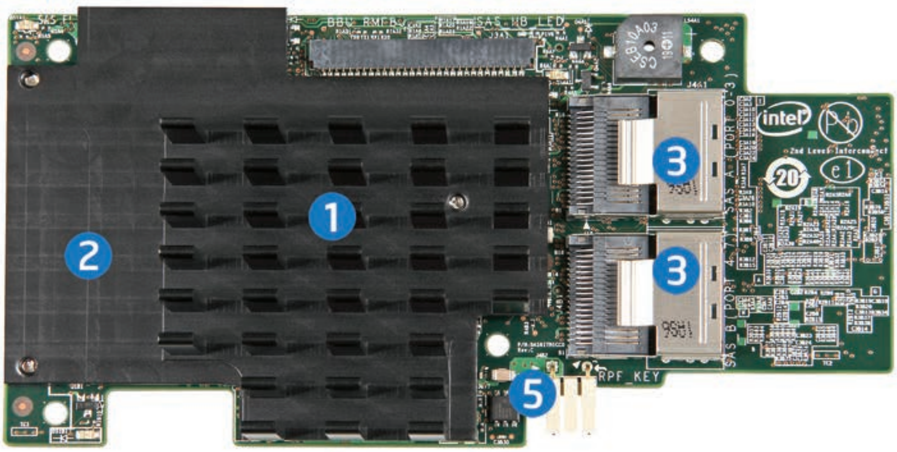


Intel® Integrated RAID Modules RMS25CB and RMT3CB Family

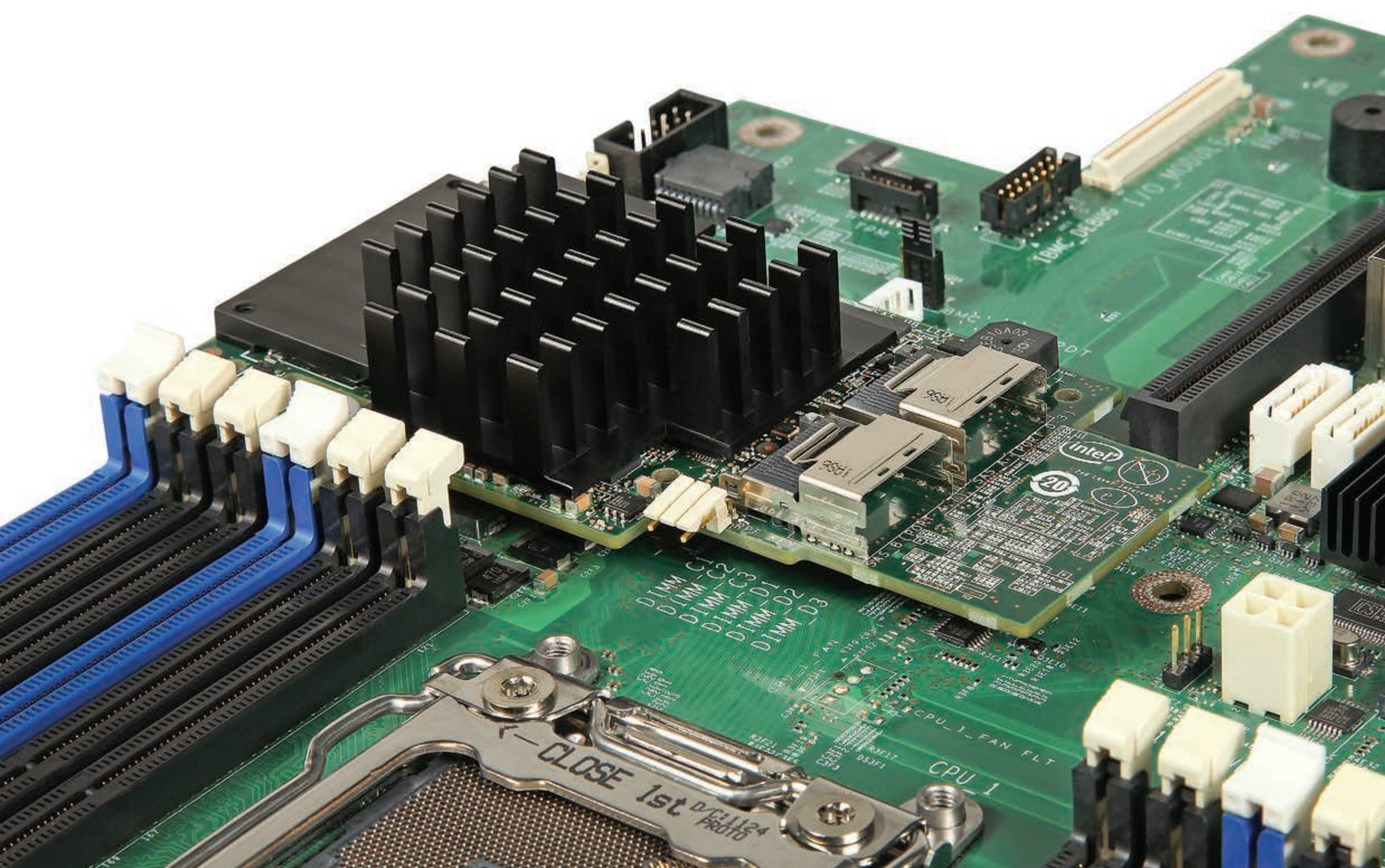
Powered by LSI* MegaRAID* Technology

Features:

1 LSI SAS2208 ROC controller provides SAS 2 compliance, including 6Gb/s data transfer
2 Up to 1GB DDR3 1333MHz cache (ECC DDR3 memory) that efficiently stores data in transition
3 Up to two SFF8087 SAS/SATA connectors for up to eight internal ports
4 x8 PCI Express Generation 3[1] interface for fast communication with the server board
5 Connector for optional Intel® RAID Premium Feature Keys which offer features such as SSD Cache 2.0 with FastPath I/O
6 Optional Intel® RAID Smart Battery Backup Unit or Intel® RAID Maintenance Free Backup Unit



4 Unique x8 PCIe server board connector on bottom of module



Technical Specifications:

Base Product Order Codes	RMS25CB080 (8 port SAS w/ 1GB DDR3) RMS25CB040 (4 port SAS w/ 1GB DDR3) RMT3CB080 (8 port SATA w/ 512MB DDR3)
Accessories	AXXRSBBU9 (Lithium Polymer BBU) AXXRMFBU2 (Maintenance Free Backup Unit) AXXRPFKSSD2 (SSD Cache 2.0 with FastPath I/O Upgrade) AXXRPFKDE2 (Drive Encryption Management) AXXRPFKSNSH2 (Rapid Recovery Snapshot)
Cables	Multiple kits are available to best fit the chassis that the module is installed in. See www.intel.com/go/RAID for details.
RAID Levels and Spans	RAID Levels 0, 1, 5 and 6 RAID Spans 10, 50 and 60
Data Protection Feature Highlights	Online Capacity Expansion Hot-Spare Support – Global and Dedicated Single Controller Multipathing (Failover) Enclosure Management (SES2, SGPIO) Background Consistency Checking Patrol Read for Media Functionality S.M.A.R.T. Support
Intel® RAID Software	Intel® RAID Web Console 2 Intel® RAID Command Line Tool Intel® RAID Flash Utilities
I/O Processor	LSI SAS2208 ROC running at 800 MHz
Drive Types	SAS 6Gb/s or SATA 6Gb/s, SAS 3Gb/s or SATA 3Gb/s (RMT3CB080 accepts SATA drives only)
Maximum Drives	RMS25 models support up to 128 physical devices; RMT3 model supports up to 32 physical devices
Maximum RAID Volumes (Virtual Drives)	64
Connectors	080 models have two SAS SFF8087 x4 SAS internal connectors; 040 models have one 4-port connector
Cache Memory	RMS25 models include 1GB embedded DDR3 at 1333MHz; RMT3 model includes 512MB embedded DDR3
PCI Interface	x8 PCI Express* 2.0/3.0 [1]
Cache Backup	Option for Lithium Polymer BBU or Maintenance Free NAND and Supercap module backup
Form Factor	1U Capable Mezzanine Card
Data Transfer Rates	Up to 6Gb/s per port
Operating Temperature	Maximum ambient: 65°C (55°C with optional BBU)
Operating Voltage	+3.3 V
Intel Server Boards Supported	Intel® Server Boards S2600GZ, S2600IP, W2600CR, S2400EP, S2400GP and systems including these motherboards
Operating Systems	Extensive support includes Microsoft* Windows* Vista/2008/ Server 2003/2000/XP, Linux*, Solaris*(x86), Netware*, FreeBSD*, VMware* and more. Visit intel.com for a complete list of supported operating systems

For more information on Intel® RAID products, visit: **www.intel.com/go/RAID**

[1]At launch, compatibility will be limited to PCIe Gen2. PCIe Gen3 support is anticipated to be added by August 2012 and will require a module with a manufacture date that follows the addition of PCIe Gen3 support.

LSI ENABLED

0212/SJ/Exact/PDF Please Recycle 326853-001US

intel®