(intel)

High Port Count RAID Modules for SAS Performance and Scalability

Intel® Integrated RAID Modules RMS3VC160 & RMS3AC160

12Gb/s SAS/RAID Modules for Select Intel® Xeon® Processor Based Server Boards

Intel® Integrated RAID Module RMS3VC160

Intel® Integrated RAID Module RMS3AC160

RAID Modules Ideal for Enterprise, Cloud and Content Applications

The Intel® RAID Modules of the RMS3xC160 family are designed to offer additional advanced RAID and configuration flexibility to the existing Intel® RAID Module RMS3 family line. These products add 16 port direct drive support in either RAID or non-RAID mode. Designed to enable expansion of server storage, the Intel® Integrated RAID Module RMS3AC160 and RMS3VC160 enable exceptional SAS performance and scalability.

These RAID modules are 2U capable, and their mezzanine board form factor affords 16 ports of SAS/SATA connectivity without taking up a standard add-in card PCIe* slot. Both are powered by LSI* technology and designed with the latest 12Gb/s IOC and ROC controllers, enabling 16 ports of SAS connectivity to support 12Gb/s SAS or 6Gb/s SATA targets. They also provide increased IOPs capabilities (over existing controllers) for transactional intensive applications.

Tailored to Meet Specific Needs

The Intel Integrated RAID Modules RMS3xC160 family can be tailored to meet the exact SAS/RAID solution needs:
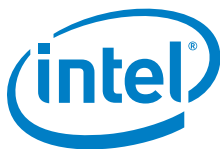
- **Mainstream Intelligent RAID:** The RMS3AC160 RAID module utilizes the Broadcom* SAS3316 RAID Controller, and provides mainstream Intelligent RAID capability supporting RAID levels 0/1/10/5/50/6/60, along with write back and read ahead acceleration using the 2GB of DDR3 1866MHz onboard cache memory. The cache can be protected from power loss using the Intel® RAID Maintenance Free Backup AXXRMFBU6. This module also supports all Intel® RAID Premium Feature Keys, including the SSD Cache performance feature, and the HW Disk Encryption support key.

- **IOC/JBOD mode:** The RMS3VC160 utilizes the Broadcom SAS3216 IO controller designed to provide economical connectivity options. The module provides 12Gb/s connectivity, high IOPs, high throughput, and low latency to the attached targets, which enables maximum storage performance to the operating system and applications at a low cost.

- **High Drive Count Solutions:** both of these modules support up to 16 drives connected directly, but can also connect to and support SAS expanders for additional target scale out. This allows maximum flexibility to balance performance versus connectivity at a low cost.

PRODUCT SPECIFICATIONS

FEATURE	RMS3AC160	RMS3VC160
I/O Processor	Broadcom* SAS3316	Broadcom SAS3216
RAID Levels	RAID 0, 1, 10, 5, 50, 6, 60	n/a
Cache Memory	2GB DDR3 at 1866 MHz	n/a
Form Factor	Modular Mezzanine	
Connectors	4 Mini-SAS-HD (SFF8643) connectors	
PCIe* Interface	x8 PCI Express* 3.0	
Data Transfer Rates	Up to 12Gbps per port	
Operating Temperature	Maximum ambient: 65C (55C with MFBU option)	Maximum ambient: 65C
Operating System/Driver Support	Microsoft Window*, Linux* (SLES*, RHEL*) Solaris* FreeBSD*	
Drive Types	SAS 12Gbps, SATA 6Gbps	
Maximum Physical Devices	240	1028
Maximum Array Volumes	64	n/a
Maintenance Free Backup Unit	AXXRMFBU6 (optional)	n/a
Self-Encrypting Drive Support (Optional upgrade key enables HW disk encryption services in coordination with capable drives)	AXXRPFKDE2	n/a
SSD Cache Support (Optional upgrade key enables Solid State Drives to be used as super-sized cache by the RAID controller)	AXXRPFKSSD2	n/a
Warranty	3 years standard - AWR optional	
Data Protection Features		
On-line Capacity Extension	Yes	n/a
Distributed Sparing	Yes	n/a
Background Consistency Checking	Yes	n/a
Patrol Read for Media Functionality	Yes	n/a
S.M.A.R.T Support	Yes	
Enclosure Management	Yes	
Pre-boot RAID Support	Yes	n/a
Expander Support	Yes	
Write Back Cache with optional Protection	Yes	n/a
Intel® RAID management software	Yes	
Hot-Spare Support, Global & Dedicated	Yes	n/a

ORDER CODES

INTEL SKU	INTEL MM#	DESCRIPTION
RMS3AC160	945022	Intel® Integrated RAID Module: 16 internal port SAS 3.0 mezzanine card with dual core RAID-On-Chip (ROC), RAID levels 0,1,5,6,10,50, 60 PCIe Gen3, optional Maintenance Free Backup Unit
RMS3VC160	946902	Intel® Integrated RAID Module: 16 internal port SAS 3.0 mezzanine card, PCIe Gen3, no RAID support (JBOD/Target mode only)

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