

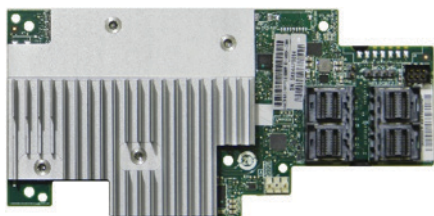
PRODUCT BRIEF

Software-Defined Storage, Content and Web Hosting Appliances,
Cloud Service Providers, and Enterprise IT



Intel® Storage Controllers: Tri-mode Family

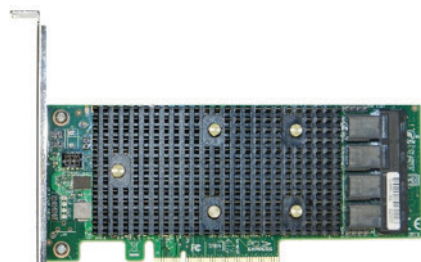
Tri-mode Intel® Storage Controllers supporting PCIe* NVMe*



Intel® Storage Module RMSP3JD160J

Intel® Storage Controllers for Select Intel® Xeon® Processor Based Server Solutions

As big data continues to get bigger, so does the need for high-performance storage solutions. Software-Defined Storage, Content and Web Hosting Appliances, Cloud Service Providers, and Enterprise IT customers are seeking high-uptime controllers for mass storage, with maximum reliability for these high-intensity workloads. Designed to enable expansion of server storage, the Intel® Storage Controllers enable exceptional NVMe*, SAS, and SATA performance and scalability. The tri-mode family of Intel Storage Controllers include modules and adapters, all of which support NVMe.



Intel® Storage Adapter RSP3QD160J

Intel Storage Controllers: Modules (RMSP3) vs. Adapters (RSP3)

- Intel® Storage Modules are designed for select 2U Intel® Xeon® processor-based server solutions, affording up to 16 ports of PCIe*/SAS/SATA connectivity without taking up a standard add-in card PCIe slot, for a highly integrated configuration.
- Intel® Storage Adapters come in a low-profile MD2 standard PCIe form-factor, and are PCIe compliant for flexibility of configuration and use in any system.



Intel® Storage Adapter RSP3GD016J

Support for the NVMe Ecosystem

Tri-mode Intel Storage Controllers bring PCIe NVMe to the Storage Controller. With tri-mode Storage Controllers, data centers can deploy high-performance NVMe solutions with the reliability of hardware I/O Controllers (IOCs), as well as SAS and SATA storage solutions at high IOPS, high throughput, and low latency.

Key Features

- **Tri-mode Storage Controllers** use the Avago* SAS3416 I/O Controller for highly scalable connectivity to NVMe over PCIe 3.0, 12Gb/s SAS over PCIe 3.0, and 6Gb/s SATA.
- High IOPS, high throughput, and low latency to the attached targets enables maximum storage performance to the operating system and applications at a low cost.
- Tri-mode Intel Storage Controllers enable high drive count solutions, with support for up to 16 direct-attach SAS/SATA drives or 4 direct-attach NVMe drives. NVMe switches and SAS expanders enable additional scalability.

INTEL® STORAGE CONTROLLER SPECIFICATIONS

	RMSP3JD160J	RSP3QD160J	RSP3GD016J
I/O Processor	Avago* SAS3416† IOC	Avago SAS3416 IOC	Avago SAS3416 IOC
Form Factor	Mezzanine Module	Low-Profile MD2 AIC	Low-Profile MD2 AIC
Mini-SAS-HD (SFF8643) connectors	4 internal	4 internal	4 external

TRI-MODE INTEL® STORAGE CONTROLLERS	
Maximum Physical Devices	512 or 1024 (Firmware Dependent; RWC3 limit 256)
PCIe* Interface	x8 PCI Express* 3.0
Drive Types	PCIe* NVMe*, SAS 12Gb/s and lower, SATA 6Gb/s and lower
Operating System/Driver Support	Microsoft Windows*, VMWare*, Linux* (SLES*, RHEL*), Solaris*, FreeBSD*
Maximum Ambient Operating Temperature	65° C
Warranty	3 years standard (AWR optional)

DATA PROTECTION FEATURES	RMSP3JD160J	RSP3QD160J	RSP3GD016J
Enclosure Management	✓	✓	✓
Expander Support	✓	✓	✓
Intel® RAID management software	✓	✓	✓
S.M.A.R.T Support	✓	✓	✓

†May use Avago* SAS3516 series ROC

ORDER CODES

INTEL SKU	DESCRIPTION
RMSP3JD160J	Tri-mode SAS/SATA/PCIe Storage Controller Mezzanine Module with 16 Internal Ports
RSP3QD160J	Tri-mode SAS/SATA/PCIe Storage Controller Adapter (PCIe AIC) with 16 Internal Ports
RSP3GD016J	Tri-mode SAS/SATA/PCIe Storage Controller Adapter (PCIe AIC) with 16 External Ports

For additional RAID modules and add-in-cards, visit intel.com/RAID

For more information on Intel® Server Products and Solutions, visit: intel.com/serverproducts

For product specifications visit: ark.intel.com

For compatibility information please visit www.intel.com/support.

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