Frequently Asked Questions

LSI 2nd-Generation 6Gb/s MegaRAID SATA+SAS Controller Cards
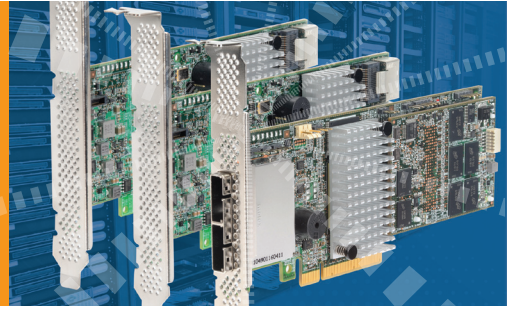
How are the LSI® MegaRAID® SAS 9265/9266/9285 series controller cards different than the existing 9260/9280 series controllers?

The MegaRAID SAS 9265/9266/9285 series is the LSI 2nd generation of high-performance MegaRAID SATA+SAS RAID controller cards based on 6Gb/s SAS technology. The low profile MD2 form factor controllers feature the new dual-core LSISAS2208 SAS ROC IC with two 800MHz PowerPC processor cores and 1GB DDRIII cache memory. The cards provide support for up to 240 SATA and SAS hard disk drives (HDDs) or solid state drives (SSDs), and support hardware RAID levels 0, 1, 5, 6, 10 and 60.

What SKUs are available in this new MegaRAID series?

This 2nd generation 6Gb/s SAS MegaRAID series includes a 4-port internal controller with side connectors (MegaRAID SAS 9266-4i), 8-port internal controller with top connectors (MegaRAID SAS 9265-8i), 8-port internal controller with side connectors (MegaRAID SAS 9266-8i), 8-port external controller (MegaRAID SAS 9285-8e), and 8-port external controller with MegaRAID CacheVault™ Module included (MegaRAID SAS 9285CV-8e) to address high-performance storage requirements for both inside and outside the server.

What is the performance of the MegaRAID SAS 9265/9266/9285 series versus the 9260/9280 series of controllers?

The new MegaRAID controllers deliver performance levels greater than 200,000 I/Os per second (IOPS), a 3x improvement compared to the previous generation products. The controller also delivers industry-leading bandwidth with RAID 5 and 6 sequential writes at 3,276 MB/s and sequential reads at 3,000 MB/s – up to a 67% improvement over the 9260/9280 series. Users can boost IOPS performance to greater than 465,000 IOPS by utilizing MegaRAID FastPath software. This advanced software option provides high-performance I/O acceleration for SSDs connected to a MegaRAID controller, enabling users to realize the full performance benefits of SSDs without sacrificing enterprise-class reliability.

What is the performance of the MegaRAID SAS 9265/9266/9285 series controllers versus the competition?

MegaRAID SAS 9265/9266/9285 series controllers, powered by the LSISAS2208 dual-core 6Gb/c SAS RAID-on-Chip (ROC), deliver the industry's highest server RAID IOPS and bandwidth, extending the performance leadership offered by the existing family of MegaRAID 6Gb/s SATA+SAS controllers.

The 9265/9266/9285 series controllers provide between four and seven-and-a-half times (4X-7.5X) the IOPSs of the next closest competitor, and have the highest IOPS performance in SSD environments. These controllers also show superior throughput performance versus the competitors, with RAID 5 and 6 streaming performance over 2500MB/s – an industry-first achievement that cannot be matched by any other RAID controller product in the market today.

What applications are the MegaRAID SAS 9265/9266/9285 controllers ideal for and why?

The MegaRAID SAS 9265, 9266, and 9285 series controllers drive performance levels up beyond 400,000 IOPS to meet the high I/O transaction demands of database and cloud applications as well as provide the sustained data transfer rate (SDTF) horsepower and high sequential bandwidth to meet the processing requirements of digital media, video and imaging environments.

What types of cache protection options do the MegaRAID SAS 9265/9266/9285 series support?

There are both battery backup and NAND flash backup options for these MegaRAID controllers. The MegaRAID SAS 9266-4i, 9266-8i and 9285CV-8e all support or include MegaRAID CacheVault technology, which offloads data stored in the controller cache to the NAND flash in the event of a power or server failure for a more eco-friendly and lower total cost cache protection solution. An optional intelligent LSIiBBU09 battery backup unit (LSI00279), utilizing heat-tolerant cell technology, is also available for the MegaRAID SAS 9265-8i, 9266-4i, 9266-8i, and 9285-8e.

How does CacheVault technology work?

In write-back mode, data written to cache is vulnerable until it is made permanent on disk. To avoid the possibility of data loss or corruption during a power or server failure, CacheVault technology transfers the contents of the DRAM cache to NAND flash using power from the CacheVault power module (CVPM). Once the power is restored to the MegaRAID controller, CacheVault technology transfers the contents of the NAND flash back to the DRAM, which will eventually be flushed to disk.

Do the CacheVault and battery options mount locally or remotely to these controller cards?

	Battery	CacheVault
MegaRAID SAS 9266-4i	Optional Accessory – LSIiBBU09 Connects Local or Remote	Optional Accessory – LSICMV01 CV Flash Module (CVFM) connects locally CV Power Module (CVPM) connects remotely
MegaRAID SAS 9265-8i	Optional Accessory – LSIiBBU09 Connects Remotely	N/A
MegaRAID SAS 9266-8i	Optional Accessory – LSIiBBU09 Connects Local or Remote	Optional Accessory – LSICMV01 CV Flash Module (CVFM) connects locally CV Power Module (CVPM) connects remotely
MegaRAID SAS 9285-8e	Optional Accessory – LSIiBBU09 Connects Remotely	N/A
MegaRAID SAS 9285CV-8e	N/A	Included Accessory CV Flash Module (CVFM) connects locally CV Power Module (CVPM) connects remotely

What products is the optional CacheVault accessory kit (LSICVM01) compatible with?

The LSICVM01 is an optional accessory for the MegaRAID SAS 9266-4i and 9266-8i only.

What options does LSI offer for remote connection of my LSIiBBU09 or CacheVault Power Module in my server?

LSI sells an optional remote mounting board (LSI BBU-BRACKET-05) that allows customers to remotely mount their battery backup or CacheVault Power Module (CVPM) in an adjacent server PCI slot. The BBU-BRACKET-05 (Part Number: LSI00291) allows one or two BBUs or CVPMs to be attached at a time and comes with a full-height bracket installed, while an optional low-profile bracket is included as part of the kit. Both brackets are 'vented' to allow for maximum cooling air flow in the vicinity of the battery.

Is LSI MegaRAID CacheCade® Pro 2.0 read/write software supported on the 9265/9266/9285 series product line?

Yes. Customers can purchase a software license (LSI00293) or hardware key (LSI00290) to activate CacheCade Pro 2.0 software on the MegaRAID SAS 9265-8i, 9266-4i, 9266-8i, 9285-8e, or 9285CV-8e.

What is LSI MegaRAID CacheCade Pro 2.0 read/write software?

CacheCade Pro 2.0 read/write software is an advanced software option for select 6Gb/s MegaRAID SATA+SAS controller cards. CacheCade Pro 2.0 read/write software is designed to accelerate the performance of HDD arrays with only an incremental investment in SSD technology. The software enables SSDs to be configured as a dedicated pool of controller cache to help maximize I/O performance for transaction intensive applications like databases, web sites, and others.

What accessories or options are available for each specific MegaRAID controller in this series?

Configurator				
	CacheVault	**Battery Backup**	**CacheCade Pro 2.0**	**Remote Mounting Bracket for BBU or CVPM**
9266-4i *(LSI00305 SGL)* *(LSI00306 KIT)*	LSICVM01 *(LSI00297)*	LSIiBBU09 *(LSI00279)*	SW License *(LSI00293)* OR HW Key *(LSI00290)*	LSI BBU-BRACKET-05 *(LSI00291)*
9265-8i *(LSI00277 SGL)* *(LSI00278 KIT)*	N/A	LSIiBBU09 *(LSI00279)*	SW License *(LSI00293)* OR HW Key *(LSI00290)*	LSI BBU-BRACKET-05 *(LSI00291)*
9266-8i *(LSI00295 SGL)* *(LSI00296 KIT)*	LSICVM01 *(LSI00297)*	LSIiBBU09 *(LSI00279)*	SW License *(LSI00293)* OR HW Key *(LSI00290)*	LSI BBU-BRACKET-05 *(LSI00291)*
9285-8e *(LSI00284 SGL)*	N/A	LSIiBBU09 *(LSI00279)*	SW License *(LSI00293)* OR HW Key *(LSI00290)*	LSI BBU-BRACKET-05 *(LSI00291)*
9285CV-8e *(LSI00298 SGL)*	INCLUDED	N/A	SW License *(LSI00293)* OR HW Key *(LSI00290)*	LSI BBU-BRACKET-05 *(LSI00291)*

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