

# Adaptec Unified Serial® Series 5 and Series 5Z RAID Controllers vs. LSI 3ware RAID Cards

Operating System Support	Adaptec RAID	3ware RAID
Linux (in-box driver) – Kernel 2.4.x / 2.6.xx	Yes	Yes
VMware (in-box driver) – ESX 3.x, ESXi 3.x and vSphere 4	Yes	No
Unix (in-box driver) – SCO Unix, UnixWare and Open Server	Yes	No
Microsoft (in-box driver) – 2003/2008/Vista/XP	Yes	No

Competitive Matrix Model	Adaptec Series 5Z	Adaptec Series 5	LSI 3ware RAID 9650SE	LSI 3ware RAID 9690SA
Technology	Unified Serial® (SATA/SAS)	Unified Serial® (SATA/SAS)	SATA Only	SAS/SATA
Max Performance	1.2 GB/s	1.2 GB/s	700 MB/s	650 MB/s
Port Flexibility	4–8	4–28	4–24 internal only	4–8
Max. Devices Connected	256	256	24	128
RAID 0, 1, 5, 6, 10, 50	Yes	Yes	Yes	Yes
RAID 1E, 5EE, 60	Yes	Yes	No	No
Battery Backup Unit	No	Yes	Yes	Yes
Zero Maintenance Cache Protection (Flash-based)	Yes	No	No	No
Automatic Copyback Hot Spare	Yes	Yes	No	No
Optimized Disk Utilization	Yes	Yes	No	No
Enclosure Management	SES & SAF-TE	SES & SAF-TE	SAF-TE	SES
XOR Engine	IOP348	IOP348	G133e	G133e
Processor Speed	1.2 GHz Dual Core	1.2GHz Dual Core	266 MHz	266 MHz

Feature & Function Comparison	Adaptec RAID Product Line	LSI 3ware RAID Product Line
Unified Serial Architecture	Yes, all Series 5 controllers support both SATA and SAS devices and have tested compatible with over 300 devices.	– Only the 9690 architecture allows support for SAS and SATA devices. 9650 supports only SATA drives.
Zero maintenance cache protection (via NAND Flash)	<ul style="list-style-type: none"> <li>– Yes, set it and forget it. Stores protected data for up to 10 years.</li> <li>– No shutdown required for battery replacement.</li> <li>– No batteries of which to dispose.</li> <li>– RAID performance optimized immediately – charges in minutes instead of hours.</li> <li>– Always-on protection and performance.</li> </ul>	No, Li-Ion batteries are used for cache protection.
ROC (RAID on Chip) technology	Yes, controller is built on ROC architecture for improved reliability.	No
Intelligent Read Ahead Caching	Yes, controllers have fast read ahead caching algorithms to support sustained read transfer speeds under Linux and Windows.	No
Intelligent Power Management	Reduces storage energy consumption by as much as 70% without compromising application performance. Users can minimize power consumption by alternating between 3 modes: 1) Normal operation, 2) Standby, 3) Power-off.	No
Support for SAS Tapes	Yes, controller supports SAS tapes and ATAPI devices.	No
Support for SAS Expanders	Yes, SAS expanders are supported providing connectivity up to 256 devices seamlessly.	Only the 9690 supports SAS expanders connecting up to 128 devices.



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