RAID and Storage Options Available on Intel® Server Boards and Systems
based on Intel® 3200/5000 Chipset

Revision 3.0

March, 2009

Revision History

Date	Revision Number	Modifications
October 2006	1.0	Initial Release.
February 2007	2.0	Changed documentation format.
March 2009	3.0	Added server boards and systems based on Intel® 3200 chipset.

Disclaimers

RAID and Storage Options Available on Intel® Server Boards and Systems
based on Intel® 3200/5000 Chipset
RAID Options Available With Intel® Server Boards

1.   RAID Options Available With Intel® Server Boards

- Software RAID = Intel® Embedded Server RAID Technology II, utilizing system processor(s) and memory.
- Matrix RAID = Intel® Matrix Storage Manager, utilizing system processor(s) and memory.
- Hardware RAID = Intel® Integrated RAID, utilizing dedicated Intel® I/O Processor 333 or LSI* 1078 SAS ROC, and dedicated memory for outstanding performance and reliability.

Intel® Server Board SKU	Storage Ports Supported	Storage Controller	RAID Types and Levels Supported
S5000PALR S5000XALR S5000PSLSATAR S5000XSLSATAR S5000XVNSATAR S5000VSASATAR S5000VSA4DIMMR	6 SATA ports	On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5
S5000PSLSASR S5000XVNSASR S5000VSASASR	2 SATA ports	On-board ESB2 chip	Software RAID 0/1 standard
	4 SAS ports *Up to 8 SAS or SATA drives via expander backplanes*	On-board LSI1064e SAS chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5
S5000PSLROMBR	6 SATA ports	On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5
	4 internal + 4 external SAS ports *Up to 16 SAS or SATA drives via expander backplanes*	ROMB SAS card	Hardware RAID 0/1/10/5/50 Requires Intel® RAID Activation Key AXXRAK18E and DIMM module Optional battery: Intel® RAID Smart Battery Backup module AXXRSBBU3
S5000VSASCSIR	6 SATA ports	On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5
	1 SCSI channel	SCSI card	Software RAID 0/1 standard
S5000VCLR	6 SATA ports	On-board ESB2 chip	Software RAID 0/1/10 standard
S5000VCLSASR	2 SATA ports	On-board ESB2 chip	Software RAID 0/1 standard
	4 SAS ports *Up to 8 SAS or SATA drives via expander backplanes*	On-board LSI1064e SAS chip	Software RAID 0/1/10 standard

Intel® Server Board SKU	Storage Ports Supported	Storage Controller	RAID Types and Levels Supported
S5400SF	6 SATA ports	On-board ESB2-E chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5
S3200SHV S3210SHLC S3210SHLX	6 SATA ports	On-board ICH9R chip	Software RAID 0/1/10 Matrix RAID 0/1/5

2. RAID Options Available With Intel® Server Systems

- Software RAID = Intel® Embedded Server RAID Technology II, utilizing system processor(s) and memory.
- Hardware RAID = Intel® Integrated RAID, utilizing dedicated Intel® I/O Processor 333 / LSI* 1078 SAS ROC and dedicated memory for outstanding performance and reliability.
- Matrix RAID = Intel® Matrix Storage Manager, utilizing system processor(s) and memory.

Intel® Server System SKU	Embedded / Integrated RAID		Drives Supported by Enclosure (on-board controller may not support some configurations)	Add-in RAID Card Support for Internal Drive
	Controller Type	RAID Types and Levels		
SR1500ALR	SATA On-board ESB2 chip	Software RAID 0/1 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Three hot-swap SAS/SATA 3.5–inch drives	Yes
SR1500ALSASR	SAS/SATA LSI1064e SAS chip on active backplane	Software RAID 0/1 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Three hot-swap SAS/SATA 3.5-inch drives	No
SR1560SF	SATA On-board ESB2 chip	Software RAID 0/1 standard	Two fixed SATA/SAS 3.5-inch drives	Yes
SR1560SFHS	SAS/SATA LSI1064e SAS chip on active backplane	Software RAID 0/1 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Three hot-swap SAS/SATA 3.5-inch drives	No
SR2500ALBRPR	SATA On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Six hot-swap SAS/SATA 3.5-inch drives *Sixth drive slot optional with ASR2500SIXDRV*	Yes
SR2500ALLXR	SAS/SATA LSI1068 SAS chip on active midplane	Software RAID 0/1/10 standard Hardware RAID 0/1/10/5/50 with Intel® RAID Activation Key AXXRAK18E and with Intel® RAID Mini-DIMM AXXMINIDIMM	Six hot-swap SAS/SATA 3.5-inch drives *Sixth drive slot optional with ASR2500SIXDRV*	No
SR1550ALR	SATA 6 ports only On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Eight hot-swap SAS/SATA 2.5-inch drives *Seventh and eighth drive slots optional with FXX25HDDCAR*	Yes

Intel® Server System SKU	Embedded / Integrated RAID		Drives Supported by Enclosure (on-board controller may not support some configurations)	Add-in RAID Card Support for Internal Drive
	Controller Type	RAID Types and Levels		
SR1550ALSASR	SAS/SATA LSI1068 SAS chip on active midplane	Software RAID 0/1/10 standard Hardware RAID 0/1/10/5/50 with Intel® RAID Activation Key AXXRAK18E and with Intel® RAID Mini-DIMM AXXMINIDIMM	Eight hot-swap SAS/SATA 2.5-inch drives *Seventh and eighth drive slots optional with FXX25HDDCAR*	No
SR1530CLR	SATA On-board ESB2 chip	Software RAID 0/1 standard	Two fixed SATA 3.5-inch drives	Yes
SR1530HCLR	SATA On-board ESB2 chip	Software RAID 0/1 standard	Three hot-swap SAS/SATA 3.5-inch drives	Yes
SR1530HCLSR	SAS/SATA On-board LSI 1064e SAS chip	Software RAID 0/1 standard	Three hot-swap SAS/SATA 3.5" drives	Yes
SR2520SAFR	SATA On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Six fixed SATA 3.5-inch drives	Low-profile only
SR2520SAXR	SATA On-board ESB2 chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Six hot-swap SATA 3.5-inch drives	Low-profile only No drive fault LEDs
SR2520SAXSR	SAS/SATA On-board LSI1064e SAS chip	Software RAID 0/1/10 standard Software RAID 5 with Intel® RAID Activation Key AXXRAKSW5	Six hot-swap SAS/SATA 3.5-inch drives	No
SR1530HSH SR1530SH	SATA On-board ICH9R chip	Software RAID 0/1 Matrix RAID 0/1/5	Three hot-swap SATA 3.5-inch drives	Yes

3.   RAID Options Available With Intel® Server Chassis

- Hardware RAID = Intel® Integrated RAID, utilizing dedicated Intel® I/O Processor 333 / LSI* 1078 SAS ROC and dedicated memory for outstanding performance and reliability.
- IR RAID = Intel® IT/IR RAID, utilizing SAS chip resource for entry-level hardware RAID.

Intel® Server Chassis SKU with Optional Intel® RAID Accessory	Embedded / Integrated RAID		Drives Supported by Enclosure (on-board controller may not support some configurations)	Add-in RAID Card Support for Internal Drive
	Controller Type	RAID Types and Levels		
SR2500 with active midplane 2	SAS/SATA LSI1078 SAS chip	IR RAID 0/1/1E/10E standard Hardware RAID 0/1/10/5/50/6 with Intel® RAID Activation Key AXXRAKSAS2 and with Intel® RAID Mini-DIMM AXXMINIDIMM512	Six hot-swap SAS/SATA 3.5-inch drives *Sixth drive slot optional with ASR2500SIXDRV*	No
SR1550 with active midplane 2	SAS/SATA LSI1078 SAS chip	IR RAID 0/1/1E/10E standard Hardware RAID 0/1/10/5/50/6 with Intel® RAID Activation Key AXXRAKSAS2 and with Intel® RAID Mini-DIMM AXXMINIDIMM512	Eight hot-swap SAS/SATA 2.5-inch drives *Seventh and eighth drive slots optional with FXX25HDDCAR*	No