

Intel[®] Server Board SE7520AF2 Memory Test List

Revision 51.0
January 2008

Revision History

Date	Rev	Modifications
Sept/04	1.0	Initial release.
Oct/04	2.0	Added Infineon* 512MB part. Added Hynix* 1GB part. (In shaded area)
Oct/04	3.0	Added Smart*, Apacer*, ATP*, and Dataram* 1GB parts. (In shaded area)
Oct/04	4.0	Added ATP and Samsung* 256MB parts. Added ATP, Smart, Kingston* and Samsung 512MB parts. (In shaded area)
Nov/04	5.0	Removed Samsung 512MB part as testing is not complete. Corrected Infineon 512MB part number. Added Legacy* 512MB parts. Added Smart, Wintec*, Legacy and Kingston 1GB parts. Added Smart 2GB parts. (In shaded area)
Nov/04	6.0	Added Buffalo* 512MB parts. Added Wintec* 1GB parts. (In shaded area)
Dec/04	7.0	Added Buffalo 256MB parts. Added Samsung 512MB parts. Added Dataram* and Samsung 2GB parts. (In shaded area)
Dec/04	8.0	Added Wintec 512MB parts and Smart 1GB parts. (In shaded area)
Dec/04	9.0	Added Micron* and Hynix 512MB parts. Added Dataram and Samsung 1GB parts. Added Legacy* and Micron 2GB parts. (In shaded area)
Dec/04	10.0	Added Smart 512MB parts. (In shaded area)
Jan/05	11.0	Added Smart 1GB and Samsung 2GB parts. (In shaded area)
Jan/05	12.0	Added Smart 1GB part. (In shaded area)
Feb/05	13.0	Added Samsung 256MB, 512MB, 1GB and 2GB parts. Added Dataram 512MB parts. Added Netlist* 1GB parts. (In shaded area)
Mar/05	14.0	Added Smart and Samsung 1GB parts. (In shaded area)
Mar/05	15.0	Added note on Lead free modules (these modules are now in bold text). Added Smart 1GB and 2GB parts. Added ATP 2GB parts. (In shaded area)
Mar/05	16.0	Added Netlist Inc 1GB Lead free part. (In shaded area)
Apr/05	17.0	Added Super Talent* 512MB and 1GB parts. Added Legend and Samsung 1GB parts. (In shaded area)
Apr/05	18.0	Added Viking, Samsung and Infineon 1GB parts. Added ATP and Smart 2GB parts. (In shaded area)
May/05	19.0	Added Kingston and Samsung 512MB parts. Added Ventura, Transcend*, and Netlist 1GB parts. Added Netlist and Dataram 2GB parts. Added Samsung and Infineon 256MB parts to ROMB list. (In shaded area)
May/05	20.0	Added Kingston 1GB and 2GB parts. Added Infineon 2GB part. (In shaded area)
Jun/05	21.0	Added ATP 512MB part. Added Samsung 1GB part. Added Smart 2GB part. (In shaded area)
Jun/05	22.0	Added Legacy 512MB and 1GB parts. (In shaded area)
Jun/05	23.0	Added Viking 512MB and 1GB parts. Added Simple, Avant* and Wintec
Aug/05	24.0	Added Wintec and Kingston 512MB parts. Added Apacer* and Wintec 1GB parts. Added Dataram and Wintec 2GB parts. Added Infineon 512MB & 1GB parts. Added Micron 512MB, 1G & 2G parts. Added TRS 256MB module for ROMB (In shaded area)

Date	Rev	Modifications
Aug/05	25.0	Added Smart 1GB parts. Added Kingston 2GB parts. (In shaded area)
Sept/05	26.0	Added Wintec and Kingston 1GB parts. Added Transcend 512MB parts. Added Samsung 2GB part. (In shaded area)
Oct/05	27.0	Added Ventura 512MB part. Added Samsung 1GB and 2GB parts. (In shaded area)
Oct/05	28.0	Added Nanya* 512MB, 1GB and 2GB parts. Added Legacy 512MB part. Added Kingston 1GB part. Added Smart 2GB part. (In shaded area) Updated unleaded parts with correct shading.
Nov/05	29.0	Added Smart and Wintec 1GB parts. Added Kingston 2GB and 512MB parts. Added Samsung 256MB, 512MB, 1GB and 2GB parts. Added Hynix 1GB, 2GB and 4GB parts. Added Smart and Infineon 4GB parts. (In shaded area)
Dec/05	30.0	Added Legacy and Smart 1GB parts. Added Wintec 512MB part. (In shaded area)
Jan/06	31.0	Added Legacy and ATP 2GB parts. (In shaded area)
Jan/06	32.0	Added ATP and Smart 512MB parts. Added Kingston 1GB part. Added Samsung 2G part. Added ROMB Samsung & Infineon 512MB parts. (In shaded area)
Feb/06	33.0	Added Legend 512MB, 1GB and 2GB parts. Added Smart 1GB part. Added ROMB Micron 128MB part. Added ROMB Micron, Dataram and ATP 256MB parts. Added Hynix 512MB, 1G & 2G parts. Added ROMB Micron, Buffalo, Dataram, ATP and Netlist 512MB parts. Removed Samsung & Infineon 512MB DR parts from the RMOB section. Made correction to verbiage saying that the ROMB controller will not support Dual Rank or 1G parts. (In shaded area)
Mar/06	34.0	Added ATP 1GB part. Added Unigen 512MB parts. (In shaded area)
Mar/06	35.0	Added Kingston 2GB part. Added Dataram 512MB and 1GB parts. (In shaded area)
May/06	36.0	Infineon name change to Qimonda effective May 1 st , 2006. Added TRS 512MB & 1G parts. Added Kingston 1G & 2G parts. (In shaded area)
June/06	37.0	Added Kingston 1G part. (In shaded area)
July/06	38.0	Added TRS and Netlist, Inc. 1GB parts. Added Apacer and Kingston 2GB parts. (In shaded area)
Aug/06	39.0	Added Kingston and TRS 512MB parts. (In shaded area)
Aug/06	40.0	Added TRS 512MB parts. Added TRS and Dane-Elec 1GB parts. (In shaded area)
Oct/06	41.0	Added TRS 512MB, 1GB, and 2GB parts. (In shaded area)
Nov/06	42.0	Added Kingston 512MB, 1GB, and 2GB parts. (In shaded area)
Jan/07	43.0	Added Kingston 1GB part. Added Kingston, Smart, and Avant Technology 2GB parts. (In shaded area)
Feb/07	44.0	Added Samsung 4GB part. (In shaded area)
Feb/07	45.0	Added TRS 1GB part. (In shaded area)
Feb/07	46.0	Added All Components 2GB part. Updated vendor contact information. (In shaded area)
Mar/07	47.0	Updated contact information. Added US Technology 2GB part. (In shaded area)

Date	Rev	Modifications
May/07	48.0	Added Kingston 2GB part. (In shaded area)
May/07	49.0	Additional memory parts added. (In shaded area)
Nov/07	50.0	Additional memory parts added; corrected part ranking. (In shaded area)
Jan/08	51.0	Additional memory parts added. (In shaded area)

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The Intel® Server Board SE7520AF2 may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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Please Note: DIMM devices with gold contacts should NOT be placed into DIMM sockets with tin-lead contacts or vice-versa. Mixing dissimilar metal contact types has been shown to result in unreliable memory operation. Intel recommends similar manufacturer and similar speeds in each Rank on the memory module. Mixing of dissimilar memory is NOT recommended.

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1. Overview of Memory Testing

The following test processes are used to qualify Dual In-Line Memory Modules (DIMMs) for use with the Intel® Server Board SE7520AF2. Memory is a vital subsystem in a server. Intel requires that strict guidelines be met before a DIMM vendor is added to the Tested Memory List. To be included on the list as a fully supported DIMM, the memory must undergo rigorous tests to ensure that the product will perform the intended server product functions. Memory qualification for Intel server, workstation and RAID controller products is performed both by Intel's Memory Validation Lab (MVL) and by an independent external test lab, Computer Memory Test Lab* (CMTL).

The Tested Memory Lists for Intel's server board, workstation board, and RAID controller products categorize memory modules as Advanced Tested. The Advanced Testing process includes a standard paper qualification and then is followed by two levels of functional testing. DIMMs that have completed and passed Advanced Testing are considered to be compatible with the product on which they were tested, and with the test software and operating systems that was used during the test process.

Note: Memory qualification for main memory is done by testing identical memory modules in all DIMM slots. Memory qualification does not include testing of mixed DIMM type and/or vendors. Mixing of DIMM type and/or vendors is not recommended.

1.1 Paper Qualification

A paper qualification is performed to verify that the specifications of a given DIMM meet Intel's memory specifications for a given product. Specification criteria reviewed include: critical timings, electrical characteristics, timing requirements, environmental requirements, and packaging requirements.

1.2 Functional Testing

After a given DIMM passes the standard paper qualification, functionality of the DIMM is then tested with the intended Intel product. Two levels of functional testing is performed; Standard and Advanced.

Standard functional testing requires that the given DIMM and Intel product combination operate with no failures for a period of no less than 24 hours for both minimum and maximum DIMM configurations. Testing is performed using a Microsoft Windows* operating system and a custom test package. The test systems operate with standard voltage and at room temperature.

1.3 Advanced functional testing

Advanced functional testing requires that the given DIMM and Intel product combination operate with no failures for a period of no less than 24 hours for both minimum and maximum DIMM configurations. Testing is performed with multiple operating systems and various custom test packages. Each test configuration is tested with various voltage and temperature margin conditions.

1.4 Computer Memory Test Lab*

Computer Memory Test Lab, also known as "CMTL*" is a leading memory test organization responsible for testing a broad range of memory products. A memory product, which receives a "PASS" after being tested by CMTL, means it functions correctly and consumers can use the product to perform the intended server functions. In order to pass these stringent standards, memory products must maintain the highest manufacturing procedures and pass an exacting battery of tests. Testing is performed with Intel supplied equipment and procedures defined by Intel's various functional testing levels.

CMTL* Contact Information:

Office: (949) 716-8690
Main Fax: (949) 716-8691

Computer Memory Test Lab (CMTL)
24 Hammond Suite F
Irvine, CA 92618
<http://www.cmtlabs.com/>

2. Intel® Server Board SE7520AF2 Memory Subsystem

The Intel® Server Board SE7520AF2 main memory subsystem was designed to support Double Data Rate2 (DDR2) 400-MHz Registered ECC Synchronous Dynamic Random Access Memory (SDRAM). Other industry naming conventions for DDR2-400 include PC23200.

The maximum main memory capacity supported is based on the number of DIMM slots provided and maximum supported memory loads by the chipset. On the Intel® Server Board SE7520AF2 the maximum supported capacity is 16GB, the minimum supported capacity is 256MB with one single 256MB DIMM.

Supported DDR2-400 DIMM capacities for main memory include: 256MB, 512MB, 1GB, 2GB, and 4GB.

The Intel® Server Board SE7520AF2 RAID memory subsystem (SROMBU42E) was designed to support Double Data Rate (DDR) 333MHz Unbuffered ECC Synchronous Dynamic Random Access Memory (SDRAM). Other industry naming conventions for DDR333 include PC2700.

The Intel® Server Board SE7520AF2 maximum supported RAID memory capacity is 1GB, the minimum supported capacity is 128MB.

Supported DDR333 DIMM capacities for RAID memory include: 128MB, 256MB, 512MB, 1GB.

2.1 Main Memory Population

The Intel® Server Board SE7520AF2 has eight DIMM slots grouped into four DIMM banks for main memory. DIMMs within each bank should be identical (same manufacturer, CAS latency, number of rows, columns and devices, timing parameters etc.). Although DIMMs within a bank must be identical, the BIOS supports various DIMM sizes and configurations allowing memory between banks to be different. Memory sizing and configuration is guaranteed only for qualified DIMMs approved by Intel.

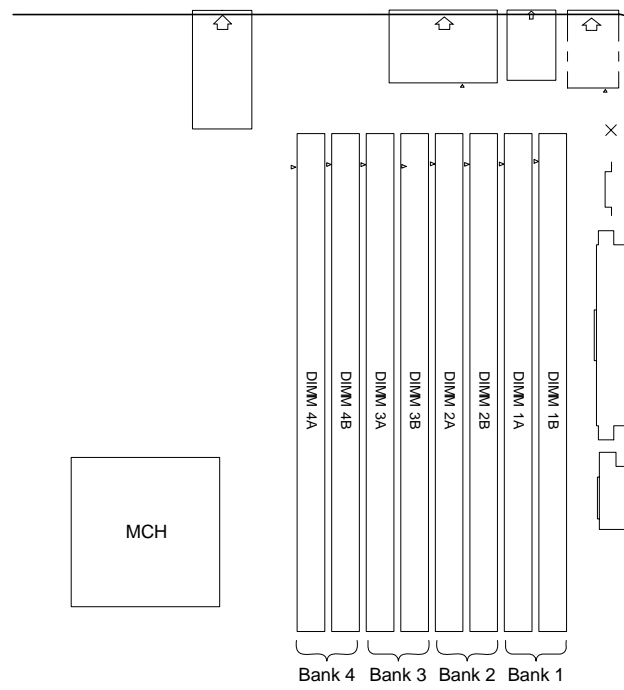


Figure 1. Identifying Banks of Memory

The memory controller is capable of supporting up to 4 loads per channel for DDR2-400. Memory technologies are classified as being either single rank or dual rank depending on the number of DRAM devices that are used on any one DIMM. A single rank DIMM is a single load device, i.e.) Single Rank = 1 Load. Dual rank DIMMs are dual load devices, i.e.) Dual Rank = 2 loads. Refer to the memory module manufacturer specifications to determine if a DIMM is single or dual rank.

DDR2 400 DIMM population rules are as follows:

- (1) DIMM banks must be populated in order, starting with the bank furthest from MCH.
- (2) Dual rank DIMMs must be populated before single rank DIMMs.
- (3) A maximum of four DIMMs can be populated when all DIMMs are dual rank.

The following tables show the supported memory configurations:

- s/r = single rank
- d/r = dual rank
- E = Empty

Table 1: Supported DDR2-400 DIMM Populations

Bank 4	Bank 3	Bank 2	Bank 1
E	E	E	s/r
E	E	E	d/r
E	E	s/r	s/r
E	E	s/r	d/r
E	E	d/r	d/r
E	s/r	s/r	s/r
E	s/r	s/r	d/r
s/r	s/r	s/r	s/r

Note: On the Intel® Server Board SE7520AF2, when using all dual rank DDR2-400 DIMMs, a total of four DIMMs can be populated (two in Bank 1 and two in Bank 2). Configuring more than four dual rank DDR2-400 DIMMs will result in the BIOS generating a memory configuration error.

The following table lists the current supported memory types:

Table 2: DDR2-400 DIMM Module Matrix

DDR2-400 Registered SDRAM Module Matrix						
DIMM Capacity	DIMM Organization	SDRAM Density	SDRAM Organization	# SDRAM Devices/rows/Ranks	# Address bits rows/Ranks/column	Ranked
256MB	32M x 72	256Mbit	32M x 8	9/1/4	13/2/10	Single Ranked
512MB	64M x 72	256Mbit	64M x 4	18/1/4	13/2/11	Single Ranked
512MB	64M x 72	256Mbit	32M x 8	18/2/4	13/2/10	Double Ranked
512MB	64M x 72	512Mbit	64M x 8	9/1/4	14/2/10	Single Ranked
1GB	128M x 72	512Mbit	128M x 4	18/1/4	14/2/11	Single Ranked
1GB	128M x 72	512Mbit	64M x 8	18/2/4	14/2/10	Double Ranked
1GB	128M x 72	1Gbit	128M x 8	9/1/8	14/3/10	Single Ranked
2GB	256M x 72	1Gbit	256M x 4	18/1/8	14/3/11	Single Ranked
2GB	256M x 72	1Gbit	128M x 8	18/2/8	14/3/10	Double Ranked
2GB	256M x 72	2Gbit	256M x 8	9/1/8	15/3/10	Single Ranked
4GB	512M x 72	2Gbit	256M x 8	18/2/8	15/3/10	Double Ranked
4GB	512M x 72	2Gbit	512M x 4	18/1/8	15/3/11	Single Ranked
4GB	512M x 72	4Gbit	512M x 8	9/1/8	TBD	Single Ranked

2.2 RAID Memory Population

The Intel® Server Board SE7520AF2 includes one DDR DIMM slot next to the PCI Slots not shared with main memory and for exclusive use as RAID cache of the SROMBU42E RAID subsystem. Memory sizing and configuration is guaranteed only for qualified DIMMs approved by Intel. The ROMB subsystem supports RAID memory for higher performance operation (write back cache). In addition, for enhanced data protection, the ROMB functionality in the Intel® Server Board SE7520AF2 supports the Intel® Portable Cache Module Accessory which enables 72 hours of battery back-up.

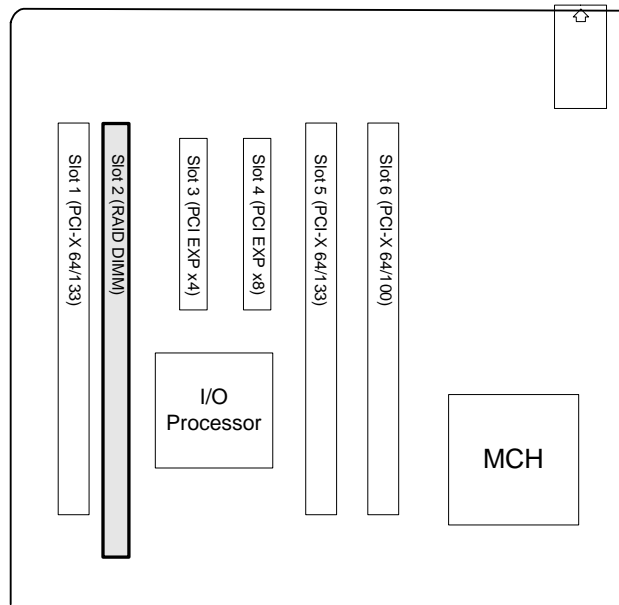


Figure 2. Identifying RAID Memory Slot

The following table lists the current supported memory types for RAID memory slot:

Table 3: DDR333 DIMM Module Matrix

DDR333 Unbuffered SDRAM Module Matrix					
DIMM Capacity	DIMM Organization	DRAM Density	DRAM Organization	# DRAM Devices/rows/Banks	# Address bits rows/Banks/column
128MB	16M x 72	64Mbit	16M x 4	18/1/4	12/2/10
128MB	16M x 72	64Mbit	8M x 8	18/2/4	12/2/9
128MB	16M x 72	128Mbit	16M x 8	9/1/4	12/2/10
256MB	32M x 72	64Mbit	16M x 4	36/2/4	12/2/10
256MB	32M x 72	128Mbit	32M x 4	18/1/4	12/2/11
256MB	32M x 72	128Mbit	16M x 8	18/2/4	12/2/10
256MB	32M x 72	256Mbit	32M x 8	9/1/4	13/2/10
512MB	64M x 72	128Mbit	32M x 4	36/2/4	12/2/11
512MB	64M x 72	256Mbit	64M x 4	18/1/4	13/2/11
512MB	64M x 72	256Mbit	32M x 8	18/2/4	13/2/10
512MB	64M x 72	512Mbit	64M x 8	9/1/4	13/2/11
1GB	128M x 72	256Mbit	64M x 4	36/2/4	13/2/11
1GB	128M x 72	512Mbit	64M x 8	18/2/4	13/2/11
1GB	128M x 72	512Mbit	128M x 4	18/1/4	13/2/12

3. Intel® Server Board SE7520AF2 Main Memory Tested

The following tables list DIMM devices tested to be compatible with the Intel® Server Board SE7520AF2. The list of tested memory is periodically updated as qualified memory is added during the production life of the Intel product.

Intel strongly recommends the use of ECC memory in all server products.

Memory modules not listed in the following tables have not been tested for compatibility and their use with the Intel® Server Board SE7520AF2 may result in unpredictable operation and data loss.

Caution: Third party memory vendors may use the same module part number with different DRAM vendors and die revisions. To insure proper system operation, verify that each DRAM vendor and die revision has been separately tested and qualified. Please notify CMTL if there is a discrepancy. This list is subject to change without notice.

Note: This list is not intended to be all-inclusive. It is provided as a convenience to Intel's general customer base, but Intel does not make any representations or warranties whatsoever regarding the quality, reliability, functionality, or compatibility of these memory modules.

Intel® Server Board SE7520AF2
Registered ECC, DDR2-400 DIMM Modules
256 MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
~ Qimonda (Infineon)*	HYS72T32000HR-5-A	HYB18T256800AF5-A	~ Qimonda (Infineon)		9/22/04	Yes	(32Mx8) [*] 9	x8SR	
Micron*	MT9HTF3272Y-40EB2	MT47H32M8BP-37E	Micron		9/22/04	Yes	(32Mx8) [*] 9	x8SR	
+ATP Electronics*	AH32K72N8BQC4M	MT47H32M8BP(FP)-37E rev	Micron	SH240N08K1	10/14/04		(32Mx8) [*] 9	x8SR	
Samsung*	M393T3253FG0-CCC Date Code: 0521	K4T56083QF-GCCC	Samsung		10/29/04		(32Mx8) [*] 9	x8SR	
+Buffalo*	D2R400A-ES256MBJ	MT47H32M8BP(FP)-5E rev B	Micron	2DRA18F-BA	11/23/04		(32Mx8) [*] 9	x8SR	
Samsung	M393T3253FZ0-CCC Date Code: 0521	K4T56083QF-ZCCC	Samsung		2/24/05	Yes	(32Mx8) [*] 9	x8SR	
Samsung	M393T3253FG3-CCC	K4T56083QF-GCCC	Samsung		11/4/05		(32Mx8) [*] 9	x8SR	
Samsung	M393T3253FZ3-CCC	K4T56083QF-ZCCC	Samsung		11/4/05	Yes	(32Mx8) [*] 9	x8SR	

Modules shaded in blue do not contain Lead.

~ Effective May 1st, 2006, Infineon memory products will be known as Qimonda

(+) This vendor is part of the CMTL Certification program. This means this part has/will be tested across all compatible Intel Server Boards. For further information contact CMTL @ <http://cmtlabs.com/>

Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Verify that the DRAM part number matches the DRAM on this list before purchasing.

Intel® Server Board SE7520AF2

Registered ECC, DDR2-400 DIMM Modules

512 MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
~ Qimonda (Infineon)	HYS72T64000HR-5-A	HYB18T512800AF	~ Qimonda (Infineon)		9/22/04	Yes	(64Mx8)* 9	x8SR	
~ Qimonda (Infineon)	HYS72T64020HR-5-A	HYB18T256800AF5-A	~ Qimonda (Infineon)		10/1/04	Yes			
+Smart Modular Technologies*	SM647RDR264835IA	HYB18T512800AC5 rev A	~ Qimonda (Infineon)	P54G240NEBUB1RA rev A	10/11/04		(64Mx8)* 9	x8SR	
+Smart Modular Technologies	SM647RDR26483-5-I	HYB18T512800AF(AC) 5 rev A	~ Qimonda (Infineon)	240-11-4 rev C	10/13/04		(64Mx8)* 9	x8SR	
+ATP Electronics	AH64K72M4BQC4S	K4T56043QF-GCCC rev F	Samsung	SH240M04K1	10/14/04		(64Mx4)* 18	x4SR	
Kingston*	KVR400D2R3/512	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	2025263-001.A00	10/18/04		(64Mx8)* 9	x8SR	
+Legacy Electronics Inc.*	S506472J20A-50A	HYB18T256400AF5 rev A	~ Qimonda (Infineon)	LE18DD2F2404RRH rev 1	11/3/04		(64Mx4)* 18	x4SR	
+Buffalo	D2R400A-E512MBJ	MT47H32M8BP(FP)-5E rev B	Micron	2DRB28F-BA	11/19/04		(32Mx8)* 18	x8DR	
Samsung	M393T6553BG0-CCC	K4T51083QB-GCCC	Samsung		11/29/04		(64Mx8)* 9	x8SR	
Samsung	M393T6450FG0-CCC Date Code: 0521	K4T56043QF-GCCC	Samsung		11/29/04		(64Mx4)* 18	x4SR	
Samsung	M393T6453FG0-CCC Date Code: 0521	K4T56083QF-GCCC	Samsung		11/29/04		(32Mx8)* 18	x8DR	
+Wintec Industries*	39C921284B-L	K4T51083QB-GCD5 rev B	Samsung	D2R872	12/2/04		(64Mx8)* 9	x8SR	
Micron*	MT18HTF6472Y-40EB2		Micron		12/13/04	Yes			
Hynix*	HYMP564R728-E3 AA	HY5PS12821-F-E3	Hynix		12/13/04		(64Mx8)* 9	x8SR	
+Smart Modular Technologies	SB647RDR264835IA	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	PB54G240NEBUB2RA rev A	12/17/04		(64Mx8)* 9	x8SR	
+Dataram*	DTM63311C	K4T56043QF-GCCC rev F	Samsung	40011A rev A	2/2/05		(64Mx8)* 9	x8SR	
Samsung	M393T6553BZ0-CCC	K4T51083QB-ZCCC	Samsung		2/24/05	Yes	(64Mx8)* 9	x8SR	
Samsung	M393T6453FZ0-CCC Date Code: 0521	K4T56083QF-ZCCC	Samsung		2/24/05	Yes	(32Mx8)* 18	x8DR	
Samsung	M393T6450FZ0-CCC Date Code: 0521	K4T56043QF-ZCCC	Samsung		2/24/05	Yes	(64Mx4)* 18	x4SR	
+Super Talent Electronics*	T400RA512	K4T51083QB-ZCD5 rev B	Samsung	B62RRCA	3/15/05		(64Mx8)* 9	x8SR	
+Kingston	KVR400D2S8R3/512I	HYB18T512800AF37 rev A	~ Qimonda (Infineon)	2025263-001.A00 rev A	4/29/05		(64Mx8)* 9	x8SR	

**Registered ECC, DDR2-400 DIMM Modules
512 MB Sizes (64Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
Samsung	M393T6553CZ0-CCC	K4T51083QC-ZCCC	Samsung		5/2/05	Yes	(64Mx8)* 9	x8SR	
+ATP Electronics	AH64K72N8BHC4S	K4T51083QB-GCCC rev B	Samsung	SH240N08K1	5/19/05		(64Mx8)* 9	x8SR	
+Legacy Electronics Inc.	L506472K20A-50A	G64Mx8DDR2	Legacy	LE9DD2F2408RRA rev A	6/3/05		(64Mx8)* 9	x8SR	
+Viking*	VR5ER647218EBPL1	MT47H64M8CB-37E rev B	Micron	0000992A rev A	6/22/05		(64Mx8)* 9	x8SR	
+Wintec Industries	39C921284B-GL	K4T51083QB-ZCD5 rev B	Samsung	D2R872 na	7/6/05		(64Mx8)* 9	x8SR	
~ Qimonda (Infineon)	HYS72T64000HR-5-A	HYB18T512800AC5	~ Qimonda (Infineon)		7/8/05	Yes	(64Mx8)* 9	x8SR	
+Kingston	KVR400D2S8R3/512I	HYB18T512800AF37 rev A	~ Qimonda (Infineon)	2025263-001.C00 na	7/1/05		(64Mx8)* 9	x8SR	
Micron	MT9HTF6472Y-40EB2	MT47H64M8CB-5E	Micron		7/21/05	Yes	(64Mx8)* 9	x8SR	
+Transcend Information*	TS64MQR72V4J	K4T51083QC-ZCCC rev C	Samsung	09-2140 na	8/31/05		(64Mx8)* 9	x8SR	
+Ventura Technology Group*	D2-52KC53SV-333	K4T56043QF-ZCD5 rev F	Samsung	D2R472 na	9/23/05		(64Mx4)* 18	x4SR	
+Legacy Electronics Inc.	B557K4C2AAA-50	K4T51083QC-ZCCC rev C	Samsung	LE9DD2F2408RRA rev A	10/4/05		(64Mx8)* 9	x8SR	
Nanya Technology Corporation*	NT512T72U89A0BV-5A	NT5TU64M8AE-5A rev A	Nanya	NTPCB0002 OP (0509) na	10/17/05	Yes	(64Mx8)* 9	x8SR	
+Kingston	KVR400D2S8R3/512I	NT5TU64M8AE-37B rev A	Nanya	2025263-001.C00 na	10/31/05		(64Mx8)* 9	x8SR	
Samsung	M393T6450FZ3-CCC	K4T56043QF-ZCCC	Samsung		10/24/05	Yes	(64Mx4)* 18	x4SR	
Samsung	M393T6450FG3-CCC	K4T56043QF-GCCC	Samsung		11/4/05		(64Mx4)* 18	x4SR	
Samsung	M393T6453FZ3-CCC	K4T56083QF-ZCCC	Samsung		11/4/05	Yes	(32Mx8)* 18	x8DR	
Samsung	M393T6453FG3-CCC	K4T56083QF-GCCC	Samsung		11/4/05		(32Mx8)* 18	x8DR	
Samsung	M393T6553CZ3-CCC	K4T51083QC-ZCCC	Samsung		11/4/05	Yes	(64Mx8)* 9	x8SR	
+Wintec Industries	39C921284C-G	K4T51083QC-ZCD5 rev C	Samsung	B62RRCF na	11/30/05	Yes	(64Mx8)* 9	x8SR	

Registered ECC, DDR2-400 DIMM Modules 512 MB Sizes (64Mx72)									
Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
+ATP Electronics	AH64K72F8BHC4S	K4T51083QC-ZCD5 rev C	Samsung	SH240F08K1 na	12/23/05	Yes	(64Mx8) [*] ₉	x8SR	
+Smart Modular Technologies	SG647RDR264835-SC	K4T51083QC-ZCCC rev C	Samsung	M393T6553BG1 (KS-11A)	1/13/06	Yes	(64Mx8) [*] ₉	x8SR	
+Legend	L64723C7-R41H2H1F	HY5PS12821FP-E3 rev 1st Gen.	Hynix	104 (0530,0534)	1/27/06	Yes	(64Mx8) [*] ₉	x8SR	
Hynix	HYMP564R72P8-E3	HY5PS12821FP-E3	Hynix		1/31/06	Yes	(64Mx8) [*] ₉	x8SR	
Hynix	HYMP564R72BP8-E3	HY5PS12821BFP-E3	Hynix		1/31/06	Yes	(64Mx8) [*] ₉	x8SR	
Unigen	UG64T7200L8DR-5AREF-CD	MT47H64M8B6-37E rev D	Micron	ACORN na	2/9/06	Yes	(64Mx8) [*] ₉	x8SR	
Unigen	UG64T7200L8DR-5AREF-NG	EDE5108AGSE-5C-E rev G	Elpida	ACORN na	2/14/06	Yes	(64Mx8) [*] ₉	x8SR	
+Dataram	DTM63312B	NT5TU64M8AE-37B rev A	Nanya	40042A rev A	3/9/06	Yes	(64Mx8) [*] ₉	x8SR	
TRS	TRS31261	HYB18T256400AF5 rev A	Infineon	M0549LA1 rev 1	04/06/06	Yes			
TRS	TRS31260	HYB18T512800AF5 rev A	Infineon	M0551LA1 rev 1	04/10/06	Yes			
Kingston	KVR400D2S8R3/512I	E5108AG-5C-E rev G	Elpida	2025263-001.C00 na	7/17/06	Yes	(64Mx8) [*] ₉	x8SR	
TRS	TRS31260X	HYB18T512800AF5 rev A	Infineon	M0551LA1 rev 1	7/26/06	Yes	(64Mx8) [*] ₉	x8SR	
TRS	TRS31274	HYB18T512800AF37 rev A	Infineon	M0551LA1 rev 1	8/4/06	Yes	(64Mx8) [*] ₉	x8SR	
TRS	TRS31275	E5108AG-5C-E rev G	Elpida	M0551LA1 rev 1	8/7/06	Yes	(64Mx8) [*] ₉	x8SR	
TRS	TRS31284	K4T51083QC-ZCD5 rev C	Samsung	M0551LA1 rev 1	8/22/06	Yes	(64Mx8) [*] ₉	x8SR	
TRS	TRS31261X	HYB18T256400AF5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	8/25/06	Yes	(64Mx4) [*] ₁₈	x4SR	
Kingston	KVR400D2S8R3/512I	E5108AGBG-6E-E rev G	Elpida	2025263-001.C00 na	11/7/06	Yes	(64Mx8) [*] ₉	x8SR	

Modules shaded in blue do not contain Lead.

~ Effective May 1st, 2006, Infineon memory products will be known as Qimonda

(+) This vendor is part of the CMTL Certification program. This means this part has/will be tested across all compatible Intel Server Boards. For further information contact CMTL @ <http://cmtlabs.com/>

Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Verify that the DRAM part number matches the DRAM on this list before purchasing.

Intel® Server Board SE7520AF2

Registered ECC, DDR2-400 DIMM Modules

1 GB Sizes (128Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
Micron	MT18HTF12872Y-40EA2	MT47H128M8FP	Micron		9/22/04	Yes	(128x4)*18	x4SR	
Hynix	HYMP512R724-E3 AA-A	HY5PS12421-F-E3	Hynix		10/1/04		(128Mx4)*18	x4SR	
+Smart Modular Technologies	SM1287RDR212435SB	K4T51043QB-GCCC rev B	Samsung	P54G240N ESUBRCC rev A	10/8/04		(128Mx4)*18	x4SR	
+Smart Modular Technologies	SM1287RDR212435IA	HYB18T512400AC5 rev A	~ Qimonda (Infineon)	P54G240N ESUBRCC rev A	10/6/04		(128Mx4)*18	x4SR	
+Apacer*	78.01068.461	K4T51043QB-GCCC rev B	Samsung	48.16189.0 91 rev 1	10/8/04		(128Mx4)*18	x4SR	
+Dataram	DTM63310A	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	40011A rev A	10/1/04		(128Mx4)*18	x4SR	
+ATP Electronics	AH28K72M4BHC4S	K4T51043QB-GCCC rev B	Samsung	SH240M04 K1	10/8/04		(128Mx4)*18	x4SR	
+Smart Modular Technologies	SM1287RDR21243-5-I	HYB18T512400AC5 rev A	~ Qimonda (Infineon)	240-13-4	11/5/04		(128Mx4)*18	x4SR	
+Wintec Industries	39C931284B-L	K4T51083QB-GCD5 rev B	Samsung	D2R872	11/11/04		(64Mx8)*18	X8DR	
+Legacy Electronics Inc.	S512872M20A-50A	HYB18T512400AF(C)5 rev A	~ Qimonda (Infineon)	LE18DD2F 2404RRH rev 1	11/9/04		(128Mx4)*18	x4SR	
Kingston	KVR400D2R3/1G	E5104AB-4A-E rev B	Elpida	2025248-001 rev 0.5	11/10/04		(128Mx4)*18	x4SR	
+Wintec Industries	39S931281A-L	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	D2R872	11/15/04		(64Mx8)*18	x8DR	
+Smart Modular Technologies	SM1287RDR21243-5-S	K4T51043QB-GCCC rev B	Samsung	M393T2950 BG0	12/2/04		(128Mx4)*18	x4SR	
+Dataram	DTM63310F	K4T51043QB-GCCC rev B	Samsung	40011A rev A	12/6/04		(128Mx4)*18	x4SR	
Samsung	M393T2953BG0-CCC	K4T51083QB-GCCC	Samsung		12/14/04		(64Mx8)*18	x8DR	
+Smart Modular Technologies	SM2567RDR21283-5-S	K4T51043QB-SCCC rev B	Samsung	M393T5750 BS1	1/6/05		(128Mx4)*18	x4SR	
+Smart Modular Technologies	SB1287RDR212435IA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	PB54G240 NESUBRC C1 rev A	1/12/05		(128Mx4)*18	x4SR	
Netlist Inc*	NLD127R212038-D32KSB	K4T51043QB-GCCC rev B	Samsung	0208-10 rev A	1/31/05		(128Mx4)*18	x4SR	
Samsung	M393T2953BZ0-CCC	K4T51083QB-ZCCC	Samsung		2/24/05	Yes	(64Mx8)*18	x8DR	
+Smart Modular Technologies	SM1287RDR21243-5-H	HY5PS12421F-E3 rev A	Hynix	E72369	2/25/05		(128Mx4)*18	x4SR	

Registered ECC, DDR2-400 DIMM Modules
1 GB Sizes (128Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
Samsung	M393T2950BG0-CCC Date Code: 0521	K4T51043QB-GCCC	Samsung		2/28/05		(128Mx4) *18	x4SR	
+Smart Modular Technologies	SM1287RDR21243-5-H	HY5PS12421F-E3 rev A	Hynix	E72369	2/25/05		(128Mx4) *18	x4SR	
Netlist Inc*	NLD127R21203F-D32KSB	K4T51043QB-ZCCC rev B	Samsung	0208-10 rev A	3/16/05	Yes	(128Mx4) *18	x4SR	
Super Talent Electronics	T400RA1G4	K4T51043QB-ZCCC rev B	Samsung	D2R472	3/17/05		(128Mx4) *18	x4SR	
+Legend	L12723C7-RCAH2HBF	HY5PS12821F-E3 rev A	Hynix	B62RRCA rev A	3/22/05		(128Mx4) *18	x4SR	
Samsung	M393T2953CZ0-CCC	K4T510830C-ZCCC	Samsung		3/22/05	Yes	(64Mx8)* 18	x8DR	
+Viking	VR5ER287214EBPL1	MT47H128M4BT-37E rev A	Micron	0001009A rev A	3/30/05		(128Mx4) *18	x4SR	
Samsung	M393T2950BZ0-CCC Date Code: 0521	K4T51043QB-ZCCC	Samsung		4/14/05	Yes	(128Mx4) *18	x4SR	
~ Qimonda (Infineon)	HYS72T128000HR-5-A	HYB18T512400AF5	~ Qimonda (Infineon)		4/27/05	Yes	(128Mx4) *18	x4SR	
+Ventura Technology Group	D2-54KF53SV-333	K4T51043QB-ZCCC rev B	Samsung	D2R472	4/19/05		(128Mx4) *18	x4SR	
+Transcend Information	TS128MQR72V4K	K4T51043QB-GCCC rev B	Samsung	09-2090	4/21/05		(128Mx4) *18	x4SR	
+Netlist, Incorporated	NLD127R212038-D32KIA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	0208-10 rev A	4/18/05		(128Mx4) *18	x4SR	
+Kingston	KVR400D2S4R3/1GI	E5104AE-5C-E rev E	Elpida	2025248-001.B00	5/5/05		(128Mx4) *18	x4SR	
Samsung	M393T2950CZ0-CCC	K45T1043QC-ZCCC	Samsung		6/6/05	Yes	(128Mx4) *18	x4SR	
+Legacy Electronics Inc.	B512872M20A-50A	K4T51043QB-GCCC rev B	Samsung	LE18DD2F 2404RRH rev A	6/8/05		(128Mx4) *18	x4SR	
+SimpleTech*	ST72P4T128M-B05AU	K4T51043QB-ZCCC rev B	Samsung	E186014 na	6/20/05		(128Mx4) *18	x4SR	
+Avant Technology*	AVF7228R52E3400F0-MTB	MT47H64M8CB-37E rev B	Micron	50-1431-01B rev B	6/27/05		(64Mx8)* 18	x8DR	
+Viking	VR5ER287218EBPL3	MT47H64M8CB-37E rev B	Micron	0000992A rev A	6/20/05		(64Mx8)* 18	x8DR	
+Wintec Industries	39S931341A-L	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	D2R472	6/15/05		(128Mx4) *18	x4SR	
+Apacer	76.02220.B06	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	48.16189.0 11 rev 1	7/27/05		(128Mx4) *18	x4SR	
~ Qimonda (Infineon)	HYS72T128020HR-5-A	HYB18T512800AF5-A	~ Qimonda (Infineon)		7/25/05	Yes	(64Mx8)* 18	x8DR	
Micron	MT18HTF12872Y-40EB3	MT47H64M8BT-5E	Micron		7/25/05	Yes	(128Mx4) *18	x4SR	
+Wintec Industries	39C931344B-GL	K4T51043QB-ZCCC rev B	Samsung	D2R472 na	7/12/05		(128Mx4) *18	x4SR	
+Smart Modular Technologies	SB1287RDR21243-5-E	E5104AB-4A-E rev B	Elpida	Z10 026A na	08/09/05		128Mx4)* 18	X4SR	

**Registered ECC, DDR2-400 DIMM Modules
1 GB Sizes (128Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
+Wintec Industries	39931342-L	MT47H128M4CB-5E rev B	Micron	D2R472 na	8/30/05		(128Mx4)*18	x4SR	
+Kingston	KVR400D2S8R3/1GI	HYB18T1G800AF-5 rev A	~ Qimonda (Infineon)	2025263-001.C00	9/6/05		128M x 8		
+Wintec Industries	39931344B-L	K4T51043QB-GCCC rev B	Samsung	D2R472 na	9/12/05		(128Mx4)*18	x4SR	
Samsung	M393T2950CZ3-CCC	K4T51043QC-ZCCC	Samsung		9/30/05	Yes	(128Mx4)*18	x4SR	
+Kingston	KVR400D2S4R3/1GI	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	2025248-001.B00 na	10/7/05		(128Mx4)*18	x4SR	
Nanya Technology Corporation	NT1GT72U4PA0BV-5A	NT5TU128M4AE-5A rev A	Nanya	NTPCB00019 (0519, 0515) na	10/18/05	Yes	(128Mx4)*18	x4SR	
+Wintec Industries	39C931344C-L	K4T51043QC-ZCCC rev C	Samsung	D2R472 na	10/24/05		(128Mx4)*18	x4SR	
+Smart Modular Technologies	SG1287RDR264835IA5	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	PG58G240 NEBUB2R B rev A	11/1/05		(64Mx8)*18	x8DR	
Hynix	HYMP512R72P8-E3		Hynix		10/24/05	Yes	(64Mx8)*18	x8DR	
Samsung	M393T2953CZ3-CCC	K4T510830C-ZCCC	Samsung		11/4/05	Yes	(64Mx8)*18	x8DR	
+Legacy Electronics Inc.	B517M4C2AHA-50	K4T51043QC-ZCCC rev C	Samsung	LE18DD2F 2404RRH rev A	11/23/05		(128Mx4)*18	x4SR	
+Smart Modular Technologies	SG1287RDR264835IA	HYB18T512800AF37 rev A	~ Qimonda (Infineon)	PG58G240 NEBUB2R B rev A	11/10/05		(64Mx8)*18	x8DR	
+Kingston	KVR400D2S4R3/1GI	HYB18T512400AF37 rev A	~ Qimonda (Infineon)	2025248-001.B00 na	1/13/06	Yes	(128Mx4)*18	x4SR	
+Smart Modular Technologies	SG1287RDR264835SC	K4T51083QC-ZCD5 rev C	Samsung	PG58G240 NEBUB2R B rev A	1/18/06	Yes	(64Mx8)*18	x8DR	
Hynix	HYMP512R72P4-E3	HY5PS12421FP-E3	Hynix		1/31/06	Yes	(128Mx4)*18	x4SR	
Hynix	HYMP112R72P8-E3	HY5PS1G831FP-E3	Hynix		1/31/06	Yes	(128Mx8)*9		
Hynix	HYMP512R72BP4-E3	HY5PS12421BFP-E3	Hynix		1/31/06	Yes	(128Mx4)*18	x4SR	
Hynix	HYMP512R72BP8-E3	HY5PS12821BFP-E3	Hynix		1/31/06	Yes	(64Mx8)*18	x8DR	
+Legend	L12723C7-R41H2M1F	HY5PS12421F-E3 rev 1st Gen.	Hyundai	104	2/2/06		(128Mx4)*18	x4SR	
+ATP Electronics	AH28K72M4BHC4S	K4T51043QC-ZCCC rev C	Samsung	SH240M04 K2 na	3/1/06	Yes	(128Mx4)*18	x4SR	
+Dataram	DTM63310J	NT5TU128M4AE-5A rev A	Nanya	40011A rev A	3/17/06	Yes	(128Mx4)*18	x4SR	

Registered ECC, DDR2-400 DIMM Modules 1 GB Sizes (128Mx72)									
Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
TRS	TRS31265	HYB18T512400AF5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	04/04/06	Yes			
Kingston	KVR400D2S8R3/1GI	E1108AA-5C-E rev A	Elpida	2025263-001.C00 na	04/14/06	Yes			
Kingston	KVR400D2S4R3/1GI	NT5U128M4AE-5A rev A	Nanya	2025248-001.B00 na	06/01/06	Yes	(128Mx4)*18	x4SR	
Netlist, Inc.	NLD127R21203F-D32KNA	NT5TU128M4AE-5A rev A	Nanya	0208-10 rev B	6/23/06	Yes	(128Mx4)*18	x4SR	
TRS	TRS31267	K4T51043QC-ZCCC rev C	Samsung	M0549LA1 rev 1	6/30/06	Yes	(128Mx4)*18	x4SR	
Dane-Elec	DMD400R072283NG	EDE5108AESK-5C-E rev E	Elpida	D2R872 rev 1	7/28/06	Yes	(64Mx8)*18	x8DR	
TRS	TRS31276	HYB18T512400AF37 rev A	Qimonda (Infineon)	M0549LA1 rev 1	8/9/06	Yes	(128Mx4)*18	x4SR	
TRS	TRS31277	E5104AG-5C-E rev G	Elpida	M0549LA1 rev 1	8/14/06	Yes	(128Mx4)*18	x4SR	
TRS	TRS31265X	HYB18T512400AF5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	8/30/06	Yes	(128Mx4)*18	x4SR	
Kingston	KVR400D2S4R3/1GI	E5104AG-5C-E rev G	Elpida	2025248-001.B00 na	10/16/06	Yes	(128Mx4)*18	x4SR	
Kingston	KVR400D2S8R3/1GI	E1108AB-6E-E rev B	Elpida	2025263-001.C00 na	11/22/06	Yes	(128Mx8)*9		
TRS	TRS31277X	E5104AG-5C-E rev G	Elpida	M0549LA1 rev 1	2/9/07	Yes	(128Mx4)*18	x4SR	
Kingston	KVR400D2S8R3/1GI	MT47H128M8HQ-3 rev E	Micron	2025263-001.C00 na	4/24/07	Yes	(128Mx8)*9		
Kingston	KVR400D2S4R3/1GI	E5104AHSE-6E-E rev H	Elpida	2025248-001.B00 na	5/8/07	Yes	(128Mx4)*18	x4SR	
Kingston	KVR400D2S4R3/1GI	NT5TU128M4BE-3C rev B	Nanya	2025248-001B00	12/21/07	Yes	(128Mx4)*18	x4SR	

Modules shaded in blue do not contain Lead.

~ Effective May 1st, 2006, Infineon memory products will be known as Qimonda

(+) This vendor is part of the CMTL Certification program. This means this part has/will be tested across all compatible Intel Server Boards. For further information contact CMTL @ <http://cmtlabs.com/>

Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Intel® Server Board SE7520AF2

Registered ECC, DDR2-400 DIMM Modules

2 GB Sizes (256Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
+Smart Modular Technologies	SM2567RDR21283-5-I	HYB18T512400AC5 rev A	~ Qimonda (Infineon)	240-20-1	11/3/04		(128Mx4) *36	x4DR	
+Dataram	DTM63309A	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	40040A rev A	11/23/04		(128Mx4) *36	x4DR	
Samsung	M393T5660MZ0-CCC	K4T1G044QM-ZCCC	Samsung		11/29/04	Yes	(256Mx4) *18	x4SR	
+Legacy Electronics Inc.	S525672M20A-50A	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	TTM-SA2 rev 1	12/6/04		(128Mx4) *36	x4DR	
Micron	MT18HTF25672Y-40EA2		Micron		12/13/04	Yes	(256Mx4) *18	x4SR	
Samsung	M393T5750BS0-CCC Date Code: 0521	K45T1043QB-SCCC	Samsung		1/10/05		(128Mx4) *36	x4DR	
Samsung	M393T5750BY0-CCC Date Code: 0521	K45T1043QB-ZCCC	Samsung		2/24/05	Yes	(128Mx4) *36	x4DR	
+Smart Modular Technologies	SB2567RDR212835IA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	PB52G240N ESUB1RJ	3/1/05		(128Mx4) *36	x4DR	
+ATP Electronics	AH56K72M4BJC4M	MT47H256M4BT-5E rev A	Micron	SH240M04K1	3/10/05		(128Mx4) *36	x4DR	
+ATP Electronics	AH56K72J4BHC4C	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	SH240J04K1	4/6/05		(128Mx4) *36	x4DR	
+Smart Modular Technologies	SM2567RDR22543-5-I	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)	240-13-5	4/1/05		(256Mx4) *18	x4SR	
+Smart Modular Technologies	SM2567RDR22543-5-S	K4T1G044QM-ZCCC rev M	Samsung	M393T2950B G0	4/13/05		(256Mx4) *18	x4SR	
Netlist, Incorporated	NLD257R212038- D32KIA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	0203-10 rev A	4/21/05		(128Mx4) *36	x4DR	
+Dataram	DTM63320A	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)	40011A rev A	4/28/05		(128Mx4) *36	x4DR	
+Kingston	KVR400D2D4R3/2GI	E5104AE-5C-E rev E	Elpida	2025292- 001.A00	5/4/05		(128Mx4) *36	x4DR	
~ Qimonda (Infineon)	HYS72T256000HR-5-A	HYB18T1G400AF-5	~ Qimonda (Infineon)		5/24/05	Yes	(256Mx4) *18	x4SR	
+Smart Modular Technologies	SG2567RDR212835IA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	PG52G240N ESUB1RJ rev A	6/2/05		(256Mx4) *18	x4SR	
+Dataram	DTM63309B	K4T51043QC-ZCCC rev C	Samsung	40040A rev A	7/21/05		(128Mx4) *36	x4DR	
+Wintec Industries	39C941441A-L	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)	D2R472 na	7/8/05		(256Mx4) *18	x4SR	
Micron	MT36HTF25672Y-40EB1		Micron		7/25/05	Yes			
+Kingston	KVR400D2D8R3/2GI	HYB18T1G800AF-5 rev A	~ Qimonda (Infineon)	2025302- 001.A00 na	08/15/05		(128Mx8) *18		
Samsung	M393T5750CZ0-CCC	K45T1043QC-ZCCC	Samsung		9/20/05	Yes	(128Mx4) *36	x4DR	

**Registered ECC, DDR2-400 DIMM Modules
2 GB Sizes (256Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
Samsung	M393T5750CZ0-CCC	K4T51043QC-ZCCC	Samsung		9/30/05	Yes	(128Mx4) *36	x4DR	
Nanya Technology Corporation	NT2GT72U4NA1BV-5A	NT5TU128M4AE-5A rev A	Nanya	NTPCB00037 P (0514) na	10/18/05	Yes	(128Mx4) *36	x4DR	
+Smart Modular Technologies	SG2567RDR21283-5-H	HY5PS1G421MP-E3 rev A	Hynix	0518-1,-2,-3,-4,-6	9/28/05		(128Mx4) *36	x4DR	
+Kingston	KVR400D2D4R3/2GI	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	2025292-001.B00 na	11/4/05		(128Mx4) *36	x4DR	
Hynix	HYMP125R72P4-E3	HY5PS1G431FP-E3	Hynix		10/24/05	Yes	(256Mx4) *18	x4SR	
Samsung	M393T5750CZ3-CCC	K45T1043QC-ZCCC	Samsung		11/4/05	Yes	(128Mx4) *36	x4DR	
Samsung	M393T5660MZ3-CCC	K4T1G044QM-ZCCC	Samsung		11/4/05	Yes	(256Mx4) *18	x4SR	
+Legacy Electronics Inc.	B527M4C2BJA-50	K4T51043QC-ZCCC rev C	Samsung	LE36DD2F2404RRJ rev B	12/5/05		(128Mx4) *36	x4DR	
+ATP Electronics	AH56K72M4BJC4C	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)	SH240M04K1 na	12/16/05	Yes	(256Mx4) *18	x4SR	
Samsung	M393T5660AZ3-CCC	K4T1G044QA-ZCCC	Samsung		12/13/05	Yes	(256Mx4) *18	X4SR	
+Legend	L25723C7-R41H2W2F	HY5PS1G421MP-E3 rev 1st Gen.	Hynix	0536	1/20/06	Yes	(256Mx4) *18	x4SR	
Hynix	HYMP125R72P8-E3	HY5PS1G831FP-E3	Hynix		1/31/06	Yes	(128Mx8) *18		
Hynix	HYMP525R72BP4-E3	HY5PS12421BFP-E3	Hynix		1/31/06	Yes	(128Mx4) *36	x4SR	
+Kingston	KVR400D2D4R3/2GI	HYB18T512400AF37 rev A	~ Qimonda (Infineon)	2025292-001.B00 na	3/7/06	Yes	(128Mx4) *36	x4SR	
Kingston	KVR400D2D8R3/2GI	E1108AA-5C-E rev A	Elpida	2025302-001.A00 na	04/13/06	Yes			
TRS	TRS31270	HYB18T1G400AF-5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	04/19/06	Yes			
Apacer	75.A72A1.G00	K4T51043QC-ZCCC rev C	Samsung	48.1A189.012 rev 2	6/22/06	Yes	(128Mx4) *36		
Kingston	KVR400D2D4R3/2GI	NT5TU128M4AE-5A rev A	Nanya	2025292-001.B00 na	6/19/06	Yes	(128Mx4) *36		
TRS	TRS31270X	HYB18T1G400AF-5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	8/17/06	Yes	(256Mx4) *18	x4SR	
Kingston	KVR400D2D4R3/2GI	E5104AG-5C-E rev G	Elpida	2025292-001.B00 na	10/20/06	Yes	(128Mx4) *36	x4SR	
Smart Modular Technologies	SG2567RDR212435NB	NT5TU128M4BE-3C rev B	Nanya	PG52G240N ESUB3RJ rev A	12/6/06	Yes	(128Mx4) *36	x4SR	
Kingston	KVR400D2D8R3/2GI	E1108AB-6E-E rev B	Elpida	2025302-001.A00 na	12/12/06	Yes	(128Mx8) *18		
Avant Technology	AVF7256R53E3400F6-ELEP	EDE5104AE-5C-E rev E	Elpida	BA2RRCJ 1.01 rev 1	12/15/06	Yes	(128Mx4) *36	x4SR	

**Registered ECC, DDR2-400 DIMM Modules
2 GB Sizes (256Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
All Components	AVF7256R53E3400F6-ELEP	EDE5104AE-5C-E rev E	Elpida	BA2RRCJ 1.01 rev 1	2/23/07	Yes	(128Mx4) *36	x4SR	
US Technology	AVF7256R53E3400F6-ELEP	EDE5104AE-5C-E rev E	Elpida	BA2RRCJ 1.01 rev 1	3/23/07	Yes	(128Mx4) *36	x4SR	
Kingston	KVR400D2D8R3/2GI	MT47H128M8HQ-3 rev E	Micron	2025302-001.A00 na	4/17/07	Yes	(128Mx8) *18		
Kingston	KVR400D2D4R3/2GI	E5104AHSE-6E-E rev H	Elpida	2025292-001.C00 na	5/4/07	Yes	(128Mx4) *36	x4SR	
Smart Modular Technologies	SG2567RDR212435IB	HYB18T512400BF3S rev B	Qimonda	PG52G240N ESUB3RJ rev A	10/3/07	Yes	(128Mx4) *36	x4SR	

Modules shaded in blue do not contain Lead.

~ Effective May 1st, 2006, Infineon memory products will be known as Qimonda

(+) This vendor is part of the CMTL Certification program. This means this part has/will be tested across all compatible Intel Server Boards. For further information contact CMTL @ <http://cmtlabs.com/>

Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Verify that the DRAM part number matches the DRAM on this list before purchasing.

Intel® Server Board SE7520AF2
Registered ECC, DDR2-400 DIMM Modules
4 GB Sizes (512Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Rank	EOL
+Smart Modular Technologies	SG5127RDR225635IA	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)	PG516G240 NESUC1RK rev A	10/28/05	Yes	(128Mx4) *36	x4DR	
Hynix	HYMP351R72MP4-E3		Hynix		10/24/05	Yes	(256Mx4) *36	x4DR	
~ Qimonda (Infineon)	HYS72T512022HR-5-A	HYB18T2G402AF-5-A	~ Qimonda (Infineon)		11/1/05	Yes	(2x256Mx4) *18		
Samsung	M393T5168AZ0-CCC	K4T2G264QA	Samsung		1/29/07	Yes	(512Mx4) *18		
Smart Modular Technologies	SG5127RDR225635AR T	HYB18T1G400AF-5 rev A	Qimonda	XG58G240N ESUB1TK rev A	4/26/07	Yes	(256Mx4) *36	x4DR	

Modules shaded in blue do not contain Lead.

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Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Verify that the DRAM part number matches the DRAM on this list before purchasing.

4. Intel® Server RAID SROMBU42E Memory Tested

The following tables list DIMM devices tested to be compatible with the Intel® Server RAID SROMBU42E subsystem of the Intel® Server Board SE7520AF2. The list of tested memory is periodically updated as qualified memory is added during the production life of the Intel product.

Intel strongly recommends the use of ECC memory in all server products.

Memory modules not listed in the following tables have not been tested for compatibility and their use with the RAID subsystem of the Server Board SE7520AF2 may result in unpredictable operation and data loss.

The Intel® RAID On MotherBoard (ROMB) DIMM should be a single rank device (with at maximum nine x8 devices) due to the Intel® RAID Smart Battery (RSB) retention time requirements.

Caution: Third party memory vendors may use the same module part number with different DRAM vendors and die revisions. To insure proper system operation, verify that each DRAM vendor and die revision has been separately tested and qualified. Please notify CMTL if there is a discrepancy. This list is subject to change without notice.

Note: This list is not intended to be all-inclusive. It is provided as a convenience to Intel's general customer base, but Intel does not make any representations or warranties whatsoever regarding the quality, reliability, functionality, or compatibility of these memory modules.

Intel® Server RAID SROMBU42E
Unbuffered ECC DDR DIMM Modules
128 MB Sizes (16Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Speed	EOL
Intel	AXXRPCM1 (DIMM-Battery Unit)	K4H561638D-TCB3	Samsung				(16Mx8)*9	333	
~ Qimonda (Infineon)	HYS72D16000GU-7-A	HYB250D128800AT-7A	~ Qimonda (Infineon)				(16Mx8)*9	266	
Micron	MT9VDDT1672AG-335B4	MT46V16M8-6TB	Micron				(16Mx8)*9	333	
Micron	MT5VDDT1672AG-40BF3	MT46V16M16TG-5B rev F	Micron	0287 rev A	6/6/05		(16Mx16)* 5	400	

Intel® Server RAID SROMBU42E
Unbuffered ECC DDR DIMM Modules
256 MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Speed	EOL
Samsung	M381L3223DTL-CA2	K4H560838D-TCA2	Samsung				(32Mx8)* 9	266	
Samsung	M381L3223ETM-CB3	K4H560838E-TCB3	Samsung				(32Mx8)* 9	333	
~ Qimonda (Infineon)	HYS72D32300HU-5-C		~ Qimonda (Infineon)			Yes		400	
Samsung	M381L3223FTM-CCC		Samsung					400	
TRS	TRS20206	HYB25D256800CE-6 rev C	~ Qimonda (Infineon)	M0498LA1 rev 1	7/15/05			333	
Micron	MT9VDDT3272AG-335G4	MT46V32M8TG-6T rev G	Micron	0286 rev A	6/3/05		(32Mx8)* 9	333	
+Dataram	DTM63635D	HYB25D256800CE-6 rev C	~ Qimonda (Infineon)	40570A rev A	3/4/05		(32Mx8)* 9	333	
+ATP Electronics	AG32L72T8SQB3S	K4H560838F-TCB3 rev F	Samsung	SG184T08L 1 rev 1	3/2/05		(32Mx8)* 9	333	
Micron	MT9VDDT3272AG-40BG4	MT46V32M8TG-5B rev G	Micron	0286 rev A	6/8/05		(32Mx8)* 9	400	

Modules shaded are Lead Free

~ Effective May 1st, 2006, Infineon memory products will be known as Qimonda

(+) This vendor is part of the CMTL Certification program. This means this part has/will be tested across all compatible Intel Server Boards. For further information contact CMTL @ <http://cmtlabs.com/>

Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Verify that the DRAM part number matches the DRAM on this list before purchasing.

Intel® Server RAID SROMBU42E
Unbuffered ECC DDR DIMM Modules
512 MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	Speed	EOL
Samsung	M381L6523CUM-CB3	K4H510838C-UCB3 rev C	Samsung		1/23/06			333	
~ Qimonda (Infineon)	HYS72D64300HU-6-C	HYB25D512800CE-6 rev C	~ Qimonda (Infineon)		1/16/06	Yes	(64Mx8)* 9	333	
Micron	MT9VDDT6472AG-335D1	MT46V64M8TG-5B rev D	Micron	0286 rev A	6/10/05		(64Mx8)* 9	333	
+Buffalo	DD333-E512/MG	MT46V32M8-6TG rev G	Micron	UE0532-AA	3/3/05		(32Mx8)* 18	333	
+Dataram	DTM63715A	HYB25D512800CE-5 rev C	~ Qimonda (Infineon)	40024A rev A	6/30/05		(64Mx8)* 9	400	
+ATP Electronics	AG64L72T8SHC4S	K4H510838C-UCCC rev C	Samsung	SG184T08L1	5/26/05		(64Mx8)* 9	400	
Netlist, Incorporated	NL96472D6408A-D32KSC	K4H510838C-UCCC rev C	Samsung	BDS982A	2/1/06	Yes	(64Mx8)* 9	400	

Modules shaded are Lead Free

~ Effective May 1st, 2006, Infineon memory products will be known as Qimonda

(+) This vendor is part of the CMTL Certification program. This means this part has/will be tested across all compatible Intel Server Boards. For further information contact CMTL @ <http://cmtlabs.com/>

Caution: Some modules on this list may contain "stacked" DRAM parts. These parts may have thermal & physical limitations in some chassis configurations. It is advised to verify that your chassis configuration will support "stacked" parts before purchase.

Verify that the DRAM part number matches the DRAM on this list before purchasing.

Sales Information

Vendor Name	Web URL	Vendor Direct Sales Info
ATP Electronics	http://www.atpinc.com/	John Cheng Tel 408-732-5875 Fax 408-732-5893 sales@atpusa.com
ATP Electronics -- Taiwan Inc.	http://www.atpinc.com/	Patty Kuo Tel 011-886-2-2659-6368 Fax 886-2-2659-4982
Avant Technology	http://www.avanttechnology.com	Brad Scoggins Phone: (512)491-7411 Fax: (512)491-7412 brads@avanttechnology.com
Aved Memory Products	http://www.avedmemory.com/	
Buffalo Technology	http://www.buffalotech.com/	(800) 967-0959 memory@buffalotech.com
Centon Electronics	http://www.centon.com	Tel: 949-855-9111 Fax: 949-855-6035
Corsair	http://www.corsairmicro.com/	Tel: 510-657-8747 Fax: 510-657-8748
Dane-Elec	http://www.dane-memory.com/	Michal Hassan @ (949)450-2941 or email @ Michal@Dane-memory.com
Dataram	http://www.dataram.com/	Paul Henke, 800-328-2726 x2239 in USA 609-799-0071 phenke@dataram.com
GoldenRAM	http://www.goldenram.com	Jason M. Barrette @ 800-222-861 x7546 jasonb@goldenram.com or Michael E. Meyer @800-222-8861 x7512 michaelm@goldenram.com
Hitachi	http://semiconductor.hitachi.com/pointer/	
Hyundai/Hynix Semiconductor	http://www.hea.com/	
~ Qimonda (Infineon)	http://www.infineon.com/business/distribut/index.htm	
ITAUCOM	http://www.itauc.com.br	
JITCO CO LTD	http://www.jitco.net/	Seong Jeon Tel: 82-32-817-9740 s.jeon@jitco.net
Kingston	http://www.kingston.com	US.- Call (877) 435-8726 Asia – Call 886-3-564-1539 Europe – Call +44-1932-755205
Legacy Electronics Inc.	http://www.legacyelectronics.com	U.S. Contact: Gary Ridenour, 949-498-9600, Ext 350 European Contact: 49 89 370 664 11
Legend	http://www.legend.com.au	
Micron	http://silicon.micron.com/mktg/http://silicon.micron.com/mktg/mbqual/qual_data.cfm	
MSC Vertriebs GmbH	http://www.msc-ge.com	William Perrigo 49-7249-910-417 Fax: 49-7249-910-229 wpe@msc-ge.com
Nanya Technology	http://www.ntc.com.tw	Winson Shao 886-3-328-1688, Ext 6018 winsonshao@ntc.com.tw

Vendor Name	Web URL	Vendor Direct Sales Info
Netlist, Inc	http://www.netlistinc.com	Christopher Lopes 949.435.0025 tel 949.435.0031 fax sales@netlistinc.com
Peripheral Enhancements	http://www.peripheral.com/	
Samsung	http://www.korea.samsungsemi.com/locate/buy/list_na.html	For US customers go to: http://www.mymemorystore.com/
Silicon Tech	http://www.silicontech.com/contact/salescontacts.shtml	
Simple Tech	http://www.simpletech.com	Ron Darwish @ (949) 260-8230 or email @ Rdarwish@Simpletech.com
SMART Modular Technologies	www.smartm.com/channel/hpc/	Gene Patino (949) 439-6167 Gene.Patino@Smartm.com
Super Talent Electronics	http://www.supertalentmemory.com	David Crume (408) 957-8181 support@supertalentmemory.com
Swissbit	http://www.swissbit.com	Tony Cerreta Tel: 914-935-1400 x240 Fax: 914-935-9865 tony.cerreta@swissbitna.com
TechnoLinc Corporation	http://www.technolinc.com	David Curtis 510-445-7400 davidc@technolinc.com
TRS* Tele-Radio-Space GmbH	http://www.certified-memory.com http://www.certified-memory.de	Vendor Direct Sales Info: Andreas Gruendl Tel: +49.89.945532-34 Fax: +49.89.945532-41 Andreas.gruendl@trs-eu.com
Unigen	http://www.unigen.com	
Ventura Technology Inc	http://www.venturatech.com	Sam Lewis 760 724-8700 ext. 103
Viking InterWorks	http://www.vikinginterworks.com	Adrian Proctor Tel: 949-643-7255 adrian.proctor@sanmina-sci.com
Virtium Technology Inc	http://www.virtium.com	Tod Skelton @ (949) 460-0020 ext. 146 or email @ tod.skelton@virtium.com
Wintec Industries	http://www.wintecindustries.com	Tel 510-360-6300 Fax 510-770-9338

5. CMTL* (Computer Memory Test Labs)

CMTL is a privately owned and operated memory testing organization responsible for testing a broad range of memory products. Memory devices tested by CMTL must undergo a rigorous battery of tests to ensure that the product will perform the intended server functions. Memory capability is a major factor your customers consider. CMTL has the ability to test and certify memory on Intel-based server platforms. The list of memory modules, which have undergone testing through the CMTL facility, should be referenced when considering modules for integration into this Intel server product. Stringent standards with regard to manufacturing procedures and quality must be met to pass the exacting tests required for qualification through the independent testing facility. Testing is performed by CMTL with Intel server products and test procedures defined by Intel's Memory Qualification Lab. Intel routinely audits the CMTL facility to ensure all procedures, process handling, and testing methodologies are met.

IMPORTANT NOTE

DIMM devices with gold contacts should NOT be placed into DIMM sockets with tin-lead contacts or vice-versa. Mixing dissimilar metal contact types has been shown to result in unreliable memory operation. Intel recommends similar manufacturer and similar speeds in each Rank on the memory module. Mixing of dissimilar memory manufacturer devices or dissimilar memory device speeds is not recommended. This document contains information which is the proprietary property of Intel Corporation. Nothing in this document constitutes a guaranty, warranty, or license, express or implied. Intel has tested the following DIMMs for minimum electrical and functional compatibility with the Intel® Server RAID Controller. This listing is not intended to be all inclusive; it only represents the DIMMs Intel or CMTL has tested. Users of this list are reminded to check with the DIMM manufacturer or Distributor to ensure that a particular DIMM model is adequate for the intended purpose on the Intel® Server RAID Controller. Intel provides no indemnities for and expressly disclaims all liabilities for any and all such guaranties, representations, and warranties (oral or written) whether express or implied, related to DIMMs in a Intel® Server RAID Controller product, including without limitation to: fitness for a particular purpose; merchantability; noninfringement of intellectual property or other rights of any third party or of Intel. The reader is advised that third parties may have intellectual property rights which may be relevant to this document and the technologies discussed herein, and is advised to seek the advice of competent legal counsel, without obligation of Intel. Intel retains the right to make changes to this document at any time, without notice. Intel makes no warranty or representation with respect to the use of this document or reliance by the reader upon its contents, and assumes no responsibility for any errors which may appear in the document nor does it make a commitment to update the information contained herein.

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