



Intel[®] Server Board SE7320EP2 Memory List Test Report Summary

Revision History		
Date	Rev	Modifications
June/05	1.0	Release
Aug/05	2.0	Added Samsung* 256MB, 512MB, 1GB and 2GB parts. Added Infineon* 512MB, 1GB and 2GB parts. (In shaded area)
Aug/05	3.0	Added ATP*, Apacer*, Dataram*, Kingston*, Micron* and Viking* 512MB parts. Added Kingston, ATP, Viking, Dataram, Smart* and Apacer 1GB parts. Added Smart, Apacer, Micron and Wintec* 2GB parts. (In shaded area)
Sept/05	4.0	Added Wintec 512MB and 1GB parts. Added Apacer 512MB parts. Added Micron 1GB part and Samsung 2GB part. (In shaded area)
Oct/05	5.0	Added Ventura* 512MB part. Added Kingston 1GB part. (In shaded area)
Oct/05	6.0	Added Apacer and Hynix* 512MB parts. Added Smart, Ventura and Samsung 1GB parts. (In shaded area) Updated unleaded parts with correct shading.
Nov/05	7.0	Added Samsung 256MB parts. Added Samsung 512MB parts. Added Samsung 1GB parts. Added Kingston, Hynix, Samsung and Dataram 2GB parts. Added Smart and Infineon 4GB parts. (In shaded area)
Dec/05	8.0	Added ATP, Kingston and Legend 1GB parts. Added Smart 2GB part. (In shaded area)
Jan/06	9.0	Added Kingston 2GB and 512MB parts. Added ATP 2GB part. Added Apacer 512MB part. (In shaded area)
Jan/06	10.0	Added Smart, Nanya and Kingston 1GB parts. Added Nanya and ATP 512MB parts. Added Nanya 2GB part. Added Hynix 512MB, 1G & 4G parts. Added Samsung 512MB & 2G parts. (In shaded area)
Feb/06	11.0	Added Legacy, Apacer and Wintec 1GB parts. Added Kingston 2GB part. Added Hynix 512MB, 1G & 2G parts. (In shaded area)
Mar/06	12.0	Added Smart 1GB part. (In shaded area)
Mar/06	13.0	Added Legend 2GB part. Added Legacy 512MB part. Added TRS 512MB, 1GB and 2GB parts. (In shaded area)
May/06	14.0	Infineon name change to Qimonda effective May 1 st , 2006. Added Smart 512MB part. Added Legacy 2G part. Added Dataram 1G & 2G parts. (In shaded area)
June/06	15.0	Added ATP 1GB part. Added Kingston 1GB and 2GB parts. (In shaded area)
July/06	16.0	Added TRS and Kingston 512MB parts. Added TRS 1GB part. Added Kingston 2GB part. (In shaded area)
Aug/06	17.0	Added Dane-Elec and Smart 1GB parts. (In shaded area)
Aug/06	18.0	Added TRS and Super Talent Electronics 2GB parts. (In shaded area)
Oct/06	19.0	Added Super Talent Electronics and TRS 512MB parts. Added Super Talent Electronics, Avant Technology, and TRS 1GB parts. (In shaded area)
Nov/06	20.0	Added Kingston 512MB, 1GB, and 2GB parts. (In shaded area)
Jan/07	21.0	Added Kingston 1GB part. Added Kingston and Smart 2GB parts. (In shaded area)
Jan/07	22.0	Added ATP Electronics 2GB part. (In shaded area)
Feb/07	23.0	Added TRS 1GB part. (In shaded area)
Feb/07	24.0	Added All Components 1GB part. Updated vendor contact information. (In shaded area)

Revision History		
Date	Rev	Modifications
Mar/07	25.0	Updated contact information. No new parts added.
May/07	26.0	Added Kingston 1GB and 2GB parts. (In shaded area)
May/07	27.0	Additional memory parts added. (In shaded area)
Jan/08	28.0	Additional memory parts added. (In shaded area)
Mar/08	29.0	Additional memory parts added. (In shaded area)
May/08	30.0	Additional memory parts added. (In shaded area)

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The Intel® Server Board SE7320EP2 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 bank on the memory module. Mixing of dissimilar memory manufacturer and similar speeds in each bank on the memory module is NOT recommended.

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Overview of Memory Testing

The following procedure is used to qualify Dual In-Line Memory Modules (DIMMs) for use with the Intel® Server Board SE7320EP2. Memory is a vital subsystem in a server. Intel requires strict guidelines to be met before a DIMM vendor is put onto the qualified memory list. To be acknowledged on the list as a fully functional DIMM, the memory must undergo rigorous tests to ensure that the product will perform the intended Server and Workstation product functions.

Memory qualification for Intel®'s Server and Workstation Board products is performed by Intel's Memory Validation Laboratory (MVL), and by an independent external test laboratory, Computer Memory Test Lab (+CMTL*).

Intel's Server Board, Workstation Board and RAID Controller products qualified memory lists categorize memory modules as Advanced Tested. The Advanced Testing process involves a paper qualification, a standard voltage and room temperature functional test, and a voltage and temperature margin functional test. A paper qualification is a review of critical timings, electrical characteristics, timing requirements, environmental requirements, and packaging requirements in order to see if the DIMM meets Intel's memory specifications. The standard voltage and room temperature test involves testing the memory module on the particular Intel board for which it is being qualified with test software operating under Microsoft* Windows for no less than 24 hours. The voltage and temperature margin testing involves testing the memory module on the particular Intel product for which it is being qualified with various test software and operating systems for 24 hours under various voltage and temperature margin conditions. DIMMs that have completed Advanced Testing are known to be compatible with the product on which they were tested, and with the test software and operating system that was utilized during the test procedure.

+CMTL* is a leading memory testing 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 equipment and a procedure as defined by Intel's various functional testing levels. Testing is performed on a number of Intel® Server RAID Controllers.

CMTL Contact Info:

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Qualified DDR Memory for the Intel® Server Board SE7320EP2

The Intel® Server Board SE7320EP2 has 4 DIMM sockets supporting up to 8 GB of Registered ECC DDR2-400 memory using four 72-bit DIMM modules. These four DIMM sockets constitute two memory banks; Bank1 with contiguous sockets labeled DIMM1A & DIMM1B, and Bank2 with contiguous sockets labeled DIMM2A & DIMM2B. When memory is installed in pairs, DIMM Bank1 must be populated before DIMM Bank2. Memory within a DIMM bank must be identical. For customers requiring a lower cost configuration, a single DIMM may be populated in the DIMM1A socket. If this is done, the Intel® x4 Single Device Data Correction (Intel x4 SDDC) technology and memory interleaving will not be enabled. DIMM and memory configurations must adhere to the following:

- Only DDR2-400 registered ECC DDR II compliant, ECC, DDR II memory DIMMs will be supported.
- ECC single-bit errors (SBE) will be corrected and multiple-bit error (MBE) will be detected.
- Supports Intel x4 SDDC with x4 DIMMs.
- Pin Count: 184.
- Memory capacity: 256MB, 512MB, 1GB and 2GB.
- Minimum configuration: 256MB using one single 256MB DIMM in socket DIMM1A.
- One or two memory banks may be populated.

Below is a chart that lists the current supported memory types:

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

The following tables list DIMM devices tested to be compatible with the Intel® Server Board. This document and the DIMM list will be updated as qualified memory is added during the life of the Intel® Server Board 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 SE7320EP2 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 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 SE7320EP2
Registered ECC, DDR2-400 DIMM Modules
256MB Size (32M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead-Free	DRAM Organization	EOL
Qimonda*	HYS72T32000HR-5-A	HYB18T256800AF5-A	Qimonda		5/24/05	Yes	(32Mx8) [*] ₉	
Micron*	MT9HTF3272Y-40EB2	MT47H32M8BP-37E	Micron		5/19/05	Yes	(32Mx8) [*] ₉	
Samsung*	M393T3253FZ0-CCC	K4T56083QF-GCCC	Samsung		6/20/05	Yes	(32Mx8) [*] ₉	
Samsung	M393T3253FG0-CCC	K4T56083QF-GCCC	Samsung		6/6/05		(32Mx8) [*] ₉	
Samsung	M393T3253FG3-CCC	K4T56083QF-GCCC	Samsung		11/4/05		(32Mx8) [*] ₉	
Samsung	M393T3253FZ3-CCC	K4T56083QF-ZCCC	Samsung		11/4/05	Yes	(32Mx8) [*] ₉	

(+) 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 SE7320EP2
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	EOL
Qimonda	HYS72T64000GR-5-A	HYB18T512800AC5	Qimonda		5/19/05		(64Mx8) [*] 9	
Qimonda	HYS72T64000HR-5-A	HYB18T512800AC5	Qimonda		5/19/05	Yes	(64Mx8) [*] 9	
Samsung	M393T6453FG0-CCC	K4T56083QF-GCCC	Samsung		5/19/05		(32Mx8) [*] 18	
Micron	MT18HTF6472Y-40EB2	MT47H64M4BP-37E	Micron		5/19/05	Yes		
Samsung	M393T6453FG0-CCC	K4T56083QF-GCCC	Samsung		5/19/05		(32Mx8) [*] 18	
Samsung	M393T6453FZ0-CCC	K4T56083QF-GCCC	Samsung		6/20/05	Yes	(32Mx8) [*] 18	
Samsung	M393T6553CZ0-CCC	K4T51083QC-ZCCC	Samsung		6/20/05	Yes	(64Mx8) [*] 9	
Samsung	M393T6553BZ0-CCC	K4T51083QB-GCCC	Samsung		6/20/05	Yes	(64Mx8) [*] 9	
Samsung	M393T6553BG0-CCC	K4T51083QB-GCCC	Samsung		6/20/05		(64Mx8) [*] 9	
Qimonda	HYS72T64020HR-5-A	HYB18T256800AF5-A	Qimonda		6/20/05	Yes	(32Mx8) [*] 18	
+ATP Electronics*	AH64K72N8BHC4S	K4T51083QB-GCCC rev B	Samsung	SH240N08K1	07/01/05		(64Mx8) [*] 9	
+Apacer*	78.91057.331	HYB18T512800AF5 rev A	Qimonda	48.16188.011 rev 1	07/11/05		(64Mx8) [*] 9	
+Dataram*	DTM63311C	K4T56043QF-(Z)GCCC rev F	Samsung	40011A rev A	08/10/05		(64Mx8) [*] 18	
+Kingston*	KVR400D2S8R3/512I	HYB18T512800AF37 rev A	Qimonda	2025263-001.C00 na	08/08/05		(64Mx8) [*] 9	
+Viking*	VR5ER647218EBPL1	MT47H64M8CB-37E rev B	Micron	0000992A rev A	08/18/05		(64Mx8) [*] 9	
Micron	MT9HTF6472Y-40EB2	MT47H64M8CB-5E	Micron		8/17/05	Yes	(64Mx8) [*] 9	
+Apacer	76.92220.B12	HYB18T512800AF5 rev A	Qimonda	48.16188.011 rev 1	8/25/05		(64Mx8) [*] 9	
+Apacer	76.92220.B07	K4T51083QB-ZCD5 rev B	Samsung	48.16188.011 rev 1	9/1/05		(64Mx8) [*] 9	
+Wintec Industries*	39C921284B-GL	K4T51083QB-ZCD5 rev B	Samsung	D2R872 na	8/29/05		(64Mx8) [*] 9	
+Ventura Technology Group*	D2-52KC53SV-333	K4T56043QF-ZCD5 rev F	Samsung	D2R472 na	9/22/05		(64Mx8) [*] 9	

Intel® Server Board SE7320EP2
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	EOL
+Apacer	75.963A1.G01	EDE5108AGSE-5C-E rev G	Elpida	48.16188.01 1 rev 1	10/17/05	Yes	(64Mx8)* 9	
Hynix*	HYMP564R728-E3 AA	HY5PS12821-F-E3	Hynix		10/10/05		(64Mx8)* 9	
Samsung	M393T6450FZ3-CCC	K4T56043QF-ZCCC	Samsung		10/24/05	Yes	(64Mx4)* 18	
Samsung	M393T6450FG3-CCC	K4T56043QF-GCCC	Samsung		11/4/05		(64Mx4)* 18	
Samsung	M393T6453FZ3-CCC	K4T56083QF-ZCCC	Samsung		11/4/05	Yes	(32Mx8)* 18	
Samsung	M393T6453FG3-CCC	K4T56083QF-GCCC	Samsung		11/4/05		(32Mx8)* 18	
Samsung	M393T6553CZ3-CCC	K4T51083QC-ZCCC	Samsung		11/4/05	Yes	(64Mx8)* 9	
+Kingston	KVR400D2S8R3/512I	NT5TU64M8AE-37B rev A	Nanya	2025263- 001.C00 na	12/7/05		(64Mx8)* 9	
+Apacer	75.963A1.G02	K4T51083QC-ZCD5 rev C	Samsung	48.16188.01 1 rev 1	12/14/05	Yes	(64Mx8)* 9	
+ATP Electronics	AH64K72F8BHC4S	K4T51083QC-ZCD5 rev C	Samsung	SH240F08K 1 na	12/22/05	Yes	(64Mx8)* 9	
Nanya Technology Corporation	NT512T72U89A0BV-5A	NT5TU64M8AE-5A rev A	Nanya	NTPCB0002 0P (0509) na	1/6/06		(64Mx8)* 9	
Samsung	M393T6450FZ0-CCC	K4T56043QF-GCCC	Samsung		12/13/05	Yes	(64Mx4)* 18	
Hynix	HYMP564R72P8-E3	HY5PS12821FP-E3	Hynix		12/13/05	Yes	(64Mx8)* 9	
Hynix	HYMP564R72BP8-E3	HY5PS12821BFP-E3	Hynix		1/31/06	Yes	(64Mx8)* 9	
+Legacy Electronics Inc.	B557K4C2AAA-50	K4T51083QC-ZCCC rev C	Samsung	LE9DD2F24 08RRA rev A	3/10/06		(64Mx8)* 9	
+TRS	TRS31261	HYB18T256400AF5 rev A	Qimonda	M0549LA1 rev 1	3/22/06	Yes	(64Mx8)* 9	
+TRS	TRS31260	HYB18T512800AF5 rev A	Qimonda	M0551LA1 rev 1	3/24/06	Yes	(64Mx8)* 9	
Smart Modular Technologies	SG647RDR264835-SC	K4T51083QC-ZCCC rev C	Samsung	M393T6553 BG1 (KS- 11A)	04/24/06	Yes		
Kingston	KVR400D2S8R3/512I	E5108AG-5C-E rev G	Elpida	2025263- 001.C00 na	7/7/06	Yes	(64Mx8)* 9	
TRS	TRS31260X	HYB18T512800AF5 rev A	Qimonda (Infineon)	M0551LA1 rev 1	6/27/06		(64Mx8)* 9	
Super Talent Electronics	T400RA512/S12TR8BHS	K4T51083QC-ZCD5 rev C	Samsung	DR20809 rev F1.01	8/17/06	Yes	(64Mx8)* 9	

Intel[®] Server Board SE7320EP2
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	EOL
TRS	TRS31261X	HYB18T256400AF5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	9/5/06	Yes	(64Mx4)* 18	
TRS	TRS31275	E5108AG-5C-E rev G	Elpida	M0551LA1 rev 1	9/11/06	Yes	(64Mx8)* 9	
Kingston	KVR400D2S8R3/512I	E5108AGBG-6E-E rev G	Elpida	2025263- 001.C00 na	11/3/06	Yes	(64Mx8)* 9	

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Intel® Server Board SE7320EP2
Registered, ECC, DDR2-400 DIMM Modules
1GB Size (128M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	EOL
Micron	MT18HTF12872Y-40EA2	MT47H64M8BT-5E	Micron		5/23/05	Yes	(128Mx4)* 18	
Samsung	M393T2953CZ0-CCC	K4T510830C-ZCCC	Samsung		5/19/05	Yes	(64Mx8)*1 8	
Qimonda	HYS72T128000HR-5-A	HYB18T512400AF5	Qimonda		5/19/05	Yes	(128Mx4)* 18	
Samsung	M393T2953BG0-CCC	K4T510830B-GCCC	Samsung		7/25/05		(64Mx8)*1 8	
Qimonda	HYS72T128020HR-5-A	HYB18T512800AF5-A	Qimonda		7/25/05	Yes	(64Mx8)*1 8	
Samsung	M393T2950BZ0-CCC	K45T1043QC-ZCCC	Samsung		6/20/05	Yes	(128Mx4)* 18	
Samsung	M393T2950BG0-CCC	K4T51043QB-GCCC	Samsung		6/20/05		(128Mx4)* 18	
Samsung	M393T2950CZ0-CCC	K45T1043QC-ZCCC	Samsung		6/6/05	Yes	(128Mx4)* 18	
+Kingston	KVR400D2S4R3/1GI	E5104AE-5C-E rev E	Elpida	2025248-001.B00	07/18/05		(128Mx4)* 18	
+ATP Electronics	AH28K72M4BHC4S	K4T51043QB-GCCC rev B	Samsung	SH240M04K1	06/29/05		(128Mx4)* 18	
+Viking	VR5ER287218EBPL3	MT47H64M8CB-37E rev B	Micron	0000992A rev A	07/14/05		(64Mx8)*1 8	
+Dataram	DTM63310A	HYB18T512400AF5 rev A	Qimonda	40011A rev A	08/17/05		(128Mx4)* 18	
+Smart Modular Technologies*	SB1287RDR2124351A	HYB18T512400AF5 rev A	Qimonda	PB54G240NE SUBRCC1 rev A	08/08/05		(128Mx4)* 18	
+Apacer	76.02220.B11	K4T51043QB-ZCCC rev B	Samsung	48.16189.011 rev 1	08/12/05		(128Mx4)* 18	
+Apacer	76.02220.B06	HYB18T512400AF5 rev A	Qimonda	48.16189.011 rev 1	08/16/05		(128Mx4)* 18	
+Apacer	78.01068.331	HYB18T512400AF5 rev A	Qimonda	48.16189.011 rev 1	08/03/05		(128Mx4)* 18	
+Wintec Industries	39C931344B-GL	K4T51043QB-ZCCC rev B	Samsung	D2R472 na	9/15/05		(128Mx4)* 18	
Micron	MT18HTF12872Y-40EB3	MT47H64M8BT-5E	Micron		9/20/05	Yes	(128Mx4)* 18	
+Kingston	KVR400D2S8R3/1GI	HYB18T1G800AF-5 rev A	Qimonda	2025263-001.C00	9/26/05		(128Mx4)* 18	
+Smart Modular Technologies	SB1287RDR21243-5-H	HY5PS12421FP-E3 A 1st Generation	Hynix	E72369 na	10/6/05		(128Mx4)* 18	
+Ventura Technology Group	D2-54KF53SV-333	K4T51043QB-ZCCC rev B	Samsung	D2R472	9/29/05		(128Mx4)* 18	
Samsung	M393T2953BZ0-CCC	K4T510830B-ZCCC	Samsung		10/13/05	Yes	(64Mx8)* 18	
Samsung	M393T2950CZ3-CCC	K4T51043QC-ZCCC	Samsung		10/24/05	Yes	(128Mx4)* 18	

Intel® Server Board SE7320EP2
Registered, ECC, DDR2-400 DIMM Modules
1GB Size (128M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	EOL
Samsung	M393T2953CZ3-CCC	K4T510830C-ZCCC	Samsung		11/4/05	Yes	(64Mx8)*18	
+ATP Electronics	AH28K72L8BHC4S	K4T51083QC-ZCD5 rev C	Samsung	SH240L08K2 na	12/2/05		(64Mx8)*18	
+Kingston	KVR400D2S4R3/1GI	HYB18T512400AF5 rev A	Qimonda	2025248-001.B00 na	11/23/05		(128Mx4)*18	
+Legend	L12723C7-RCAH2HBF	HY5PS12821F-E3 rev A	Hynix	B62RRCA rev A	11/18/05		(64Mx8)*18	
+Smart Modular Technologies	SG1287RDR264835S C	K4T51083QC-ZCD5 rev C	Samsung	PG58G240NE BUB2RB rev A	12/23/05	Yes	(64Mx8)*18	
Nanya Technology Corporation	NT1GT72U4PA0BV-5A	NT5TU128M4AE-5A rev A	Nanya	NTPCB00019 (0519, 0515) na	1/10/06		(128Mx4)*18	
+Kingston	KVR400D2S4R3/1GI	HYB18T512400AF3 7 rev A	Qimonda	2025248-001.B00 na	1/13/06	Yes	(128Mx4)*18	
Hynix	HYMP112R72P8-E3	HY5PS1G831FP-E3	Hynix		1/10/06	Yes	(128Mx8)*9	
Hynix	HYMP512R72P4-E3	HY5PS12421FP-E3	Hynix		1/10/06	Yes	(128Mx4)*18	
Hynix	HYMP512R724-E3	HY5PS12421-F-E3	Hynix		1/10/06		(128Mx4)*18	
Hynix	HYMP512R72P8-E3	HY5PS12821FP-E3	Hynix		12/13/05	Yes	(64Mx8)*18	
+Legacy Electronics Inc.	B517M4C2AHA-50	K4T51043QC-ZCCC rev C	Samsung	LE18DD2F240 4RRH rev A	1/23/06		(128Mx4)*18	
+Apacer	75.072A1.G02	K4T51043QC-ZCD5 rev C	Samsung	48.16189.011 rev 1	1/27/06	Yes	(128Mx4)*18	
Hynix	HYMP512R72BP8-E3	HY5PS12821BFP-E3	Hynix		1/31/06	Yes	(64Mx8)*18	
Hynix	HYMP512R72BP4-E3	HY5PS12421BFP-E3	Hynix		1/31/06	Yes	(128Mx4)*18	
+Wintec Industries	39S931341A-L	HYB18T512400AF5 rev A	Qimonda	D2R472	2/3/06	Yes	(128Mx4)*18	
+Smart Modular Technologies	SG1287RDR264835IA	HYB18T512800AF3 7 rev A	Qimonda	PG58G240NE BUB2RB rev A	2/10/06	Yes	(64Mx8)*18	
+TRS	TRS31265	HYB18T512400AF5 rev A	Qimonda	M0549LA1 rev 1	3/17/06	Yes	(128Mx4)*18	
Dataram	DTM63310J	NT5TU128M4AE-5A rev A	Nanya	40011A rev A	04/04/06	Yes		

**Registered, ECC, DDR2-400 DIMM Modules
1GB Size (128M x 72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	EOL
ATP Electronics	AH28K72M4BHC4S	K4T51043QC-ZCCC rev C	Samsung	SH240M04K2na	05/01/06	Yes	(128Mx4)*18	
Kingston	KVR400D2S8R3/1GI	E1108AA-5C-E rev A	Elpida	2025263-001.C00 na	05/04/06	Yes	(128Mx8)	
Kingston	KVR400D2S4R3/1GI	NT5U128M4AE-5A rev A	Nanya	2025248-001.B00 na	06/01/06	Yes	(128Mx4)*18	
TRS	TRS31267	K4T51043QC-ZCCC rev C	Samsung	M0549LA1 rev 1	6/22/06	Yes	(128Mx4)*18	
Smart Modular Technologies	SG1287RDR212435NA	NT5TU128M4AE-5A rev A	Nanya	NTPCB00019P	7/18/06	Yes	(128Mx4)*18	
Dane-Elec	DMD400R072283NG	EDE5108AESK-5C-E rev E	Elpida	D2R872 rev 1	7/25/06	Yes	(64Mx8)*18	
Super Talent Electronics	T400RB1G/S1GTR8CHS	K4T51083QC-ZCD5 rev C	Samsung	DR20818 rev G1.01	8/11/06	Yes	(64Mx8)*18	
Super Talent Electronics	T400RA1G4/S1GTR4BHS	K4T51043QC-ZCD5 rev C	Samsung	DR20418 rev H1.01	8/21/06	Yes	(128Mx4)*18	
Avant Technology	AVF7228R52E3400F0-MTDP	MT47H64M8B6-37E rev D	Micron	50-1431-01B rev B	8/25/06	Yes	(64Mx8)*18	
TRS	TRS31265X	HYB18T512400AF5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	8/29/06	Yes	(128Mx4)*18	
Kingston	KVR400D2S4R3/1GI	E5104AG-5C-E rev G	Elpida	2025248-001.B00 na	10/9/06	Yes	(128Mx4)*18	
Kingston	KVR400D2S8R3/1GI	E1108AB-6E-E rev B	Elpida	2025263-001.C00 na	11/22/06	Yes	(128Mx8)	
TRS	TRS31277X	E5104AG-5C-E rev G	Elpida	M0549LA1 rev 1	1/24/07	Yes	(128Mx4)*18	
All Components	AVF7228R52E3400F0-MTDP	MT47H64M8B6-37E rev D	Micron	50-1431-01B rev B	2/23/07	Yes	(64Mx8)*18	
Kingston	KVR400D2S8R3/1GI	MT47H128M8HQ-3 rev E	Micron	2025263-001.C00 na	4/19/07	Yes	(128Mx8)	
Kingston	KVR400D2S4R3/1GI	E5104AHSE-6E-E rev H	Elpida	2025248-001.B00 na	5/3/07	Yes	(128Mx4)*18	
Kingston	KVR400D2S4R3/1GI	NT5TU128M4BE-3C rev B	Nanya	2025248-001B00	12/20/07	Yes	(128Mx4)*18	

(+) 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 SE7320EP2
Registered, ECC, DDR2-400 DIMM Modules
2GB Size (256M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	EOL
Qimonda	HYS72T256220HR-5-A	HYB18T512400AF5	Qimonda		5/19/05	Yes	(128Mx 4)*36	
Micron	MT18HTF25672Y-40EA2		Micron		7/25/05	Yes	(256Mx4)*18	
Samsung	M393T5660MZ0-CCC	K4T1G044QM-ZCCC	Samsung		6/20/05	Yes	(256Mx4)*18	
Qimonda	HYS72T256000HR-5-A	HYB18T1G400AF-5	Qimonda		6/6/05	Yes	(256Mx4)*18	
+Smart Modular Technologies	SB2567RDR212835I A	HYB18T512400AF5 rev A	Qimonda	PB52G240NES UB1RJ rev A	07/28/05		(128Mx 4)*36	
+Apacer	76.A2220.B10	HYB18T512400AF5 rev A	Qimonda	48.1A189.012 rev 2	07/21/05		(128Mx 4)*36	
+Smart Modular Technologies	SM2567RDR22543-5-I	HYB18T1G400AF-5 rev A	Qimonda	240-13-5	07/25/05		(256Mx4)*18	
+Smart Modular Technologies	SG2567RDR212835I A	HYB18T512400AF5 rev A	Qimonda	PG52G240NES UB1RJ rev A	08/19/05		(128Mx 4)*36	
+Wintec Industries	39C941441A-L	HYB18T1G400AF-5 rev A	Qimonda	D2R472 na	08/01/05		(256Mx4)*18	
Micron	MT36HTF25672Y-40EB1		Micron		8/17/05	Yes		
Samsung	M393T5750CZ0-CCC	K45T1043QC-ZCCC	Samsung		9/20/05	Yes	(128Mx4)*36	
+Kingston	KVR400D2D8R3/2GI	HYB18T1G800AF-5 rev A	Qimonda	2025302-001.A00 na	10/25/05	Yes	(128Mx8)*18	
+Dataram	DTM63309A	HYB18T512400AF5 rev A	Qimonda	40040A rev A	10/31/05		(128Mx 4)*36	
Hynix	HYMP125R724-E3	HY5PS1G431F-E3	Hynix		10/24/05		(256Mx4)*18	
Hynix	HYMP125R72P4-E3	HY5PS1G431FP-E3	Hynix		10/24/05	Yes	(256Mx4)*18	
Samsung	M393T5660MZ3-CCC	K4T1G044QM-ZCCC	Samsung		11/4/05	Yes	(256Mx4)*18	
Samsung	M393T5750CZ3-CCC	K45T1043QC-ZCCC	Samsung		11/4/05	Yes	(128Mx4)*36	
+Smart Modular Technologies	SG2567RDR21283-5-H	HY5PS1G421MP-E3 rev A	Hynix	(0504-5,-3,-1),(0518-1,-2,-3,-4,-6),(0516-1,-3)	11/14/05	Yes	(128Mx8)*18	
+ATP Electronics	AH56K72J4BHC4C	HYB18T512400AF5 rev A	Qimonda	SH240J04K1	12/6/05		(128Mx8)*18	
+Kingston	KVR400D2D4R3/2GI	HYB18T512400AF5 rev A	Qimonda	2025292-001.B00 na	12/13/05		(128Mx8)*18	
Nanya Technology Corporation	NT2GT72U4NA1BV-5A	NT5TU128M4AE-5A rev A	Nanya	NTPCB00037P (0514) na	1/9/06		(128Mx 4)*36	
Samsung	M393T5660AZ3-CCC	K4T1G044QA-ZCCC	Samsung		11/15/05	Yes	(256Mx4)*18	

**Registered, ECC, DDR2-400 DIMM Modules
2GB Size (256M x 72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	EOL
+Kingston	KVR400D2D4R3/2GI	HYB18T512400AF3 7 rev A	Qimonda	2025292-001.B00 na	1/20/06	Yes	(128Mx4)*36	
Hynix	HYMP525R72BP4-E3	HY5PS12421BFP-E3	Hynix		1/31/06	Yes	(128Mx4)*36	
Hynix	HYMP125R72P8-E3	HY5PS1G831FP-E3	Hynix		1/31/06	Yes	(128Mx8)*18	
+Legend	L25723C7-R41H2W2F	HY5PS1G421MP-E3 rev 1st Gen.	Hynix	0536	3/3/06	Yes	(256Mx4)*18	
+TRS	TRS31270	HYB18T1G400AF-5 rev A	Qimonda	M0549LA1 rev 1	3/16/06	Yes	(256Mx4)*18	
Legacy Electronics Inc.	B527M4C2BJA-50	K4T51043QC-ZCCC rev C	Samsung	LE36DD2F2404 RRJ rev B	04/05/06			
Dataram	DTM63309F	NT5TU128M4AE-5A rev A	Nanya	40040A rev A	04/12/06	Yes		
Kingston	KVR400D2D8R3/2GI	E1108AA-5C-E rev A	Elpida	2025302-001.A00 na	05/05/06	Yes	(128Mx8)*18	
Kingston	KVR400D2D4R3/2GI	NT5TU128M4AE-5A rev A	Nanya	2025292-001.B00 na	6/16/06	Yes	(128Mx8)*18	
TRS	TRS31270X	HYB18T1G400AF-5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	8/4/06	Yes	(256Mx4)*18	
Super Talent Electronics	T400RB2G4/S2GTR 4CHS	K4T51043QC-ZCD5 rev C	Samsung	BA2RRCJ na	8/9/06	Yes	(128Mx8)*18	
Kingston	KVR400D2D4R3/2GI	E5104AG-5C-E rev G	Elpida	2025292-001.B00 na	10/13/06	Yes	(128Mx4)*36	
Smart Modular Technologies	SG2567RDR212435 NB	NT5TU128M4BE-3C rev B	Nanya	PG52G240NES UB3RJ rev A	12/4/06	Yes	(128Mx4)*36	
Kingston	KVR400D2D8R3/2GI	E1108AB-6E-E rev B	Elpida	2025302-001.A00 na	12/8/06	Yes	(128Mx8)*18	
ATP Electronics	AH56K72J4BHC4S	K4T51043QC-ZCCC rev C	Samsung	SH240J04K2 na	1/12/07	Yes	(128Mx4)*36	
Kingston	KVR400D2D8R3/2GI	MT47H128M8HQ-3 rev E	Micron	2025302-001.A00 na	4/13/07	Yes	(128Mx8)*18	
Kingston	KVR400D2D4R3/2GI	E5104AHSE-6E-E rev H	Elpida	2025292-001.C00 na	5/8/07	Yes	(128Mx4)*36	
Kingston	KVR400D2D8R3/2GI	HY5PS1G831CFP-Y5 rev C	Hynix	2025302001.A0 0 na	2/27/08	Yes	(128Mx8)*18	
Kingston	KVR400D2D4R3/2GI	HYB18T512400AF3 7 rev A	Qimonda	2025292-001.C00 rev C	4/18/08	Yes	(128Mx8)*18	

Intel® Server Board SE7320EP2
Registered, ECC, DDR2-400 DIMM Modules
4GB Size (512M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	Lead Free	DRAM Organization	EOL
+Smart Modular Technologies	SG5127RDR225635I A	HYB18T1G400AF-5 rev A	Qimonda	PG516G240NE SUC1RK rev A	10/19/05	Yes	(256Mx4)*36	
Qimonda	HYS72T512022HR- 5-A	HYB18T2G402AF- 5-A	Qimonda		11/1/05	Yes	(2x256Mx4)* 18	
Hynix	HYMP351R72MP4- E3	HY5PS2G431MP- E3	Hynix		12/13/05	Yes	(256Mx4)*36	
Kingston	KVR400D2D4R3/2GI	NT5TU128M4BE- 3C rev B	Nanya	2025292- 001.C00 na	1/4/08	Yes	(128Mx4)*36	

(+) 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/>

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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.heacom.com/	
Qimonda	http://www.infineon.com/business/distribut/index.htm	
ITAUCOM	http://www.itaucocom.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	

Vendor Name	Web URL	Vendor Direct Sales Info
MSC Vertriebs GmbH	http://www.msc-ge.com	William Perrigo 49-7249-910-417 Fax: 49-7249-910-229 wpe@msc-ge.com
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
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 davide@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

CMTL* (Computer Memory Test Labs)

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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 bank 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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