

Intel[®] Server Board SE7221BK1 Memory List Test Report Summary



*Revision 22.0
January 2006*

Revision History		
Date	Rev	Modifications
Sept/04	.5	Pre-release.
Oct/04	.6	Added Infineon* 1GB and 2GB parts. Added Samsung* 256MB part. (In shaded area)
Oct/04	1.0	Release version. Added Micron* and Infineon 256MB parts. Added Samsung 512MB parts. Added Infineon, Hynix*, Micron and Samsung 1GB parts. (In shaded area)
Decv/04	2.0	Added Micron and Infineon 256MB and 512MB parts. Added Micron 1GB part. Added Infineon 2GB part.
Dec/04	3.0	Added Buffalo* 512MB parts. (In shaded area)
Dec/04	4.0	Added Dataram* 256MB, 512MB and 1GB parts. Added Legacy* 512MB and Buffalo 256MB parts. (In shaded area)
Dec/04	5.0	Added ATP* 512MB and 1GB parts. Added Buffalo 1GB parts. (In shaded area)
Jan/05	6.0	Added Samsung 256MB part. Added Ventura*, Hynix and Samsung 512MB parts. Added Infineon 1GB part. (In Shaded area)
Feb/05	7.0	Added Samsung 256MB, 512MB and 1GB parts. Added Dataram and Smart 512MB parts. Added ATP and Smart* 1GB parts. (In shaded area)
Feb/05	8.0	Added ATP and Viking* 512MB parts. (In shaded area)
Mar/05	9.0	Added Ventura 512MB parts. (In shaded area)
Apr/05	10.0	Added Legend* 256MB and 512MB parts. Added Simple* 512MB parts. (In shaded area)
May/05	11.0	Added Dataram 1GB parts. (In shaded area)
May/05	12.0	Added Viking 512MB parts. Added Ventura 1GB parts. (In shaded area)
Jun/05	13.0	Added ATP 256MB parts. Added Buffalo 512MB parts. (In shaded area)
Jun/05	14.0	Added Buffalo 1GB parts. (In shaded area)
Aug/05	15.0	Added Kingston* 512MB parts. Added Wintec* 1GB parts. (In shaded area)
Aug/05	16.0	Added Smart, Kingston and Wintec 1GB parts. (In shaded area)
Sept/05	17.0	Added Ventura and Samsung 512MB parts. Added Samsung 1GB part. (In shaded area)
Oct/05	18.0	Added Transcend*, Samsung and Ventura 1GB parts. (In shaded area)
Oct/05	19.0	Added Kingston and Samsung 512MB parts. (In shaded area) Updated unleaded parts with correct shading.
Nov/05	20.0	Added Samsung 256MB parts. Added Transcend, Samsung and Legend 512MB parts. Added Micron 2GB part. (In shaded area)
Dec/05	21.0	Added Buffalo 1GB part. (In shaded area)
Jan/06	22.0	Added Kingston 2GB part. Added Buffalo 512MB part. (In shaded area)

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The Intel® Server Board SE7221BK1 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 test memory modules for use in the Intel® Server Board SE7221BK1. Memory is a vital subsystem in a platform. Intel Corporation requires strict guidelines to be met before a memory vendor and part is put onto the qualified memory list. Each Intel Server Board product has a separate qualified memory list.

Memory qualification for Intel's Server Board products is performed by Intel's Memory Validation Laboratory (MVL), and by an independent external test laboratory, Computer Memory Test Lab (CMTL)¹. CMTL is a leading memory testing organization responsible for testing a broad range of memory products. Memory devices tested by Intel's MVL or CMTL must undergo rigorous tests to ensure that the product will perform the intended server functions.

Intel's Server and Workstation Board 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 memory 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* 2000 Advanced Server for no less than 24 hours. The voltage and temperature margin testing involves testing the memory module on the particular Intel board for which it is being qualified with various test software and operating systems for 48-72 hours under various voltage and temperature margin conditions. Memory modules 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.

For information regarding the testing procedure required to reach each phase, please contact your Intel Representative.

¹ CMTL* is an independent memory testing organization responsible for testing a broad range of memory products. Receiving a "PASS" after being tested by CMTL, means that a product functions correctly and consumers can use it 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.

CMTL contact:

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

Qualified Memory for the Intel® Server Board SE7221BK1

The memory module on the server board SE7221BK1 has 4 DIMM sockets, which can hold up to 4 GB of Unbuffered ECC and non-ECC DDR2-400 or DDR2-533 memory using four 72-bit DIMM modules. The following memory features are supported:

- DDR2-400 and DDR2-533 Unbuffered ECC and non-ECC compatible 1.8V modules (in compliance with the DDR JEDEC DIMM Specification)
- DIMMs with capacity of 256MB, 512MB, 1GB and 2GB. Other DRAM sizes may function correctly but will not be validated.
- Minimum configuration is 256MB using one 256MB DIMM.

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

DDR2-400 and DDR2-533 Unbuffered SDRAM Module Matrix					
DIMM Capacity	DIMM Organization	SDRAM Density	SDRAM Organization	# SDRAM Devices/rows/Banks	# Address bits rows/Banks/column
256MB	32M x 72	256Mbit	32M x 8	9/1/4	13/2/10
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	14/2/10
1GB	128M x 72	512Mbit	64M x 8	18/2/4	14/2/10
1GB	128M x 72	1Gbit	128M x 8	9/1/8	14/3/10
2GB	256M x 72	1Gbit	128M x 8	18/2/8	14/3/10
2GB	256M x 72	2Gbit	256M x 8	9/1/8	15/3/10

Memory features are detailed in *the Intel® Server Board SE7221BK1 Technical Product Specification* available on-line at <http://support.intel.com/support/motherboards/server/SE7221BK1>

The following table lists DIMM devices known to be compatible with the Intel Server Board SE7221BK1. Intel recommends that Advanced Tested DIMMs be used to establish reliable system operation. DIMM devices not listed can be used; but, in the event of unreliable system operation, the DIMM devices should be replaced with functionally Advanced Tested DIMMs to determine whether the DIMM devices are causing the problem.

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.

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.

This list is subject to change without notice.

Server Board SE7221BK1

Unbuffered, ECC, DDR2-400 DIMM Modules 256MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Samsung*	M391T3253FG0-CCC	K4T56083QF-GCCC	Samsung		10/1/04	3		(32Mx8)*9	
Infineon*	HYS72T32000HU-5-A	HYB18T256800AF5-A	Infineon		10/15/04	3	Yes	(32Mx8)*9	
Micron*	MT9HTF3272AY-40EB3		Micron		10/15/04	3	Yes	(32Mx8)*9	
Samsung	M391T3253FZ0-CCC	K4T56083QF-GCCC	Samsung		1/25/05	3	Yes	(32Mx8)*9	
Samsung	M391T3253FG3-CCC	K4T56083QF-GCCC	Samsung		11/4/05	3		(32Mx8)*9	
Samsung	M391T3253FZ3-CCC	K4T56083QF-ZCCC	Samsung		11/4/05	3	Yes	(32Mx8)*9	

Unbuffered, ECC, DDR2-533 DIMM Modules 256MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Micron	MT9HTF3272AY-53EB3		Micron		11/1/04	4	Yes	(32Mx8)*9	
Infineon	HYS72T32000HU-3.7.A	HYB18T256AF37-A	Infineon		11/1/04	4	Yes	(32Mx8)*9	
+Dataram*	DTM63308A	MT47H32M8BP(FP)-37E rev B	Micron	40038A rev A	12/6/04	4		(32Mx8)*9	
Samsung	M391T3253FG0-CD5	K4T56083QF-GCD5	Samsung		1/19/05	4		(32Mx8)*9	
Samsung	M391T3253FZ0-CD5	K4T56083QF-GCD5	Samsung		1/25/05	4	Yes	(32Mx8)*9	
+ATP Electronics*	AJ32K72A8BQD5S	K4T56083QF-ZCD5 rev F	Samsung	SJ240A08 K1	6/10/05	4		(32Mx8)*9	
Samsung	M391T3253FG3-CD5	K4T56083QF-GCD5	Samsung		11/4/05	4		(32Mx8)*9	
Samsung	M391T3253FZ3-CD5	K4T56083QF-ZCD5	Samsung		11/4/05	4	Yes	(32Mx8)*9	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

(+) 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.

Server Board SE7221BK1

Unbuffered, Non-ECC, DDR2-400 DIMM Modules 256MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL

Unbuffered, Non-ECC, DDR2-533 DIMM Modules 256MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
+Buffalo*	D2U533B-S256MBJ	MT47H32M8BP(FP)-37E rev B	Micron	2DUA18F-BA	12/10/04	4		(32Mx8)*9	
+Legend*	L32642CE-UR1H2CBF	HY5PS56821F-C4 rev A	Hyundai	B62URCA rev 1	4/5/05	4		(32Mx8)*9	
+ATP Electronics	AJ32K64A8BQD5S	K4T56083QF-GCD5 rev F	Samsung	SJ240A08K1	6/14/05	4		(32Mx8)*9	

Modules shaded in blue are low profile

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Samsung	M391T6553BG0-CCC	K4T51083QB-GCCC	Samsung		10/15/04	3		(64Mx8)*9	
Samsung	M391T6453FG0-CCC	K4T56083QF-GCCC	Samsung		10/15/04	3		(32Mx8)*18	
Infineon	HYS72T64000HU-5-A	HYB18T512800 AF5-A	Infineon		11/1/04	3	Yes	(32Mx8)*18	
Micron	MT18HTF6472AY-40EB2		Micron		11/1/04	3	Yes	(32Mx8)*18	
Samsung	M391T6453FZ0-CCC	K4T56083QF-GCCC	Samsung		1/25/05	3	Yes	(32Mx8)*18	
Samsung	M391T6553BZ0-CCC	K4T51083QB-GCCC	Samsung		1/25/05	3	Yes	(64Mx8)*9	
Samsung	M391T6453FG3-CCC	K4T56083QF-GCCC	Samsung		11/4/05	3		(32Mx8)*18	
Samsung	M391T6453FZ3-CCC	K4T56083QF-ZCCC	Samsung		11/4/05	3	Yes	(32Mx8)*18	

Unbuffered, ECC, DDR2-533 DIMM Modules 512MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Micron	MT18HTF6472AY-53EB2	MT47H32M8BP	Micron		11/1/04	4	Yes	(32Mx8)*18	
Infineon	HYS72T64000HU-3.7-A	HYB18T512800 AF-37-A	Infineon		11/1/04	4	Yes	(64Mx8)*9	
+Buffalo	D2U533B-512MBJ	MT47H32M8BP(FP)-37E rev B	Micron	2DUZ28F-AA	12/2/04	4		(32Mx8)*18	
+Dataram	DTM63304A	MT47H32M8BP(FP)-37E rev B	Micron	40031A rev A	12/10/04	4		(32Mx8)*18	
+ATP Electronics	AJ64K72B8BQD5S	K4T56083QF-GCD5 rev F	Samsung	SJ240B08 K2	12/16/04	4		(32Mx8)*18	
+Ventura Technology Group*	D2-52BA51SV-444	K4T56083QF-GCD5 rev F	Samsung	D2U872	1/14/05	4		(32Mx8)*18	
Hynix*	HYMP564U728-C4 AA	HY5PS12821-F-C4	Hynix		1/19/05	4		(64Mx8)*9	
Samsung	M391T6453FG0-CD5	K4T56083QF-GCD5	Samsung		1/19/05	4		(32Mx8)*18	
+Dataram	DTM63319A	HYB18T512800 AF37 rev A	Infineon	40038A rev A	1/27/05	4		(64Mx8)*9	
+Smart Modular Technologies*	SM647UDR26484-3-1	HYB18T512800 AF37 rev A	Infineon	240-1-5	1/20/05	4		(64Mx8)*9	
Samsung	M391T6453FZ0-CD5	K4T56083QF-GCD5	Samsung		1/25/05	4	Yes	(32Mx8)*18	
+ATP Electronics	AJ64K72A8BHD5S	K4T51083QB-GCD5 rev B	Samsung	SJ240A08 K1	2/4/05	4		(64Mx8)*9	
SimpleTech*	ST72Q8T64ML-A37F	K4T51083QB-ZCD5 rev B	Samsung	B62URCA	3/30/05	4		(64Mx8)*9	
+Buffalo	D2U533B-E512MBJ	MT47H32M8BP-37E rev B	Micron	2DUZ28F-AA	6/15/05	4		(32Mx8)*18	

**Unbuffered, ECC, DDR2-533 DIMM Modules
512MB Sizes (64Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
+Kingston*	KVR533D2E4/512I	K4T51083QC-ZCD5 rev C	Samsung	2025260-0F1 rev.C00	7/20/05	4		(64Mx8)*9	
+Ventura Technology Group	D2-52BA62SV-444	K4T56083QF-ZCD5 rev F	Samsung	D2U872 rev C	9/6/05	4		(32Mx8)*18	
Samsung	M391T6553CZ3-CD5	K4T51083QB-ZCD5	Samsung		9/12/05	4	Yes	(64Mx8)*9	
+Kingston	KVR533D2E4/512I	NT5TU64M8AE-37B rev A	Nanya	2025260-0F1.C00 na	10/11/05	4		(64Mx8)*9	
Samsung	M391T6553BZ0-CD5	K4T51083QB-ZCD5	Samsung		10/11/05	4	Yes	(64Mx8)*9	
Transcend Information	TS64MLQ72V5J	K4T51083QC-ZCD5 rev C	Samsung	09-2470 na	10/20/05	4		(64Mx8)*9	
Samsung	M391T6453FG3-CD5	K4T56083QF-GCD5	Samsung		11/4/05	4		(32Mx8)*18	
Samsung	M391T6453FZ3-CD5	K4T56083QF-ZCD5	Samsung		11/4/05	4	Yes	(32Mx8)*18	
+Buffalo	D2U533B-ES512MBJ	MT47H64M8CB-37E rev B	Micron	2DUA18F-BA na	12/8/05	4	Yes	(64Mx8)*9	

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Modules in bold text do not contain Lead.

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Unbuffered, Non-ECC, DDR2-400 DIMM Modules 512MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
+Legacy Electronics Inc.*	L506464K20C-50A	(G)64MX8DDR2	Legacy	LE9DD2F2408URA rev A	12/6/04	3		(64Mx8)*9	

Unbuffered, Non-ECC, DDR2-533 DIMM Modules 512MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
+Legacy Electronics Inc.	L506464K20C-37A	64MX8DDR2	Legacy	LE9DD2F2408URA rev A	12/8/04	4		(64Mx8)*9	
+ATP Electronics	AJ64K64A8BHD5S	K4T51083QB-GCD5 rev B	Samsung	SJ240A08K1	2/10/05	4		(64Mx8)*9	
+Viking*	VR5EU646418EBSL1	EDE5108ABSE-5C-E rev B	Elpida	0001026B rev B	2/10/05	4		(64Mx8)*9	
+Ventura Technology Group	D2-51BA51SV-444	K4T56083QF-GCD5 rev F	Samsung	D2U872	2/23/05	4		(32Mx8)*16	
+Ventura Technology Group	D2-51BD52MV-444	MT47H64M8BT-37E rev A	Micron	D2U172	2/21/05	4		(64Mx8)*9	
+Legend	L64642CE-UR1H2CBF	HY5PS56821F-C4 rev A	Hyundai	B62URCA rev 1	4/7/05	4		(32Mx8)*16	
+Viking	VR5EU646418EBSL2	EDE5108AESK-5C-E rev E	Elpida	0001026B rev B	5/10/05	4		(64Mx8)*9	
+Legend	L64642CE-UR1H2H1F	HY5PS12821F-C4 rev F	Hynix	B62URCD rev 1	11/4/05	4		(64Mx8)*8	

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Server Board SE7221BK1

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Infineon	HYS72T128020GU-5-A	HYB18T512 800AC5 FSS13811	Infineon		10/1/04	3		(64Mx8)*18	
Samsung	M391T2953BG0-CCC	K4T51083QB-GCCC	Samsung		10/15/04	3		(64Mx8)*18	
Micron	MT18HTF12872AY-40EA1		Micron		10/15/04	3	Yes	(64Mx8)*18	
Infineon	HYS72T128020HU-5-A	HYB18T512 800AF5 FSS13811	Infineon		10/15/04	3	Yes	(64Mx8)*18	
Samsung	M391T2953BZ0-CCC	K4T51083QB-GCCC	Samsung		1/25/05	3	Yes	(64Mx8)*18	

**Unbuffered, ECC, DDR2-533 DIMM Modules
1GB Sizes (128Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Infineon	HYS72T128020HU-3.7-A	HYB18T512800AF-37-A	Infineon		10/15/04	4	Yes	(64Mx8)*18	
Hynix	HYMP512U728-C4AA	HY5PS12821F-C4	Hynix		10/15/04	4		(64Mx8)*18	
Micron	MT18HTF12872AY-53EA1	MT47H64M8BP	Micron		11/1/04	4	Yes	(64Mx8)*18	
+Dataram	DTM63306A	MT47H64M8BT(FT)-37E rev A	Micron	40031A rev A	12/9/04	4		(64Mx8)*18	
+ATP Electronics	AJ28K72B8BHD5S	K4T51083QB-GCD5 rev B	Samsung	SJ240B08K2	12/14/04	4		(64Mx8)*18	
+Smart Modular Technologies	SM1287UDR26484-3-I	HYB18T512800AF37 rev A	Infineon	240-2-2	1/19/05	4		(64Mx8)*18	
+Dataram	DTM63306C	HYB18T512800AF37 rev A	Infineon	40031A rev A	4/18/05	4		(64Mx8)*18	
+Ventura Technology Group	D2-54BD51SV-444	K4T51083QB-ZCD5 rev B	Samsung	D2U872	5/11/05	4		(64Mx8)*18	
+Wintec Industries	39734281	HYB18T512800AF37 rev A	Infineon	D2U872 na	7/5/05	4		(64Mx8)*18	
+Kingston	KVR533D2E4/1GI	HYB18T512800AF37 rev A	Infineon	2025230-0F1.D00 na	08/15/05	4		(64Mx8)*18	
+Smart Modular Technologies	SG1287UDR264843I AP	HYB18T512800AF37 rev A	Infineon	PG58G240 NUBUB2RB rev A	08/10/05	4		(64Mx8)*18	
Samsung	M391T2953CZ3-CD5	K4T51083QB-ZCD5	Samsung		9/12/05	4	Yes	(64Mx8)*18	
Transcend Information*	TS128MLQ72V5J	K4T51083QC-ZCD5 rev C	Samsung	09-2100 na	9/16/05	4		(64Mx8)*18	
+Ventura Technology Group	D2-54BD62SV-444	K4T510838QB-ZCD5 rev B	Samsung	D2U872 rev C	9/20/05	4		(64Mx8)*18	
Samsung	M391T2953BZ0-CD5	K4T51083QB-ZCD5	Samsung		9/27/05	4	Yes	(64Mx8)*18	
+Buffalo	D2U533B-E1GMBJ	MT47H64M8CB-37E rev B	Micron	2DUZ28F-AA na	11/18/05	4	Yes	(64Mx8)*18	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

(+) 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.

Server Board SE7221BK1

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL

Unbuffered, Non-ECC, DDR2-533 DIMM Modules 1GB Sizes (128Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
+Buffalo	D2U533B-1GMAJ	MT47H64M8BT(F T)-37E rev A	Micron	2DUZ28F-AA	12/17/04	4		(64Mx8)*18	
+ATP Electronics	AJ28K64B8BHD5S	K4T51083QB-GCD5 rev B	Samsung	SJ240B08K2	1/27/05	4		(64Mx8)*18	
+Buffalo	D2U533B-1GMBJ	MT47H64M8CB-37E rev B	Micron	2DUZ28F-AA	6/28/05	4		(64Mx8)*18	
+Wintec Industries	39134281	HYB18T512800A F37 rev A	Infineon	D2U872 na	08/08/05	4		(64Mx8)*18	
+Smart Modular Technologies	SG1286UDR26484 3IAP	HYB18T512800A F37 rev A	Infineon	PG58G240NUB UB2RB rev A	08/17/05	4		(64Mx8)*18	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

(+) 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.

Server Board SE7221BK1

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Infineon	HYS72T256020HU-5-A	HYB18T1G800AF5-A	Infineon		10/1/04	3	Yes	(128Mx8)*18	
Micron	MT18HTF25672AY-40EA1	MT47H128M8BT-37E rev A	Micron		11/4/05	3	Yes	(128Mx8)*18	

Unbuffered, ECC, DDR2-533 DIMM Modules 2GB Sizes (256Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Infineon	HYS72T256020HU-3.7-A	HYB18T1G800AF-3.7A	Infineon		11/1/04	4	Yes	(128Mx8)*18	
+Kingston	KVR533D2E4/2GI	E1108AA-5C-E rev A	Elpida	2025230-0F1.D00 na	12/16/05	4	Yes	(128Mx8)*18	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

(+) 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.

Server Board SE7221BK1

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL

**Unbuffered, Non-ECC, DDR2-533 DIMM Modules
2GB Sizes (256Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

(+) 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.

Sales Information

Vendor Name	Web URL	Vendor Direct Sales Info
ATP Electronics	http://www.atpusa.com/	Florence Hsieh Tel 408-732-5831 Fax 408-732-5055 sales@atpusa.com
ATP Electronics -- Taiwan Inc.	http://www.atpusa.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/	
Infineon	http://www.infineon.com/business/distribut/index.htm	
ITAUCOM	http://www.itaucum.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: Keri Albers 888 466 3853 ext. 307 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
Netlist, Inc	http://www.netlistinc.com	Christopher Lopes 949.435.0025 tel 949.435.0031 fax sales@netlistinc.com

Vendor Name	Web URL	Vendor Direct Sales Info
Peripheral Enhancements	http://www.peripheral.com/	
PNY	http://www.pny.com/internet_explorer/LPB.HTML	
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	http://www.smartm.com/channel	Gene Patino (949) 439-6167 Gene.Patino@Smartm.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 Gründl, Pho.: +49(0)89/94553234, Fax.: +49(0)89/94553293, agruendl@trs-space.de
Unigen	http://www.unigen.com	
Ventura Technology Inc	http://www.venturatech.com	Don Hummel @ 805-581-0800 x 108 or email @ don@venturatech.com
Viking InterWorks	http://www.vikinginterworks.com	
Virtium Technology Inc	http://www.virtium.com	Tod Skelton @ (949) 460-0020 ext. 146 or email @ tod.skelton@virtium.com
Legend	http://www.legend.com.au	Tel: 800-338-2361 Fax: 949-459-8577 orderdesk@vikingcomponents.com
Wintec Industries	http://www.wintecindustries.com	Tel 510-360-6300 Fax 510-770-9338

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 Validation 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 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 boxed processors. 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 boxed processor baseboard. 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 Board 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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