Intel® Server Board SAI2
Memory List Test Report Summary

Revision 34.0
September, 2003

Revision History		
Date	**Rev**	**Modifications**
Dec/01	0.5	Initial post-launch release for review.
Dec/01	1.0	Added Micron 256MB, 512MB & 1G parts. Added Samsung 256MB & 1G parts. Added Infineon 256MB part. (In shaded area).
Jan/02	2.0	Added ATP, Micron, Samsung & Infineon 128MB part. Dataram, Legend, Viking, Micron, Samsung & Infineon 256MB parts. Samsung & Infineon 512MB parts. Samsung & Infineon 1G parts. (In shaded)
Jan/02	3.0	Added Dataram 512MB parts. Added Dataram, SMART Modular 1GB parts (In shaded area)
Feb/02	4.0	Added ATP 512MB parts. Added Dataram 256MB, 512MB & 1GB parts. Added Legend 512MB & 1GB parts. Added SMART Modular 256MB & 512MB parts. (In shaded area)
Feb/02	5.0	Added ATP 256MB & 1GB parts. Added Aved 512MB part. Added Dataram 128MB, 256MB & 512MB parts. Added Legend 256MB, 512MB & 1GB parts. (In shaded area)
Mar/02	6.0	Added Aved 128MB & 512MB parts. Added PNY 512MB & 1GB parts. Added Dataram 256MB parts (In shaded area).
Mar/02	7.0	Added Aved 256MB parts. Added ATP 256MB parts. Added SimpleTech 512MB parts (In shaded area).
April/02	8.0	Added Dane-Elec 256MB parts. Added Apacer, ATP Electronics, Dane-Elec & MSC 512MB parts. Added Ventura 1GB parts (In shaded area). Updated some Dataram part numbers (~ noted with this symbol).
April/02	9.0	Added Dataram 256MB parts. Added Ventura 512MB parts. (In shaded area)
May/02	10.0	Added Dataram 128MB parts. Added Aved 256MB parts. Added MSC & Ventura 512MB parts. (In shaded area)
May/02	11.0	Added MSC 256MB & 512MB Parts. Added Dataram 512MB parts. (In shaded area)
June/02	12.0	Added MSC 512MB parts. (In shaded area)
June/02	13.0	Added Dataram 256MB parts. (In shaded area)
July/02	14.0	Added Buffalo 256MB & 512MB parts. Added Dataram 1GB parts. (In shaded area)
July/02	15.0	Added Dataram 1GB parts. (In shaded area)
Aug/02	16.0	Added MSC 256MB parts. (In shaded area)
Aug/02	17.0	Added Dataram 1GB parts. Added Legend 256MB parts. Added ASC 512MB parts. Added Samsung 512MB & 1G parts. (In shaded area).
Sept/02	18.0	Added Dataram 512MB parts. Added MSC 256MB & 512MB parts. (In shaded area)
Sept/02	19.0	Added Dataram 256MB & 512MB parts. Added MSC 512MB parts. (In shaded area)
Oct/02	20.0	Added Dataram 1GB parts. (In shaded area)
Oct/02	21.0	Added Aved 128MB parts. Added Dataram & MSC 512MB parts. Added Micron 256MB & 512MB parts. (In shaded area)
Oct/02	22.0	Added Avant & Dataram 1GB parts. Added MSC 512MB parts. (In shaded area)
Nov/02	23.0	Added ATP & MSC 1GB parts. Added Avant 512MB parts. (In shaded area)
Dec/02	24.0	Added ATP 256MB parts. Added Legend 256MB & 512MB parts. (In shaded area)
Jan./03	25.0	Added Avant 1GB parts. (In shaded area)
Jan./03	26.0	Micron 256MB & 1G parts. (In shaded area)
Jan/03	27.0	Added Avant & Smart 256MB parts. Added Buffalo 512MB parts. (In shaded area)
Feb/03	28.0	Added Buffalo 256MB parts. (In shaded area)
Apr/03	29.0	Updated EOL status
Jun/03	30.0	Updated EOL Status
July/03	31.0	Added Viking 256MB parts. (In shaded area) Also updated EOL status.
July/03	32.0	Added Viking 512MB parts. (In shaded area)

Revision History		
Date	**Rev**	**Modifications**
Aug/03	33.0	Updated EOL Status
Sept/03	34.0	Added Dataram 256MB and 512MB parts. (In shaded area)

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The hardware vendor remains solely responsible for the design, sale and functionality of its product, including any liability arising from product infringement or product warranty. Only approved software drivers and accessories that are recommended for the revision number of the boards and system being operated should be used with Intel products. Please note that, as a result of warranty repairs or replacements, alternate software and firmware versions may be required for proper operation of the equipment.

The Intel® Server Board SAI2 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.

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 SAI2. 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.

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[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:

John Deters	Computer Memory Test Lab (CMTL)
714-960-1243 (voice)	101 Main Street, Suite 2G
714-960-4695 (fax)	Huntington Beach, CA 92648
	http://www.cmtlabs.com/

Qualified Memory for the Intel® Server Board SAI2

The memory module on the server board SAI2 has 4 DIMM sockets, which can hold up to 4 GB of Registered ECC PC133 memory using six 72 bit DIMM modules. The following memory features are supported:

- 133 MHz, Registered ECC PC-133 compatible 3.3V registered SDRAM modules (in compliance with the PC-133 Registered DIMM Specification)
- DIMMs with capacity of 64MB, 128MB, 256 MB, 512 MB and 1G. Other DRAM sizes may function correctly but will not be validated.
- Minimum configuration is 64MB using one 64MB DIMM.

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

PC-133 Registered SDRAM Module Configurations for Cas Latency 2 & 3					
DIMM Capacity	**DIMM Organization**	**SDRAM Density**	**SDRAM Organization**	**# SDRAM Devices/rows/Banks**	**# Address bits rows/Banks/column**
64MB	8M x 72	64Mbit	8M x 8	9/1/4	12/2/9
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	12/2/10
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	64M x 4	9/1/4	13/2/11
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
1GB	128M x 72	256Mbit	64M x 4	36/2/4	13/2/11

Memory features are detailed in *the Intel® Server Board SAI2 Technical Product Specification* available on-line at http://support.intel.com/support/motherboards/server/SAI2/

The following table lists DIMM devices known to be compatible with the Intel Server Board SAI2. 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.

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
64MB Sizes (8Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
Micron	MT9LSDT872G-133C3	MT48LC8M8A2-75C	Micron		11/14/01	3		
Samsung	M390S0823FT1-C7A	K4S640832F-TC75	Samsung		11/14/01	3		

Modules shaded in blue are low profile

(+) This vendor is part of the CMTL Certification program. This means this part has/will been 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.*

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
128MB Sizes (16Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
Samsung	M390S1620FT1-C7A	K4S640432F-TC75	Samsung		11/13/01	3		
Infineon	HYS72V16301GR-7.5-C2	HYB39S128800CT-7.5-C2	Infineon		11/14/01	3		
Micron	MT9LSDT1672G-13EE1	MT48LC16M8AA2	Micron		11/15/01	2		
Samsung	M390S1723DT1-C7A	K4S2808320-TC75	Samsung		11/15/01	3		
Micron	MT18LSDT1672G-13EC2	MT48LC16M4A2-7EC	Micron		12/11/01	3		
Infineon	HYS72V16600GR-7.5-C2	HYB39S128800CT-7.5-C2	Infineon		12/12/01	3	Yes	
Micron	MT9LSDT1672G-133E2	MT48LC16M8A2-75E	Micron		12/12/01	3	Yes	
Samsung	M390S1723DTU-C7A	K4S280832D-TC75	Samsung		12/17/01	3	Yes	
+ATP Electronics	AR16V72L8S4GAS	K4S280832D-TC75 rev D	Samsung	SR168L08V rev 1	12/20/01	3		EOL
+Dataram	~DTM60168C (Old Part# DTM60168(M))	MT48LC16M8A2TG-75 rev E	Micron	40506 rev A	2/6/02	3	Yes	EOL
+Aved Memory Products	AMP377P1723AT2-C75/H	HY57V28820AT-H rev A	Hyundai	105399 rev B	2/26/02	3	Yes	EOL
+Aved Memory Products	AMP377P1723AT2-C7B/MI	MT48LC16M8A2TG-7E rev A	Micron	105399 rev B	2/17/02	3	Yes	EOL
+Dataram	DTM60168D	HYB39S128800CT-75 rev C	Infineon	40506 rev A	4/21/02	3	Yes	EOL
+Aved Memory Products	AMP377P1723DT2-C75/S	K4S280832D-TC75 rev D	Samsung	105399 rev B	7/23/02	3	Yes	EOL

Modules shaded in blue are low profile

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SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
256MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
Samsung	M390S3320DT1-C7A	K4S2804320-TC75	Samsung		11/15/01	3		
Micron	MT18LSDT3272G-13EE1	MT48LC32M4A2-7EE	Micron		11/19/01	2		
Infineon	HYS72V32300GR-7.5-C2	HYB39S256800CT-7.5-C2	Infineon		11/19/01	3		
Infineon	HYS72V32300GR-7.5-C2	HYB39S256800CT-7.5-C2	Infineon		11/19/01	3		
Micron	MT9LSDT3272G-133B1	MT 48LC32M8A2	Micron		12/07/01	3		
Samsung	M390S3253CT1-C7A	K4S560832C-TC75	Samsung		12/07/01	3		
Infineon	HYS72V32600GR-7.5-C2	HYB39S256800CT-7.5-C2	Infineon		12/17/01	3	Yes	
Micron	MT9LSDT3272G-133B2	MT48LC32M8A2	Micron		12/18/01	3	Yes	
Samsung	M390S3320DTU-C7A	K4S280432D-TC75	Samsung		12/18/01	3	Yes	
Samsung	M390S3253CTU-C7A	K4S560832C-TC75	Samsung		12/30/01	3	Yes	
+Legend	L3272QC3-59AHSC3A	HY57V56820T-H rev A	Hyundai	B5982 rev A	12/18/01	3		EOL
+Viking	INT25633	MT48LC32M4A2-75 rev A	Micron	0000891AG rev A	12/26/01	3		EOL
+Dataram	~DTM68014B (Old Part# DTM68014(M))	MT48LC32M4A2TG-75	Micron	651219-G rev 1	12/26/01	3		EOL
+Dataram	~DTM68014D (Old Part# DTM68014(Y))	HY57V28420AT-H rev A	Hyundai	651219-G rev 1	1/30/02	3		EOL
+SMART Modular Technologies	SM3272SR301-ICA	TC59S6404CFT75 rev C	Toshiba	P51G168NEBS IBP3	1/22/02	3		EOL
+Legend	L3272QC3	HYB39S128800CT-7.5	Infineon	B5982 rev A	2/2/02	3		EOL
+ATP Electronics	AR32V72N4S4GAS	K4S280432C-TC75 rev C	Samsung	SR168N04V rev 2	2/6/02	3	Yes	EOL
+ATP Electronics	AMR32V72J4S4GAS	K4S280432C-TC75 rev C	Samsung	SR168J04V rev 1	2/11/02	3		EOL
+Dataram	~DTM60172C (Old Part# DTM60172(M))	MT48LC32M8A2TG-75 rev B	Micron	40506 rev A	2/11/02	3	Yes	EOL
+Dataram	~DTM60199A (Old Part# DTM60199(M))	MT48LC32M4A2TG-75 rev E	Micron	40551 rev A	2/21/02	3	Yes	EOL
+ATP Electronics	AR32V72L8S8GAS	K4S560832C-TC/L75	Samsung	SR168L08V1 rev 1	3/6/02	3	Yes	
+Aved Memory Products	AMP377P3323AT2-C75/MV	V54C3128804VAT-7 rev A	Mosel-Vitelic	105352 Rev.B	3/11/02	3		EOL
+Aved Memory Products	AMP377P3323AT2-C7B/MI	MT48LC16M8A2TG-7E rev A	Micron	105352 rev B	3/11/02	2		EOL
Dane-Elec	DP133R072323IL	NT5SV32M8AT-7K rev 09300BPT	Nanya	DE082030 rev B	3/25/02	2	Yes	

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
256MB Sizes (32Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
+Dataram	DTM60172D	HYB39S256800CT-75 rev C	Infineon	40506 rev A	4/4/02	3	Yes	EOL
+Aved Memory Products	AMP377P3323AT2-C75/N	NT5SV16M8CT-7K rev C	Nanya	105352 rev B	4/22/02	3	Yes	
Samsung	M390S3253DT1-C7A	K4S560832D-TC75	Samsung		4/30/02	3		
+MSC Vertriebs GmbH	MSC256M00040	HYB39S256800CT-7.5 rev C	Infineon	M0508LA1	5/20/02	3		EOL
+Dataram	DTM60172E	HYB39S256800DT-7 rev D	Infineon	40506 rev A	6/10/02	3	Yes	EOL
+Buffalo	VS133-R256/ME	48LC16M8A2-75 rev E	Micron	ZEY8RWF-AA	6/28/02	3		EOL
+MSC Vertriebs GmbH	MSC256M00036	K4S560832C-TC rev C	Samsung	M0508LA1	8/1/02	3		EOL
+Legend	L3272QC3-59AIS73C	HYB39S128800CT-7.5 rev C	Infineon	B5982 rev A	8/7/02	3		EOL
+MSC Vertriebs GmbH	MSC256M00142	HYB39S256800CT-7.5 rev C	Infineon	M0493LA2	8/29/02	3	Yes	EOL
+Dataram	DTM60172F	MT48LC32M8A2TG-75 rev C	Micron	40506 rev A	9/12/02	3	Yes	
Micron	MT9LSDT3272G-13EB2	MT48LC32M8A2-7E B	Micron		10/8/02	2		
Micron	MT9LSDT3272G-133C2	MT48LC32M8A2-75 C	Micron		10/16/02	3		
+ATP Electronics	AR32V72Q8S8GAS	K4S560832D-TC75 rev D	Samsung	BRSA80A	12/2/02	3	Yes	
+Legend	L3272QC3-59BHSC3B	HY57V56820BT-H rev B	Hyundai	B5982 rev B	11/25/02	3		
Micron	MT18LSDT3272G-133E1	MT48LC32M4A2 -75E	Micron		12/18/02	3		
+Avant Technology	AVE7232R37A2133E1-A	NT5SV32M4CT-7K rev C	Nanya	50-1412-01-A rev A	1/23/03	2	Yes	
+Smart Modular Technologies	SM5NET32M72LMDOG	K4S560832D-TC75	Samsung	P512168NEB SKGAX rev A	1/15/03	3	Yes	
+Buffalo	VS133-RS256/MC	MT48LC32M8A2TG-75 rev C	Micron	YEY8RWF-AA	2/5/03	3		
+Viking	VI8AR327238DTEL1	K4S560832D-TC75 rev D	Samsung	0000967A	6/25/03	3	Yes	
+Dataram	DTM60172H	MT48LC32M8A2TG-75 rev D	Micron	40506 rev A	9/8/03	3	Yes	

Modules shaded in blue are low profile

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SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
512 MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
Samsung	M390S6450CT1-C7A	K4S560432C-TC75	Samsung		11/19/01	3		
Infineon	HYS72V64300GR-7.5-C2	HYB395256400CT-7.5-C2	Infineon		11/19/01	3		
Micron	MT18LSDT6472G-133B1	48LC64M4A2-75	Micron		12/01/01	3		
Infineon	HYS72V64500GR-7.5-C2	HYB39S256400CT-7.5-C2	Infineon		12/23/01	3	Yes	
Samsung	M390S6450CTU-C7A	K4S560432C-TC75	Samsung		12/23/01	3	Yes	
+Dataram	DTM68015 (Y)	HY57V56420T-H	Hyundai	651219-G rev 1	1/15/02	3		EOL
+ATP Electronics	AR64V72N4S8GAS	K4S560432C-TC75 rev C	Samsung	SR168N04V rev 2	1/30/02	3	Yes	EOL
+Dataram	~DTM68015B (Old Part# DTM68015(M))	MT48LC64M4A2TG-75 rev B	Micron	651219-G rev 1	1/24/02	3		EOL
+SMART Modular Technologies	SM6472SR301-ICA	K4S560432C-TC75 rev C	Samsung	P51G168NEBSIBP3	1/22/02	3		EOL
+Legend	L6472WC3-21ASSG3C	K4S560432C-TC75 rev C	Samsung	16-21040 rev A	1/28/02	3	Yes	EOL
+Aved Memory Products	AMP377P6453AT2-C75/MV	V54C3256804VAT-7 rev A	Mosel-Vitelic	105352 rev B	2/4/02	3		EOL
+Legend	L6472QC3-59AHSC3A	HY57V562820T-H rev A	Hyundai	B5982 rev A	2/2/02	3		EOL
+Dataram	~DTM60194A (Old Part# DTM60194(M))	MT48LC64M4A2TG-75 rev B	Micron	40551 rev A	2/12/02	3	Yes	EOL
+Dataram	DTM60194 (H)	HM5225405BTT-75 rev B	Hitachi	40551 rev A	2/13/02	3	Yes	EOL
+Dataram	~DTM60194C (Old Part# DTM60194(E))	HYB39S256400CT-75 rev C	Infineon	40551 rev A	2/7/02	3	Yes	EOL
+Aved Memory Products	AMP377P6450BT3-C75/S	K4S560432B-TC75 rev B	Samsung	105349 rev C	2/17/02	3		EOL
+PNY	7264WHSTM8G24TWR-PH0	HYB39S256800CT-7.5 rev C	Infineon	40000476 rev B	2/18/02	3		EOL
SimpleTech	ST72R4K64-A75A	MT48LC64M4A2-75 rev B	Micron	758	3/7/2002	3		

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
512 MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
Apacer	AM512LS62R13304	K4S560432C-TC75 rev C	Samsung	48.16103.012	3/27/02	N/A		
+ATP Electronics	AR64V72M8S8GAS	K4S560832C-TC/L75 rev C	Samsung	SR168M08V rev 2	3/27/02	N/A		
Dane-Elec	DP133R072643IL	K4S560832C-TC75 rev C	Samsung	DE082030 rev B	3/26/02	2	Yes	
+MSC Vertriebs GmbH	MSC512M00001	HYB39S256400CT-7.5	Infineon	M0507LA1	3/20/02	3	Yes	
Ventura Technology Group	S52SVJ23EV	HYB39S256800CT-7.5 rev C	Infineon	V204	4/15/02	3		
+MSC Vertriebs GmbH	MSC512M00002	K4S560432C-TC75 rev C	Samsung	M0507LA1	4/25/02	3		EOL
Ventura Technology Group	S52SVJ23EV	HYB39S256800CT-7.5 Rev C	Infineon	V204	4/15/02	3		
+Dataram	DTM60194D	HYB39S256400DT-7 rev D	Infineon	40551 rev A	5/15/02	3	Yes	EOL
+MSC Vertriebs GmbH	MSC512M00003	MT48LC64M4A2TG-75 rev A	Micron	M0507LA1	5/22/02	3		EOL
+MSC Vertriebs GmbH	MSC512M00037	K4S560832C-TC rev C	Samsung	M0508LA1	5/31/02	3		EOL
+Buffalo	VS133-R512/MB	48LC32M8A2-75 rev B	Micron	ZEY8RWF-AA	6/24/02	3		EOL
+MSC Vertriebs GmbH	MSC 512M00151	MSCS8608A8A-75	Fujitsu	PCB M0508LA1	8/12/02	3		EOL
+MSC Vertriebs GmbH	MSC512M00148	K4S510832C-KC75 rev C	Samsung	M0493LA2	8/19/02	3	Yes	EOL
Samsung	M390S6450DT1-C7A	K4S560432D-TC75	Samsung		8/20/02	3		
+Dataram	DTM60194E	K4S560432D-TC75 rev D	Samsung	40551 rev A	8/26/02	3	Yes	EOL
+MSC Vertriebs GmbH	MSC512M00041	HYB39S256800CT-7.5 rev C	Infineon	M0508LA1	8/22/02	3		EOL
+Dataram	DTM60194F	MT48LC64M4A2TG-75 rev C	Micron	40551 rev A	9/9/02	3	Yes	
+MSC Vertriebs GmbH	MSC512M00149	HYB39S256400DT-7 rev D	Infineon	M0507LA1	9/4/02	2		EOL

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
512 MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
+Dataram	DTM68015E	MT48LC64M4A2TG-75 rev C	Micron	40544 rev A	10/2/02	3		EOL
+MSC Vertriebs GmbH	MSC 512M00153	HYB 39S256800DT-7.5 rev D	Infineon	PCB M0508LA1	10/14/02	3		
Micron	MT18LSDT6472G-133C2	MT48LC64M4A2-75 C	Micron		10/08/02	3		
Micron	MT18LSDT6472G-13EB1	MT48LC64M4A2-7E B	Micron		10/08/02	2		
Micron	MT18LSDF6472G-133B1	MTN2NJILB11DBHB F	Micron		10/11/02	3		
+MSC Vertriebs GmbH	MSC 512M00152	K4S560832D-TC75 rev D	Samsung	PCB M0508LA1	10/16/02	3		
+Avant Technology	AVE7264R38A2133 E1-A	NT5SV64M4AT-7K rev A	Nanya	501412-01-A rev A	11/8/02	2	Yes	
+Avant Technology	AVE7264R38A3133 E1-A	K4S560432D-TC75 rev D	Samsung	501412-01A rev A	11/13/02	3	Yes	
+Legend	L6472QC3-59BHSC3B	HY57V56820BT-H rev B	Hyundai	B5982 rev B	11/18/02	3		
+Buffalo	VS133-R512/MC	MT48LC32M8A2TG-75 rev C	Micron	ZEY8RWF-AA	1/29/03	3		
+Viking	VI8AR647238DTEL1	K4S560832D-TC75 rev D	Samsung	0000967A	6/30/03	3	Yes	
+Viking	VI8AR647234DTEL1	K4S560432D-TC75 rev D	Samsung	0000891B	7/9/03	3	Yes	
+Dataram	DTM60194I	MT48LC64M4A2TG-75 rev D	Micron	40551 rev A	8/28/03	3	Yes	

Modules shaded in blue are low profile

(+) This vendor is part of the CMTL Certification program. This means this part has/will been 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.*

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
1G Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
Infineon	HYS72V128320GR-7.5-C2	HYB39S256400CI-75	Infineon		11/19/01	3		
Samsung	M390S2858CT1-C7A	K4S560432C-TC75	Samsung		11/28/01	3		
Micron	MT36LSDF12872G-133B1	IMBIIDBHBF	Micron		12/01/01	3		
Samsung	M390S2858CTU-C7A	K4S560432C-TC75			12/20/01	3	Yes	
Infineon	HYS72V128520-7.5-C2	HYB39S256400CT-7.5-C2			12/20/01	3	Yes	
+Dataram	~DTM60193A (Old Part# DTM60193(M))	MT48LC64M4A2FB-75 rev B	Micron	40554 rev A	1/9/02	2	Yes	EOL
+Dataram	~DTM60192C (Old Part# DTM60192(E))	HYB39S256400CT-75 rev C	Infineon	40481 rev A	1/17/02	3		EOL
+SMART Modular Technologies	SM12872SR301-ICA	K4S560432C-TC75 rev C	Samsung	P51G168N EBSIBP3 rev A	1/17/02	3		EOL
+Dataram	~DTM60192A (Old Part# DTM60192(M))	MT48LC64M4A2TG-75 rev B	Micron	40481 rev A	1/24/02	3		EOL
+Legend	L1272WC3-21ASSG3C	K4S560432C-TC75 rev C	Samsung	16-21040 rev A	1/28/02	3	Yes	EOL
+ATP Electronics	AR128V72N4SMGAS	K4S560432C-TC75 rev C	Samsung	SR168N04 V rev 2	2/6/02	3	Yes	EOL
+Legend	L1272QC3-HRAHSD3A	HY57V56420T-H	Hyundai	0114-1 rev A	2/7/02	3		EOL
+PNY	72A0UHSTM8G24KWR-PH0	HYB39S256400CT-7.5 rev C	Infineon	40000475 rev B	2/25/02	3		EOL
Ventura Technology Group	S54SWJ27SV	K4S560432A-TC75 rev A	Samsung	V211	3/20/02	3		
+Dataram	DTM60192D	HYB39S256400DT-7 rev D	Infineon	40481 rev A	7/3/02	3		EOL
+Dataram	DTM60192E	K4S560432D-TC75 rev D	Samsung	40481 rev A	6/26/02	3		EOL

SAI2Server Board

Registered, ECC, 133MHz SDRAM DIMM Modules
1G Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Low Profile	EOL
+Dataram	DTM60193B	V54C3256404VBS-7	Mosel-Vitelic	40554 rev A	7/15/02	3	Yes	EOL
+Dataram	DTM60193C	MT48LC64M4A2FB-75 rev B	Micron	40554A rev A	8/15/02	3	Yes	EOL
Samsung	M390S2858DT1-C7A	K4S560432D-TC75	Samsung		8/20/02	3		
+Dataram	DTM60192F	MT48LC64M4A2TG-75 rev C	Micron	40481 rev A	9/27/02	3		EOL
+Avant Technology	AVE7228R38A2133E3-A	NT5SV64M4AT-7K rev A	Nanya	BRSB43A rev A	10/24/02	2		
+Dataram	DTM60193E	MT48LC64M4A2FB-75 rev C	Micron	40554A rev A	10/25/02	3	Yes	
+ATP Electronics	AR128V72N4SMGA	NT5SV64M4AT-7K	Nanya	SR168N04V rev 2	11/4/02	3	Yes	
+MSC Vertriebs GmbH	MSC 001G00150	HYB39S256400DT-7 rev D	Infineon	M0507LA1	10/30/02	2		
+Avant Technology	AVE7228R38A3133E3-A	NT5SV64M4AT-7K rev A	Nanya	BRSB43A	12/9/02	3		
+Avant Technology	AVE7228R82A3133E1-A	NT5SV64M4AT-7K rev A	Nanya	501412-01-A rev A	12/17/02	3	Yes	
Micron	MT36LSDT12872G-133C2	MT48LC64M4A2-75C	Micron		12/23/02	3		
Micron	MT36LSDF12872G-133C1	MT48LC64M4A2FC-75	Micron		12/30/02	3		

Modules shaded in blue are low profile

~ Indicates a part number change.

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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/	Robert Olszak @ 800-822-0071 ext. 2404
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.itaucom.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	
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
Peripheral Enhancements	http://www.peripheral.com/	
PNY	http://www.pny.com/internet_explorer/LPB.HTML	

Vendor Name	Web URL	Vendor Direct Sales Info
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	Leo Alafriz 949-753-0116 ext. 125 leo.alafriz@smartm.com
TechnoLinc Corporation	http://www.technolinc.com	David Curtis 510-445-7400 davidc@technolinc.com
TRS	http://www.certified-memory.com	William Perrigo 49-7249-910-417 Fax: 49-7249-910-229 wpe@msc-ge.com
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 510-770-9239 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.