



# **Intel® L440GX+ Server Board Memory List Test Report Summary**



*Revision 93.0  
April, 2002*

<b>Revision History</b>	
<b>Date</b>	<b>Modifications</b>
January 99	Initial release
January 99	Release
February 99	New Qualified memory added. Changing Level 1 & Level 2 to Advanced listing
March 99	Adding new memory
April 99	Part number change for Dataram
May 99	Part number change and corrections made. Added new memory to the list (shaded modules in table).
May 99	Part number correction made. Added new memory to the list (shaded modules in table).
May 99	Part number corrections made. (Shaded modules in table).
May 99	Added new memory to the list. Part number corrections made. (Shaded modules in table).
May 99	Removed Micron Part
May 99	Added new memory to the list. Part number corrections made. (Shaded modules in table).
June 99	Added new memory to the list.
June 99	Part number correction made for Hyundai.
July 99	Part number correction made for Hyundai.
July 99	Remove Viking 512MB Registered part. Removed Micron 128MB Registered part.
Aug 99	Remove Southland Microsystems 128MB Unbuffered part.
Aug. 99	Added new memory to the list. Removed Viking 256MB Registered part.
Aug. 99	Added new memory to the list.
Sept. 99	Added new memory to the list.
Sept. 99	Added DRAM & PCB part numbers. Added new memory to the list.
Oct. 99	Added new memory to the list.
Oct. 99	Added DRAM Vendor. Added new memory to the list. (Shaded modules in table).
Oct. 99	Added new memory to the list. (Shaded modules in table).
Nov. 99	Added new memory to the list. (Shaded modules in table).
Nov. 99	Added new memory to the list. (Shaded modules in table). Add column to identify product that is end of life (EOL).
Nov. 99	Added new memory to the list. (Shaded modules in table).
Dec. 99	Added new memory to the list. (Shaded modules in table).
Dec. 99	Part number changes on Samsung parts. Added new qualified part. (In shaded area). Add distributor information.
Dec. 99	Added new qualified part. (In shaded area).
Jan. 00	Added new qualified part. (In shaded area). Add distributor information.
Jan. 00	Added new qualified part. (In shaded area). Add old part #s for Samsung. Updated distributor information.
Jan. 00	Added new qualified part. (In shaded area). Removed ATP 512MB part.

<b>Revision History (continued)</b>		
<b>Date</b>	<b>Rev.</b>	<b>Modifications</b>
Feb. 00	Rev. 40	Added Infineon & Samsung 512/265Mb parts. These parts can only be used with L440GX+ Fab 5 boards (or latter) and BIOS 11(or latter). .Added Viking 256MB & Dane Elec 128MB parts. (In shaded area). Added caution for using stacked DRAM parts.
Feb. 00	Rev. 41	Added Unigen Corporation & Viking 128MB parts. (In shaded area). Corrected verbiage for the 256Mb parts and add board PBA/AA number.
Feb. 00	Rev. 42	Added ATP Electronics 512MB part. (In shaded area). Removed Viking 512MB part #3D64722R4SN3-3226 from list.
Mar. 00	Rev. 43	Added Memory Card Tech 128MB & Virtium Tech 256MB parts. (In shaded area).
Mar. 00	Rev. 44	Added Apacer 256MB & Dana Elec 128MB parts. Added Viking & Kingston 512MB parts. (In shaded area).
Mar. 00	Rev. 45	Added GoldenRAM 64MB & 128MB parts. Added Viking & Kingston 512MB parts. Part number change for Advantage Memory 256MB part. Updated part numbers for Samsung. (In shaded area).
April 00	Rev. 46	Added GoldenRAM 512MB part. Added Admor Memory LLC & Dane Elec 256MB parts. Added Dane Elec 128MB parts. Made correction Viking 512MB part to be Reg. (In shaded area).
May 00	Rev. 47	Added Dane Elec 128MB part. Added Dataram 512MB part. Added Date code info for Micron 128MB parts. (In shaded area).
May 00	Rev. 48	Added Virtium Technology Inc 128MB part. (In shaded area).
May 00	Rev. 49	Made correction for Viking 512MB part. Added Virtium Technology Inc 256MB & 512MB parts. Added Dataram 256MB part. (In shaded area).
June 00	Rev. 50	Added Dane Elec, Silicon Tech & Simple Tech 128MB & Virtium Technology Inc, Silicon Tech & Simple Tech 256MB parts. Added distributor information for Admor Memory LLC. (In shaded area).
June 00	Rev. 51	Added three Dane Elec 128MB parts. Added Simmtron Tech. 128MB & 256MB parts. Added ATP Electronics 256MB part. Added Viking 256MB part. Added Dataram 512MB part. (In shaded area).
June 00	Rev. 52	Added Kingston 128MB part. Added Simmtron Tech 256MB part. Added Dataram & Advantage Memory 512MB parts. Part number change for Kingston 128MB, 256MB & 512MB parts. (In shaded area).
July 00	Rev. 53	Added Viking, Simple Tech, Silicon Tech & Kingston 512MB parts. (In shaded area).
July 00	Rev. 54	Added 'Unigen Corporation & Dataram 256MB parts. (In shaded area).
Aug. 00	Rev. 55	Added Dataram 256MB part. Added ATP Electronics 512MB part. Added Dane Elec 128MB & 256MB parts. (In shaded area).
Aug. 00	Rev. 56	Part number correction on ATP 128MB part. Added Viking 128MB part. . Added GoldenRAM info to the Distributor section. (In shaded area).
Aug. 00	Rev. 57	Added Infineon Technologies 256MB & 512MB parts. Added Apacer 128MB & 512MB parts. Added Kingston 128 & 256MB parts. Correction made to GoldenRAM to Goldenram. (In shaded area).
Sept. 00	Rev. 58	Added Corsair & Dane-Elec 256MB, 512MB & 1GB parts. Added Dataram 256MB & 512MB parts. Added Think Computer Products Inc. 128MB part. Added Viking 512MB part. Added PC133MHz information and parts to this list. (In shaded area).
Sept. 00	Rev. 59	Correction on ATP 512MB part. Added Dane-Elec & Viking 128MB parts. (In shaded area).
Oct. 00	Rev. 60	Added Dane-Elec 64MB, 128MB, 256MB & 512MB parts. Added Legacy Electronics Inc. 512MB part. (In shaded area).

*Continued on next page.....*

<b>Revision History (continued)</b>		
<b>Date</b>	<b>Rev.</b>	<b>Modifications</b>
Oct. 00	Rev. 61	Added Dane-Elec 64MB, 256MB, and 512MB parts Updated distributor info for Centon Elec & Silicon Tech. Added Dane-Elec 256MB part. Added Memory Card Technology, ATP Electronics & Corsair 512MB parts. (In shaded area).
Oct. 00	Rev. 62	Added Memory Card Technology & Dane-Elec 256MB parts. Added Centon Electronics 512MB part. (In shaded area).
Nov. 00	Rev. 63	Added Kingston 128MB part. Added Think Computer Products Inc. 512MB part. Added Dane-Elec 256MB & 512MB parts. Added Corsair & Kingston 256MB parts. (In shaded area).
Nov. 00	Rev. 64	Added Dane-Elec 256MB part. Added Aved Memory Products 128MB & 256MB parts. Added ATP Electronics 512MB parts. (In shaded area).
Dec.00	Rev. 65	Added Centon Electronics & Dataram 512MB parts. Added Dataram Aved Memory Products 128MB parts. Added GoldenRAM & Aved Memory Products 64MB parts. (In shaded area).
Dec.00	Rev. 66	Added GoldenRAM & Aved Memory Products 64MB parts. Added Dataram 512MB part. (In shaded area).
Jan. 01	Rev. 67	Added Dane-Elect 64MB, 128MB 256MB parts. Added ATP Electronics, Simple Tech, Silicon Tech, Aved Memory Products & Centon Electronics 512MB parts. (In shaded area).
Jan. 01	Rev. 68	Added Dane-Elec 64MB part. Added ATP Electronics & Dane-Elec 128MB parts. Added GoldenRAM, Dane-Elec, Silicon Tech & Viking 256MB parts. Added Aved Memory Products, Simple Tech, Silicon Tech, Corsair & Dataram 512MB parts. Added ATP Electronics 1G part. Added 2 <sup>nd</sup> part number for some Viking parts. Identified EOL parts. (In shaded area).
Feb. 01	Rev. 69	Added Dane-Elec 128MB part. Added Aved Memory Products & Dataram 512MB parts. Added Dataram 1G part. (In shaded area).
Mar. 01	Rev. 70	Added Viking 128MB & 1G parts. Added PNY 128MB, 256MB & 512MB parts. Added Aved Memory Products 128MB, 256MB & 512MB parts. Added Dataram 256MB, 512MB & 1G parts. Added Dane-Elec 256MB. Added Samsung 256MB & 512MB part. (In shaded area).
April 01	Rev. 71	Added Dataram 512MB & 256MB parts. Added Dane-Elec 512MB, 256MB & 128MB parts. Added PNY 128MB part. Added Aved Memory Products 256MB part. Added GoldenRAM 128MB & 64MB parts. (In shaded area).
May 01	Rev. 72	Added GoldenRAM 64MB part. PNY, Dataram, Kingston & Dane-Elec 128MB parts. Added PYN, GoldenRAM, ATP Elec, Dataram & Avant Technology 256MB parts. Added Dataram, Avant Technology & PYN 512MB parts. (In shaded area).
June 01	Rev. 73	Added Dane-Elec 32MB & 512MB parts. Added Aved Memory Products 256MB parts. Added Dataram 512MB parts. Added GoldenRAM 128MB part. Added Dane-Elec 128MB parts. (In shaded area).
June 01	Rev. 74	Added ATP Elec 256MB, 512MB, and 1GB parts. Added Aved Memory Products 64MB, 128MB and 256MB parts, Added Dataram 512MB part. (In shaded area)
June 01	Rev. 75	Added Dataram 256MB, ATP Electronics, 256 and 1GB parts. (In shaded area)
June 01	Rev. 76	Added Dataram 256MB and 512MB parts. Added Simple Tech 512MB and 1GB parts. (In shaded area)
June 01	Rev. 77	Added Dataram and Aved Memory 256MB parts. (In shaded area)
July 01	Rev. 78	Added Dataram 128MB and 256MB, ATP 1GB, Avant 512MB, PNY 256MB parts. (In shaded area)
July 01	Rev. 79	Added Goldenram 64MB parts, ATP 512MB part. (In shaded area)
August 01	Rev. 82	Added Aved 128MB, PNY 182MB, Goldenram 128MB, Dataram 258MB parts. (In shaded area)

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<b>Revision History (continued)</b>		
<b>Date</b>	<b>Rev.</b>	<b>Modifications</b>
July 01	Rev. 80	Added GoldenRAM 128MB part, Dataram and PNY 256MB parts, Dataram 512MB part. (In shaded area)
August 01	Rev. 81	Added PNY 256MB part. (In shaded area)
August 01	Rev. 83	Added Dataram 256MB , PNY 256MB, PNY 512MB parts. (In shaded area)
August 01	Rev. 84	Added Dane Elec 128MB and 256MB parts. (In shaded area)
August 01	Rev. 85	Added Dane Elec 256MB and PNY 512MB parts. (In shaded area)
September 01	Rev. 86	Added Dane Elec 64MB, 256MB and 512MB parts. (In shaded area)
October 01	Rev. 87	Added GoldenRAM 256MB. Aved 512 and 256MB and PNY 512MB parts. (In shaded area)
October 01	Rev. 88	Added Dataram 128MB, Aved 256MB parts. (In shaded area)
November 01	Rev. 89	Added Dataram and Aved 128MB parts. (In shaded area)
December 01	Rev. 90	Added Dataram 1GB part. (In shaded area)
December 01	Rev. 91	Added Dataram 256 and 512 parts. (In shaded area)
March 02	Rev.92	Added SMART Modular Technologies 256MB and 512MB parts (In shaded area). Updated Distributor Information.
April 02	Rev.93	Added Dataram 512MB & 1GB parts. (In shaded area) Updated some Dataram part numbers (~ noted with this symbol)

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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 L440GX+ server board. 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 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<sup>sm</sup>).

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 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 NT\* v4.0 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. 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 Gold Certification: This certification program is administered and controlled by CMTL. For further information contact CMTL at [john@cmtlabs.com](mailto:john@cmtlabs.com)

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+CMTL<sup>sm</sup> 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<sup>sm</sup>, 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 L440GX+ server boards.

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## Qualified SDRAM DIMM Memory for the L440GX+ Server Board

The L440GX+ memory module has 4 dual in-line memory module (DIMM) sockets that support up to 2GB of 100MHz or 133MHz SDRAM system memory. The Intel® 82440GX AGPset supports different varieties of DIMM size, manufacturer, and speed. The BIOS will automatically detect the memory type, size, and speed. The following memory features are supported:

168-pin gold-plated SDRAM DIMMs  
Unbuffered or Registered 100MHz or 133MHz SDRAM ECC or Non-ECC DIMMs;  
32MB, 64MB, 128MB, 256MB, 512MB, 1Gig  
3.3v memory only  
Single or double-sided DIMMs  
Single layer or “stacked component” DIMMs

Memory features are detailed in the *L440GX+ Server Board Technical Product Specification* available on-line at <http://support.intel.com/support/motherboards/server/L440GX/>

The following tables list DIMM devices known to be compatible with the Intel L440GX+ Pentium® II & Pentium® III processor-ready server board. This document and the DIMM list will be updated as qualified memory is added during the life of the L440GX+ product.

Intel strongly recommends the use of ECC memory in all server systems. The Intel Pentium® II & Pentium® III processors used with the L440GX+ Server board with a 100MHz-system bus must be paired only with 100MHz or 133MHz SDRAM DIMMs. (Note: Using 133MHz SDRAM DIMMs will not change the performance to this product.)

Memory modules not listed in the following tables may be used, however, Intel recommends the use of Advanced Tested ECC modules, and in the event of unreliable system operation, the modules should be replaced with Advanced Tested ECC modules to determine whether the unlisted or non - ECC modules are causing the problem. Intel recommends that module and DRAM vendors not be mixed in the same system.

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<sup>(SM)</sup> 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.

***This list is subject to change without notice.***

Below are the charts that list the current supported memory types:

**Supported Memory Types for PC-100 parts:**

<b>PC-100 Unbuffered SDRAM Module Configurations</b>						
<b>DIMM Capacity</b>	<b>DIMM Organization</b>	<b>SDRAM Density</b>	<b>SDRAM Organization</b>	<b># SDRAM Devices/rows/Banks</b>	<b># Address bits rows/Banks/column</b>	
<b>Non ECC Memory</b>	32MB	4M x 64	16Mbit	2M x 8	16/2/2	11/1/9
	32MB	4M x 64	64Mbit	2M x 32	4/2/4	11/2/8
	32MB	4M x 64	64Mbit	4M x 16	4/1/4	12/2/8
	64MB	8M x 64	64Mbit	8M x 8	8/1/4	12/2/9
	128MB	16M x 64	64Mbit	8M x 8	16/2/4	12/2/9
	128MB	16M x 64	128Mbit	16M x 8	8/1/4	12/2/10
	256MB	32M x 64	128Mbit	16M x 8	16/2/4	12/2/10
	256MB	32M x 64	256Mbit	32M x 8	8/1/4	13/2/10
	512MB	64M x 64	256Mbit	32M x 8	16/2/4	13/2/10
<b>ECC Memory</b>	32MB	4M x 72	16Mbit	2M x 8	18/2/2	11/1/9
	32MB	4M x 72	64Mbit	2M x 32	5/2/4	11/2/8
	32MB	4M x 72	64Mbit	4M x 16	5/1/4	12/2/8
	64MB	8M x 72	64Mbit	8M x 8	9/1/4	12/2/9
	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	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	256Mbit	32M x 8	18/2/4	13/2/10

<b>PC-100 Registered SDRAM Module Configurations</b>						
<b>DIMM Capacity</b>	<b>DIMM Organization</b>	<b>SDRAM Density</b>	<b>SDRAM Organization</b>	<b># SDRAM Devices/rows/Banks</b>	<b># Address bits rows/Banks/column</b>	
<b>ECC Memory</b>	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	128Mbit	16M x 8	9/1/4	12/2/11
	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
	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

**Supported Memory Types for PC-133 parts:**

<b>PC-133 Unbuffered SDRAM Module Configurations</b>						
<b>DIMM Capacity</b>	<b>DIMM Organization</b>	<b>SDRAM Density</b>	<b>SDRAM Organization</b>	<b># SDRAM Devices/rows/Banks</b>	<b># Address bits rows/Banks/column</b>	
<b>Non ECC Memory</b>	32MB	4M x 64	16Mbit	2M x 8	16/2/2	11/1/9
	32MB	4M x 64	64Mbit	2M x 32	4/2/4	11/2/8
	32MB	4M x 64	64Mbit	4M x 16	4/1/4	12/2/8
	64MB	8M x 64	64Mbit	8M x 8	8/1/4	12/2/9
	128MB	16M x 64	64Mbit	8M x 8	16/2/4	12/2/9
	128MB	16M x 64	128Mbit	16M x 8	8/1/4	12/2/10
	256MB	32M x 64	128Mbit	16M x 8	16/2/4	12/2/10
	256MB	32M x 64	256Mbit	32M x 8	8/1/4	13/2/10
	512MB	64M x 64	256Mbit	32M x 8	16/2/4	13/2/10
<b>ECC Memory</b>	32MB	4M x 72	16Mbit	2M x 8	18/2/2	11/1/9
	32MB	4M x 72	64Mbit	2M x 32	5/2/4	11/2/8
	32MB	4M x 72	64Mbit	4M x 16	5/1/4	12/2/8
	64MB	8M x 72	64Mbit	8M x 8	9/1/4	12/2/9
	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	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	256Mbit	32M x 8	18/2/4	13/2/10
<b>PC-133 Registered SDRAM Module Configurations</b>						
<b>DIMM Capacity</b>	<b>DIMM Organization</b>	<b>SDRAM Density</b>	<b>SDRAM Organization</b>	<b># SDRAM Devices/rows/Banks</b>	<b># Address bits rows/Banks/column</b>	
<b>ECC Memory</b>	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

## *L440GX+ Server Platform*

### *Unbuffered, ECC, 100MHz SDRAM DIMM Modules 32MB Sizes (4Mx72)*

Manufacturer	Part Number	DRAM Part Number	PCB Part Number	Date	CMTL Test #	EOL
Fujitsu	PDC4UV7284B-102T-S			3/1/99		
MICRON	MT18LSDT472AG-10BC4			11/23/98		
MICRON	MT5LSDT472AG-10CB1			2/4/99		
MICRON	MT5LSDT472AG-10EC5			11/1/99		
??SAMSUNG	(Old #) KMM374S403CT-GL (New #) M374S0403CT-C1L00			2/4/99		

+Samsung parts are available under both part numbers.

## *L440GX+ Server Platform*

### *Unbuffered, ECC, 100MHz SDRAM DIMM Modules 64MB Sizes (8Mx72)*

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Dataram	DTM60085	MT48LC8M8A2TG	Micron	40451	8/30/99	A395	
FUJITSU	PDC8UV7284C-102T-S				2/10/99		
Hyundai	HYM7V75A801ATFG-10S	HY57V658020ATC-10S	Hyundai	94V-0 9841-2	1/13/99	A186	EOL
Legend	L0872PI2	HY57V658020A / TC-10S	Hyundai	PC58964-A1	11/12/99	A493	
MICRON	MT9LSDT872AG-10CB4				2/10/99		
MICRON	MT9LSDT872AG-10EC7				10/28/99		
NEC	MC-458CA726LF-A80				3/26/99		
??SAMSUNG	(Old #) KMM374S823CTS-GL (New #) M374S0823CTS-C1L00				2/10/99		
??SAMSUNG	(Old #) KMM374S823DTS-GL (New #) M374S0823DTS-C1L00				11/18/99		
Southland Micro System	SNT 64MB-PC1E	V54C365804VBT8PC	Mosel-Vitelic	120503B	5/20/99	A355	EOL
+Viking	PE8721U4SN3-3226	TC59S6408BFT-80	GOLDSTAR	9001601	12/29/98	A185	EOL
GoldenRAM	L440GX/64EC-GR	MT48LC8M8A2TG-8E	Micron	1030203-001 rev A	3/18/00	A686	
GoldenRAM	7550110-GR	MT48LC8M8A2-8E	Micron	1030203-001A rev A	12/09/00	B656	
#+Aved Memory Products	AMP374P0823BTE-C1H/H	HY57V658020BTC-10P-A rev B	Hyundai	105500 rev A	5/26/01	D211	

*Continued.....*

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

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+GoldenRAM	7550410-GR	MT48LC8M8A2-7.5	Micron	1030203-002B rev B	4/2/01	C456	
+GoldenRAM	7550410-GR	MT48LC8M8A2TG-75 rev A	Micron	105506-001A rev A	7/17/2001	D806	

+Samsung parts are available under both part numbers.

# Low Profile part.

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

# L440GX+ Server Platform

## Unbuffered, ECC, 100MHz SDRAM DIMM Modules 128MB Sizes (16Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
ATP Electronics	AMC16V72E8S4GHS	KM48S8030CT-GH / C	Samsung	~ SC168E-64/128 rev 1.0 0398	11/19/99	A548	
Corsair	CM734S128A-GX/S	KM48S16030T-GL	Samsung	50-00087	10/29/99	A542	
Corsair	CM734S128-GX/S	KM48S8030CT-GL	Samsung	50-00087 rev A	11/25/99	A582	
+Dataram	DTM60086	MT48LC8M8A2TG-8E	Micron	40451	9/10/99	A398	
Fujitsu	PDC16UV7284C-102T-S				3/1/99		
HYUNDAI	HYM7V75A1601ATFG-10S				2/4/99		
Integritech	IM50M16F7243D4T	48LC8M8A2-8EB	Micron	CM-14	3/28/99	A252	EOL
Legend	L1672PI2	HY57V658020A / TC-10S	Hyundai	PC16872-A2	11/5/99	A495	
MICRON	MT18LSDT1672AG-10CB4 <i>Qualified with date code 9834 only</i>				2/4/99		EOL
MICRON	MT18LSDT1672AG-10EC7 <i>Qualified with date code 9922 only</i>				10/28/99		
MICRON	MT9LSDT1672AG-10EB1				11/22/99		
NEC	MC-4516CC726LF-A80				11/18/99		
??SAMSUNG	(Old #) KMM374S1623CT-GL (New #) M374S1623CT0-C1L00				2/17/99		
Southland Micro System	SNT U1672P1W4N	D4564841G5-A80-9JF	NEC	120571A	5/19/99	A354	EOL
+Viking	PE16722U4SN3-3226	GM72V66841CT7J	GOLDSTAR	9001601	12/31/98	A184	EOL
+Viking	INT12802	HY57V12898020TC-10S	Hyundai	9001601 /A	12/4/99	A517	
+Viking	INT12801 And PC10016X72CL3-IA	UPD45128841G5-A10	NEC	9001601 / A	12/3/99	A514	
+Viking	INT12804	GM72V28841AT-7J	Goldstar	9001601 rev A	12/16/99	A523	
Unigen Corporation	UG516S7448JC-PH	TC59SM708FT-80	Toshiba	INTEL 8X8	12/24/99	A627	
Unigen Corporation	UG516S7448HC-PH	TC59S6408CFT-80	Toshiba	INTEL8X8	12/24/99	A626	
+Viking	INT12803	KM48S16030T-GL	Samsung	9001601 rev A	12/24/99	A520	
+Dane Elec	DP100-072162A-3	D4564841G5-A80-9JF	NEC	PC100-1672	1/12/00	A008	
+Dane Elec	DP100-072162A-3	81F64842C-103FN	Fujitsu	PC100-1672	2/2/00	A003	
Memory Card Technology	DM1673VS65804X-103	MB81F64842D-102FN	Fujitsu	650729-G1	2/26/00	A709	
+Dane Elec	DP100-072162A-3	TC59S6408CFT-80	Toshiba	PC100-1672	3/11/00	A738	
GoldenRAM	L440GX/128EC-GR	MT48LC8M8A2TG-8E	Micron	1030203-001 rev A	3/18/00	A687	
+Dane Elec	DP100-072162A-3	HYB39S64800BT-8 die B	Siemens	PC100-1672	4/28/00	A758	
Virtium Technology Inc	VM374S1723-GL	D45128841G5-A10-9JF	NEC	168-167203B	5/8/00	A981	
+Dane-Elec	DP100-072162A-3	KM48S8030CT-GL	Samsung	PC100-1672	6/6/00	A764	
+Dane Elec	DP100-072162A-3	HYB39S64800BT-8 die B	Siemens	PC100-1672	4/28/00	A758	
Virtium Technology Inc	VM374S1723-GL	D45128841G5-A10-9JF	NEC	168-167203B	5/8/00	A981	

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## *L440GX+ Server Platform*

### Unbuffered, ECC, 100MHz SDRAM DIMM Modules 128MB Sizes (16Mx72).....Continued

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Dane-Elec	DP100-072162A-3	KM48S8030CT-GL	Samsung	PC100-1672	6/6/00	A764	
+Viking	INT12803	K4S280832B-TC1L rev B	Samsung	9001601 rev A	8/1/00	B364	
Think Computer Products Inc.	TMINL440GX-128	HYB39S64800CT-8	Infineon	KO-6289 rev A	9/1/00	B461	
+Dane-Elec	DP100-072162A	D4564841G5-A80-9JF	NEC	PC16872 A3 rev. B	9/21/00	B517	
# Aved Memory Products	AMP374P1723BTE-C1H/S	K4S280832B-TC1H rev B	Samsung	105500 rev A	2/23/01	C383	
# Aved Memory Products	AMP374P1723ATE-C1H/H	HY57V28820AT-P rev A	Hyundai	105500 rev A	2/27/01	C415	
# Aved Memory Products	AMP374P1623BTE-C1H/H	HY57V658020bTC-10P-A rev B	Hyundai	105500 rev A	5/31/01	D216	

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Dane-Elec	DP133-072163A	HY57V64820HGT-H	Hyundai	SD6472LC-A	1/25/01	C081	
+Dane-Elec	DP133-072163A	NT56V6610C0T-75	Nanya	SD6472LC-A	4/26/01	C891	
+GoldenRAM	7550420-GR	HYB39S64800BT-7.5 rev B	Infineon	1030203-002B rev B	5/24/01	C446	
+GoldenRAM	7550420-GR	MT48LC8M8A2TG-75 rev A	Micron	105506-001A rev A	7/24/01	D830	
+Dataram	DTM60140 (68019Z)	HY57V28820HCT-H rev A	Hyundai	650769-G rev 1	11/05/01	F281	

~ Part number change/correction.

??Samsung parts are available under both part numbers.

# Low Profile part.

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



## *L440GX+ Server Platform*

### *Unbuffered, ECC, 100MHz SDRAM DIMM Modules 256MB Sizes (32Mx72)*

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
MICRON	MT18LSDT3272AG-10EB1				2/4/99		
??SAMSUNG	(Old #) KMM374S3323T-GL (New #) M374S3323MT0-C1L00				2/4/99		
Simmtron Technology	DT3272V182USLP3	D45128841G5-A80	NEC	168167203	8/17/99	A437	
Toshiba	THMY7232G1EG-80				3/31/99		
Legend	L3272PI2	HY57V1298020A / TC-10S	Hyundai	PC16872-A2	12/30/99	A589	
??Samsung	(Old #) KMM374S3323AT-GL (New #) M374S3323AT0-C1L00				01/21/00		
Virtium Technology Inc	VM374S3323-GLS	KM48S16030T-GL	Samsung	168-167203 rev B	5/18/00	A925	
+Viking	INT25618 and PC10032X72CL2-IA	D45128841G5-A80-9JF	NEC	9001601	6/5/00	B160	
Unigen Corporation	UG532S7448JC-PH	TC59SM708FT-80	Toshiba	INTEL8X8 rev 1.0	7/12/00	B118	
+Dataram	DTM60099	MT48LC16M8A2TG-8E	Micron	40451 rev B	7/7/00	B213	
Infineon Technologies	HYS72V32300GU-7.5-C2	HYB39S256800CT-7.5	Infineon	2002308-001-B00	8/23/00	B325	
+Dataram	DTM60099	GM72V28841ALT-7K	Hyundai	40451 rev. B	8/31/00	B215	
+Dane-Elec	DP100R072323E	K4S280832B-TC1H	Samsung	16-25600B rev. B	10/2/00	B564	
Memory Card Technology	DM3273VS12804X-102G	D45128841G5-A80-9JF	NEC	650769-G1 rev 1	10/9/00	B556	
GoldenRAM	7550130-GR	TC59SM708FT-75 rev A	Toshiba	1030203-002B rev B	1/12/01	B662	
# +Aved Memory Products	AMP374P3323BTE-C1H/S	K4S280832B-TC1H rev B	Samsung	105500 rev A	2/19/01	C391	
# +Aved Memory Products	AMP374P3323ATE-C1H/MV	V54C3128804VAT-7 Rev. A	Mosel-Vitellic	105500 rev. A	4/23/01	C542	
# +Aved Memory Products	AMP374P3323ATE-C1H/H	HY57V28820AT-P rev A	Hyundai	105500 rev A	5/14/01	D204	
#+Aved Memory Products	AMP366P3323ATE-C1H/MI	MT48LC16M8A2TG-7E rev A	Micron	105500 rev A	6/4/01	C995	
+Dataram	~DTM60099A (Old Part# DTM60099(60099Z)(M))	MT48LC16M8A2TG-75 rev E	Micron	40451 rev B	7/26/2001	D663	

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Dane-Elec	DP133-072323E	HYB39S128800CT-7.5	Infineon	SD6472LC-A	1/23/01	C074	
+Dane-Elec	DP133-072323E	K4S280832A-TC75	Samsung	SD6472LC-A	2/21/01	C442	
+GoldenRAM	7550330-GR	MT48LC16M8A2-75 rev B	Micron	1030203-002B rev B	5/4/01	C449	
+PNY	7232ZHSEM4G19TWN-PH0	HYB39S128800CT-7.5 rev C	Infineon	40000387 rev A	08/13/01	D231	
+PNY	7232ZHSEM4G19TWN-PK0	TC59SM708AFT-75 rev A	Toshiba	40000387 rev A	08/17/01	D238	
GoldenRAM	7550430-GR	MT48LC16M8A2TG-75 rev A	Micron	105506-001A rev A	08/20/01	E099	

~ Part number change/correction.

??Samsung parts are available under both part numbers.

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

**L440GX+ Server Platform**

**Unbuffered, ECC, 100MHz SDRAM DIMM Modules  
512MB Sizes (64Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
Infenion	++HYS72V64220GU-8A				1/27/00		
??Samsung	~ ++ (Old #) KMM374S6453AT-GL (New #) M374S6453ATO-C1L00				1/27/00		
+Viking	++INT51205	HYB39S256800T-8	Siemens	9001702G	3/27/00	A864	
Kingston	++ ~KVR100X72C3/512-IS	0325804CT3A die 360	IBM	2022112-002 rev B00	3/19/00	A825	
Infineon Technologies	HYS72V64220GU-8C2	HYB39S256800CT-8 rev C2	Infineon	2022268-001A00	8/10/00	B324	
+Dane-Elec	DP100-072643I	HYB39S256800AT-8A	Infineon	PC16872 A3 rev B	9/28/00	B557	
Legacy Electronics Inc.	38L6JS00-1EAG	LES64408TA-8X	Legacy	LE64724 rev.A	9/26/00	B561	
Memory Card Technology	DM6473VS24804X-102G	HYB39S256800AT-8	Infineon	650769-G1 rev.1	10/6/00	B555	
Silicon Tech	INT72R4J64M4H-A10DV	K4S280432C-TC1H	Samsung	734	12/21/00	B941	
+Aved Memory Products	AMP374P6453BT1-C1H/S	K4S560832B-TC1H000 rev B	Samsung	105500 rev 1	1/9/01	B900	
+Dataram	DTM60177 (60177Z)	HYB39S256800CT-8 REV. C	Infineon	40512 rev A	3/7/01	C199	
+Dane-Elec	DP100-072642I	HYB39S256800AT-8	Infineon	PC16872 A3 rev B	5/10/01	C736	
# +Dataram	DTM60177(60177Z)	HM5225805BTT-A6 rev C	Hitachi	40512 rev A	5/22/01	C202	

*Continued.....*

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
GoldenRAM	7550440-GR	0325804CT3A75 rev A	IBM	1030203-002B rev B	4/2/01	C455	
+PNY	7264WHSEM8G19TWN-PH0	HYB39S256800CT-7.5 rev C	Infineon	40000387 rev A	08/13/01	D245	
+#Aved Memory Products	AMP366P6453AT1-C75/MV	V54C3256804VAT-7 rev A	Mosel-Vitellic	105500 rev A	10/2/01	E629	
+PNY	7264WHSEM8G19TWN-PK0	TC59SM808BFT-75 rev B	Toshiba	40000387 rev A	9/25/01	D252	

++This part has 256Mb DRAM Parts and can only be used with PBA704293-503/AA721242-008 boards or latter and BIOS 11 or latter. (Earlier boards & BIOS will not support 256Mb DRAM technology)

~ Part number change.

??Samsung parts are available under both part numbers.

+ This vendor is part of the CMTL Gold or Advance 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.

## *L440GX+ Server Platform*

### **Unbuffered, Non-ECC, 100MHz SDRAM DIMM Modules 32 MB Sizes (4Mx64)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
Integritech	IM51M04U6443D4U	48LC4M16A2-8E	Micron	CM-15	4/19/99	A298	EOL
# +Dane-Elec	DP100-064041B	HYB39S64160BT-8	Infineon	IM564PCG rev B	5/15/01	C563	

## *L440GX+ Server Platform*

### **Unbuffered, Non-ECC, 100MHz SDRAM DIMM Modules 64 MB Sizes (8Mx64)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
Integritech	IM50M08U6443D4T	MT48LC8M8B4-8CD	Micron	CM-14	4/23/99	A301	EOL
Integritech	IM51M08U6443D4U	48LC4M16A2-8EB	Micron	CM-15	3/26/99	A253	EOL
+Dane-Elec	DP100-064082A	NT56V6610C0T-75B	Nanya	PC16872 A3 rev. B	9/26/00	B475	
+Dane-Elec	DP100-064083AU2	NT56V6610C0T-8A	Nanya	PC16872 A3 rev. B	9/26/00	B507	
+Aved Memory Products	AMP366P0823BTE-C1H/H	HY57V658020BTC-10P rev B	Hyundai	105500 rev A	11/29/00	B790	
+GoldenRAM	7550310-GR	MT48LC8M8A2TG-75 rev A	Micron	105506- 001A rev A	7/17/2001	D814	
+#Dane-Elec	DP100-064081FL	K4S281632B-TC1H	Samsung	DE162023 rev B	9/6/01	E155	

### **Unbuffered, Non-ECC, 133MHz SDRAM DIMM Modules 64 MB Sizes (8Mx64)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
Dane-Elec	DP133-064083A	HYB39S64800CT-7.5	Infineon	PC100 6472LC	12/19/00	B976	
+Dane-Elec	DP133-064083A	N364804CT3C	IBM	PC100 6472LC	1/19/01	C057	
+GoldenRAM	7550310-GR	MT48LC8M8A2TG-75 Rev.A	Micron	1030203- 002B rev B	5/4/01	C445	
+#Dane-Elec	DP133-064083AL	NT56V6610C0T-75	Nanya	DE082018 rev B	8/24/01	E156	

# Low Profile part.

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

## *L440GX+ Server Platform*

### **Unbuffered, Non-ECC, 100MHz SDRAM DIMM Modules 128 MB Sizes (16Mx64)**

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+Dane Elec	DP100-064162A-3	48LCM8A2	Micron	PCBPC100-1672 rev 1	12/16/99	A609	
Integritech	IM50M16U6443D4T	48LC8M8A2-8EB	Micron	CM-14	4/7/99	A251	EOL
+Dane Elec	DP100-064162A-3	D4564841G5-A80-9JF	NEC	PC100-1672	1/12/00	A013	
+Dane Elec	DP100-064162A-3	TC59S6408CFT-80	Toshiba	PC100-1672	3/11/00	A726	
+Dane Elec	DP100-064162A-3	HYB39S64800BT-8	Siemens	PC100-1672 rev 1.0	4/12/00	A714	
+Dane Elec	DP100-064162A	D4564841G5-A80-9JF	NEC	PC100-1672 rev 1.0	4/12/00	A719	
+Dane Elec	DP100-064162A-3	KM48S8030CT-GL	Samsung	PC100-1672	4/12/00	A732	
+Dane Elec	DP100-072162A-3	MT48LC8M8A2TG-8E	Micron	PC100-1672	5/20/00	A744	
+Dane Elec	DP100-064162A	HYB39S64800BT-8	Infineon	PC16872 rev 2	7/21/00	B243	
+Dane-Elec	DP100-064162A	NT56V6610C0T-75B	Nanya	PC16872 A3 rev. B	9/21/00	B481	
+Dane-Elec	DP100-064162AU2	D4564841G5-A80-9JF	NEC	PC16872 A3 rev. B	9/22/00	B490	
+Dane-Elec	DP100-064163A	HYB39S64800BT-8	Infineon	PC16872 A3 rev. B	9/21/00	B502	
+Dane-Elec	DP100-064163A	NT56V6610C0T-8A	Nanya	PC16872 A3 rev. B	9/27/00	B496	
+Aved Memory Products	AMP366R1723ATE-C1H/H	HY57V2880AT-P rev A	Hyundai	105500 rev A	11/13/00	B703	
+Aved Memory Products	AMP366P1723BTE-C1H/S	K4S280832B-TC1H rev B	Samsung	105500 rev A	11/13/00	B708	
+Aved Memory Products	AMP366P1623BTE-C1H/H	HY57V658020BTC-10P-A rev B	Hyundai	105500 rev A	11/28/00	B786	
+Dane-Elec	DP100-064161E	HYB39S128800CT-8	Infineon	E119697/1672SYP C100	4/16/01	C617	
+#Aved Memory Products	AMP374P1723ATE-C1H/MI	MT48LC16M8A2TG-7E rev A	Micron	105500 rev A	8/9/01	D940	

*Continued.....*

**Unbuffered, Non-ECC, 133MHz SDRAM DIMM Modules  
128 MB Sizes (16Mx64)**

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+Aved Memory Products	AMP366P1723ATE-C75/H	HY57V28820AT-H rev A	Hyundai	105500 rev A	11/16/00	B756	
+Dane-Elec	DP133-064163A	NT56V6610COT-75S	Nanya	SD6472LC-A	12/19/00	B979	
+Dane-Elec	DP133-064163E	HYB39S128800CT-7.5	Infineon	SD6472LC-A	1/15/01	C085	
Dane-Elec	DP133-064163A	N364804CT3C	IBM	SD6472LC-A	1/29/01	C060	
+Dataram	DTM60143(60143Z)	MT48LC16M8A2TG-75 rev. B	Micron	40483 rev. A1	1/30/01	C105	
PNY	6416ZHSEM4G09TW N-PH0	HYB39S128800CT-7.5 REV. C	Infineon	40000387 REV. A	2/14/01	C115	
PNY	6416ZHSEM4G09TW N-PK0	TC59SM708AFT-75 rev A	Toshiba	40000387 rev A	3/8/01	C112	
+Dane-Elec	DP133-064163A	NT56V6610C0T-75	Nanya	SD6472LC-A	5/17/01	C793	
+Dane-Elec	DP133-064163E	HY57V28820AT-H	Hyundai	SD6472LC-A	5/18/01	C801	
#+Aved Memory Products	AMP366P1723BTE-C75/S	K4S280832B-TC75 rev B	Samsung	105500 rev A	5/29/01	D376	
+GoldenRAM	7550320-GR	MT48LC8M8A2TG-75 rev A	Micron	105506-001A rev A	8/7/01	D822	
+Aved Memory Products	AMP366P1723DTE-C75/S	K4S280832D-TC75 rev D	Samsung	105550 rev A	11/01/01	E706	

# Low Profile part.

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

## *L440GX+ Server Platform*

### **Unbuffered, Non-ECC, 100MHz SDRAM DIMM Modules 256 MB Sizes (32Mx64)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Aved Memory Products	AMP366P3323BTE-C1H/S	K4S280832B-TC1H rev B	Samsung	105500 rev A	11/16/00	B742	
+Aved Memory Products	AMP366P3323ATE-C1H/H	HY57V28820AT-P rev A	Hyundai	105500 rev A	11/14/00	B747	
+Aved Memory Products	AMP336P3323ATE-C1H/MV	V54C3128804VAT-7 rev. A	Mosel-Vitellic	105500 rev A	3/27/01	C498	
+#Dane-Elec	DP100-064161FL	K4S281632B-TC1H	Samsung	DE162023 rev B	8/24/2001	E152	
+#Dane-Elec	DP133-064163EL	HY57V28820AT-H	Hyundai	DE082018 rev B	8/24/2001	E204	

### **Unbuffered, Non-ECC, 133MHz SDRAM DIMM Modules 256 MB Sizes (32Mx64)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Aved Memory Products	AMP366P3323ATE-C75/H	HY57V28820AT-H rev A	Hyundai	105500 rev A	11/15/00	B758	
+Dane-Elec	DP133-064323E	K4S280832A-TC75	Samsung	SD6472LC-A	12/21/00	B982	
+Dane-Elec	DP133-064323E	TC59SM708FT-75	Toshiba	SD6472LC-A	1/25/01	C063	
+Dane-Elec	DP133-064323E	HYB39S128800CT-7.5	Infineon	SD6472LC-A	1/23/01	C071	
PNY	6432ZHSEM4G17TW N-PK0	TC59SM708AFT-75 REV. A	Toshiba	40000387 REV. A	2/9/01	C137	
PNY	6432ZHSEM4G17TW N-PH0	HYB39S128800CT-7.5 REV. C	Infineon	40000387 REV. A	2/9/01	C142	
+Aved Memory Products	AMP366P3323ATE-C75/MV	V54C3128804VAT-7 rev. A	Mosel-Vitellic	105500 rev A	3/21/01	C493	
+PNY	6432ZHSEM4G17TW N-PH0	HYB39S128800CT-7.5 rev C	Infineon	40000387 rev A	6/30/01	D451	
+#Dane-Elec	DP133-064323IL	K4S560832B-TC75	Samsung	DE082018 rev B	9/7/01	E180	

# Low Profile part.

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

## *L440GX+ Server Platform*

### **Unbuffered, Non-ECC, 100MHz SDRAM DIMM Modules 512MB Sizes (64Mx72)**

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+Aved Memory Products	AMP366P6453BT1-C1H/S	K4S560832B-TC1H rev B	Samsung	105500 rev A	12/29/00	B895	
+Aved Memory Products	AMP366P6453BT1-C1H/I	HYB39S256800AT-8 rev B	Infineon	105500 REV. A	1/25/01	C108	
+Dane-Elec	DP100-064642D-S	HYB39S128400CT-8	Infineon	E119697/1672 SYPC100	3/7/01	C719	

### **Unbuffered, Non-ECC, 133MHz SDRAM DIMM Modules 512MB Sizes (64Mx72)**

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+Aved Memory Products	AMP366P6453BT1-C75/S	K4S560832B-TC75 REV B	Samsung	105500 REV. A	1/15/01	C095	
PNY	6464WHSEM8G17TWN-PH0	HYB39S256800CT-7.5 REV. C	Infineon	40000387 REV. A	2/9/01	C159	
PNY	6464WHSEM8G17TWN-PK0	TC59SM808BFT-75 REV. B	Toshiba	40000387 rev A	4/12/01	C155	
+Dataram	DTM60145 (68018Z)	HY57V56820T-HP	Hyundai	650769-G1 rev 1	12/11/01	F749	

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



## *L440GX+ Server Platform*

### **Registered, ECC, 100MHz SDRAM DIMM Modules 64MB Sizes (8Mx72)**

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
FUJITSU	PDC8RV7284C-102T-S				2/7/99		
Hyundai	HYM7V75AS801ATHG-10S	HY57V658020ATC-10S	Hyundai	9835-1	1/23/99	A187	EOL
Hyundai	HYM7V75AS801BTHG-10	HY57V658020BTC	Hyundai	N/A	10/1/99	A457	
NEC	MC-458DA726F-A80				2/7/99		
GoldenRAM	7550211-GR	HYB39S64800CT-80 rev a	Infineon	103238-001A rev A	11/27/00	B808	
+Aved Memory Products	AMP377P0823BT2-C1H/H	HY57V658020BTC-10P-A rev B	Hyundai	105399 rev B`	12/18/00	B989	
GoldenRAM	7550210-GR	HYB39S64800CT-80	Infineon	1030238-001A rev A	3/16/01	B772	

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

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
SAMSUNG	M390S823DT1-C75				7/17/00		
MICRON	MT9LSDT872G-133C3				8/3/00		

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

# *L440GX+ Server Platform*

## **Registered, ECC, 100MHz SDRAM DIMM Modules 128MB Sizes (16Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
ATP Electronics	AMR16V72F8S4GHS	KM48S8030CT-GH / C	Samsung	SR168F08V1 / 1	10/22/99	A537	
+Dataram	DTM60089	MT48LC16M4A2TG-8E	Micron	40455 / A	10/26/99	A541	
+Dataram	DTM60089	HY57V654020BTC-10P	Hyundai	40455 / A	11/25/99	A544	
+Dataram	DTM60089C	KM44S16030BT-GH	Samsung	40455 rev A	12/17/99	A543	
FUJITSU	PDC16RV7244C-102T-S				2/7/99		
Hyundai	HYM7V75A1601ATFG-10S	HY57V658020ATC-10S	Hyundai	9833-3	1/27/99	A207	EOL
Hyundai	HYM7V75AS1601ATNG-10S	HY57V654020ATC-10S	Hyundai	9835-2	1/27/99	A206	EOL
Hyundai	HYM7V75AS1601BTNG-10S	HY57V654020BTC	Hyundai	9909-2	9/28/99	A459	
IBM	IBM13M16734BCB-360T				12/23/99		
Kingston	~KVR100X72RC2/128-IS	KM44S16030CT-GH	Samsung	2022146-001 B00	10/29/99	A545	
Kingston	~KVR100X72RC3/128-IS	0364404CT3B	IBM	2022146-001	11/19/99	A572	
MICRON	MT18LSDT1672G-10EC2				11/1/99		
??Samsung	(Old #) KMM377S1620CT3-GH (New #) M377S1620CT3-C1H00				4/20/99		
??Samsung	(Old #) KMM377S1620DT3-GL (New #) M377S1620DT3-C1L00				9/29/99		
Simple Tech	STI7216118RD1-10AVG	D4564441G5-A10-9JF	NEC	00669	5/10/99	A340	
Silicon Tech	SL72R4D16M4H-A10AV	D4564441G5-A10-9JF	NEC	00669	5/10/99	A348	
Unigen Corporation	UG516S7544HG-PH	TC59S6404BFT-80	Toshiba	RAWCARD-B	12/10/99	A590	
??Samsung	(Old #) KMM377S1620DT3-GH (New #) M377S1620DT3-C1L00				12/29/99		
+Viking	MD-460680	HYB39S64400BT-8 / B	Siemens	9001603G	9/17/99	A449	
Silicon Tech	INT72R8E16M4H-A10CV	D45128841G5-A80	NEC	668 rev A	5/31/00	B111	
Simple Tech	SINT7216118ARD1-10CVG	D45128841G5-A80	NEC	668 rev A	5/31/00	B112	
+Dane-Elec	DP100R072163E	HY57V1298020TC-75	Hyundai	16-25600A	6/7/00	A910	
+Dane-Elec	DP100R072163A	HYB39S64800BT-8	Infineon	16-25600A rev A	6/7/00	A915	
Simmtron Technology	DT1672V92RSLP	K4S280832A-TC1H000	Samsung	LE32872R	6/5/00	B147	
Kingston	KVR100X72RC2/128-IS	KM44S16030DT-GH rev D	Samsung	2022146-001 rev B00	6/18/00	B184	
Apacer	71.73325.112	HYB39S64800BT-8 rev B	Infineon	48.16063.012 rev 2	8/23/00	B305	
Kingston	KVR100X72RC2/128-IS	UPD4564441G5-A80-9JF	NEC	2022146-001 rev C00	8/17/00	B403	
+Viking	INT12816 And PC10016X72RCL2-IA	UPD45128841G5-A80-9JF	NEC	9001742	9/21/00	B492	
Kingston	KVR100X72RC2/128-IS	HYB39S64400BT-8	Infineon	2022146-001 C00 rev. C00	10/20/00	B624	
+Dataram	DTM60167	MT48LC16M8A2TG-8E	Micron	40506 rev A	11/20/00	B721	

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**Registered, ECC, 100MHz SDRAM DIMM Modules  
128MB Sizes (16Mx72) (Continued.....)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Viking	PE16721R4SN3-UN04	MT48LC16M8A2-8E REV. B	Micron	9001742 REV.A	2/6/01	C267	
# Aved Memory Products	AMP377P1723BT2-C1H/S	K4S280832B-TC1H rev B	Samsung	105399 rev B	2/12/01	C385	
# Aved Memory Products	AMP377P1723AT2-C1H/H	HY57V28820AT-P rev A	Hyundai	105399 rev B	2/19/01	C379	
+Dataram	DTM60089 (60089Z)	MT48LC16M4A2TG-8E Rev. C	Micron	40455 rev B	4/6/01	C743	
Kingston	KVR100X72RC3/128-IS	N364404CT3C	IBM	2022146-001 rev C00	4/6/01	C980	
#+Aved Memory Products	AMP377P1723AT2-C1H/MI	MT48LC16M8A2TG-7E rev A	Micron	105399 rev B	6/6/01	C988	
#+Dataram	DTM60167 (60167Z) (M)	MT48LC16M8A2TG-75 rev E	Micron	40506 rev A	10/19/01	E637	

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
SAMSUNG	M390S1723AT1-C75				6/21/00		
NEC	MC4516DA727EFA-A75				6/30/00		
SAMSUNG	M390S1723BT1-C75				7/25/00		
MICRON	MT18LSDT1672G-13EC2				7/6/00		
ATP Electronics	AR16V72N4S4GAS	K4S640432D-TC75 die D	Samsung	SR168N04V rev 2	1/8/01	B926	
+Dane-Elec	DP133R072163EL	K4S280832A-TC75	Samsung	SRBF 2568 rev A	1/30/01	B942	
+Dane-Elec	DP133R072163C	TC59S6404CFT-75	Toshiba	168-327201C rev C	3/8/01	C896	
PNY	7216ZHSTM4G13TWI-PK0	TC59SM708AFT-75 REV. A	Toshiba	40000494 rev A	4/5/01	C123	
+Dane-Elec	DP133R072163C	MT48LC16M4A2-75	Micron	DE0401 rev A	4/23/01	C528	
#+Dataram	~DTM60168C (Old Part# DTM60168(M))	MT48LC16M8A2TG-75 rev E	Micron	40506 rev A	7/11/2001	D688	
+Dataram	DTM60158(60158Z)(M)	MT48LC16M8A2TG-75 rev E	Micron	40484 rev A	7/12/2001	D696	
#+PNY	7216ZHSTM4G13TWI-PH0	HYB39S128800CT-7.5 rev C	Infineon	40000494 rev A	8/7/2001	C183	
#+Aved Memory Products	AMP377P1723AT2-C7B/MI	MT48LC16M8A2TG-7E rev A	Micron	105399 rev B	8/9/2001	D002	

?? Samsung parts are available under both part numbers

# Low Profile part.

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

## *L440GX+ Server Platform*

### **Registered, ECC, 100MHz SDRAM DIMM Modules 256MB Sizes (32Mx72)**

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+Dataram	DTM60087	HY57V654020ATC-10P	Hyundai	40455	1/13/99	A183	
+Viking	3D32722R4SN3-3226	KM44S16030BT-GL	Samsung	9811610	1/24/99	A182	EOL
FUJITSU	~PDC32RV7244H-102TPI				2/7/99		
+Dataram	DTM60087	HYB39S64400AT-8	Siemens	40455	2/10/99	A218	
??SAMSUNG	(Old #) KMM377S3323T-GL (New #) M377S3323MT0-C1L00				2/10/99		
Memory & Testing Inc.	MS32M72RB-T10B	GM72V66441CT7J	LG	STM72RB	4/11/99	A297	EOL
Corsair	CM744S256-GX/T	TC59S6404BFT-80	Toshiba	50-00092A	4/30/99	A273	EOL
Centon Electronics	CINT256M/RP100S	V54C365404VBT8PC	Mosel-Vitellic	CPCB-00401	5/14/99	A343	
Silicon Tech	SL72R4G32M4H-A10AV	TC59S6404BFT-80	Toshiba	00734	5/15/99	A347	
Simple Tech	STI7232118IRD2-10AVG	TC59S6404BFT-80	Toshiba	00734	5/15/99	A344	
Kentron	KT3272SRN0R06	HY57V654020ATC-10S	Hyundai	3272SRN	5/27/99	A364	
Advantage Memory	SD3272-32X4-81VRS4	48LC16M4A2-8E	Micron	~A5208G	6/3/99	A365	EOL
+Dataram	DTM60087	MT48LC16M4A2TG-8E	Micron	40455	6/10/99	A390	
ATP Electronics	AMR32V72J4S4GH	KM44S32030T-GH	Samsung	SR168J04V	8/13/99	A423	
Toshiba	THMY7232F0EG-80				10/11/99		
Kingston	~KVR100X72RC3/256-IS	KM44S32030T-GL 852	Samsung	2022146-001 B00	10/22/99	A546	
Corsair	CM766S256-GX/S	KM44S32030T-GL	Samsung	50-0096	10/23/99	A509	EOL
ATP Electronics	AMR32V72J4S4G8S	KM44S32030T-G8	Samsung	SR168J04V1 / 1	10/29/99	A539	
Kingston	~KVR100X72RC2/256-IS	TC59SM704FT-80	Toshiba	2022146-001-b00	11/5/99	A566	
ATP Electronics	AMR32V72F8S4GLS	KM48S16030T-GL / 1	Samsung	SR168F08V1	11/12/99	A549	
Unigen Corporation	UG532S7544JG-PH	TC59SM704FT-80	Toshiba	RAWCARD-B	11/12/99	A554	
ATP Electronics	AMR32V72J4S4G8T	TC59SM704FT-80	Toshiba	SR168J04V rev 1.0	11/19/99	A580	
+Dataram	DTM60087	TC59S6404BFT-80	Toshiba	40455 rev B	11/25/99	A584	
+Viking	INT25601	UPD45128441G5-A10 \ A	NEC	9001690G	11/25/99	A559	
+Dataram	DTM60122	MT48LC32M4A2TG-8E	Micron	40455 rev B	12/3/99	A597	
+Dataram	DTM60122	TC59SM704FT-80	Toshiba	40455 rev B	12/3/99	A598	
Ventura Technology Group	S26RSJ12NV	D45128841-G5	NEC	PCB 002A rev A	12/10/99	A621	EOL
+Viking	INT25604	TC59SM704FT-80 \ A	Toshiba	9001690G	12/10/99	A565	

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**Registered, ECC, 100MHz SDRAM DIMM Modules**  
**256MB Sizes (32Mx72).....Continued**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
Corsair	CM764S256-GX2/T	TC59SM708FT-80	Toshiba	50-00099A	12/24/99	A628	
MICRON	MT18LSDT3272G-10EB1				12/29/99		
Virtium Technology Inc	VM375S3320-GL	TC59SM704FT-80	Toshiba	168-327201 rev A	1/6/00	A631	
+Viking	INT25603	KM44S32030T-GL / A	Samsung	9001690G	1/26/00	A562	
Virtium Technology Inc	VM375S3320-GL	KM44S32030T-GL	Samsung	168-327201A	2/26/00	A698	
Apacer	71.84325.412	MT48LC16M8A2TG-8E	Micron	48.16063.012 rev 2	3/4/00	A774	
Admor Memory LLC	ADIN256-L440GX	D45128841G5-A10-9JF die A	Nec	16-25600A rev A	4/2/00	A879	
+Dane Elec	DP100R72322E	D45128841G5-A75-9JF	NEC	16-25600A rev A	4/19/00	A829	
+Dataram	DTM60287(60087Y)	HY57V1298020TC-10P	Hyundai	40454 rev C	5/13/00	A929	
Virtium Technology Inc	VM375S3323D-GL	KM48S16030AT-GL rev A	Samsung	16-22540A rev A	5/20/00	B097	
Silicon Tech	INT72R8E32M4H-A10CV	D45128841G5-A80-9JF	NEC	668 rev A	5/30/00	B109	
Simple Tech	SINT7232118ARD2-10CVG	D45128841G5-A80-9JF	NEC	668 rev A	5/30/00	B110	
Simmtron Technology	DT3272V92RSLP	K4S560832A-TC1L000	Samsung	LE32872R	6/1/00	B146	
ATP Electronics	AR32V72J4S4GHSB	K4S280432B-TC1H	Samsung	SR168J04V rev 1	6/1/00	B089	
Simmtron Technology	DT3272V92RSLP	LES32808TA-8X	Legacy	LE32872R rev A	6/21/00	B209	
+Dataram	DTM60122	HY57V1294020TC-10P	Hyundai	40455 rev B	7/17/00	B197	
+Dane-Elec	DP100R072322E-2	D45128841G5-A80	NEC	16-25600B rev B	7/23/00	B327	
+Dane-Elec	DP100R072323E	D45128841G5-A80-9JF	NEC	16-25600B rev B	7/26/00	B332	
Kingston	KVR100X72RC2/256-IS	TC59SM704FT-80	Toshiba	2022146-001 rev B00	8/25/00	B408	
+Dane-Elec	DP100R072323E	D45128841G5-A80-9JF	NEC	16-25600B rev B	8/30/00	B436	
Think Computer Products Inc.	TMINL440GX-256R	MT48LC16M8A2-8E rev B	Micron	KO-6178	9/7/00	B468	
+Dane-Elec	DP100R072322E	D45128841G5-A80-9JF	NEC	16-25600B rev B	9/26/00	B443	
+Dane-Elec	DP100R072322E	K4S280832B-TC1H	Samsung	16-25600B rev. B	10/12/00	B569	
+Dane-Elec	DP100R072322E	TC59SM708FT-80	Toshiba	16-25600B rev B	10/30/00	B686	
Corsair	CM766S256-GX/S	K4S280432B-TC1L rev. B	Samsung	50-00096 rev. A	11/01/00	B698	
Kingston	KVR100X72RC2/256-IS	K4S280432A-TC1H	Samsung	2022146-001	11/02/00	B719	
+Dane-Elec	DP100R072323E	TC59SM708FT-80	Toshiba	16-25600B rev B	11/7/00	B691	
+Dane-Elec	DP100R072322E	HYB39S128800CT-8	Infineon	16-25600B rev B	1/15/01	B949	
+Dane-Elec	DP100R072323E	HYB39S128800CT-8	Infineon	16-25600B rev B	1/15/01	B957	
GoldenRAM	7550230-GR	MT48LC32M4A2TG-75 Rev.B	Micron	1030099-001B rev B	1/26/01	B661	
+Viking	PE32721R4SN3-UN01	UPD45128441G5-A80	NEC	9001603	1/29/01	C260	
+Aved Memory Products	AMP377P3323BT2-C1H/S	K4S280832B-TC1H rev B	Samsung	105352 rev B	2/12/01	C396	

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**Registered, ECC, 100MHz SDRAM DIMM Modules**  
**256MB Sizes (32Mx72)..... Continued**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Aved Memory Products	AMP377P3323AT2-C1H/H	HY57V28820AT-P rev A	Hyundai	105352 rev B	2/12/01	C402	
# +Dataram	DTM60171 (60171Z)	K4S560832B-TC1H REV. B	Samsung	40506 REV. A2	2/19/01	C213	
+Dataram	DTM60287 (60087Y)	MT48LC16M8A2TG-75 REV. B	Micron	40454 REV. C	2/27/01	C296	
+Dataram	DTM60171 (60171Z)	HM5225805BTT-A6 REV. B	Hitachi	40506 rev A	3/7/01	C220	
+Dataram	DTM60122 (60122Z)	MT48LC32M4A2TG-75 Rev. B	Micron	40455 rev B	4/10/01	C750	
+Dane-Elec	DP100-072323E	D45128841G5-A80-9JF	NEC	PC16872 A3 rev B	4/12/01	C729	
+Aved Memory Products	AMP377P3323AT2-C1H/MV	V54C3128804VAT-7 rev. A	Mosel-Vitellic	105352 rev B	4/14/01	C504	
+Aved Memory Products	AMP377P3323AT2-C1H/MI	MT48LC16M8A2TG-7E rev A	Micron	105352 rev B	5/11/01	D065	
+Dataram	DTM60189(M)(60189Z)	MT48LC16M8A2TG-75 rev E	Micron	40532 rev B	6/11/01	C901	
+Dataram	~DTM60087Y (Old Part# DTM60287(60087Y)(M))	MT48LC16M8A2TG-75 rev E	Micron	40054 rev C	6/26/01	D633	
+Dataram	DTM60122 60122Z (M)	MT48LC32M4A2TG-75 rev E	Micron	40455 rev B	7/8/2001	D879	

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
HITACHI	HB52RF329E2-75F				8/3/00		
SAMSUNG	M390S3320BT1-C75				6/25/00		
Silicon Tech	INT72R8E32M4H-A75AV	K4S280832C-TC75	Samsung	814	1/25/01	C190	
Simple Tech	SINT7232118RD2-75AVG	K4S280832C-TC75	Samsung	814	1/25/01	C194	
+Dataram	DTM60125	MT48LC32M4A2TG-75 rev B	Micron	40481 rev A	2/14/01	C473	
+Aved Memory Products	AMP377P3323AT2-C75/H	HY57V28820AT-H rev A	Hyundai	105352 rev B	2/19/01	C483	
Samsung	M390S3320CT1-C75				3/12/01		
+Aved Memory Products	AMP377P3253BTE-C75/S	K4S560832B-TC75 REV.B	Samsung	105399 rev B	3/8/01	C289	
+Dane-Elec	DP133R072323E	HYB39S128800CT-7.5 rev B	Infineon	16-25600B rev B	3/9/01	C892	
+Viking	INT25624	HY57V28820AT-H rev. A	Hyundai	9001742 rev A	3/27/01	C459	
Avant Technology	TNV7232837A3EE0	MT48LC32M4A2 REV. B	Micron	50135501 rev A	4/6/01	C835	
+PNY	7232ZHSTM4G24TWR-PK0	TC59SM708AFT-75 REV. A	Toshiba	40000476 rev B	4/16/01	C130	
+GoldenRAM	7550030-GR	MT48LC16M8A2-7.5	Micron	1030238-001A rev A	4/12/01	C981	
+Aved Memory Products	AMP377P3323AT2-C75/MV	V54C3128804VAT-7 rev. A	Mosel-Vitellic	105352 Rev.B	4/19/01	C514	
+Dane-Elec	DP133R072323IL	K4S560832B-TC75	Samsung	SRBF 2568 rev A	4/13/01	C521	
# +ATP Electronics	AR32V72N4S4GAS	K4S280432A-TC75 rev A	Samsung	SR168N04V rev 2	5/3/01	D054	
+Aved Memory Products	AMP377P3323BT2-C75/S	K4S280832B-TC75	Samsung	105352 rev B	5/22/01	D369	
#+Dataram	DTM60172(60172Z)(H)	HM5225805BTT-75 rev B	Hitachi	40506 rev A	7/25/2001	D948	
+Dataram	DTM60125(60125Z)(M)	MT48LC32M4A2TG-75 rev E	Micron	40481 rev A	8/9/2001	D646	
#+Dane-Elec	DP133R072323IL	HYB39S256800CT-7.5	Infineon	DE082030	08/29/01	E232	

#+Dane-Elec	DP133R072323IL	K4S560832B-TC75	Samsung	DE082030	08/30/01	E216	
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**Registered, ECC, 133MHz SDRAM DIMM Modules  
256MB Sizes (32Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
#+ATP Electronics	AR32V72N4S4GAS	K4S280432C-TC75 rev C	Samsung	SR168N04V rev 2	6/6/01	D172	
+ATP Electronics	AMR32V72F8S4GAS	K4S280832C-TC75 rev C	Samsung	SR168F08V rev 1	6/6/01	D603	
ATP Electronics	AMR32V72J4S4GAS	K4S280432C-TC75 rev C	Samsung	SR168J 04V rev 1	6/12/01	D587	
#Dataram	DTM60188(60188Z)(I)	HYB39S128400CT-7.5 rev C	Infineon	40506 rev A	6/22/01	C908	
#Dataram	DTM60188(60188Z)(M)	MT48LC32M4A2TG-75 rev B	Micron	40506 rev A	6/18/01	C914	
+Aved Memory Products	AMP377P3323AT2-C7B/MI	MT48LC16M8A2TG-7E rev A	Micron	105352 rev B	6/25/01	C950	
+PNY	7232ZHSTM4G24TWR-PH0	HYB39S128800CT-7.5 rev C	Infineon	40000476 rev B	7/28/01	C116	
+#Dataram	DTM60188 (60188) (M)	MT48LC32M4A2TG-75 rev E	Micron	40506 rev A	08/17/01	E003	
+#Aved Memory Products	AMP377P3253ATE-C75/MV	V54C3256804VAT-7 rev A	Mosel-Vitellic	105399 rev B	9/26/01	E662	
+Aved Memory Products	AMP377P3323DT2-C75/S	K4S280832D-TC75 rev D	Samsung	105352 rev B	10/24/01	E698	
# +Dataram	DTM60172 (60172Z)	MT48LC32M8A2TG-75 rev A	Micron	40506 rev A	11/29/01	F626	
+SMART Modular Technologies	SM572324574E03R	K4S280432D-TC75	Samsung	P51G168NEBSIB33 rev B	2/19/02	H122	

# Low Profile part.

+ This vendor is part of the CMTL Gold or Advance 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.



## *L440GX+ Server Platform*

### **Registered, ECC, 100MHz SDRAM DIMM Modules 512MB Sizes (64Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
Corsair	CM744S512-GX/S	KM44S32030T-GL	Samsung	50-00092 / A	10/15/99	A501	EOL
Corsair	CM754S512-GX/S	KM44S32030T-GL	Samsung	50-0091 rev A	11/19/99	A581	EOL
+Dataram	DTM60091	TC59SM704FT-80	Toshiba	40455	4/27/99	A327	
Kentron	KT6472SRN0R	KM44S32030T-GL	Siemens	3272SRN	7/27/99	A430	
??SAMSUNG	(Old #) KMM377S6427T1-GL (New #) M377S6427MT1-C1L00				2/10/99		
??SAMSUNG	~(Old #) KMM377S6453AT-GH (New #) M377S6453AT0-C1H00				11/13/99		
Silicon Tech	SL72R4J64M4H-A10AV	TC59SM704FT-80	Toshiba	10000-00734-211	4/26/99	A325	
Simple Tech	STI7264118IRD2-10AVG	TC59SM704FT-80	Toshiba	10000-00734-211	4/29/99	A323	
Toshiba	THMY726EOLEG-80US				10/27/99		
+Viking	INT51201	HY57V1294020TC-10S	Hyundai	(1)9923716A- (2)9923717-23	8/25/99	A442	
+Viking	INT51201	HY57V1294020TC-10S	Hyundai	(1) 9923715AG (2) 9923716-23	10/8/99	A479	
+Viking	INT51204	UPD45128441G5A10	NEC	9923715.9923716 rev A	12/17/99	A526	
Infineon	++HYS72V64200GR-8B				12/17/99		
??Samsung	++ (Old #)KMM377S6453AT-GH (New #) M377S6453ATO-C1H00				01/27/00		
??Samsung	++ (Old #)KMM377S6450AT3-GH (New #) M377S6450AT3-C1H00				01/27/00		
Infineon	++HYS72V64200GR-8A				01/27/00		
ATP Electronics	AMR64V72J4SDGHS	KM44S32030BT-GH die B	Samsung	SR168J04V1 rev 1.0	2/19/00	A696	
Kingston	~KVR100X72RC3/512-IS	12350-01	Staktek	202224-001	3/4/00	A659	
+Viking	INT51202	KM44S32030T-GL	Samsung	9923715A.992371 6 rev A	3/4/00	A807	EOL
GoldenRAM	L440GX/512REC-GR	TC59SM704FT-80	Toshiba	1030099-001 rev B	4/2/00	A692	
+Dataram	DTM60091	KM44S32030BT-GL	Samsung	40455 rev B	4/27/00	A1000	
Virtium Technology Inc	VM375S6420D/S-GL	KM44S32030AT-GL	Samsung	16-22540A/16- 22541A	5/13/00	B039	
+Dataram	DTM60091	MT48LC32M4A2TG-8E	Micron	40455 rev B	6/1/00	B092	
+Dataram	DTM60091	HY57V1294020TC-10S	Hyundai	40455 rev B	6/13/00	B174	
Advantage Memory	SD6472-32X4S-81VRS4	KM44S32030T-GL	Samsung	A5208 rev A	6/14/00	B074	
+~Viking	INT51204 And PC10064X72RCL3-IA	UPD45128441G5-A10- 9JF	NEC	9923171A/992371 6A/9923715C rev A-C	7/3/00	B201	
Simple Tech	SINT7264218RD2- 10CVG	HYB39S256800AT-8	Infineon	814 rev A	7/3/00	B226	
Silicon Tech	INT72R8F64M8H-A10CV	HYB39S256800AT-8	Infineon	814 rev A	7/3/00	B227	

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***L440GX+ Server Platform***  
**Registered, ECC, 100MHz SDRAM DIMM Modules**  
**512MB Sizes (64Mx72).....(Continued)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+~Viking	INT51204	UPD45128441G5-A10-9JF	NEC	9923171A/9923716A/9923715C rev A-C	7/3/00	B201	
Simple Tech	SINT7264218RD2-10CVG	HYB39S256800AT-8	Infineon	814 rev A	7/3/00	B226	
Silicon Tech	INT72R8F64M8H-A10CV	HYB39S256800AT-8	Infineon	814 rev A	7/3/00	B227	
Kingston	KVR100X72RC3/512-IS	HYB39S256400AT-8	Infineon	2022254-001 rev A00	7/5/00	B228	
ATP Electronics	AMR64V72G4S4GAS	K4S280432B-TC75	Samsung	~SR168G64V rev 1298	7/20/00	B232	
ATP Electronics	AR64V72C4S8GLS	K4S560432A-TC1L	Samsung	SR168C04V rev 1	7/27/00	B285	
Infineon Technologies	HYS72V64200GR-8C2	HYB39S256400CT-8 rev C	Infineon	E53863-X30	8/10/00	B323	
Apacer	71.95325.112	HYB39S256800AT-8	Infineon	48.16063.002	8/14/00	B359	
Corsair	CM764S512-100/S	K4S560832A-TC1H rev A	Samsung	50-00099 rev A	8/29/00	B451	
+Dane-Elec	DP100R072643I-2	HYB39S256800AT-8A	Infineon	16-25600B rev B	8/25/00	B432	
+Dataram	DTM60291(60163Z)	HYB39S256800T-8A	Infineon	40454C rev. C	9/7/00	B424	
Viking	INT51208	0312404CT3 rev. A	IBM	9923715C rev. C/9923716A rev. A/9923717A rev.A	9/15/00	B454	
ATP Electronics	AR64V72C4S4GHS	K4S560432A-TC1H die A	Samsung	SR168C04V rev 1	10/2/00	B560	
Corsair	CM764S512-100/S	K4S560832A-TC1L rev. A	Samsung	50-00099 rev. A	10/2/00	B572	
Centon Electronics	CINT512M/RP100S	MT48LC32M4A2TG-8E	Micron	CPCB-00401-G rev C	10/10/00	B599	
Think Computer Products Inc.	TMINL440GX+-512	0325804CT3A	IBM	KO-6187 rev A	10/26/00	B672	
+Dane-Elec	DP100R072642I	HYB39S256800AT-8	Infineon	16-25600B rev. B	11/01/00	B683	
ATP Electronics	AMR64V72F8S8GLS	K4S560832A-TC1L	Samsung	SR168F08V rev1 99 Aug	11/13/00	B765	
Centon Electronics	CINT512M/RP100S	GM72V28441AT8DR	Goldstar	CPCB-00401-G rev C	11/20/00	B727	
+Dataram	DTM60292(60161Z)	K4S560832B-TC1H rev B	Samsung	40454 rev C	11/20/00	B397	
+Dataram	DTM60291(60163Z)	K4S560832A-TCIL rev A	Samsung	40454 rev C	12/13/00	B813	
Simple Tech	SINT7264118IRD2-10DVG	K4S280432C-TC1H	Samsung	734	12/21/00	B940	
+Aved Memory Products	AMP377P6453BT2-C1H/S	K4S560832B-TC1H000	Samsung	1053352 rev 2	1/8/01	B906	
Corsair	CM764S512-100/S	K4S560832B-TC1L	Samsung	50-00099 REV. A-RV1	1/13/01	C090	
+Dataram	DTM60175 (60175Z)	HM5225805BTT-A6 REV. B	Hitachi	40511 rev A	3/9/01	C206	
+Dataram	DTM60164 (60164Z)	MT48LC32M4AZFC-8E	Micron	40505 rev A	3/9/01	C758	
+Dataram	DTM60091(60091Z)	HY57V28420AT-S REV. A	Hyundai	40455 rev B	4/26/01	C858	
+Dataram	DTM60291(60163Z)	HYB39S256800CT-8 rev C	Infineon	40454 rev C	5/18/01	D010	

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
ATP Electronics	AR64V72N4S8GAS	K4S560432A-TC75 rev A	Samsung	SR168N04V rev 2	12/21/00	B932	
Centon Electronics	CIN512M/RP100S	D45128441G5-A80-9JF	NEC	CPCB-00401 rev C	1/2/01	C032	
Simple Tech	SINT7264118IRD2-75AVG	K4S280432C-TC75	Samsung	758	1/18/01	B970	
Silicon Tech	INT72R4J64M4H-A75AV	K4S280432C-TC75	Samsung	758	1/18/01	B971	
+Dataram	DTM60133(60133Z)	HM5225405BTT-75 rev A	Hitachi	40481 rev a2	1/29/01	C027	
+Aved Memory Products	AMP377P6453BT2-C75/S	K4S560832B-TC75	Samsung	105352 REV. B	1/30/01	C096	
PNY	7264WHSTM8G24TWR-PH0	HYB39S256800CT-7.5 REV. C	Infineon	40000476 REV. B	2/15/01	C162	
+Dataram	DTM60133(60133Z)	K4S560432A-TC75 rev A	Samsung	40481 rev A2	2/16/01	C016	
+Aved Memory Products	AMP377P6450BT3-C75/S	K4S560432B-TC75 REV. B	Samsung	105349 REV. C	2/27/01	C273	
Samsung	M390S6450BT1-C75				3/12/01		
+Dane-Elec	DP133R072643H	K4S560432A-TC75	Samsung	168-327201C rev C	3/26/01	C932	
+Viking	INT51213	UPD45128441G5-A75-9JF	NEC	9923715C/9923716A/9923717A rev C-A	3/29/01	C466	
Avant Technology	TNV7264838A3EE0	HY57V56420T-H	Hyundai	50135501 rev A	4/6/01	C837	
#+ATP Electronics	AR64V72N4S8GAS	K4S560432B-TC75 rev B	Samsung	SR168N04V rev 2	5/31/01	D033	
#+Dataram	DTM60176(60176Z)(H)	HM5225805BTT-75 rev B	Hitachi	40511 rev A	5/26/01	C234	
#+Dataram	DTM60175(60175Z)(I)	HYB39S256800CT-8 rev C	Infineon	40511 rev A	6/18/01	C210	
Simple Tech	ST72R4E64-A75A	UPD45128441G5-A75	NEC	758	6/21/01	D094	
Avant Technology	TNV7264E38A2EE0	NT5SV64M4AT-7K	Nanya	50135501 rev A	6/30/2001	D715	
+ATP Electronics	AMR64V72J4S8GAS	K4S560432B-TC75 rev B	Samsung	SR168J 04V rev 1	7/18/2001	D595	
+Dataram	DTM60116(60116Z)(M)	MT48LC32M4A2TG-75 rev E	Micron	40481 rev A	7/24/2001	D717	
+PNY	7264WHSTM8G24TWR-PK0	TC59SM808BFT-75 rev B	Toshiba	40000476 rev B	08/30/01	C146	
#+Dane-Elec	DP133R072643IL	K4S560832B-TC75	Samsung	DE082030	9/7/01	E224	
+Aved Memory Products	AMP377P6453AT2-C75/MV	V54C3256804VAT-7 rev B	Mosel-Vitellic	105352 rev A	9/26/01	E654	

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

<b>Manufacturer</b>	<b>Part Number</b>	<b>DRAM Part Number</b>	<b>DRAM Vendor</b>	<b>PCB Part Number</b>	<b>Date</b>	<b>CMTL Test #</b>	<b>EOL</b>
+SMART Modular Technologies	SM6472SR301-ICA	K4S560432C-TC75 rev C	Samsung	P51G168NEBSIBP 3	2/17/02	H474	
+#Dataram	DTM60194C (Old Part# DTM60194(E))	HYB39S256400CT-75 rev C	Infineon	40551 rev A	3/28/02	H921	

# Low Profile part.

~ Part number change/correction.

?Samsung parts are available under both part numbers.

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

++This part has 256Mb DRAM Parts and can only be used with PBA704293-503/AA721242-008 boards or latter and BIOS 11 or latter. (Earlier boards & BIOS will not support 256Mb DRAM technology)

**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.

## L440GX+ Server Platform

### Registered, ECC, 100MHz SDRAM DIMM Modules 1GB Sizes (128M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
+Dane-Elec	DP100R072282H	HY39S256400AT-8	Infineon	16-25600B rev B	9/11/00	B447	
+Dane-Elec	DP100R072283H	HYB39S256400AT-8	Infineon	16-25600B rev. B	9/7/00	B449	
+Viking	4D128722R8SN3-UN01	K4S560432A-TC1H	Samsung	9923717A/9923716A/9923715C REV.A-C	2/23/01	C249	
+Aved Memory Products	AMP377P2857BT1-C1H/S	K4S560432B-TC1H000 rev B	Samsung	105503 rev A	3/27/01	B914	

### Registered, ECC, 133MHz SDRAM DIMM Modules 1GB Sizes (128M x 72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CMTL Test #	EOL
ATP Electronics	AR128V72N4SSGAS	K4S560432A-TC75 rev A	Samsung	SR168N04V rev 2	1/5/01	B920	
+Dataram	DTM60126(60126Z)	HM5225405BTT-75 rev B	Hitachi	40481 rev A2	2/2/01	C051	
+Dataram	DTM60126(60126Z)	K4S560432B-TC75 rev B	Samsung	40481 rev A2	2/22/01	C055	
+ATP Electronics	AR128V72J4SSGAS	K4S560432B-TC75 rev B	Samsung	SR168J04V rev 1	6/1/01	D040	
+ATP Electronics	AR128V72N4SMGAS	K4S560432B-TC75 rev B	Samsung	SR168N04V rev 2	6/6/01	D148	
#ATP Electronics	AR128V72N4SSGAS	K4S560432B-TC75 rev B	Samsung	SR168N04V rev 2	6/12/01	D026	
#Simple Tech	ST72R4L128-A75A	K4S560432B-TC75	Samsung	930	6/21/01	D870	
ATP Electronics	AR128V72J4SMGAS	K4S560432B-TC75 rev B	Samsung	SR168J 04V rev 1	7/2/2001	D140	
+Dataram	DTM60192 (60192Z)	HYB39S256400CT-75 rev C	Infineon	40481 rev A	11/20/01	F633	
+#Dataram	DTM60193A (Old Part# DTM60193(M))	MT48LC64M4A2FB-75 rev B	Micron	40554 rev A	3/15/2002	H838	

Note: L440GX Server board only supports up to 2GB's of memory. When using 1G sticks you can only install up to two modules.

# Low Profile part.

~ Part number change/correction.

??Samsung parts are available under both part numbers.

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

++This part has 256Mb DRAM Parts and can only be used with PBA704293-503/AA721242-008 boards or latter and BIOS 11 or latter. (Earlier boards & BIOS will not support 256Mb DRAM technology)

**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.

# Distributor Information

## ASIA

Vendor Name	Distributor Name	Contact Name	PhoneNumber	Fax Number/E-Mail
ATP Electronics, Inc		Florence Hsieh	Tel 408-468-6031	Fax 408-732-5055 <a href="mailto:sales@atpusa.com">sales@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
ATP Electronics, Inc Taiwan		Suzan Chang	Tel 011-886-2-2718- 8405-201 Mobil 0912201378	Fax 886-2-27188253 <a href="mailto:suzanc@atpusa.com">suzanc@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
Centon Electronics		John Hardacre	800-234-9292	
Corsair (USA)		Richard Hashim	01-510-657-8747 ext. 204	<a href="http://www.corsairmicro.com/sales.htm">http://www.corsairmicro.com/sales.htm</a>
Dataram	Avnet, Inc.		800-426-7999	
Dataram	Arrow ICP		888-427-2250	
Dataram	Pioneer Standard Electronics/Keylink Systems		800-539-5465	
Dataram	Wyle Systems		800-318-9953	
Samsung				<a href="http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm">http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm</a>
Simmtron Tech.	Direct Sales		858-457-3421 ext.100	858-457-0164
Silicon Tech Inc.				<a href="http://www.simpletech.com/about/buyprod.html">http://www.simpletech.com/about/buyprod.html</a>
SMART Modular Technologies		Chuck Lantz	888-496-8135 ext. 125	<a href="mailto:chuck.lantz@smartm.com">chuck.lantz@smartm.com</a> <a href="http://www.smartm.com">http://www.smartm.com</a>
Southland Microsystems				<a href="http://www.southlandmicro.com/index2.html">http://www.southlandmicro.com/index2.html</a>
Silicon Tech				<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Unigen Corporation	Taiwan Branch Office		886-2-2698-0818	<a href="mailto:unigen@ms15.hinet.net">unigen@ms15.hinet.net</a>
Viking Components			++353.1.466.0090	<a href="http://www.viking.ie/">http://www.viking.ie/</a>

# Europe

Vendor Name	Distributor Name	Contact Name	PhoneNumber	Fax Number/E-Mail
Advantage Memory	AMC Europe LTD	Demetri Morosan Neil Cameron Patrick van Uden		<a href="mailto:dfm@advanatagememory.com">dfm@advanatagememory.com</a> <a href="mailto:Nca@advantagememory.com">Nca@advantagememory.com</a> <a href="mailto:Pvu@advantagememory.com">Pvu@advantagememory.com</a>
ATP Electronics, Inc		Florence Hsieh	Tel 408-468-6031	Fax 408-732-5055 <a href="mailto:sales@atpusa.com">sales@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
ATP Electronics, Inc Taiwan		Suzan Chang	Tel 011-886-2-2718- 8405-201 Mobil 0912201378	Fax 886-2-27188253 <a href="mailto:suzanc@atpusa.com">suzanc@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
Centon Electronics		John Hardacre	800-234-9292	
Corsair (USA)		Richard Hashim	01-510-657-8747 ext. 204	<a href="http://www.corsairmicro.com/sales.htm">http://www.corsairmicro.com/sales.htm</a>
Dane-Elec			(353) 91 55 30 00	: <a href="mailto:sales@dane-elec.ie">sales@dane-elec.ie</a>
Dataram	Avnet, Inc.		800-426-7999	
Dataram	Arrow ICP		888-427-2250	
Dataram	Pioneer Standard Electronics/Keylink Systems		800-539-5465	
Dataram	Wyle Systems		800-318-9953	
Hyundai		tkhan	+82-2-746-6639	<a href="mailto:T.K.Han@hei.co.kr">T.K.Han@hei.co.kr</a>
Infineon				<a href="http://www.infineon.com/business/distribut/index.htm">http://www.infineon.com/business/distribut/index.htm</a>
Kingston				<a href="http://www.kingston.com/partners/default.asp">http://www.kingston.com/partners/default.asp</a>
Samsung				<a href="http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm">http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm</a>
Silicon Tech Inc.	Microtronica-Sweden	Jorgen Carlsson	00 46 86 807800	<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Silicon Tech Inc.	Microtronica-Denmark	Brigitte Kraglund	00 45 44 508100	<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Silicon Tech Inc.	Eurodis Bytech	Carol Boycott	00 44 1256 379312	<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Silicon Tech Inc.	Eurocomposant	Julie Fichot	00 33 130649515	<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Silicon Tech Inc.	NBN System Components	Adalbert Reidle	00 49 815292360	<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Simmtron Tech.	Direct Sales		858-457-3421 ext.100	858-457-0164
SMART Modular Technologies		Chuck Lantz	888-496-8135 ext. 125	<a href="mailto:chuck.lantz@smartm.com">chuck.lantz@smartm.com</a> <a href="http://www.smartm.com">http://www.smartm.com</a>

# Japan

Vendor Name	Distributor Name	Contact Name	PhoneNumber	Fax Number/E-Mail
ATP Electronics, Inc		Florence Hsieh	Tel 408-468-6031	Fax 408-732-5055 <a href="mailto:sales@atpusa.com">sales@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
ATP Electronics, Inc Taiwan		Suzan Chang	Tel 011-886-2- 2718-8405-201 Mobil 0912201378	Fax 886-2-27188253 <a href="mailto:suzanc@atpusa.com">suzanc@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
Centon Electronics		John Hardacre	800-234-9292	
Corsair (USA)		Richard Hashim	01-510-657-8747 ext. 204	<a href="http://www.corsairmicro.com/sales.htm">http://www.corsairmicro.com/sales.htm</a>
Dataram	Avnet, Inc.		800-426-7999	
Dataram	Arrow ICP		888-427-2250	
Dataram	Pioneer Standard Electronics/Keylink Systems		800-539-5465	
Dataram	Wyle Systems		800-318-9953	
Infineon				<a href="http://www.infineon.com/business/distribut/index.htm">http://www.infineon.com/business/distribut/index.htm</a>
Kingston				<a href="http://www.kingston.com/partners/default.asp">http://www.kingston.com/partners/default.asp</a>
Samsung				<a href="http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm">http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm</a>
Silicon Tech Inc.				<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Simmtron Tech.	Direct Sales		858-457-3421 ext.100	858-457-0164
Simple Tech				<a href="http://www.simpletech.com/about/buyprod.html">http://www.simpletech.com/about/buyprod.html</a>
SMART Modular Technologies		Chuck Lantz	888-496-8135 ext. 125	<a href="mailto:chuck.lantz@smartm.com">chuck.lantz@smartm.com</a> <a href="http://www.smartm.com">http://www.smartm.com</a>
Southland Microsystems				<a href="http://www.southlandmicro.com/index2.html">http://www.southlandmicro.com/index2.html</a>



## South America

Vendor Name	Distributor Name	Contact Name	PhoneNumber	Fax Number/E-Mail
Advantage Memory	Ingram Micro/ Mexico	Alejandro Macias	011 525.263.6500	
ATP Electronics, Inc		Florence Hsieh	Tel 408-468-6031	Fax 408-732-5055 <a href="mailto:sales@atpusa.com">sales@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
ATP Electronics, Inc Taiwan		Suzan Chang	Tel 011-886-2-2718-8405-201 Mobil 0912201378	Fax 886-2-27188253 <a href="mailto:suzanc@atpusa.com">suzanc@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
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Dataram	Avnet, Inc.		800-426-7999	
Dataram	Arrow ICP		888-427-2250	
Dataram	Pioneer Standard Electronics/Keylink Systems		800-539-5465	
Dataram	Wyle Systems		800-318-9953	
Infineon				<a href="http://www.infineon.com/business/distribut/index.htm">http://www.infineon.com/business/distribut/index.htm</a>
Kingston				<a href="http://www.kingston.com/partners/default.asp">http://www.kingston.com/partners/default.asp</a>
Samsung				<a href="http://www.korea.samsungs.emi.com/top/contactus/contactus_index.htm">http://www.korea.samsungs.emi.com/top/contactus/contactus_index.htm</a>
Silicon Tech Inc.				<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Simple Tech				<a href="http://www.simpletech.com/about/buyprod.html">http://www.simpletech.com/about/buyprod.html</a>
SMART Modular Technologies		Chuck Lantz	888-496-8135 ext. 125	<a href="mailto:chuck.lantz@smartm.com">chuck.lantz@smartm.com</a> <a href="http://www.smartm.com">http://www.smartm.com</a>
Southland Microsystems				<a href="http://www.southlandmicro.com/index2.html">http://www.southlandmicro.com/index2.html</a>
Simmtron Tech.	Direct Sales		858-457-3421 ext.100	858-457-0164

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Vendor Name	Distributor Name	Contact Name	PhoneNumber	Fax Number/E-Mail
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Advantage Memory	Peptron	Patti Hirschey Paul Spenard	800 669-5030	
ATP Electronics, Inc		Florence Hsieh	Tel 408-468-6031	Fax 408-732-5055 <a href="mailto:sales@atpusa.com">sales@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
ATP Electronics, Inc Taiwan		Suzan Chang	Tel 011-886-2-2718-8405-201 Mobil 0912201378	Fax 886-2-27188253 <a href="mailto:suzanc@atpusa.com">suzanc@atpusa.com</a> <a href="http://www.atpusa.com">http://www.atpusa.com</a>
Centon Electronics		John Hardacre	800-234-9292	
Corsair	Synnex Information Technologies	Jack Chen	800-756-9888	<a href="http://www.corsairmicro.com/sales.htm">http://www.corsairmicro.com/sales.htm</a>
Dataram	Avnet, Inc.		800-426-7999	
Dataram	Arrow ICP		888-427-2250	
Dataram	Pioneer Standard Electronics/Keylink Systems		800-539-5465	
Dataram	Wyle Systems		800-318-9953	
GoldenRAM  <a href="http://www.goldenram.com">www.goldenram.com</a>	Direct Sales	Jason M. Barrette  Michael Meyer	800/222-8861 ext. 7546 800/222-8661 ext. 7512	<a href="mailto:jasonb@goldenram.com">jasonb@goldenram.com</a> 949/460-7646 fax <a href="mailto:michaelm@goldenram.com">michaelm@goldenram.com</a> 949/460-7612 fax
Infineon				<a href="http://www.infineon.com/business/distribut/index.htm">http://www.infineon.com/business/distribut/index.htm</a>
Kingston				<a href="http://www.kingston.com/partners/default.asp">http://www.kingston.com/partners/default.asp</a>
Samsung				<a href="http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm">http://www.korea.samsungsemi.com/top/contactus/contactus_index.htm</a>
Silicon Tech Inc.				<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>
Simple Tech				<a href="http://www.simpletech.com/about/buyprod.html">http://www.simpletech.com/about/buyprod.html</a>
Southland Microsystems				<a href="http://www.southlandmicro.com/index2.html">http://www.southlandmicro.com/index2.html</a>
Unigen Corporation	Corporate Headquarters/Sales		1-800- 826-0808 510-668-2088	<a href="mailto:sales_info@unigen.com">sales_info@unigen.com</a>
Viking Components			800.338.2361 949.643.7255	<a href="http://www.vikingcomponents.com/company/offices.html">http://www.vikingcomponents.com/company/offices.html</a>
Simmtron Tech.	Direct Sales		858-457-3421 ext.100	858-457-0164
SMART Modular Technologies		Chuck Lantz	888-496-8135 ext. 125	<a href="mailto:chuck.lantz@smartm.com">chuck.lantz@smartm.com</a> <a href="http://www.smartm.com">http://www.smartm.com</a>

### **CMTL<sup>sm</sup> (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.

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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 boxed Pentium® II Xeon™ processors. This listing is not intended to be all inclusive; it only represents the DIMMs Intel or CMTL<sup>sm</sup> 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 Pentium II 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 L440GX+ 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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