

# **Intel<sup>®</sup> Server Board S3000PT Memory List Test Report Summary**



Revision 25.0  
February 2009

<b>Revision History</b>		
<b>Date</b>	<b>Rev</b>	<b>Modifications</b>
Sept/06	1.0	Initial release.
Oct/06	2.0	Added Buffalo* 512MB parts. Added Smart* 1GB parts. (In shaded area)
Nov/06	3.0	Added Qimonda* and Samsung* 512MB parts. Added Micron* and Qimonda 1GB parts. Added Micron 2GB part. Deleted duplicate part in the wrong section. Updated max memory from 4GB to 8GB. Updated voltage from 2.5 V to 1.8 V. Made changes to Sales Information section. (In shaded area)
Nov/06	4.0	Added Smart, Dataram*, Ventura*, and Kingston* 512MB parts. Added Smart, Buffalo*, Ventura, and Dataram 1GB parts. Added Dataram 2GB part. (In shaded area)
Jan/07	5.0	Added Ventura 512MB part. Added Kingston, Ventura, Samsung, and ATP Electronics 1GB parts. Added Samsung 2GB parts. (In shaded area)
Jan/07	6.0	Added Legacy and Wintec 1GB parts. (In shaded area)
Feb/07	7.0	Added Dataram 512MB part. Added Dataram and ATP Electronics 1GB parts. (In shaded area)
Feb/07	8.0	Added ATP Electronics 512MB part. Added TRS 1GB part. (In shaded area)
Feb/07	9.0	Added TRS 512MB parts. Added Dataram 1GB part and Smart 2GB part. Updated vendor contact information. (In shaded area)
Mar/07	10.0	Added ATP Electronics 2GB part. (In shaded area)
Mar/07	11.0	Updated contact information. Added Smart 512MB part. (In shaded area)
May/07	12.0	Added Qimonda 512MB and 1GB parts. Added Kingston 2GB part. (In shaded area)
May/07	13.0	Additional memory parts added. (In shaded area)
Jun/07	14.0	Additional memory parts added. (In shaded area)
Jul/07	15.0	Additional memory parts added. (In shaded area)
Aug/07	16.0	Additional memory parts added. (In shaded area)
Oct/07	17.0	Updated some contact information. Additional memory parts added. (In shaded area)
Nov/07	18.0	Additional memory parts added. (In shaded area)
Jan/08	19.0	Additional memory parts added. (In shaded area)
Mar/08	20.0	Additional memory parts added. (In shaded area)
Apr/08	21.0	Additional memory parts added. (In shaded area)
May/08	22.0	Additional memory parts added. (In shaded area)
Nov/08	23.0	Additional memory parts added. (In shaded area)
Dec/08	24.0	Additional memory parts added. (In shaded area)
Feb/09	25.0	Additional memory parts added. (In shaded area)

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The Intel® Server Board S3000PT may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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

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## Overview of Memory Testing

The following procedure is used to test memory modules for use in the Intel® Server Board S3000PT. 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)<sup>1</sup>. 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 Server 2003\* Enterprise Edition 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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<sup>1</sup> CMTL is an independent memory testing organization responsible for testing a broad range of memory products. Receiving a "PASS" after being tested by CMTL, means that a product functions correctly and consumers can use it to perform the intended server functions. In order to pass these stringent standards, memory products must maintain the highest manufacturing procedures and pass an exacting battery of tests. Testing is performed with equipment and a procedure as defined by Intel's various functional testing levels.

CMTL contact:

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## Qualified Memory for the Intel® Server Board S3000PT

The memory module on the Intel® Server Board S3000PT has 4 DIMM sockets, which can hold up to 8 GB of unbuffered ECC and non-ECC DDR2-533 or DDR2-667 memory using four 72-bit DIMM modules. The following memory features are supported:

- DDR2-533 and DDR2-667 unbuffered ECC and non-ECC compatible 1.8V modules (in compliance with the DDR JEDEC DIMM Specification).
- DIMMs with capacity of 256 MB, 512 MB, 1 GB and 2 GB. Other DRAM sizes may function correctly but will not be validated.
- Minimum configuration is 256 MB using one 256 MB DIMM.
- Maximum configuration is 8 GB.

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

DDR2-533 Unbuffered SDRAM Module Matrix					
DIMM Capacity	DIMM Organization	SDRAM Density	SDRAM Organization	# SDRAM Devices/rows/Banks	# Address bits rows/Banks/column
256 MB	32M x 72	256Mbit	32M x 8	9/1/4	13/2/10
512 MB	64M x 72	256Mbit	32M x 8	18/2/4	13/2/10
512 MB	64M x 72	512Mbit	64M x 8	9/1/4	14/2/10
1 GB	128M x 72	512Mbit	64M x 8	18/2/4	14/2/10
1 GB	128M x 72	1Gbit	128M x 8	9/1/8	14/3/10
2 GB	256M x 72	1Gbit	128M x 8	18/2/8	14/3/10
DDR2-667 Unbuffered SDRAM Module Matrix					
DIMM Capacity	DIMM Organization	SDRAM Density	SDRAM Organization	# SDRAM Devices/rows/Banks	# Address bits rows/Banks/column
256 MB	32M x 72	256Mbit	32M x 8	9/1/4	13/2/10
512 MB	64M x 72	256Mbit	32M x 8	18/2/4	13/2/10
512 MB	64M x 72	512Mbit	64M x 8	9/1/4	14/2/10
1 GB	128M x 72	512Mbit	64M x 8	18/2/4	14/2/10
1 GB	128M x 72	1Gbit	128M x 8	9/1/8	14/3/10
2 GB	256M x 72	1Gbit	128M x 8	18/2/8	14/3/10

Memory features are detailed in the *Intel® Server Board S3000PT Technical Product Specification* available on-line at <http://support.intel.com/support/motherboards/server/S3000PT>.

The following table lists DIMM devices known to be compatible with the Intel® Server Board S3000PT. 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.***

**Intel<sup>®</sup> Server Board S3000PT**  
**Unbuffered, ECC, DDR2-533 DIMM Modules**  
**512 MB Sizes (64Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Buffalo	D2U533B-ES512MDJ	MT47H64M8B6-37E rev D	Micron	2DUA18F-BA rev B	9/28/06	4	Yes	(64Mx8)*9	
Qimonda	HYS72T64000HU-3.7-A	HYB18T512800 AF-3.7-A	Qimonda			4	Yes	(64Mx8)*9	
Samsung	M391T6553CZ3-CD5	K4T51083QC-ZCD5	Samsung			4	Yes	(64Mx8)*9	
Dataram	DTM63319C	HY5PS12821CF P-Y5 rev C	Hynix	40038A rev A	1/22/07	4	Yes	(64Mx8)*9	
TRS	TRS30281X	HYB18T512800 AF37 rev A	Qimonda	M0544LA1 rev 1	2/23/07	4	Yes	(64Mx8)*9	
TRS	TRS30282X	E5108AG-5C-E rev G	Elpida	M0544LA1 rev 1	2/22/07	4	Yes	(64Mx8)*9	
Dane-Elec	D2D533-072644NG	MT47H64M8B6-37E rev D	Micron	D2U72F rev 1	7/17/07	4	Yes	(64Mx8)*9	
Buffalo	D2U533B-ES512EGJ	E5108AGBG-5C-E rev G	Elpida	2DUA18F-BA na	10/4/07	4	Yes	(64Mx8)*9	

**Unbuffered, ECC, DDR2-667 DIMM Modules**  
**512 MB Sizes (64Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Qimonda	HYS72T64000HU-3S-A	HYB18T512800 AF-3S-A	Qimonda			5	Yes	(64Mx8)*9	
Samsung	M391T6553CZ3-CE6	K4T51083QC-ZCE6	Samsung			5	Yes	(64Mx8)*9	
ATP Electronics	AJ64K72F8BHE6S	K4T51083QE-ZCE6 rev E	Samsung	D2U72F na	2/1/07	5	Yes	(64Mx8)*9	
Smart Modular Technologies	SG647UDR264852ES	GSW64M8XB3IT 5X4GSE rev G	Smart	PG54G240 NUBUB1R F rev A	3/15/07	5	Yes	(64Mx8)*9	
Qimonda	HYS72T64000HU-3S-B	HYB18T512800 BF	Qimonda		5/1/07	5	Yes	(64Mx8)*9	
Dataram	DTM63321D	HY5PS12821CF P-Y5 rev C	Hynix	40038A rev A	4/25/07	5	Yes	(64Mx8)*9	
Legacy Electronics Inc.	B557K4C20FC-30R	K4T51083QC-ZCE6 rev C	Samsung	D2U72F rev C	5/10/07	5	Yes	(64Mx8)*9	
Kingston	KVR667D2E5/512I	NT5TU64M8BE-3C rev B	Nanya	2025320-0F1.A00 na	5/21/07	5	Yes	(64Mx8)*9	
Avant Technology	AVF7264U52E5667F 1-MTDP	MT47H64M8B6-3 rev D	Micron	B62URCA 0.50 na	5/29/07	5	Yes	(64Mx8)*9	
Hynix	HYMP564U72CP8-Y5	HY5PS12821CF P-Y5	Hynix		6/7/07	5	Yes	(64Mx8)*9	
Legacy Electronics Inc.	B557KCE20FC-30R	K4T51083QE-ZCE6 rev E	Samsung	D2U72F rev F	10/25/07	5	Yes	(64Mx8)*9	

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

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

## Intel® Server Board S3000PT

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Buffalo	D2U533B-S512EGJ	E5108AG-5C-E rev G	Elpida	2DUD18F-AA na	9/26/06	4	Yes	(64Mx8)*9	
Dane-Elec	D2D533-064644NG	EDE5108AG-5C-E rev G	Elpida	D2U64D na	7/19/07	4	Yes	(64Mx8)*9	

### Unbuffered, Non-ECC, DDR2-667 DIMM Modules 512 MB Sizes (64Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Smart Modular Technologies	SG647UDR264852-SC	K4T51083QC-ZCE6 rev C	Samsung	M391T6553C Z0-V03 na	10/2/06	5	Yes	(64Mx8)*18	
Dataram	DTM63321C	NT5TU64M8AE-3C rev A	Nanya	40038A rev A	10/26/06	5	Yes	(64Mx8)*18	
Ventura Technology Group	D2-52CD63LV-555	EDE5108AGBG-6E-E rev G	Elpida	D2U72F na	11/6/06	5	Yes	(64Mx8)*18	
Kingston	KVR667D2E5/512I	E5108AGSE(BG)-6E-E rev G	Elpida	2025320.0F1. A00 na	11/7/06	5	Yes	(64Mx8)*18	
Ventura Technology Group	D2-51CD63SV-555	K4T51083QC-ZCE6 rev C	Samsung	D2U72F na	12/22/06	5	Yes	(64Mx8)*18	
Dataram	DTM63389A	HYB18T1G160C2 F-3S rev C2	Qimonda	40104A rev A	11/14/09	5	Yes	64M x 16	

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

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## Intel<sup>®</sup> Server Board S3000PT

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Smart Modular Technologies	SG1287UDR264852 ES	G64M8XB3IT5X4GSE rev A	Smart	PG58G240 NUBUB1RG rev A	9/25/06	5	Yes		
Smart Modular Technologies	SG1287UDR264852 IB	HYB18T512800BF3S rev B	Qimonda	240-7-1 (K0552)	9/27/06	5	Yes		
Micron	MT18HTF12872AY-53EB1	MT47H64M8CB-37E	Micron			4	Yes	(64Mx8)*18	
Qimonda	HYS72T128020HU-3.7-A	HYB18T512800AF-3.7-A	Infineon			4	Yes	(64Mx8)*18	
Buffalo	D2U533B-E1GMDJ	MT47H64M8B6-37E rev D	Micron	2DUZ28F-AA na	10/13/06	4	Yes	(64Mx8)*18	
Samsung	M391T2953CZ3-CD5	K4T51083QC-ZCD5	Samsung		12/1/06	4	Yes	(64Mx8)*18	
Dataram	DTM63306E	HY5PS12821CFP-Y5 rev C	Hynix	40031A rev A	1/18/07	4	Yes	(64Mx8)*18	
TRS	TRS30309X	HYB18T512800AF37 rev A	Qimonda	M0540LA1 rev 1	1/30/07	4	Yes	(64Mx8)*18	
Dane-Elec	D2D533-072284NG	MT47H64M8B6-37E rev D	Micron	D2U72G rev 1	7/16/07	4	Yes	(64Mx8)*18	

### Unbuffered, ECC, DDR2-667 DIMM Modules 1 GB Sizes (128Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Micron	MT18HTF12872AY-667B3	MT47H64M8CB-3	Micron			5	Yes	(64Mx8)*18	
Qimonda	HYS72T128020HU-3S-A	HYB18T512800AF-3S-A	Qimonda			5	Yes	(64Mx8)*18	
Smart Modular Technologies	SG1287UDR264852 -SC	K4T51083QC-ZCE6 rev C	Samsung	M391T2953 CZ0 na	10/4/06	5	Yes	(64Mx8)*18	
Smart Modular Technologies	SG1287UDR264852 SC	K4T51083QC-ZCE6 rev C	Samsung	PG58G240 NUBUB1RG rev A	10/5/06	5	Yes	(64Mx8)*18	
Ventura Technology Group	D2-54CD64LV-555	EDE5108AGBG-6E-E rev G	Elpida	D2U72G na	10/19/06	5	Yes	(64Mx8)*18	
Dataram	DTM63324C	NT5TU64M8AE-3C rev A	Nanya	40031A rev A	11/3/06	5	Yes	(64Mx8)*18	
Kingston	KVR667D2E5/1GI	E5108AGSE(BG)-6E-E rev G	Elpida	2025321-0F1.A00 na	12/1/06	5	Yes	(64Mx8)*18	
ATP Electronics	AJ28K72H8BHE6S	K4T51083QC-ZCE6 rev C	Samsung	SJ240H08K 1 na	12/20/06	5	Yes	(64Mx8)*18	
Ventura Technology Group	D2-54CD64SV-555	K4T51083QC-ZCE6 rev C	Samsung	D2U72G rev 1.0	12/21/06	5	Yes	(64Mx8)*18	
Wintec Industries	39737284	K4T510830C-ZCE6 rev C	Samsung	D2U72G rev G	1/10/07	5	Yes	(64Mx8)*18	
ATP Electronics	AJ28K72G8BHE6S	K4T51083QE-ZCE6 rev E	Samsung	D2U72G V1.0	1/26/07	5	Yes	(64Mx8)*18	
Dataram	DTM63324D	HY5PS12821CFP-Y5 rev C	Hynix	40031A rev A	2/21/07	5	Yes	(64Mx8)*18	

**Unbuffered, ECC, DDR2-667 DIMM Modules  
1 GB Sizes (128Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Qimonda	HYS72T128020HU-3S-B	HYB18T512800BF	Qimonda		5/1/07	5	Yes	(64Mx8)*18	
Dataram	DTM63324E	HY5PS12821CFP-Y5 rev C	Hynix	40082A rev A	5/4/07	5	Yes	(64Mx8)*18	
Kingston	KVR667D2E5/1GI	NT5TU64M8BE-3C rev B	Nanya	2025321-0F1.A00 na	5/18/07	5	Yes	(64Mx8)*18	
Wintec Industries	39C737284E	K4T51083QE-ZCE6 rev E	Samsung	D2U72G rev G	5/23/07	5	Yes	(64Mx8)*18	
Avant Technology	AVF7228U52E5667 F2-MTDP	MT47H64M8B6-3 rev D	Micron	B62URCB na	5/30/07	5	Yes	(64Mx8)*18	
Hynix	HYMP512U72CP8-Y5	HY5PS12821CFP-Y5	Hynix		6/7/07	5	Yes	(64Mx8)*18	
Samsung	M391T2953EZ3-CE6	K4T51083QE-ZCE6	Samsung		1/24/08	5	Yes	(64Mx8)*18	
Smart Modular Technologies	SG1287UDR264852-SE	K4T51083QE-ZCE6 rev E	Samsung	M391T2953 CZ1 na	1/10/08	5	Yes	(64Mx8)*18	
Samsung	M391T2863QZ3-CE6	K4T1G084QQ-HCE6	Samsung	Samsung	4/4/08	5	yes	(128Mx8)*9	
Kingston	KVR667D2E5/1GI	E1108ACBG-8E-E rev C	Elpida	2025320-0F1.00A rev A	10/27/08	5		128M x 8	
Dataram	DTM63391A	HYB18T1G800C2F-3S rev C2	Qimonda	40083A rev A	12/03/08	5		128M x 8	

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

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

## *Intel<sup>®</sup> Server Board S3000PT*

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

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

### *Unbuffered, Non-ECC, DDR2-667 DIMM Modules 1 GB Sizes (128Mx72)*

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Ventura Technology Group	D2-53CD64LV-555	EDE5108AGBG-6E-E rev G	Elpida	D2U72G na	10/25/06	5	Yes	(64Mx8)*18	
Ventura Technology Group	D2-53CD64SV-555	K4T51083QC-ZCE6 rev C	Samsung	D2U72G rev 1.0	12/19/06	5	Yes	(64Mx8)*18	
Legacy Electronics Inc.	B516K4C2AEC-30R	K4T51083QC-ZCE6 rev C	Samsung	LE16D2FG38URE rev A	1/12/07	5	Yes	(64Mx8)*18	

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

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



**Unbuffered, ECC, DDR2-667 DIMM Modules  
2 GB Sizes (256Mx72)**

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
TRS	TRS30321X	E1108AB-6E-E rev B	Elpida	M0540LA1 rev 1	3/12/08	5	Yes	(128Mx8)*18	
Samsung	M391T5663QZ3- CE6	K4T1G084QQ-HCE6	Samsung	Samsung	4/4/08	5	yes	(128Mx8)*18	
Dataram	DTM63344D	HYB18T1G800C2F- 3S rev C2	Qimonda	40082A rev A	11/25/08	5		128M x 8	

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

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

## Intel® Server Board S3000PT

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

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

### Unbuffered, Non-ECC, DDR2-667 DIMM Modules 2 GB Sizes (256Mx72)

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Ventura Technology Group	D2-55CG64EV-555	HYB18T1G800BF-3S rev B	Qimonda	D2U72G na	8/1/07	5	Yes	(128Mx8)*18	
Legacy Electronics Inc.	M526NAE20EC-30R	MT47H128M8HQ-3 rev E	Micron	D2U64E rev E	8/10/07	5	Yes	(128Mx8)*18	

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

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

## Sales Information

Vendor Name	Web URL	Vendor Direct Sales Info
ATP Electronics	<a href="http://www.atpusa.com/">http://www.atpusa.com/</a>	Tel (1) 408-732-5000, ext 5858 Fax 408-732-5893 <a href="mailto:sales@atpusa.com">sales@atpusa.com</a>
ATP Electronics -- Taiwan Inc.	<a href="http://www.atpusa.com/">http://www.atpusa.com/</a>	Tel 011-886-2-2659-6368 Fax 886-2-2659-4982
Avant Technology	<a href="http://www.avanttechnology.com">http://www.avanttechnology.com</a>	Brad Scoggins Phone: (512)491-7411 Fax: (512)491-7412 <a href="mailto:brads@avanttechnology.com">brads@avanttechnology.com</a>
Aved Memory Products	<a href="http://www.avedmemory.com/">http://www.avedmemory.com/</a>	
Buffalo Technology	<a href="http://www.buffalotech.com/">http://www.buffalotech.com/</a>	(800) 967-0959 <a href="mailto:memory@buffalotech.com">memory@buffalotech.com</a>
Centon Electronics	<a href="http://www.centon.com">http://www.centon.com</a>	Tel: 949-855-9111 Fax: 949-855-6035
Corsair	<a href="http://www.corsairmicro.com/">http://www.corsairmicro.com/</a>	Tel: 510-657-8747 Fax: 510-657-8748
Crucial	<a href="http://www.crucial.com/intel">http://www.crucial.com/intel</a>	Toll-free: 888-363-4167 (US & Canada only) Tel: 208-363-5790 Fax: 208-363-5560 <a href="mailto:crucial.sales@micron.com">crucial.sales@micron.com</a>
Dane-Elec	<a href="http://www.dane-memory.com/">http://www.dane-memory.com/</a>	Michal Hassan @ (949)450-2941 or email @ <a href="mailto:Michal@Dane-memory.com">Michal@Dane-memory.com</a>
Dataram	<a href="http://www.dataram.com/">http://www.dataram.com/</a>	Paul Henke, 800-328-2726 x2239 in USA <a href="mailto:phenke@dataram.com">phenke@dataram.com</a> Peter Jauss, +49-69-680-9070 in EMEA <a href="mailto:pjauss@dataram.com">pjauss@dataram.com</a>
GoldenRAM	<a href="http://www.goldenram.com">http://www.goldenram.com</a>	Jason M. Barrette @ 800-222-861 x7546 <a href="mailto:jasonb@goldenram.com">jasonb@goldenram.com</a> or Michael E. Meyer @800-222-8861 x7512 <a href="mailto:michaelm@goldenram.com">michaelm@goldenram.com</a>
Hitachi	<a href="http://semiconductor.hitachi.com/pointer/">http://semiconductor.hitachi.com/pointer/</a>	
Hyundai/Hynix Semiconductor	<a href="http://www.he.com/">http://www.he.com/</a>	
Infineon	<a href="http://www.infineon.com/business/distribut/index.htm">http://www.infineon.com/business/distribut/index.htm</a>	
ITAUCOM	<a href="http://www.itauc.com.br">http://www.itauc.com.br</a>	
JITCO CO LTD	<a href="http://www.jitco.net/">http://www.jitco.net/</a>	Seong Jeon Tel: 82-32-817-9740 <a href="mailto:s.jeon@jitco.net">s.jeon@jitco.net</a>
Kingston	<a href="http://www.kingston.com">http://www.kingston.com</a>	US.- Call (877) 435-8726 Asia – Call 886-3-564-1539 Europe – Call +44-1932-755205
Legacy Electronics Inc.	<a href="http://www.legacyelectronics.com">http://www.legacyelectronics.com</a>	U.S. Contact: Keri Albers 888 466 3853 ext. 307 European Contact: 49 89 370 664 11
Legend	<a href="http://www.legend.com.au">http://www.legend.com.au</a>	
Micron	<a href="http://www.micron.com">http://www.micron.com</a>	
MSC Vertriebs GmbH	<a href="http://www.msc-ge.com">http://www.msc-ge.com</a>	William Perrigo 49-7249-910-417 Fax: 49-7249-910-229 <a href="mailto:wpe@msc-ge.com">wpe@msc-ge.com</a>
Netlist, Inc	<a href="http://www.netlistinc.com">http://www.netlistinc.com</a>	Christopher Lopes 949.435.0025 tel 949.435.0031 fax <a href="mailto:sales@netlistinc.com">sales@netlistinc.com</a>

<b>Vendor Name</b>	<b>Web URL</b>	<b>Vendor Direct Sales Info</b>
<b>Peripheral Enhancements</b>	<a href="http://www.peripheral.com/">http://www.peripheral.com/</a>	
<b>PNY</b>	<a href="http://www.pny.com/internet_explorer/LPB.HTML">http://www.pny.com/internet_explorer/LPB.HTML</a>	
<b>Samsung</b>	<a href="http://www.samsung.com/Products/Semiconductor/Sales/index.htm">http://www.samsung.com/Products/Semiconductor/Sales/index.htm</a>	See website for direct sales and local distributor information.
<b>Silicon Tech</b>	<a href="http://www.silicontech.com/contact/salescontacts.shtml">http://www.silicontech.com/contact/salescontacts.shtml</a>	
<b>Simple Tech</b>	<a href="http://www.simpletech.com">http://www.simpletech.com</a>	Ron Darwish @ (949) 260-8230 or email @ <a href="mailto:Rdarwish@Simpletech.com">Rdarwish@Simpletech.com</a>
<b>SMART Modular Technologies</b>	<a href="http://www.smartm.com/channel/hpc/">www.smartm.com/channel/hpc/</a>	Gene F. Patino Tel: 949 439-6167 <a href="mailto:gene.patino@smartm.com">gene.patino@smartm.com</a>
<b>TechnoLinc Corporation</b>	<a href="http://www.technolinc.com">http://www.technolinc.com</a>	David Curtis 510-445-7533 <a href="mailto:davide@technolinc.com">davide@technolinc.com</a>
<b>TRS* Tele-Radio-Space GmbH</b>	<a href="http://www.certified-memory.com">http://www.certified-memory.com</a> <a href="http://www.certified-memory.de">http://www.certified-memory.de</a>	Vender Direct Sales Info: Andreas Gruendl Tel: +49.89.945532-34 Fax: +49.89.945532-41 <a href="mailto:Andreas.gruendl@trs-eu.com">Andreas.gruendl@trs-eu.com</a>
<b>Unigen</b>	<a href="http://www.unigen.com">http://www.unigen.com</a>	
<b>Ventura Technology Inc</b>	<a href="http://www.venturatech.com">http://www.venturatech.com</a>	Sam Lewis 760 724-8700 ext. 103
<b>Viking InterWorks</b>	<a href="http://www.vikinginterworks.com">http://www.vikinginterworks.com</a>	Adrian Proctor Tel: 949-643-7255 <a href="mailto:adrian.proctor@sanmina-sci.com">adrian.proctor@sanmina-sci.com</a>
<b>Virtium Technology Inc</b>	<a href="http://www.virtium.com">http://www.virtium.com</a>	Tod Skelton @ (949) 460-0020 ext. 146 or email @ <a href="mailto:tod.skelton@virtium.com">tod.skelton@virtium.com</a>
<b>Wintec Industries</b>	<a href="http://www.wintecindustries.com">http://www.wintecindustries.com</a>	Tel 510-360-6300 Fax 510-770-9338



### **CMTL\* (Computer Memory Test Labs)**

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

#### **IMPORTANT NOTE**

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

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