

Intel® Server Compute Blade SBX82 Memory List Test Report Summary

Revision Hi	Rev	Modifications
Jun/05	1.0	Initial Release
Jun/05		Added Buffalo 256MB parts. Added Legacy, Kingston, Avant and ATP 1GB
Jun/05	2.0	parts. Added ATP and Smart 2GB parts. (In shaded area)
Aug/05	3.0	Added ATP 512MB parts. Added Apacer Viking Smart and Dataram 1GB parts. Added Dataram 2GB parts. Removed column for "Low Profile" and replaced it with "Lead Free". (In shaded area)
Aug/05	4.0	Added Dataram, Legacy, Kingston and Apacer 512MB parts. Added Smart 1GB parts. Added Smart, Wintec and Dataram 2GB parts. (In shaded area)
Sept/05	5.0	Added Samsung 512MB and 1GB parts. Added Apacer 2GB part. (In shaded area)
Oct/05	6.0	Added Smart 1GB and 2GB parts. Added Wintec and Ventura 512MB parts. (In shaded area)
Oct/05	7.0	Added Nanya 512MB part. Added Kingston and Legend 1GB parts. Added Legacy and Smart 2GB parts. (In shaded area)
Nov/05	8.0	Added Nanya 1GB and 2GB parts. Added Smart 1GB and 4GB parts. Added Kingston 512MB and 2GB parts. (In shaded area)
Dec/05	9.0	Added Legacy 1GB part. (In shaded area)
Jan/06	10.0	Added Legacy 512MB part. (In shaded area)
Jan/06	11.0	Added Smart 1GB part. Added ATP 512MB part. (In shaded area)
Feb/06	12.0	Added Legend 512MB part. (In shaded area)
Mar/06	13.0	Added Smart 512MB part. (In shaded area)
Mar/06	14.0	Added Smart and Ventura 512MB parts. (In shaded area)
May/06	15.0	Infineon name change to Qimonda effective May 1 st , 2006. Added Dataram 512MB & 1G parts. Added TRS 512MB, 1G & 2G parts. Added Kingston 1G part. (In shaded area)
Jun/06	16.0	Added Dataram 1G part. (In shaded area)
Jun/06	17.0	Updated verbiage to support 4G modules. (In shaded area)
Jul/06	18.0	Added TRS and Kingston 512MB parts. Added TRS and Ventura Technology Group 1GB parts. Added Kingston 2GB part. (In shaded area)
Aug/06	19.0	Added Ventura Technology Group 2GB part. (In shaded area)
Aug/06	20.0	Added Dane-Elec 1GB part. Added TRS 2GB part. (In shaded area)
Oct/06	21.0	Added TRS 512MB and 1GB parts. (In shaded area)
Nov/06	22.0	Added Kingston 1GB and 2GB parts. (In shaded area)
Jan/07	23.0	Added Kingston and TRS 512MB parts. (In shaded area)
Jan/07	24.0	Added TRS 1GB part. (In shaded area)
Feb/07	25.0	Added ATP Electronics 2GB part. (In shaded area)
Feb/07	26.0	Added TRS 1GB part. (In shaded area)
Mar/07	27.0	Updated contact information. No new parts added.
May/07	28.0	Additional memory parts added. (In shaded area)
Aug/07	29.0	Additional memory parts added. (In shaded area)

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

The Intel® Server Compute Blade SBX82 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.

Table of Contents

OVERVIEW OF MEMORY TESTING	5
REGISTERED, ECC, DDR2-400 DIMM MODULES 256MB SIZES (32MX72)	
REGISTERED, ECC, DDR2-400 DIMM MODULES 512MB SIZES (64Mx72)	
REGISTERED, ECC, DDR2-400 DIMM MODULES 512MB SIZES (64MX72)	10
REGISTERED, ECC, DDR2-400 DIMM MODULES 1GB SIZES (128MX72)	11
REGISTERED, ECC, DDR2-400 DIMM MODULES 1GB SIZES (128MX72)	12
REGISTERED, ECC, DDR2-400 DIMM MODULES 2GB SIZES (256Mx72)	13
REGISTERED, ECC, DDR2-400 DIMM MODULES 2GB SIZES (256Mx72)	14
REGISTERED, ECC, DDR2-400 DIMM MODULES 4GB SIZES (512MX72)	15
CMTL* (COMPUTER MEMORY TEST LABS)	18

Overview of Memory Testing

The following procedure is used to test memory modules for use in the Intel[®] Server Compute Blade SBX82. 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 Blade product has a separate qualified memory list.

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

Intel[®]'s Server and Workstation board qualified memory lists categorize memory modules as Advanced Tested. The Advanced Testing process involves a paper qualification, a standard voltage and room temperature functional test, and a voltage and temperature margin functional test. A paper qualification is a review of critical timings, electrical characteristics, timing requirements, environmental requirements, and packaging requirements in order to see if the memory meets Intel's memory specifications. The standard voltage and room temperature test involves testing the memory module on the particular Intel Server Blade 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 Server Blade for which it is being qualified with various test software and operating systems for 48-72 hours under various voltage and temperature margin conditions. Memory modules that have completed Advanced Testing are known to be compatible with the product on which they were tested, and with the test software and operating system that was utilized during the test procedure.

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

¹ CMTL* is an independent memory testing organization responsible for testing a broad range of memory products. Receiving a "PASS" after being tested by CMTL, means that a product functions correctly and consumers can use it to perform the intended server functions. In order to pass these stringent standards, memory products must maintain the highest manufacturing procedures and pass an exacting battery of tests. Testing is performed with equipment and a procedure as defined by Intel's various functional testing levels. CMTL contact:

John Deters 949-716-8690 (voice) 949-716-8691 (fax) Computer Memory Test Lab (CMTL) 24 Hammond Suite F Irvine, CA 92618 http://www.cmtlabs.com/

Qualified Memory for the Intel® Server Compute Blade SBX82

The memory module on the Intel® Server Compute Blade SBXL82 has 4 DIMM sockets, which can hold up to 16 GB of Registered ECC DDR2-400 memory using four 72-bit DIMM modules. The following memory features are supported:

- DDR2-400 (PC2300) Registered ECC in compliance with the standard DDR JEDEC DIMM Specification
- DIMMs with capacity of 256MB, 512MB, 1G, 2G & 4G modules. Other DRAM sizes may function correctly but will not be validated
- Minimum configuration is 512MB using two 256MB DIMMs
- Maximum Configuration is 16GB using four 4GB DIMMs
- Memory DIMMs are populated in sets of two identical DIMMS. Install the DIMMs in the following order:

 Pair
 DIMM Connectors

 First
 1 (J113) and 2 (J111)

 Second
 3 (J112) and 4 (J110)

 Refer to the Intel® Server Compute Blade SBX82 Installation and User's Guide for specifics of memory configuration and population rules

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

DD	DDR2-400 Registered DRAM Module Configurations for CAS Latency 3, 4, & 5								
DIMM Capacity	DIMM Organization	DRAM Density	DRAM Organization	# DRAM Devices/rows/Banks	# Address bits rows/Banks/column				
256MB	32M × 72	256Mbit	32M × 8	9/1/4	13/2/10				
256MB	$32M \times 72$	256Mbit	32M × 8	9/1/4	13/2/10				
512MB	64M × 72	256Mbit	64M × 8	18/1/4	13/2/11				
512MB	64M × 72	256Mbit	64M × 4	18/1/4	13/2/11				
512MB	64M × 72	512Mbit	64M × 8	9/1/4	14/2/10				
512MB	64M × 72	512Mbit	64M × 8	9/1/4	14/2/10				
1GB	128M × 72	512Mbit	128M × 4	18/1/4	14/2/11				
1GB	128M × 72	512Mbit	128M × 4	18/1/4	14/2/11				
2 <i>G</i> B	256 M × 72	1Gbit	128M × 8	18/2/8	14/2/11				
2 <i>G</i> B	256M × 72	512Mbit	128M × 8	36/2/4	13/2/12				
4GB	512M × 72	2Gbit	256M × 8	18/2/8	15/3/10				
4GB	512M × 72	2Gbit	512M × 4	18/1/8	15/3/11				
4 <i>G</i> B	512M × 72	4Gbit	512M × 8	9/1/8	TBD				

The following table lists DIMM devices known to be compatible with the Intel® Server Compute Blade SBX82. 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® Server Compute Blade SBX82

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

Manufacturer	Part Number	DRAM Part Number	DRAM	PCB Part	Date	CAS	Lead	DRAM	EOL
			Vendor	Number		Latency	Free	Organization	
Micron	MT9HTF3272Y-40EB2	MT47H32M8BP-37E	Micron		5/05	3	Yes	(32Mx8)*9	
Samsung	M393T3253FG0-CCC	K4T56083QF-GCCC	Samsung		5/05	3		(32Mx8)*9	
Samsung	M393T3253FZ0-CCC	K4T56083QF-ZCCC	Samsung		5/05	3	Yes	(32Mx8)*9	
+Buffalo	D2R400A-ES256MBJ	MT47H32M8BP(FP)- 5E rev B	Micron	2DRA18F-BA	6/05	3		(32Mx8)*9	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

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

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

			•						
Manufacturer	Part Number	DRAM Part Number	DRAM	PCB Part	Date	CAS	Lead	DRAM	EOL
			Vendor	Number		Latenc	Free	Organization	
Micron	MT18HTF6472Y-40EB1		Micron		5/05	у 3	Yes	(64Mx4)*18	
Samsung	M393T6450FG0-CCC	K4T56043QF-GCCC	Samsung		5/05	3		(64Mx4)*18	
Samsung	M393T6450FZ0-CCC	K4T56043QF-ZCCC	Samsung		5/05	3	Yes	(64Mx4)*18	
Elpida*	EBE51RD8ABFA-4A-E	EDE5108ABSE-4A	Elpida		5/05	3	Yes	(64Mx8)*9	
Samsung	M393T6553BG0-CCC	K4T51083QB-GCCC	Samsung		5/05	3		(64Mx8)*9	
Samsung	M393T6553BZ0-CCC	K4T51083QB-ZCCC	Samsung		5/05	3	Yes	(64Mx8)*9	
+ATP Electronics	AH64K72N8BHC4S	K4T51083QB-GCCC rev B	_	SH240N08K1	7/05	3		(64Mx8)*9	
+Legacy Electronics Inc.	L506472K20A-50A	G64Mx8DDR2	Legacy	LE9DD2F240 8RRA rev A	08/05	3		(64Mx8)*9	
+Kingston	KVR400D2S8R3/512I	HYB18T512800AF37 rev A	~ Qimonda (Infineon)	2025263- 001.C00 na	08/05	3		(64Mx8)*9	
+Apacer	76.92220.B12	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	48.16188.011 rev 1	08/05	3		(64Mx8)*9	
+Dataram	DTM63311C	K4T56043QF- (Z)GCCC rev F	Samsung	40011A rev A	08/05	3		(64Mx4)*18	
Samsung	M393T6553CZ0-CCC	K4T51083QC-ZCCC rev C	Samsung	M393T6553B G0 na	9/8/05	3		(64Mx8)*9	
+Wintec Industries	39C921284B-GL	K4T51083QB-ZCD5 rev B	Samsung	D2R872 na	9/20/05	3		(64Mx8)*9	
+Ventura Technology Group	D2-52KC53SV-333	K4T56043QF-ZCD5 rev F	Samsung	D2R472 na	9/26/05	3		(64Mx4)*18	
Nanya Technology Corporation	NT512T72U89A0BV-5A	NT5TU64M8AE-5A rev A	Nanya	NTPCB0002 0P (0509) na	10/05	3	Yes	(64Mx4)*18	
+Kingston	KVR400D2S8R3/512I	NT5TU64M8AE-37B rev A	Nanya	2025263- 001.C00 na	10/27/05	3		(64Mx8)*9	
+Legacy Electronics Inc.	B557K4C2AAA-50	K4T51083QC-ZCCC rev C	Samsung	LE9DD2F240 8RRA rev A	12/16/05	3		(64Mx8)*9	
+ATP Electronics	AH64K72F8BHC4S	K4T51083QC-ZCD5 rev C	Samsung	na	1/5/06	3	Yes	(64Mx8)*9	
+Legend	L64723C7-R41H2H1F	HY5PS12821FP-E3 rev 1st Gen.	Hynix	104 (0530,0534)	2/6/06	3	Yes	(64Mx8)*9	
+Smart Modular Technologies	SG647RDR264835-SC	K4T51083QC-ZCCC rev C	Samsung	M393T6553B G1 (KS-11A)	2/17/06	3	Yes	(64Mx8)*9	
+Ventura Technology Group	D2-52KD65SV-333	K4T51083QC-ZCD5 rev C	Samsung	D2R18A na	3/13/06	3	Yes	(64Mx8)*9	

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latenc	Lead Free	DRAM Organization	EOL
TRS	TRS31261	HYB18T256400AF5 rev A	~ Qimonda (Infineon)	M0549LA1 rev 1	04/11/06	3	Yes		
Dataram	DTM63315B	HYB18T256400AF5 rev A	~ Qimonda (Infineon)	40045 rev A	04/14/06	3	Yes		
TRS	TRS31260	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	M0551LA1 rev 1	04/21/06	3	Yes		
Kingston	KVR400D2S8R3/512I	E5108AG-5C-E rev G	Elpida	2025263- 001.C00 na	7/6/06	3	Yes	(64Mx8)*9	
TRS	TRS31260X	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	M0551LA1 rev 1	6/30/06	3	Yes	(64Mx8)*9	
TRS	TRS31261X	HYB18T256400AF5 rev A	Qimonda (Infineon)	M0549LA1 rev 1	9/19/06	3	Yes	(64Mx4)*18	
TRS	TRS31275	E5108AG-5C-E rev G	Elpida	M0551LA1 rev 1	9/22/06	3	Yes	(64Mx8)*9	
Kingston	KVR400D2S8R3/512I	E5108AGBG-6E-E rev G	Elpida	2025263- 001.C00 na	11/30/06	3	Yes	(64Mx8)*9	
TRS	TRS31275X	E5108AG-5C-E rev G	Elpida	M0551LA1 rev 1	12/22/06	3	Yes	(64Mx8)*9	

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

[~] Effective May 1st, 2006, Infineon memory products will be known as Qimonda

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Laten	Lead Free	DRAM Organization	EOL
						су		ŭ	
Elpida	EBE10RD4ABFA-4A-E	EDE5104ABSE-4A	Elpida		5/05	3	Yes	(128Mx4)*18	
Samsung	M393T2950BG0-CCC	K4T51043QB-GCCC	Samsung		5/05	3		(128Mx4)*18	
Samsung	M393T2950BZ0-CCC	K4T51043QB-ZCCC	Samsung		5/05	3	Yes	(128Mx4)*18	
+Legacy Electronics Inc.	B512872M20A-50A	K4T51043QB-GCCC rev B	Samsung	LE18DD2 F2404RR H rev A	6/05	3		(128Mx4)*18	
+Kingston	KVR400D2S4R3/1GI	E5104AE-5C-E rev E	Elpida	2025248- 001.B00	6/05	3		(128Mx4)*18	
+ATP Electronics	AH28K72M4BHC4S	K4T51043QB-GCCC rev B	Samsung	SH240M0 4K1	6/05	3		(128Mx4)*18	
+Avant Technology	AVF7228R52E3400F0- MTB	MT47H64M8CB-37E rev B	Micron	50-1431- 01B rev B	6/05	3		(64Mx8)*18	
+Apacer	78.01068.331	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	48.16189. 011 rev 1	7/05	3		(128Mx4)*18	
+Viking	VR5ER287214EBPL1	MT47H128M4BT- 37E rev A	Micron	0001009A rev A	7/05	3		(128Mx4)*18	
+Smart Modular Technologies	SB1287RDR212435IA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	PB54G24 0NESUB RCC1 rev A	7/05	3		(128Mx4)*18	
+Dataram	DTM63310A	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	40011A rev A	7/05	3		(128Mx4)*18	
+Smart Modular Technologies	SB1287RDR21243-5-H	HY5PS12421FP-E3 A 1st Generation	Hynix	E72369 na	08/05	3		(128Mx4)*18	
Samsung	M393T2950CZ0-CCC	K4T51043QC-ZCCC rev C	Samsung	M393T29 50BG0 na	9/12/05	3		(128Mx4)*18	
+Smart Modular Technologies	SB1287RDR21243-5-E	E5104AB-4A-E rev B	Elpida	Z10 026A na	9/05	3		(128Mx4)*18	
+Kingston	KVR400D2S4R3/1GI	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	2025248- 001.B00 na	10//05	3		(128Mx4)*18	
+Legend	L12723C7-RCAH2HBF	HY5PS12821F-E3 rev A	Hynix	B62RRC A rev A	10/05	3		(64Mx8)*18	
Nanya Technology Corporation	NT1GT72U4PA0BV-5A	NT5TU128M4AE-5A rev A	Nanya	019 (0519, 0515) na	10//05	3	Yes	(128Mx4)*18	
+Smart Modular Technologies	SG1287RDR264835IA5	HYB18T512800AF5 rev A	~ Qimonda (Infineon)	PG58G24 0NEBUB2 RB rev A	11/05	3		(64Mx8)*18	
+Smart Modular Technologies	SG1287RDR264835IA	HYB18T512800AF37 rev A	~ Qimonda (Infineon)	PG58G24 0NEBUB2 RB rev A	11/05	3		(64Mx8)*18	
+Legacy Electronics Inc.	B517M4C2AHA-50	K4T51043QC-ZCCC rev C	Samsung	LE18DD2 F2404RR H rev A	12/2/05	3		(128Mx4)*18	

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

Manufacturer	Part Number	DRAM Part Number	DRAM	PCB Part	Date	CAS	Lead	DRAM	EOL
			Vendor	Number		Laten	Free	Organization	
						су			
				PG58G24					
+Smart		K4T51083QC-ZCD5	_	0NEBUB					
Modular	SG1287RDR264835SC	rev C	Samsung	2RB rev	12/05	3	Yes	(64Mx8)*18	
Technologies		107 0		A					
				2025248-					
Vingoton	KVR400D2S4R3/1GI	HYB18T512400AF37	Infineon	001.B00	04/07/06	3	Yes		
Kingston	KVK400D254K3/TGI	rev A	infineon		04/07/06	3	res		
		LIVEACTEACACCATE		na					
TRS	TRS31265	HYB18T512400AF5	Infineon	M0549LA	04/19/06	3	Yes		
		rev A		1 rev 1					
Dataram	DTM63316B	NT5TU128M4AE-5A	Nanya	40045 rev	04/25/06	3	Yes		
Dataram	D1100010B	rev A	Harrya	Α	04/20/00		103		
Dataram	DTM63310J	NT5TU128M4AE-5A	Nonvo	40011A	05/04/06	3	Yes		
Datarani	D110033103	rev A	Nanya	rev A	05/04/06	3	162		
TDO	TD004007	K4T51043QC-ZCCC		M0549LA	0/00/00			(4000 4)*40	
TRS	TRS31267	rev C	Samsung	1 rev 1	6/28/06	3	Yes	(128Mx4)*18	
Ventura									
Technology	D2-54KF53RV-333	NT5TU128M4AE-	Nanya	D2R472	6/21/06	3	Yes	(128Mx4)*18	
Group	22 0 1141 00141 000	37B rev A	- runnyu	na	0,21,00			(12011)(1)	
		EDE5108AESK-5C-E		D2R872					
Dane-Elec	DMD400R072283NG	rev E	Elpida	rev 1	7/27/06	3	Yes	(64Mx8)*18	
		HYB18T512400AF5	Qimonda	M0549LA					
TRS	TRS31265X				9/8/06	3	Yes	(128Mx4)*18	
		rev A	(Infineon)	1 rev 1				,	
		E5104AG-5C-E rev		2025248-		_			
Kingston	KVR400D2S4R3/1GI	G	Elpida	001.B00	10/9/06	3	Yes	(128Mx4)*18	
		_		na					
TRS	TRS31267X	K4T51043QC-ZCCC	Samsung	M0549LA	1/10/07	3	Yes	(128Mx4)*18	
1110	11(001201)	rev C	Carrisarig	1 rev 1	1710/01	J	103	(12011147) 10	
TRS	TRS31277X	E5104AG-5C-E rev	Elpida	M0549LA	2/1/07	3	Yes	(128Mx4)*18	
IKO	183312118	G	Eipiua	1 rev 1	2/1/0/	3	162	(120WX4) 10	
		EE404AUOE OE E		2025248-					
Kingston	KVR400D2S4R3/1GI	E5104AHSE-6E-E	Elpida	001.B00	5/1/07	3	Yes	(128Mx4)*18	
Jana		rev H		na				, , ,	
_		HY5PS12421CFP-Y5		40011A					
Dataram	DTM63310N	rev C	Hynix	rev A	8/7/07	3	Yes	(128Mx4)*18	
		164 0		ICVA					

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

[~] Effective May 1st, 2006, Infineon memory products will be known as Qimonda

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

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

Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
Elpida	EBE21RD4ABHA-4A-E		Elpida		5/05	3	Yes	(128Mx4)*36	
Samsung	M393T5750BS0-CCC	K45T1043QB-SCCC	Samsung		5/05	3		(128Mx4)*36	
Samsung	M393T5750BY0-CCC	K45T1043QB-YCCC	Samsung		5/05	3		(128Mx4)*36	
+ATP Electronics	AH56K72J4BHC4C	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	SH240J04K 1	6/05	3		(128Mx4)*36	
+Smart Modular Technologies	SG2567RDR212835IA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	PG52G240 NESUB1RJ rev A	6/05	3		(128Mx4)*36	
+Dataram	DTM63309A	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	40040A rev A	7/05	3		(128Mx4)*36	
+Wintec Industries	39C941441A-L	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)		08/05	3		(256Mx4)*18	
+Smart Modular Technologies	SB2567RDR212835IA	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	PB52G240 NESUB1RJ rev A	08/05	3		(128Mx4)*36	
+Dataram	DTM63309B	K4T51043QC-ZCCC rev C	Samsung	40040A rev A	08/05	3		(128Mx4)*36	
+Apacer	76.A2220.B10	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	48.1A189.0 12 rev 2	9/05	3		(128Mx4)*36	
+Smart Modular Technologies	SM2567RDR22543-5-I	HYB18T1G400AF-5 rev A	~ Qimonda (Infineon)	240-13-5 (0516)	9/05	3		(256Mx4)*18	
+Legacy Electronics Inc.	B527M4C2BJA-50	K4T51043QC-ZCCC rev C	Samsung	LE36DD2F 2404RRJ rev B	10/05	3		(128Mx4)*36	
+Smart Modular Technologies	SG2567RDR21283-5-H	HY5PS1G421MP-E3 rev A	Hynix	0518-1,-2,- 3,-4,-6	10/05	3	Yes	(256Mx4)*18	
+Kingston	KVR400D2D4R3/2GI	HYB18T512400AF5 rev A	~ Qimonda (Infineon)	2025292- 001.B00 na	10/31/ 05	3		(128Mx4)*36	
Nanya Technology Corporation	NT2GT72U4NA1BV-5A	NT5TU128M4AE-5A rev A	Nanya	NTPCB000 37P (0514) na	10/19/ 05	3	Yes	(128Mx4)*36	
Dataram	DTM63309F	NT5TU128M4AE-5A rev A	Nanya	40040A rev A	03/30/ 06	3	Yes		
TRS	TRS31270	HYB18T1G400AF-5 rev A	Infineon	M0549LA1 rev 1	04/04/ 06	3	Yes		
Kingston	KVR400D2D4R3/2GI	NT5TU128M4AE-5A rev A	Nanya	2025292- 001.B00 na	6/23/0 6	3	Yes	(128Mx4)*36	
Ventura Technology Group	D2-56KF66RV-333	NT5TU128M4AE- 37B rev A	Nanya	D2R436 na	7/12/0 6	3	Yes	(128Mx4)*36	

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

Manufacturer	Part Number	DRAM Part Number	DRAM	PCB Part	Date	CAS	Lead	DRAM	EOL
			Vendor	Number		Latency	Free	Organization	
			Qimond						
TRS	TRS31270X	HYB18T1G400AF-5		M0549LA1	8/2/06	3	Yes	(256Mx4)*18	
	11100121001	rev A	(Infineon	rev 1	0,2,00		. 00	(200111)(1)	
)						
Kingston	KVR400D2D4R3/2GI	E5104AG-5C-E rev	Elpida	2025292-	10/18/	3	Yes	(128Mx4)*36	
Killystoli	KVK400D2D4K3/2GI	G	Еіріца	001.B00 na	06	3	162	(120WIX4) 30	
ATP	AH56K72J4BHC4S	K4T51043QC-ZCCC	Samsun	SH240J04	1/24/0	3	Yes	/420My/*26	
Electronics	AUDOKI ZJADUCAS	rev C	g	K2 na	7	3	res	(128Mx4)*36	
Vingoton	KVR400D2D4R3/2GI	E5104AHSE-6E-E	Elpido	2025292-	E /0 /07	2	Vaa	/4.20My.4*26	
Kingston	NVR400D2D4R3/2GI	rev H	Elpida	001.C00 na	5/8/07	3	Yes	(128Mx4)*36	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

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

Registered, ECC, DDR2-400 DIMM Modules 4GB Sizes (512Mx72)

			•	,					
Manufacturer	Part Number	DRAM Part Number	DRAM Vendor	PCB Part Number	Date	CAS Latency	Lead Free	DRAM Organization	EOL
+Smart Modular Technologies	SG5127RDR225635IA	HYB18T1G400AF-5 rev A	Qimond	PG516G24	10/25/ 05	3	Yes	(256Mx4)*36	
Smart Modular Technologies	SG5127RDR225635AR T	HYB18T1G400AF-5 rev A	Qimond a	XG58G240 NESUB1TK rev A	5/4/07	3	Yes	(256Mx4)*36	
Legacy Electronics Inc.	M547RAE20LA-50R	MT47H256M4HQ-3 rev E	Micron	D2R24L rev E	5/10/0 7	3	Yes	(256Mx4)*36	

Modules shaded in blue are low profile.

Modules in bold text do not contain Lead.

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

Sales Information

Vendor Name	Web URL	Vendor Direct Sales Info
ATP Electronics	http://www.atpinc.com/	John Cheng
		Tel 408-732-5875
		Fax 408-732-5893
		sales@atpusa.com
ATP Electronics	http://www.atpinc.com/	Patty Kuo
Taiwan Inc.		Tel 011-886-2-2659-6368
		Fax 886-2-2659-4982
Avant Technology	http://www.avanttechnology.com	Brad Scoggins
	integration of the second of t	Phone: (512)491-7411
		Fax: (512)491-7412
		brads@avanttechnology.com
Aved Memory Products	http://www.avedmemory.com/	
Buffalo Technology	http://www.buffalotech.com/	(800) 967-0959
Danialo Technology	into in white and the control in the	memory@buffalotech.com
Centon Electronics	http://www.centon.com	Tel: 949-855-9111
Centon Electronics	intp://www.conton.com	Fax: 949-855-6035
Corsair	http://www.corsairmicro.com/	Tel: 510-657-8747
Corsan	http://www.corsammero.com/	Fax: 510-657-8748
Dane-Elec	http://www.dane-memory.com/	Michal Hassan @ (949)450-2941 or email @
Dane-Elec	http://www.dane-memory.com/	Michal@Dane-memory.com
Dataram	http://www.dotorom/	Paul Henke, 800-328-2726 x2239 in USA
Dataram	http://www.dataram.com/	
		609-799-0071
C 11 DAM	10. // 11	phenke@dataram.com
GoldenRAM	http://www.goldenram.com	Jason M. Barrette @ 800-222-861 x7546
		jasonb@goldenram.com
		or Michael E. Meyer @800-222-8861 x7512
TT*/ 1 *		michaelm@goldenram.com
Hitachi	http://semiconductor.hitachi.com/pointer/	
Hyundai/Hynix	http://www.hea.com/	
Semiconductor		
~ Qimonda (Infineon)	http://www.infineon.com/business/distribut	
TEATICON (/index.htm	
ITAUCOM TERM	http://www.itaucom.com.br	
JITCO CO LTD	http://www.jitco.net/	Seong Jeon
		Tel: 82-32-817-9740
		s.jeon@jitco.net
Kingston	http://www.kingston.com	US Call (877) 435-8726
		Asia – Call 886-3-564-1539
		Europe – Call +44-1932-755205
Legacy Electronics Inc.	http://www.legacyelectronics.com	U.S. Contact: Gary Ridenour, 949-498-9600, Ext 350
		European Contact: 49 89 370 664 11
Legend	http://www.legend.com.au	
Micron	http://silicon.micron.com/mktg/http://silic	
	on.micron.com/mktg/mbqual/qual_data.cf	
	<u>m</u>	
MSC Vertriebs GmbH	http://www.msc-ge.com	William Perrigo
		49-7249-910-417
		Fax: 49-7249-910-229
		wpe@msc-ge.com
Nanya Technology	http://www.ntc.com.tw	Winson Shao
		886-3-328-1688, Ext 6018
		winsonshao@ntc.com.tw
Netlist, Inc	http://www.netlistinc.com	Christopher Lopes
,		949.435.0025 tel
		949.435.0031 fax
		sales@netlistinc.com

Vendor Name	Web URL	Vendor Direct Sales Info
Peripheral Enhancements	http://www.peripheral.com/	
PNY	http://www.pny.com/internet_explorer/LP B.HTML	
Samsung	http://www.korea.samsungsemi.com/locate	For US customers go to:
	/buy/list_na.html	http://www.mymemorystore.com/
Silicon Tech	http://www.silicontech.com/contact/salescontacts.shtml	
Simple Tech	http://www.simpletech.com	Ron Darwish @ (949) 260-8230 or email @
		Rdarwish@Simpletech.com
SMART Modular	http://www.smartm.com	Leo Alafriz
Technologies		949-753-0116 ext. 125
		<u>leo.alafriz@smartm.com</u>
TechnoLinc Corporation	http://www.technolinc.com	David Curtis
		510-445-7400
		davidc@technolinc.com
TRS* Tele-Radio-Space	http://www.certified-memory.com	Vendor Direct Sales Info: Andreas Gruendl
GmbH	http://www.certified-memory.de	Tel: +49.89.945532-34
		Fax: +49.89.945532-41
		Andreas.gruendl@trs-eu.com
Unigen	http://www.unigen.com	
Ventura Technology Inc	http://www.venturatech.com	Sam Lewis
		760 724-8700 ext. 103
Viking InterWorks	http://www.vikinginterworks.com	Adrian Proctor
		Tel: 949-643-7255
		adrian.proctor@sanmina-sci.com
Virtium Technology Inc	http://www.virtium.com	Tod Skelton @ (949) 460-0020 ext. 146 or email @
		tod.skelton@virtium.com
Wintec Industries	http://www.wintecindustries.com	Tel 510-360-6300
		Fax 510-770-9338

CMTL* (Computer Memory Test Labs)

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-based Blade. Intel provides no indemnities for and expressly disclaims all liabilities for any and all such quaranties, representations, and warranties (oral or written) whether express or implied, related to DIMMs in a Intel® Server Blade 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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