

# **Intel<sup>®</sup> Server Board SE7320VP2 Memory Test List**

Revision 54.0  
September 2008

## Revision History

| Date    | Rev  | Modifications  |
|---------|------|--|
| Sept/04 | 1.0  | Release revision.  |
| Oct/04  | 2.0  | Added Micron* 256MB part. Added Infineon* and Hynix* 1GB parts. (In shaded area)   |
| Oct/04  | 3.0  | Added Infineon 256MB parts. Added ATP*, Infineon and Hynix 512MB parts. (In shaded area)   |
| Nov/04  | 4.0  | Added TRS* 512MB, 1GB, and 2GB parts. Added ATP and Smart* 512MB and 1GB parts. Added Hynix 1GB part. (In shaded area)   |
| Nov/04  | 5.0  | Added Ventura*, TRS and Kingston* 1GB parts. Added Ventura and Smart 2GB parts. (In shaded area)   |
| Dec/04  | 6.0  | Added Apacer* 512MB and 1GB parts. Added TRS 1GB parts. (In shaded area)   |
| Dec/04  | 7.0  | Added Legacy* and Viking* 1GB parts. (In shaded area)  |
| Dec/04  | 8.0  | Added Micron 256MB part, Hynix 512MB part and Legacy 2GB parts. (In shaded area)   |
| Dec/04  | 9.0  | Added Viking and Apacer 2GB parts. (In shaded Area)  |
| Jan/05  | 10.0 | Added Legacy 512MB and Smart 1GB parts. (In shaded area)   |
| Jan/05  | 11.0 | Added Infineon 1GB and Smart 2GB parts. (In shaded area)   |
| Feb/05  | 12.0 | Added ATP 2GB parts. (In shaded area)  |
| Feb/05  | 13.0 | Added Samsung* 256MB part. Added Legacy 1GB and ATP 2GB parts. (In shaded area)  |
| Mar/05  | 14.0 | Added Ventura and Samsung 512MB parts. Added Samsung, Smart and ATP 1GB parts. Added Infineon 2GB part. (In shaded area)   |
| Mar/05  | 15.0 | Added note on Lead free modules (these modules are now in bold text). Added Legend 256MB, 512MB and 1GB parts. Added Ventura, Samsung and Dane-elec* 1GB parts. Added Dataram* and Infineon 2GB parts. (In shaded area)  |
| Apr/05  | 16.0 | Added Dataram, Ventura, Dane-Elec and Hynix 512MB parts. Added Dataram 1GB and 2GB parts. Added Micron 2GB part. (In shaded area)  |
| Apr/05  | 17.0 | Added Kingston 512MB and 2GB parts. Added Samsung 512MB parts. Added Ventura, Wintec*, and Dataram 1GB parts. (In shaded area)   |
| May/05  | 18.0 | Added Simple* 512MB and 1GB parts. Added Micron 512MB part. Added Samsung, Micron and Infineon 1GB parts. Added Netlist* 2GB parts. (In shaded area)   |
| May/05  | 19.0 | Added Avant* 512MB and 2GB parts. Added Dataram 1GB parts. (In shaded area)  |
| June/05 | 20.0 | Added support for DDR2-400 DDR II modules. Added Infineon, Micron and Samsung DDR2 256MB parts. Added Samsung and Infineon DDR2 512MB parts. Added Micron, Infineon and Samsung DDR2 1GB parts. Added Hynix, Samsung and Infineon DDR2 2GB parts. Replaced Low Profile column with Lead-Free. Added Dataram 1GB parts. Added Avant 2GB parts. (In shaded area) |
| Jun/05  | 21.0 | Added Wintec, Samsung and Micron 512MB parts. Added Samsung and Micron 1GB parts. Added Dataram and Samsung 2GB parts. Added Samsung 4GB part (In shaded area)   |

| Date    | Rev  | Modifications   |
|---------|------|---|
| Aug/05  | 22.0 | Added Kingston 512MB parts. Added Hynix, Infineon, Samsung, Dataram and Kingston 1GB parts. Micron 512MB, 1GB, 2GB and 4GB parts. (In shaded area)  |
| Aug/05  | 23.0 | Added Kingston 1GB parts. Added Dataram 4GB parts. Added TRS 2GB parts. Added ATP, Kingston, Legacy, Smart, Viking and Wintec DDR2 1GB parts. Added Smart, Kingston and Dataram DDR2 2GB parts. Added Viking, Samsung and Infineon DDR2 512MB parts. (In shaded area) |
| Sept/05 | 24.0 | Added Wintec and Samsung 2GB part. Added Kingston 512MB part. (In shaded area)  |
| Oct/05  | 25.0 | Added Ventura and Micron 512MB parts. Added Smart, Dataram and Samsung 1GB parts. (In shaded area)  |
| Oct/05  | 26.0 | Added Wintec, Dataram and Hynix DDR2 512MB parts. Added Legend and Legacy 1GB parts. Added Dataram, Kingston and Samsung DDR2 1GB parts. Added Kingston 2GB part. (In shaded area) Updated unleaded parts to correct shading.   |
| Nov/05  | 27.0 | Added Samsung 256MB parts. Added Apacer, Hynix and Samsung 512MB parts. Added Dataram, Hynix, Avant, Samsung and Legend 1GB parts. Added Smart, Samsung, Hynix and Micron 2GB parts. Added Infineon 4GB part. (In shaded area)  |
| Nov/05  | 28.0 | Updated two Micron 1GB parts with corrected DRAM part numbers. (in shaded area)   |
| Dec/05  | 29.0 | Added Legend 1GB part. Added Kingston DDR 1GB part. Added Legacy DDR2 2GB part. Added Smart DDR2 4GB part. (In shaded area)   |
| Jan/06  | 30.0 | Added Kingston DDR2 4GB, 2GB and 512MB parts. Added ATP DDR 4GB and DDR2 2GB parts. Added Samsung 1GB and 2GB parts. (In shaded area)   |
| Jan/06  | 31.0 | Added Legend 1GB part. Added Ventura DDR2 1GB part. Added Apacer DDR2 512MB part. Added Samsung DDR1 256MB, 512MB, 1G & 2G parts. Added Samsung DDR2 2G part. Added Hynix DDR2 512MB, 1G & 4G parts. (In shaded area)   |
| Feb/06  | 32.0 | Added Kingston, Wintec and Apacer DDR2 1GB parts. Added Infineon DDR1 512MB, 1G & 2G parts. Added Hynix DDR2 1G & 2G parts. (In shaded area)  |
| Mar/06  | 33.0 | Added Dataram 1GB part. Added TRS 2GB part. Added Smart and Legacy DDR2 1GB parts. Added Legacy and ATP DDR2 512MB parts. Added Legend DDR2 2GB parts. (In shaded area)   |
| Mar/06  | 34.0 | Added TRS 512MB, 1GB and 2GB parts. Added Dataram 2GB part. Added TRS DDR2 512MB and 2GB parts. Added Legend DDR2 512MB part. Added Smart DDR2 1GB part. (In shaded area)   |
| May/06  | 35.0 | Infineon name change to Qimonda effective May 1 <sup>st</sup> , 2006. Added TRS 512MB & 1G parts. Smart 512MB parts. Added Kingston and Dataram 1G, 2G & 4G parts. (In shaded area)   |
| June/06 | 36.0 | Added Buffalo 512MB DDR1 part. Added Dataram 512MB, 1G and 2G DDR2 parts. Added Kingston 1G and 2G DDR2 parts. Added Smart 1G DDR2 part. (In shaded area)   |
| July/06 | 37.0 | Added TRS 512MB part. Added TRS, Kingston, and Smart 1GB parts. Added Kingston 2GB part. (In shaded area)   |
| July/06 | 38.0 | Added TRS 512MB part. Added TRS, Kingston, and Smart 1GB parts. Added Kingston 2GB part. (In shaded area)   |
| Aug/06  | 39.0 | Added Kingston 512MB and 2GB parts. (In shaded area)  |

| Date    | Rev  | Modifications  |
|---------|------|--|
| Aug/06  | 40.0 | Added TRS 2GB part. (In shaded area)   |
| Oct/06  | 41.0 | Added TRS and Super Talent Electronics 512MB parts. Added TRS, Super Talent Electronics, Avant Technology, and Kingston 1GB parts. Added Super Talent Electronics 2GB part. (In shaded area) |
| Nov/06  | 42.0 | Added Kingston 512MB, 1GB, and 2GB parts. (In shaded area)   |
| Jan/07  | 43.0 | Added Kingston 1GB part. Added Kingston, Smart, and ATP Electronics 2GB parts. (In shaded area)  |
| Jan/07  | 44.0 | Added Smart Modular Technologies 4GB part. (In shaded area)  |
| Feb/07  | 45.0 | Added All Components and TRS 1GB parts. Added Kingston 4GB part. Updated vendor contact information. (In shaded area)  |
| Mar/07  | 46.0 | Updated contact information. Added Kingston 512MB part. Added US Technology 1GB part. (In shaded area)   |
| May/07  | 47.0 | Added Dataram 512MB part. Added Dataram and Kingston 1GB parts. Added Kingston 2GB parts. (In shaded area)   |
| May/07  | 48.0 | Additional memory parts added. (In shaded area)  |
| Jul/07  | 49.0 | Additional memory parts added. (In shaded area)  |
| Nov/07  | 50.0 | Additional memory parts added. (In shaded area)  |
| Jan/08  | 51.0 | Additional memory parts added. (In shaded area)  |
| Mar/08  | 52.0 | Additional memory parts added. (In shaded area)  |
| May/08  | 53.0 | Additional memory parts added. (In shaded area)  |
| Sept 08 | 54.0 | Additional memory parts added. (In shaded area)  |

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The Intel® Server Board SE7320VP2 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 Rank on the memory module. Mixing of dissimilar memory manufacturer and similar speeds in each Rank on the memory module is NOT recommended.

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## Table of Contents

|   |           |
|---|-----------|
| <b>1. Overview of Memory Testing .....</b>                                | <b>8</b>  |
| 1.1 Paper Qualification.....  | 8         |
| 1.2 Functional Testing.....   | 8         |
| 1.3 Computer Memory Test Lab* .....                                       | 8         |
| <b>2. Intel® Server Board SE7320VP2 Memory Subsystem .....</b>            | <b>9</b>  |
| 2.1 Memory Population .....   | 10        |
| 2.2 Identifying “Single Rank” or “Double Ranked” DIMMs .....              | 12        |
| DIMM Capacity.....  | 12        |
| DIMM Organization .....   | 12        |
| SDRAM Density .....   | 12        |
| SDRAM Organization.....   | 12        |
| # SDRAM Devices/rows/Ranks.....   | 12        |
| # Address bits rows/Ranks/column .....                                    | 12        |
| Ranked.....   | 12        |
| <b>3. Tested Memory .....</b>   | <b>14</b> |
| <i>Registered ECC, DDR266 DIMM Modules</i>                                |           |
| 256MB Size (32M x 72).....  | 15        |
| <i>Registered ECC, DDR333 DIMM Modules</i> .....                          | 15        |
| 256MB Size (32M x 72).....  | 15        |
| <i>Registered ECC, DDR2-400 DIMM Modules</i> .....                        | 15        |
| 256MB Size (32M x 72).....  | 15        |
| <i>Registered, ECC, DDR266 DIMM Modules 512 MB Sizes (64Mx72)</i> .....   | 16        |
| <i>Registered, ECC, DDR333 DIMM Modules 512 MB Sizes (64Mx72)</i> .....   | 16        |
| <i>Registered, ECC, DDR333 DIMM Modules 512 MB Sizes (64Mx72)</i> .....   | 17        |
| <i>Registered, ECC, DDR2-400 DIMM Modules 512 MB Sizes (64Mx72)</i> ..... | 18        |
| <i>Registered, ECC, DDR2-400 DIMM Modules 512 MB Sizes (64Mx72)</i> ..... | 19        |
| <i>Registered, ECC, DDR266 DIMM Modules</i> .....                         | 20        |
| 1GB Size (128M x 72).....   | 20        |
| <i>Registered, ECC, DDR333 DIMM Modules</i> .....                         | 21        |
| 1GB Size (128M x 72).....   | 21        |
| <i>Registered, ECC, DDR333 DIMM Modules</i> .....                         | 22        |
| 1GB Size (128M x 72).....   | 22        |
| <i>Registered, ECC, DDR333 DIMM Modules</i> .....                         | 23        |
| 1GB Size (128M x 72).....   | 23        |
| <i>Registered, ECC, DDR2-400 DIMM Modules</i> .....                       | 24        |
| 1GB Size (128M x 72).....   | 24        |
| <i>Registered, ECC, DDR2-400 DIMM Modules</i> .....                       | 25        |
| 1GB Size (128M x 72).....   | 25        |
| <i>Registered, ECC, DDR2-400 DIMM Modules</i> .....                       | 26        |

|   |           |
|---|-----------|
| 1GB Size (128M x 72).....                         | 26        |
| Registered, ECC, DDR266 DIMM Modules .....        | 27        |
| 2GB Size (256M x 72).....                         | 27        |
| Registered, ECC, DDR333 DIMM Modules .....        | 28        |
| 2GB Size (256M x 72).....                         | 28        |
| Registered, ECC, DDR2-400 DIMM Modules .....      | 29        |
| 2GB Size (256M x 72).....                         | 29        |
| Registered, ECC, DDR2-400 DIMM Modules .....      | 30        |
| 2GB Size (256M x 72).....                         | 30        |
| Registered, ECC, DDR266 DIMM Modules .....        | 31        |
| 4GB Size (256M x 72).....                         | 31        |
| Registered, ECC, DDR333 DIMM Modules .....        | 31        |
| 4GB Size (256M x 72).....                         | 31        |
| Registered, ECC, DDR2-400 DIMM Modules .....      | 31        |
| 4GB Size (256M x 72).....                         | 31        |
| <b>4. Sales Information .....</b>                 | <b>32</b> |
| <b>5. CMTL* (Computer Memory Test Labs) .....</b> | <b>34</b> |

## 1. Overview of Memory Testing

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The following test processes are used to qualify Dual In-Line Memory Modules (DIMMs) for use with the Intel® Server Board SE7320VP2. Memory is a vital subsystem in a server. Intel requires that strict guidelines be met before a DIMM vendor is added to the Tested memory List. To be included on the list as a fully supported DIMM, the memory must undergo rigorous tests to ensure that the product will perform the intended server product functions. Memory qualification for Intel® Server, Workstation, and RAID Controller products is performed both by Intel's Memory Validation Lab (MVL) and by an independent external test lab, Computer Memory Test Lab\* (CMTL).

The Tested Memory Lists for Intel's server board, Workstation board, and RAID controller products categorize memory modules as Advanced Tested. The Advanced Testing process includes a standard paper qualification and then is followed by two levels of functional testing. DIMMs that have completed and passed Advanced Testing are considered to be compatible with the product on which they were tested, and with the test software and operating systems that was used during the test process.

### 1.1 Paper Qualification

A paper qualification is performed to verify that the specifications of a given DIMM meet Intel's memory specifications for a given product. Specification criteria reviewed include: critical timings, electrical characteristics, timing requirements, environmental requirements, and packaging requirements.

### 1.2 Functional Testing

After a given DIMM passes the standard paper qualification, functionality of the DIMM is then tested with the intended Intel product. Two levels of functional testing is performed; Standard and Advanced.

Standard functional testing requires that the given DIMM and Intel product combination operate with no failures for a period of no less than 24 hours for both minimum and maximum DIMM configurations. Testing is performed using a Microsoft Window\* operating system and a custom test package. The test systems operate with standard voltage and at room temperature.

Advanced functional testing requires that the given DIMM and Intel product combination operate with no failures for a period of no less than 24 hours for both minimum and maximum DIMM configurations. Testing is performed with multiple operating systems and various custom test packages. Each test configuration is tested with various voltage and temperature margin conditions.

### 1.3 Computer Memory Test Lab\*

Computer Memory Test Lab\*, also known as CMTL, is a leading memory test organization responsible for testing a broad range of memory products. A memory product, which receives a "PASS" after being tested by CMTL, 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 Intel supplied equipment and procedures defined by Intel's various functional testing levels.

#### CMTL\* Contact Info:

Office: (949) 716-8690  
Fax: (949) 716-8691

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



## 2. Intel® Server Board SE7320VP2 Memory Subsystem

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The Intel® Server Board SE7320VP2 is capable of supporting either DDR266/333 or DDR2-400 memory technologies depending on which baseboard SKU is being used.

NOTE: Industry naming conventions for equivalent memory technologies include the following:

- DDR266 = PC2100
- DDR333 = PC2700
- DDR2-400 = PC23200

The following maximum memory capacities are supported based on the number of DIMM slots provided and maximum supported memory loads by the chipset:

24GB maximum capacity for DDR266  
16GB maximum capacity for DDR333 and DDR2-400

The minimum memory supported with the system running in single channel memory mode is:

256MB for DDR256, DDR333 and DDR2-400.

Supported DIMM capacities are as follows:

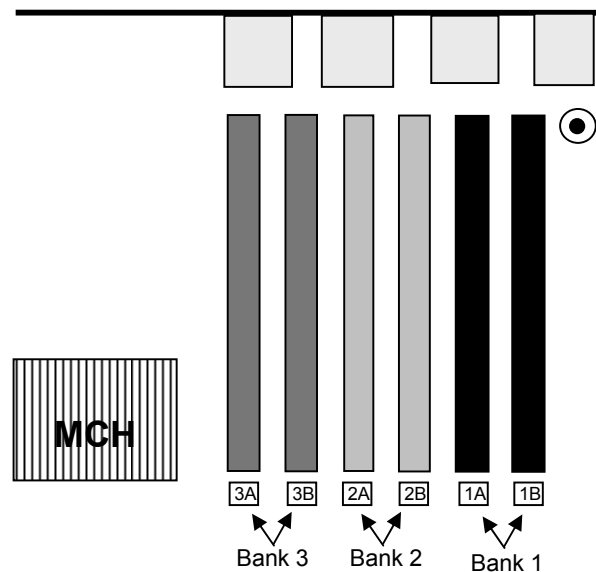
DDR266 Memory DIMM sizes include: 256MB, 512MB, 1GB, 2GB, and 4GB.

DDR333 Memory DIMM sizes include: 256MB, 512MB, 1GB, 2GB, and 4GB.

DDR2-400 Memory DIMM sizes include: 256MB, 512MB, 1GB, 2GB, and 4GB.

## 2.1 Memory Population

The Intel® Server Board SE7320VP2 has six DIMM slots, or three DIMM banks. Both DIMMs in a bank should be identical (same manufacturer, CAS latency, number of rows, columns and devices, timing parameters etc.). Although DIMMs within a bank must be identical, the BIOS supports various DIMM sizes and configurations allowing the banks of memory to be different. Memory sizing and configuration is guaranteed only for qualified DIMMs approved by Intel.



**Figure 1. Identifying Banks of Memory**

Mixing of DDR266, DDR333 and DDR2-400 DIMMs is supported between banks of memory. However, when mixing DIMM types, DDR333 will run at DDR266 speeds.

The memory controller is capable of supporting up to 4 loads per channel for DDR333. Memory technologies are classified as being either single rank or dual rank depending on the number of DRAM devices that are used on any one DIMM. A single rank DIMM is a single load device, i.e.) Single Rank = 1 Load. Dual rank DIMMs are dual load devices, i.e.) Dual Rank = 2 loads.

### **DDR266 and DDR333 DIMM population rules are as follows:**

- (1) DIMM banks must be populated in order starting with the slots furthest from MCH
- (2) Single rank DIMMs must be populated before dual rank DIMMs
- (3) A maximum of four DIMMs can be populated when all four DIMMs are dual rank DDR333 DIMMs.

### **DDR2-400 DIMM population rules are as follows:**

- (1) DIMMs banks must be populated in order starting with the slots furthest from MCH
- (2) Dual rank DIMMs are populated before single rank DIMMs
- (3) A maximum of four DIMMs can be populated when all four DIMMs are dual rank DDR2-400 DIMMs

The following tables show the supported memory configurations:

- s/r = single rank
- d/r = dual rank
- E = Empty

**Table 1: Supported DDR266 DIMM Populations**

| MCH | Bank 3 – DIMMs 3A, 3B | Bank 2 – DIMMs 2A, 2B | Bank 1 – DIMMs 1A, 1B |
|-----|-----------------------|-----------------------|-----------------------|
|     | S/R                   | S/R                   | S/R                   |
|     | E                     | S/R                   | S/R                   |
|     | E                     | E                     | S/R                   |
|     | D/R                   | D/R                   | D/R                   |
|     | E                     | D/R                   | D/R                   |
|     | E                     | E                     | D/R                   |
|     | D/R                   | S/R                   | S/R                   |
|     | D/R                   | D/R                   | S/R                   |
|     | E                     | D/R                   | S/R                   |

**Table 2: Supported DDR333 DIMM Populations**

| MCH | Bank 3 – DIMMs 3A, 3B | Bank 2 – DIMMs 2A, 2B | Bank 1 – DIMMs 1A, 1B |
|-----|-----------------------|-----------------------|-----------------------|
|     | S/R                   | S/R                   | S/R                   |
|     | E                     | S/R                   | S/R                   |
|     | E                     | E                     | S/R                   |
|     | E                     | D/R                   | D/R                   |
|     | E                     | E                     | D/R                   |
|     | D/R                   | S/R                   | S/R                   |
|     | E                     | D/R                   | S/R                   |

**Table 3: Supported DDR2-400 DIMM Populations**

| MCH | Bank 3 – DIMMs 3A, 3B | Bank 2 – DIMMs 2A, 2B | Bank 1 – DIMMs 1A, 1B |
|-----|-----------------------|-----------------------|-----------------------|
|     | S/R                   | S/R                   | S/R                   |
|     | E                     | S/R                   | S/R                   |
|     | E                     | E                     | S/R                   |
|     | E                     | D/R                   | D/R                   |
|     | E                     | E                     | D/R                   |
|     | E                     | S/R                   | D/R                   |
|     | S/R                   | S/R                   | D/R                   |

**Note:** On the Intel® Server Board SE7320VP2, when using all dual rank DDR333 or DDR2-400 DIMMs, a total of four DIMMs can be populated. Configuring more than four dual rank DDR333 or DDR2-400 DIMMs will result in the BIOS generating a memory configuration error.

## 2.2 Identifying “Single Rank” or “Double Ranked” DIMMs

- **x8SR** = x8 *Single-Ranked modules* - have 5 DRAMs on the front and 4 DRAMs on the back with empty spots in between the DRAMs.
- **x8DR** = x8 *Double-Ranked modules* - have 9 DRAMs on each side for a total of 18 (no empty slots)
- **x4SR** = x4 *Single-Ranked modules* - have 9 DRAMs on each side for a total of 18 – and look similar to x8 Double-Ranked
- **x4DR** = x4 *Double-Ranked modules* - have 18 (stacked) DRAMs on each side for a total of 36

The table below lists the current supported memory types:

| DDR266 Registered SDRAM Module Matrix |                   |               |                    |                            |                                  |               |
|---------------------------------------|-------------------|---------------|--------------------|----------------------------|----------------------------------|---------------|
| DIMM Capacity                         | DIMM Organization | SDRAM Density | SDRAM Organization | # SDRAM Devices/rows/Ranks | # Address bits rows/Ranks/column | Ranked        |
| 256MB                                 | 32M x 72          | 128Mbit       | 32M x 4            | 18/1/4                     | 12/2/11                          | Single Ranked |
| 256MB                                 | 32M x 72          | 128Mbit       | 16M x 8            | 18/2/4                     | 12/2/10                          | Double Ranked |
| 256MB                                 | 32M x 72          | 256Mbit       | 32M x 8            | 9/1/4                      | 13/2/10                          | Single Ranked |
| 512MB                                 | 64M x 72          | 256Mbit       | 64M x 4            | 18/1/4                     | 13/2/11                          | Single Ranked |
| 512MB                                 | 64M x 72          | 256Mbit       | 32M x 8            | 18/2/4                     | 13/2/10                          | Double Ranked |
| 512MB                                 | 64M x 72          | 512Mbit       | 64M x 8            | 9/1/4                      | 13/2/11                          | Single Ranked |
| 1GB                                   | 128M x 72         | 256Mbit       | 64M x 4            | 36/2/4                     | 13/2/11                          | Double Ranked |
| 1GB                                   | 128M x 72         | 512Mbit       | 64M x 8            | 18/2/4                     | 13/2/11                          | Double Ranked |
| 1GB                                   | 128M x 72         | 512Mbit       | 128M x 4           | 18/1/4                     | 13/2/12                          | Single Ranked |
| 2GB                                   | 256M x 72         | 512Mbit       | 128M x 4           | 36/2/4                     | 13/2/12                          | Double Ranked |
| 4GB                                   | 512M x 72         | 1Gbit         | 512M x 72          | 36/2/4                     | 14/2/12                          | Double Ranked |

| DDR333 Registered SDRAM Module Matrix |                   |               |                    |                            |                                  |               |
|---------------------------------------|-------------------|---------------|--------------------|----------------------------|----------------------------------|---------------|
| DIMM Capacity                         | DIMM Organization | SDRAM Density | SDRAM Organization | # SDRAM Devices/rows/Ranks | # Address bits rows/Ranks/column | Ranked        |
| 256MB                                 | 32M x 72          | 128Mbit       | 32M x 4            | 18/1/4                     | 12/2/11                          | Double Ranked |
| 256MB                                 | 32M x 72          | 128Mbit       | 16M x 8            | 18/2/4                     | 12/2/10                          | Double Ranked |
| 256MB                                 | 32M x 72          | 256Mbit       | 32M x 8            | 9/1/4                      | 13/2/10                          | Single Ranked |
| 512MB                                 | 64M x 72          | 256Mbit       | 64M x 4            | 18/1/4                     | 13/2/11                          | Single Ranked |
| 512MB                                 | 64M x 72          | 256Mbit       | 32M x 8            | 18/2/4                     | 13/2/10                          | Double Ranked |
| 512MB                                 | 64M x 72          | 512Mbit       | 64M x 8            | 9/1/4                      | 13/2/11                          | Single Ranked |
| 1GB                                   | 128M x 72         | 512Mbit       | 128M x 4           | 18/1/4                     | 13/2/12                          | Single Ranked |
| 1GB                                   | 128M x 72         | 512Mbit       | 64M x 8            | 18/2/4                     | 13/2/11                          | Double Ranked |
| 1GB                                   | 128M x 72         | 1Gbit         | 128M x 4           | 9/1/4                      | 14/2/11                          | Single Ranked |
| 2GB                                   | 256M x 72         | 1Gbit         | 128M x 4           | 18/1/4                     | 14/2/12                          | Single Ranked |
| 2GB                                   | 256M x 72         | 1Gbit         | 128M x 8           | 18/2/4                     | 14/2/11                          | Double Ranked |
| 4GB                                   | TBD               | TBD           | TBD                | TBD                        | TBD                              | TBD           |

| <b>DDR2-400 Registered SDRAM Module Matrix</b> |                          |                      |                           |                                   |   |               |
|--|--------------------------|----------------------|---------------------------|-----------------------------------|---|---------------|
| <b>DIMM Capacity</b>                           | <b>DIMM Organization</b> | <b>SDRAM Density</b> | <b>SDRAM Organization</b> | <b># SDRAM Devices/rows/Ranks</b> | <b># Address bits rows/Ranks/column</b> | <b>Ranked</b> |
| 256MB  | 32M x 72                 | 256Mbit              | 32M x 8                   | 9/1/4                             | 13/2/10                                 | Single Ranked |
| 512MB  | 64M x 72                 | 256Mbit              | 64M x 4                   | 18/1/4                            | 13/2/11                                 | Single Ranked |
| 512MB  | 64M x 72                 | 256Mbit              | 32M x 8                   | 18/2/4                            | 13/2/10                                 | Double Ranked |
| 512MB  | 64M x 72                 | 512Mbit              | 64M x 8                   | 9/1/4                             | 14/2/10                                 | Single Ranked |
| 1GB  | 128M x 72                | 512Mbit              | 128M x 4                  | 18/1/4                            | 14/2/11                                 | Single Ranked |
| 1GB  | 128M x 72                | 512Mbit              | 64M x 8                   | 18/2/4                            | 14/2/10                                 | Double Ranked |
| 1GB  | 128M x 72                | 1Gbit                | 128M x 8                  | 9/1/8                             | 14/3/10                                 | Single Ranked |
| 2GB  | 256M x 72                | 1Gbit                | 256M x 4                  | 18/1/8                            | 14/3/11                                 | Single Ranked |
| 2GB  | 256M x 72                | 1Gbit                | 128M x 8                  | 18/2/8                            | 14/3/10                                 | Double Ranked |
| 2GB  | 256M x 72                | 2Gbit                | 256M x 8                  | 9/1/8                             | 15/3/10                                 | Single Ranked |
| 4GB  | 512M x 72                | 2Gbit                | 256M x 8                  | 18/2/8                            | 15/3/10                                 | Double Ranked |
| 4GB  | 512M x 72                | 2Gbit                | 512M x 4                  | 18/1/8                            | 15/3/11                                 | Single Ranked |
| 4GB  | 512M x 72                | 4Gbit                | 512M x 8                  | 9/1/8                             | TBD                                     | Single Ranked |

### 3. Tested Memory

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The following tables list DIMM devices tested to be compatible with the Intel® Server Board SE7320VP2. The list of tested memory is periodically updated as qualified memory is added during the production life of the Intel product.

Intel strongly recommends the use of ECC memory in all server products.

Memory modules not listed in the following tables have not been tested for compatibility and their use with the Intel® Server Board SE7320VP2 may result in unpredictable operation and data loss.

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

**Note:** This list is not intended to 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.

| <b>Intel® Server Board SE7320VP2</b>         |                     |                      |             |                   |          |           |                   |      |     |
|--|---------------------|----------------------|-------------|-------------------|----------|-----------|-------------------|------|-----|
| <b>Registered ECC, DDR266 DIMM Modules</b>   |                     |                      |             |                   |          |           |                   |      |     |
| <b>256MB Size (32M x 72)</b>                 |                     |                      |             |                   |          |           |                   |      |     |
| Manufacturer                                 | Part Number         | DRAM Part Number     | DRAM Vendor | PCB Part Number   | Date     | Lead-Free | DRAM Organization | Rank | EOL |
| Micron*                                      | MT9VDDT3272G-265G3  | MT46V32M8-6T G       | Micron      |                   | 10/1/04  |           | (32Mx8)*9         | SR   |     |
| +Legend*                                     | L3272YC5-RU1HDC5B   | HY5DU56822BT-J rev B | Hyundai     | DRR1U0818-A rev 1 | 3/9/05   |           | (32Mx8)*9         | SR   |     |
| <b>Registered ECC, DDR333 DIMM Modules</b>   |                     |                      |             |                   |          |           |                   |      |     |
| <b>256MB Size (32M x 72)</b>                 |                     |                      |             |                   |          |           |                   |      |     |
| Manufacturer                                 | Part Number         | DRAM Part Number     | DRAM Vendor | PCB Part Number   | Date     | Lead-Free | DRAM Organization | Rank | EOL |
| Samsung*                                     | M312L3223EG0-CB3    | K4H560838E-GCB3      | Samsung     |                   | 9/12/04  |           | (32Mx8)*9         | SR   |     |
| Qimonda*                                     | HYS72D32300GB R-6-C | HYB25D256800CC-6     | Qimonda     |                   | 10/25/04 |           | (32Mx8)*9         | SR   |     |
| Qimonda                                      | HYS72D32300GB R-6-B | HYB25D256800BC-6     | Qimonda     |                   | 10/25/04 |           | (32Mx8)*9         | SR   |     |
| Micron                                       | MT9VDDF3272G-335G3  | MT46V32M8FG-6        | Micron      |                   | 12/17/04 |           | (32Mx8)*9         | SR   |     |
| Samsung                                      | M312L3223EZ0-CB3    | K4H560838E-ZCB3      | Samsung     |                   | 2/24/05  | Yes       | (32Mx8)*9         | SR   |     |
| Samsung                                      | M312L3223EG3-CB3    | K4H560838E-GCB3      | Samsung     |                   | 11/15/05 |           | (32Mx8)*9         | SR   |     |
| Samsung                                      | M312L3223EZ3-CB3    | K4H560838E-ZCB3      | Samsung     |                   | 11/15/05 | Yes       | (32Mx8)*9         | SR   |     |
| <b>Registered ECC, DDR2-400 DIMM Modules</b> |                     |                      |             |                   |          |           |                   |      |     |
| <b>256MB Size (32M x 72)</b>                 |                     |                      |             |                   |          |           |                   |      |     |
| Manufacturer                                 | Part Number         | DRAM Part Number     | DRAM Vendor | PCB Part Number   | Date     | Lead-Free | DRAM Organization | Rank | EOL |
| Qimonda                                      | HYS72T32000HR-5-A   | HYB18T256800AF5-A    | Qimonda     |                   | 5/23/05  | Yes       | (32Mx8)*9         | SR   |     |
| Micron                                       | MT9HTF3272Y-40EB2   | MT47H32M8BP-37E      | Micron      |                   | 5/23/05  | Yes       | (32Mx8)*9         | SR   |     |
| Samsung                                      | M393T3253FG0-CCC    | K4T56083QF-GCCC      | Samsung     |                   | 5/23/05  |           | (32Mx8)*9         | SR   |     |
| Samsung                                      | M393T3253FZ0-CCC    | K4T56083QF-ZCCC      | Samsung     |                   | 5/23/05  | Yes       | (32Mx8)*9         | SR   |     |
| Samsung                                      | M393T3253FG3-CCC    | K4T56083QF-GCCC      | Samsung     |                   | 11/4/05  |           | (32Mx8)*9         | SR   |     |
| Samsung                                      | M393T3253FZ3-CCC    | K4T56083QF-ZCCC      | Samsung     |                   | 11/4/05  | Yes       | (32Mx8)*9         | SR   |     |

(+) 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.

**Verify that the DRAM part number matches the DRAM on this list before purchasing.**

**Intel® Server Board SE7320VP2**  
**Registered, ECC, DDR266 DIMM Modules**  
**512 MB Sizes (64Mx72)**

| Manufacturer | Part Number         | DRAM Part Number       | DRAM Vendor | PCB Part Number   | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|--------------|---------------------|------------------------|-------------|-------------------|----------|-----------|-------------------|------|-----|
| Micron       | MT18VDDT6472G-265G3 | MT46V64M4-75 G         | Micron      |                   | 9/13/04  |           | (32Mx8)*<br>18    | DR   |     |
| +TRS*        | TRS21202            | HYB25D256400CE-7 rev C | Qimonda     | M0530LA1 rev 1    | 11/4/04  |           | (64Mx4)*<br>18    | SR   |     |
| +TRS         | TRS21151            | HYB25D256400BT-7 rev B | Qimonda     | M0530LA1 rev 1    | 11/10/04 |           | (64Mx4)*<br>18    | SR   |     |
| +TRS         | TRS21152            | HYB25D256800BT-7 rev B | Qimonda     | M0529LA1 rev 1    | 11/9/04  |           | (32Mx8)*<br>18    | DR   |     |
| +Legend      | L6472YC5-RU1HDC5B   | HY5DU56822BT-J rev B   | Hyundai     | DRR1U0818-A rev 1 | 3/9/05   |           | (32Mx8)*<br>18    | DR   |     |
| Hynix        | HYMD264G726D4 M-H   | HY5DU56422DT-H         | Hynix       |                   | 4/6/05   |           | (64Mx4)*<br>18    | SR   |     |
| Samsung      | M312L6420ETS-CB0    | K4H560438E-TCB0        | Samsung     |                   | 4/13/05  |           | (64Mx4)*<br>18    | SR   |     |
| Samsung      | M312L6420EUS-CB0    | K4H560438E-UCB0        | Samsung     |                   | 4/13/05  | Yes       | (64Mx4)*<br>18    | SR   |     |

**Registered, ECC, DDR333 DIMM Modules**  
**512 MB Sizes (64Mx72)**

| Manufacturer                 | Part Number           | DRAM Part Number       | DRAM Vendor | PCB Part Number     | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|------------------------------|-----------------------|------------------------|-------------|---------------------|----------|-----------|-------------------|------|-----|
| Qimonda                      | HYS72D64300GB R-6-B   | HYB25D256400BC-6       | Qimonda     |                     | 9/4/04   |           | (64Mx4)*<br>18    | SR   |     |
| +ATP Electronics*            | AB64L72L4BFB3C        | HYB25D256400BC-5 rev B | Qimonda     | SB184L04L1          | 10/25/04 |           | (64Mx4)*<br>18    | SR   |     |
| Qimonda                      | HYS72D64300GB R-6-C   | HYB25D256400CC-6       | Qimonda     |                     | 10/25/04 |           | (64Mx4)*<br>18    | SR   |     |
| Qimonda                      | HYS72D64320GB R-6-C   | HYB25D256800CC-6       | Qimonda     |                     | 10/25/04 |           | (32Mx8)*<br>18    | DR   |     |
| Hynix*                       | HYMD564G72BF8 N-J AA  | HY5DU12822BF-J         | Hynix       |                     | 10/27/04 |           | (64Mx8)*<br>9     | SR   |     |
| +ATP Electronics             | AB64L72L4BFB3C        | HYB25D256400BC-5 rev B | Qimonda     | SB184L04L1          | 10/25/04 |           | (64Mx4)*<br>18    | SR   |     |
| +ATP Electronics             | AB64L72L4BFB3S        | K4H560438E-GCB3 rev E  | Samsung     | SB184L04L1          | 11/8/04  |           | (64Mx4)*<br>18    | SR   |     |
| +Smart Modular Technologies* | SM6472RDDR6H1 BGBC    | HYB25D256400CC-6 rev C | Qimonda     | 184-22-2            | 11/1/04  |           | (64Mx4)*<br>18    | SR   |     |
| +Apacer*                     | 75.96299.555          | HYB25D256400CC-6 rev C | Qimonda     | 48.16164.013 rev C  | 11/24/04 |           | (64Mx4)*<br>18    | SR   |     |
| Hynix                        | HYMD264G726DF 4N-J AA | HY5DU564220-F-J        | Hynix       |                     | 12/17/04 |           |                   |      |     |
| +Legacy Electronics Inc.*    | 88S6JDGR-1NDG         | HYB25D256400BC6 rev B  | Qimonda     | LE36DDF1844RC rev B | 1/6/05   |           | (64Mx4)*<br>18    | SR   |     |
| +Ventura Technology Group*   | D52YCK44SV            | K4H560438E-GCB3 rev E  | Samsung     | DR1G472B            | 2/22/05  |           | (64Mx4)*<br>18    | SR   |     |
| Samsung                      | M312L6420EG0-CB3      | K4H560438E-GCB3        | Samsung     |                     | 2/25/05  |           | (64Mx4)*<br>18    | SR   |     |



| <b>Registered, ECC, DDR333 DIMM Modules<br/>512 MB Sizes (64Mx72)</b> |                           |                           |                    |                        |             |                  |                          |             |            |
|---|---------------------------|---------------------------|--------------------|------------------------|-------------|------------------|--------------------------|-------------|------------|
| <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>Lead-Free</b> | <b>DRAM Organization</b> | <b>Rank</b> | <b>EOL</b> |
| Samsung   | M312L6420EZ0-CB3          | K4H560438E-ZCB3           | Samsung            |                        | 2/25/05     | Yes              | (64Mx4)*<br>18           | SR          |            |
| +Dataram  | DTM63676D                 | HYB25D256400CC-6<br>rev C | Qimonda            | 40018A rev<br>A        | 3/16/05     |                  | (64Mx4)*<br>18           | SR          |            |
| +Ventura<br>Technology<br>Group                                       | D52YCK44MV                | MT46V64M4FG-6 rev<br>G    | Micron             | DR1G472B               | 3/25/05     |                  | (64Mx4)*<br>18           | SR          |            |
| +Dane-Elec*   | DLD333R072645H            | MT46V64M4FG-5B rev<br>G   | Micron             | DR1G472B               | 3/18/05     |                  | (64Mx4)*<br>18           | SR          |            |
| +Kingston*  | KVR333S4R25/51<br>2I      | HYB25D256400CC-6<br>rev C | Qimonda            | 2025161-<br>001.B00    | 4/7/05      |                  | (64Mx4)*<br>18           | SR          |            |
| SimpleTech*   | ST72E4K64ML-<br>B06E      | HYB25D256400CC-6<br>rev C | Qimonda            | 01269 rev A            | 4/18/05     |                  | (64Mx4)*<br>18           | SR          |            |
| Micron  | MT18VDDF6472G<br>-335G3   | 4AGII D9BJR               | Micron             |                        | 5/3/05      |                  | (64Mx8)*<br>9            | SR          |            |
| +Avant<br>Technology  | AVM7264R38C533<br>3K6-MTG | MT46V64M4FG-5B rev<br>G   | Micron             | RCE0020-01<br>rev 1    | 5/5/05      |                  | (64Mx4)*<br>18           | SR          |            |
| +Wintec<br>Industries*  | 3C944646-L                | HYB25D256400CC-5<br>rev C | Qimonda            | DR1G472B               | 6/8/05      |                  | (64Mx4)*<br>18           | SR          |            |
| +Kingston   | KVR333S4R25/51<br>2I      | K4H560438E-GCB3 rev<br>E  | Samsung            | 2025161-<br>001.B00 na | 7/15/05     |                  | (64Mx4)*<br>18           | SR          |            |
| Micron  | MT9VDDF6472G-<br>335D3    | MT46V64M8FG               | Micron             |                        | 9/26/05     |                  | (64Mx8)*<br>9            | SR          |            |
| Samsung   | M312L6523CZ0-<br>CB3      | K4H510838C-ZCB3           | Samsung            |                        | 10/24/05    | Yes              | (64Mx8)*<br>9            | SR          |            |
| Hynix   | HYMD564G726CF<br>P8N-J    | HY5DU12822CFP-J           | Hynix              |                        | 10/25/05    |                  | (64Mx8)*<br>9            | SR          |            |
| Samsung   | M312L6420EG3-<br>CB3      | K4H560438E-GCB3           | Samsung            |                        | 11/15/05    |                  | (64Mx4)*<br>18           | SR          |            |
| Samsung   | M312L6420EZ3-<br>CB3      | K4H560438E-ZCB3           | Samsung            |                        | 11/15/05    | Yes              | (64Mx4)*<br>18           | SR          |            |
| Samsung   | M312L6523CZ3-<br>CB3      | K4H510838C-ZCB3           | Samsung            |                        | 11/15/05    | Yes              | (64Mx8)*<br>9            | SR          |            |
| Qimonda   | HYS72D256320HB<br>R-6-C   | HYB25D512400CF-6          | Qimonda            |                        | 1/31/06     | Yes              | (64Mx8)*<br>9            | SR          |            |
| +TRS  | TRS21220                  | HYB25D256400BC-6<br>rev B | Qimonda            | M0545LA1<br>rev 1      | 3/9/06      |                  | (64Mx4)*<br>18           | SR          |            |
| +TRS  | TRS21180                  | HYB25D256400CC-6<br>rev C | Qimonda            | M0545LA1<br>rev 1      | 3/15/06     |                  | (64Mx4)*<br>18           | SR          |            |
| Kingston  | KVR333S4R25/51<br>2I      | HYB25D256400CF-5<br>rev C | Qimonda            | 2025161-<br>001.B00 na | 3/20/07     | Yes              | (64Mx4)*<br>18           | SR          |            |
| Kingston  | KVR333S4R25/5<br>12I      | HYB25D256400CF-5<br>rev C | Qimonda            | 2025318-<br>001.A00    | 09/23/08    | Yes              | 64M x 4                  | SR          |            |

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

| Manufacturer              | Part Number        | DRAM Part Number       | DRAM Vendor | PCB Part Number     | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|---------------------------|--------------------|------------------------|-------------|---------------------|----------|-----------|-------------------|------|-----|
| Samsung                   | M393T6453FG0-CCC   | K4T56083QF-GCCC        | Samsung     |                     | 5/23/05  |           | (32Mx8)*<br>18    | DR   |     |
| Samsung                   | M393T6453FZ0-CCC   | K4T56083QF-ZCCC        | Samsung     |                     | 5/23/05  | Yes       | (32Mx8)*<br>18    | DR   |     |
| Samsung                   | M393T6450FG0-CCC   | K4T56043QF-GCCC        | Samsung     |                     | 5/23/05  |           | (64Mx4)*<br>18    | SR   |     |
| Samsung                   | M393T6450FZ0-CCC   | K4T56043QF-ZCCC        | Samsung     |                     | 5/23/05  | Yes       | (64Mx4)*<br>18    | SR   |     |
| Qimonda                   | HYS72T64020HR-5-A  | HYB18T256800AF5-A      | Qimonda     |                     | 6/6/05   | Yes       | (32Mx8)*<br>18    | DR   |     |
| Qimonda                   | HYS72T64001HR-5-A  | HYB18T256400AF5-A      | Qimonda     |                     | 6/6/05   | Yes       | (64Mx4)*<br>18    | SR   |     |
| Samsung                   | M393T6553BG0-CCC   | K4T51083QB-GCCC        | Samsung     |                     | 6/6/05   |           | (64Mx8)*<br>9     | SR   |     |
| Samsung                   | M393T6553CZ0-CCC   | K4T51083QC-ZCCC        | Samsung     |                     | 6/20/05  | Yes       | (64Mx8)*<br>9     | SR   |     |
| Micron                    | MT18HTF6472Y-40EB2 | MT47H64M4BP-37E        | Micron      |                     | 6/20/05  | Yes       | (64Mx4)*<br>18    | SR   |     |
| Micron                    | MT9HTF6472Y-40EB2  | MT47H64M8CB-5E         | Micron      |                     | 7/18/05  | Yes       | (64Mx8)*<br>9     | SR   |     |
| +Viking*                  | VR5ER647218EB PL1  | MT47H64M8CB-37E rev B  | Micron      | 0000992A rev A      | 07/26/05 |           | (64Mx8)*<br>9     | SR   |     |
| Samsung                   | M393T6553BZ0-CCC   | K4T51083QB-ZCCC        | Samsung     |                     | 8/3/05   | Yes       | (64Mx8)*<br>9     | SR   |     |
| Qimonda                   | HYS72T64000GR-5-A  | HYB18T512800AC5        | Qimonda     |                     | 8/15/05  |           | (64Mx8)*<br>9     | SR   |     |
| Qimonda                   | HYS72T64000HR-5-A  | HYB18T512800AC5        | Qimonda     |                     | 8/15/05  | Yes       | (64Mx8)*<br>9     | SR   |     |
| +Kingston                 | KVR400D2S8R3/5 12I | HYB18T512800AF37 rev A | Qimonda     | 2025263-001.C00 na  | 9/13/05  |           | (64Mx8)*<br>9     | SR   |     |
| +Ventura Technology Group | D2-52KC53SV-333    | K4T56043QF-ZCD5 rev F  | Samsung     | D2R472 na           | 9/26/05  |           | (64Mx8)*<br>9     | SR   |     |
| +Dataram                  | DTM63312A          | HYB18T512800AF5 rev A  | Qimonda     | 40042A rev A        | 10/11/05 |           | (64Mx8)*<br>9     | SR   |     |
| +Wintec Industries        | 39C921284B-GL      | K4T51083QB-ZCD5 rev B  | Samsung     | D2R872 na           | 10/4/05  |           | (64Mx8)*<br>9     | SR   |     |
| Hynix                     | HYMP564R728-E3     | HY5PS12821-F-E3        | Hynix       |                     | 10/12/05 |           | (64Mx8)*<br>9     | SR   |     |
| +Apacer                   | 75.963A1.G01       | EDE5108AGSE-5C-E rev G | Elpida      | 48.16188.01 1 rev 1 | 10/19/05 | Yes       | (64Mx8)*<br>9     | SR   |     |
| Samsung                   | M393T6450FZ3-CCC   | K4T56043QF-ZCCC        | Samsung     |                     | 10/24/05 | Yes       | (64Mx4)*<br>18    | SR   |     |
| Samsung                   | M393T6450FG3-CCC   | K4T56043QF-GCCC        | Samsung     |                     | 11/4/05  |           | (64Mx4)*<br>18    | SR   |     |
| Samsung                   | M393T6453FZ3-CCC   | K4T56083QF-ZCCC        | Samsung     |                     | 11/4/05  | Yes       | (32Mx8)*<br>18    | DR   |     |
| Samsung                   | M393T6453FG3-CCC   | K4T56083QF-GCCC        | Samsung     |                     | 11/4/05  |           | (32Mx8)*<br>18    | DR   |     |
| Samsung                   | M393T6553CZ3-CCC   | K4T51083QC-ZCCC        | Samsung     |                     | 11/4/05  | Yes       | (64Mx8)*<br>9     | SR   |     |
| +Kingston                 | KVR400D2S8R3/5 12I | NT5TU64M8AE-37B rev A  | Nanya       | 2025263-001.C00 na  | 12/14/05 |           | (64Mx4)*<br>18    | SR   |     |

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

| Manufacturer               | Part Number         | DRAM Part Number             | DRAM Vendor        | PCB Part Number       | Date     | Lead-Free | DRAM Organization                  | Rank | EOL |
|----------------------------|---------------------|------------------------------|--------------------|-----------------------|----------|-----------|------------------------------------|------|-----|
| +Apacer                    | 75.963A1.G02        | K4T51083QC-ZCD5 rev C        | Samsung            | 48.16188.011 rev 1    | 12/21/05 | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Hynix                      | HYMP564R72P8-E3     | HY5PS12821FP-E3              | Hynix              |                       | 1/10/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Hynix                      | HYMP564R72BP8-E3    | HY5PS12821BFP-E3             | Hynix              |                       | 1/10/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| +Legacy Electronics Inc.   | B557K4C2AAA-50      | K4T51083QC-ZCCC rev C        | Samsung            | LE9DD2F2408RRA rev A  | 2/10/06  |           | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| +ATP Electronics           | AH64K72F8BHC4S      | K4T51083QC-ZCD5 rev C        | Samsung            | SH240F08K1 na         | 2/28/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| +Legend                    | L64723C7-R41H2H1F   | HY5PS12821FP-E3 rev 1st Gen. | Hynix              | 104 (0530,0534)       | 3/10/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| +TRS                       | TRS31260            | HYB18T512800AF5 rev A        | Qimonda            | M0551LA1 rev 1        | 3/24/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Smart Modular Technologies | SG647RDR264835-SC   | K4T51083QC-ZCCC rev C        | Samsung            | M393T6553BG1 (KS-11A) | 04/05/06 | Yes       |                                    |      |     |
| TRS                        | TRS31261            | HYB18T256400AF5 rev A        | Qimonda (Infineon) | M0549LA1 rev 1        | 04/10/06 | Yes       |                                    |      |     |
| Buffalo                    | D2R400A-ES512MBJ    | MT47H64M8CB-5E rev B         | Micron             | 2DRA18F-BA na         | 04/27/06 | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Dataram                    | DTM63312B           | NT5TU64M8AE-37B rev A        | Nanya              | 40042A rev A          | 05/02/06 | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Dataram                    | DTM63311D           | HYB18T256400AF5 rev A        | Qimonda            | 40011A rev A          | 05/23/06 | Yes       |                                    |      |     |
| TRS                        | TRS31260X           | HYB18T512800AF5 rev A        | Qimonda (Infineon) | M0551LA1 rev 1        | 7/3/06   | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  |      |     |
| Kingston                   | KVR400D2S8R3/512I   | E5108AG-5C-E rev G           | Elpida             | 2025263-001.C00 na    | 7/12/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  |      |     |
| Super Talent Electronics   | T400RA512/S12TR8BHS | K4T51083QC-ZCD5 rev C        | Samsung            | DR20809 rev F1.01     | 8/15/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| TRS                        | TRS31261X           | HYB18T256400AF5 rev A        | Qimonda (Infineon) | M0549LA1 rev 1        | 8/29/06  | Yes       | (64Mx4) <sup>*</sup> <sub>18</sub> | SR   |     |
| TRS                        | TRS31275            | E5108AG-5C-E rev G           | Elpida             | M0551LA1 rev 1        | 9/15/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Kingston                   | KVR400D2S8R3/512I   | E5108AGBG-6E-E rev G         | Elpida             | 2025263-001.C00 na    | 11/2/06  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |
| Dataram                    | DTM63312E           | HY5PS12821CFP-Y5 rev C       | Hynix              | 40042A rev A          | 4/19/07  | Yes       | (64Mx8) <sup>*</sup> <sub>9</sub>  | SR   |     |

(+) 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.

**Verify that the DRAM part number matches the DRAM on this list before purchasing.**

**Intel® Server Board SE7320VP2**  
**Registered, ECC, DDR266 DIMM Modules**  
**1GB Size (128M x 72)**

| Manufacturer                  | Part Number              | DRAM Part Number               | DRAM Vendor | PCB Part Number               | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|-------------------------------|--------------------------|--------------------------------|-------------|-------------------------------|----------|-----------|-------------------|------|-----|
| Hynix                         | HYMD512G726B<br>4M-HAA   | HY5DU12422BT-H                 | Hynix       |                               | 10/1/04  |           | (128Mx4)<br>*18   | SR   |     |
| Hynix                         | HYMD512G726B<br>4M-HAA   | HY5DU12422BT-H                 | Hynix       |                               | 11/15/04 |           | (128Mx4)*<br>18   | SR   |     |
| +Ventura<br>Technology Group  | D54WYK42SV               | K4H510838B-TCB3<br>rev B       | Samsung     | DR1G872-A                     | 11/19/04 |           | (64Mx8)*<br>18    | DR   |     |
| +TRS                          | TRS21174                 | HYB25D512800AT-<br>7 rev A     | Qimonda     | M0529LA1<br>rev 1             | 11/17/04 |           | (64Mx8)*<br>18    | DR   |     |
| +TRS                          | TRS21171                 | HYB25D256400BC-<br>7 rev B     | Qimonda     | M0533LA1<br>rev 1             | 11/18/04 |           | (64Mx4)*<br>36    | DR   |     |
| +TRS                          | TRS21203                 | HYB25D512400BE-<br>7 rev B     | Qimonda     | M0530LA1<br>rev 1             | 11/22/04 |           | (128Mx4)*<br>18   | SR   |     |
| +Legend                       | L1272YC5-<br>RU1HDH5A    | HY5DU12822AT-H<br>rev A        | Hyundai     | DRR1U0818<br>-A rev 1         | 3/11/05  |           | (64Mx8)*<br>18    | DR   |     |
| Samsung                       | M312L2828ET0-<br>CB0     | K4H510638E-TCB0                | Samsung     |                               | 6/20/05  |           | (64Mx4)*<br>36    | DR   |     |
| Micron                        | MT18VDDT12872<br>G-265D2 | MT46V128M4TG-6T                | Micron      |                               | 6/20/05  |           | (128Mx4)*<br>18   | SR   |     |
| +Dataram                      | DTM63698C                | HYB25D512400BT(<br>BE)-6 rev B | Qimonda     | 40581A rev<br>A               | 6/30/05  | Yes       | (128Mx4)*<br>18   | SR   |     |
| Samsung                       | M312L2828EU0-<br>CB0     | K4H510638E-UCB0                | Samsung     |                               | 9/26/05  | Yes       | (64Mx4)*<br>36    | DR   |     |
| +Legend                       | L1272YC5-<br>183HDD5A    | HY5DU56422AS-H<br>rev A        | Hyundai     | 184RL rev 3                   | 10/7/05  |           | (64Mx4)*<br>36    | DR   |     |
| Samsung                       | M312L2920CUS-<br>CB0     | K4H510438C-UCB0                | Samsung     |                               | 9/21/05  | Yes       | (128Mx4)*<br>18   |      |     |
| +Dataram                      | DTM63653R                | HYB25D256400CF-<br>6 rev C     | Qimonda     | 40599A rev<br>A               | 2/7/06   | Yes       | (64Mx4)*<br>36    | DR   |     |
| Smart Modular<br>Technologies | SG12872RDDR3<br>08BTSC   | K4H510838C-UCCC<br>rev C       | Samsung     | PG52G184N<br>EBZ6RCL<br>rev A | 05/18/06 | Yes       | (64Mx8)*<br>18    | DR   |     |

**Registered, ECC, DDR333 DIMM Modules  
1GB Size (128M x 72)**

| Manufacturer                | Part Number          | DRAM Part Number       | DRAM Vendor | PCB Part Number        | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|-----------------------------|----------------------|------------------------|-------------|------------------------|----------|-----------|-------------------|------|-----|
| Qimonda                     | HYS72D128320G-BR-6-C | HYB25D256400CC-6       | Qimonda     |                        | 9/1/04   |           | (64Mx4)*<br>36    | DR   |     |
| Qimonda                     | HYS72D128300G-BR-6-B | HYB25D512400BC-6 B     | Qimonda     |                        | 10/1/04  |           | (128Mx4)*<br>*18  | SR   |     |
| +ATP Electronics            | AB28L72Y4BFB3 C      | HYB25D256400BC-5 rev B | Qimonda     | SB184Y04L1             | 11/3/04  |           | (64Mx4)*<br>36    | DR   |     |
| +ATP Electronics            | AB28L72L4BFB3 C      | HYB25D512400BC-6 rev B | Qimonda     | SB184L04L1             | 11/10/04 |           | (128Mx4)*<br>18   | SR   |     |
| +Smart Modular Technologies | SM12872RDDR6 H2BGIC  | HYB25D256400CC-6 rev C | Qimonda     | P54G184NE SZBRCD rev B | 11/5/04  |           | (64Mx4)*<br>36    | DR   |     |
| +Smart Modular Technologies | SM12872RDDR6 H2BGAS  | K4H560438E-GCB3 rev E  | Samsung     | P54G184NE SZBRCD rev B | 11/11/04 |           | (64Mx4)*<br>36    | DR   |     |
| +TRS                        | TRS21197             | HYB25D256400CC-6 rev C | Qimonda     | M0533LA1 rev 1         | 11/12/04 |           | (64Mx4)*<br>36    | DR   |     |
| Kingston                    | KVR333X72RC25 /1G    | HYB25D256400CC-6 rev C | Qimonda     | 2025247-001.A00        | 11/16/04 |           | (64Mx4)*<br>36    | DR   |     |
| +Apacer                     | 75.07299.561         | HYB25D512400BC-6 rev B | Qimonda     | 48.16164.01 3 rev C    | 11/24/04 |           | (128Mx4)*<br>18   | SR   |     |
| +Legacy Electronics Inc.    | 89S6MDZR-1NDG        | HYB25D512400BC-6 rev B | Qimonda     | LE18DDF18 44R rev A    | 11/30/04 |           | (128Mx4)*<br>18   | SR   |     |
| +Viking                     | VI4CR287224DB KL2    | K4H560438E-GCB3 rev E  | Samsung     | 0000972B               | 12/2/04  |           | (64Mx4)*<br>36    | DR   |     |
| +Smart Modular Technologies | SM12872RDDR6 H1BGAI  | HYB25D512400BC-6 rev B | Qimonda     | P52G184NE SZBGAX rev A | 12/21/04 |           | (128Mx4)*<br>18   | SR   |     |
| Qimonda                     | HYS72D128321G-BR-6-B | HYB25D512800BC-6 B     | Qimonda     |                        | 1/10/05  |           | (64Mx8)*<br>18    | DR   |     |
| +Legacy Electronics Inc.    | 89S6JDGM-1NDG        | HYB25D256400BC6 rev B  | Qimonda     | LE36DDF18 44RRF rev A  | 2/2/05   |           | (64Mx4)*<br>36    | DR   |     |
| +Smart Modular Technologies | SM12872RDDR6 H1BGBI  | HYB25D512400BC-6 rev B | Qimonda     | 184-22-2               | 2/23/05  |           | (128Mx4)*<br>18   | SR   |     |
| +ATP Electronics            | AB28L72L4BFB3 M      | MT46V128M4FN-5B rev D  | Micron      | SB184L04L1             | 2/18/05  |           | (128Mx4)*<br>18   | SR   |     |
| +ATP Electronics            | AB28L72L4BFB3 S      | K4H510438C-ZCB3 rev C  | Samsung     | SB184L04L1             | 2/22/05  |           | (128Mx4)*<br>18   | SR   |     |
| Samsung                     | M312L2820EG0-CB3     | K4H510438B-GCB3        | Samsung     |                        | 3/2/05   |           | (64Mx4)*<br>36    | DR   |     |
| +Ventura Technology Group   | D54YFK44MV           | MT46V128M4FN-6 rev D   | Micron      | DR1G472B               | 3/2/05   |           | (128Mx4)*<br>18   | SR   |     |
| +Dane-Elec                  | DLD333R072285 M      | MT46V128M4FN-5B rev D  | Micron      | DR1G472B               | 3/4/05   |           | (128Mx4)*<br>18   | SR   |     |

**Registered, ECC, DDR333 DIMM Modules  
1GB Size (128M x 72)**

| Manufacturer              | Part Number            | DRAM Part Number       | DRAM Vendor | PCB Part Number    | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|---------------------------|------------------------|------------------------|-------------|--------------------|----------|-----------|-------------------|------|-----|
| Samsung                   | M312L2820EG0-CB3       | K4H510438B-GCB3        | Samsung     |                    | 3/2/05   |           | (64Mx4)*<br>36    | DR   |     |
| +Dataram                  | DTM63677F              | HYB25D256400CC-6 rev C | Qimonda     | 40599A rev A       | 3/22/05  |           | (64Mx4)*<br>36    | DR   |     |
| +Ventura Technology Group | D54YFK44SV             | K4H510438C-ZCB3 rev C  | Samsung     | DR1G472B           | 3/30/05  |           | (128Mx4)*<br>18   | SR   |     |
| Wintec Industries         | 3C954641D-L            | HYB25D256400CC-5 rev C | Qimonda     | ZK4096M84 RCJB     | 4/5/05   |           | (64Mx4)*<br>36    | DR   |     |
| +Dataram                  | DTM63677F              | HYB25D256400CC-6 rev C | Qimonda     | 40599A rev A       | 3/22/05  |           | (64Mx4)*<br>36    | DR   |     |
| SimpleTech                | ST72E4L128ML-B06E      | HYB25D512400BC-6 rev B | Qimonda     | 01269 rev A        | 4/20/05  |           | (128Mx4)*<br>18   | SR   |     |
| Samsung                   | M312L2920CZ0-CB3       | K4H510438C-ZCB3        | Samsung     |                    | 5/3/05   | Yes       | (128Mx4)*<br>18   | SR   |     |
| Micron                    | MT36VDDF12872 G-335G3  | MT46V64M4FG-6          | Micron      |                    | 5/3/05   |           | (64Mx4)*<br>36    | DR   |     |
| Qimonda                   | HYS72D128300G BR-6-B   | HYB25D512400BC-6 B     | Qimonda     |                    | 5/3/05   |           | (128Mx4)*<br>18   | SR   |     |
| +Dataram                  | DTM63694B              | K4H510438C-ZCB3 rev C  | Samsung     | 40018A rev A       | 5/16/05  |           | (128Mx4)*<br>18   | SR   |     |
| Samsung                   | M312L2820EZ0-CB3       | K4H510438B-GCB3        | Samsung     |                    | 6/22/05  | Yes       | (64Mx4)*<br>36    | DR   |     |
| +Kingston                 | KVR333S4R25/1 GI       | HYB25D512400BC-6 rev B | Qimonda     | 2025318-001.A00 na | 7/5/05   |           | (128Mx4)*<br>18   | SR   |     |
| Micron                    | MT18VDDF12872 G-335D3  | MT46V128M4FN-6         | Micron      |                    | 7/8/05   |           | (128Mx4)*<br>18   | SR   |     |
| Hynix                     | HYMD512G726B F4N-J     | HY5DU12422B-F-J        | Hynix       |                    | 7/25/05  |           | (64Mx4)*1<br>8    |      |     |
| Samsung                   | M312L2923CZ0-CB3       | K4H510838C-ZCB3        | Samsung     |                    | 7/25/05  | Yes       | (64Mx8)*1<br>8    | DR   |     |
| +Kingston                 | KVR333D4R25/1 GI       | K4H560438E-GCB3 rev E  | Samsung     | 2025247-001.A00 na | 08/09/05 |           | (64Mx4)*<br>36    | DR   |     |
| +Dataram                  | DTM63677F              | HYB25D256400CC-6 rev C | Qimonda     | 40599A rev A       | 3/22/25  |           | (64Mx4)*<br>36    | DR   |     |
| +Legacy Electronics Inc.  | 89B6MDZR-1NDG          | K4H510438C-ZCB3 rev C  | Samsung     | LE18DDF1844R rev A | 10/14/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Avant Technology         | AVM7228R53C5333K6-NYBP | NT5DS128M4BG-6K rev B  | Nanya       | RCE0020-01 rev 1   | 10/28/05 |           | (128Mx4)*<br>18   | SR   |     |
| Hynix                     | HYMD512G726C FP4N-J    | HY5DU12422CFP-J        | Hynix       |                    | 10/24/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Legend                   | L1272YC6-PPXSMD1B      | K4H510438B-GCB3 rev B  | Samsung     | M312L6420 G0 na    | 12/1/05  |           | (128Mx4)*<br>18   | SR   |     |
| +Legend                   | L1272YC6-PPXSDD2E      | K4H560438E-GCB3 rev E  | Samsung     | DR2G472B na        | 1/11/06  |           | (64Mx4)*<br>36    | DR   |     |
| Samsung                   | M312L2920CZ3-CB3       |                        | Samsung     |                    | 11/15/05 | Yes       | (128Mx4)*<br>18   | SR   |     |

**Registered, ECC, DDR333 DIMM Modules  
1GB Size (128M x 72)**

| Manufacturer | Part Number         | DRAM Part Number       | DRAM Vendor        | PCB Part Number    | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|--------------|---------------------|------------------------|--------------------|--------------------|----------|-----------|-------------------|------|-----|
| Samsung      | M312L2923CZ3-CB3    |                        | Samsung            |                    | 11/15/05 | Yes       | (64Mx8)*18        | DR   |     |
| Samsung      | M312L2820EG3-CB3    |                        | Samsung            |                    | 11/15/05 |           | (64Mx4)*36        | DR   |     |
| Samsung      | M312L2820EZ3-CB3    |                        | Samsung            |                    | 11/15/05 | Yes       | (64Mx4)*36        | DR   |     |
| Qimonda      | HYS72D128321HBR-6-C | HYB25D512800CF-6       | Qimonda            |                    | 1/31/06  | Yes       | (64Mx8)*18        | DR   |     |
| Qimonda      | HYS72D128300HBR-6-C | HYB25D512400CF-6       | Qimonda            |                    | 1/31/06  | Yes       | (128Mx4)*18       | SR   |     |
| +TRS         | TRS21196            | HYB25D256400BC-6 rev B | Qimonda            | M0533LA1 rev 1     | 3/13/06  |           | (64Mx4)*36        | DR   |     |
| +TRS         | TRS21229            | HYB25D512400BC-6 rev B | Qimonda            | M0545LA1 rev 1     | 3/20/06  |           | (128Mx4)*18       | SR   |     |
| Kingston     | KVR333D4R25/1GI     | HYB25D256400CF-5 rev C | Qimonda (Infineon) | 2025247-001.A00 na | 3/30/06  | Yes       |                   |      |     |
| Kingston     | KVR333S4R25/1GI     | K4H510438C-ZCB3 rev C  | Samsung            | 2025324-001.A00 na | 8/22/06  | Yes       | (128Mx4)*18       | SR   |     |
| Kingston     | KVR333S4R25/1GI     | K4H510438C-ZCCC rev C  | Samsung            | 2025324-001.A00 na | 10/5/06  | Yes       | (128Mx4)*18       | SR   |     |
| Kingston     | KVR333S4R25/1GI     | HYB25D512400CF-5 rev C | Qimonda            | 2025324-001.A00 na | 4/30/07  | Yes       | (128Mx4)*18       | SR   |     |
| Kingston     | KVR333S4R25/1GI     | HYB25D512400BF-5 rev B | Qimonda            | 2025324-001.A00 na | 9/26/07  | Yes       | (128Mx4)*18       | SR   |     |

**Registered, ECC, DDR2-400 DIMM Modules  
1GB Size (128M x 72)**

| Manufacturer                | Part Number         | DRAM Part Number                 | DRAM Vendor        | PCB Part Number          | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|-----------------------------|---------------------|----------------------------------|--------------------|--------------------------|----------|-----------|-------------------|------|-----|
| Micron                      | MT18HTF12872Y-40EA2 | MT47H64M8BT-5E                   | Micron             |                          | 5/23/05  | Yes       | (128Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T2950BG0-CCC    | K4T51043QB-GCCC                  | Samsung            |                          | 5/23/05  |           | (128Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T2950BZ0-CCC    | K4T51043QB-ZCCC                  | Samsung            |                          | 5/23/05  | Yes       | (128Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T2953BG0-CCC    | K4T510830B-GCCC                  | Samsung            |                          | 5/23/05  |           | (64Mx8)*<br>18    | DR   |     |
| Samsung                     | M393T2953BZ0-CCC    | K4T51083QB-ZCCC                  | Samsung            |                          | 5/23/05  | Yes       | (64Mx8)*<br>18    | DR   |     |
| Samsung                     | M393T2953CZ0-CCC    | K4T510830C-ZCCC                  | Samsung            |                          | 5/23/05  | Yes       | (64Mx8)*<br>18    | DR   |     |
| Qimonda                     | HYS72T128000HR-5-A  | HYB18T512400AF5                  | Qimonda            |                          | 6/6/05   | Yes       | (128Mx4)*<br>18   | SR   |     |
| Qimonda                     | HYS72T128020HR-5-A  | HYB18T512800AF5-A                | Qimonda            |                          | 6/27/05  | Yes       | (64Mx8)*<br>18    | DR   |     |
| Micron                      | MT18HTF12872Y-40EB3 | MT47H64M8BT-5E                   | Micron             |                          | 6/27/05  | Yes       | (128Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T2950CZ0-CCC    | K45T1043QC-ZCCC                  | Samsung            |                          | 6/27/05  | Yes       | (128Mx4)*<br>18   | SR   |     |
| +ATP Electronics            | AH28K72M4BHC4S      | K4T51043QB-GCCC rev B            | Samsung            | SH240M04K1               | 07/08/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Kingston                   | KVR400D2S4R3/1GI    | E5104AE-5C-E rev E               | Elpida             | 2025248-001.B00          | 07/14/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Legacy Electronics Inc.    | B512872M20A-50A     | K4T51043QB-GCCC rev B            | Samsung            | LE18DD2F2404RRH rev A    | 07/18/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Smart Modular Technologies | SB1287RDR21243-5-E  | E5104AB-4A-E rev B               | Elpida             | Z10 026A na              | 08/18/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Legacy Electronics Inc.    | S512872M20A-50A     | HYB18T512400AF(C)5 rev A         | Qimonda            | LE18DD2F2404RRH rev A    | 08/11/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Smart Modular Technologies | SB1287RDR21243-5-H  | HY5PS12421FP-E3 A 1st Generation | Hynix              | E72369 na                | 08/05/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Viking                     | VR5ER287218EB-PL3   | MT47H64M8CB-37E rev B            | Micron             | 0000992A rev A           | 08/01/05 |           | (64Mx8)*<br>18    | DR   |     |
| +Wintec Industries          | 39C931344B-GL       | K4T51043QB-ZCCC rev B            | Samsung            | D2R472 na                | 08/03/05 |           | (128Mx4)*<br>18   | SR   |     |
| +Smart Modular Technologies | SB1287RDR212435IA   | HYB18T512400AF5 rev A            | Qimonda            | PB54G240N ESUBRCC1 rev A | 9/21/05  |           | (128Mx4)*<br>18   | SR   |     |
| +Dataram                    | DTM63310A           | HYB18T512400AF5 rev A            | Qimonda            | 40011A rev A             | 10/6/05  |           | (128Mx4)*<br>18   | SR   |     |
| +Kingston                   | KVR400D2S8R3/1GI    | HYB18T1G800AF-5 rev A            | Qimonda            | 2025263-001.C00          | 9/29/05  |           | (128Mx8)*<br>9    | SR   |     |
| Samsung                     | M393T2950CZ3-CCC    | K4T51043QC-ZCCC                  | Samsung            |                          | 10/12/05 | Yes       | (128Mx4)*<br>18   | SR   |     |
| +Dataram                    | DTM63327A           | HYB18T512800AF5 rev A            | Qimonda (Infineon) | 40056A rev A             | 10/28/05 |           | (64Mx8)*<br>18    | DR   |     |



**Registered, ECC, DDR2-400 DIMM Modules  
1GB Size (128M x 72)**

| Manufacturer                | Part Number        | DRAM Part Number        | DRAM Vendor | PCB Part Number         | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|-----------------------------|--------------------|-------------------------|-------------|-------------------------|----------|-----------|-------------------|------|-----|
| +Legend                     | L12723C7-RCAH2HBF  | HY5PS12821F-E3 rev A    | Hynix       | B62RRCA rev A           | 11/7/05  |           | (64Mx8)*18        | DR   |     |
| Hynix                       | HYMP512R724-E3     | HY5PS12421-F-E3         | Hynix       |                         | 10/24/05 |           | (128Mx4)*18       | SR   |     |
| Samsung                     | M393T2953CZ3-CCC   | K4T510830C-ZCCC         | Samsung     |                         | 11/1/05  | Yes       | (64Mx8)*18        | DR   |     |
| +Kingston                   | KVR400D2S4R3/1GI   | HYB18T512400AF5 rev A   | Qimonda     | 2025248-001.B00 na      | 11/14/05 |           | (128Mx4)*18       | SR   |     |
| +Ventura Technology Group   | D2-54KF53SV-333    | K4T51043QB-ZCCC rev B   | Samsung     | D2R472                  | 1/9/06   | Yes       | (128Mx4)*18       | SR   |     |
| Hynix                       | HYMP512R72P4-E3    | HY5PS12421FP-E3         | Hynix       |                         | 1/10/06  | Yes       | (128Mx4)*18       | SR   |     |
| Hynix                       | HYMP512R72P8-E3    | HY5PS12821FP-E3         | Hynix       |                         | 1/10/06  | Yes       | (64Mx8)*18        | DR   |     |
| Hynix                       | HYMP112R72P8-E3    | HY5PS1G831FP-E3         | Hynix       |                         | 1/10/06  | Yes       | (128Mx8)*9        | SR   |     |
| +Kingston                   | KVR400D2S4R3/1GI   | HYB18T512400AF3 7 rev A | Qimonda     | 2025248-001.B00 na      | 1/18/06  | Yes       | (128Mx4)*18       | SR   |     |
| +Wintec Industries          | 39S931341A-L       | HYB18T512400AF5 rev A   | Qimonda     | D2R472                  | 1/23/06  | Yes       | (128Mx4)*18       | SR   |     |
| +Apacer                     | 75.072A1.G02       | K4T51043QC-ZCD5 rev C   | Samsung     | 48.16189.01 1 rev 1     | 1/25/06  | Yes       | (128Mx4)*18       | SR   |     |
| Hynix                       | HYMP512R72BP4-E3   | HY5PS12421BFP-E3        | Hynix       |                         | 1/31/06  | Yes       | (128Mx4)*18       | SR   |     |
| Hynix                       | HYMP512R72BP8-E3   | HY5PS12821BFP-E3        | Hynix       |                         | 1/31/06  | Yes       | (64Mx8)*18        | DR   |     |
| +Smart Modular Technologies | SG1287RDR2648 35IA | HYB18T512800AF3 7 rev A | Qimonda     | PG58G240N EBUB2RB rev A | 2/7/06   |           | (64Mx8)*18        | DR   |     |
| +Legacy Electronics Inc.    | B517M4C2AHA-50     | K4T51043QC-ZCCC rev C   | Samsung     | LE18DD2F2 404RRH rev A  | 2/16/06  |           | (128Mx4)*18       | SR   |     |
| +Smart Modular Technologies | SG1287RDR2648 35SC | K4T51083QC-ZCD5 rev C   | Samsung     | PG58G240N EBUB2RB rev A | 3/7/06   | Yes       | (64Mx8)*18        | DR   |     |
| TRS                         | TRS31265           | HYB18T512400AF5 rev A   | Qimonda     | M0549LA1 rev 1          | 03/29/06 | Yes       |                   |      |     |
| Dataram                     | DTM63310J          | NT5TU128M4AE-5A rev A   | Nanya       | 40011A rev A            | 04/03/06 | Yes       |                   |      |     |
| Kingston                    | KVR400D2S8R3/1GI   | E1108AA-5C-E rev A      | Elpida      | 2025263-001.C00 na      | 05/03/06 | Yes       |                   |      |     |
| Dataram                     | DTM63327B          | NT5TU64M8AE-37B rev A   | Nanya       | 40056A rev A            | 05/08/06 | Yes       | (64Mx8)*18        | DR   |     |

**Registered, ECC, DDR2-400 DIMM Modules  
1GB Size (128M x 72)**

| Manufacturer               | Part Number            | DRAM Part Number       | DRAM Vendor        | PCB Part Number          | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|----------------------------|------------------------|------------------------|--------------------|--------------------------|----------|-----------|-------------------|------|-----|
| Kingston                   | KVR400D2S4R3/1GI       | NT5U128M4AE-5A rev A   | Nanya              | 2025248-001.B00 na       | 6/6/06   | Yes       | (128Mx4)*18       | SR   |     |
| Smart Modular Technologies | SG1287RDR212435NA      | NT5TU128M4AE-5A rev A  | Nanya              | NTPCB00019P              | 7/7/06   | Yes       | (128Mx4)*18       | SR   |     |
| TRS                        | TRS31267               | K4T51043QC-ZCCC rev C  | Samsung            | M0549LA1 rev 1           | 6/23/06  | Yes       | (128Mx4)*18       | SR   |     |
| Super Talent Electronics   | T400RA1G4/S1G TR4BHS   | K4T51043QC-ZCD5 rev C  | Samsung            | DR20418 rev H1.01        | 8/11/06  | Yes       | (128Mx4)*18       | SR   |     |
| Super Talent Electronics   | T400RB1G/S1GT R8CHS    | K4T51083QC-ZCD5 rev C  | Samsung            | DR20818 rev G1.01        | 8/18/06  | Yes       | (64Mx8)*18        | DR   |     |
| Avant Technology           | AVF7228R53E3400F0-MTB  | MT47H128M4CB-5E rev B  | Micron             | 50-1435-01B rev B        | 8/24/06  | Yes       | (128Mx4)*18       | SR   |     |
| TRS                        | TRS31265X              | HYB18T512400AF5 rev A  | Qimonda (Infineon) | M0549LA1 rev 1           | 8/28/06  | Yes       | (128Mx4)*18       | SR   |     |
| Avant Technology           | AVF7228R52E3400F0-ELGP | EDE5108AGBG-5C-E rev G | Elpida             | 50-1431-01B rev B        | 9/6/06   | Yes       | (64Mx8)*18        | DR   |     |
| Kingston                   | KVR400D2S4R3/1GI       | E5104AG-5C-E rev G     | Elpida             | 2025248-001.B00 na       | 10/12/06 | Yes       | (128Mx4)*18       | SR   |     |
| Kingston                   | KVR400D2S8R3/1GI       | E1108AB-6E-E rev B     | Elpida             | 2025263-001.C00 na       | 11/21/06 | Yes       | (128Mx8)*9        | SR   |     |
| TRS                        | TRS31277X              | E5104AG-5C-E rev G     | Elpida             | M0549LA1 rev 1           | 2/15/07  | Yes       | (128Mx4)*18       | SR   |     |
| All Components             | AVF7228R52E3400F0-ELGP | EDE5108AGBG-5C-E rev G | Elpida             | 50-1431-01B rev B        | 2/23/07  | Yes       | (64Mx8)*18        | DR   |     |
| US Technology              | AVF7228R52E3400F0-ELGP | EDE5108AGBG-5C-E rev G | Elpida             | 50-1431-01B rev B        | 3/24/07  | Yes       | (64Mx8)*18        | DR   |     |
| Kingston                   | KVR400D2S8R3/1GI       | MT47H128M8HQ-3 rev E   | Micron             | 2025263-001.C00 na       | 4/16/07  | Yes       | (128Mx8)*9        | SR   |     |
| Dataram                    | DTM63327C              | HY5PS12821CFP-Y5 rev C | Hynix              | 40056A rev A             | 4/19/07  | Yes       | (64Mx8)*18        | DR   |     |
| Dataram                    | DTM63310N              | HY5PS12421CFP-Y5 rev C | Hynix              | 40011A rev A             | 4/20/07  | Yes       | (128Mx4)*18       | SR   |     |
| Kingston                   | KVR400D2S4R3/1GI       | E5104AHSE-6E-E rev H   | Elpida             | 2025248-001.B00 na       | 5/2/07   | Yes       | (128Mx4)*18       | SR   |     |
| Dane-Elec                  | DMD400R072283NG        | EDE5108AESK-5C-E rev E | Elpida             | D2R872 rev 1             | 7/16/07  | Yes       | (64Mx8)*18        | DR   |     |
| Smart Modular Technologies | SG1287RDR212435IB      | HYB18T512400BF37 rev B | Qimonda            | PG54G240N ESUBRCC1 rev A | 10/19/07 | Yes       | (128Mx4)*18       | SR   |     |
| Kingston                   | KVR400D2S4R3/1GI       | NT5TU128M4BE-3C rev B  | Nanya              | 2025248-001B00           | 12/19/07 | Yes       | (128Mx4)*18       | SR   |     |

(+) 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.

**Verify that the DRAM part number matches the DRAM on this list before purchasing.**

**Intel® Server Board SE7320VP2**  
**Registered, ECC, DDR266 DIMM Modules**  
**2GB Size (256M x 72)**

| Manufacturer              | Part Number           | DRAM Part Number           | DRAM Vendor | PCB Part Number | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|---------------------------|-----------------------|----------------------------|-------------|-----------------|----------|-----------|-------------------|------|-----|
| +TRS                      | TRS21155              | HYB25D512400AT-7 rev A     | Qimonda     | M0531LA1 rev 1  | 11/12/04 |           | (128Mx4)*<br>36   | DR   |     |
| +Ventura Technology Group | D56WXK28SV            | K4H510438B-TCB3 rev B      | Samsung     | V213            | 11/18/04 |           | (128Mx4)*<br>36   | DR   |     |
| +Viking                   | VI4CR567224EY HL3     | K4H510438B-TCB3 rev B      | Samsung     | 03-0307 rev B   | 12/15/04 |           | (128Mx4)*<br>36   | DR   |     |
| +ATP Electronics          | AB56L72T4SHB0S        | K4H510438B-TCB3 rev B      | Samsung     | SB184T04L3      | 1/25/05  |           | (128Mx4)*<br>36   | DR   |     |
| +Avant Technology         | AVM7256R53C5266K7-MTD | MT46V128M4FN-6 rev D       | Micron      | E186014         | 5/31/05  |           | (128Mx4)*<br>36   | DR   |     |
| +Dataram                  | DTM63689D             | HYB25D512400BF(BC)-6 rev B | Qimonda     | 40020A rev A    | 6/6/05   |           | 128M x 4          |      |     |
| +TRS                      | TRS21218              | HYB25D512400BE-7 rev B     | Qimonda     | M0531LA1 rev 1  | 08/02/05 |           | (128Mx4)*<br>36   | DR   |     |
| Micron                    | MT36VDDDF25672G-265D2 | MT46V128M4FN               | Micron      |                 | 10/24/05 |           | (128Mx4)*<br>36   | DR   |     |
| Samsung                   | M312L5628BT0-CB0      | K4H1G0638B-TCB0            | Samsung     |                 | 7/29/05  |           | (128Mx4)*<br>36   |      |     |
| Samsung                   | M312L5628CU0-CB0      | K4H1G0638C-UCB0            | Samsung     |                 | 8/19/05  | Yes       | (128Mx4)*<br>36   |      |     |
| +Dataram                  | DTM63689J             | HYB25D512400CF-6 rev C     | Qimonda     | 40020A rev A    | 3/22/06  | Yes       | (128Mx4)*<br>36   | DR   |     |

| <b>Registered, ECC, DDR333 DIMM Modules<br/>2GB Size (256M x 72)</b> |                        |                           |                    |                        |             |                  |                          |             |            |
|--|------------------------|---------------------------|--------------------|------------------------|-------------|------------------|--------------------------|-------------|------------|
| <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>Lead-Free</b> | <b>DRAM Organization</b> | <b>Rank</b> | <b>EOL</b> |
| +Smart Modular Technologies  | SM25672RDDR6 H2BGAI    | HYB25D512400BC-6 rev B    | Qimonda            | P54G184NESZ B1RF rev A | 11/15/04    |                  | (128Mx4)<br>*36          | DR          |            |
| +Legacy Electronics Inc.   | 8AL6MDGM-1PDG          | BGA128MX4DDRNC            | Legacy             | LE36DDF1844 RRF rev B  | 12/9/04     |                  | (128Mx4)<br>*36          | DR          |            |
| +Apacer  | 75.A7299.570           | HYB25D512400BC-6 rev B    | Qimonda            | 48.16164.014 rev 4     | 12/15/04    |                  | (128Mx4)<br>*36          | DR          |            |
| +Smart Modular Technologies  | SM25672RDDR6 H2BGBI    | HYB25D512400BC-6 rev B    | Qimonda            | 184-25-2               | 1/14/05     |                  | (128Mx4)<br>*36          | DR          |            |
| +ATP Electronics   | AB56L72Z4BFB3C         | HYB25D512400BC-6 rev B    | Qimonda            | SB184Z04L1             | 1/31/05     |                  | (128Mx4)<br>*36          | DR          |            |
| Qimonda  | HYS72D256320G BR-6-B   | HYB25D512400BC-6 B        | Qimonda            |                        | 3/2/05      |                  | (128Mx4)<br>*36          | DR          |            |
| +Dataram   | DTM63680H              | MT46V128M4BN-6 rev D      | Micron             | 40020A rev A           | 2/25/05     |                  | (128Mx4)<br>*36          | DR          |            |
| Qimonda  | HYS72D256320G BR-6-B   | HYB25D512400BC-6 B        | Qimonda            |                        | 3/2/05      |                  | (128Mx4)<br>*36          | DR          |            |
| +Dataram   | DTM63680F              | HYB25D512400BF(C)-6 rev B | Qimonda            | 40020A rev A           | 3/15/05     |                  | (128Mx4)<br>*36          | DR          |            |
| Micron   | MT36VDDF25672 G-335D2  | MT46V128M4FN              | Micron             |                        | 4/6/05      |                  | (128Mx4)<br>*36          | DR          |            |
| +Kingston  | KVR333D4R25/2 GI       | HYB25D512400BC-6 rev B    | Qimonda            | 2025294-001.A00        | 4/4/05      |                  | (128Mx4)<br>*36          | DR          |            |
| Netlist*, Incorporated   | NL9257RD12032-D27JSC   | K4H510438C-ZCB3 rev C     | Samsung            | 0175-10 rev A          | 4/27/05     |                  | (128Mx4)<br>*36          | DR          |            |
| +Avant Technology  | AVM7256R53C53 33K7-MTD | MT46V128M4FN-6 rev D      | Micron             | B6R404 rev 1           | 5/4/05      |                  | (128Mx4)<br>*36          | DR          |            |
| Samsung  | M312L5720CZ0-CB3       | K4H510438C-ZCB3           | Samsung            |                        | 6/20/05     | Yes              | (128Mx4)<br>*36          | DR          |            |
| +Kingston  | KVR333D4R25/2 GI       | MT46V128M4FN-6 rev D      | Micron             | 2025294-001.A00 na     | 10/11/05    |                  | (128Mx4)<br>*36          | DR          |            |
| Samsung  | M312L5720CZ3-CB3       | K4H510438C-ZCB3           | Samsung            |                        | 11/15/05    | Yes              | (128Mx4)<br>*36          | DR          |            |
| Samsung  | M312L5628BT0-CB0       | K4H1G0638B-TCB0           | Samsung            |                        | 11/15/05    |                  | (128Mx4)<br>*36          | DR          |            |
| Samsung  | M312L5628CU0-CB0       | K4H1G0638C-UCB0           | Samsung            |                        | 11/15/05    | Yes              | (128Mx4)<br>*36          | DR          |            |
| Qimonda  | HYS72D256320H BR-6-C   | HYB25D512400CF-6          | Qimonda            |                        | 1/31/06     | Yes              | (128Mx4)<br>*36          | DR          |            |
| +TRS   | TRS21225               | HYB25D512400BC-6 rev B    | Qimonda            | M0546LA1 rev 1         | 3/2/06      |                  | (128Mx4)<br>*36          | DR          |            |
| Dataram  | DTM63680P              | HYB25D512400CF-6 rev C    | Qimonda (Infineon) | 40020A rev A           | 04/10/06    |                  |                          |             |            |
| Kingston   | KVR333D4R25/2 GI       | K4H510438C-ZCB3 rev C     | Samsung            | 2025294-001.A00 na     | 7/25/06     | Yes              | (128Mx4)<br>*36          | DR          |            |
| Kingston   | KVR333D4R25/2 GI       | HYB25D512400CF-5 rev C    | Qimonda            | 2025294-001.A00 na     | 4/13/07     | Yes              | (128Mx4)<br>*36          | DR          |            |
| Kingston   | KVR333D4R25/2 GI       | HYB25D512400BF-5 rev B    | Qimonda            | 2025294-001.A00 na     | 9/25/07     | Yes              | (128Mx4)<br>*36          | DR          |            |

**Registered, ECC, DDR2-400 DIMM Modules  
2GB Size (256M x 72)**

| Manufacturer                | Part Number         | DRAM Part Number      | DRAM Vendor | PCB Part Number                                 | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|-----------------------------|---------------------|-----------------------|-------------|---|----------|-----------|-------------------|------|-----|
| Hynix                       | HYMP125R724-E3      | HY5PS1G431F-E3        | Hynix       |   | 5/23/05  |           | (256Mx4)*<br>18   | SR   |     |
| Qimonda                     | HYS72T256220H R-5-A | HYB18T512400AF5       | Qimonda     |   | 5/23/05  | Yes       | (128Mx4)*<br>36   | SR   |     |
| Qimonda                     | HYS72T256000H R-5-A | HYB18T1G400AF-5       | Qimonda     |   | 6/6/05   | Yes       | (256Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T5660MZ0-CCC    | K4T1G044QM-ZCCC       | Samsung     |   | 6/6/05   | Yes       | (256Mx4)*<br>18   | SR   |     |
| Micron                      | MT18HTF25672Y-40EA2 |                       | Micron      |   | 6/27     | Yes       | (256Mx4)*<br>18   | SR   |     |
| Micron                      | MT36HTF25672Y-40EB1 |                       | Micron      |   | 7/8/05   | Yes       | (128Mx4)*<br>36   |      |     |
| +Smart Modular Technologies | SB2567RDR2128 35IA  | HYB18T512400AF5 rev A | Qimonda     | PB52G240NES UB1RJ rev A                         | 07/22/05 |           | (128Mx4)*<br>36   | DR   |     |
| +Smart Modular Technologies | SG2567RDR2128 35IA  | HYB18T512400AF5 rev A | Qimonda     | PG52G240NES UB1RJ rev A                         | 07/12/05 |           | (128Mx4)*<br>36   | DR   |     |
| +Smart Modular Technologies | SM2567RDR2254 3-5-I | HYB18T1G400AF-5 rev A | Qimonda     | 240-13-5  | 07/18/05 |           | (256Mx4)*<br>18   | SR   |     |
| +Kingston                   | KVR400D2D8R3/2GI    | HYB18T1G800AF-5 rev A | Qimonda     | 2025302-001.A00 na                              | 08/23/05 |           | 128M x 8          |      |     |
| +Dataram                    | DTM63309A           | HYB18T512400AF5 rev A | Qimonda     | 40040A rev A                                    | 08/16/05 |           | (128Mx4)*<br>36   | DR   |     |
| +Dataram                    | DTM63309B           | K4T51043QC-ZCCC rev C | Samsung     | 40040A rev A                                    | 08/18/05 |           | (128Mx4)*<br>36   | DR   |     |
| +Wintec Industries          | 39C941441A-L        | HYB18T1G400AF-5 rev A | Qimonda     | D2R472 na                                       | 8/29/05  |           | (256Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T5750CZ0-CCC    | K45T1043QC-ZCCC       | Samsung     |   | 9/20/05  | Yes       | (128Mx4)*<br>36   | DR   |     |
| +Smart Modular Technologies | SG2567RDR2128 3-5-H | HY5PS1G421MP-E3 rev A | Hynix       | (0504-5,-3,-1),(0518-1,-2,-3,-4,-6),(0516-1,-3) | 10/26/05 | Yes       | (128Mx4)*<br>36   | DR   |     |
| Samsung                     | M393T5750BS0-CCC    | K45T1043QB-SCCC       | Samsung     |   | 11/1/05  |           | (128Mx4)*<br>36   | DR   |     |
| Samsung                     | M393T5750BY0-CCC    | K45T1043QB-ZCCC       | Samsung     |   | 11/1/05  | Yes       | (128Mx4)*<br>36   | DR   |     |
| Hynix                       | HYMP125R72P4-E3     | HY5PS1G431FP-E3       | Hynix       |   | 11/1/05  |           | (256Mx4)*<br>18   | SR   |     |
| Samsung                     | M393T5750CZ3-CCC    | K45T1043QC-ZCCC       | Samsung     |   | 11/4/05  | Yes       | (128Mx4)*<br>36   | DR   |     |
| Samsung                     | M393T5660MZ3-CCC    | K4T1G044QM-ZCCC       | Samsung     |   | 11/4/05  | Yes       | (256Mx4)*<br>18   | SR   |     |
| +Legacy Electronics Inc.    | B527M4C2BJA-50      | K4T51043QC-ZCCC rev C | Samsung     | LE36DD2F240 4RRJ rev B                          | 11/21/05 |           | (128Mx4)*<br>36   | DR   |     |
| +ATP Electronics            | AH56K72M4BJC4 C     | HYB18T1G400AF-5 rev A | Qimonda     | SH240M04K1 na                                   | 12/9/05  | Yes       | (256Mx4)*<br>18   | SR   |     |
| +Kingston                   | KVR400D2D4R3/2GI    | HYB18T512400AF5 rev A | Qimonda     | 2025292-001.B00 na                              | 12/13/05 |           | (128Mx4)*<br>36   | DR   |     |
| Samsung                     | M393T5660AZ3-CCC    | K4T1G044QA-ZCCC       | Samsung     |   | 11/15/05 | Yes       | (256Mx4)*<br>18   | SR   |     |

**Registered, ECC, DDR2-400 DIMM Modules  
2GB Size (256M x 72)**

| Manufacturer               | Part Number          | DRAM Part Number             | DRAM Vendor        | PCB Part Number         | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|----------------------------|----------------------|------------------------------|--------------------|-------------------------|----------|-----------|-------------------|------|-----|
| Hynix                      | HYMP125R72P8-E3      | HY5PS1G831FP-E3              | Hynix              |                         | 1/31/06  | Yes       | (128Mx8)*<br>18   |      |     |
| Hynix                      | HYMP525R72BP4-E3     | HY5PS12421BFP-E3             | Hynix              |                         | 1/31/06  | Yes       | (128Mx4)*<br>36   | DR   |     |
| +Legend                    | L25723C7-R41H2W2F    | HY5PS1G421MP-E3 rev 1st Gen. | Hynix              | 0536                    | 2/28/06  | Yes       | (256Mx4)*<br>18   | SR   |     |
| +TRS                       | TRS31270             | HYB18T1G400AF-5 rev A        | Qimonda            | M0549LA1 rev 1          | 3/20/06  | Yes       | (256Mx4)*<br>18   | SR   |     |
| Kingston                   | KVR400D2D4R3/2GI     | HYB18T512400AF3 7 rev A      | Qimonda            | 2025292-001.B00 na      | 04/17/06 | Yes       |                   |      |     |
| Kingston                   | KVR400D2D8R3/2GI     | E1108AA-5C-E rev A           | Elpida             | 2025302-001.A00 na      | 05/11/06 | Yes       | (128Mx8)*<br>18   |      |     |
| Dataram                    | DTM63309F            | NT5TU128M4AE-5A rev A        | Nanya              | 40040A rev A            | 05/19/06 | Yes       | (128Mx4)*<br>36   | DR   |     |
| Kingston                   | KVR400D2D4R3/2GI     | NT5TU128M4AE-5A rev A        | Nanya              | 2025292-001.B00 na      | 6/16/06  | Yes       | (128Mx4)*<br>36   | DR   |     |
| TRS                        | TRS31270X            | HYB18T1G400AF-5 rev A        | Qimonda (Infineon) | M0549LA1 rev 1          | 8/8/06   | Yes       | (256Mx4)*<br>18   | SR   |     |
| Super Talent Electronics   | T400RB2G4/S2G TR4CHS | K4T51043QC-ZCD5 rev C        | Samsung            | BA2RRCJ na              | 8/16/06  | Yes       | (128Mx4)*<br>36   | DR   |     |
| Kingston                   | KVR400D2D4R3/2GI     | E5104AG-5C-E rev G           | Elpida             | 2025292-001.B00 na      | 10/10/06 | Yes       | (128Mx4)*<br>36   | DR   |     |
| ATP Electronics            | AH56K72M4BJC4 C      | HYB18T1G400AF-5 rev A        | Qimonda (Infineon) | SH240M04K2 na           | 11/28/06 | Yes       | (256Mx4)*<br>18   | SR   |     |
| Smart Modular Technologies | SG2567RDR2124 35NB   | NT5TU128M4BE-3C rev B        | Nanya              | PG52G240NES UB3RJ rev A | 12/4/06  | Yes       | (128Mx4)*<br>36   | DR   |     |
| Kingston                   | KVR400D2D8R3/2GI     | E1108AB-6E-E rev B           | Elpida             | 2025302-001.A00 na      | 12/7/06  | Yes       | (128Mx8)*<br>18   |      |     |
| Kingston                   | KVR400D2D8R3/2GI     | MT47H128M8HQ-3 rev E         | Micron             | 2025302-001.A00 na      | 4/13/07  | Yes       | (128Mx8)*<br>18   |      |     |
| Dataram                    | DTM63309J            | HY5PS12421CFP-Y5 rev C       | Hynix              | 40040A rev A            | 4/25/07  | Yes       | (128Mx4)*<br>36   | DR   |     |
| Kingston                   | KVR400D2D4R3/2GI     | E5104AHSE-6E-E rev H         | Elpida             | 2025292-001.C00 na      | 5/3/07   | Yes       | (128Mx4)*<br>36   | DR   |     |
| Smart Modular Technologies | SG2567RDR2124 35SE   | K4T51043QE-ZCE6 rev E        | Samsung            | PG52G240NES UB3RJ rev A | 10/23/07 | Yes       | (128Mx4)*<br>36   | DR   |     |
| Kingston                   | KVR400D2D4R3/2GI     | NT5TU128M4BE-3C rev B        | Nanya              | 2025292-001.C00 na      | 12/20/07 | Yes       | (128Mx4)*<br>36   | DR   |     |
| Kingston                   | KVR400D2D8R3/2GI     | HY5PS1G831CFP-Y5 rev C       | Hynix              | 2025302001.A00 na       | 2/26/08  | Yes       | (128Mx8)*<br>18   |      |     |
| Kingston                   | KVR400D2D4R3/2GI     | HYB18T512400AF3 7 rev A      | Qimonda            | 2025292-001.C00 rev C   | 04/18/08 | Yes       | (128Mx8)*<br>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/>

**Verify that the DRAM part number matches the DRAM on this list before purchasing.**

**Intel® Server Board SE7320VP2**  
**Registered, ECC, DDR266 DIMM Modules**  
**4GB Size (256M x 72)**

| Manufacturer     | Part Number      | DRAM Part Number      | DRAM Vendor | PCB Part Number     | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|------------------|------------------|-----------------------|-------------|---------------------|----------|-----------|-------------------|------|-----|
| Samsung          | M312L5128MT0-CB0 | K4H2G0638M-TCB0       | Samsung     |                     | 6/20/05  |           | (256Mx4)<br>*36   | SR   |     |
| +Dataram         | DTM63687C        | K4H1G0438M-TCB0 rev M | Samsung     | 40556 rev B         | 08/04/05 |           | (256Mx4)<br>*36   |      |     |
| +ATP Electronics | AB12L72P4SMB0S   | K4H2G0638M-TCB0 rev M | Samsung     | M312L2828T0B GA-V01 | 12/8/05  |           | (256Mx4)<br>*36   | SR   |     |

**Registered, ECC, DDR333 DIMM Modules**  
**4GB Size (256M x 72)**

| Manufacturer | Part Number          | DRAM Part Number | DRAM Vendor | PCB Part Number | Date    | Lead-Free | DRAM Organization | Rank | EOL |
|--------------|----------------------|------------------|-------------|-----------------|---------|-----------|-------------------|------|-----|
| Micron       | MT36VDDT51272G-265A2 | MT46V256M4TG-75A | Micron      |                 | 6/27/05 |           | (256Mx4)<br>*36   |      |     |

**Registered, ECC, DDR2-400 DIMM Modules**  
**4GB Size (256M x 72)**

| Manufacturer                | Part Number        | DRAM Part Number      | DRAM Vendor        | PCB Part Number          | Date     | Lead-Free | DRAM Organization | Rank | EOL |
|-----------------------------|--------------------|-----------------------|--------------------|--------------------------|----------|-----------|-------------------|------|-----|
| Qimonda                     | HYS72T512022HR-5-A | HYB18T2G402AF-5-A     | Qimonda            |                          | 11/1/05  | Yes       | (2x256Mx4)*18     |      |     |
| +Smart Modular Technologies | SG5127RDR225635IA  | HYB18T1G400AF-5 rev A | Qimonda            | PG516G240NE SUC1RK rev A | 11/14/05 | Yes       | (256Mx4)<br>*36   |      |     |
| +Kingston                   | KVR400D2D4R3/4GI   | E1104AA-4A-E rev A    | Elpida             | 2025343-001.A00 na       | 12/16/05 |           | (256Mx4)<br>*36   |      |     |
| Hynix                       | HYMP351R72MP4-E3   | HY5PS2G431MP-E3       | Hynix              |                          | 1/10/06  | Yes       | (256Mx4)<br>*36   |      |     |
| Kingston                    | KVR400D2D4R3/4GI   | K4T2G064QA-ZCD5 rev A | Samsung            | M393T1G68MG1 na          | 04/07/06 | Yes       |                   |      |     |
| Dataram                     | DTM63325A          | HYB18T1G400AF-5 rev A | Qimonda (Infineon) | 40054A rev D             | 04/24/06 | Yes       |                   |      |     |
| Smart Modular Technologies  | SG5127RDR225635ART | HYB18T1G400AF-5 rev A | Qimonda            | XG58G240NES UB1TK rev A  | 1/8/07   | Yes       | (256Mx4)<br>*36   |      |     |
| Kingston                    | KVR400D2D4R3/4GI   | E1108ABSH-E rev B     | Elpida             | Z10077 na                | 2/22/07  | Yes       | (256Mx4)<br>*36   |      |     |

(+) 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.

**Verify that the DRAM part number matches the DRAM on this list before purchasing.**

## 4. Sales Information

| Vendor Name                    | Web URL   | Vendor Direct Sales Info   |
|--------------------------------|---|--|
| ATP Electronics                | <a href="http://www.atpinc.com/">http://www.atpinc.com/</a>   | Tel (1) 408-732-5000, ext 5858<br>Fax 408-732-5893<br><a href="mailto:sales@atpusa.com">sales@atpusa.com</a>   |
| ATP Electronics -- Taiwan Inc. | <a href="http://www.atpinc.com/">http://www.atpinc.com/</a>   | Tel 011-886-2-2659-6368<br>Fax 886-2-2659-4982   |
| Avant Technology               | <a href="http://www.avanttechnology.com">http://www.avanttechnology.com</a>   | Brad Scoggins<br>Phone: (512)491-7411<br>Fax: (512)491-7412<br><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<br><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<br>Fax: 949-855-6035   |
| Corsair                        | <a href="http://www.corsairmicro.com/">http://www.corsairmicro.com/</a>   | Tel: 510-657-8747<br>Fax: 510-657-8748   |
| Dane-Elec                      | <a href="http://www.dane-memory.com/">http://www.dane-memory.com/</a>   | Michal Hassan @ (949)450-2941 or email<br>@ <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<br>609-799-0071<br><a href="mailto:phenke@dataram.com">phenke@dataram.com</a>  |
| GoldenRAM                      | <a href="http://www.goldenram.com">http://www.goldenram.com</a>   | Jason M. Barrette @ 800-222-861 x7546<br><a href="mailto:jasonb@goldenram.com">jasonb@goldenram.com</a><br>or Michael E. Meyer @800-222-8861<br>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.hea.com/">http://www.hea.com/</a>   |  |
| Qimonda                        | <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<br>Tel: 82-32-817-9740<br><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<br>Asia – Call 886-3-564-1539<br>Europe – Call +44-1932-755205  |
| Legacy Electronics Inc.        | <a href="http://www.legacyelectronics.com">http://www.legacyelectronics.com</a>   | U.S. Contact: Gary Ridenour, 949-498-9600, Ext 350<br>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://silicon.micron.com/mktg/">http://silicon.micron.com/mktg/</a> <a href="http://silicon.micron.com/mktg/mbqual/qual_data.cfm">http://silicon.micron.com/mktg/mbqual/qual_data.cfm</a> |  |
| MSC Vertriebs GmbH             | <a href="http://www.msc-ge.com">http://www.msc-ge.com</a>   | William Perrigo<br>49-7249-910-417<br>Fax: 49-7249-910-229<br><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<br>949.435.0025 tel<br>949.435.0031 fax<br><a href="mailto:sales@netlistinc.com">sales@netlistinc.com</a>  |
| Peripheral Enhancements        | <a href="http://www.peripheral.com/">http://www.peripheral.com/</a>   |  |



| Vendor Name                | Web URL  | Vendor Direct Sales Info  |
|----------------------------|--|---|
| Samsung                    | <a href="http://www.korea.samsungsemi.com/locate/buy/list_na.html">http://www.korea.samsungsemi.com/locate/buy/list_na.html</a>                              | For US customers go to:<br><a href="http://www.mymemorystore.com/">http://www.mymemorystore.com/</a>  |
| Silicon Tech               | <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">http://www.simpletech.com</a>  | Ron Darwish @ (949) 260-8230 or email @<br><a href="mailto:Rdarwish@Simpletech.com">Rdarwish@Simpletech.com</a>   |
| SMART Modular Technologies | <a href="http://www.smartm.com/channel/hpc/">www.smartm.com/channel/hpc/</a>   | Gene Patino<br>(949) 439-6167<br><a href="mailto:Gene.Patino@Smartm.com">Gene.Patino@Smartm.com</a>   |
| Swissbit                   | <a href="http://www.swissbit.com">http://www.swissbit.com</a>  | Tony Cerreta<br>Tel: 914-935-1400 x240<br>Fax: 914-935-9865<br><a href="mailto:tony.cerreta@swissbitna.com">tony.cerreta@swissbitna.com</a>                               |
| TechnoLinc Corporation     | <a href="http://www.technolinc.com">http://www.technolinc.com</a>  | David Curtis<br>510-445-7400<br><a href="mailto:davidc@technolinc.com">davidc@technolinc.com</a>  |
| TRS* Tele-Radio-Space GmbH | <a href="http://www.certified-memory.com">http://www.certified-memory.com</a><br><a href="http://www.certified-memory.de">http://www.certified-memory.de</a> | Vendor Direct Sales Info: Andreas Gruendl<br>Tel: +49.89.945532-34<br>Fax: +49.89.945532-41<br><a href="mailto:Andreas.gruendl@trs-eu.com">Andreas.gruendl@trs-eu.com</a> |
| Unigen                     | <a href="http://www.unigen.com">http://www.unigen.com</a>  |   |
| Ventura Technology Inc     | <a href="http://www.venturatech.com">http://www.venturatech.com</a>  | Sam Lewis<br>760 724-8700 ext. 103  |
| Viking InterWorks          | <a href="http://www.vikinginterworks.com">http://www.vikinginterworks.com</a>  | Adrian Proctor<br>Tel: 949-643-7255<br><a href="mailto:adrian.proctor@sanmina-sci.com">adrian.proctor@sanmina-sci.com</a>   |
| Virtium Technology Inc     | <a href="http://www.virtium.com">http://www.virtium.com</a>  | Tod Skelton @ (949) 460-0020 ext. 146 or<br>email @ <a href="mailto:tod.skelton@virtium.com">tod.skelton@virtium.com</a>  |
| Wintec Industries          | <a href="http://www.wintecindustries.com">http://www.wintecindustries.com</a>  | Tel 510-360-6300<br>Fax 510-770-9338  |

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

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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.

### 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 Rank 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 the Intel® Server RAID Controller. 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 Intel® Server RAID Controller. Intel provides no indemnities for and expressly disclaims all liabilities for any and all such guaranties, representations, and warranties (oral or written) whether express or implied, related to DIMMs in a Intel® Server RAID Controller 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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