



# **Intel® Server RAID Controller SRCU42E Memory List**

*Test Report Summary*

**Revision 4.0**

**January 2007**

## **Revision History**

Date	Rev	Modifications
October 2004	1.0	Initial release.
January 2004	1.2	Correct DIMM pin count error
February 2005	1.3	Remove Virtium modules and update 128MB PNY module number.
March 2005	1.4	Add Dataram and ATP 256MB parts
June 2005	2.0	Corrected supported memory specification. Added Micron parts
Sep 2006	3.0	Add TRS parts and Lead-Free DIMM
Jan 2007	4.0	Remove disqualified Virtium modules and PNY modules.

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# 1. Overview of Memory Testing

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**Caution:** DIMM devices with gold contacts should NOT be placed into DIMM sockets with tin-lead contacts or vice-versa. Mixing dissimilar metal contact types results in unreliable memory operation.

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The following procedure qualifies Dual In-Line Memory Modules (DIMMs) with the Intel® Server RAID Controller SRCU42E. Intel requires strict guidelines to be met before a DIMM vendor is included in the qualified memory list. To be acknowledged on the list as a fully-functional DIMM, the memory must undergo rigorous tests to ensure that the product will perform the intended product functions.

Memory qualification for Intel's RAID controller products is performed by in Intel labs and/or external test laboratories.

Intel's RAID Controller qualified memory lists categorize memory modules as Advanced Tested. The Advanced Testing process involves:

- **Paper qualification:** A review of critical timings, electrical characteristics, timing requirements, environmental requirements, and packaging requirements. This qualification ensures the DIMM meets Intel's memory specifications.
- **Standard voltage and room temperature functional test:** Testing the memory module on the target RAID controller test software operating under Microsoft Windows\* for at least 24 hours.
- **Voltage and temperature margin functional test:** Testing the memory module on the RAID controller product with test software and operating systems. This is a 24-hour test that uses various voltage and temperature margin conditions.

DIMMs that have completed Advanced Testing are known to be compatible with the product on which they were tested, and with the test software and operating system that was utilized during the test procedure.

## 2. Qualified DDR SDRAM DIMMs

The Intel® RAID Controller SRCU42E is a two-channel SCSI RAID controller for high-performance / high-security server applications. It supports RAID 0, 1, 5, 10, and 50 array drives and private / pool hot-fix drives. It includes an on-board Intel® IOP80332 Intelligent I/O Processor (500 MHz) XOR-Engine and an on-board LSI\* 1030 dual channel SCSI I/O controller that provides Ultra 320 capability. The controller is PCI Express\* compliant and includes a BIOS (X-ROM) firmware tool for array configuration and management.

Standard DDR 333 (PC2700) and Standard DDR 400 (PC3200) compatible unbuffered ECC DIMMs are supported. The controller utilizes DDR PC2700 SDRAM unbuffered memory modules for caching and is compatible with memory modules that meet these specifications:

- 184-pin gold-plated SDRAM DIMMs
- Unbuffered PC2700 ECC SDRAM Memory Modules
- 128 MB, 256 MB, and 512 MB capacities
- 2.5V memory only
- Single rank DIMMs

The controller utilizes DDR PC3200 unbuffered SDRAM memory modules for caching and is compatible with memory modules that meet these specifications:

- 184-pin gold-plated SDRAM DIMMs
- Unbuffered PC3200 ECC SDRAM Memory Modules
- 128 MB, 256 MB, and 512 MB capacities
- 2.6V memory only
- Single rank DIMMs

The following tables list DIMM devices tested to be compatible with the Intel® Server RAID Controller. This document and the DIMM list will be updated as qualified memory is added during the life of the Intel® Server RAID Controller SRCU42E.

Only memory modules that are listed in the following tables have been tested for compatibility with the RAID Controller SRCU42E. Other memory modules may result in unpredictable operation and data loss.

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**Note:** *This list is not all-inclusive. It is provided as a convenience to Intel's customers, but Intel does not make any representations or warranties whatsoever regarding the quality, reliability, functionality, or compatibility of these memory modules.*

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## 2.1 Unbuffered ECC DDR SDRAM DIMM Modules, 128MB

Manufacturer	Part Number	DIMM-Battery Unit	Lead Free
Intel Corporation	AXXRPCM1 (MM#861697)	Yes	
Virtium	VML381L1624B3SF	Yes	
PNY	69001636SMF	Yes	
PNY	69001636SMD	Yes	
PNY	69001636ELK	Yes	
Intel Corporation	AXXRPCM1 (MM#879070)	Yes	Yes
PNY	69001636SMF-T	Yes	Yes
PNY	69001636ELK-T	Yes	Yes
Southland	128S-PR333EB-D6LSIFR	Yes	Yes
Virtium	VLL381L1624B3SF	Yes	Yes
Micron	MT5VDDT1672AG-40BF3		
PNY	69001642INC		
Southland	128S-UD333E2-D6LSIC		
Southland	128S-UD333E2-H6LSIF		
Southland	128S-UD333E2-A6LSIKR		Yes
Virtium	VL381L1624CB3SH		Yes
Virtium	VL381L1624DB3SF		Yes

## 2.2 Unbuffered ECC DDR SDRAM DIMM Modules, 256MB

Manufacturer	Part Number	DIMM-Battery Unit	Lead Free
Virtium	VL381L3324B3SC	Yes	Yes
PNY	69001942INB	Yes	
PNY	69001924MTG	Yes	
PNY	69001679SMF		
Dataram	DTM63635D		
ATP Electronics	AG32L72T8SQC4S		
Micron	MT9VDDT3272AG-225G4		
Micron	MT9VDDT3272AG-40BG4		
TRS	TRS20206		

## 2.3 Unbuffered ECC DDR SDRAM DIMM Modules, 512MB

Manufacturer	Part Number	DIMM-Battery Unit	Lead Free
Micron	MT9VDDT6472AG-335D1		

### 3. Sales Information

Vendor Name	Web URL	Vendor Direct Sales Info
PNY Technologies	<a href="http://www.pny.com">http://www.pny.com</a>	sales@avedmemory.com Tel 1-714-573-5000
Dataram	<a href="http://www.dataram.com/">http://www.dataram.com/</a>	phenke@dataram.com Tel 800-328-2726 x2239 in USA
ATP Electronics	<a href="http://www.atpusa.com">http://www.atpusa.com</a>	sales@atpusa.com Tel 1-408-732-5831
Micron	<a href="http://www.micron.com">http://www.micron.com</a>	Tel 1-208-368-3900
TRS	<a href="http://www.trspace.de/">http://www.trspace.de/</a>	pgaeng@trs-space.de Tel +49-7249-910-380
Virtium	<a href="http://www.virtium.com/">http://www.virtium.com/</a>	sales@virtium.com Tel 1-949-888-2444x120
Southland	<a href="http://www.southlandmicro.com/">http://www.southlandmicro.com/</a>	oemsales@southlandmicro.com Tel +1-949-380-1958

### 4. Intel® Product Dealers and Product Integrators

The Intel Product Dealer program was designed in North America to support system integrators building and selling a limited number of systems per year. More information on this program is available through the Intel web site at <http://channel.intel.com>. Similar programs exist in European, Middle Eastern, African, Asia-Pacific, and the South American regions.



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## 5. Notes and Cautions

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### *Cautions*

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- DIMM devices with gold contacts should NOT be placed into DIMM sockets with tin-lead contacts or vice-versa. Mixing dissimilar metal contact types results in unreliable memory operation.
- Intel recommends similar manufacturer and similar speeds in each bank on the memory module. Mixing of dissimilar memory manufacturer devices or dissimilar memory device speeds is not recommended.

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### *Important Notes*

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- This document contains information that is the proprietary property of Intel Corporation. Nothing in this document constitutes a guaranty, warranty, or license, express or implied.
- Intel has tested the DIMMs listed in this document for minimum electrical and functional compatibility with the noted Intel® Server RAID Controller(s). This listing is not all inclusive; it only represents the DIMMs that Intel or CMTL has tested. Users should 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.
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