

Disclaimer

INTEL DISCLAIMS ALL LIABILITY FOR THESE DEVICES, INCLUDING LIABILITY FOR INFRINGEMENT OF ANY PROPRIETARY RIGHTS RELATING TO THESE DEVICES OR THE IMPLEMENTATION OF INFORMATION IN THIS DOCUMENT. INTEL DOES NOT WARRANT OR REPRESENT THAT SUCH DEVICES OR IMPLEMENTATION WILL NOT INFRINGE SUCH RIGHTS. INTEL IS NOT OBLIGATED TO PROVIDE ANY SUPPORT, INSTALLATION, OR OTHER ASSISTANCE WITH REGARD TO THESE DEVICES.

THE INTEL PRODUCT REFERRED TO IN THIS DOCUMENT IS INTENDED FOR STANDARD COMMERCIAL USE ONLY. CUSTOMERS ARE SOLELY RESPONSIBLE FOR ASSESSING THE SUITABILITY OF THE PRODUCT AND/OR DEVICES FOR USE IN PARTICULAR APPLICATIONS. THE REFERENCED INTEL PRODUCT IS NOT INTENDED FOR USE IN CRITICAL CONTROL OR SAFETY SYSTEMS OR IN NUCLEAR FACILITY APPLICATIONS.

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by the sale of Intel products. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, lifesaving, or life sustaining applications. Intel retains the right to make changes to its test specifications and memory list at any time, without notice.

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

Copyright © Intel Corporation 2014.

* Other brands and names are the property of their respective owners.



DDR4 RDIMM System-Level Validation Results on Intel® Xeon® E5-2600 v3 Processor Family

Listed below are the results from a small sample of DDR4 RDIMMs tested on Intel® Xeon® E5-2600 v3 processor family .

We are providing this information as a guide to module compatibility with Intel server reference platforms. This testing is not intended to replace the normal OEM qualification process. For results on Intel® motherboards or OEM specific production motherboards, please refer to the OEM's list of qualified memory suppliers. All parts are recommended to be run, using latest Intel® Platform reference Code Production Version.

Update Apr 14Th, 2017

RDIMM SR/DR DDR4-
2133 1.2V 1DIMM per channel; 3 slots per channel; 4 channels
1866 1.2V 2DIMMs per channel; 3 slots per channel; 4 channels
1600 1.2V 3DIMMs per channel; 3 slots per channel; 4 channels

DIMM					DRAM					Register		
Supplier	Part Number	Size	CL	Raw Card	Supplier	Part Number	Density Die	Width	Date Code	Vendor	Revision	Note
Crucial	CT4G4RFS8213.9FB1	4GB	15	D1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	Montage	A0	
Crucial	CT4G4RFS8213.9FB1	4GB	15	D1	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	Inphi	C0	
Crucial	CT4G4RFS8213.9FB1	4GB	15	D1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	IDT	C0	
Crucial	CT8G4RFS4213.18FA2	8GB	15	C	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	IDT	C0	
Crucial	CT8G4RFS4213.18FA2	8GB	15	C	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Montage	B1	
Crucial	CT8G4RFS4213.18FA2	8GB	15	C	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Inphi	B0	
Crucial	CT8G4RFS4213.18FB1	8GB	15	C1	Micron	MT40A1G4RH-083E:B	4Gb	x4	1618	Montage	A0	
Crucial	CT8G4RFS4213.18FB1	8GB	15	C1	Micron	MT40A1G4RH-083E:B	4Gb	x4	1618	Inphi	C0	
Crucial	CT8G4RFS4213.18FB1	8GB	15	C1	Micron	MT40A1G4RH-083E:B	4Gb	x4	1618	IDT	C0	
Crucial	CT8G4RFD8213.18FA1	8GB	15	E	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	Montage	B1	
Crucial	CT8G4RFD8213.18FA1	8GB	15	E	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	TI	A6	
Crucial	CT8G4RFD8213.18FB1	8GB	15	E1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	Montage	A0	
Crucial	CT8G4RFD8213.18FB1	8GB	15	E1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	Inphi	C0	
Crucial	CT8G4RFD8213.18FB1	8GB	15	E1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	IDT	C0	
Crucial	CT16G4RFD4213.36FA2	16GB	15	B	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	IDT	C0	
Crucial	CT16G4RFD4213.36FA2	16GB	15	B	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Montage	B1	
Crucial	CT16G4RFD4213.36FA2	16GB	15	B	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Inphi	B0	
Crucial	CT16G4RFD4213.36FB1	16GB	15	B1	Micron	MT40A1G4RH-075E:B	4Gb	x4	1618	Montage	A0	
Crucial	CT16G4RFD4213.36FB1	16GB	15	B1	Micron	MT40A1G4RH-075E:B	4Gb	x4	1618	Inphi	C0	

RDIMM SR/DR DDR4-**2133 1.2V 1DIMM per channel; 3 slots per channel; 4 channels****1866 1.2V 2DIMMs per channel; 3 slots per channel; 4 channels****1600 1.2V 3DIMMs per channel; 3 slots per channel; 4 channels**

DIMM					DRAM					Register		
Supplier	Part Number	Size	CL	Raw Card	Supplier	Part Number	Density Die	Width	Date Code	Vendor	Revision	Note
Crucial	CT16G4RFD4213.36FB1	16GB	15	B1	Micron	MT40A1G4RH-075E:B	4Gb	x4	1618	IDT	C0	
Crucial	CT32G4RFD4213.36FA1	32GB	15	B1	Micron	MT40A2G4PM-083E:A	8Gb	X4	1516	IDT	C0	
Crucial	CT32G4RFD4213.36FA1	32GB	15	B1	Micron	MT40A2G4PM-083E:A	8Gb	X4	1516	Montage	C0	
Crucial	CT32G4RFD4213.36FB1	32GB	15	B1	Micron	MT40A2G4WE-083E:B	8Gb	x4	1544	IDT	C0	
Crucial	CT32G4RFD4213.36FB1	32GB	15	B1	Micron	MT40A2G4WE-083E:B	8Gb	x4	1544	Montage	C0	
Crucial	CT32G4RFD4213.36FB1	32GB	15	B1	Micron	MT40A2G4WE-083E:B	8Gb	x4	1544	Inphi	C0	
Kingston	KVR21R15S8/4	4GB	15	D	SK hynix	H5AN4G8NMFR-TFC	4Gb	x8	1412	IDT	C0	
Kingston	KVR21R15S8/4	4GB	15	D	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1512	Montage	C0	
Kingston	KVR21R15S4/8	8GB	15	C	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1412	IDT	C0	
Kingston	KVR21R15S4/8	8GB	15	C	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1512	Montage	C0	
Kingston	KVR21R15D8/8	8GB	15	E	SK hynix	H5AN4G8NMFR-TFC	4Gb	x8	1412	Montage	B1	
Kingston	KVR21R15D4/16	16GB	15	A	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1412	Montage	B1	
Kingston	KVR21R15D4/16	16GB	15	A	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1548	IDT	C0	
Kingston	KVR21R15D4/16	16GB	15	A1	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1523	IDT	C0	
Micron	MTA9ASF51272PZ-2G1A2	4GB	15	D	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	IDT	C0	
Micron	MTA9ASF51272PZ-2G1A2	4GB	15	D	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	Montage	B1	
Micron	MTA9ASF51272PZ-2G1A2	4GB	15	D	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	Inphi	B0	
Micron	MTA9ASF51272PZ-2G1B1	4GB	15	D1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	Montage	A0	
Micron	MTA9ASF51272PZ-2G1B1	4GB	15	D1	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	Inphi	C0	
Micron	MTA9ASF51272PZ-2G1B1	4GB	15	D1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	IDT	C0	
Micron	MTA18ASF1G72PZ-2G1A2	8GB	15	C	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	IDT	C0	
Micron	MTA18ASF1G72PZ-2G1A2	8GB	15	C	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Montage	B1	
Micron	MTA18ASF1G72PZ-2G1A2	8GB	15	C	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Inphi	B0	
Micron	MTA18ASF1G72PZ-2G1B1	8GB	15	C1	Micron	MT40A1G4RH-083E:B	4Gb	x4	1618	Montage	A0	
Micron	MTA18ASF1G72PZ-2G1B1	8GB	15	C1	Micron	MT40A1G4RH-083E:B	4Gb	x4	1618	Inphi	C0	
Micron	MTA18ASF1G72PZ-2G1B1	8GB	15	C1	Micron	MT40A1G4RH-083E:B	4Gb	x4	1618	IDT	C0	

RDIMM SR/DR DDR4-
2133 1.2V 1DIMM per channel; 3 slots per channel; 4 channels
1866 1.2V 2DIMMs per channel; 3 slots per channel; 4 channels
1600 1.2V 3DIMMs per channel; 3 slots per channel; 4 channels

DIMM					DRAM					Register		
Supplier	Part Number	Size	CL	Raw Card	Supplier	Part Number	Density Die	Width	Date Code	Vendor	Revision	Note
Micron	MTA18ASF1G72PDZ-2G1A1	8GB	15	E	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	Montage	B1	
Micron	MTA18ASF1G72PDZ-2G1A1	8GB	15	E	Micron	MT40A512M8HX-093E:A	4Gb	x8	1408	TI	A6	
Micron	MTA18ASF1G72PDZ-2G1B1	8GB	15	E1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	Montage	A0	
Micron	MTA18ASF1G72PDZ-2G1B1	8GB	15	E1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	Inphi	C0	
Micron	MTA18ASF1G72PDZ-2G1B1	8GB	15	E1	Micron	MT40A512M8RH-075E:B	4Gb	x8	1618	IDT	C0	
Micron	MTA36ASF2G72PZ-2G1A2	16GB	15	B	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	IDT	C0	
Micron	MTA36ASF2G72PZ-2G1A2	16GB	15	B	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Montage	B1	
Micron	MTA36ASF2G72PZ-2G1A2	16GB	15	B	Micron	MT40A1G4HX-093E:A	4Gb	x4	1408	Inphi	B0	
Micron	MTA36ASF2G72PZ-2G1B1	16GB	15	B1	Micron	MT40A1G4RH-075E:B	4Gb	x4	1618	Montage	A0	
Micron	MTA36ASF2G72PZ-2G1B1	16GB	15	B1	Micron	MT40A1G4RH-075E:B	4Gb	x4	1618	Inphi	C0	
Micron	MTA36ASF2G72PZ-2G1B1	16GB	15	B1	Micron	MT40A1G4RH-075E:B	4Gb	x4	1618	IDT	C0	
Micron	MTA36ASF4G72PZ-2G1A1	32GB	15	B1	Micron	MT40A2G4PM-083E:A	8Gb	X4	1516	IDT	C0	
Micron	MTA36ASF4G72PZ-2G1A1	32GB	15	B1	Micron	MT40A2G4PM-083E:A	8Gb	X4	1516	Montage	C0	
Micron	MTA36ASF4G72PZ-2G1B1	32GB	15	B1	Micron	MT40A2G4WE-083E:B	8Gb	x4	1544	IDT	C0	
Micron	MTA36ASF4G72PZ-2G1B1	32GB	15	B1	Micron	MT40A2G4WE-083E:B	8Gb	x4	1544	Montage	C0	
Micron	MTA36ASF4G72PZ-2G1B1	32GB	15	B1	Micron	MT40A2G4WE-083E:B	8Gb	x4	1544	Inphi	C0	
Samsung	M393A5143DB0-CPB	4GB	15	D	Samsung	K4A4G085WD-BCPB	4Gb	x4	1428	IDT	C0	
Samsung	M393A5143DB0-CPB	4GB	15	D	Samsung	K4A4G085WD-BCPB	4Gb	x4	1428	Montage	B1	
Samsung	M393A1K43BB0-CPB	8GB	15	D	Samsung	K4A8G085WB-BCPB	8Gb	x8	1522	IDT	C0	
Samsung	M393A1K43BB0-CPB	8GB	15	D	Samsung	K4A8G085WB-BCPB	8Gb	x8	1522	Montage	C0	
Samsung	M393A1G40EB1-CPB	8GB	15	C1	Samsung	K4A4G045WE-BCPB	4Gb	x4	1610	IDT	C0	
Samsung	M393A1G40EB1-CPB	8GB	15	C1	Samsung	K4A4G045WE-BCPB	4Gb	x4	1610	Montage	C0	
Samsung	M393A1G40EB1-CPB	8GB	15	C1	Samsung	K4A4G045WE-BCPB	4Gb	x4	1610	Inphi	B0	
Samsung	M393A1G40DB0-CPB	8GB	15	C	Samsung	K4A4G045WD-BCPB	4Gb	x4	1340	IDT	C0	
Samsung	M393A1G40DB0-CPB	8GB	15	C	Samsung	K4A4G045WD-BCPB	4Gb	x4	1337	Montage	B1	
Samsung	M393A1G40DB0-CPB	8GB	15	C	Samsung	K4A4G045WD-BCPB	4Gb	x4	1446	Inphi	B0	
Samsung	M393A2K40BB0-CPB	16GB	15	C	Samsung	K4A8G045WB-BCPB	8Gb	x4	1522	IDT	C0	
Samsung	M393A2K40BB0-CPB	16GB	15	C	Samsung	K4A8G045WB-BCPB	8Gb	x4	1522	Montage	C0	

RDIMM SR/DR DDR4-
2133 1.2V 1DIMM per channel; 3 slots per channel; 4 channels
1866 1.2V 2DIMMs per channel; 3 slots per channel; 4 channels
1600 1.2V 3DIMMs per channel; 3 slots per channel; 4 channels

DIMM					DRAM					Register		
Supplier	Part Number	Size	CL	Raw Card	Supplier	Part Number	Density	Width	Date Code	Vendor	Revision	Note
Samsung	M393A1G43DB0-CPB	8GB	15	E	Samsung	K4A4G085WD-BCPB	4Gb	x8	1404	IDT	C0	
Samsung	M393A1G43DB0-CPB	8GB	15	E	Samsung	K4A4G085WD-BCPB	4Gb	x8	1404	Montage	B1	
Samsung	M393A1G43DB0-CPB	8GB	15	E	Samsung	K4A4G085WD-BCPB	4Gb	x8	1410	Inphi	B0	
Samsung	M393A1G43DB0-CPB	8GB	15	E1	Samsung	K4A4G085WD-BCPB	4Gb	x8	1404	IDT	C0	
Samsung	M393A1G43DB0-CPB	8GB	15	E1	Samsung	K4A4G085WD-BCPB	4Gb	x8	1404	Montage	B1	
Samsung	M393A1G43DB0-CPB	8GB	15	E1	Samsung	K4A4G085WD-BCPB	4Gb	x8	1410	Inphi	B0	
Samsung	M393A2K43BB1-CPB	16GB	15	E1	Samsung	K4A8G085WB-BCPB	8Gb	x8	1522	IDT	C0	
Samsung	M393A2K43BB1-CPB	16GB	15	E1	Samsung	K4A8G085WB-BCPB	8Gb	x8	1522	Montage	C0	
Samsung	M393A2G40DB0-CPB	16GB	15	A	Samsung	K4A4G045WD-BCPB	4Gb	x4	1337	IDT	C0	
Samsung	M393A2G40DB0-CPB	16GB	15	A	Samsung	K4A4G045WD-BCPB	4Gb	x4	1410	Inphi	B0	
Samsung	M393A2G40DB0-CPB	16GB	15	A	Samsung	K4A4G045WD-BCPB	4Gb	x4	1340	Montage	B1	
Samsung	M393A2G40EB1-CPB	16GB	15	A1	Samsung	K4A4G045WE-BCPB	4Gb	x4	1610	IDT	C0	
Samsung	M393A2G40EB1-CPB	16GB	15	A1	Samsung	K4A4G045WE-BCPB	4Gb	x4	1610	Montage	C0	
Samsung	M393A2G40EB1-CPB	16GB	15	A1	Samsung	K4A4G045WE-BCPB	4Gb	x4	1610	Inphi	B0	
Samsung	M393A4K40BB0-CPB	32GB	15	A	Samsung	K4A8G045WB-BCPB	8Gb	x4	1434	IDT	C0	
Samsung	M393A4K40BB0-CPB	32GB	15	A	Samsung	K4A8G045WB-BCPB	8Gb	x4	1449	Montage	C0	
SK hynix	HMA451R7MFR8N-TFTD	4GB	15	D	SK hynix	H5AN4G8NMFR-TFC	4Gb	x8	1406	IDT	C0	
SK hynix	HMA451R7MFR8N-TFT1	4GB	15	D	SK hynix	H5AN4G8NMFR-TFC	4Gb	x8	1406	Montage	B1	
SK hynix	HMA451R7AFR8N-TFTD	4GB	15	D	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1501	IDT	C0	1
SK hynix	HMA451R7AFR8N-TFT1	4GB	15	D	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1501	Montage	B1	1
SK hynix	HMA41GR7MFR4N-TFTD	8GB	15	C	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1406	IDT	C0	
SK hynix	HMA41GR7MFR4N-TFT1	8GB	15	C	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1406	Montage	B1	
SK hynix	HMA41GR7MFR8N-TFTD	8GB	15	E	SK hynix	H5AN4G8NMFR-TFC	4Gb	x8	1406	IDT	C0	
SK hynix	HMA41GR7MFR8N-TFT1	8GB	15	E	SK hynix	H5AN4G8NMFR-TFC	4Gb	x8	1406	Montage	B1	
SK hynix	HMA41GR7AFR8N-TFTD	8GB	15	E	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1501	IDT	C0	1
SK hynix	HMA41GR7AFR8N-TFT1	8GB	15	E	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1501	Montage	B1	1
SK hynix	HMA41GR7AFR4N-TFT1	8GB	15	C	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1510	Montage	B1	

Note:

1. Part has been observed to sometimes exhibit marginally lower TxVREF than Intel RMT guideline, when run at 3DPC- 1600. Not considered a functional failure risk.

RDIMM SR/DR DDR4-
2133 1.2V 1DIMM per channel; 3 slots per channel; 4 channels
1866 1.2V 2DIMMs per channel; 3 slots per channel; 4 channels
1600 1.2V 3DIMMs per channel; 3 slots per channel; 4 channels

DIMM					DRAM					Register		
Supplier	Part Number	Size	CL	Raw Card	Supplier	Part Number	Density Die	Width	Date Code	Vendor	Revision	Note
SK hynix	HMA41GR7AFR4N-TFTD	8GB	15	C	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1506	IDT	C0	
SK hynix	HMA82GR7AFR4N-TFT2	16GB	15	C2	SK hynix	H5AN8G4NAFR-TFC	8Gb	x4	1645	Montage	C0	
SK hynix	HMA42GR7MFR4N-TFTD	16GB	15	A	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1406	IDT	C0	
SK hynix	HMA42GR7MFR4N-TFT1	16GB	15	A	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1406	Montage	B1	
SK hynix	HMA42GR7AFR4N-TFT1	16GB	15	A	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1510	Montage	B1	
SK hynix	HMA42GR7AFR4N-TFTD	16GB	15	A	SK hynix	H5AN4G4NAFR-TFC	4Gb	x4	1506	IDT	C0	
SK hynix	HMA84GR7MFR4N-TFTD	32GB	15	B	SK hynix	H5AN8G4NMFR-TFC	8Gb	x4	1421	IDT	C0	
SK hynix	HMA84GR7MFR4N-TFT1	32GB	15	B	SK hynix	H5AN8G4NMFR-TFC	8Gb	x4	1421	Montage	B1	
SK hynix	HMA84GR7MFR4N-TFTL	32GB	15	B	SK hynix	H5AN8G4NMFR-TFC	8Gb	x4	1421	Inphi	B0	
SK hynix	HMA84GR7AFR4N-TFT2	32GB	15	B2	SK hynix	H5AN8G4NAFR-TFC	8Gb	x4	1619	Montage	C0	
SK hynix	HMA84GR7AFR4N-TFTD	32GB	15	B2	SK hynix	H5AN8G4NAFR-TFC	8Gb	x4	1619	IDT	C0	

RDIMM SR/DR DDR4-
2133 1.2V 1DIMM per channel; 3 slots per channel; 4 channels

DIMM					DRAM					Register		
Supplier	Part Number	Size	CL	Raw Card	Supplier	Part Number	Density Die	Width	Date Code	Vendor	Revision	Note
Adata	AD4R2133Y8G15-BHYM 8GB	8GB	15	C	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1427	Montage	B1	
Adata	AD4R2133Y16G15-BHYM	16GB	15	A	SK hynix	H5AN4G4NMFR-TFC	4Gb	x4	1427	Montage	B1	

Approved Test Labs:

The following test labs have the capability of performing the DDR4 RDIMM system-level testing. For further information please contact:

Platform Memory Operations Lab

Advanced Validation Labs

Rhonda Duda, Program Manager

phone: 714-438-2787

rduda@validationlabs.com