

Intel Platform Memory Operations

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DDR4 2133 Non-ECC UDIMM Validation Results

Listed below are the results from a small sample of DDR4 2133 Non-ECC UDIMM modules tested on Intel reference desktop platforms based on 6th Gen Intel® Core™, Intel® Pentium®, Intel® Celeron® processors (codename Skylake). We are providing this information as a guide to module performance with Intel® reference platforms. This testing is not intended to replace the normal OEM component qualification process. For results on specific Intel® motherboards or OEM production motherboards, please refer to the OEM's list of qualified memory suppliers.

DDR4-2133 (15-15-15) Non-ECC UDIMM, 2DIMM/ch, 2 channels, tested at 1.2V Vdd

DIMM Supplier	DIMM Part Number	DIMM Size	Raw Card	DRAM Supplier	DRAM Part Number	DRAM Density	DRAM Width	DRAM DateCode	Die Revision	Note
ADATA	AD4U2133W4G15-B	4GB	A	Samsung	K4A4G085WD-BCPB	4Gb	x8	1618	D	
ADATA	AD4U2133W8G15-B	8GB	B	Samsung	K4A4G085WD-BCPB	4Gb	x8	1618	D	
Crucial	CT2G4DFS624A.4FP	2GB	B	Micron	MT40A256M16GE-075E:B	4Gb	x16	1618	B	
Crucial	CT4G4DFS8213.8FA2	4GB	A	Micron	MT40A512M8HX-093E:A	4Gb	x8	1524	A	2
Crucial	CT4G4DFS8213.8FB1	4GB	A	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	B	
Crucial	CT8G4DFD8213.16FA2	8GB	B	Micron	MT40A512M8HX-093E:A	4Gb	x8	1524	A	2
Crucial	CT8G4DFD8213.16FB1	8GB	B	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	B	

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Crucial	CT8G4DFS8213.8FA1	8GB	A	Micron	MT40A1G8PM-083E:A	8Gb	x8	1618	A	
Crucial	CT16G4DFD8213.16FAD	16GB	B	Micron	MT40A1G8PM-083E:A	8Gb	x8	1618	A	
Kingston	KVR24N15S6/2	2GB	C	Micron	MT40A256M16GE-083E:B	4Gb	x16	1618	B	
Kingston	KVR21N15S8/4	4GB	A	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1618	A	1
Kingston	KVR21N15S6/4	4GB	C	Micron	MT40A512M16JY-083E:B	8Gb	x16	1548	B	3
Kingston	KVR24N17S6/4	4GB	C	SK hynix	H5AN8G6NAFR-UHC	8Gb	x16	1622	A	
Kingston	KVR21N15D8/8	8GB	B	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1618	A	1
Kingston	KVR24N17D8/8	8GB	B	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	B	
Kingston	KVR24N17S8/8	8GB	A	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
Kingston	KVR24N17S8/8	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	3
Kingston	KVR21N15D8/16	16GB	B	SK hynix	H5AN8G8NMFR-TFC	8Gb	x8	1618	M	1
Kingston	KVR24N17D8/16	16GB	B	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
Kingston	KVR24N17D8/16	16GB	B	SK hynix	H5AN8G8NMFR-UHC	8Gb	x8	1513	M	
Micron	MTA4ATF25664AZ-2G3B1	2GB	B	Micron	MT40A256M16GE-075E:B	4Gb	x16	1618	B	
Micron	MTA8ATF51264AZ-2G1A2	4GB	A	Micron	MT40A512M8HX-093E:A	4Gb	x8	1524	A	2
Micron	MTA8ATF51264AZ-2G1B1	4GB	A	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	B	
Micron	MTA4ATF51264AZ-2G3B1	4GB	C	Micron	MT40A512M16JY-083E:B	8Gb	x16	1548	B	3

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Micron	MTA16ATF1G64AZ-2G1A2	8GB	B	Micron	MT40A512M8HX-093E:A	4Gb	x8	1524	A	2
Micron	MTA16ATF1G64AZ-2G1B1	8GB	B	Micron	MT40A512M8RH-083E:B	4Gb	x8	1618	B	
Micron	MTA8ATF1G64AZ-2G3B1	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1550	B	3
Micron	MTA8ATF1G64AZ-2G1A1	8GB	A	Micron	MT40A1G8PM-083E:A	8Gb	x8	1618	A	
Micron	MTA8ATF1G64AZ-2G1BZES	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1546	B	3
Micron	MTA16ATF2G64AZ-2G1B1	16GB	B	Micron	MT40A1G8WE-083E:B	8Gb	x8	1546	B	3
Micron	MTA16ATF2G64AZ-2G3B1	16GB	B	Micron	MT40A1G8WE-083E:B	8Gb	x8	1546	B	3
Micron	MTA16ATF2G64AZ-2G1A1	16GB	B	Micron	MT40A1G8PM-083E:A	8Gb	x8	1618	A	
Ramaxel	RMUA5120MB76H8F-2400	2GB	C	Micron	MT40A256M16GE-083E	4Gb	x16	1602	B	
Ramaxel	RMUA5090MA68H9F-2133	4GB	A	Micron	MT40A512M8HX-093E:A	4Gb	x8	1524	A	2
Ramaxel	RMUA5120MB86H9F-2400	4GB	C	Micron	MT40A512M16JY-083E	8Gb	x16	1602	B	3
Ramaxel	RMUA5110MB78HAF-2400	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1552	B	3
Samsung	M378A5644EB0-CRC	2GB	C	Samsung	K4A4G165WE-BCRC	4Gb	x16	1622	E	
Samsung	M378A5644EB0-CPB	2GB	C	Samsung	K4A4G165WE-BCPB	4Gb	x16	1618	E	
Samsung	M378A1G43DB0-CPB	8GB	B	Samsung	K4A4G085WB-BCPB	4Gb	x8	1618	D	
Samsung	M378A5143EB2-CRC	4GB	A	Samsung	K4A4G085WE-BCRC	4Gb	x8	1622	E	
Samsung	M378A5143EB1-CPB	4GB	A	Samsung	K4A4G085WE-BCPB	4Gb	x8	1618	E	

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Samsung	M378A5143DB0-CPB	4GB	A	Samsung	K4A4G085WB-BCPB	4Gb	x8	1618	D	
Samsung	M378A5244BB0-CRC	4GB	C	Samsung	K4A8G165WB-BCRC	8Gb	x16	1628	B	
Samsung	M378A5244CB0-CRC	4GB	C	Samsung	K4A8G165WC-BCRC	8Gb	x16	1616	C	
Samsung	M378A5244CB0-CPB	4GB	C	Samsung	K4A8G165WC-BCPB	8Gb	x16	1616	C	
Samsung	M378A1G43EB1-CRC	8GB	B	Samsung	K4A4G085WE-BCRC	4Gb	x8	1622	E	
Samsung	M378A1G43EB1-CPB	8GB	B	Samsung	K4A4G085WE-BCPB	4Gb	x8	1618	E	
Samsung	M378A1K43BB2-CRC	8GB	A	Samsung	K4A8G085WB-BCRC	8Gb	x8	1622	B	
Samsung	M378A1K43BB1-CPB	8GB	A	Samsung	K4A8G085WB-BCPB	8Gb	x8	1618	B	
Samsung	M378A1K43CB2-CRC	8GB	A	Samsung	K4A8G085WC-BCRC	8Gb	x8	1617	C	
Samsung	M378A1K43CB2-CPB	8GB	A	Samsung	K4A8G085WC-BCPB	8Gb	x8	1617	C	
Samsung	M378A2K43BB1-CRC	16GB	B	Samsung	K4A8G085WB-BCRC	8Gb	x8	1622	B	
Samsung	M378A2K43CB1-CRC	16GB	B	Samsung	K4A8G085WC-BCRC	8Gb	x8	1619	C	
Samsung	M378A2K43CB1-CPB	16GB	B	Samsung	K4A8G085WC-BCPB	8Gb	x8	1619	C	
Samsung	M378A2K43BB1-CPB	16GB	B	Samsung	K4A8G085WB-BCPB	8Gb	x8	1618	B	
SK hynix	HMA451U6AFR8N-TF N0	4GB	A	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1618	A	1
SK hynix	HMA851U6AFR6N-TFN0	4GB	C	SK hynix	H5AN8G6NAFR-TFC	8Gb	x16	1622	A	
SK hynix	HMA851U6AFR6N-UHN0	4GB	C	SK hynix	H5AN8G6NAFR-UHC	8Gb	x16	1622	A	

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SK hynix	HMA41GU6AFR8N-TF N0	8GB	B	SK hynix	H5AN4G8NAFR-TFC	4Gb	x8	1618	A	1
SK hynix	HMA81GU6MFR8N-TF N0	8GB	A	SK hynix	H5AN8G8NMFR-TFC	8Gb	x8	1618	M	1
SK hynix	HMA81GU6AFR8N-TFN0	8GB	A	SK hynix	H5AN8G8NAFR-TFC	8Gb	x8	1605	A	
SK hynix	HMA81GU6AFR8N-UHN0	8GB	A	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
SK hynix	HMA82GU6MFR8N-TF N0	16GB	B	SK hynix	H5AN8G8NMFR-TFC	8Gb	x8	1618	M	1
SK hynix	HMA82GU6AFR8N-TFN0	16GB	B	SK hynix	H5AN8G8NAFR-TFC	8Gb	x8	1605	A	
SK hynix	HMA82GU6AFR8N-UHN0	16GB	B	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	

Note: 1. MRC revision 1.3.0 or later is required.

Note: 2. MRC revision 1.8.0.2 or later is required.

Note: 3. MRC revision 2.1.0 or later is required.

Created on January 12st, 2017

Approved test labs

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

Advanced Validation Labs

Intel Platform Memory Operations

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