

# Intel Platform Memory Operations

## **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.

© 2016 Intel Corporation.

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

## Intel Platform Memory Operations

### DDR4 2400 Non-ECC SoDIMM Validation Results

Listed below are the results from a small sample of DDR4 2400 Non-ECC SoDIMM modules tested on Intel reference mobile platforms with 7th Gen Intel® Core™, Intel® Pentium®, Intel® Celeron® processor (codename Kaby Lake), in accordance to Intel platform memory POR (Plan of Record). 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.

#### DDR4-2400 (17-17-17) Non-ECC SoDIMM, 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
Crucial	CT2G4SFS624A.4FB1	2GB	C	Micron	MT40A256M16GE-075E:B	4Gb	x16	1623	B	
Crucial	CT2G4DFS6266.4FB1	2GB	C	Micron	MT40A256M16GE-075E:B	4Gb	x16	1628	B	
Crucial	CT4G4SFS624A.4FB1	4GB	C	Micron	MT40A512M16JY-083E:B	8Gb	x16	1609	B	1
Crucial	CT4G4DFS8266.8FB1	4GB	A	Micron	MT40A512M8RH-075E:B	4Gb	x8	1648	B	
Crucial	CT4G4SFS6266.4FB1	4GB	C	Micron	MT40A512M16JY-075E:B	8Gb	x16	1614	B	
Crucial	CT4G4SFS624A.4FE1	4GB	C	Micron	MT40A512M16LY-075:E	8Gb	x16	1716	E	
Crucial	CT4G4SFS6266.4FE1	4GB	C	Micron	MT40A512M16LY-075:E	8Gb	x16	1716	E	

## Intel Platform Memory Operations

Crucial	CT8G4SFS824A.8FB1	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	1
Crucial	CT8G4SFD8266.16FB1	8GB	B	Micron	MT40A512M8RH-075E:B	4Gb	x8	1648	B	
Crucial	CT8G4SFS824A.8FA1	8GB	A	Micron	MT40A1G8PM-083E:A	8Gb	x8	1628	A	
Crucial	CT8G4SFS8266.8FB1	8GB	A	Micron	MT40A1G8WE-075E:B	8Gb	x8	1610	B	
Crucial	CT8G4SFS824A.8FE1	8GB	A	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Crucial	CT8G4SFS8266.8FE1	8GB	A	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Crucial	CT16G4SFD824A.16FB1	16GB	B	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	1
Crucial	CT16G4SFD824A.16FA1	16GB	B	Micron	MT40A1G8PM-083E:A	8Gb	x8	1650	A	
Crucial	CT16G4SFD8266.16FB1	16GB	B	Micron	MT40A1G8WE-075E:B	8Gb	x8	1610	B	
Crucial	CT16G4SFD824A.16FE1	16GB	E	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Crucial	CT16G4SFD8266.16FE1	16GB	E	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Kingston	KVR24S17S8/4	4GB	A	Micron	MT40A512M8RH-083E:B	4Gb	x8	1603	B	
Kingston	KVR24S17S6/4	4GB	C	SK hynix	H5AN8G6NAFR-UHC	8Gb	x16	1622	A	
Kingston	KVR26S19S6/4	4GB	C	Micron	MT40A512M16LY-075:E	8Gb	x16	1724	E	
Kingston	KVR24S17D8/8	8GB	E	Micron	MT40A512M8RH-083E:B	4Gb	x8	1603	B	

## Intel Platform Memory Operations

Kingston	KVR24S17S8/8	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1626	B	
Kingston	KVR24S17S8/8	8GB	A	Micron	MT40A1G8SA-075:H	8Gb	x8	1710	H	
Kingston	KVR24S17S8/8	8GB	A	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
Kingston	KVR26S19S8/8	8GB	A	Micron	MT40A1G8SA-075:E	8Gb	x8	1724	E	
Kingston	KVR24S17D8/16	16GB	E	Micron	MT40A1G8SA-075:H	8Gb	x8	1710	H	
Kingston	KVR24S17D8/16	16GB	B	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	1
Kingston	KVR24S17D8/16	16GB	E	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
Kingston	KVR26S19D8/16	16GB	E	Micron	MT40A1G8SA-075:E	8Gb	x8	1724	E	
Micron	MTA4ATF25664HZ-2G3B1	2GB	C	Micron	MT40A256M16GE-075E:B	4Gb	x16	1623	B	
Micron	MTA4ATF25664HZ-2G6B1	2GB	C	Micron	MT40A256M16GE-075E:B	4Gb	x16	1628	B	
Micron	MTA4ATF51264HZ-2G3B1	4GB	C	Micron	MT40A512M16JY-083E:B	8Gb	x16	1609	B	1
Micron	MTA8ATF51264HZ-2G6B1	4GB	A	Micron	MT40A512M8RH-075E:B	4Gb	x8	1648	B	
Micron	MTA4ATF51264HZ-2G6B1	4GB	C	Micron	MT40A512M16JY-075E:B	8Gb	x16	1614	B	
Micron	MTA4ATF51264HZ-2G3E1	4GB	C	Micron	MT40A512M16LY-075:E	8Gb	x16	1716	E	
Micron	MTA4ATF51264HZ-2G6E1	4GB	C	Micron	MT40A512M16LY-075:E	8Gb	x16	1716	E	

## Intel Platform Memory Operations

Micron	MTA8ATF1G64HZ-2G3H1	8GB	A	Micron	MT40A1G8SA-083:H	8Gb	x8	1710	H	
Micron	MTA8ATF1G64HZ-2G6H1	8GB	A	Micron	MT40A1G8SA-075:H	8Gb	x8	1710	H	
Micron	MTA8ATF1G64HZ-2G3B1	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	1
Micron	MTA16ATF1G64HZ-2G6B1	8GB	B	Micron	MT40A512M8RH-075E:B	4Gb	x8	1648	B	
Micron	MTA8ATF1G64HZ-2G6B1	8GB	A	Micron	MT40A1G8WE-075E:B	8Gb	x8	1610	B	
Micron	MTA8ATF1G64HZ-2G3A1	8GB	A	Micron	MT40A1G8PM-083E:A	8Gb	x8	1648	A	
Micron	MTA8ATF1G64HZ-2G3E1	8GB	A	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Micron	MTA8ATF1G64HZ-2G6E1	8GB	A	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Micron	MTA16ATF2G64HZ-2G3A1	16GB	B	Micron	MT40A1G8PM-083E:A	8Gb	x8	1640	A	
Micron	MTA16ATF2G64HZ-2G3H1	16GB	E	Micron	MT40A1G8SA-083:H	8Gb	x8	1710	H	
Micron	MTA16ATF2G64HZ-2G6H1	16GB	E	Micron	MT40A1G8SA-075:H	8Gb	x8	1710	H	
Micron	MTA16ATF2G64HZ-2G3B1	16GB	B	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	1
Micron	MTA16ATF2G64HZ-2G6B1	16GB	B	Micron	MT40A1G8WE-075E:B	8Gb	x8	1610	B	
Micron	MTA16ATF2G64HZ-2G3E1	16GB	E	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	
Micron	MTA16ATF2G64HZ-2G6E1	16GB	E	Micron	MT40A1G8SA-062E:E	8Gb	x8	1720	E	

## Intel Platform Memory Operations

Ramaxel	RMSA3270MB86H9F-2400	4GB	C	Micron	MT40A512M16JY-083E:B	8Gb	x16	1609	B	1
Ramaxel	RMSA3270HA86H9F-2400	4GB	C	SK hynix	H5AN8G6NAFR-UHC	8Gb	x16	1622	A	
Ramaxel	RMSA3260MB78HAF-2400	8GB	A	Micron	MT40A1G8WE-083E:B	8Gb	x8	1608	B	1
Ramaxel	RMSA3260HA78HAF-2400	8GB	C	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
Samsung	M471A5644EB0-CRC	2GB	C	Samsung	K4A4G165WE-BCRC	4Gb	x16	1622	E	
Samsung	M471A5143EB1-CRC	4GB	A	Samsung	K4A4G085WE-BCRC	4Gb	x8	1622	E	
Samsung	M471A5244CB0-CRC	4GB	C	Samsung	K4A8G165WC-BCRC	8Gb	x16	1616	C	
Samsung	M471A5244BB0-CRC	4GB	C	Samsung	K4A8G165WB-BCRC	8Gb	x16	1628	B	
Samsung	M471A1G43EB1-CRC	8GB	E	Samsung	K4A4G085WE-BCRC	4Gb	x8	1622	E	
Samsung	M471A1K43BB1-CRC	8GB	A	Samsung	K4A8G085WB-BCRC	8Gb	x8	1622	B	
Samsung	M471A1K43CB1-CRC	8GB	A	Samsung	K4A8G085WC-BCRC	8Gb	x8	1619	C	
Samsung	M471A2K43BB1-CRC	16GB	E	Samsung	K4A8G085WB-BCRC	8Gb	x8	1622	B	
Samsung	M471A2K43CB1-CRC	16GB	E	Samsung	K4A8G085WC-BCRC	8Gb	x8	1616	C	
SK hynix	HMA425S6AFR6N-UHN0	2GB	C	SK hynix	H5AN4G6NAFR-UHC	4Gb	x16	1545	A	
SK hynix	HMA451S6AFR8N-UHN0	4GB	A	SK hynix	H5AN4G8NAFR-UHC	4Gb	x8	1614	A	

## Intel Platform Memory Operations

SK hynix	HMA851S6AFR6N-UHN0	4GB	C	SK hynix	H5AN8G6NAFR-UHC	8Gb	x16	1622	A	
SK hynix	HMA81GS6AFR8N-UHN0	8GB	A	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	
SK hynix	HMA82GS6AFR8N-UHN0	16GB	E	SK hynix	H5AN8G8NAFR-UHC	8Gb	x8	1622	A	

**Note 1: MRC revision 1.0.4.1 or later is required.**

**Created on October 25<sup>st</sup>, 2017**

### **Approved test labs**

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

### **Advanced Validation Labs**

Attn: Rhonda Duda, Program Manager  
17665B Newhope Street  
Fountain Valley, CA 92708  
USA Phone: 714-438-2787  
rduda@validationlabs.com

