

**DDR4 2133 Qualified Vendors List (QVL)**

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
SAMSUNG	M378A5143DB0--CPB	4G	SS	SEC 428 BCPB	K4A4G085WD	15-15-15-36	1.2V	•	•
SAMSUNG	M378A1G43DB0--CPB	8G	DS	SEC 428 BCPB	K4A4G085WD	15-15-15-36	1.2V	•	•
G.SKILL	F4-2133C15Q-32GRK	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
GLOWAY	PC4-17000	4G	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
KINGSTON	HX421C13PBK4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
PANRAM	PUD42133C138G4NJW	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	13-13-13-35	1.2V	•	•
PANRAM	PUD42133C134G4NJW	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	13-13-13-35	1.2V	•	•
CORSAIR	CMK16GX4M4A2133C15	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
CRUCIAL	MTA8ATF51264AZ-2G1A1	4G	SS	MICRON	4QA77D9RCQ	15-15-15-36	1.2V	•	•
CORSAIR	CMV4GX4M1A2133C15	4G	SS	N/A	4GA72Z9RGR	15-15-15-36	1.2V	•	•
KINGSTON	HX421C14FB/8	8G	DS	N/A	Heat-Sink Package	14-14-14-35	1.2V	•	•
KINGSTON	HX421C13SBK4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
KINGSTON	KVR21N15D8/8	8G	DS	SK HYNIX	H5AN4G8NAFR	15-15-15-36	1.2V	•	•
GALAXY	GAM4DBLBM2133D15IE041C	4G	DS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
GALAXY	GAM4DBLBM213315IE081C	8G	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
AVEXIR	AVD4U21331508G-1C0B	8G	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
CORSAIR	CMK16GX4M4A2133C13	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	13-15-15-28	1.2V	•	•
GEIL	GPR48GB2133C15DC	8GB (4GB*2)	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
KINGSTON	HX421C14FBK4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	14-14-14-35	1.2V	•	•
TEKISM	T4U2133B8G15-SAD	8G	DS	SEC 446 BCPB	K4A4G085WD	15-15-15-36	1.2V	•	•
G.SKILL	F4-2133C15Q-16GRB	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
CENTURY	PC4-17000	8G	DS	SK HYNIX	H5AN4G8NMFR	15-15-15-36	1.2V	•	•
KINGSTON	KVR21N15S8/4	4G	SS	SK HYNIX	H5AN4G8NMFR	15-15-15-36	1.2V	•	•
ADATA	AX4U2133W4G15-QRZ	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15	1.2V	•	•
TEAM	TED48GM2133C15BK	8G	DS	SK HYNIX	H5AN4G8NMFR	15-15-15-36	1.2V	•	•
Transcend	TS1GLH72V1H (ECC)	8G	DS	SEC552	K4A4G085WBECPB			•	•
ADATA	AD4U2133W8G15-B	128GB( 16x 8G)	DS	SK HYNIX	H5AN4G8NAFR			•	•
CRUCIAL	CT8G4DFD8213.16FA11	32GB ( 8GB*4 )	DS	MICRO	5CA77D9RGQ		1.2V	•	•
KINGSTON	KVR21E15S8/4	4GB	SS	SK HYNIX	H5AN4G8NAFR		1.2V	•	•
G.SKILL	F4-2133C15S-4GNT	4G	SS	G.SKILL	D4 512M8GE15	15-15-15-35	1.2V	•	•
G.SKILL	F4-2133C15S-8GNT	8G	DS	G.SKILL	D4 512M8GE15	15-15-15-35	1.2V	•	•
TEAM	TPAD44G2133HC15BK	4G	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
APACER	AHU08GGB13CGT7G	8G	DS	N/A	Heat-Sink Package			•	•
ASINT	SLB404G08-CCN2B 1615	8G	DS	SK HYNIX	H5AN4G8NMFR			•	•
PATRIOT	PSD48G21332	8G	DS	PAIROT	PM512M8D4BU-083			•	•
APACER	AU08GGB13CDTBGC	8G	DS	APACER	AM6F6008THSA11550F			•	•
SAMSUNG	M378A1K43BB1-CPB	8G	SS	SEC 610	K4A8G085WBBCPB			•	•
KINGSTON	HX421C14FB2/8	8G	SS	N/A	Heat-Sink Package		1.2V	•	•
KINGSTON	HX421C14FBK2/8	8GB (4GB*2)	SS	N/A	Heat-Sink Package		1.2V	•	•
KINGSTON	HX421C14FB/4	4G	SS	N/A	Heat-Sink Package		1.2V	•	•
V-COLOR	TC48G21S818-IMS	32GB(8GB*4)	SS	V-COLOR	N/A		1.2V	•	•
TEAM	TED416G2133C15BK	16G	DS	TEAM	T4D10248MT-21	15-15-15-36	1.2V	•	•
TIGO	TMKU8GF58-2133P	8G	DS	N/A	PPE08-093TP		1.2V	•	•
SAMSUNG	M378A5143EB1-CPB	4GB	SS	SEC 637	E8GZ250WP	15-15-15-36	1.2V	•	•
SAMSUNG	M378A5143EB1-CPB	4GB	SS	SEC 607	E8K4089YC	15-15-15-36	1.2V	•	•
TEAM	TED48G2133C15BK	8GB	SS	TEAM	T4D10248KT-21	15-15-15-36	1.2V	•	•
ANUCELL	GRPIF1621033818594	8GB	DS	ANUCELL	P4P4GF3BLF-GMT	16-16-16-35	1.2V	•	•
GALAXY	GAL4AXLBM213315IE081C	8GB	SS	GALAXY	GA4L1GM88BA093H	15-15-15-35	1.2V	•	•
Xiede	1.2V-PC4-17000-1620	4GB	SS	MICON	6GA77D9RCQ	15-15-15-36	1.2V	•	•
Xiede	1.2V-PC4-17000-1620	8GB	DS	SK HYNIX	H5AN4G8NMFR	15-15-15-36	1.2V	•	•
V-COLOR	TC48G21S815	8GB	SS	V-COLOR	TMCB134HA3	15-15-15-36	1.2V	•	•
V-COLOR	TC48G21S815-iMS	8GB	SS	V-COLOR	E0510	15-15-15-36	1.2V	•	•

<b>SAMSUNG</b>	M378A2K43BB1CPB	16G	DS	SEC510	K4A8G085WBBCPB	1.2V	•	•	
<b>G.SKILL</b>	F4-2133C15Q-32GRR	8G*4	SS	N/A	Heat-Sink Package	15-15-15-35	1.20V	•	•
<b>CRUCIAL</b>	<b>CT16G4DFD8213.C16FAD1</b>	<b>16G</b>	<b>DS</b>	<b>MICON</b>	<b>6NA47C9BGD</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>	
<b>CRUCIAL</b>	<b>CT8G4DFD8213.C16FDR2</b>	<b>8G</b>	<b>DS</b>	<b>MICON</b>	<b>6UD75C9BHB</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>	
<b>CRUCIAL</b>	<b>CT4G4DFS8213.C8FBD2</b>	<b>4G</b>	<b>SS</b>	<b>MICON</b>	<b>6SB45C9BHC</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>	
<b>GEIL</b>	<b>GFY48GB2133C15DC</b>	<b>4G</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15-36</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>Klevv</b>	<b>IM48GU88N21-FFFHMB</b>	<b>8GB</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>Klevv</b>	<b>IM44GU48N21-FFFHAB</b>	<b>4GB</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>Klevv</b>	<b>IM4AGU88N21-FFFHMB</b>	<b>16GB</b>	<b>DS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>PATRIOT</b>	<b>PVE48G213C4GY</b>	<b>8G</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>		<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>GEIL</b>	<b>GPR432GB2133C15QC</b>	<b>8G</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15-36</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>SK HYNIX</b>	<b>HMA451U6AFR8N-TF</b>	<b>16GB(4*4GB)</b>	<b>SS</b>	<b>SK HYNIX</b>	<b>H5AN4G8NAFR</b>	<b>15-15-15-36</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>GLOWAY</b>	<b>STK4U2133D15041C/PC4-17000</b>	<b>4G</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15-35</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>G.SKILL</b>	<b>F4-2133C15Q-64GFX</b>	<b>64GB(4*16GB)</b>	<b>DS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15-36</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>G.SKILL</b>	<b>F4-2133C15Q-32GFX</b>	<b>32GB ( 4x 8GB )</b>	<b>SS</b>	<b>N/A</b>	<b>Heat-Sink Package</b>	<b>15-15-15-36</b>	<b>1.2V</b>	<b>•</b>	<b>•</b>
<b>G.SKILL</b>	<b>F4-2133C15S-8GDB</b>	<b>8GB</b>	<b>SS</b>	<b>G.SKILL</b>	<b>D4 1GM8GDDP</b>	<b>15-15-15-35</b>	<b>1.35V</b>	<b>•</b>	<b>•</b>
<b>AVANT</b>	<b>AVW6451U67J5213N3-SAEP</b>	<b>4GB</b>	<b>SS</b>	<b>SEC 549</b>	<b>K4A4G08</b>	<b>15--15-15-36</b>	<b>1.20V</b>	<b>•</b>	<b>•</b>
<b>AVANT</b>	<b>AVW641GU67J5213N2-SAEP</b>	<b>8GB</b>	<b>DS</b>	<b>SEC 549</b>	<b>K4A4G08</b>	<b>15--15-15-36</b>	<b>1.20V</b>	<b>•</b>	<b>•</b>
<b>AVANT</b>	<b>AVW642GU42J5213N2-SAEP</b>	<b>16GB</b>	<b>DS</b>	<b>SEC 549</b>	<b>K4A8G08</b>	<b>15--15-15-36</b>	<b>1.20V</b>	<b>•</b>	<b>•</b>
<b>Ramsta</b>	<b>R2DD4N04G2133</b>	<b>4G</b>	<b>SS</b>	<b>Micron</b>	<b>8</b>	<b>15-15-15-35</b>	<b>1.20V</b>	<b>•</b>	<b>•</b>
<b>Ramsta</b>	<b>R2DD4N08G2133</b>	<b>8GB</b>	<b>SS</b>	<b>Micron</b>	<b>8</b>	<b>15-15-15-36</b>	<b>1.20V</b>	<b>•</b>	<b>•</b>

#### DDR4 2400 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
<b>ADATA</b>	AX4U2400W8G16-DRZ	8G	DS	N/A	Heat-Sink Package	16-16-16	1.2V	•	•
<b>G.SKILL</b>	F4-2400C15Q-32GRB	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>PATRIOT</b>	PX416G240C5QK	4G	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>GLOWAY</b>	PC4-19200	4G	DS	N/A	Heat-Sink Package	16-16-16-35	1.2V	•	•
<b>PANRAM</b>	PUD42400C154G4NJW	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>PANRAM</b>	PUD42400C158G4NJW	8G	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>CRUCIAL</b>	BL54K4G4D240FSA	4G	SS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
<b>ADATA</b>	AX4U2400W4G16-DRZ	4G	SS	N/A	Heat-Sink Package	16-16-16	1.2V	•	•
<b>GEIL</b>	GPR416GB2400C15QC	4G	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>MUSHKIN</b>	997199F	8G	DS	N/A	Heat-Sink Package	15-15-15-35-50	1.2V	•	•
<b>KINGSTON</b>	HX424C15FBK4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-35-56	1.2V	•	•
<b>APACER</b>	78.C1GMA.AF30B	8G	DS	SK HYNIX	H5AN4G8NMFR	16-16-16-36	1.2V	•	•
<b>PNY</b>	MD16GK2D4240015AB	16GB ( 8GB*2)	DS	N/A	Heat-Sink Package		1.2V	•	•
<b>V-COLOR</b>	TD8G16C16-UHK	16GB ( 8GB*2)	DS	N/A	Heat-Sink Package	16-16-16-35	1.2V	•	•
<b>G.SKILL</b>	F4-2400C15D-169GVR	16GB ( 8GB*2)	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>APACER</b>	AHU08GGB24CDT7G	8G	DS	N/A	Heat-Sink Package	16-16-16-36		•	•
<b>CORSAIR</b>	CM4X8GE2400C14K4-CN	8G	DS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
<b>CORSAIR</b>	CMK8GX4M1A2400C14	8G	DS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
<b>PATRIOT</b>	PV416G240C5QK	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>KINGSTON</b>	HX424C15FBK4/16	4G	SS	N/A	Heat-Sink Package		1.2V	•	•
<b>G.SKILL</b>	F4-2400C14Q2-128GRK	16G	DS	N/A	Heat-Sink Package	14-14-14-34	1.2V	•	•
<b>G.SKILL</b>	F4-2400C14Q-16GRK	4G	SS	N/A	Heat-Sink Package	14-14-14-34	1.2V	•	•
<b>G.SKILL</b>	F4-2400C15Q-16GRR	4G	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
<b>AVEXIR</b>	AVD4UZ124001608G-4COR	8G	DS	N/A	Heat-Sink Package		1.2V	•	•
<b>AVEXIR</b>	AVD4UZ124001604G-4COB	4G	SS	N/A	Heat-Sink Package		1.2V	•	•
<b>CRUCIAL</b>	BLS8G4D240FSA.16FADG	8G	DS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
<b>TEAM</b>	TED48G2400C16BK	8GB	DS	TEAM	T4D5128HT-24	16-16-16-39	1.2V	•	•
<b>KINGSTON</b>	HX424C12PBK4/32	8G	DS	N/A	Heat-Sink Package		1.35V	•	•

G.SKILL	F4-2400C15Q-32GRR	8G	DS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
GALAXY	GAL4AXLBM2400D16JE081C	8G	SS	GALAXY	GA4L1GM88BA093H		1.2V	•	•
CORSAIR	CM4X8GE2400C16K4-CN	8G	DS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
LEORICE	DDR4/2400MHZ/CL15/1.2V	32GB ( 8GB*4 )	SS	N/A	Heat-Sink Package		1.2V	•	•
CORSAIR	CMD32GX4M4A2400C14	8G	DS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
AMD	R748G2400U2S	8G	DS	N/A	Heat-Sink Package	15-15-15-36	1.2V	•	•
MICRON	MTA16ATF2G64AZ-2G3B1	16G	DS	MICRON	5WB47D9TBH			•	•
MICRON	MTA8ATF1G64AZ-2G3B1	8G	SS	MICRON	5WB47D9TBH	17-17-17-39-55	1.2V	•	•
KINGSTON	HX424C12SB2K4/16	16GB ( 4GB*4 )	SS	N/A	Heat-Sink Package		1.35V	•	•
KINGSTON	HX424C12SB2K4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package		1.35V	•	•
KINGSTON	HX424C15FBK2/16	16GB ( 8GB*2 )	DS	N/A	Heat-Sink Package		1.2V	•	•
GALAXY	GAM4BXLBS240016JE164C	16GB ( 4GB*4 )	SS	N/A	Heat-Sink Package	16-16-16-36	1.2V	•	•
APACER	AH08GGB24CDT5H	16GB ( 2x 8G )	DS	N/A	Heat-Sink Package	16-16-16-36		•	•
CORSAIR	CMK8GX4M2A2400C14	8GB ( 2x 4G )	SS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
CORSAIR	CMK16GX4M2A2400C14	16GB ( 2x 8G )	DS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
AVEXIR	AVD4U24001608G-1BW	8G	DS	N/A	512X8DDR4		1.2V	•	•
AVEXIR	AVD4UZ124001608G-2COR	16GB (8GB*2)	DS	N/A	Heat-Sink Package		1.2V	•	•
V-COLOR	8GTC48G24S817-IMS	32GB ( 8GB*4 )	SS	V-COLOR	N/A		1.2V	•	•
CORSAIR	CMD32GX4M4A2400C12	32GB(8GB*4)	DS	N/A	Heat-Sink Package		1.2V	•	•
G.SKILL	F4-2400C15Q-64GIS	64GB(16GB*4)	DS	N/A	Heat-Sink Package		1.2V	•	•
G.SKILL	F4-2400C15Q-32GNT	32GB(8GB*4)	SS	G.SKILL	D4 1GM8GE15		1.2V	•	•
CRUCIAL	BLS8G4D240FSB.16FARG	32GB(8GB*4)	DS	N/A	Heat-Sink Package		1.2V	•	•
GEIL	GLW416GB2400C15DC	8G	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
TEAM	TDTRD48G2400HC15ABK	8GB	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
TEAM	TDRED48G2400HC14BK	8GB	DS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
GEIL	GRP416GB2400C16DC	8GB	SS	N/A	Heat-Sink Package	16-16-16-36	1.2V	•	•
ADATA	AX4U2400W8G16-BRZ	8G	DS	N/A	Heat-Sink Package	16-16-16	1.2V	•	•
KINGSTON	HX424C15FB/16	16GB	DS	N/A	Heat-Sink Package		1.2V	•	•
CRUCIAL	BLS8G4D240FSC.16FARG	8GB	DS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
CORSAIR	CMK32GX4M2A2400C14	32GB(8GB*2)	DS	N/A	Heat-Sink Package	14-16-16-31	1.2V	•	•
GALAXY	GAM4HFL1BM2400D15IE08IC	8G	DS	N/A	Heat-Sink Package		1.2V	•	•
CORSAIR	CMK32GX4M4A2400C16R	32GB(4*8GB)	SS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
CORSAIR	CMD16GX4M4B2400C10	16GB(4*4GB)	SS	N/A	Heat-Sink Package	10-12-12-28	1.35V	•	•
MUSHKIN	997199T	16GB(2*8GB)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
GEIL	8G2133C151.2V	8G	DS	GEIL	512X8DDR4Y		1.2V	•	•
TEAM	TED416G2400C16BK	16G	DS	TEAM	T4D10248MT-24	16-6-16-39	1.2V	•	•
TEAM	TCD44G2400C14BK	4GB	SS	Skhymix	H5AN4G8NAFR	14-16-16-31	1.2V	•	•
TIGO	TMKU8GF28-2400U	8G	DS	N/A	Heat-Sink Package		1.2V	•	•
APACER	AU08GGB24CEYBGC	8G	SS	APACER	AM6F6308MHHSB2	17-17-17-39	1.2V	•	•
KINGSTON	HX424C12SB2K2/16	16G	DS	N/A	Heat-Sink Package		1.35V	•	•
GLOWAY	PC4-19200	8G	SS	N/A	M15B302062	15-15-15-35	1.2V	•	•
ADATA	AX4U240038G16-BWZ	8GB*8	SS	N/A	Heat-Sink Package	17-16-16-39	1.2V	•	•
ADATA	AX4U2400316G16-SBF	16G*16	DS	N/A	Heat-Sink Package	17-16-16-39	1.2V	•	•
AVEXIR	AVD4UZ124001608G-4COR	8GB*4	SS	N/A	Heat-Sink Package	16-16-16-36	1.2V	•	•
AVEXIR	AVD4UZ124001604G-4COR	16GB ( 4x 4GB )	SS	N/A	Heat-Sink Package	16-16-16-36	1.2V	•	•
KINGSTON	TF24D4U7S8MB-8	8GB	SS	MICON	6SB77D9TBH	17-17-17-39	1.2V	•	•
KINGSTON	TF24D4U7S1MBD-2	2GB	SS	MICON	6GB77D9TGQ	17-17-17-39	1.2V	•	•
KINGSTON	TF24D4U7S8MBD-4	4GB	SS	MICON	6QB77D9TGG	17-17-17-39	1.2V	•	•
RAMAXEL	RMUA5120MB86H9F-2400	4GB	SS	MICON	6RB77D9TBK	17-17-17-39	1.2V	•	•
RAMAXEL	RMUA5120MB76H8F-2400	2GB	SS	MICON	6GB77D9TGQ	17-17-17-39	1.2V	•	•
V-COLOR	TC48G24S817	8GB	SS	V-COLOR	TMC9486G2	17-17-17-39	1.2V	•	•
ADATA	AX4U240038G16-SBF	8GB	SS	N/A	Heat-Sink Package	17-17-17-39	1.2V	•	•
ADATA	AX4U2400W8G16-DRD	8GB	DS	N/A	Heat-Sink Package	17-17-17-39	1.2V	•	•
ADATA	AX4U2400316G16-DRD	16G	DS	N/A	Heat-Sink Package	17-17-17-39	1.2V	•	•

G.SKILL	F4-2400C15Q2-64GRK	8GB*8	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
TEAM	TCD48G2400C14BK	8G	SS	TEAM	T4D10248MT-24	14-16-16-31	1.2V	•	•
TEAM	TED44G2400C16BK	4G	SS	TEAM	T4D5128MT-24	16-16-16-39	1.2V	•	•
CRUCIAL	BLS16G4D240FSE.16FAD	16G	DS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
CRUCIAL	BLS4G4D240FSA.8FARG	4G	SS	N/A	Heat-Sink Package	16-16-16-39	1.2V	•	•
PATRIOT	PV48G240C5	8G	DS	N/A	Heat-Sink Package		1.2V	•	•
TEAM	TFWD416G2400C15BBK	16G	DS	TEAM	PP020-093E TP	15-17-17-35	1.2V	•	•
TEAM	TFRD48G2400C15ABK	8G	SS	TEAM	T4D10248HT-24	15-15-15-35	1.2V	•	•
TEAM	TFRD44G2400C15ABK	4G	SS	TEAM	T4D5128HT-24	15-15-15-35	1.2V	•	•
Klevv	IM44GU48N24-FFFHAZ	4GB	SS	N/A	Heat-Sink Package	15-15-15	1.2V	•	•
Klevv	IM4AGU88N24-FFFHMZ	16GB	DS	N/A	Heat-Sink Package	15-15-15	1.2V	•	•
Klevv	IM48GU88N24-FFFHMZ	8GB	SS	N/A	Heat-Sink Package	15-15-15	1.2V	•	•
Klevv	IM4AGU88N24-FFFHMB	16GB	DS	N/A	Heat-Sink Package	15-15-15	1.2V	•	•
Klevv	IM44GU48N24-FFFHAB	4GB	SS	N/A	Heat-Sink Package	15-15-15	1.2V	•	•
GEIL	GPR432GB2400C16QC	8GB	SS	N/A	Heat-Sink Package	16-16-16-36	1.2V	•	•
G.SKILL	F4-2400C15D-16GTZR	8GB	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V	•	•
CRUCIAL	MTA16ATF1G64AZ-2G3A2	8GB	DS	MICON	5VA77D9RGG	17-17-17-39	1.2V	•	•
Kingston	KVR24N17S8/8	8GB	SS	N/A	Heat-Sink Package	17-17-17-39	1.2V	•	•
G.SKILL	F4-2400C15Q-64GFX	64GB(4*16GB)	DS	N/A	Heat-Sink Package	15-15-15-39	1.20V	•	•
G.SKILL	F4-2400C15Q-32GFX	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	15-15-15-39	1.20V	•	•
G.SKILL	F4-2400C16Q-64GFX	64GB(4*16GB)	DS	N/A	Heat-Sink Package	16-16-16-39	1.20V	•	•
G.SKILL	F4-2400C16Q-32GFX	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	16-16-16-39	1.20V	•	•
CORSAIR	CMK16GX4M2Z2400C16	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	16-16-16-18	1.20V	•	•
CORSAIR	CMK128GX4M8A2400C14	128GB(8*16GB)	DS	N/A	Heat-Sink Package	14-16-16-31	1.20V	•	•
SAMSUNG	M378A5244CB0--CRC	16GB(4*4GB)	SS	SEC 704	K4A8G16 5WC BCRC	17-17-17-39	1.20V	•	•
AMD	R744G2400U1S	4GB	SS	N/A	Heat-Sink Package	15-15-15-36	1.20V	•	•
CORSAIR	CMK128GX4M8A2400C14(Ver3.3)	128GB ( 8x 16GB )	DS	N/A	Heat-Sink Package	14-16-16-31	1.20V	•	•
CORSAIR	CMK16GX4M2Z2400C16(Ver3.31)	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	16-16-16-39	1.20V	•	•
GeIL	GFR416GB2400C16S	16GB	SS	N/A	Heat-Sink Package	16-16-16-36	1.20V	•	•
GeIL	GFR432GB2400C16D	16GB	SS	N/A	Heat-Sink Package	16-16-16-36	1.20V	•	•
HyperX	HX424C15FB2K4/32	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	15-15-15-35	1.20V	•	•
GLOWAY	STK4U2400D17081C	8GB	DS	N/A	Heat-Sink Package	17-17-17-39	1.20V	•	•
GLOWAY	STK4U2400D17081C	8GB	SS	N/A	Heat-Sink Package	17-17-17-39	1.20V	•	•
PATRIOT	PSD48G240081	8GB	SS	SEC 710	K4A8G08	17-17-17-39	1.20V	•	•
PATRIOT	PSD44G240081	4GB	SS	SEC 707	K4A4G08	16-16-16-39	1.20V	•	•
PATRIOT	PSD416G24002	16GB	DS	SEC 707	K4A8G08	17-17-17-39	1.20V	•	•
PATRIOT	PV432G240C5QK	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	15-15-15-35	1.20V	•	•
PATRIOT	PVE48G240C5KRD	8GB ( 2x 4GB )	SS	N/A	Heat-Sink Package	15-15-15-35	1.20V	•	•
PATRIOT	PVE416G240C5KBL	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	15-15-15-35	1.20V	•	•
SAMSUNG	M378A2K43CB1-CRC	16GB	DS	SEC 719	K4A8G08	17-17-17-39	1.20V	•	•
Crucial	CT8G4DFS824A.C8FBD1	8GB	SS	Micro	6VB47 C9BGM	17-17-17-39	1.20V	•	•
ADATA	AD4X240038G17-BP	64GB ( 8GBx8 )	SS	N/A	PP019-083E	17-17-17-39	1.20V	•	•
APACER	AHU08GGB24CDU7S	8GB	SS	N/A	Heat-Sink Package	16-16-16-36	1.20V	•	•
Crucial	BLS8G4D240FSC.16FBR2	8GB	DS	N/A	Heat-Sink Package	16-16-16-39	1.20V	•	•
Asgard	VML41UG-MIC1U22ZG	8GB	SS	N/A	Heat-Sink Package	17-17-17-39	1.20V	•	•
KINGMAX	GLLF62F-DAKZIG CLBU	4GB	SS	N/A	PS029-D93 TP	17-17-17-39	1.20V	•	•
KINGMAX	GLLH22F-18KIIA CFBU2	16GB	DS	N/A	PS023-D93 TP	17-17-17-39	1.20V	•	•
KINGMAX	GLLG42F-D8KIBIA CFDU	8GB	DS	KINGMAX	KGD8CB-CU	17-17-17-39	1.20V	•	•
GEIL	GP44GB2400C16SC	4GB	SS	GEIL	CG4L512M88BA093FH	17-16-16-36	1.20V	•	•
Kingston	KVR24N17S8/4	4GB	SS	MIRCON	7CB75	17-17-17-39	1.20V	•	•
Ramsta	R2DD4N04G2400	4G	SS	Micron	8	16-16-16-39	1.20V	•	•
Ramsta	R2DD4N16G2400	16G	SS	Micron	16	17-17-17-39	1.20V	•	•
Ramsta	R2DD4N08G2400	8GB	DS	Micron	8	17-17-17-39	1.20V	•	•

DDR4 2666 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
CORSAIR	CMK16GX4M4A2666C16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
CORSAIR	CMD32GX4M4A2666C15(Ver5.29)	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-17-17-35	1.2V		•
G.SKILL	F4-2666C15Q-16GRR	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V		•
MUSHKIN	997192F	8GB(4GB*2)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V		•
KINGSTON	HX426C13PBK4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36	1.35V		•
KINGSTON	HX426C15FBK4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-17-17-35	1.2V		•
CORSAIR	CMD128GX4M8A2666C15	128GB(16GB*4)	DS	N/A	Heat-Sink Package	15-17-17-35	1.2V		•
KINGSTON	HX426C15FBK4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-17-17-35	1.2V		•
CRUCIAL	BLE4G4D26AFEA.8FAD	8G	SS	N/A	Heat-Sink Package	16-16-17-36	1.2V		•
CRUCIAL	BLE8G4D26AFEA.16FAD	8G	DS	N/A	Heat-Sink Package	16-17-17-36	1.2V		•
AVEXIR	AVD4UZ126661504G-4COB	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V		•
PATRIOT	PV416G266C5QK	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V		•
AVEXIR	AVD4UZ126661508G-4COB	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36	1.2V		•
CRUCIAL	BLT4G4D26AFTA.8FADG	4G	SS	N/A	Heat-Sink Package	16-17-17-36	1.2V		•
KLEVV	IMA41GU6MFR8N-C F0	8G	DS	N/A	Heat-Sink Package	15-15-15	1.2V		•
KINGSTON	HX426C13SB2K4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36	1.35V		•
KINGSTON	HX426C13SB2K4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36	1.35V		•
PNY	MD16GK4D4266615AXR	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package		1.2V		•
AVEXIR	AVD4UZ126661504G-4IPROG	16G(4G*4)	DS	N/A	Heat-Sink Package		1.2V		•
AVEXIR	AVD4UZ126661504G	8G(4G*2)	DS	N/A	Heat-Sink Package		1.2V		•
CORSAIR	CMU32GX4M2A2666C16	32GB(2*16GB)	DS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
CORSAIR	CMK32GX4M4A2666C16	32GB(8GB*4)	DS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
CORSAIR	CMK16GX4M2A2666C16	16GB(2*8GB)	SS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
CORSAIR	CMK32GX4M2A2666C16	32GB(2*16GB)	DS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
CORSAIR	CMK16GX4M4A2666C15	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-17-17-35	1.2V		•
CORSAIR	CMK64GX4M4A2666C16	64GB(16GB*4)	DS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
G.SKILL	F4-2666C15Q-32GRR	8G*4	SS	N/A	Heat-Sink Package	15-15-15-35	1.2V		•
AVEXIR	AVD4UZ126661704G-4COR	4G*4	SS	N/A	Heat-Sink Package		1.2V		•
AVEXIR	AVD4UZ126661708G-4COR	8G*4	SS	N/A	Heat-Sink Package		1.2V		•
CORSAIR	CMK32GX4M4A2666C15	32GB(4*8GB)	DS	N/A	Heat-Sink Package	15-17-17-35	1.2V		•
TEAM	TFRD4162666C15BBK	16G	DS	N/A	SEC546	15-17-17-35	1.2V		•
TEAM	TFWD48G2666C15BBK	8G	DS	N/A	SEC634	15-17-17-35	1.2V		•
TEAM	TCD44G2666C15BBK	4G	SS	TEAM	T4D5128HT-266	15-17-17-35	1.2V		•
HyperX	HX426C15FBK2/16	8G	DS	N/A	Heat-Sink Package		1.2V		•
Klevv	IM48GU88N26-FFFHMZ	8GB	SS	N/A	Heat-Sink Package	15-15-15	1.2V		•
Klevv	IM4AGU88N26-FFFHMZ	16GB	DS	N/A	Heat-Sink Package	15-15-15	1.2V		•
Klevv	IM44GU48N26-FFFHAZ	4GB	SS	N/A	Heat-Sink Package	15-15-15	1.2V		•
CORSAIR	CMK16GX4M2A2666C16(Ver5.30)	8GB	SS	N/A	Heat-Sink Package	16-18-18-35	1.2V		•
ADATA	AX4U266638G16-DRZ	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	16-16-16-39	1.2V		•
ADATA	AX4U2666W8G16-QRZ	32GB ( 4x 8GB )	DS	N/A	Heat-Sink Package	16-16-16-39	1.2V		•
crucial	BLS8G4D26BFSC.16FBR2	8GB	DS	N/A	Heat-Sink Package	16-18-18-38	1.20V		•
crucial	BLS16G4D26BFSC.16FBD	16GB	DS	N/A	Heat-Sink Package	16-18-18-38	1.20V		•
crucial	BLS4G4D26BFSC.8FBR2	4GB	SS	N/A	Heat-Sink Package	16-18-18-38	1.20V		•
CORSAIR	CMK128GX4M8A2666C16	128GB(8*16GB)	DS	N/A	Heat-Sink Package	16-18-18-36	1.20V		•
CORSAIR	CMR16GX4M2A2666C16	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	16-18-18-35	1.20V		•
CORSAIR	CMK128GX4M8A2666C16(Ver5.30)	128GB ( 8x 16GB )	DS	N/A	Heat-Sink Package	16-18-18-35	1.20V		•
CORSAIR	CMR64GX4M8A2666C16	64GB ( 8x 8GB )	SS	N/A	Heat-Sink Package	16-18-18-35	1.20V		•
HyperX	HX426C16FB2K4/64	64GB(4*16GB)	DS	N/A	Heat-Sink Package	16-18-18-39	1.20V		•
G.SKILL	F4-2666C16Q2-64GRB	64GB ( 8GBx8 )	SS	N/A	Heat-Sink Package	16-16-16-36	1.20V		•
HyperX	HX426C15SBK8/128	128GB ( 16GBx8 )	DS	N/A	Heat-Sink Package	15-16-16-35	1.20V		•

### DDR4 2800 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMM

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	1 DIMM	2 DIMM
CORSAIR	CMK16GX4M4A2800C16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	16-18-18-36	1.2V	•	•
KINGSTON	HX428C14PB2K4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
PANRAM	PUD42800C164G4NJW	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	16-18-18-36	1.25V	•	•
KINGSTON	HX428C14PBK4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
AVEXIR	AVD4UZ128001604G-4COB	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36-51	1.2V	•	•
AVEXIR	AVD4UZ128001608G-4COB	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36-51	1.2V	•	•
CORSAIR	CMK32GX4M4A2800C16	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	16-18-18-36	1.2V	•	•
KINGSTON	HX428C14SB2K4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
KINGSTON	HX428C14SB2K4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
ADATA	Digital Storm	8G	DS	SK HYNIX	HMA54G8NAFR			•	•
G.SKILL	F4-2800C16D-16GRR	8G*2	SS	N/A	Heat-Sink Package		1.2V	•	•
ADATA	AX4U280038G17-SBF	8GB*8	SS	N/A	Heat-Sink Package	18-17-17-36	1.2V	•	•
ADATA	AX4U2800316G16-SBF	16GB	DS	N/A	Heat-Sink Package	17-16-16-36	1.2V	•	•
CORSAIR	CMD32GX4M4A2800C16	8G	DS	N/A	Heat-Sink Package	16-18-18-36	1.2V	•	•
G.SKILL	F4-2800C14Q-64GVK	16G*4	DS	N/A	Heat-Sink Package	14-14-14-35	1.35V	•	•
G.SKILL	F4-2800C16Q-32GVR	8G*4	SS	N/A	Heat-Sink Package	16-16-16-36	1.20V	•	•
AVEXIR	AVD4UZ128001504G-4BZ1RR	4G*4	SS	N/A	Heat-Sink Package		1.35V	•	•
AVEXIR	AVD4UZ128001508G-4BZ1RR	8G*4	DS	N/A	Heat-Sink Package		1.35V	•	•
CORSAIR	CMD16GX4M4A2800C16	16GB(4*4GB)	SS	N/A	Heat-Sink Package	16-18-18-36	1.2V	•	•
CORSAIR	CMK64GX4M8B2800C14	64GB(8*8GB)	DS	N/A	Heat-Sink Package	14-16-16-36	1.35V	•	•
TEAM	TFWD416G2800C16CBK	16G	DS	TEAM	T4D10248HT-30	16-18-18-38	1.2V	•	•
TEAM	TFRD48G2800C16CBK	8G	DS	N/A	SEC625	16-18-18-38	1.2V	•	•
TEAM	TCD44G2800C16CBK	4G	SS	TEAM	T4D5128HT-30	16-18-18-38	1.2V	•	•
FORZA	NFMUD416E8-2800EH2A	16GB	DS	N/A	Heat-Sink Package	17-17-17-36	1.2V	•	•
FORZA	NFMUD480E8-2800DH2A	8G	SS	N/A	Heat-Sink Package	17-17-17-36	1.2V	•	•
ADATA	AX4U2800W8G17-BRD	8GB	DS	N/A	Heat-Sink Package	17-17-17-36	1.2V	•	•
G.SKILL	F4-2800C15Q-32GVR	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	15-15-15-35	1.25V	•	•
ADATA	AX4U2800W4G17-BRZ	8GB(2*4GB)	SS	N/A	Heat-Sink Package	17-17-17-36	1.2V	•	•
ADATA	AX4U280038G17-BWZ	8G	SS	N/A	Heat-Sink Package	17-17-17-36	1.2V	•	•
KINGMAX	GLMG42F-18KIIA CJBR4	8GB	SS	N/A	Heat-Sink Package	17-17-17-39	1.20V	•	•

#### DDR4 3000 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
CORSAIR	CMD32GX4M2B3000C15	32GB ( 16GB*2 )	DS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
KINGSTON	HX430C15PB2K4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
G.SKILL	F4-3000C15Q-16GRR	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-35	1.35V	•	•
PANRAM	PUD43000C154G4NJW	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
KINGSTON	HX430C15PBK4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
KINGSTON	HX430C15SB2K4/32	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
AVEXIR	AVD4UZ130001604G-4COB	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36-51	1.35V	•	•
AVEXIR	AVD4UZ130001608G-4COB	32GB ( 8GB*4 )	DS	N/A	Heat-Sink Package	15-15-15-36-51	1.35V	•	•
KINGSTON	HX430C15SBK2/16	16GB ( 8GB*2 )	DS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
KLEVV	IM44GU48A30-GIIHMC	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	16-18-18	1.35V	•	•

<b>KINGSTON</b>	HX430C15SB2K4/16	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	15-15-15-36-50	1.35V	•	•
<b>G.SKILL</b>	F4-3000C15D-32GVR	32GB (16GB*2)	DS	N/A	Heat-Sink Package	15-15-15-35	1.35V	•	•
<b>CORSAIR</b>	CMK64GX4M4B3000C15	64GB (16GB*4)	DS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>ADATA</b>	AX4U300038G16-DBZ	8G	DS	N/A	Heat-Sink Package	16-18-18-36	1.35V	•	•
<b>ADATA</b>	AX4U3000316G16-BGZ	16G	DS	N/A	Heat-Sink Package	16-18-18	1.35V	•	•
<b>CORSAIR</b>	CMD16GX4M4B3000C15	4G	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMK32GX4M2B3000C15	16G	DS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMU16GX4M2C3000C15	8G	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMK16GX4M4B3000C15	4G	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>G.SKILL</b>	F4-3000C15Q-32GRK	8G*4	DS	N/A	Heat-Sink Package	15-15-15-35	1.35V	•	•
<b>CORSAIR</b>	CMK8GX4M2B3000C15	8GB(2*4GB)	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMU32GX4M4C3000C15	32GB(8GB*4)	DS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>GEIL</b>	GFR416GB3000C15ADC	8G	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>TEAM</b>	TFWD416G3000C16CBK	16G	DS	TEAM	T4D10248HT-30	16-18-18-38	1.35V	•	•
<b>TEAM</b>	TFRD48G3000C16CBK	8G	DS	N/A	SEC625	16-18-18-38	1.35V	•	•
<b>TEAM</b>	TCD44G3000C16CBK	4G	SS	TEAM	T4D5128HT-30	16-18-18-38	1.35V	•	•
<b>Klevv</b>	IM4AGU88A30-FGGHMZ	16GB	DS	N/A	Heat-Sink Package	15-16-16	1.35V	•	•
<b>Klevv</b>	IM48GU88A30-FGGHMZ	8GB	SS	N/A	Heat-Sink Package	15-16-16	1.35V	•	•
<b>Klevv</b>	IM44GU48A30-FGGHAZ	4GB	SS	N/A	Heat-Sink Package	15-16-16	1.35V	•	•
<b>Klevv</b>	IM48GU88A30-FGGHMB	8GB	SS	N/A	Heat-Sink Package	15-16-16	1.35V	•	•
<b>Klevv</b>	IM44GU48A30-FGGHAB	4GB	SS	N/A	Heat-Sink Package	15-16-16	1.35V	•	•
<b>Klevv</b>	IM4AGU88A30-FGGHMB	16GB	DS	N/A	Heat-Sink Package	15-16-16	1.35V	•	•
<b>G.SKILL</b>	F4-3000C16D-16GISB	8GB*2	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•
<b>CORSAIR</b>	CMD16GX4M2B3000C15(Ver5.30)	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMD32GX4M4C3000C15(Ver5.30)	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>FORZA</b>	NFMUD416E8-3000DH2A	16GB	DS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>FORZA</b>	NFMUD480E8-3000DH2A	8GB	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMR16GX4M2C3000C15	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>CORSAIR</b>	CMR32GX4M4C3000C15	32GB ( 4x 8GB )	DS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>Team</b>	TDRRD48G3000HC16CBK	8GB	DS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•
<b>Team</b>	TDRGD48G3000HC16CBK	8GB	DS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•
<b>GALAXY</b>	HOF DDR4-3000	16GB ( 2x 8GB )		N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•
<b>GeIL</b>	GLR416GB3000C15ADC	8GB	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>G.SKILL</b>	F4-3000C15S-16GVR	16GB	DS	N/A	Heat-Sink Package	15-15-15-35	1.35V	•	•
<b>FORZA</b>	NMUD480E82-3000DB30	8GB	SS	N/A	Heat-Sink Package	15-17-17-35	1.35V	•	•
<b>PATRIOT</b>	PV432G300C6GK	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	16-16-16-36	1.35V	•	•
<b>HyperX</b>	HX430C15PB3K4/32	32GB ( 4x 8GB )	SS	N/A	Heat-Sink Package	15-17-17-36	1.35V	•	•
<b>CRUCIAL</b>	BLT8G4D30AETA.K16FE	8GB	DS	N/A	Heat-Sink Package	15-16-16-35	1.35V	•	•
<b>PATRIOT</b>	PVE416G300C6KBL	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	16-16-16-36	1.35V	•	•
<b>PATRIOT</b>	PVE48G300C6KRD	8GB ( 2x 4GB )	SS	N/A	Heat-Sink Package	16-16-16-36	1.35V	•	•
<b>Team</b>	TF3D48G3000HC16CBK	8GB	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•
<b>Team</b>	TF4D48G3000HC16CBK	8GB	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•
<b>GALAXY</b>	N/A	16GB ( 2x 8GB )	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•	•

#### DDR4 3200+ Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
<b>PATRIOT</b>	PV48G340C6K	8GB ( 4GB*2)	SS	N/A	Heat-Sink Package		1.35V		•
<b>GALAXY</b>	HOF4CALCS3600K17LD162C	16G(8G*2)	SS	N/A	Heat-Sink Package	17-18-18-38	1.35V		•
<b>CORSAIR</b>	CMK16GX4M2B3600C18	16GB(2*8GB)	SS	N/A	Heat-Sink Package	18-19-19-39	1.35V		•
<b>PANRAM</b>	PUD43200C164G4NJW	16GB ( 4GB*4)	SS	N/A	Heat-Sink Package	16-18-18-39	1.35V		•
<b>MUSHKIN</b>	997202F	8GB ( 4GB*2)	SS	N/A	Heat-Sink Package	15-15-15-36	1.2V		•
<b>G.SKILL</b>	F4-3200C16D-8GVKB	8GB ( 4GB*2)	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V		•
<b>APACER</b>	78.BAGMD.AF20B	8GB ( 4GB*2)	SS	N/A	Heat-Sink Package	16-16-16-36	1.35V		•

PATRIOT	PV48G320C6K	8GB (4GB*2)	SS	N/A	Heat-Sink Package		1.35V	•
ADATA	AX4U3200W8G16-BGZ		DS	N/A	Heat-Sink Package	16-16-16	1.35V	•
CORSAIR	CMD8GX4M2B3600C18	8GB(2*4GB)	SS	N/A	Heat-Sink Package	18-19-19-39	1.35V	•
TEAM	TFWD416G3200C16CBK	16G	DS	N/A	SEC546	16-18-18-38	1.35V	•
TEAM	TFWD48G3200C16CBK	8G	DS	N/A	SEC613	16-18-18-38	1.35V	•
G.SKILL	F4-3200C16D-16GTZR	8GB*2	SS	N/A	Heat-Sink Package	18-18-18-38	1.35V	•
CORASIR	CMD16GX4M2B3200C16	16G	DS	N/A	Heat-Sink Package	16-18-18-36	1.35V	•
G.SKILL	F4-3200C14Q-32GFX	32GB (4x 8GB)	SS	N/A	Heat-Sink Package	14-14-14-34	1.35V	•
CORSAIR	CMR32GX4M4C3333C16	32GB (4x 8GB)	SS	N/A	Heat-Sink Package	16-18-18-35	1.35V	•
CORSAIR	CMK64GX4M8B3200C16	64GB (8 x 8GB)	SS	N/A	Heat-Sink Package	16-18-18-36	1.35V	•
Team	TF1D48G3200HC16CBK	8GB	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•
Team	TF2D48G3200HC16CBK	8GB	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•
G.SKILL	F4-3200C16Q-32GTZR	32GB (4x8GB)	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•
CORSAIR	CMK16GX4M2B3200C16	16GB (2x 8GB)	DS	N/A	Heat-Sink Package	16-18-18-36	1.35V	•
G.SKILL	F4-3200C16D-16GTZ	16GB (2x 8GB)	DS	N/A	Heat-Sink Package	16-16-16-36	1.35V	•
CORSAIR	CMU16GX4M2C3200C16	16GB (2x 8GB)	SS	N/A	Heat-Sink Package	16-18-18-36	1.35V	•
G.SKILL	F4-3200C16S-8GRKB	8GB	SS	N/A	Heat-Sink Package	16-18-18-38	1.35V	•

#### DIMM Slots

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports one pair of modules inserted into either the **Gray** slots or the **Black** slots as one pair of Dual-channel memory configuration
- 4 DIMM: Supports 4 modules inserted into both the **Gray** and **Black** slots as two pairs of Dual-channel memory configuration

-When installing total memory of 4GB capacity or more, Windows 32-bit operation system may only recognize less than 3GB. Hence, a total installed memory of less than 3GB is recommended.

-It is recommended to install the memory modules from the slots for better overclocking capability.

-The default DIMM frequency depends on its Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module. Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value.