DDR4 2133 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage（V）	DIMM socket support (Optional)	
							1 DIMM	2 DIMM
SAMSUNG	M378A5143DB0--CPB	4GB	SS	Samsung	15-15-15-36	1.2	●	●
SAMSUNG	M378A1G43DB0--CPB	8GB	DS	SEC 428 BCPB	15-15-15-36	1.2	●	●
GLOWAY	PC4-17000	4GB	SS	N/A	15-15-15-35	1.2	●	●
KINGSTON	HX421C13PBK4/16	4*4GB	SS	Hynix	15-15-15-36	1.2	●	●
PANRAM	PUD42133C138G4NJW	4*8GB	DS	N/A	13-13-13-35	1.2	●	●
PANRAM	PUD42133C134G4NJW	4*4GB	SS	N/A	13-13-13-35	1.2	●	●
CORSAIR	CMK16GX4M4A2133C15(Ver4.23)	4*4GB	SS	N/A	15-15-15-36	1.2	●	●
CRUCIAL	MTA8ATF51264AZ-2G1A1	4GB	SS	Micron	15-15-15-36	1.2	●	●
CORSAIR	CMV4GX4M1A2133C15	4GB	SS	N/A	15-15-15-36	1.2	●	●
KINGSTON	HX421C14FB/8	8GB	DS	Hynix	14-14-14-35	1.2	●	●
APACER	78.C1GM3.AF10B	8GB	DS	Hynix	16-16-16-36	1.2	●	●
KINGSTON	HX421C13SBK4/16	4*4GB	SS	Hynix	15-15-15-36	1.2	●	●
KINGSTON	KVR21N15D8/8	8GB	DS	Hynix	15-15-15-36	1.2	●	●
GALAXY	GAM4DBLBM213315IE081C	8GB	DS	N/A	15-15-15-35	1.2	●	●
AVEXIR	AVD4U21331508G-1C0B	8GB	DS	N/A	15-15-15-35	1.2	●	●
CORSAIR	CMK16GX4M4A2133C13（Ver5.29）	4*4GB	SS	N/A	13-15-15-28	1.2	●	●
GEIL	GPR48GB2133C15DC	2*4GB	SS	Micron	15-15-15-36	1.2	●	●
KINGSTON	HX421C14FBK4/32	4*8GB	DS	Hynix	14-14-14-35	1.2	●	●
TEKISM	T4U2133B8G15-SAD	8GB	DS	SEC 446 BCPB	15-15-15-36	1.2	●	●
G.SKILL	F4-2133C15Q-16GRB	4*4GB	SS	Samsung	15-15-15-35	1.2	●	●
CENTURY	PC4-17000	8GB	DS	Hynix	15-15-15-36	1.2	●	●
ADATA	AX4U2133W4G15-QRZ	4*4GB	SS	N/A	15-15-15-36	1.2	●	●
TEAM	TED48GM2133C15BK	8GB	DS	Hynix	15-15-15-36	1.2	●	●
ADATA	AD4U2133W8G15-B	16*8GB	DS	Hynix	15-15-15-36	1.2	●	●
CRUCIAL	CT8G4DFD8213.16FA11	4*8GB	DS	Micron	15-15-15-36	1.2	●	●
KINGSTON	KVR21E15S8/4	4GB	SS	Hynix	15-15-15-36	1.2	●	●
G.SKILL	F4-2133C15S-4GNT	4GB	SS	Hynix	15-15-15-35	1.2	●	●
G.SKILL	F4-2133C15S-8GNT	8GB	DS	Hynix	15-15-15-35	1.2	●	●
TEAM	TPAD44G2133HC15BK	4GB	SS	Samsung	15-15-15-36	1.2	●	●
APACER	AHU08GGB13CGT7G	8GB	DS	Hynix	16-16-16-36	1.2	●	●
ASINT	SLB404G08-CCN2B 1615	8GB	DS	Hynix	15-15-15-36	1.2	●	●
PATRIOT	PSD48G21332	8GB	DS	PAIROT	15-15-15-36	1.2	●	●
SAMSUNG	M378A1K43BB1-CPB	8GB	SS	Samsung	15-15-15-36	1.2	●	●
KINGSTON	HX421C14FB2/8	8GB	SS	Micron	14-14-14-35	1.2	●	●
KINGSTON	HX421C14FBK2/8	2*4GB	SS	Micron	14-14-14-35	1.2	●	●
KINGSTON	HX421C14FB/4	4GB	SS	Hynix	14-14-14-35	1.2	●	●
V-COLOR	TC48G21S818-IMS	4*8GB	SS	Micron	15-15-15-36	1.2	●	●
TEAM	TED416G2133C15BK	16GB	DS	Micron	15-15-15-36	1.2	●	●
SAMSUNG	M378A5143EB1-CPB	4GB	SS	Samsung	15-15-15-36	1.2	●	●
SAMSUNG	M378A5143EB1-CPB	4GB	SS	Samsung	15-15-15-36	1.2	●	●
TEAM	TED48G2133C15BK	8GB	SS	SpecTek	15-15-15-36	1.2	●	●
ANUCELL	GRPIF1621033818594	8GB	DS	ANUCELL	16-16-16-35	1.2	●	●
TIGO	TMKU8G868-2133P	8GB	SS	Micron	15-15-15-36	1.2	●	●
Xiede	1.2V-PC4-17000-1620	4GB	SS	Micron	15-15-15-36	1.2	●	●
Xiede	1.2V-PC4-17000-1620	8GB	DS	Hynix	15-15-15-36	1.2	●	●
V-COLOR	TC48G21S815	8GB	SS	Hynix	15-15-15-36	1.2	●	●
V-COLOR	TC48G21S815-IMS	8GB	SS	Micron	15-15-15-36	1.2	●	●
SAMSUNG	M378A2K43BB1CPB	16GB	DS	SEC510	15-15-15-36	1.2	●	●
G.SKILL	F4-2133C15Q-32GRR	4*8GB	SS	N/A	15-15-15-35	1.2	●	●
G.SKILL	F4-2133C15Q2-64GRR	8*8GB	SS	Hynix	15-15-15-35	1.2	●	●
CRUCIAL	CT16G4DFD8213.C16FAD1	16GB	DS	Micron	15-15-15-36	1.2	●	●
CRUCIAL	CT8G4DFD8213.C16FDR2	8GB	DS	Micron	15-15-15-36	1.2	●	●
CRUCIAL	CT4G4DFS8213.C8FBD2	4GB	SS	Micron	15-15-15-36	1.2	●	●
GEIL	GFY48GB2133C15DC	4GB	SS	N/A	15-15-15-36	1.2	●	●
Klevv	IM48GU88N21-FFFHMB	8GB	SS	Hynix	15-15-15-35	1.2	●	●
Klevv	IM44GU48N21-FFFHAB	4GB	SS	Hynix	15-15-15-35	1.2	●	●
Klevv	IM4AGU88N21-FFFHMB	16GB	DS	Hynix	15-15-15-35	1.2	●	●
GEIL	GPR432GB2133C15QC	8GB	SS	Micron	15-15-15-36	1.2	●	●
SK HYNIX	HMA451U6AFR8N-TF	4*4GB	SS	Hynix	15-15-15-36	1.2	●	●
GLOWAY	STK4U2133D15041C/ PC4-17000	4GB	SS	N/A	15-15-15-35	1.2	●	●
G.SKILL	F4-2133C15Q-64GFX	4*16GB	DS	N/A	15-15-15-36	1.2	●	●
G.SKILL	F4-2133C15Q-32GFX	4*8GB	SS	N/A	15-15-15-36	1.2	●	●
G.SKILL	F4-2133C15S-8GDB	8GB	SS	Hynix	15-15-15-35	1.2	●	●
AVANT	AVW6451U67J5213N3-SAEP	4GB	SS	SEC 549	15--15-15-36	1.2	●	●
AVANT	AVW641GU67J5213N2-SAEP	8GB	DS	SEC 549	15--15-15-36	1.2	●	●
SanMax	SMD4-U4G28SE-21P	4GB	SS	SEC 534	15-15-15-36	1.2	●	●
ADATA	AD4U213338G15-B	8*8GB	SS	SpecTek	15-15-15-36	1.2	●	●
ADATA	AD4U2133W4G15-BP	8*4GB	SS	SpecTek	15-15-15-36	1.2	●	●
Ramsta	R2DD4N04G2133	4GB	SS	Micron	15-15-15-35	1.2	●	●
Ramsta	R2DD4N08G2133	8GB	SS	Micron	15-15-15-36	1.2	●	●
APACER	AU16GGB13CDYBGC	16GB	DS	APACER	15-15-15-36	1.2	●	●
silicon power	SP004GBLFU213N02	4GB	SS	Hynix	15-15-15-36	1.2	●	●
TEKISM	T4U2133B8G15-HYM	2* 8GB	DS	Hynix	15-15-15-36	1.2	●	●
TIGO	TMKU4G456-2133P	4GB	SS	Hynix	15-15-15-36	1.2	●	●
HYUNDAI	HYE16G21C15	16GB	SS	Hynix	15-15-15-35	1.2	●	●

2 DIMM Slots

For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.

• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.

• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 2400 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	DIMM socket support (Optional)	
							1 DIMM	2 DIMM
ADATA	AX4U2400W8G16-DRZ	8GB	DS	N/A	17-16-16-39	1.2	•	•
G.SKILL	F4-2400C15Q-32GRB	4*8GB	DS	N/A	15-15-15-35	1.2	•	•
GLOWAY	PC4-19200	4GB	DS	GLOWAY	16-16-16-35	1.2	•	•
PANRAM	PUD42400C154G4NJW	4*4GB	SS	N/A	15-15-15-35	1.2	•	•
PANRAM	PUD42400C158G4NJW	4*8GB	DS	N/A	15-15-15-35	1.2	•	•
CRUCIAL	BLS4K4G4D240FSA	4GB	SS	Micron	16-16-16-39	1.2	•	•
GEIL	GPR416GB2400C15QC	4GB	SS	N/A	15-15-15-35	1.2	•	•
MUSHKIN	997199F	2*8GB	DS	N/A	15-15-15-35	1.2	•	•
KINGSTON	HX424C15FBK4/32	4*8GB	DS	Hynix	15-15-15-35	1.2	•	•
APACER	78.C1GMA.AF30B	8G	DS	Hynix	16-16-16-36	1.2	•	•
PNY	MD16GK2D4240015AB	2*8GB	DS	N/A	15-15-15-35	1.2	•	•
G.SKILL	F4-2400C15D-169GVR	2*8GB	DS	N/A	15-15-15-35	1.2	•	•
CORSAIR	CM4X8GE2400C14K4-CN（Ver4.24）	8GB	DS	N/A	14-16-16-31	1.2	•	•
CORSAIR	CMK8GX4M1A2400C14(Ver3.20)	8GB	DS	N/A	14-16-16-31	1.2	•	•
PATRIOT	PV416G240C5QK	4*4GB	SS	N/A	15-15-15-35	1.2	•	•
KINGSTON	HX424C15FBK4/16	4*4GB	SS	Hynix	15-15-15-35	1.2	•	•
G.SKILL	F4-2400C14Q2-128GRK	8*16GB	DS	Samsung	14-14-14-34	1.2	•	•
G.SKILL	F4-2400C14Q-16GRK	4*4GB	SS	Hynix	14-14-14-34	1.2	•	•
G.SKILL	F4-2400C15Q-16GRR	4*4GB	SS	Samsung	15-15-15-35	1.2	•	•
AVEXIR	AVD4UZ124001608G-4COR	4*8GB	DS	N/A	16-16-16-36	1.2	•	•
AVEXIR	AVD4UZ124001604G-4COB	4*4GB	SS	N/A	16-16-16-36	1.2	•	•
CRUCIAL	BLS8G4D240FSA.16FADG	8GB	DS	Micron	16-16-16-39	1.2	•	•
TEAM	TED48G2400C16BK	8GB	DS	Hynix	16-16-16-39	1.2	•	•
KINGSTON	HX424C12PBK4/32	4*8GB	DS	Hynix	12-13-13-35	1.35	•	•
G.SKILL	F4-2400C15Q-32GRR	4*8GB	DS	N/A	15-15-15-35	1.2	•	•
GEIL	DDR48GB2400C16QC	8GB	SS	Micron	17-16-16-36	1.2	•	•
CORSAIR	CM4X8GE2400C16K4-CN（Ver5.20）	8GB	DS	Hynix	16-16-16-39	1.2	•	•
CORSAIR	CMD32GX4M4A2400C14（Ver4.23）	4*8GB	DS	N/A	14-16-16-31	1.2	•	•
AMD	R748G2400U2S	8GB	DS	N/A	15-15-15-36	1.2	•	•
MICRON	MTA16ATF2G64AZ-2G3B1	16GB	DS	Micron	17-17-17-39	1.2	•	•
MICRON	MTA8ATF1G64AZ-2G3B1	8GB	SS	Micron	17-17-17-39	1.2	•	•
KINGSTON	HX424C12SB2K4/16	4*4GB	SS	Hynix	12-14-14-35	1.35	•	•
KINGSTON	HX424C12SB2K4/32	4*8GB	DS	Hynix	12-14-14-35	1.35	•	•
KINGSTON	HX424C15FBK2/16	2*8GB	DS	Hynix	15-15-15-35	1.2	•	•
GALAXY	GAM4BXLBS240016JE164C	4*4GB	SS	N/A	16-16-16-36	1.2	•	•
APACER	AH08GGB24CDT5H	2*8GB	DS	N/A	16-16-16-36	1.2	•	•
CORSAIR	CMK8GX4M2A2400C14(Ver3.28)	2* 4GB	SS	N/A	14-16-16-31	1.2	•	•
CORSAIR	CMK16GX4M2A2400C14	2*8GB	DS	N/A	14-16-16-31	1.2	•	•
AVEXIR	AVD4UZ124001608G-1COB	8GB	DS	N/A	16-16-16-36	1.2	•	•
AVEXIR	AVD4U24001608G-1BW	8GB	DS	N/A	16-16-16-36	1.2	•	•
APACER	AU08GGB24CETBGC	8GB	DS	APACER	17-17-17-39	1.2	•	•
AVEXIR	AVD4UZ124001608G-2COR	2*8GB	DS	N/A	16-16-16-36	1.2	•	•
V-COLOR	8GTC48G24S817-IMS	4*8GB	SS	V-COLOR	17-17-17-39	1.2	•	•
G.SKILL	F4-2400C15Q-64GIS	4*16GB	DS	Micron	15-15-15-35	1.2	•	•
CRUCIAL	BLS8G4D24OFSB.16FARG	4*8GB	DS	Micron	16-16-16-39	1.2	•	•
GEIL	GLW416GB2400C15DC	8GB	SS	Hynix	15-15-15-35	1.2	•	•
TEAM	TDTRD48G2400HC15ABK	8GB	SS	N/A	15-15-15-35	1.2	•	•
TEAM	TDRED48G2400HC14BK	8GB	DS	Hynix	14-16-16-31	1.2	•	•
ADATA	AX4U2400W8G16-BRZ	8GB	DS	N/A	17-16-16-39	1.2	•	•
KINGSTON	HX424C15FB/16	16GB	DS	Micron	15-15-15-35	1.2	•	•
CRUCIAL	BLS8G4D240FSC.16FARG	8GB	DS	Micron	16-16-16-39	1.2	•	•
GALAXY	GAM4HFL1BM2400D15IE08IC	8G	DS	N/A	15-15-15-35	1.2	•	•
CORSAIR	CMK32GX4M4A2400C16R(Ver3.31)	4*8GB	SS	Micron	16-16-16-39	1.2	•	•
CORSAIR	CMD16GX4M4B2400C10	4*4GB	SS	Hynix	10-12-12-28	1.35	•	•
MUSHKIN	997199T	2*8GB	SS	N/A	15-15-15-35	1.2	•	•
GEIL	8G2133C151.2V	8GB	DS	Hynix	14-16-16-35	1.2	•	•
TEAM	TED416G2400C16BK	16GB	DS	Micron	16-16-16-39	1.2	•	•
TEAM	TCD44G2400C14BK	4GB	SS	Hynix	14-16-16-31	1.2	•	•
TIGO	TMKU8GF28-2400U	8GB	DS	N/A	17-17-17-39	1.2	•	•
APACER	AU08GGB24CEYBGC	8GB	SS	Hynix	17-17-17-39	1.2	•	•
KINGSTON	HX424C12SB2K2/16	16G	DS	Hynix	12-14-14-35	1.35	•	•
GLOWAY	PC4-19200	8GB	SS	N/A	15-15-15-35	1.2	•	•
ADATA	AX4U240038G16-BWZ	8*8GB	SS	Hynix	17-16-16-39	1.2	•	•
ADATA	AX4U2400316G16-SBF	16*16GB	DS	Hynix	17-16-16-39	1.2	•	•
AVEXIR	AVD4UZ124001608G-4COR	4*8GB	SS	Micron	16-16-16-36	1.2	•	•
AVEXIR	AVD4UZ124001604G-4COR	4*4GB	SS	Micron	16-16-16-36	1.2	•	•
KINGSTON	TF24D4U7S8MB-8	8GB	SS	Micron	17-17-17-39	1.2	•	•
KINGSTON	TF24D4U7S8MBD-4	4GB	SS	Micron	17-17-17-39	1.2	•	•
RAMAXEL	RMUA5120MB86H9F-2400	4GB	SS	Micron	17-17-17-39	1.2	•	•
RAMAXEL	RMUA5120MB76H8F-2400	2GB	SS	Micron	17-17-17-39	1.2	•	•
V-COLOR	TC48G24S817	8GB	SS	V-COLOR	17-17-17-39	1.2	•	•
ADATA	AX4U240038G16-SBF	8*8GB	SS	Hynix	17-17-17-39	1.2	•	•
ADATA	AX4U2400W8G16-DRD	8GB	DS	Hynix	17-17-17-39	1.2	•	•
ADATA	AX4U2400316G16-DRD	16GB	DS	Hynix	17-17-17-39	1.2	•	•
G.SKILL	F4-2400C15Q2-64GRK	8*8GB	SS	Hynix	15-15-15-35	1.2	•	•
TEAM	TCD48G2400C14BK	8GB	SS	Micron	14-16-16-31	1.2	•	•
TEAM	TED44G2400C16BK	4GB	SS	Micron	16-16-16-39	1.2	•	•
CRUCIAL	BLS16G4D240FSE.16FAD	16GB	DS	Micron	16-16-16-39	1.2	•	•
CRUCIAL	BLS4G4D240FSA.8FARG	4GB	SS	Micron	16-16-16-39	1.2	•	•
PATRIOT	PV48G240C5	8GB	DS	N/A	15-15-15-35	1.2	•	•
TEAM	TFWD416G2400C15BBK	16GB	DS	TEAM	15-17-17-35	1.2	•	•
TEAM	TFRD44G2400C15ABK	4GB	SS	Hynix	15-15-15-35	1.2	•	•
Klevv	IM44GU48N24-FFFHAZ	4GB	SS	Hynix	15-15-15-35	1.2	•	•
Klevv	IM4AGU88N24-FFFHMZ	16GB	DS	Hynix	15-15-15-35	1.2	•	•
Klevv	IM48GU88N24-FFFHMZ	8GB	SS	Hynix	15-15-15-35	1.2	•	•
Klevv	IM4AGU88N24-FFFHMB	16GB	DS	Hynix	15-15-15-35	1.2	•	•
Klevv	IM48GU88N24-FFFHMB	8GB	SS	Hynix	15-15-15-35	1.2	•	•
Klevv	IM44GU48N24-FFFHAB	4GB	SS	Hynix	15-15-15-35	1.2	•	•
G.SKILL	F4-2400C15D-16GTZR	8GB	SS	Hynix	15-15-15-35	1.2	•	•
CRUCIAL	MTA16ATF1G64AZ-2G3A2	8GB	DS	Micron	17-17-17-39	1.2	•	•
G.SKILL	F4-2400C15Q-64GFX	4*16GB	DS	Hynix	15-15-15-39	1.2	•	•
G.SKILL	F4-2400C15Q-32GFX	4*8GB	SS	Hynix	15-15-15-39	1.2	•	•
G.SKILL	F4-2400C16Q-64GFX	4*16GB	DS	Hynix	16-16-16-39	1.2	•	•
G.SKILL	F4-2400C16Q-32GFX	4*8GB	SS	Hynix	16-16-16-39	1.2	•	•
CORSAIR	CMK16GX4M2Z2400C16(Ver3.31)	2* 8GB	SS	Micron	16-16-16-18	1.2	•	•
CORSAIR	CMK128GX4M8A2400C14(Ver5.30)	8*16GB	DS	Hynix	14-16-16-31	1.2	•	•
AMD	R744G2400U1S	4GB	SS	N/A	15-15-15-36	1.2	•	•
CORSAIR	CMK128GX4M8A2400C14(Ver5.30)	8*16GB	DS	Hynix	14-16-16-31	1.2	•	•
CORSAIR	CMK16GX4M2Z2400C16(Ver3.31)	2*8GB	SS	Micron	16-16-16-39	1.2	•	•
GelL	GFR416GB2400C16S	16GB	SS	Micron	16-16-16-36	1.2	•	•
GelL	GFR432GB2400C16D	16GB	SS	Micron	16-16-16-36	1.2	•	•
HyperX	HX424C15FB2K4/32	4*8GB	SS	Hynix	15-15-15-35	1.2	•	•
GLOWAY	STK4U2400D17081C	8GB	DS	Micron	17-17-17-39	1.2	•	•
GLOWAY	STK4U2400D17081C	8GB	SS	Micron	17-17-17-39	1.2	•	•
GLOWAY	STK4U2400D17161C	16GB	SS	Micron	17-17-17-39	1.2	•	•
PATRIOT	PSD48G240081	8GB	SS	SEC 710	17-17-17-39	1.2	•	•
PATRIOT	PSD44G240081	4GB	SS	SEC 707	16-16-16-39	1.2	•	•
PATRIOT	PSD416G24002	16GB	DS	SEC 707	17-17-17-39	1.2	•	•
PATRIOT	PV432G240C5QK	4*8GB	SS	N/A	15-15-15-35	1.2	•	•
PATRIOT	PVE48G240C5KRD	2*4GB	SS	N/A	15-15-15-35	1.2	•	•
PATRIOT	PVE416G240C5KBL	2*8GB	SS	N/A	15-15-15-35	1.2	•	•
SAMSUNG	M378A2K43CB1-CRC	16GB	DS	Samsung	17-17-17-39	1.2	•	•
Crucial	CT8G4DFS824A.C8FBD1	8GB	SS	Micron	17-17-17-39	1.2	•	•
ADATA	AD4X240038G17-BP	8*8GB	SS	SpecTek	17-17-17-39	1.2	•	•
APACER	AHU08GGB24CDU7S	8GB	SS	N/A	16-16-16-36	1.2	•	•
Crucial	BLS8G4D240FSC.16FBR2	8GB	DS	Micron	16-16-16-39	1.2	•	•
Asgard	VML41UG-MIC1U22ZG	8GB	SS	Micron	17-17-17-39	1.2	•	•
KINGMAX	GLLH22F-18KIIA CFBU2	16GB	DS	N/A	17-17-17-39	1.2	•	•
KINGMAX	GLLG42F-D8KBIA CFDU	8GB	DS	KINGMAX	17-17-17-39	1.2	•	•
GEIL	GP44GB2400C16SC	4GB	SS	Micron	17-16-16-36	1.2	•	•
Kingston	KVR24N17S8/4	4GB	SS	Micron	17-17-17-39	1.2	•	•

2 DIMM Slots

For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.

• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.

• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 2400 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	DIMM socket support (Optional)	
							1 DIMM	2 DIMM
CRUCIAL	BLS16G4D240FSC.16FBR	16GB	DS	Micron	16-16-16-39	1.2	●	●
CRUCIAL	BLS8G4D240FSCK.8FBD	8GB	SS	Micron	16-16-16-39	1.2	●	●
CRUCIAL	CT8G4DFD824A.C16FBD2	8GB	DS	Micron	17-17-17-39	1.2	●	●
CRUCIAL	CT16G4DFD824A.C16FHD1	16GB	DS	Micron	17-17-17-39	1.2	●	●
ADATA	AX4U240038G16-BRZ	8*8GB	SS	Hynix	17-16-16-39	1.2	●	●
G.SKILL	F4-2400C15S-8GNT	8GB	SS	Hynix	15-15-15-35	1.2	●	●
Crucial	CT8G4DFS824A.C8FHD1	8GB	SS	Micron	17-17-17-39	1.2	●	●
APACER	AU08GGB24CEYBGH	8GB	SS	N/A	17-17-17-39	1.2	●	●
GALAXY	GAMER D4-2400 8G C16 紅燈	8GB	DS	Hynix	16-16-16-36	1.2	●	●
GALAXY	GAMER D4-2400 8G C16 綠燈	8GB	DS	Hynix	16-16-16-36	1.2	●	●
GALAXY	GAMER Ⅲ DDR4-2400 8G C16	8GB	SS	Micron	16-16-16-36	1.2	●	●
Ramsta	R2DD4N04G2400	4GB	SS	Micron	16-16-16-39	1.2	●	●
Ramsta	R2DD4N16G2400	16GB	SS	Micron	17-17-17-39	1.2	●	●
TIGO	TMKU8G868-2400U	8GB	SS	Micron	16-16-16-39	1.2	●	●
HyperX	HX424C15FB/4	4GB	SS	Micron	15-15-15-35	1.2	●	●
CRUCIAL	BLS8G4D240FSE.16FBR2	8GB	DS	Micron	16-16-16-39	1.2	●	●
APACER	AHU08GGB24CDU7G	8GB	SS	Micron	16-16-16-36	1.2	●	●
GEIL	GASB416GB2400C16QC	4GB	SS	Micron	16-16-16-36	1.2	●	●
GEIL	GASB432GB2400C16QC	8GB	SS	N/A	16-16-16-36	1.2	●	●
TIGO	TMKU8G868-2400U	8GB	SS	Hynix	17-17-17-39	1.2	●	●
APACER	AU16GGB24CEYBGC	16GB	DS	APACER	17-17-17-39	1.2	●	●
GEIL	GLS48GB2400C16DC	4GB	SS	N/A	17-16-16-36	1.2	●	●
GLOWAY	TYP8U2400E17042C	8GB	SS	Micron	17-17-17-39	1.2	●	●
Asgard	VML41UG-MEC1U2BQ1	8GB	SS	N/A	17-17-17-39	1.2	●	●
silicon power	SP008GBLFU240B02	8GB	SS	Hynix	17-17-17-39	1.2	●	●
GeIL	GLS48GB2400C16DC	4GB	SS	Micron	17-16-16-36	1.2	●	●
TIGO	TMKU4G456-2400U	4GB	SS	TIGO	17-17-17-39	1.2	●	●
TIGO	TMKUFGF68-2400U	16GB	DS	TIGO	17-17-17-39	1.2	●	●
HYUNDAI	HYE4G24C17	4GB	SS	Hynix	17-17-17-39	1.2	●	●
HYUNDAI	HYE8G24C17	8GB	SS	Hynix	17-17-17-39	1.2	●	●
Apacer	AU16GGB24CEYBGH	16GB	DS	Micron	17-17-17-39	1.2	●	●
MAXSUN	MSD48G24Q3	8GB	DS	Micron	17-17-17-39	1.2	●	●
TECLAST	TLD44G24A30	4GB	DS	Micron	17-17-17-39	1.2	●	●
TECLAST	TLD48G24A30	8GB	SS	Micron	17-17-17-39	1.2	●	●
Kingson	KVR24N17S8/80-SP	8GB	SS	Micron	17-17-17-39	1.2	●	●
ADATA	AD4U2400W4G17-B	4GB	SS	SK Hynix	15-15-15-35	1.2	●	●
ADATA	AD4U2400W8G17-B	8GB	DS	SK Hynix	15-15-15-35	1.2	●	●
ADATA	AX4U2400316G16-DRD(XMP)	16GB	DS	SK Hynix	16-16-16-39	1.2	●	●
ADATA	AX4U2400316G16-SBF(XMP)	16GB	DS	SK Hynix	15-15-15-36	1.2	●	●
ADATA	AX4U240038G16-BRS-R(XMP)	8GB	SS	SK Hynix	16-16-16-39	1.2	●	●
ADATA	AX4U240038G16-SBF(XMP)	8GB	SS	SK Hynix	16-16-16-39	1.2	●	●
ADATA	AX4U2400W8G16-BRZ(XMP)	8GB	DS	SK Hynix	15-15-15-36	1.2	●	●
ADATA	AX4U2400W8G16-DRD(XMP)	8GB	DS	SK Hynix	16-16-16-39	1.2	●	●
Apacer	78.B1GMS.4050B	4x 4GB	SS	Samsung	17-17-17-39	-	●	●
Apacer	78.C1GMS.4010B	4x 8GB	DS	Samsung	17-17-17-39	-	●	●
Apacer	EK.08G2T.GEC(XMP)	8GB	SS	Micron	17-17-17-39	-	●	●
Apacer	EL.08G2T.GFM	8GB	SS	SK Hynix	17-17-17-39	-	●	●
Asgard	VML41UE-MIC1U22Q1	2GB	SS	Micron	17-17-17-39	1.2	●	●
CORSAIR	CMD16GX4M4A2400C14(Ver4.23)(XMP)	4x 4GB	SS	-	14-16-16-31	1.2	●	●
CORSAIR	CMD32GX4M4A2400C14(Ver4.23)(XMP)	4x 8GB	DS	-	14-16-16-31	1.2	●	●
CORSAIR	CMK16GX4M2A2400C16(Ver3.31)(XMP)	2x 8GB	DS	Micron	15-15-15-36	1.2	●	●
CORSAIR	CMK16GX4M2D2400C14(Ver4.21)(XMP)	2x 8GB	DS	Samsung	14-16-16-31	1.2	●	●
CORSAIR	CMK16GX4M2Z2400C16(Ver3.31)	2x 8GB	SS	Micron	16-16-16-39	1.2	●	●
CORSAIR	CMK16GX4M4A2400C14(Ver4.23)(XMP)	4x 4GB	SS	-	14-16-16-31	1.2	●	●
CORSAIR	CMK16GX4M4A2400C14(Ver5.20)(XMP)	4x 4GB	SS	SK Hynix	14-16-16-31	1.2	●	●
CORSAIR	CMK32GX4M4A2400C14(Ver4.23)(XMP)	4x 8GB	DS	-	14-16-16-31	1.2	●	●
CORSAIR	CMK32GX4M4A2400C16(Ver3.31)(XMP)	4x 8GB	SS	Micron	15-15-15-36	1.2	●	●
CORSAIR	CMK64GX4M4A2400C14(Ver3.31)(XMP)	4x 16GB	DS	Micron	15-15-15-36	1.2	●	●
CORSAIR	CMK64GX4M4A2400C14(Ver4.31)(XMP)	4x 16GB	DS	Samsung	15-15-15-36	1.2	●	●
CORSAIR	CMK8GX4M2D2400C14(Ver3.11)(XMP)	2x 4GB	DS	Micron	14-16-16-31	1.2	●	●
crucial	BLS16G4D240FSB.16FBD(XMP)	16GB	DS	Micron	16-16-16-39	1.2	●	●
crucial	BLS4G4D240FSB.8FBD(XMP)	4GB	SS	Micron	16-16-16-39	1.2	●	●
crucial	BLS8G4D240FSBK.8FBD(XMP)	8GB	SS	Micron	16-16-16-39	1.2	●	●
crucial	CT16G4DFD824A.C16FDR1	16GB	DS	Micron	17-17-17-39	1.2	●	●
G.SKILL	F4-2400C14Q2-128GRK(XMP)	8x 16GB	DS	Samsung	14-14-14-34	1.2	●	●
G.SKILL	F4-2400C14Q2-128GRK(XMP)	8x 16GB	DS	Samsung	15-15-15-36	1.2	●	●
G.SKILL	F4-2400C15Q-16GRR(XMP)	4x 4GB	SS	Micron	15-15-15-35	1.2	●	●
G.SKILL	F4-2400C15Q2-128GRK(XMP)	8x 16GB	DS	Samsung	15-15-15-35	1.2	●	●
G.SKILL	F4-2400C15Q2-128GVK(XMP)	8x 16GB	DS	SK Hynix	15-15-15-36	1.2	●	●
G.SKILL	F4-2400C15Q2-64GRK(XMP)	8x 8GB	DS	Samsung	15-15-15-35	1.2	●	●
G.SKILL	F4-2400C15Q-32GRR(XMP)	4x 8GB	DS	Micron	15-15-15-35	1.2	●	●
GeIL	GASB416GB2400C16QC(XMP)	4GB	SS	Micron	16-16-16-36	1.2	●	●
GeIL	GFR432GB2400C16D(XMP)	16GB	SS	Micron	16-16-16-36	1.2	●	●
GeIL	GLS48GB2400C16DC(XMP)	4GB	SS	Micron	16-16-16-36	1.2	●	●
GeIL	GPR416GB2400C15QC(XMP)	4x 4GB	SS	Samsung	15-15-15-35	1.2	●	●
GeIL	GPR432GB2400C15QC(XMP)	4x 8GB	DS	SK Hynix	15-15-15-35	1.2	●	●
GeIL	GPR432GB2400C16QC(XMP)	4x 8GB	SS	Micron	16-16-16-36	1.2	●	●
GLOWAY	TYP4U2400D17021C	2GB	SS	Micron	17-17-17-39	1.2	●	●
Hyper X	HX424C12PB2K4/16(XMP)	4x 4GB	SS	SK Hynix	12-13-13-35	1.2	●	●
Hyper X	HX424C12SB2/4(XMP)	4GB	SS	SK Hynix	15-15-15-36	1.35	●	●
Hyper X	HX424C12SB2K2/16(XMP)	2x 8GB	DS	SK Hynix	15-15-15-36	1.35	●	●
Hyper X	HX424C12SB2K4/16(XMP)	4x 4GB	SS	SK Hynix	15-15-15-36	1.35	●	●
Hyper X	HX424C12SB2K4/32(XMP)	4x 8GB	DS	SK Hynix	15-15-15-36	1.35	●	●
Hyper X	HX424C15B2K4/32(XMP)	4x 8GB	SS	Micron	15-15-15-35	1.2	●	●
Hyper X	HX424C15FB/4	4GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Hyper X	HX424C15FB/8(XMP)	8GB	SS	SK Hynix	14-14-14-32	1.2	●	●
Hyper X	HX424C15FBK2/16	2x 16GB	DS	SK Hynix	15-15-15-35	1.2	●	●
Hyper X	HX424C15FBK2/8	2x 4GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Hyper X	HX424C15FBK4/16	4x 4GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Hyper X	HX424C15FBK4/16	4x4GB	SS	SK Hynix	14-14-14-32	1.2	●	●
Hyper X	HX424C15FBK4/32	4x 8GB	DS	SK Hynix	15-15-15-35	1.2	●	●
Hyper X	HX424C15FBK4/32	4x 8GB	DS	SK Hynix	15-15-15-35	1.2	●	●
Hyper X	HX424C15FBK4/64	4x 16GB	DS	Micron	15-15-15-35	1.2	●	●
KINGMAX	GLLF62F-DAKZIG-CLBU	4GB	SS	KINGMAX	17-17-17-39	-	●	●
KINGMAX	GLLH22F-18KIIA-CFBU2	16GB	DS	KINGMAX	17-17-17-39	-	●	●
Kingston	KVR24N17D8/16	16GB	DS	Micron	17-17-17-39	1.2	●	●
Kingston	KVR24N17D8/8	8GB	DS	Micron	17-17-17-39	1.2	●	●
Kingston	KVR24N17S8/4	4GB	SS	Micron	17-17-17-39	1.2	●	●
Kingston	KVR24N17S8/8	8GB	SS	Micron	17-17-17-39	1.2	●	●
Klevv	IM44GU48N24-FFFHAB(XMP)	4GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Klevv	IM44GU48N24-FFFHAZ(XMP)	4GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Klevv	IM48GU88N24-FFFHMB(XMP)	8GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Klevv	IM48GU88N24-FFFHMZ(XMP)	8GB	SS	SK Hynix	15-15-15-35	1.2	●	●
Klevv	IM4AGU88N24-FFFHMB(XMP)	16GB	DS	SK Hynix	15-15-15-35	1.2	●	●
Micron	MTA16ATF2G64AZ-2G3B1	16GB	DS	Micron	17-17-17-39	1.2	●	●
panram	W4U2400PS-8G	8GB	SS	SK Hynix	14-14-14-31	-	●	●
PATRIOT	PSD44G240081	4GB	SS	Samsung	16-16-16-39	1.2	●	●
PATRIOT	PSD44G240081	4GB	SS	PATRIOT	16-16-16-39	1.2	●	●
PATRIOT	PSD48G240081	8GB	SS	Samsung	17-17-17-39	1.2	●	●
PATRIOT	PV432G240C5QK(XMP)	4x 8GB	SS	-	15-15-15-35	1.2	●	●
PATRIOT	PVE416G240C5KRD(XMP)	2x 8GB	SS	-	15-15-15-35	-	●	●
PATRIOT	PVE48G240C5KRD(XMP)	2x 4GB	SS	-	15-15-15-35	-	●	●

2 DIMM Slots

For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.

• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.

• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 2666 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	DIMM socket support (Optional)	
							1 DIMM	2 DIMM
CORSAIR	CMK16GX4M4A2666C16 (Ver5.29)	4*4GB	SS	N/A	16-18-18-35	1.2	●	●
CORSAIR	CMD32GX4M4A2666C15(Ver5.29)	4*8GB	DS	N/A	15-17-17-35	1.2	●	●
MUSHKIN	997192F	2*4GB	SS	N/A	15-15-15-35	1.2	●	●
KINGSTON	HX426C13PBK4/32	4*8GB	DS	Hynix	15-15-15-36	1.35	●	●
KINGSTON	HX426C15FBK4/32	4*8GB	DS	Hynix	15-17-17-35	1.2	●	●
CORSAIR	CMD128GX4M8A2666C15	4*16GB	DS	N/A	15-17-17-35	1.2	●	●
KINGSTON	HX426C15FBK4/16	4*4GB	SS	Hynix	15-17-17-35	1.2	●	●
CRUCIAL	BLE4G4D26AFEA.8FAD	4GB	SS	Micron	16-16-17-36	1.2	●	●
CRUCIAL	BLE8G4D26AFEA.16FAD	8GB	DS	Micron	16-17-17-36	1.2	●	●
AVEXIR	AVD4UZ126661504G-4COB	4*4GB	SS	N/A	15-15-15-36	1.2	●	●
AVEXIR	AVD4UZ126661508G-4COB	4*8GB	DS	N/A	15-15-15-36	1.2	●	●
CRUCIAL	BLT4G4D26AFTA.8FADG	4GB	SS	Micron	16-17-17-36	1.2	●	●
KLEVV	IMA41GU6MFR8N-C F0	8GB	DS	N/A	15-15-15-35	1.2	●	●
KINGSTON	HX426C13SB2K4/32	4*8GB	DS	Hynix	15-15-15-36	1.35	●	●
KINGSTON	HX426C13SB2K4/16	4*4GB	SS	Hynix	15-15-15-36	1.35	●	●
PNY	MD16GK4D4266615AXR	4*4GB	SS	N/A	15-15-15-35	1.2	●	●
AVEXIR	AVD4UZ126661504G-4IPROG	4*4GB	DS	N/A	15-15-15-35	1.2	●	●
AVEXIR	AVD4UZ126661504G	2*4GB	DS	N/A	15-15-15-35	1.2	●	●
CORSAIR	CMU32GX4M2A2666C16 (Ver5.20)	2*16GB	DS	Samsung	16-18-18-35	1.2	●	●
CORSAIR	CMK32GX4M4A2666C16(Ver3.20)	4*8GB	DS	N/A	16-18-18-35	1.2	●	●
CORSAIR	CMK16GX4M2A2666C16 (Ver3.31)	2*8GB	SS	Micron	16-18-18-35	1.2	●	●
CORSAIR	CMK32GX4M2A2666C16 (Ver5.39)	2*16GB	DS	N/A	16-18-18-35	1.2	●	●
CORSAIR	CMK16GX4M4A2666C15 (Ver5.20)	4*4GB	SS	N/A	15-17-17-35	1.2	●	●
CORSAIR	CMK64GX4M4A2666C16 (Ver5.3)	4*16GB	DS	Hynix	16-18-18-35	1.2	●	●
CORSAIR	CMK32GX4M4A2666C15 (Ver5.20)	4*8GB	DS	Hynix	15-17-17-35	1.2	●	●
TEAM	TFRD4162666C15BBK	16GB	DS	Samsung	15-17-17-35	1.2	●	●
TEAM	TFWD48G2666C15BBK	8GB	DS	Samsung	15-17-17-35	1.2	●	●
TEAM	TCD44G2666C15BBK	4GB	SS	Hynix	15-17-17-35	1.2	●	●
HyperX	HX426C15FBK2/16	2*8GB	DS	Micron	15-17-17-35	1.2	●	●
Klevv	IM48GU88N26-FFFHMZ	8GB	SS	Hynix	15-15-15-35	1.2	●	●
Klevv	IM4AGU88N26-FFFHMZ	16GB	DS	Hynix	15-15-15-35	1.2	●	●
Klevv	IM44GU48N26-FFFHAZ	4GB	SS	Hynix	15-15-15-35	1.2	●	●
CORSAIR	CMK16GX4M2A2666C16(Ver5.30)	8GB	SS	Hynix	16-18-18-35	1.2	●	●
ADATA	AX4U2666W4G16-BRZ	4GB	SS	Hynix	16-16-16-39	1.2	●	●
ADATA	AX4U2666W8G16-QRZ	4*8GB	DS	Hynix	16-16-16-39	1.2	●	●
crucial	BLS8G4D26BFSC.16FBR2	8GB	DS	N/A	16-18-18-38	1.2	●	●
crucial	BLS16G4D26BFSC.16FBD	16GB	DS	Micron	16-18-18-38	1.2	●	●
crucial	BLS4G4D26BFSC.8FBR2	4GB	SS	N/A	16-18-18-38	1.2	●	●
CORSAIR	CMK128GX4M8A2666C16(Ver5.39)	8*16GB	DS	Hynix	16-18-18-36	1.2	●	●
CORSAIR	CMR16GX4M2A2666C16(Ver5.30)	2*8GB	SS	Hynix	16-18-18-35	1.2	●	●
CORSAIR	CMR64GX4M8A2666C16(Ver5.30)	8* 8GB	SS	N/A	16-18-18-35	1.2	●	●
HyperX	HX426C16FB2K4/64	4*16GB	DS	Hynix	16-18-18-39	1.2	●	●
G.SKILL	F4-2666C16Q2-64GRB	8*8GB	SS	Hynix	16-16-16-36	1.2	●	●
HyperX	HX426C15SBK8/128	8*16GB	DS	N/A	15-16-16-35	1.2	●	●
HyperX	HX426C13PB3/8	4*8GB	SS	N/A	13-15-15-35	1.35	●	●
HyperX	HX426C13PB3K2/16	4*8GB	SS	N/A	13-15-15-35	1.35	●	●
HyperX	HX424C12PB3/8	4*8GB	SS	N/A	13-15-15-35	1.35	●	●
HyperX	HX424C12PB3K2/16	4*8GB	SS	N/A	13-15-15-35	1.35	●	●
HyperX	HX424C12PB3K4/32	4*8GB	SS	N/A	13-15-15-35	1.35	●	●
HyperX	HX426C13PB3/16	4*16GB	DS	Hynix	13-15-15-35	1.35	●	●
HyperX	HX426C13PB3K2/32	4*16GB	DS	Hynix	13-15-15-35	1.35	●	●
HyperX	HX424C12PB3K4/64	4*16GB	DS	Hynix	13-15-15-35	1.35	●	●
HyperX	HX424C12PB3/16	4*16GB	DS	Hynix	13-15-15-35	1.35	●	●
HyperX	HX424C12PB3K2/32	4*16GB	DS	Hynix	13-15-15-35	1.35	●	●
CRUCIAL	BLS8G4D26BFSCK.8FBR	8GB	SS	Micron	16-18-18-38	1.2	●	●
CRUCIAL	BLS8G4D26BFSCK.8FBD	8GB	SS	Micron	16-18-18-38	1.2	●	●
MICRON	MTA8ATF1G64AZ-2G6H1	8GB	SS	Hynix	19-19-19-43	1.2	●	●
TIGO	TMKG8G868-2666N	8GB	SS	N/A	19-19-19-43	1.2	●	●
ADATA	AX4U266638G16-BRS	8*8GB	SS	Hynix	16-16-16-39	1.2	●	●
ADATA	AD4U266638G19-B	8*8GB	SS	N/A	19-19-19-43	1.2	●	●
ADATA	AD4U2666316G19-B	16*16GB	DS	N/A	19-19-19-43	1.2	●	●
PANRAM	W4U2666PS-16G	2*16GB	DS	Hynix	16-18-18-35	1.2	●	●
PANRAM	W4U2666PS-8G	2*8GB	DS	panram	16-18-18-35	1.2	●	●
Team	TPD416G2666HC19BK	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TED416G2666C1901	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPRD416G2666HC1901	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPD416G2666HC1901	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TED432G2666C19DC01	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPRD432G2666HC19DC01	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPD432G2666HC19DC01	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TED464G2666C19OC01	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPRD464G2666HC19OC01	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPD464G2666HC19OC01	16GB	DS	Micron	19-19-19-43	1.2	●	●
Team	TPD48G2666HC19BK	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TED48G2666C1901	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPRD48G2666HC1901	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD48G2666HC1901	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TED416G2666C19DC01	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPRD416G2666HC19DC01	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD416G2666HC19DC01	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TED432G2666C19OC01	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPRD432G2666HC19OC01	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD432G2666HC19OC01	8GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD44G2666HC19BK	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TED44G2666C1901	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPRD44G2666HC1901	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD44G2666HC1901	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TED48G2666C19DC01	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPRD48G2666HC19DC01	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD48G2666HC19DC01	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TED416G2666C19OC01	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPRD416G2666HC19OC01	4GB	SS	N/A	19-19-19-43	1.2	●	●
Team	TPD416G2666HC19OC01	4GB	SS	N/A	19-19-19-43	1.2	●	●

2 DIMM Slots

For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.

• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.

• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 2800 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	Run@Speed	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
CORSAIR	CMK16GX4M4A2800C16(Ver5.29)	4*4GB	SS	N/A	16-18-18-36	1.2	DDR4-2666	●	●
KINGSTON	HX428C14PB2K4/16	4*4GB	SS	Hynix	15-15-15-36	1.35	DDR4-2666	●	●
PATRIOT	PX416G280C6QK	4*4GB	SS	N/A	16-18-18-36	1.2	DDR4-2666	●	●
PANRAM	PUD42800C164G4NJW	4*4GB	SS	N/A	16-18-18-36	1.25	DDR4-2666	●	●
KINGSTON	HX428C14PBK4/32	4*8GB	DS	Hynix	15-15-15-36	1.35	DDR4-2666	●	●
AVEXIR	AVD4UZ128001604G-4COB	4*4GB	SS	N/A	15-15-15-36	1.2	DDR4-2666	●	●
AVEXIR	AVD4UZ128001608G-4COB	4*8GB	DS	N/A	15-15-15-36	1.2	DDR4-2666	●	●
CORSAIR	**CMK32GX4M4A2800C16**	**4*8GB**	**DS**	**N/A**	**16-18-18-36**	**1.2**	DDR4-2666	●	●
KINGSTON	HX428C14SB2K4/32	4*8GB	DS	N/A	15-15-15-36	1.35	DDR4-2666	●	●
KINGSTON	HX428C14SB2K4/16	4*4GB	SS	Hynix	15-15-15-36	1.35	DDR4-2666	●	●
TEAM	TDGED48G2800HC16ABK	**2*8GB**	SS	Hynix	16-16-16-36	1.2	DDR4-2666	●	●
PATRIOT	PV416G280C6QK	4*4GB	SS	N/A	16-18-18-36	1.2	DDR4-2666	●	●
G.SKILL	F4-2800C16D-16GRR	2*8GB	SS	Hynix	16-16-16-36	1.2	DDR4-2666	●	●
ADATA	AX4U280038G17-SBF	**8*8GB**	SS	Hynix	18-17-17-36	1.2	DDR4-2666	●	●
ADATA	AX4U2800316G16-SBF	16GB	DS	Hynix	17-16-16-36	1.2	DDR4-2666	●	●
CORSAIR	CMD32GX4M4A2800C16 (Ver5.20)	8GB	DS	Hynix	16-18-18-36	1.2	DDR4-2666	●	●
G.SKILL	F4-2800C14O-64GVK	4*16GB	DS	Samsung	14-14-14-35	1.35	DDR4-2666	●	●
G.SKILL	F4-2800C16O-32GVR	4*8GB	SS	Hynix	16-16-16-36	1.2	DDR4-2666	●	●
AVEXIR	AVD4UZ128001504G-4BZ1RR	4*4GB	SS	Samsung	15-15-15-35	1.35	DDR4-2666	●	●
AVEXIR	AVD4UZ128001508G-4BZ1RR	**4*8GB**	DS	Samsung	15-15-15-35	1.35	DDR4-2666	●	●
CORSAIR	CMD16GX4M4A2800C16(Ver3.21)	4*4GB	SS	Micron	16-18-18-36	1.2	DDR4-2666	●	●
TEAM	TFWD416G2800C16CBK	16GB	DS	TEAM	16-18-18-38	1.2	DDR4-2666	●	●
TEAM	TFRD48G2800C16CBK	8GB	DS	Samsung	16-18-18-38	1.2	DDR4-2666	●	●
FORZA	**NFMUD416E8-2800EH2A**	**16GB**	**DS**	Hynix	**17-17-17-36**	1.2	DDR4-2666	●	●
FORZA	**NFMUD480E8-2800DH2A**	**8GB**	**SS**	N/A	17-17-17-36	1.2	DDR4-2666	●	●
ADATA	**AX4U2800W8G17-BRD**	**8GB**	**DS**	N/A	17-17-17-36	1.2	DDR4-2666	●	●
G.SKILL	**F4-2800C15Q-32GVR**	**4*8GB**	**SS**	Hynix	15-15-15-35	1.25	DDR4-2666	●	●
ADATA	**AX4U2800W4G17-BRZ**	**2*4GB**	**SS**	Hynix	17-17-17-36	1.2	DDR4-2666	●	●
ADATA	**AX4U280038G17-BWZ**	**8GB**	**SS**	Hynix	17-17-17-36	1.2	DDR4-2666	●	●
KINGMAX	GLMG42F-18KIIA CJBR4	8GB	SS	KINGMAX	17-17-17-39	1.2	DDR4-2666	●	●

2 DIMM Slots
For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.
• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.
• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 3000 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	Run@Speed	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
CORSAIR	CMD32GX4M2B3000C15(Ver4.31)	2*16GB	**DS**	N/A	**15-17-17-35**	1.35	DDR4-2666	●	●
KINGSTON	**HX430C15PB2K4/16**	**4*4GB**	**SS**	**Hynix**	**15-15-15-36**	**1.35**	**DDR4-2666**	●	●
G.SKILL	F4-3000C15Q-16GRR	4*4GB	**SS**	Hynix	**15-15-15-35**	1.35	DDR4-2666	●	●
PANRAM	**PUD43000C154G4NJW**	**4*4GB**	**SS**	**N/A**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
KINGSTON	HX430C15SB2K4/32	4*8GB	**DS**	Hynix	**15-15-15-36**	1.35	DDR4-2666	●	●
AVEXIR	**AVD4UZ130001604G-4COB**	**4*4GB**	**SS**	**N/A**	**15-15-15-36**	**1.35**	**DDR4-2666**	●	●
AVEXIR	AVD4UZ130001608G-4COB	4*8GB	**DS**	N/A	**15-15-15-36**	1.35	DDR4-2666	●	●
KINGSTON	**HX430C15SBK2/16**	**2*8GB**	**DS**	**N/A**	**15-15-15-36**	**1.35**	**DDR4-2666**	●	●
KLEVV	IM44GU48A30-GIIHMC	4*4GB	**SS**	N/A	**17-18-18-36**	1.35	DDR4-2666	●	●
CORSAIR	**CMK16GX4M2B3000C15 (Ver4.24)**	**2*8GB**	**DS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
KINGSTON	HX430C15SB2K4/16	4*4GB	**SS**	Hynix	**15-15-15-36**	1.35	DDR4-2666	●	●
TEAM	**TDGED48G3000HC16ABK**	**2*8GB**	**DS**	**Hynix**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
PATRIOT	PV416G300C6QK	4*4GB	**SS**	N/A	**16-16-16-36**	1.35	DDR4-2666	●	●
G.SKILL	**F4-3000C15D-32GVR**	**2*16GB**	**DS**	**N/A**	**15-15-15-35**	**1.35**	**DDR4-2666**	●	●
CORSAIR	CMK64GX4M4B3000C15 (Ver4.31)	4*16GB	**DS**	Samsung	**15-17-17-35**	1.35	DDR4-2666	●	●
TEAM	**TCD48G300C16ABK**	**8GB**	**SS**	**Hynix**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
ADATA	AX4U300038G16-DBZ	8*8GB	**DS**	Hynix	**16-18-18-36**	1.35	DDR4-2666	●	●
ADATA	**AX4U3000316G16-BGZ**	**16GB**	**DS**	**N/A**	**16-18-18-36**	**1.35**	**DDR4-2666**	●	●
CORSAIR	CMD16GX4M4B3000C15(Ver4.24)	4GB	**SS**	Samsung	**15-17-17-35**	1.35	DDR4-2666	●	●
CORSAIR	**CMK32GX4M2B3000C15(Ver5.39)**	**16GB**	**DS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
CORSAIR	CMU16GX4M2C3000C15 (Ver4.31)	8GB	**SS**	Samsung	**15-17-17-35**	1.35	DDR4-2666	●	●
CORSAIR	**CMK16GX4M4B3000C15(Ver3.21)**	**4GB**	**SS**	**Micron**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
G.SKILL	F4-3000C15Q-32GRK	4*8GB	**DS**	Samsung	**15-15-15-35**	1.35	DDR4-2666	●	●
CORSAIR	**CMK8GX4M2B3000C15(Ver3.21)**	**2*4GB**	**SS**	**Micron**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
CORSAIR	CMU32GX4M4C3000C15 (Ver5.3)	4*8GB	**DS**	Hynix	**15-17-17-35**	1.35	DDR4-2666	●	●
GEIL	**GFR416GB3000C15ADC**	**8GB**	**SS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
TEAM	TFWD416G3000C16CBK	16GB	**DS**	Hynix	16-18-18-38	1.35	DDR4-2666	●	●
TEAM	**TFRD48G3000C16CBK**	**8GB**	**DS**	**Samsung**	**16-18-18-38**	**1.35**	**DDR4-2666**	●	●
TEAM	TCD44G3000C16CBK	4GB	**SS**	Hynix	16-18-18-38	1.35	DDR4-2666	●	●
Klevv	**IM4AGU88A30-FGGHMZ**	**16GB**	**DS**	**Hynix**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
Klevv	IM48GU88A30-FGGHMZ	8GB	**SS**	Hynix	16-16-16-36	1.35	DDR4-2666	●	●
Klevv	**IM44GU48A30-FGGHAZ**	**4GB**	**SS**	**Hynix**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
Klevv	IM48GU88A30-FGGHMB	8GB	**SS**	Hynix	16-16-16-36	1.35	DDR4-2666	●	●
Klevv	**IM44GU48A30-FGGHAB**	**4GB**	**SS**	**Hynix**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
Klevv	IM4AGU88A30-FGGHMB	16GB	**DS**	Hynix	16-16-16-36	1.35	DDR4-2666	●	●
CORSAIR	**CMD16GX4M2B3000C15(Ver5.30)**	**2* 8GB**	**SS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
CORSAIR	**CMD32GX4M4C3000C15(Ver5.30)**	**4* 8GB**	**SS**	N/A	**15-17-17-35**	1.35	DDR4-2666	●	●
FORZA	**NFMUD480E8-3000DH2A**	**8GB**	**SS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
CORSAIR	**CMR16GX4M2C3000C15(Ver4.31)**	**2* 8GB**	**SS**	Hynix	**15-17-17-35**	1.35	DDR4-2666	●	●
CORSAIR	**CMR32GX4M4C3000C15**	**4* 8GB**	**DS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
Team	TDRRD48G3000HC16CBK	8GB	DS	Samsung	16-18-18-38	1.35	DDR4-2666	●	●
Team	**TDRGD48G3000HC16CBK**	**8GB**	**DS**	**Samsung**	**16-18-18-38**	**1.35**	**DDR4-2666**	●	●
GALAXY	HOF DDR4-3000	**2* 8GB**	SS	Hynix	16-18-18-38	1.35	DDR4-2666	●	●
GeIL	**GLR416GB3000C15ADC**	**8GB**	**SS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
G.SKILL	F4-3000C15S-16GVR	16GB	DS	Hynix	15-15-15-35	1.35	DDR4-2666	●	●
FORZA	**NMUD416E82-3000DB30**	**16GB**	**DS**	**Hynix**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
FORZA	NMUD480E82-3000DB30	8GB	SS	Hynix	15-17-17-35	1.35	DDR4-2666	●	●
PATRIOT	**PV432G300C6QK**	**4* 8GB**	**SS**	**N/A**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
HyperX	HX430C15PB3K4/32	**4* 8GB**	SS	Hynix	15-17-17-36	1.35	DDR4-2666	●	●
CRUCIAL	**BLT8G4D30AETA.K16FE**	**8GB**	**DS**	**Samsung**	**15-16-16-35**	**1.35**	**DDR4-2666**	●	●
PATRIOT	PVE416G300C6KBL	**2* 8GB**	SS	N/A	16-16-16-36	1.35	DDR4-2666	●	●
PATRIOT	**PVE48G300C6KRD**	**2*4GB**	**SS**	**N/A**	**16-16-16-36**	**1.35**	**DDR4-2666**	●	●
G.SKILL	F4-3000C14Q2-128GVKD	8*16GB	DS	Samsung	14-14-14-34	1.35	DDR4-2666	●	●
Team	**TF4D48G3000HC16CBK**	**8GB**	**SS**	**Hynix**	**16-18-18-38**	**1.35**	**DDR4-2666**	●	●
GALAXY	N/A	2*8GB	SS	Hynix	16-18-18-38	1.35	DDR4-2666	●	●
TIGO	**TMKU8GF58-3000X**	**8GB**	**DS**	**Samsung**	**16-18-18-36**	**1.35**	**DDR4-2666**	●	●
CORSAIR	CMK16GX4M2B3000C15R (Ver5.30)	8GB*2	SS	Hynix	15-17-17-35	1.35	DDR4-2666	●	●
CORSAIR	**CMK16GX4M2B3000C15R (Ver3.32)**	**8GB*2**	**SS**	**N/A**	**15-17-17-35**	**1.35**	**DDR4-2666**	●	●
CORSAIR	CMAX8GD3000C15U4-CN(Ver.5.39)	8GB	SS	Hynix	15-17-17-35	1.35	DDR4-2666	●	●
ADATA	**AX4U300038G16-BBG**	**8*8GB**	**SS**	**Hynix**	**16-18-18-36**	**1.35**	**DDR4-2666**	●	●
Hyper X	HX430C15PB3/8 HX430C15PB3K2/16	8GB 2*8GB	SS	N/A	15-17-17-36	1.35	DDR4-2666	●	●
TEKISM	**T4X3000B8G17-HY**	**8GB**	**DS**	**N/A**	**17-17-17-36**	**1.35**	**DDR4-2666**	●	●
CORSAIR	**CMK16GX4M2B3000C15 (Ver5.39)**	**2*8GB**	SS	N/A	15-17-17-35	1.35	DDR4-2666	●	●
G.SKILL	**F4-3000C16D-16GTZR**	**2*8GB**	**SS**	**N/A**	**16-18-18-38**	**1.35**	**DDR4-2666**	●	●
GALAXY	**GAM4IRL1BMR3000G16LD162C**	**2*8GB**	**SS**	**Micron**	**16-18-18-38**	**1.35**	**DDR4-2666**	●	●

2 DIMM Slots
For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.
• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.
• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 3200 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	Run@Speed	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
PANRAM	PUD43200C164G4NJW	4* 4GB	SS	N/A	16-18-18-39	1.35	DDR4-2666	●	●
MUSHKIN	997202F	2*4GB	SS	N/A	15-15-15-36	1.2	DDR4-2666	●	●
G.SKILL	F4-3200C16D-8GVKB	2*4GB	SS	Samsung	16-18-18-38	1.35	DDR4-2666	●	●
APACER	78.BAGMD.AF20B	2*4GB	SS	Hynix	16-16-16-36	1.35	DDR4-2666	●	●
PATRIOT	PV48G320C6K	2*4GB	SS	N/A	16-16-16-36	1.35	DDR4-2666	●	●
HyperX	HX432C16PB3K4/32	4*8GB	SS	Hynix	16-18-18-36	1.35	DDR4-2666	●	●
ADATA	AX4U3200W8G16-BGZ	8GB	DS	Samsung	16-16-16-36	1.35	DDR4-2666	●	●
TEAM	TFWD416G3200C16CBK	16GB	DS	Samsung	16-18-18-38	1.35	DDR4-2666	●	●
TEAM	TFWD48G3200C16CBK	8GB	DS	Samsung	16-18-18-38	1.35	DDR4-2666	●	●
G.SKILL	F4-3200C16D-16GTZR	2*8GB	SS	N/A	18-18-18-38	1.35	DDR4-2666	●	●
G.SKILL	CMD32GX4M2C3200C16(Ver5.39)	4*8GB	SS	Samsung	14-14-14-34	1.35	DDR4-2666	●	●
CORSAIR	CMK16GX4M2B3200C16(Ver4.24)	2*16GB	DS	Hynix	16-18-18-36	1.35	DDR4-2666	●	●
CORSAIR	CMU16GX4M2C3200C16(Ver5.39)	8*8GB	SS	N/A	16-18-18-36	1.35	DDR4-2666	●	●
Team	CMK32GX4M2B3200C16(Ver5.39)	8GB	SS	Hynix	16-18-18-38	1.35	DDR4-2666	●	●
CORSAIR	CMK64GX4M8B3200C16(Ver4.31)	2*8GB	DS	Samsung	16-18-18-36	1.35	DDR4-2666	●	●
G.SKILL	CMK16GX4M2B3200C16(Ver4.24)	2*8GB	DS	N/A	16-16-16-36	1.35	DDR4-2666	●	●
CORSAIR	CMU16GX4M2C3200C16(Ver5.39)	2*8GB	SS	Hynix	16-18-18-36	1.35	DDR4-2666	●	●
G.SKILL	F4-3200C16S-8GRKB	8GB	SS	N/A	16-18-18-38	1.35	DDR4-2666	●	●
CORSAIR	CMU32GX4M2C3200C16(Ver5.39)	2*16GB	DS	Hynix	16-18-18-36	1.35	DDR4-2666	●	●
Hyper X	HX432C16PB3K2/16	2*8GB	SS	Hynix	16-18-18-36	1.35	DDR4-2666	●	●

2 DIMM Slots
For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.
• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.
• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 3300 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	Run@Speed	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
ADATA	AX4U3333W4G16-QGZ	4*8GB	SS	N/A	16-16-16-36	1.35	DDR4-2666	●	●
HyperX	HX433C16PB3K2/16	2*8GB	SS	N/A	16-18-18-36	1.35	DDR4-2666	●	●
G.SKILL	F4-3300C16Q-16GRKD	4*4GB	SS	Hynix	16-16-16-36	1.35	DDR4-2666	●	●
CORSAIR	CMR32GX4M4C3333C16(Ver4.31)	4*8GB	SS	Samsung	16-18-18-35	1.35	DDR4-2666	●	●

2 DIMM Slots
For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.
• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.
• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 3400 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	Run@Speed	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
GEIL	GLWR416GB3400C16AQC	4*4GB	SS	N/A	16-18-18-36	1.35	DDR4-2666	●	●
G.SKILL	F4-3400C16Q-16GRBD	4*4GB	SS	Samsung	16-18-18-38	1.35	DDR4-2666	●	●
G.SKILL	F4-3466C16Q-16GVK	4*4GB	SS	N/A	16-18-18-38	1.35	DDR4-2666	●	●
CORSAIR	CMD16GX4M4B3466C18 (Ver4.23)	4*4GB	SS	N/A	18-19-19-39	1.35	DDR4-2666	●	●
PATRIOT	CMD32GX4M2B3466C16(Ver4.31)	2*4GB	SS	Samsung	17-18-18-36	1.35	DDR4-2666	●	●
CORSAIR	CMU32GX4M4C3400C16R (Ver5.20)	4*8GB	SS	Samsung	16-18-18-36	1.35	DDR4-2666	●	●
CORSAIR	CMD32GX4M2B3466C16(Ver4.31)	2*16GB	DS	Samsung	16-18-18-36	1.35	DDR4-2666	●	●
CORSAIR	CMR16GX4M2C3466C16(Ver4.31)	2*8GB	SS	Samsung	16-18-18-36	1.35	DDR4-2666	●	●
G.SKILL	F4-3466C16Q2-64GTZ	8* 8GB	SS	N/A	16-18-18-38	1.35	DDR4-2666	●	●

2 DIMM Slots
For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.
• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.
• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.

DDR4 3600+ Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Timing	Voltage(V)	Run@Speed	DIMM socket support (Optional)	
								1 DIMM	2 DIMM
G.SKILL	F4-3600-C17Q-16GVK	4*4GB	SS	N/A	17-18-18-38	1.35	DDR4-2666	●	●
GALAXY	HOF4CALCS3600K17LD162C	2*8GB	SS	Samsung	17-18-18-38	1.35	DDR4-2666	●	●
CORSAIR	CMD8GX4M2B3600C18 (Ver4.24)	2*4GB	SS	Samsung	18-19-19-39	1.35	DDR4-2666	●	●
CORSAIR	CMD8GX4M2B3733C17 (Ver4.24)	2*4GB	SS	N/A	17-19-19-39	1.35	DDR4-2666	●	●
G.SKILL	F4-3866C18Q-16GTZ	4*4GB	SS	Samsung	18-22-22-42	1.35	DDR4-2666	●	●
G.SKILL	F4-4000C19D-8GTZ	2*4GB	SS	Samsung	19-21-21-41	1.35	DDR4-2666	●	●
G.SKILL	F4-4000C19D-16GTZSW	2*8GB	SS	Samsung	19-21-21-41	1.35	DDR4-2666	●	●
G.SKILL	F4-4266C19D-16GTZKW	2*8GB	SS	Samsung	19-19-19-39	1.4	DDR4-2666	●	●
G.SKILL	F4-4400C19D-16GTZSW	2*8GB	SS	Samsung	19-19-19-39	1.4	DDR4-2666	●	●
G.SKILL	F4-4600C19D-16GTZSWC	2*8GB	SS	Samsung	19-23-23-43	1.5	DDR4-2666	●	●
G.SKILL	F4-4600C19D-16GTZKKA	2*8GB	SS	Samsung	19-19-19-39	1.45	DDR4-2666	●	●
GALAXY	HOF4CXL1BSR3600K17LD162C	2*8GB	SS	Samsung	17-18-18-38	1.35	DDR4-2666	●	●
KINGSTON	HX436C17PB3K4/32	4*8GB	SS	Samsung	17-18-18-39	1.35	DDR4-2666	●	●

2 DIMM Slots
For each DRAM channel (A,B), make sure to install the DRAM module to gray slot first.
• 1 DIMM: Supports one (1) module inserted into any gray slot as Single-channel memory configuration. Install the module into the A2 or B2 slot for better compatibility.
• 2 DIMMs: Supports two (2) modules inserted into one pair of gray slots as one pair of Dual-channel memory configuration. Install the modules into slots A2 and B2 for better compatibility.

- Make sure to install the memory modules from the gray slots first.
- 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
- Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel® 8th Generation 6-core or higher processors.