

## RAMPAGE IV FORMULA

### DDR3 1333 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
A-DATA	AD63I1B0823EV	2GB	SS	A-DATA	3CCA-1509A	-	-	●	
A-DATA	AXDU1333GC2G9(XMP)	2GB	SS	-	-	9-9-9-24	1.25~1.35	●	●
A-DATA	AD63I1C1624EV	4GB	DS	A-DATA	3CCA-1509A	-	-	●	●
A-DATA	SU3U1333W8G9(XMP)	8GB	DS	ELPIDA	J4208BASE-DJ-F	-	-	●	●
Apacer	78.01GC6.9L0	1GB	SS	Apacer	AM5D5808DEJSBG	9	-	●	
Apacer	78.A1GC6.9L1	2GB	DS	Apacer	AM5D5808FEQSBG	9	-	●	
Apacer	78.B1GDE.9L10C	4GB	DS	Apacer	AM5D5908CEHSBG	9	-	●	●
CORSAIR	TW3X4G1333C9A	4GB ( 2x 2GB )	DS	-	-	9-9-9-24	1.5	●	
CORSAIR	CMX8GX3M2A1333C9(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	●	
CORSAIR	CMX8GX3M4A1333C9	8GB(4 x 2GB)	DS	-	-	9-9-9-24	1.5	●	
Crucial	BL25664BN1337.16FF(XMP)	2GB	DS	-	-	7-7-7-24	1.65	●	
ELPIDA	EBJ41UF8BCF0-DJ-F	4GB	DS	ELPIDA	J2108BCSE-DJ-F	-	-	●	●
G.SKILL	F3-10600CL9D-4GBNT	4GB ( 2x 2GB )	DS	G.SKILL	D3 128M8CE9 2GB	9-9-9-24	1.5	●	●
G.SKILL	F3-10666CL7D-4GBRH(XMP)	4GB(2 x 2GB)	DS	-	-	7-7-7-21	1.5	●	●
G.SKILL	F3-10666CL8D-4GBECO(XMP)	4GB(2 x 2GB)	DS	-	-	8-8-8-24	1.35	●	●
G.SKILL	F3-10666CL9D-8GBRL	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	●	
G.SKILL	F3-10666CL9D-8GBRL	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	●	●
G.SKILL	F3-10666CL9D-8GBXL	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	●	●
GEIL	GET316GB1333C9QC	16GB ( 4x 4GB )	DS	-	-	9-9-9-24	1.5	●	
GEIL	GG34GB1333C9DC	4GB ( 2x 2GB )	DS	GEIL	GL1L128M88BA115FW	9-9-9-24	1.3	●	●
GEIL	GG34GB1333C9DC	4GB ( 2x 2GB )	DS	GEIL	GL1L128M88BA15B	9-9-9-24	1.3	●	
GEIL	GVP34GB1333C9DC	4GB ( 2x 2GB )	DS	-	-	9-9-9-24	1.5	●	
GEIL	GB34GB1333C7DC	4GB(2 x 2GB)	DS	GEIL	GL1L128M88BA15FW	7-7-7-24	1.5	●	●
GEIL	GG34GB1333C9DC	4GB(2 x 2GB)	DS	GEIL	GL1L128M88BA12N	9-9-9-24	1.3	●	●
GEIL	GVP38GB1333C9DC	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	●	●
Hynix	HMT112U6TFR8A-H9	1GB	SS	Hynix	H5TC1G83TFR	-	-	●	●
Hynix	HMT325U6BFR8C-H9	2GB	SS	Hynix	H5TQ2G83BFR	-	-	●	
Hynix	HMT125U6BFR8C-H9	2GB	DS	Hynix	H5TQ1G83BFRH9C	9	-	●	●
Hynix	HMT125U6TFR8A-H9	2GB	DS	Hynix	H5TC1G83TFR	-	-	●	
KINGMAX	FLFE85F-C8KL9	2GB	SS	KINGMAX	KFC8FNLXF-DXX-15A	-	-	●	●
KINGMAX	FLFE85F-B8KL9	2GB	DS	KINGMAX	KFB8FNLXL-BNF-15A	-	-	●	
KINGMAX	FLFF65F-C8KL9	4GB	DS	KINGMAX	KFC8FNLXF-DXX-15A	-	-	●	●
KINGMAX	FLFF65F-C8KM9	4GB	DS	Kingmax	KFC8FNMXF-BXX-15A	-	-	●	●
KINGSTON	KVR1333D3N9/1G	1GB	SS	Elpida	J1108BDSE-DJ-F	9	1.5	●	●
KINGSTON	KVR1333D3S8N9/2G	2GB	SS	Micron	IFD77 D9LGK	-	1.5	●	●
KINGSTON	KVR1333D3N9/2G	2GB	DS	Kingston	D1288JPNDPLD9U	9	1.5	●	●
KINGSTON	KVR1333D3N9K2/4G	4GB ( 2x 2GB )	DS	KINGSTON	D1288JEMFPGD9U	-	1.5	●	●

<b>KINGSTON</b>	KVR1333D3E9S/4G	4GB	DS	Elpida	J2108ECSE-DJ-F	9	1.5	•	•
<b>MICRON</b>	MT4JTF12864AZ-1G4D1	1GB	SS	Micron	D9LGQ	-	-	•	
<b>MICRON</b>	MT8JTF25664AZ-1G4D1	2GB	SS	Micron	D9LGK	-	-	•	•
<b>MICRON</b>	MT8JTF25664AZ-1G4D1	2GB	SS	Micron	D9LGK	-	-	•	
<b>MICRON</b>	MT8JTF25664AZ-1G4M1	2GB	SS	MICRON	D9PFJ	-	-	•	•
<b>MICRON</b>	MT16JTF51264AZ-1G4D1	4GB	DS	Micron	D9LGK	-	-	•	•
<b>OCZ</b>	OCZ3P1333LV3GK	3GB(3 x 1GB)	SS	-	-	7-7-7	1.65	•	
<b>OCZ</b>	OCZ3G1333LV4GK	4GB ( 2x 2GB )	DS	-	-	9-9-9	1.65	•	
<b>OCZ</b>	OCZ3P1333LV4GK	4GB(2 x 2GB)	DS	-	-	7-7-7	1.65	•	•
<b>OCZ</b>	OCZ3G1333LV8GK	8GB ( 2x 4GB )	DS	-	-	9-9-9	1.65	•	
<b>OCZ</b>	OCZ3G1333LV8GK	8GB ( 2x 4GB )	DS	-	-	9-9-9	1.65	•	
<b>PSC</b>	PC310600U-9-10-A0	1GB	SS	PSC	A3P1GF3FGF	-	-	•	•
<b>PSC</b>	PC310600U-9-10-B0	2GB	DS	PSC	A3P1GF3FGF	-	-	•	
<b>SAMSUNG</b>	M378B2873EH1-CH9	1GB	SS	SAMSUNG	K4B1G0846E	-	-	•	•
<b>SAMSUNG</b>	M378B2873FHS-CH9	1GB	SS	SAMSUNG	K4B1G0846F	-	-	•	•
<b>SAMSUNG</b>	M378B5773DH0-CH9	2GB	SS	SAMSUNG	K4B2G08460	-	-	•	
<b>SAMSUNG</b>	M378B5673FH0-CH9	2GB	DS	SAMSUNG	K4B1G0846F	-	-	•	
<b>SAMSUNG</b>	M378B5273BH1-CH9	4GB	DS	SAMSUNG	K4B2G0846B-HCH9	9	-	•	•
<b>SAMSUNG</b>	M378B5273CH0-CH9	4GB	DS	SAMSUNG	K4B2G0846C	K4B2G0846C	-	•	
<b>SAMSUNG</b>	M378B5273DH0-CH9	4GB	DS	SAMSUNG	K4B2G08460	-	-	•	•
<b>SAMSUNG</b>	M378B1G73AH0-CH9	8GB	DS	SAMSUNG	K4B4G0846A-HCH9	-	-	•	•
<b>Transcend</b>	JM1333KLN-2G	2GB	SS	Transcend	TK483PCW3	-	-	•	•
<b>Transcend</b>	TS256MLK64V3N ( 585541 )	2GB	SS	Micron	ICD77 D9LGK	9	-	•	•
<b>Transcend</b>	TS256MLK64V3N ( 574206 )	2GB	SS	Micron	D9LGK	9	-	•	•
<b>Transcend</b>	JM1333KLN-4G ( 583782 )	4GB	DS	Transcend	TK483PCW3	9	-	•	
<b>Transcend</b>	JM1333KLN-4G	4GB	DS	Transcend	TK483PCW3	-	-	•	•
<b>Transcend</b>	TS512MLK64V3N ( 585538 )	4GB	DS	Micron	IED27 D9LGK	9	-	•	•
<b>ACTICA</b>	ACT1GHU64B8F1333S	1GB	SS	SAMSUNG	K4B1G0846F	-	-	•	•
<b>ACTICA</b>	ACT1GHU72C8G1333S	1GB	SS	SAMSUNG	K4B1G0846F(ECC)	-	-	•	•
<b>ACTICA</b>	ACT2GHU64B8G1333M	2GB	DS	Micron	D9KPT	-	-	•	•
<b>ACTICA</b>	ACT2GHU64B8G1333S	2GB	DS	SAMSUNG	K4B1G0846F	-	-	•	•
<b>ACTICA</b>	ACT2GHU72D8G1333M	2GB	DS	Micron	D9KPT(ECC)	-	-	•	•
<b>ACTICA</b>	ACT2GHU72D8G1333S	2GB	DS	SAMSUNG	K4B1G0846F(ECC)	-	-	•	•
<b>ACTICA</b>	ACT4GHU64B8H1333H	4GB	DS	Hynix	H5TQ2G83AFR	-	-	•	•
<b>ACTICA</b>	ACT4GHU72D8H1333H	4GB	DS	Hynix	H5TQ2G83AFR(ECC)	-	-	•	•
<b>ATP</b>	AQ56M72E8BJH9S	2GB	DS	SAMSUNG	K4B1G0846F(ECC)	-	-	•	•
<b>ATP</b>	AQ12M72E8BKH9S	4GB	DS	SAMSUNG	K4B2G0846C(ECC)	-	-	•	•
<b>BUFFALO</b>	D3U1333-1G	1GB	SS	Elpida	J1108BFBG-DJ-F	-	-	•	•
<b>BUFFALO</b>	D3U1333-2G	2GB	DS	Elpida	J1108BFBG-DJ-F	-	-	•	•
<b>BUFFALO</b>	D3U1333-4G	4GB	DS	NANYA	NT5CB256M8BN-CG	-	-	•	•
<b>EK Memory</b>	EKM324L28BP8-I13	4GB(2 x 2GB)	DS	-	-	9	-	•	•
<b>Elixir</b>	M2F2G64CB88B7N-CG	2GB	SS	Elixir	N2CB2G808N-CG	-	-	•	•

<b>Elixir</b>	M2F2G64CB88D7N-CG	2GB	SS	Elixir	M2CB2G8BDN-CG	-	-	●	●
<b>Elixir</b>	M2F4G64CB8HB5N-CG	4GB	DS	Elixir	N2CB2G808N-CG	-	-	●	●
<b>Elixir</b>	M2F4G64CB8HD5N-CG	4GB	DS	Elixir	M2CB2G8BDN-CG	-	-	●	●
<b>KINGTIGER</b>	F10DA2T1680	2GB	DS	KINGTIGER	KTG1333PS1208NST-C9	-	-	●	
<b>KINGTIGER</b>	KTG2G1333PG3	2GB	DS	-	-	-	-	●	●
<b>Patriot</b>	PSD32G13332	2GB	DS	Prtriot	PM128M8D3BU-15	9	-	●	●
<b>Patriot</b>	PGS34G1333LLKA	4GB(2 x 2GB)	DS	-	-	7-7-7-20	1.7	●	
<b>Patriot</b>	PG38G1333EL(XMP)	8GB	DS	-	-	-	1.5	●	

#### 4 DIMM Slots

- **1 DIMM:** Supports one modules inserted in any slot as Single-channel memory configuration.

We suggest that you install the module into slot B1 or D1 for better compatibility.

- **4 DIMM:** Supports 4 modules inserted into all slots as full-loading of Quad-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.

## RAMPAGE IV FORMULA

### DDR3 1600 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
A-DATA	AM2U16BC2P1	2GB	SS	A-DATA	3CCD-1509A	-	-	•	
A-DATA	AM2U16BC4P2	4GB	DS	A-DATA	3CCD-1509A	-	-	•	
A-DATA	AX3U1600GC4G9(XMP)	4GB	DS	-	-	-	1.55~1.75	•	
A-DATA	AX3U1600PC4G8(XMP)	4GB	DS	-	-	8-8-8-24	1.55~1.75	•	
CORSAIR	HX3X12G1600C9(XMP)	12GB ( 6x 2GB )	DS	-	-	9-9-9-24	1.6	•	
CORSAIR	CMZ16GX3M4A1600C9(XMP)	16GB ( 4x 4GB )	DS	-	-	9-9-9-24	1.5	•	
CORSAIR	CMG4GX3M2A1600C6	4GB ( 2x 2GB )	DS	-	-	6-6-6-18	1.65	•	
CORSAIR	CMD4GX3M2B1600C8	4GB( 2x 2GB )	DS	-	-	8-8-8-24	1.65	•	
CORSAIR	CMX4GX3M2A1600C8(XMP)	4GB( 2x 2GB )	DS	-	-	8-8-8-24	1.65	•	
CORSAIR	CMP6GX3M3A1600C8(XMP)	6GB ( 3x 2GB )	DS	-	-	8-8-8-24	1.65	•	
CORSAIR	CMP6GX3M3A1600C8(XMP)	6GB ( 3x 2GB )	DS	-	-	8-8-8-24	1.65	•	
CORSAIR	CMX6GX3M3C1600C7(XMP)	6GB ( 3x 2GB )	DS	-	-	7-8-7-20	1.65	•	
CORSAIR	CMZ8GX3M2A1600C8(XMP)	8GB ( 2x 4GB )	DS	-	-	8-8-8-24	1.5	•	
CORSAIR	CMZ8GX3M2A1600C9(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	•	
Crucial	BL12864BN1608.8FF(XMP)	2GB( 2x 1GB )	SS	-	-	8-8-8-24	1.65	•	
Crucial	BL25664BN1608.16FF(XMP)	2GB	DS	-	-	8-8-8-24	1.65	•	
G.SKILL	F3-12800CL7Q-16GBXH(XMP)	16GB ( 4x 4GB )	DS	-	-	7-8-7-24	1.6	•	
G.SKILL	F3-12800CL9Q-16GBXL(XMP)	16GB ( 4x 4GB )	DS	-	-	9-9-9-24	1.5	•	
G.SKILL	F3-12800CL8D-4GBRM(XMP)	4GB(2 x 2GB)	DS	-	-	8-8-8-24	1.6	•	
G.SKILL	F3-12800CL9D-4GBECO(XMP)	4GB(2 x 2GB)	DS	-	-	9-9-9-24	1.35	•	
G.SKILL	F3-12800CL7D-8GBRH(XMP)	8GB ( 2x 4GB )	DS	-	-	7-8-7-24	1.6	•	
G.SKILL	F3-12800CL9D-8GBRL(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.5	•	
G.SKILL	F3-12800CL9D-8GBSR2(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.25	•	
G.SKILL	F3-12800CL8D-8GBECO(XMP)	8GB ( 2x4GB )	DS	-	-	8-8-8-24	1.35	•	
GEIL	GET316GB1600C9QC(XMP)	16GB ( 4x 4GB )	DS	-	-	9-9-9-28	1.6	•	
GEIL	GUP34GB1600C7DC(XMP)	4GB ( 2x 2GB )	DS	-	-	7-7-7-24	1.6	•	
KINGMAX	FLGD45F-B8MF7(XMP)	1GB	SS	-	-	-	-	•	
KINGSTON	KHX1600C9D3K3/12GX(XMP)	12GB ( 3x 4GB )	DS	-	-	9	1.65	•	
KINGSTON	KHX1600C9D3K3/12GX(XMP)	12GB( 3x 4GB )	DS	-	-	-	1.65	•	
KINGSTON	KHX1600C9D3K6/24GX(XMP)	24GB ( 6x 4GB )	DS	-	-	9	1.65	•	
KINGSTON	KHX1600C8D3K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	8	1.65	•	
KINGSTON	KHX1600C9D3K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	-	1.65	•	
KINGSTON	KHX1600C9D3LK2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	-	1.65	•	
KINGSTON	KHX1600C9D3X2K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	9	1.65	•	
KINGSTON	KHX1600C9D3K3/6GX(XMP)	6GB ( 3x 2GB )	DS	-	-	9	1.65	•	
KINGSTON	KHX1600C9D3K3/6GX(XMP)	6GB ( 3x 2GB )	DS	-	-	9	1.65	•	
KINGSTON	KHX1600C9D3T1K3/6GX(XMP)	6GB ( 3x 2GB )	DS	-	-	-	1.65	•	

<b>KINGSTON</b>	KHX1600C9D3T1K3/6GX(XMP)	6GB ( 3x 2GB )	DS	-	-	9	1.65	•
<b>KINGSTON</b>	KHX1600C9D3P1K2/8G	8GB ( 2x 4GB )	DS	-	-	9	1.5	•
<b>OCZ</b>	OCZ3BE1600C8LV4GK	4GB( 2x 2GB )	DS	-	-	8-8-8	1.65	•
<b>OCZ</b>	OCZ3OB1600LV4GK	4GB(2 x 2GB)	DS	-	-	9-9-9	1.65	• •
<b>OCZ</b>	OCZ3X1600LV6GK(XMP)	6GB(3 x 2GB)	DS	-	-	8-8-8	1.65	• •
<b>OCZ</b>	OCZ3X1600LV6GK(XMP)	6GB(3 x 2GB)	DS	-	-	8-8-8	1.65	•
<b>Super Talent</b>	WP160UX4G9(XMP)	4GB(2 x 2GB)	DS	-	-	9	-	•
<b>Super Talent</b>	WB160UX6G8(XMP)	6GB(3 x 2GB)	DS	-	-	-	-	•
<b>Super Talent</b>	WB160UX6G8(XMP)	6GB(3 x 2GB)	DS	-	-	8	-	•
<b>Transcend</b>	JM1600KLN-8GK	8GB ( 2x 4GB )	DS	Transcend	TK483PCW3	-	-	•
<b>Asint</b>	SLZ3128M8-EGJ1D(XMP)	2GB	DS	Asint	3128M8-GJ1D	-	-	•
<b>EK Memory</b>	EKM324L28BP8-I16(XMP)	4GB( 2x 2GB )	DS	-	-	9	-	•
<b>EK Memory</b>	EKM324L28BP8-I16(XMP)	4GB(2 x 2GB)	DS	-	-	9	-	•
<b>GoodRam</b>	GR1600D364L9/2G	2GB	DS	GoodRam	GF1008KC-JN	-	-	•
<b>KINGTIGER</b>	KTG2G1600PG3(XMP)	2GB	DS	-	-	-	-	•
<b>Mushkin</b>	996805(XMP)	4GB ( 2x 2GB )	DS	-	-	6-8-6-24	1.65	•
<b>Mushkin</b>	998805(XMP)	6GB ( 3x 2GB )	DS	-	-	6-8-6-24	1.65	•
<b>Patriot</b>	PX7312G1600LLK(XMP)	12GB ( 3x 4GB )	DS	-	-	8-9-8-24	1.65	•
<b>Patriot</b>	PGS34G1600LLKA2	4GB ( 2x 2GB )	DS	-	-	8-8-8-24	1.7	•
<b>Patriot</b>	PGS34G1600LLKA	4GB( 2x 2GB )	DS	-	-	7-7-7-20	1.7	•
<b>PATRIOT</b>	PGS34G1600LLKA	4GB(2 x 2GB)	DS	-	-	7-7-7-20	1.7	•
<b>Patriot</b>	PVV38G1600LLK(XMP)	8GB ( 2x 4GB )	DS	-	-	8-9-8-24	1.65	•
<b>Patriot</b>	PX538G1600LLK(XMP)	8GB ( 2x 4GB )	DS	-	-	8-9-8-24	1.65	•
<b>Team</b>	TXD31024M1600C8-D(XMP)	1GB	SS	Team	T3D1288RT-16	8-8-8-24	1.65	•
<b>Team</b>	TXD32048M1600C7-L(XMP)	2GB	DS	Team	T3D1288LT-16	7-7-7-24	1.65	•
<b>Team</b>	TXD32048M1600HC8-D(XMP)	2GB	DS	Team	T3D1288RT-16	8-8-8-24	1.65	•

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-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.

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### DDR3 1866 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
A-DATA	AX3U1866GC2G9B(XMP)	2GB	SS	-	-	9-11-9-27	1.55~1.75	●	●
A-DATA	AX3U1866GC4G9B(XMP)	4GB	DS	-	-	9-11-9-27	1.55~1.75	●	●
CORSAIR	CMZ8GX3M2A1866C9(XMP)	8GB ( 2x 4GB )	DS	-	-	9-10-9-27	1.5	●	●
G.SKILL	F3-14900CL9Q-16GBXL(XMP)	16GB ( 4x 4GB )	DS	-	-	9-10-9-28	1.5	●	●
G.SKILL	F3-15000CL9D-4GBTD(XMP)	4GB(2 x 2GB)	DS	-	-	9-9-9-24	1.65	●	
G.SKILL	F3-14900CL9D-8GBSR(XMP)	8GB ( 2x 4GB )	DS	-	-	9-10-9-28	1.5	●	●
G.SKILL	F3-14900CL9Q-8GBFLD(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.6	●	●
KINGSTON	KHX1866C9D3T1K3/3GX(XMP)	3GB ( 3x 1GB )	SS	-	-	-	1.65	●	●
OCZ	OCZ3P1866C9LV6GK	6GB(3 x 2GB)	DS	-	-	9-9-9	1.65	●	●
OCZ	OCZ3RPR1866C9LV6GK	6GB(3 x 2GB)	DS	-	-	9-9-9	1.65	●	
Patriot	PXD34G1866ELK(XMP)	4GB ( 2x 2GB )	SS	-	-	9-9-9-24	1.65	●	●
Patriot	PXD38G1866ELK(XMP)	8GB ( 2x 4GB )	DS	-	-	9-11-9-27	1.65	●	●
Team	TXD32048M1866C9(XMP)	2GB	DS	Team	T3D1288RT-16	9-9-9-24	1.65	●	●

4 DIMM Slots

- **1 DIMM:** Supports one modules inserted in any slot as Single-channel memory configuration.

We suggest that you install the module into slot B1 or D1 for better compatibility.

- **4 DIMM:** Supports 4 modules inserted into all slots as full-loading of Quad-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.

## RAMPAGE IV FORMULA

### DDR3 2000 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
A-DATA	AX3U2000GB2G9B(XMP)	2GB	DS	-	-	9-11-9-27	1.55~1.75	●	●
A-DATA	AX3U2000GC4G9B(XMP)	4GB	DS	-	-	9-11-9-27	1.55~1.75	●	
Apacer	78.AAGD5.9KD(XMP)	6GB(3 x 2GB)	DS	-	-	9-9-9-27	-	●	●
CORSAIR	CMT6GX3M3A2000C8(XMP)	6GB ( 3x 2GB )	DS	-	-	8-9-8-24	1.65	●	
Crucial	BL12864BE2009.8SFB3(EPP)	1GB	SS	-	-	9-9-9-28	2	●	
KINGSTON	KHX2000C9AD3T1K3/6GX(XMP)	6GB ( 3x 2GB )	DS	-	-	9	1.65	●	●
Transcend	TX2000KLN-8GK (388375)(XMP)	4GB	DS	-	-	-	1.6	●	●
AEXEA	AXA3ES2G2000LG28V(XMP)	2GB	DS	-	-	-	1.65	●	●
AEXEA	AXA3ES4GK2000LG28V(XMP)	4GB ( 2x 2GB )	DS	-	-	-	1.65	●	●
Gingle	FA3URSS673A801A	2GB	DS	-	-	9-9-9-24	-	●	●
Patriot	PX7312G2000ELK(XMP)	12GB ( 3x 4GB )	DS	-	-	9-11-9-27	1.65	●	
Patriot	PV736G2000ELK(XMP)	6GB ( 3x 2GB )	DS	-	-	7-7-7-20	1.65	●	
Patriot	PVT36G2000LLK(XMP)	6GB(3 x 2GB)	DS	-	-	8-8-8-24	1.65	●	
Silicon Power	SP002GBLYU200S02(XMP)	2GB	DS	-	-	-	-	●	
Team	TXD32048M2000C9(XMP)	2GB	DS	Team	T3D1288RT-20	9-9-9-24	1.5	●	●
Team	TXD32048M2000C9-L(XMP)	2GB	DS	Team	T3D1288LT-20	9-9-9-24	1.5	●	●
Team	TXD32048M2000C9-L(XMP)	2GB	DS	Team	T3D1288RT-20	9-9-9-24	1.6	●	●

4 DIMM Slots

• **1 DIMM:** Supports one modules inserted in any slot as Single-channel memory configuration.

We suggest that you install the module into slot B1 or D1 for better compatibility.

• **4 DIMM:** Supports 4 modules inserted into all slots as full-loading of Quad-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.

## RAMPAGE IV FORMULA

### DDR3 2133 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
A-DATA	8154A 1044(XMP)	2GB	SS	-	-	9-9-9-24	1.55-1.75	●	●
A-DATA	AX3U2133C2G9B(XMP)	2GB	SS	-	-	9-11-9-27	1.55~1.75	●	●
A-DATA	AX3U2133GC2G9B(XMP)	2GB	SS	-	-	9-9-9-24	1.55-1.75	●	
Apacer	78.BAGE4.AFD0C(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	-	●	●
CORSAIR	CMT4GX3M2A2133C9(XMP)	4GB ( 2x 2GB )	DS	-	-	9-10-9-24	1.65	●	●
CORSAIR	CMT4GX3M2B2133C9(XMP)	4GB ( 2x 2GB )	DS	-	-	9-10-9-27	1.5	●	●
G.SKILL	F3-17000CL9Q-16GBXLD(XMP)	16GB ( 4x 4GB )	DS	-	-	9-11-9-28	1.65	●	●
G.SKILL	F3-17066CL9Q-16GBTDD(XMP)	16GB ( 4x 4GB )	DS	-	-	9-9-9-24	1.65	●	●
G.SKILL	F3-17066CL9D-8GBPID(XMP)	8GB ( 2x 4GB )	DS	-	-	9-9-9-24	1.65	●	
GEIL	GE34GB2133C9DC(XMP)	4GB(2 x 2GB)	DS	-	-	9-9-9-28	1.65	●	●
KINGSTON	KHX2133C9AD3T1K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	-	1.65	●	
KINGSTON	KHX2133C9AD3T1K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	9	1.65	●	●
KINGSTON	KHX2133C9AD3W1K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	9	1.65	●	●
KINGSTON	KHX2133C9AD3X2K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	9	1.65	●	●
KINGSTON	KHX2133C9AD3X2K2/4GX(XMP)	4GB ( 2x 2GB )	DS	-	-	9-9-9-24	1.65	●	●
KINGSTON	KHX2133C9AD3T1FK4/8GX(XMP)	8GB ( 4x 2GB )	DS	-	-	9	1.65	●	●
OCZ	OCZ3XTEP2133C9LV4GK	2GB	DS	-	-	7-7-7-20	1.65	●	
Patriot	PVV34G2133C9K(XMP)	4GB ( 2x 2GB )	DS	-	-	9-11-9-27	1.66	●	●

#### 4 DIMM Slots

- **1 DIMM:** Supports one modules inserted in any slot as Single-channel memory configuration.

We suggest that you install the module into slot B1 or D1 for better compatibility.

- **4 DIMM:** Supports 4 modules inserted into all slots as full-loading of Quad-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.

## RAMPAGE IV FORMULA

### DDR3 2200 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
G.SKILL	F3-17600CL7D-4GBFLS(XMP)	4G ( 2x 2G )	DS	-	-	7-10-10-28	1.65	●	●
G.SKILL	F3-17600CL8D-4GBPS(XMP)	4GB(2 x 2GB)	DS	-	-	8-8-8-24	1.65	●	●
G.SKILL	F3-17600CL9D-4GBTDS(XMP)	4GB(2 x 2GB)	DS	-	-	9-9-9-24	1.65	●	●
GEIL	GET34GB2200C9DC(XMP)	4GB ( 2x 2GB )	DS	-	-	9-10-9-28	1.65	●	●
GEIL	GET38GB2200C9ADC(XMP)	8GB ( 2x 4GB )	DS	-	-	9-11-9-28	1.65	●	●
KINGMAX	FLKE85F-B8KHA(XMP)	4G ( 2x 2G )	DS	-	-	-	1.5~1.7	●	●
KINGMAX	FLKE85F-B8KJAA-FEIS(XMP)	4GB ( 2x 2GB )	DS	Kingmax	N/A	-	-	●	●

4 DIMM Slots

- **1 DIMM:** Supports one modules inserted in any slot as Single-channel memory configuration.

We suggest that you install the module into slot B1 or D1 for better compatibility.

- **4 DIMM:** Supports 4 modules inserted into all slots as full-loading of Quad-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.

## RAMPAGE IV FORMULA

### DDR3 2400 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	socket support (Op)	
								1 DIMM	4 DIMM
CORSAIR	CMGTX3(XMP)	2GB	DS	-	-	9-11-9-27	1.65	●	●
Transcend	TX2400KLU-4GK (381850)(XMP)	2GB	DS	-	-	-	1.65	●	●
Transcend	TX2400KLU-4GK(374243)(XMP)	2GB	DS	-	-	-	1.65	●	●

4 DIMM Slots

- **1 DIMM:** Supports one modules inserted in any slot as Single-channel memory configuration.

We suggest that you install the module into slot B1 or D1 for better compatibility.

- **4 DIMM:** Supports 4 modules inserted into all slots as full-loading of Quad-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.