DDR3 1333	Qualified Vendors List (QVL)
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			<u> </u>							
Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage			rt (Optior 4 DIMM
KINGSTON	KVR1333D3N9/4G	4GB	DS	KTC	D2568JENCNGD9U	9-9-9-24-33	1.5V		•	
ASint	SLA304G08-EDJ6A	4GB	SS	ASINT	304G08-DJ6A	9-9-9-24-33	1.5V	•	•	
ASint	SLA304G08-EDJ6B	4GB	SS	ASINT	304G08-DJ6B	9-9-9-24-33	1.5V	•	•	•
SMART	SH5126UD325893HE	4GB	DS	SEC 343 BYKO	K4B2GO8460	9-9-9-24-33	1.5V	•		
SMART	SH5126UD325893SQ	4GB	DS	SEC 343 BYKO	K4B2GO8460	9-9-9-24-33	1.5V	•	•	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dualchannel memory configuration
- 4 DIMM: Supports 4 modules inserted into both the blue 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.

DDIG 1000	Qualified Veridors List	(CX V L	-/							
Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage			rt (Optior 4 DIMM
CRUCIAL	CT102464BA160B.C16FED	8GB	DS	CRUCIAL	CT512X8-160B	10-10-10-27	1.50V		•	•
G.SKILL	F3-1600C11S-4GNT	4GB	SS	SEC 343 XYKO	XYKO K4B4GO846D 11-		1.5V	•	•	
KINGMAX	FLGE85F-B6HYB	2GB	SS	HYNIX	H5TQ2G63FFR	9-9-9-24-33	1.5V	•	•	•
KINGSTON	KVR16N11S/4	4GB	SS	KINGSTON	D5128EC4BPGGBU		1.5V	•	•	•
KINGSTON	KVR16N11/4	4GB	SS	KINGSTON	D5128EC4BPGGBU		1.35V	•	•	
KINGSTON	KVR16N11/8-SP	8GB	DS	KINGSTON	BJM730C3G-M		1.5V	•	•	•
MUSHKIN	PC3-12800	4GB	DS	N/A	Heat-Sink Package	9-9-9-24	1.50V	•	•	•
MUSHKIN	PC3-12800	4GB	DS	N/A	Heat-Sink Package 9-9-9-24		1.50V	•	•	
MIRA	PLAF8L93B-GN2	8GB	DS	N/A	BJE159C3G-M 9-9-9-24		1.50V	•	•	•
TEAM	TLD38G1600HC9BK	8GB	DS	-	-	9-9-9-24	1.5V	•	•	•
TEAM	TED34GM1600C11BK	4GB	DS	HYNIX	H5TQ2G83CFY	11-11-11-28	1.5V		•	•
ADATA	N/A	4GB	SS	ADATA	3WCD-12IIA EL1348V	-	-	•	•	•
ASint	SLB304G08-EGN1B	8GB	DS	Asint	SLB304G08-GN1B	11-11-11-28-39	1.5V	•	•	
ASint	SLA304G08-EGN6B	4GB	SS	ASINT	304G08-GN6B	11-11-11-28-39	1.5V	•	•	
AVEXIR	AVD3U16000904G-4CI	4GB	SS	N/A	Heat-Sink Package		1.5V	•	•	•
AVEXIR	AVD3U16001008G-4CI	8GB	DS	N/A	Heat-Sink Package		1.5V	•	•	•
PANRAM	PUD31600C114GPSB	4GB	SS	N/A	N/A	11-11-28-39	1.50V		•	•
PANRAM	PUD31600C118GPSB	8GB	DS	N/A	N/A	11-11-28-39	1.50V		•	•
SAMSUNG	M379B5273DHO-YKO 1325	4GB	DS	SEC 312 BJKO	K4B2GO846C	11-11-28-39	1.35V	•	•	•
VENTURA	D3-55DK1145V-11	2GB	SS	SEC 404 BCKO	K4B2GO846Q	11-11-44-28-39	1.5V	•	•	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 DIMM: Supports 4 modules inserted into both the blue 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.

DDR3 1866	Qualified Vendors List (Q	VL)								
Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage		t suppor 2 DIMM	rt (Optior 4 DIMM
CRUCIAL	BLS8G3D18ADS3.16FED	8GB	DS	N/A	N/A	10-10-10-30	1.5V	•	•	•
CRUCIAL	BLE4G3D1869DE1TX0.16FKR	4GB	DS	N/A	N/A	9-9-9-27	1.5V	•	•	•
CRUCIAL	BLE8G3D1869DE1TX0.16FED	8GB	DS	N/A	N/A	9-9-9-27	1.5V	•	•	•
CRUCIAL	BLT8G3D1869DT1TX0.16FED	8GB	DS	N/A	N/A	9-9-9-27	1.5V	•	•	•
KINGSTON	KHX18C9T2K2/8X	8GB (2x 4GB)	DS	N/A	N/A	9-9-9-24-33	1.65	•	•	
PANRAM	PUD31866C94G2PSB	4GB	SS	N/A	Heat-Sink Package	9-10-9-27	1.65V	•	•	•
PANRAM	PUD31866C98GPSB	8GB	DS	N/A	Heat-Sink Package	9-10-9-27	1.65V	•	•	•
TEAM	TED38GM1866C13BK	8GB	DS	HYNIX	H5TQ4G83AFY	13-13-13-31	1.5V	•		•
AVEXIR	AVD3U0904G-4CI	4GB	SS	N/A	N/A	11-11-11-28-39	1.65V	•	•	•
AVEXIR	AVD3U0908G-4CI	8GB	DS	N/A	N/A	11-11-11-28-39	1.5V	•	•	
MUSHKIN	PC3-14900	8GB	DS	N/A	Heat-Sink Package	11-11-11-28-39	1.5V	•	•	•

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

- -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.

⁻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.

DDR3 2000 Qualified Vendors List (QVL)

	Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	IM socke 1 DIMM	et suppoi	rt (Optior 4 DIMM
_	AVEXIR	AVD3U20000904G-4CI	4GB	SS	N/A	Heat-Sink Package	9-9-9-28-39	1.65V	•	•	
Ī	AVEXIR	AVD3U20000908G-4CI	8GB	DS	N/A	Heat-Sink Package	9-9-9-28-39	1.65V	•	•	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dualchannel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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.

DDR3 2133	Qualified Vendors List	(QVL)
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	5 (1)		00/00		OL: NO		M. K	/IM socke	et suppo	rt (Optior
Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	1 DIMM	2 DIMM	4 DIMM
G.SKILL	F3-2133C10D-16GAB	8GB	DS	N/A	N/A	10-12-12-31	1.6V			•
KINGSTON	KHX21C11T2K2/8X	8GB (2x 4GB)	SS	N/A	N/A	11-11-11-28-39	1.6V	•	•	•
AVEXIR	AVD3U21330908G-4BZ1	8GB	DS	N/A	N/A		1.65V	•	•	
AVEXIR	AVD3U21330908G-4BZ1	4GB	SS	N/A	N/A		1.65V	•	•	•
AVEXIR	AVD3U21331104G-4CI	4GB	SS	N/A	N/A	_	1.5V	•	•	
AVEXIR	AVD3U21331108G-4CI	8GB	DS	N/A	N/A		1.5V	•	•	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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.

DDR3 2200 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	IM socket support (Option 1 DIMM 2 DIMM 4 DIMM
GEIL	GET34GB2200C9DC(XMP)	2GB	DS	N/A	N/A	9-10-9-28	1.65V	
GEIL	GET38GB2200C9ADC(XMP)	4GB	DS	N/A	N/A	9-11-9-28	1.65V	
KINGMAX	FLKE85F-B8KJAA-FEIS(XMP)	2GB	DS	N/A	N/A	9-9-9-24-33	1.5V	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dualchannel memory configuration
- 4 DIMM: Supports 4 modules inserted into both the blue 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.

DDR3 2250 Qualified Vendors List (QVL)

	Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage IM socket :	support (Optior DIMM 4 DIMM
•	KINGSTON	KHX2250C9D3T1K2/4GX(XMP)	4GB (2x 2GB)	DS	N/A		9-9-9-24-33		

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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.

DDR3 2400 Qualified Vendors List (QVL)

Vandere	Dort No.	ei=o	ee/De	Chin Brand	Chin NO	Timina	Voltogo	IM socke	t suppoi	rt (Optior
Vendors	Part No.	Size	33/03	Chip Brand	Chip NO.	Timing	Voltage	1 DIMM	2 DIMM	4 DIMM
G.SKILL	F3-2400C11D-8GRS	4GB	DS	N/A	N/A	11-11-13-31	1.65V	•	•	•
KINGSTON	KHX24C11T2K2/8X(XMP)	4GB	DS	N/A	N/A	9-9-9-24-33	1.65V	•	•	
AVEXIR	AVD3U24001008G-4BZ1	8GB	DS	N/A	N/A		1.65V	•	•	
AVEXIR	AVD3U24001004G-4BZ1	4GB	SS	N/A	N/A		1.65V	•	•	•
AVEXIR	AVD3U24001104G-4CI	4GB	SS	N/A	N/A		1.65V	•	•	•
AVEXIR	AVD3U24001108G-4CI	8GB	DS	N/A	N/A		1.65V	•		•
PANRAM	PUD32400C118G2LSK	8GB	DS	N/A	N/A	11-13-13-35	1.65V	•		•
TEAM	TLD38G2400HC11CBK	8GB	DS	-	-	11-13-13-35	1.65V	•	•	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- **4 DIMM**: Supports 4 modules inserted into both the blue 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.

DDR3 2600 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	IM socket support (Option 1 DIMM 2 DIMM 4 DIMM
G.SKILL	F3-2600CL10Q-16GBZMD(XMP)	16GB(4x 4GB)	DS	N/A	N/A	10-12-12-31	1.65V	
G.SKILL	F3-2600CL11Q-32GBZHD(XMP)	32GB(8GBX4)	DS	N/A	N/A	11-13-13-35	1.65V	
ADATA	AX3U2600GW8G11	16GB (2x 8GB)	DS	N/A	N/A	11-13-13-35	1.65V	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 DIMM: Supports 4 modules inserted into both the blue 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.

DDR3 2666 Qualified Vendors List (QVL)

I	Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	IM socket support (Option			
									1 DIMM	2 DIMM	4 DIMM	
	AVEXIR	AVD3U26661204G-4CI	4GB	SS	N/A	N/A		1.65V	•	•	•	
I	AVEXIR	AVD3U26661208G-4CI	8GB	DS	N/A	N/A		1.65V	•	•	•	
_	AVEXIR	AVD3U26661104G-4BZ1	4GB	SS	N/A	N/A		1.65V	•		•	
	AVEXIR	AVD3U26661108G-4BZ1	8GB	DS	N/A	N/A		1.65V	•	•	•	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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.

DDR3 2800 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chin NO	Timina	Voltago	Itage 1 DIMM 2 DIMM 4 DIMM				
vendors	Fait No.				Cilip NO.	IIIIIII	voitage	1 DIMM	2 DIMM	4 DIMM		
AVEXIR	AVD3UH28001208G-4BZ1	8GB	DS	N/A	N/A		1.65V	•	•	•		

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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.

DDR3 2933 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	IM socket su 1 DIMM 2 D	ippor IMM	t (Optior 4 DIMM
AVEXIR	AVD3UH29331204G-4BZ1	4GB	SS	N/A	N/A	12-14-14-35		•	•	•
AVEXIR	AVD3UH29331208G-4BZ1	8GB	DS	N/A	N/A	12-14-14-35	1.65V	•	•	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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 vendormarked value.

DDR3 3000 Qualified Vendors List (QVL)

Vendors	Part No.	Sizo	66/D6	Chin Brand	Chin NO	Timing	Voltago	IM socket support (Optior
vendors	Fait No.	3126	33/03	Chip Brand	Cilip NO.	Illilling	voitage	IM socket support (Optior 1 DIMM 2 DIMM 4 DIMM
AVEXIR	AVD3UH31001204G-4BZ1			N/A		9-9-9-28-39		•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 **DIMM**: Supports 4 modules inserted into both the blue 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 vendormarked value.

DDR3 3100 Qualified Vendors List (QVL)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	IM socket support (Optior		
Vendors								1 DIMM	2 DIMM	4 DIMM
AVEXIR	AVD3UH31001204G-2CIR	4GB	SS	N/A	N/A	11-11-28-39	1.65V	•	•	
AVEXIR	AVD3UH31001204G-4BZ1	4GB	SS	N/A	N/A	11-11-28-39	1.65V	•	•	•
ADATA	AX3U3100W4G12-DGV	4GB	SS	N/A	N/A	12-14-14-36	1.65V	•	•	
ADATA	AX3U3100W4G12-DMV	4GB	SS	N/A	N/A	12-14-14-36	1.65V	•	•	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports one pair of modules inserted into eithor the blue slots or the black slots as one pair of Dual-channel memory configuration
- 4 DIMM: Supports 4 modules inserted into both the blue 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 vendormarked value.