DDR3 1333	DDR3 1333 Qualified Vendors List (QVL)													
Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage		pport (O 2 DIMM					
KINGSTON	KVR1333D3N9/4G	4GB	SS	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	•	•					
MUSHKIN	PC3-10666	4GB	SS	N/A	Heat-Sink Package	9-9-9-24	1.50V	•						
MUSHKIN	PC3-10600	2GB	SS	SEC 410 HC15	K4W2GO846P	9-9-9-24	1.50V	•	•					
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 2 modules inserted into both the blue or 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 1600 Qualified Vendors List (QVL)											
Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	ocket sup 1 DIMM 2			
CRUCIAL	CT102464BA160B.C16FED	8GB	DS	CRUCIAL	CT512X8-160B		1.50V	•	•		
G.SKILL	F3-1600C11S-4GNT	4GB	SS	SEC 343 XYKO	K4B4GO846D	K4B4GO846D 11-11-11-28		•	•		
KINGMAX	FLGE85F-B6HYB	2GB	SS	HYNIX	H5TQ2G63FFR		1.50V	•	•		
<b>KINGSTON</b>	KVR16N11S/4	4GB	SS	KINGSTON	D5128EC4BPGGBU		1.5V	•	•		
KINGSTON	KVR16N11/4	4GB	SS	KINGSTON	D5128EC4BPGGBU		1.35V	•	•		
KINGSTON	KVR16N11/4	4GB	SS	KINGSTON	D5128EC4BPGGBU		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	•	•		
Transcend	TS512MLK64W6H	4GB	SS	SEC 343 XYKO	K4B4GO846D	11-11-11-28-39	1.35V	•			
Transcend	TS1GLK64W6H	8GB	DS	SEC 343 XYKO	K4B4GO846D	11-11-28-39	1.35V	•	•		
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	SLA304G08-EGN6A	4GB	SS	ASINT	304G08-GN6A	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	N/A		1.5V	•	•		
AVEXIR	AVD3U16001008G-4CI	8GB	DS	N/A	N/A		1.5V	•	•		
PANRAM	PUD31600C114GPSB	4GB	SS	N/A	N/A	11-11-28-39	1.5V	•	•		
PANRAM	PUD31600C118GPSB	8GB	DS	DS	N/A	11-11-28-39	1.5V	•	•		
SAMSUNG	M379B5273DHO-YKO 1325	4GB	DS	SEC 312 BJKO	J4208BBBG-GN-F	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 2 modules inserted into both the blue or 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.

<b>DDR3 186</b>	6 Qualified	<b>Vendors</b>	List (QVL)
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Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	ocket su 1 DIMM	pport (O
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	N/A	9-10-9-27	1.65V	•	•
PANRAM	PUD31866C98GPSB	8GB	DS	N/A	N/A	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	9-9-9-28-39	1.65V	•	•
AVEXIR	AVD3U0908G-4CI	8GB	DS	N/A	N/A	9-9-9-28-39	1.5V	•	•
MUSHKIN	PC3-14900	8GB	DS	N/A	Heat-Sink Package	9-9-9-27	1.5V	•	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports 2 modules inserted into both the blue or 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 2000 Qualified Vendors List (QVL)

ı	Vendors	Part No.	Sizo.	66/D6	Chip Brand	Chin NO	Timing	Voltago	ocket su	pport (O
ı	vendors	Fait NO.	SIZE	33/03	Chip Brand	Chip NO.	Timing	Voltage	1 DIMM	2 DIMM
	AVEXIR	AVD3U20000904G-4CI	4GB	SS	N/A	N/A	11-11-11-28-39	1.65V	•	•
I	AVEXIR	AVD3U20000908G-4CI	8GB	DS	N/A	N/A	11-11-11-28-39	1.65V	•	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports 2 modules inserted into both the blue or 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)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	ocket sur 1 DIMM	oport (O 2 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			1.5V	•	

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 **DIMM**: Supports 2 modules inserted into both the blue or 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)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	ocket sup	
G.SKILL	F3-2400C11D-8GRS	4GB	DS	N/A	N/A	11-11-13-31	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 2 modules inserted into both the blue or 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)

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	ocket su 1 DIMM	
AVEXIR	AVD3U26661204G-4CI	8GB	SS	N/A	N/A		1.65V	•	•
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 2 modules inserted into both the blue or black slots as two pairs of Dualchannel 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	Chip NO.	Timing	Voltage	ocket support (O		
								1 DIMM	2 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 2 modules inserted into both the blue or black slots as two pairs of Dualchannel 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	ocket support (O 1 DIMM 2 DIMM
AVEXIR	AVD3UH29331204G-4BZ1	4GB	SS	N/A	N/A	9-9-9-28-39	1.65V	
AVEXIR	AVD3UH29331208G-4BZ1	8GB	DS	N/A	N/A	9-9-9-28-39	1.65V	•

- 1 DIMM: Supports one module inserted in any slot as Single-channel memory configuration
- 2 DIMM: Supports 2 modules inserted into both the blue or 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 3000 Qualified Vendors List (QVL)**

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	ocket su 1 DIMM	pport (O 2 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 2 modules inserted into both the blue or 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 3100 Qualified Vendors List (QVL)

Vendors	Part No.	Siza	99/D9	Chip Brand	Chin NO	Timing	Voltage	ocket sup	•
Vendors	i ait No.	3126	33/03	Chip Brand	Cilip No.	riiiiiig	Voltage	1 DIMM 2	2 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 2 modules inserted into both the blue or 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.