



F2-8500CL5D-4GBPK



The PK Series of G.SKILL F2-8500CL5D-4GBPK is a 4096MByte matched pair kit of DDR2 SDRAM DIMM. This model of memory provides excellent performance in the Dual-Channel DDR2-based motherboards. It has been tested comprehensively in multiple DDR2 motherboards to ensure compatibility and performance at its rated speed. This memory has been verified to operate at DDR2 1066 with latencies of 5-5-5-15 at 2.0-2.1 VDIMM.

SPECIFICATIONS

- 240-PIN DDR2 SDRAM DIMM
- DDR2 1066 / PC2 8500
- Latencies
 - 5-5-5-15 (CAS-TRCD-TRP-TRAS)
- Voltage 2.0-2.1v
- 4096 Megabytes of DDR2 memory
 - Two matched F2-8500CL5S-2GBPK
- SPD programmed at
 - JEDEC Standard latencies 5-5-5-15 at DDR2 800
- 8 Layers of PCB
- Lifetime Warranty

Every module is tested in G.SKILL's factory at the operating speed of DDR2 1066 with latencies 5-5-5-15 at 2.0 VDIMM. However, actual results may vary depending on the overclocking ability of your other computer components. G.SKILL may periodically update the part with new RAM versions of some greater performance. RAM used on the module may change without notice.

F2-8500CL5D-4GBPK has been tested on following motherboards.

Model	Chipset	2DIMM	4DIMM
Abit IP35, IP35-E, IP35-PRO	Intel P35	OK	OK
Abit IX38	Intel X38	OK	OK
Asus P5K Deluxe	Intel P35	OK	OK
Asus Maximus Formula	Intel X38	OK	OK
Asus Striker II Formula	nVidia 780i	OK	OK
Asus Rampage Formula	Intel X48	OK	OK
eVGA 780i-SLI	nVidia 780i	OK	OK
Gigabyte P35-DS3, EP35-DS3	Intel P35	OK	OK
Gigabyte X38-DS4, X38-DQ6, EX38-DQ6	Intel X38	OK	OK
Gigabyte X48-DQ6	Intel X48	OK	OK

G.SKILL does **NOT** recommend to run F2-8500CL5D-4GBPK on following motherboards.

Asus P965 Commando, Asus P965 P5B-Deluxe
(Recommends F2-8500CL5D-2GBPK)

Asus P5N-D
(Recommends F2-8000CL5D-4GBPK)

4DIMM on any motherboard with NB nvidia 680i and 650i
(Recommends 2DIMM only)

G.SKILL will periodically update the compatible motherboard table. Please check back frequently.
If you have any question about compatible motherboard, please email to ustech@gskill.com

Abit IP35, IP35-E, IP35-PRO BIOS Setting

- For FSB 266 MHz CPU

Phoenix - AwardBIOS CMOS Setup Utility SoftMenu Setup		
Intel(R) Core(TM)2 Duo CPU E6550 @ 2.33GHz Frequency : 1.86GHz		Item Help
CPU Operating Speed User Defined		Menu Level ▶
- External Clock	266MHz	Select to run the CPU at factory default frequency or by user define
- Multiplier Factor	7 X	
- Estimated New CPU Clock	1866MHz	
- DRAM Speed (CPU:DRAM)	1:2.00 (DDR2-1064)	
- PCI Express Frequency	100MHz	
Voltages Control Manual		
- CPU Core Voltage	1.3000V	
- DDR2 Voltage	2.05V	
- CPU VTT Voltage	1.2000V	
- ICH 1.50V Voltage	1.50V	
- MCH 1.25V Voltage	1.250V	
- CPU GTLREF	63.0%	
↑↓: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Phoenix - AwardBIOS CMOS Setup Utility Advanced Chipset Features		
DRAM Timing Selectable By SPD		Item Help
x - CAS Latency Time (tCL) Auto x - RAS# to CAS# Delay (tRCD) Auto x - RAS# Precharge (tRP) Auto x - Precharge Delay (tRAS) Auto x - Refresh Cycle Time (tRFC) Auto x - Write Recovery Time (tWR) Auto x - Write to Read Delay (tWTR) Auto x - Act to Act Time (tRRD) Auto x - Read to Precharge (tRTP) Auto ▶ PCIe Root Port Function Press Enter Init Display First PCI Slot PEG Force X1 Disabled		Menu Level ▶
↑↓: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

- For FSB 333 MHz CPU

Phoenix - AwardBIOS CMOS Setup Utility SoftMenu Setup		
Intel(R) Core(TM)2 Duo CPU E6550 @ 2.33GHz Frequency : 1.86GHz		Item Help
CPU Operating Speed User Defined		Menu Level ▶
- External Clock	355MHz	Select to run the CPU at factory default frequency or by user define
- Multiplier Factor	7 X	
- Estimated New CPU Clock	2485MHz	
- DRAM Speed (CPU:DRAM)	1:1.50 (DDR2-1064)	
- PCI Express Frequency	100MHz	
Voltages Control Manual		
- CPU Core Voltage	1.3400V	
- DDR2 Voltage	2.05V	
- CPU VTT Voltage	1.2000V	
- ICH 1.50V Voltage	1.50V	
- MCH 1.25V Voltage	1.250V	
- CPU GTLREF	63.0%	
↑↓: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

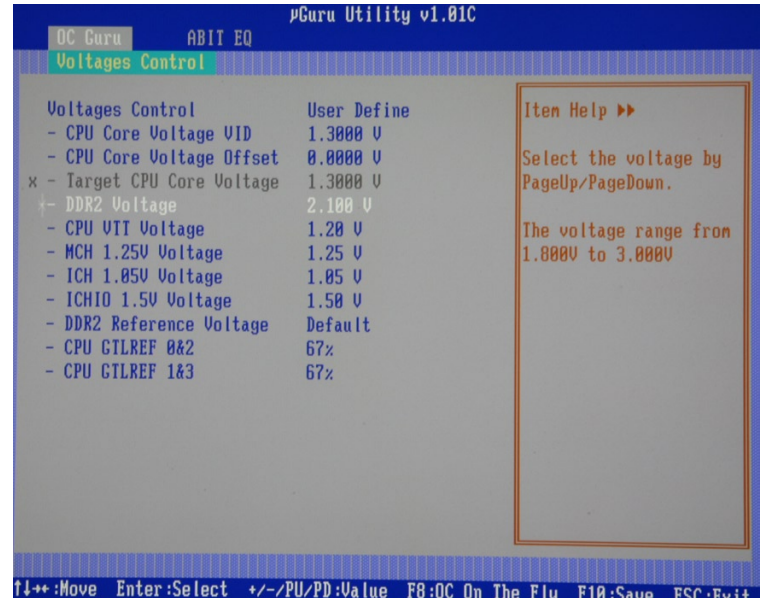
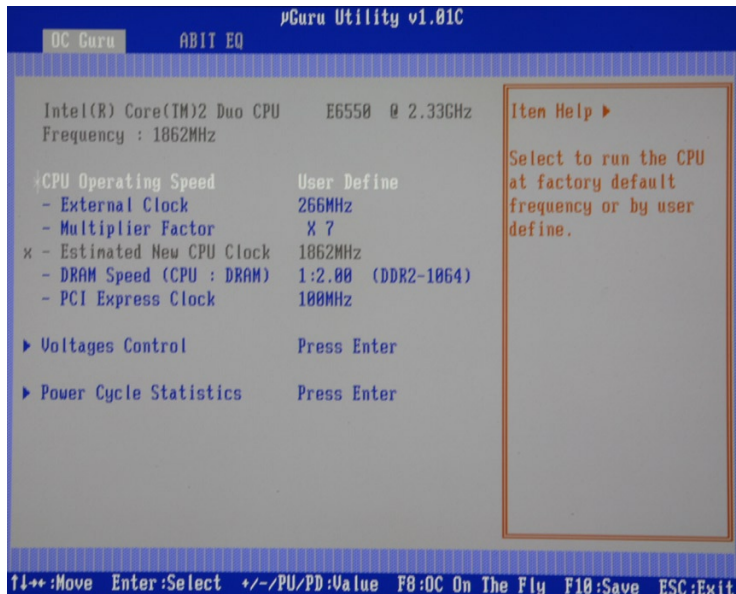
Phoenix - AwardBIOS CMOS Setup Utility Advanced Chipset Features		
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↑↓: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

NOTE: Make sure your CPU is stable if overclocking required

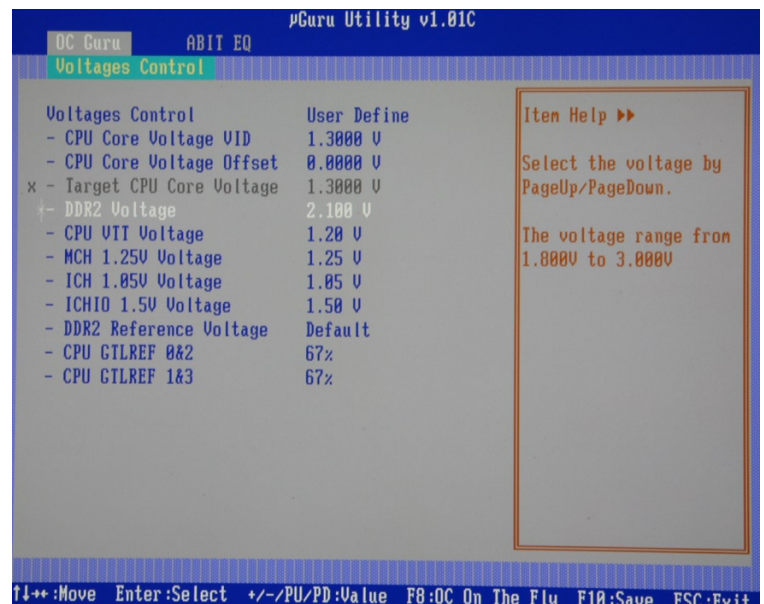
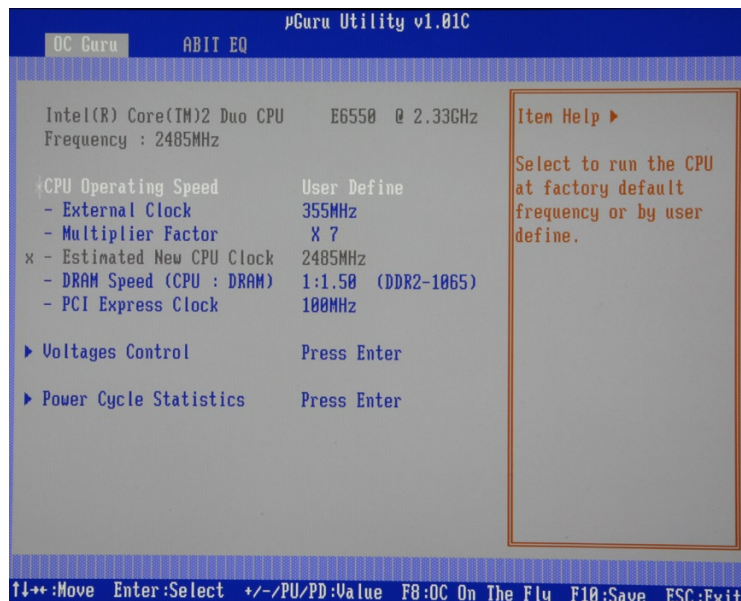
G.SKILL will periodically update the compatible motherboard table. Please check back frequently.
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Abit IX38 Quad GT BIOS Setting

- For FSB 266 MHz CPU



- For FSB 333 MHz CPU

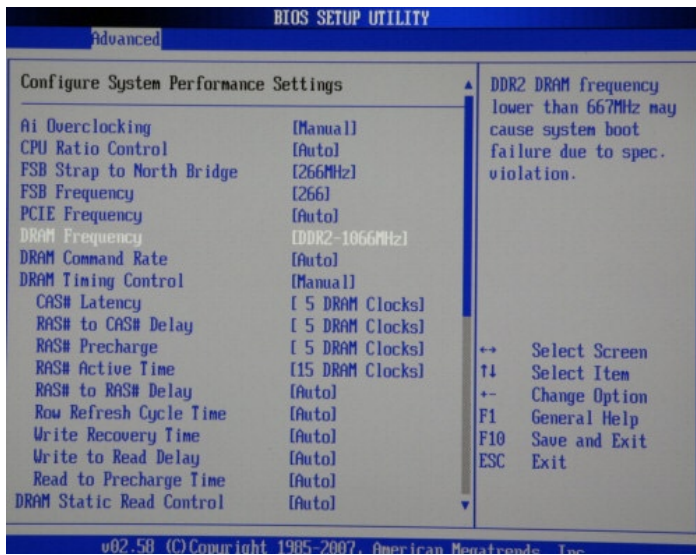


NOTE: Make sure your CPU is stable if overclocking required

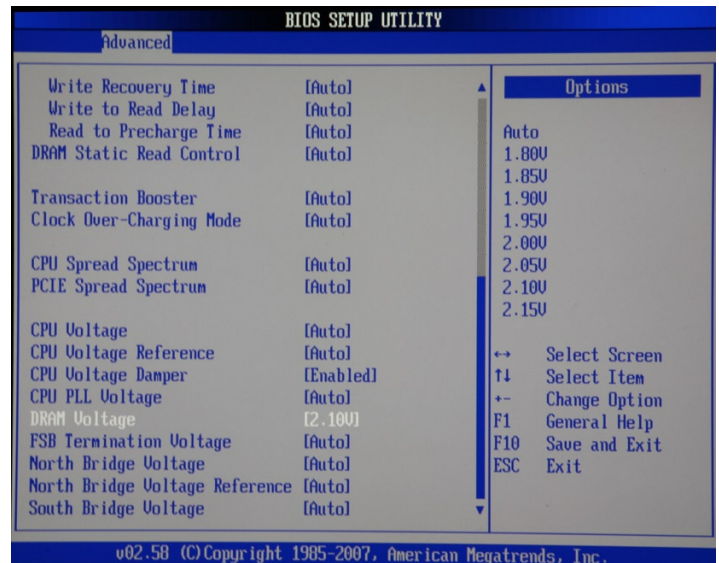
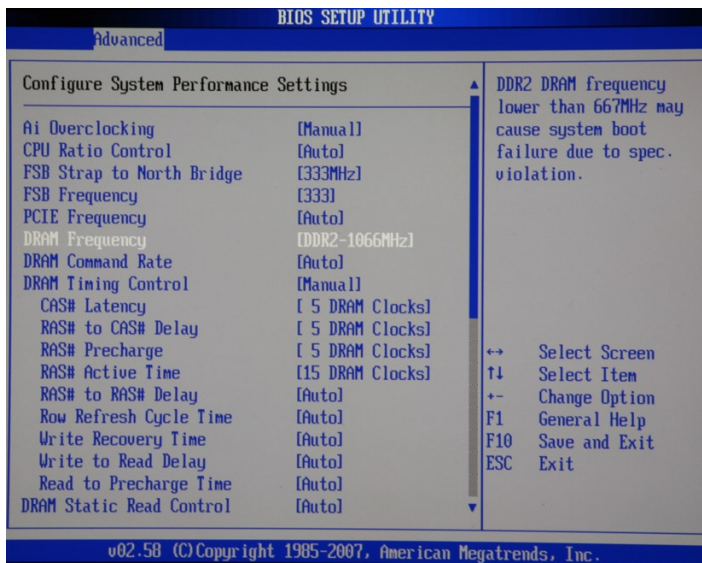
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Asus P5K Deluxe Bios Setting

- For FSB 266 MHz CPU



- For FSB 333 MHz CPU



NOTE: Make sure your CPU is stable if overclocking required

G.SKILL will periodically update the compatible motherboard table. Please check back frequently.
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Asus Maximus Formula Bios Setting

- For FSB 266 MHz CPU



- For FSB 333 MHz CPU

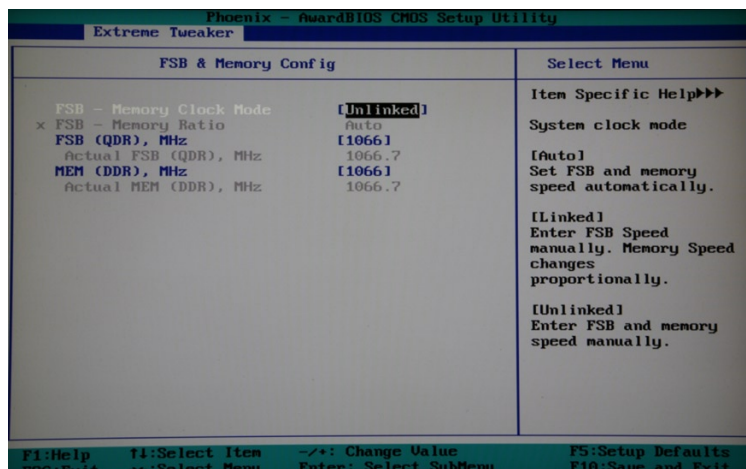


NOTE: Make sure your CPU is stable if overclocking required

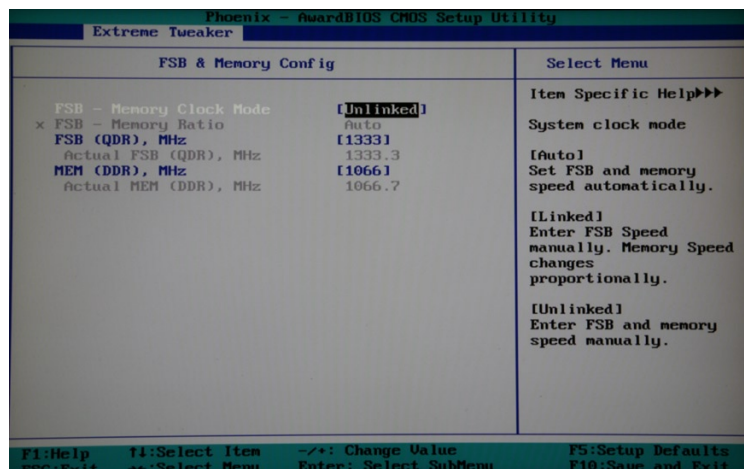
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Asus Striker II Formula Bios Setting

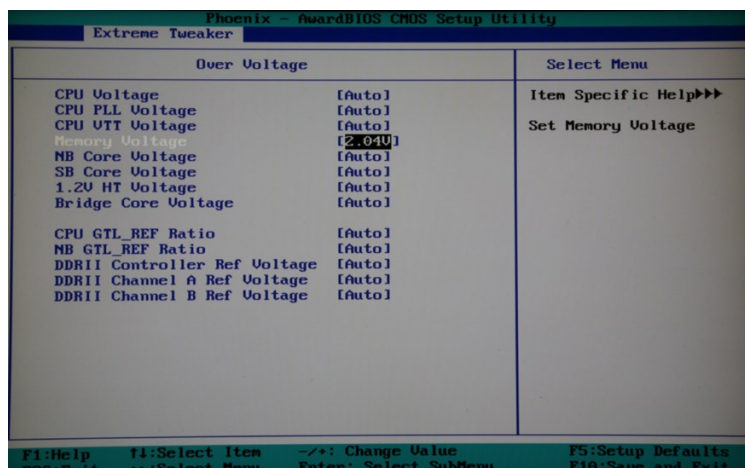
- For FSB 266 MHz CPU



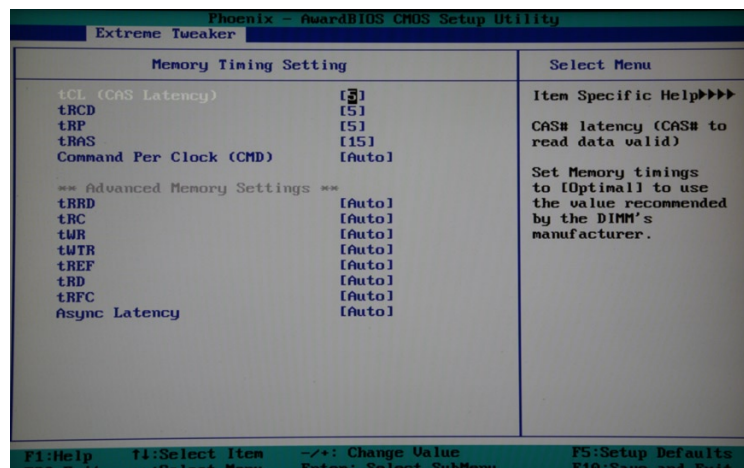
- For FSB 333 MHz CPU



- Voltage Setting



- Timing Setting

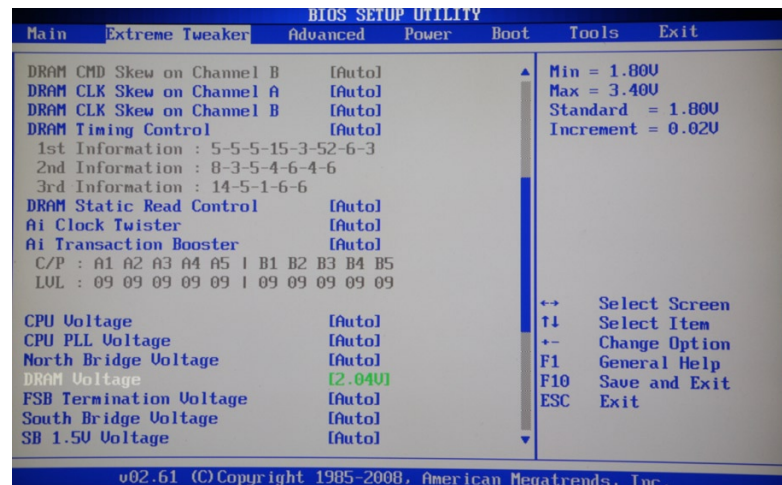
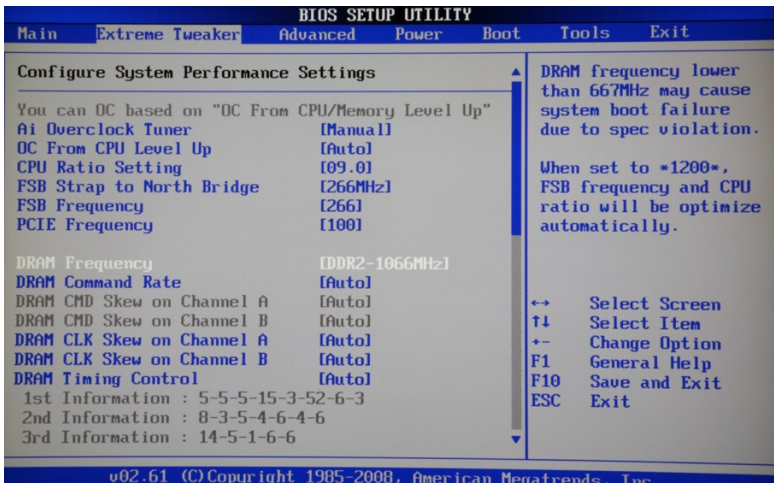


NOTE: Make sure your CPU is stable if overclocking required

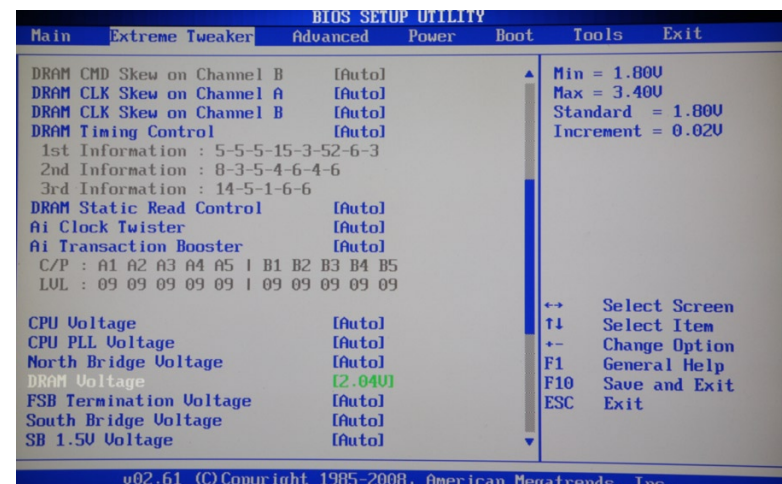
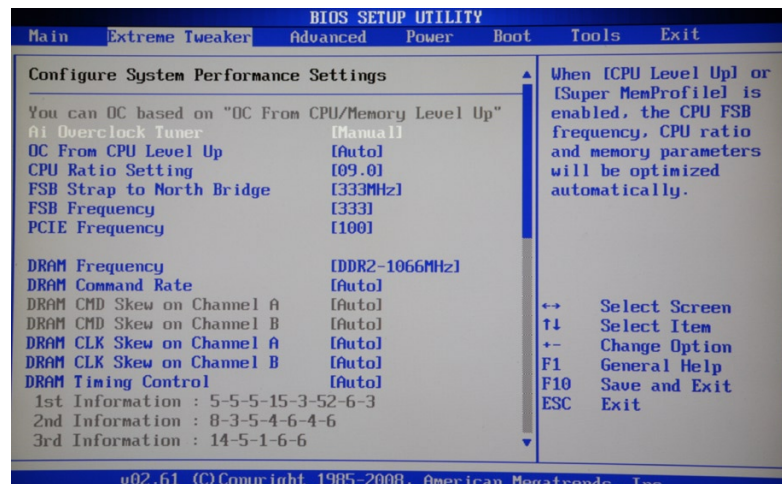
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Asus Rampage Formula Setting

- For FSB 266 MHz CPU



- For FSB 333 MHz CPU



NOTE: Make sure your CPU is stable if overclocking required

G.SKILL will periodically update the compatible motherboard table. Please check back frequently.
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eVGA 780i Bios Setting

- For FSB 333 MHz CPU

- Memory Voltage

Phoenix - AwardBIOS CMOS Setup Utility FSB & Memory Config			
Parameters	Setting	Current Value	Item Help
× SLI-Ready Memory		Not Detected	
CPU Freq, MHz	2332.4	2333.3	Menu Level >>
CPU Multiplier	7X	7X	
FSB - Memory Clock Mode	[Unlinked]		System clock mode
× FSB - Memory Ratio	Auto		[Auto]
FSB (QDR), MHz	[1333]	1333.3	Set FSB and memory speed automatically.
Actual FSB (QDR), MHz		1332.8	
MEM (DDR), MHz	[1066]	1066.7	
Actual MEM (DDR), MHz		1066.2	
▶ Memory Timing Setting	[Press Enter]		[Linked] Enter FSB Speed manually. Memory Speed changes proportionally. [Unlinked] Enter FSB and memory speed manually.
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7: Defaults			

Phoenix - AwardBIOS CMOS Setup Utility System Voltages			
Parameters	Setting	Current Value	Item Help
CPU Core	[Auto]	1.25V	
CPU FSB	[Auto]	1.2V	Menu Level >>
Memory	[2.050V]	2.050V	
nForce SPP	[Auto]	1.40V	Voltage level for CPU Core (CPU VID)
nForce MCP	[Auto]	1.500V	
HT nForce SPP <-> MCP	[Auto]	1.20V	
GTLPREF Lane 0	[Auto]	+00mV	
GTLPREF Lane 1	[Auto]	+00mV	
GTLPREF Lane 2	[Auto]	+00mV	
GTLPREF Lane 3	[Auto]	+00mV	
Users should exercise caution when over-volting ,as it can cause system instability or even void warranties and damage components			
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7: Defaults			

- Memory Timing

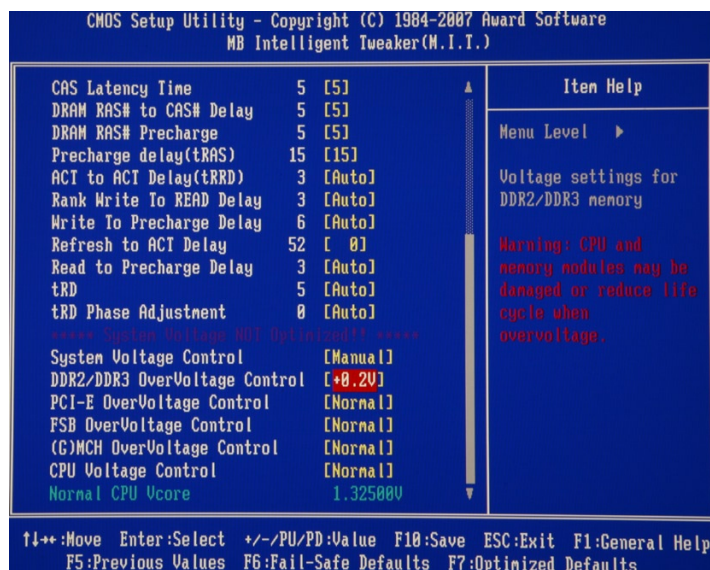
Phoenix - AwardBIOS CMOS Setup Utility Memory Timing Setting			
Parameters	Setting	Current Value	Item Help
Memory Timing Setting	[Expert]		Menu Level >>>>
tCL (CAS Latency)	[5]	5	
tRCD	[5]	5	Select [Expert] to enter timings manually
tRP	[5]	5	
tRAS	[15]	15	
Command Per Clock (CMD)	[Auto(2T)]	2T	
** Advanced Memory Settings **			
tRRD	[Auto(4)]	4	
tRC	[Auto(32)]	32	
tWR	[Auto(6)]	6	
tWTR	[Auto(10)]	10	
tREF	[Auto]	7.8uS	
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7: Defaults			

NOTE: For FSB 266 MHz CPU, please set FSB QDR MHz to 1066

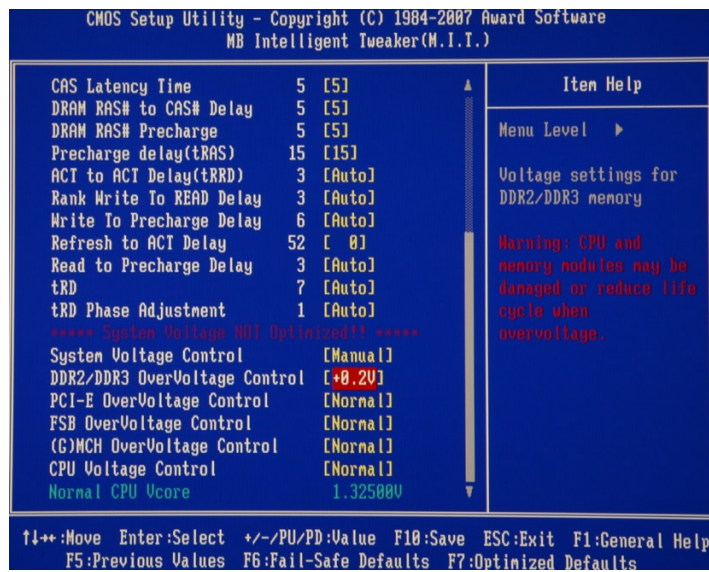
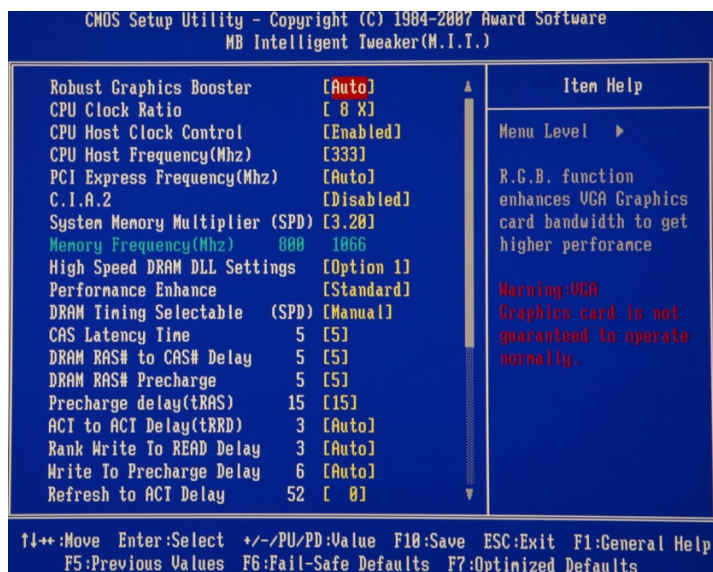
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Gigabyte P35 DS3 Bios Setting

- For FSB 266 MHz CPU



- For FSB 333 MHz CPU



NOTE: For FSB 266 MHz CPU, please set FSB QDR MHz to 1066

G.SKILL will periodically update the compatible motherboard table. Please check back frequently.
If you have any question about compatible motherboard, please email to ustech@gskill.com

Gigabyte X38 DS4 / DQ6 Bios Setting

- For FSB 266 MHz CPU

CMOS Setup Utility - Copyright (C) 1984-2007 Award Software MB Intelligent Tweaker(M.I.T.)		
Robust Graphics Booster	[Auto]	Item Help
CPU Clock Ratio	[8 X]	Menu Level ▶
CPU Host Clock Control	[Enabled]	
CPU Host Frequency(Mhz)	[266]	
PCI Express Frequency(Mhz)	[Auto]	
C.I.A.2	[Disabled]	
!! Performance Enhanced With..	[Turbo]	
System Memory Multiplier (SPD)	[4.00A]	
Memory Frequency(Mhz)	800 1066	
DRAM Timing Selectable (SPD)	[Manual]	
***** Standard Timing Control *****		
CAS Latency Time	5 [5]	
DRAM RAS# to CAS# Delay	5 [5]	
DRAM RAS# Precharge	5 [5]	
Precharge delay(tRAS)	15 [15]	
***** Advanced Timing Control *****		
ACT to ACT Delay(tRRD)	3 [Auto]	
Rank Write To READ Delay	3 [Auto]	
Write To Precharge Delay	6 [Auto]	
		(G)MCH strapping
		x.xxX -> 266MHz
		x.xxX -> 333MHz
		x.xxX -> 200MHz
		x.xxX -> 400MHz
		Warning: Improper memory clock may cause system fail to boot, and not guaranteed to operate normally
↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

CMOS Setup Utility - Copyright (C) 1984-2007 Award Software MB Intelligent Tweaker(M.I.T.)		
DRAM RAS# Precharge	5 [5]	Item Help
Precharge delay(tRAS)	15 [15]	Menu Level ▶
***** Advanced Timing Control *****		
ACT to ACT Delay(tRRD)	3 [Auto]	
Rank Write To READ Delay	3 [Auto]	
Write To Precharge Delay	6 [Auto]	
Refresh to ACT Delay	52 [Auto]	
Read to Precharge Delay	3 [Auto]	
Static tRead Value	5 [Auto]	
Static tRead Phase Adjust	0 [Auto]	
Command Rate(CMD)	2 [Auto]	
***** Clock Driving & Skew Control *****		
CPU/PCIEX Clock Driving Control	[800nV]	
CPU Clock Skew Control	[Normal]	
(G)MCH Clock Skew Control	[Normal]	
***** System Voltage NOT Optimized!! *****		
System Voltage Control	[Manual]	
DDR2 OverVoltage Control	[+0.25V]	
PCI-E OverVoltage Control	[Normal]	
		Warning: CPU and memory modules may be damaged or reduce life cycle when overvoltage.
↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

- For FSB 333 MHz CPU

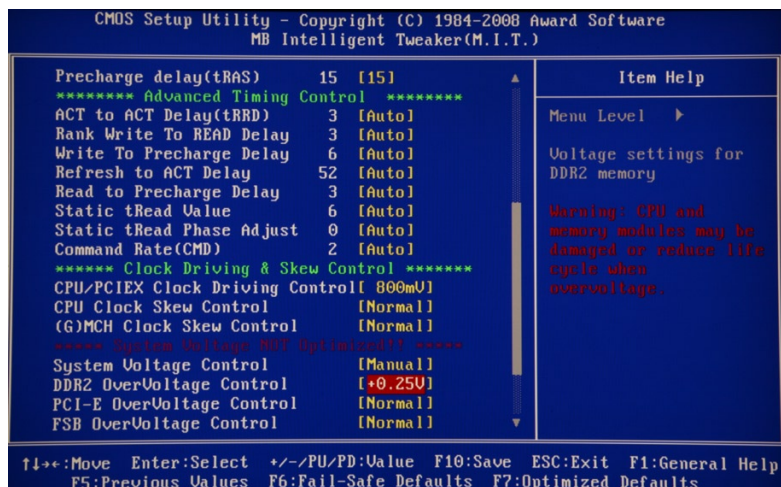
CMOS Setup Utility - Copyright (C) 1984-2007 Award Software MB Intelligent Tweaker(M.I.T.)		
Robust Graphics Booster	[Auto]	Item Help
CPU Clock Ratio	[8 X]	Menu Level ▶
CPU Frequency	2.66GHz(333x8)	
CPU Host Clock Control	[Enabled]	
CPU Host Frequency(Mhz)	[333]	
PCI Express Frequency(Mhz)	[Auto]	
C.I.A.2	[Disabled]	
!! Performance Enhanced With..	[Turbo]	
System Memory Multiplier (SPD)	[3.20B]	
Memory Frequency(Mhz)	800 1066	
DRAM Timing Selectable (SPD)	[Manual]	
***** Standard Timing Control *****		
CAS Latency Time	5 [5]	
DRAM RAS# to CAS# Delay	5 [5]	
DRAM RAS# Precharge	5 [5]	
Precharge delay(tRAS)	15 [15]	
***** Advanced Timing Control *****		
ACT to ACT Delay(tRRD)	3 [Auto]	
Rank Write To READ Delay	3 [Auto]	
		(G)MCH strapping
		x.xxX -> FSB 266MHz
		x.xxX -> FSB 333MHz
		x.xxX -> FSB 200MHz
		x.xxX -> FSB 400MHz
		Warning: Improper memory clock may cause system fail to boot, and not guaranteed to operate normally
↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

CMOS Setup Utility - Copyright (C) 1984-2007 Award Software MB Intelligent Tweaker(M.I.T.)		
DRAM RAS# Precharge	5 [5]	Item Help
Precharge delay(tRAS)	15 [15]	Menu Level ▶
***** Advanced Timing Control *****		
ACT to ACT Delay(tRRD)	3 [Auto]	
Rank Write To READ Delay	3 [Auto]	
Write To Precharge Delay	6 [Auto]	
Refresh to ACT Delay	52 [Auto]	
Read to Precharge Delay	3 [Auto]	
Static tRead Value	5 [Auto]	
Static tRead Phase Adjust	0 [Auto]	
Command Rate(CMD)	2 [Auto]	
***** Clock Driving & Skew Control *****		
CPU/PCIEX Clock Driving Control	[800nV]	
CPU Clock Skew Control	[Normal]	
(G)MCH Clock Skew Control	[Normal]	
***** System Voltage NOT Optimized!! *****		
System Voltage Control	[Manual]	
DDR2 OverVoltage Control	[+0.25V]	
PCI-E OverVoltage Control	[Normal]	
		Warning: CPU and memory modules may be damaged or reduce life cycle when overvoltage.
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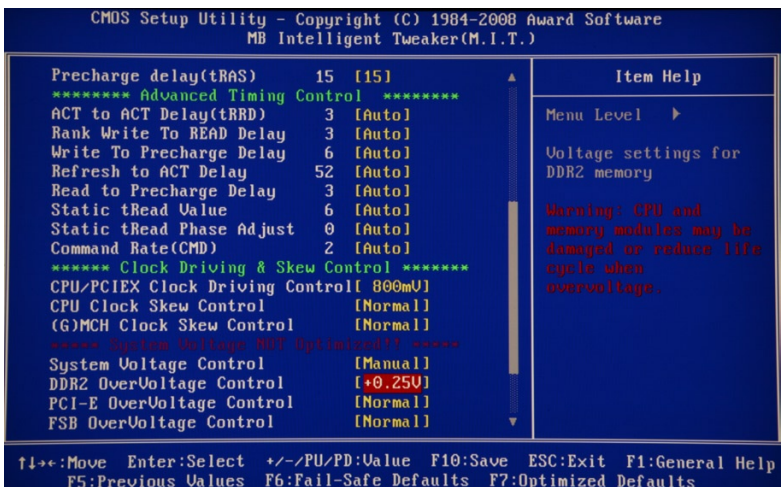
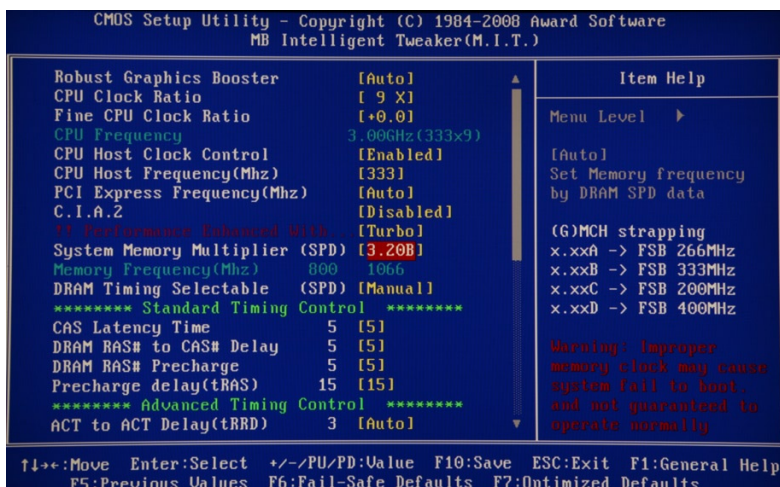
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Gigabyte X48 DQ6 Bios Setting

- For FSB 266 MHz CPU



- For FSB 333 MHz CPU



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