B75MU3+ UEFI BIOS Manual

UEFI BIOS Setup 1

1 Main Menu 3

2 Advanced Menu 4

3 Chipset Menu 23

4 Boot Menu 33

5 Security Menu 35

6 Performance 36

7 Exit Menu 41

B75MU3+ UEFI BIOS Manual

UEFI BIOS Setup

Introduction

The purpose of this manual is to describe the settings in the AMI UEFI BIOS Setup program on this motherboard. The Setup program allows users to modify the basic system configuration and save these settings to NVRAM.
UEFI BIOS determines what a computer can do without accessing programs from a disk. This system controls most of the input and output devices such as keyboard, mouse, serial ports and disk drives. BIOS activates at the first stage of the booting process, loading and executing the operating system. Some additional features, such as virus and password protection or chipset fine-tuning options are also included in UEFI BIOS.
The rest of this manual will to guide you through the options and settings in UEFI BIOS Setup.

Plug and Play Support

This AMI UEFI BIOS supports the Plug and Play Version 1.0A specification.

EPA Green PC Support

This AMI UEFI BIOS supports Version 1.03 of the EPA Green PC specification.

ACPI Support

AMI ACPI UEFI BIOS support Version 1.0/2.0 of Advanced Configuration and Power interface specification (ACPI). It provides ASL code for power management and device configuration capabilities as defined in the ACPI specification, developed by Microsoft, Intel and Toshiba.

PCI Bus Support

This AMI UEFI BIOS also supports Version 2.3 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

DDR3 SDRAM (Double Data Rate III Synchronous DRAM) is supported.

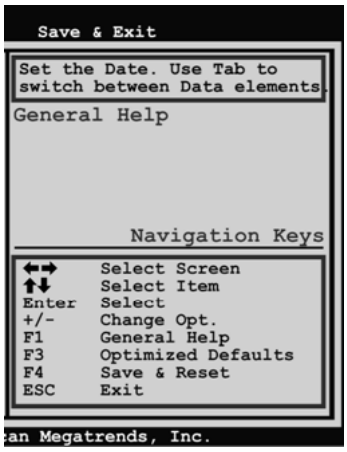
Supported CPUs

This AMI UEFI BIOS supports the Intel CPU.

Using Setup

When starting up the computer, press **<Del>** during the **Power-On Self-Test (POST)** to enter the UEFI BIOS setup utility.

In the UEFI BIOS setup utility, you will see **General Help** description at the top right corner, and this is providing a brief description of the selected item. **Navigation Keys** for that particular menu are at the bottom right corner, and you can use these keys to select item and change the settings.

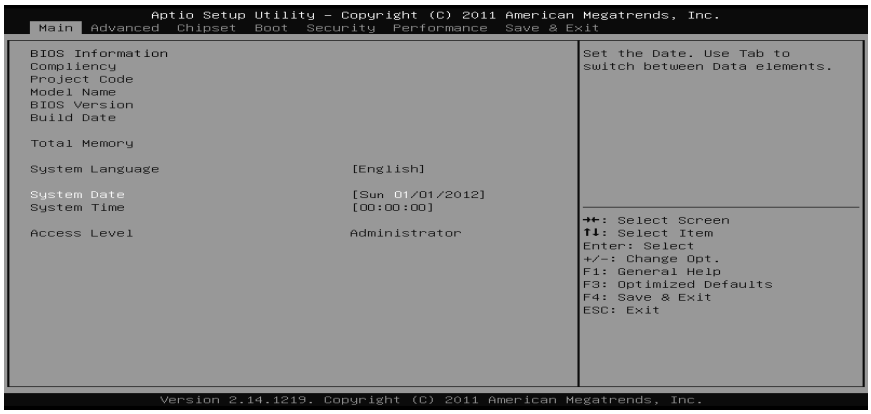


Notice

- The default UEFI BIOS settings apply for most conditions to ensure optimum performance of the motherboard. If the system becomes unstable after changing any settings, please load the default settings to ensure system's compatibility and stability. Use Load Setup Default under the Exit Menu.
- For better system performance, the UEFI BIOS firmware is being continuously updated. The UEFI BIOS information described in this manual is for your reference only. The actual UEFI BIOS information and settings on board may be slightly different from this manual.
- The content of this manual is subject to be changed without notice. We will not be responsible for any mistakes found in this user's manual and any system damage that may be caused by wrong-settings.

1 Main Menu

Once you enter AMI UEFI BIOS Setup Utility, the Main Menu will appear on the screen providing an overview of the basic system information.



BIOS Information

Shows system information including UEFI BIOS version, model name, marketing name, built date, etc.

Total Memory

Shows system memory size, VGA shard memory will be excluded.

System Date

Set the system date. Note that the 'Day' automatically changes when you set the date.

System Time

Set the system internal clock.

Access Level

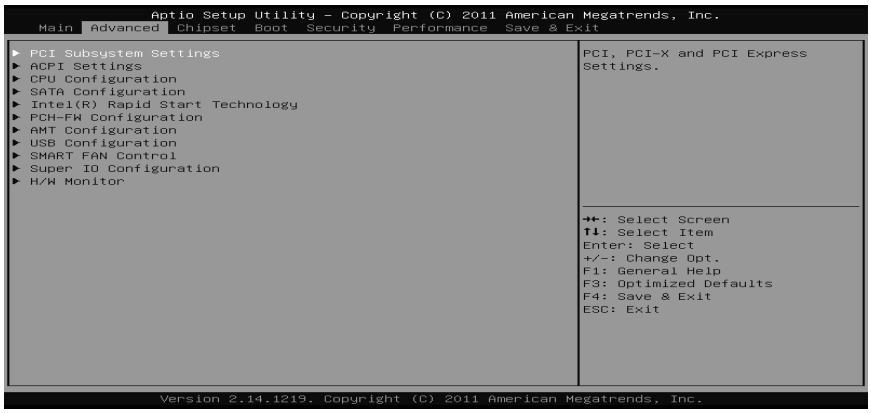
Shows the access level of current user.

2 Advanced Menu

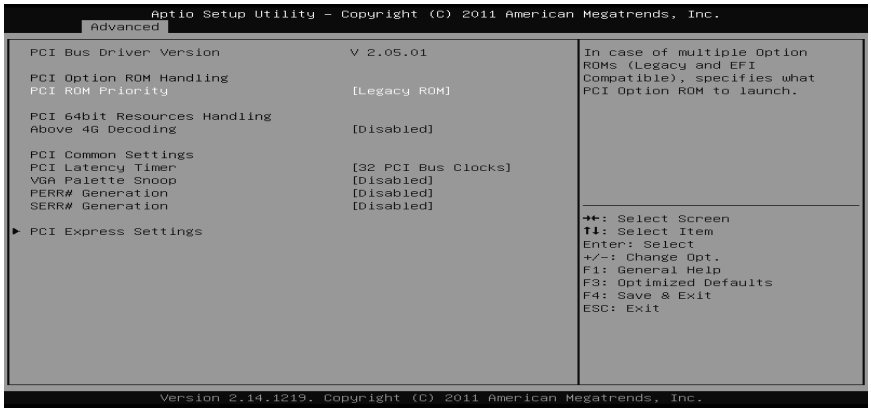
The Advanced Menu allows you to configure the settings of CPU, Super I/O, Power Management, and other system devices.

Notice

- Beware of that setting inappropriate values in items of this menu may cause system to malfunction.



PCI Subsystem Settings



PCI ROM Priority

In case of multiple option ROMs (Legacy and EFI Compatible), this item specifies what PCI Option ROM to launch
Options: Legacy ROM (Default) / EFI Compatible ROM

Above 4G Decoding

Enables or disables 64bit capable device to be decoded in above 4G address space (only if system support 64 bit PCI decoding).
Options: Disabled (Default) / Enabled

PCI Latency Timer

This item sets the value to be programmed into PCI Latency Timer Register.
Options: 32 PCI Bus Clocks (Default) / 64 PCI Bus Clocks / 96 PCI Bus Clocks / 128 PCI Bus Clocks / 160 PCI Bus Clocks / 192 PCI Bus Clocks / 224 PCI Bus Clocks / 248 PCI Bus Clocks

VGA Palette Snoop

Enables or disables VGA palette registers snooping.
Options: Disabled (Default) / Enabled

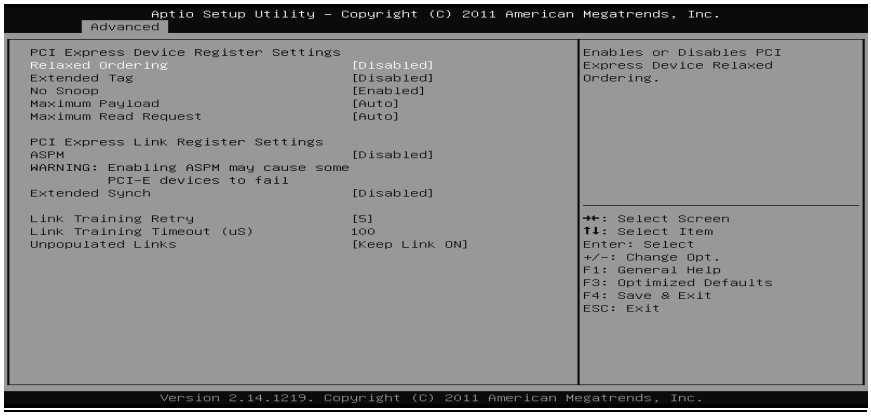
PERR# Generation

Enables or disables PCI device to generate SERR#.
Options: Disabled (Default) / Enabled

SERR# Generation

Enables or disables PCI device to generate SERR#.
Options: Disabled (Default) / Enabled

PCI Express Settings



Relaxed Ordering

Enables or disables PCI express device No snoop option.

Options: Disabled (Default) / Enabled

Extended Tag

If enabled allows device to use 8-bit tab field as a requester.

Options: Disabled (Default) / Enabled

No Snoop

This item enables or disables PCI Express Device No Snoop option.

Options: Enabled (Default) / Disabled

Maximum Payload

This item sets Maximum Payload of PCI Express Device or allows System BIOS to select the value.

Options: Auto (Default) / 128 Bytes / 256 Bytes / 512 Bytes / 1024 Bytes / 2048 Bytes / 4096 Bytes

Maximum Read Request

This item sets Maximum Read Request Size of PCI Express Device or allows System BIOS to select the value.

Options: Auto (Default) / 128 Bytes / 256 Bytes / 512 Bytes / 1024 Bytes / 2048 Bytes / 4096 Bytes

ASPM
This item sets the ASPM (Active State Power Management Settings) Level: Force L0 – Force all links to LO State; Auto – BIOS auto configures; Disabled – Disables ASPM.
Options: Disabled (Default) / Auto / Force L0s

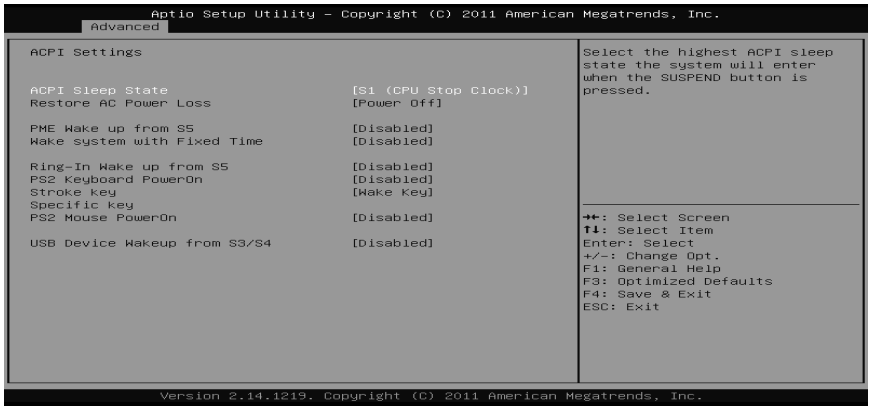
Extend Synch
If enabled allows generation of extended synchronization patterns.
Options: Disabled (Default) / Enabled

Link Training Retry
Defines number of retry attempts software will take to retrain the link if previous training attempt was unsuccessful.
Options: 5 (Default) / Disabled / 2 / 3

Link Training Timeout(uS)
Defines number of microseconds software will wait before polling 'Link Training' bit in link status register. Value range from 10 to 1000 uS.
Options: 100 (Default)

Unpopulated Links
In order to save power, software will disable unpopulated PCI Express links, if this option set to 'Disable Link'.
Options: Keep Link ON (Default) / Disable Link

ACPI Settings



ACPI Sleep State

This item selects the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
Options: S1 (CPU Stop Clock) (Default) / Suspend Disabled / S3 (Suspend to RAM)

Restore AC Power Loss

This setting specifies how your system should behave after a power fail or interrupts occurs. Power Off: Leaving the system in power-off status after power recovers. Power ON: Powering on the system immediately when power returns. Last State: 1. Leaving the system in power-off if the system shuts down at DC off status; 2. Powering on the system immediately if the system shuts down at DC on status.
Options: Power Off (Default) / Power On / Last State

PME Wake up from S5

This item enables the system to wake from S5 using PEM event.
Options: Disabled (Default) / Enabled

Wake system with Fixed Time

This item enables or disables the system to wake on by alarm event. When this item is enabled, the system will wake on the hr::min::sec specified.
Options: Disabled (Default) / Enabled

Wake up date

You can choose which date the system will boot up.

Wake up hour / Wake up minute / Wake up second

You can choose the system boot up time, input hour, minute and second to specify.

Ring-In Wake up from S5

This item enables the system to wake from S5 using Ring-In event.
Options: Disabled (Default) / Enabled

PS2 Keyboard PowerOn

This item allows you to control the keyboard power on function.
Options: Disabled (Default) / Any Key / Stroke Key / Specific Key

Stroke Keys Selected

This item will show only when Keyboard PowerOn is set "Stroke Key."
Options: Wake Key (Default) / Power Key / Ctrl+F1 / Ctrl+F2 / Ctrl+F3 / Ctrl +F4 / Ctrl+F5 / Ctrl+F6

Specific Key Enter

This item will show only when Keyboard PowerOn is set "Specific Key." Press Enter to set Specific key.

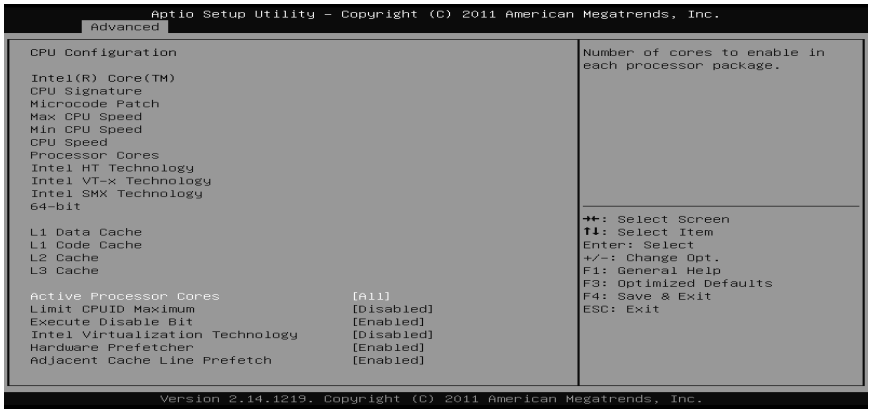
PS2 Mouse PowerOn

This item allows you to control the mouse power on function.
Options: Disabled (Default) / Enabled

USB Device Wakeup from S3/S4

This item allows you to enable or disabled the USB resume from S3/S4 function.
Options: Disabled (Default) / Enabled

CPU Configuration



Active Processor Cores

This item sets number of cores to enable in each processor package.
Options: All (Default) / 1 / 2 / 3

Limit CPUID Maximum

When the computer is booted up, the operating system executes the CPUID instruction to identify the processor and its capabilities. Before it can do so, it must first query the processor to find out the highest input value CPUID recognizes. This determines the kind of basic information CPUID can provide the operating system.
Options: Disabled (Default) / Enabled

Execute-Disable Bit

XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.).
Options: Enabled (Default) / Disabled

Intel Virtualization Tech

Virtualization Technology can virtually separate your system resource into several parts, thus enhance the performance when running virtual machines or multi interface systems.
Options: Disabled (Default) / Enabled

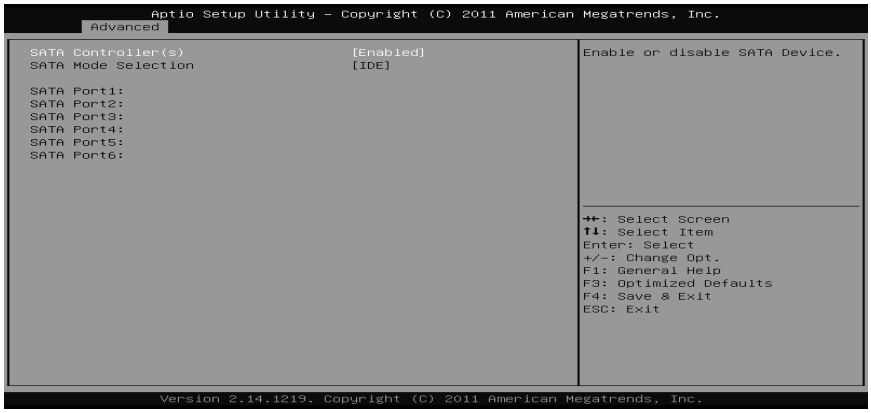
Hardware Prefetcher

The processor has a hardware prefetcher that automatically analyzes its requirements and prefetches data and instructions from the memory into the Level 2 cache that are likely to be required in the near future. This reduces the latency associated with memory reads.
Options: Enabled (Default) / Disabled

Adjacent Cache Line Prefetch

The processor has a hardware adjacent cache line prefetch mechanism that automatically fetches an extra 64-byte cache line whenever the processor requests for a 64-byte cache line. This reduces cache latency by making the next cache line immediately available if the processor requires it as well.
Options: Enabled (Default) / Disabled

SATA Configuration



SATA Controller(s)

This item enables/disables Serial ATA Device.
Options: Enabled (Default) / Disabled

SATA Mode Selection

This item determines how SATA controller(s) operate.
Options: IDE (Default) / AHCI

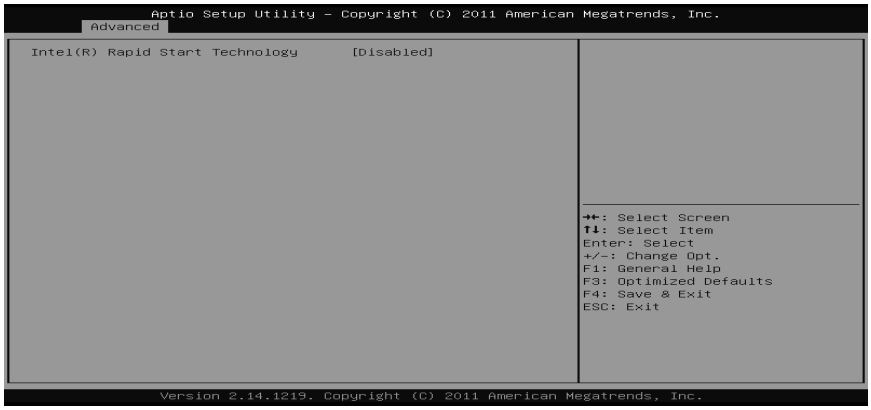
Aggressive LPM Support

This item enables PCH to aggressively enter link power state.
Options: Disabled (Default) / Enabled

SATA Controller Speed

This item indicates the maximum speed the SATA controller can support.
Options: Gen3 (Default) / Gen1 / Gen2

Intel(R) Rapid Start Technology



Intel(R) Rapid Start Technology

This item enables/disables Intel(R) Rapid Start Technology.
Options: Disabled (Default) / Enabled

Entry on S3 RTC Wake

This item sets iFFS invocation upon S3 RTC wake .
Options: Enabled (Default) / Disabled

Entry After

This item enables RTC wake timer at S3 entry.
Options: 10 minutes (Default) / Immediately / 1 minute / 2 minutes / 5 minutes / 15 minutes / 30 minutes / 1 hour / 2 hours

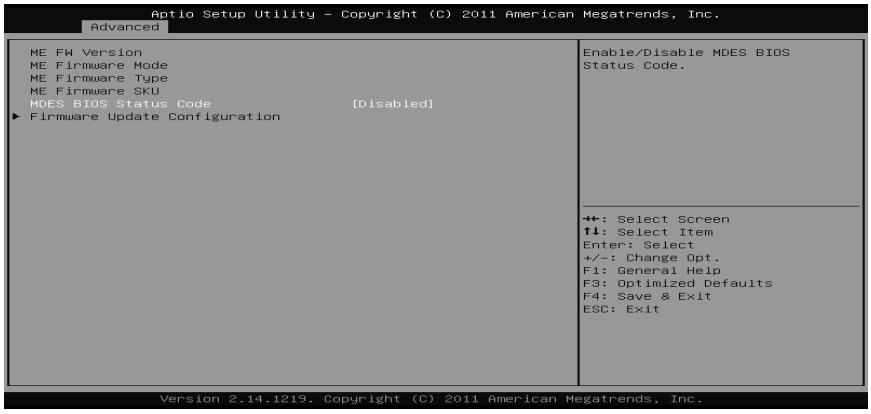
Active Page Threshold Support

This item allows system to support RST with small partition.
Options: Disabled (Default) / Enabled

Active Memory Threshold

This item allows system to try to support RST when partition size > Active Page Threshold size in MB. When set to zero, the item will be in AUTO mode and check if partition size is enough at S3 entry.
Options: 0 (Default)

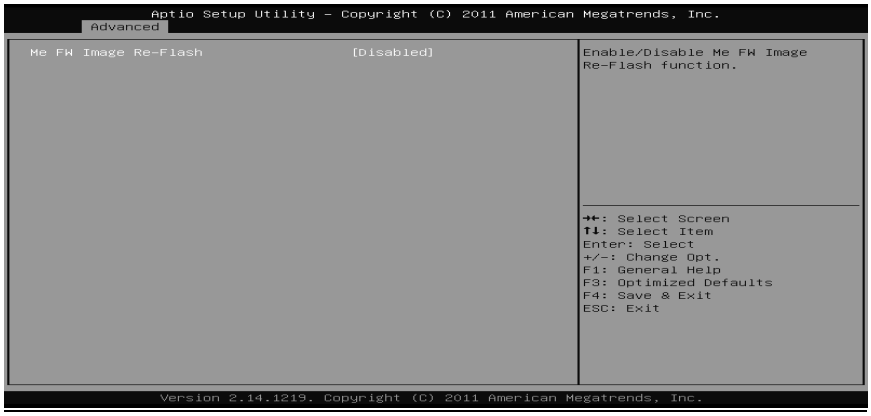
PCH-FW Configuration



MDES BIOS Status Code

This item enables/disables MDES BIOS status code..
Options: Disabled (Default) / Enabled

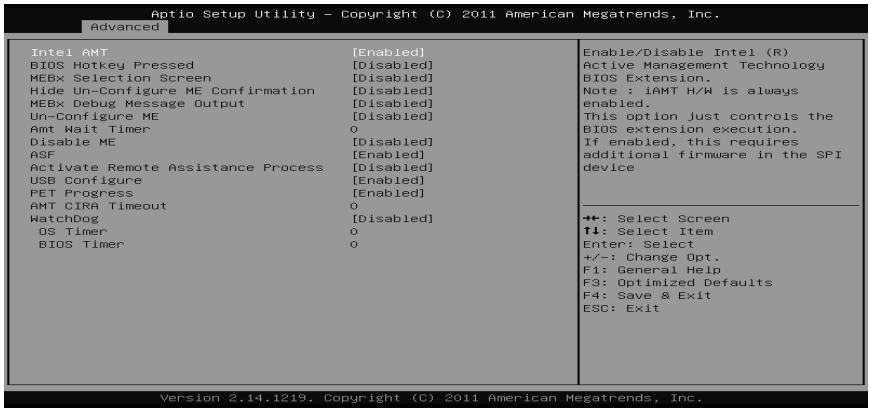
Firmware updated Configuration



Me FW Image Re-Flash

This item enables or disables Me FW image Re-Flash function.
Options: Disabled (Default) / Enabled

AMT Configuration



Intel AMT

This item enables or disables Intel(R) active management technology BIOS extension. Note: iAMT H/W is always enable. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device..
Options: Enabled (Default) / Disabled

BIOS Hotkey Pressed

OEMFLag Bit 1: enable/ disable BIOS hotkey press.
Options: Disabled (Default) / Enabled

MEBx Selection Screen

OEMFLag Bit 2: enable/ disable MEBx hotkey selection screen.
Options: Disabled (Default) / Enabled

Hide Un-Configure ME Configuration

OEMFLag Bit 6: Hide In-Configure MW without password confirmation prompt..
Options: Disabled (Default) / Enabled

MEBx Debug Message Output

OEMFLag Bit 14: enable/ disable MEBx debug message output.
Options: Disabled (Default) / Enabled

Un-Configure ME

OEMFLag Bit 15: Un-Configure ME without password..
Options: Disabled (Default) / Enabled

Amt Wait Timer

This item sets timer to wait before sending ASF_GET_BOOT_OPTIONS..
Options: 0 (Default)

Disable ME

This item sets ME to soft temporary disabled.
Options: Disabled (Default) / Enabled

ASF

This item enables/ disables alerts specification format.
Options: Enable (Default) /Disabled

Activate Remote Assistance Process

This item triggers CIRA boot/.
Options: Disable (Default) / Enabled

USB Configure

This item enables/ disables USB configure function.
Options: Enable (Default) / Disabled

PET Process

User can enables / disables PET events process to receive PET events or not..
Options: Enable (Default) / Disabled

WatchDog

This item enables/ disables watchdog timer..
Options: Disabled (Default) / Enabled

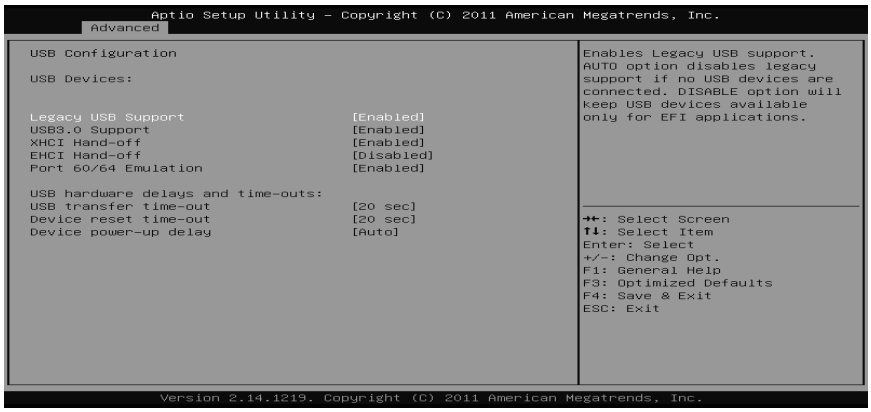
OS Timer

This item sets OS watchdog timer.

BIOS Timer

This item sets BIOSS watchdog timer.

USB Configuration



Legacy USB Support

This item determines if the BIOS should provide legacy support for USB devices like the keyboard, mouse, and USB drive. This is a useful feature when using such USB devices with operating systems that do not natively support USB (e.g. Microsoft DOS or Windows NT).
Options: Enabled (Default) / Disabled / Auto

USB3.0 Support

This item enables or disables USB3.0 (XHCI) Controller support.
Options: Enabled (Default) / Disabled

XHCI Hand-Off

This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.
Options: Enabled (Default) / Disabled

EHCI Hand-Off

This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.
Options: Disabled (Default) / Enabled

Port 60/64 Emulation

This items enables I/O port 60h/64h emulation support. This should be enabled for the complete USB keyboard legacy support for non-USB aware OSes.
Options: Enabled (Default) / Disabled

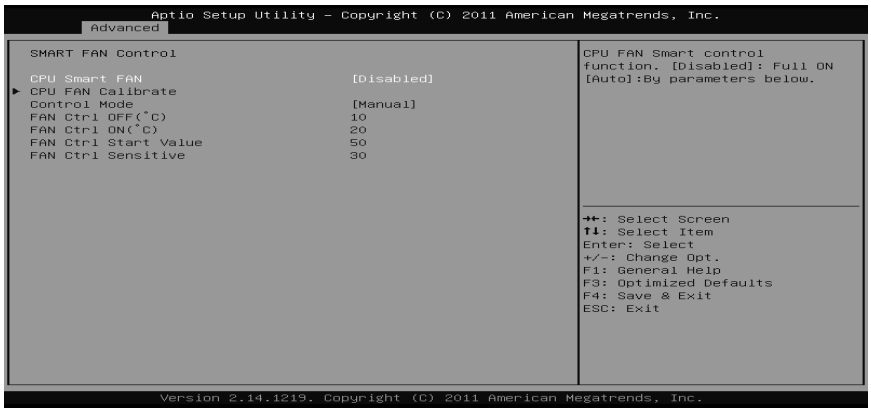
USB transfer time-out
The time-out value for Control, Bulk, and Interrupt transfers.
Options: 20 sec (Default) / 1 sec / 5 sec / 10 sec

Device reset time-out
The item sets USB mass storage device Start Unit command time-out.
Options: 20 sec (Default) / 10 sec / 30 sec / 40 sec

Device power-up delay
"Auto" uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.
Options: Auto (Default) / Manual

Device power-up delay in seconds
Delay range is 1 ~ 40 seconds, in one second increments.
Options: 5 (Default)

SMART FAN Control



CPU Smart FAN

This item allows you to control the CPU Smart Fan function.
Options: Disabled (Default) / Auto

CPU FAN Calibrate

Press [ENTER] to calibrate CPU FAN.

Control Mode

This item provides several operation modes of the fan.
Options: Quiet / Aggressive / Manual

Fan Ctrl OFF(℃)

When CPU temperature is lower than this value, the CPU fan will keep lowest RPM.
Options: 10 (℃) (default)

Fan Ctrl On(℃)

When CPU temperature is higher than this value, the CPU fan controller will turn on.
Options: 20 (℃) (Default)

Fan Ctrl Start Value

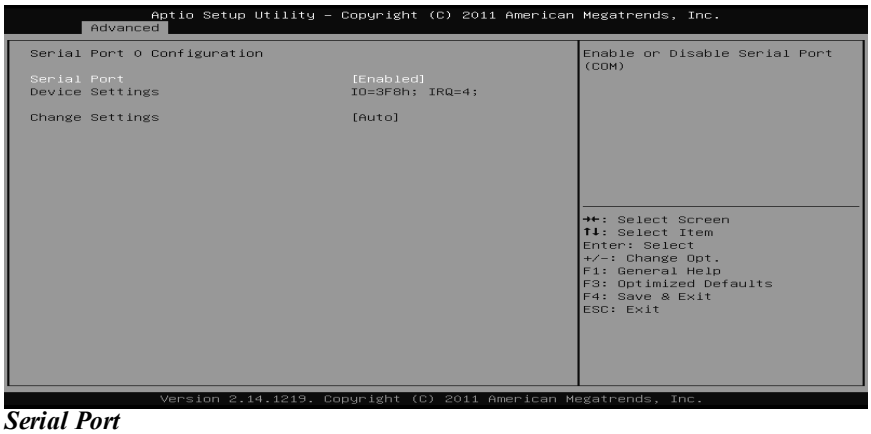
This item sets CPU FAN Start Speed Value.
Options: 50 (Default)

Fan Ctrl Sensitive

The bigger the numeral is, the higher the FAN speed is.
Options: 30 (Default)

Super IO Configuration

Serial Port 0 Configuration



Serial Port

This item enables or disables Serial Port (COM).

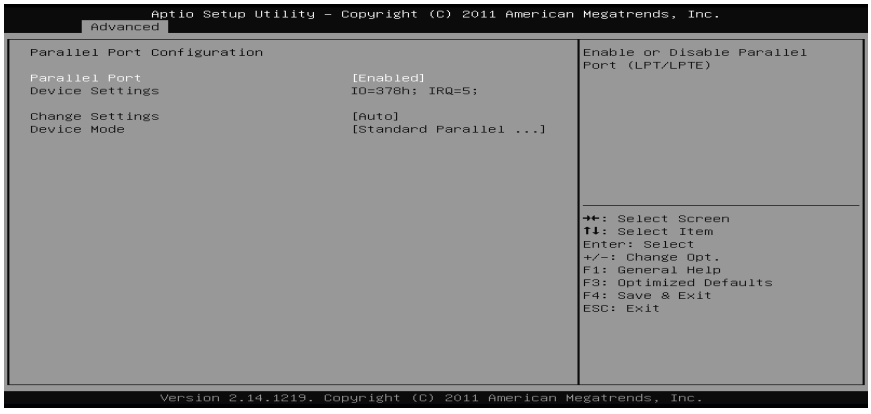
Options: Enabled (Default) / Disabled

Change Settings

This item selects an optimal setting for Super IO device.

Options: Auto (Default) / IO=3F8h; IRQ=4 / IO=3F8h; IRQ=3,4,5,6,7,10,11,12 / IO=2F8h; IRQ=3,4,5,6,7,10,11,12 / IO=3E8h; IRQ=3,4,5,6,7,10,11,12 / IO=2E8h; IRQ=3,4,5,6,7,10,11,12

Parallel Port Configuration



Parallel Port

This item enables or disables Parallel Port (LPT/LPTE).

Options: Enabled (Default) / Disabled

Change Settings

This item allows you to select an optimal setting for Super IO device.

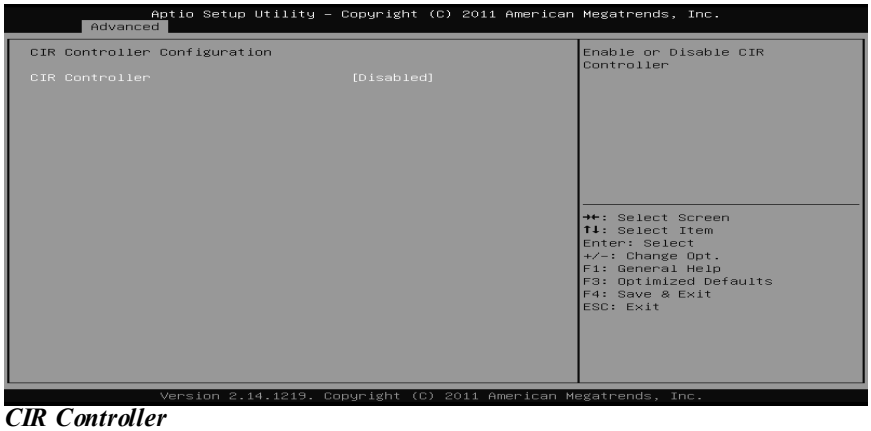
Options: Auto (Default) / IO=378h; IRQ=5 / IO=378h; IRQ=5, 6, 7, 9, 10, 11, 12 / IO=278h; IRQ=5, 6, 7, 9, 10, 11, 12 / IO=3BCh; IRQ=5, 6, 7, 9, 10, 11, 12

Device Mode

This item allows you to determine how the parallel port should function.

Options: Standard Parallel Port Mode (Default) (Using Parallel port as Standard Printer Port) /
EPP Mode (Using Parallel Port as Enhanced Parallel Port) /
ECP Mode (Using Parallel port as Extended Capabilities Port) /
ECP Mode & EPP Mode (Using Parallel port as ECP & EPP mode)

CIR Controller Configuration



CIR Controller

This item enables or disables CIR Controller.

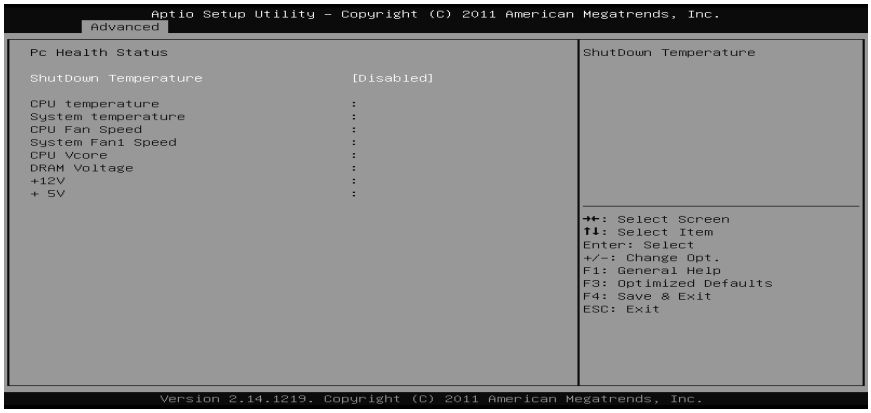
Options: Disabled (Default) / Enabled

Change Settings

This item selects an optimal setting for Super IO device.

Options: Auto (Default) / IO=3E0h; IRQ=10 / IO=3E0h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12 / IO=2E0h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12 / IO=298h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12

H/W Monitor



Shutdown Temperature

This item allows you to set up the CPU shutdown Temperature.

Options: Disabled (Default) / 70℃/158℉ / 75℃/167℉ / 80℃/176℉ / 85℃/185℉ / 90℃/194℉

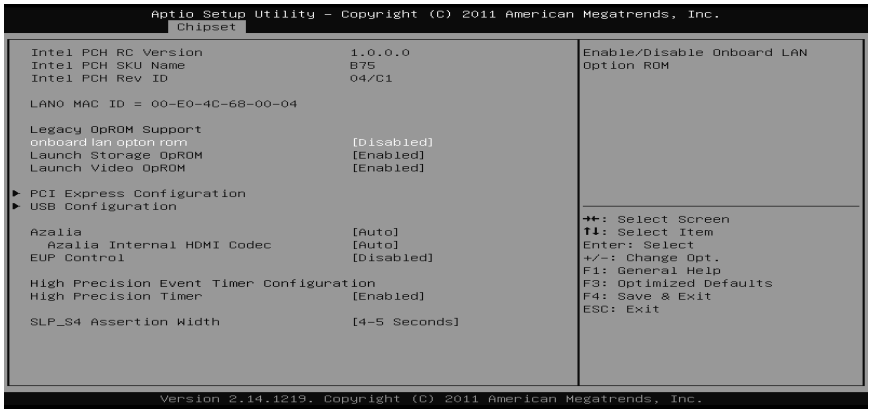
3 Chipset Menu

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components.

Notice

- Beware of that setting inappropriate values in items of this menu may cause system to malfunction.

PCH-IO Configuration



on board lan option rom

This item enables or disables onboard LAN option ROM.
Options: Disabled (Default) / Enabled

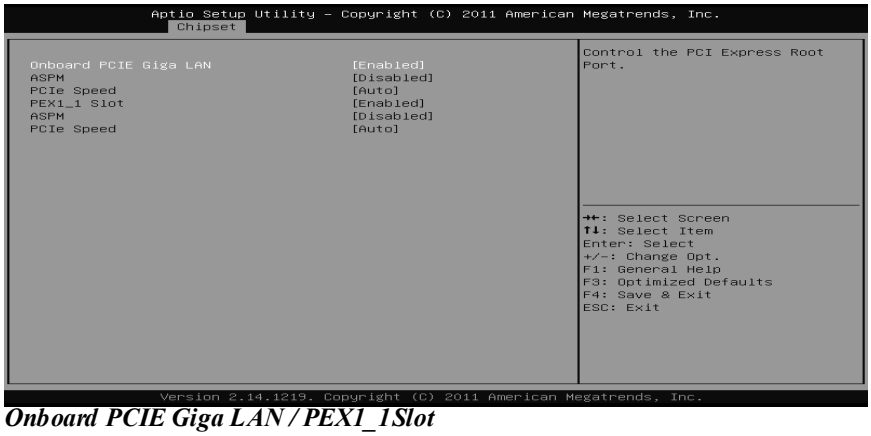
Launch Storage OpROM

This item enables or disables boot Options for legacy mass storage devices with option ROM.
Options: Enabled (Default) / Disabled

Launch Video OpROM

This item enables or disables execution of the legacy option ROM for video devices.
Options: Enabled (Default) / Disabled / Enabled when no UEFI Driver

PCI Express Configuration



Onboard PCIE Giga LAN / PEX1_1Slot

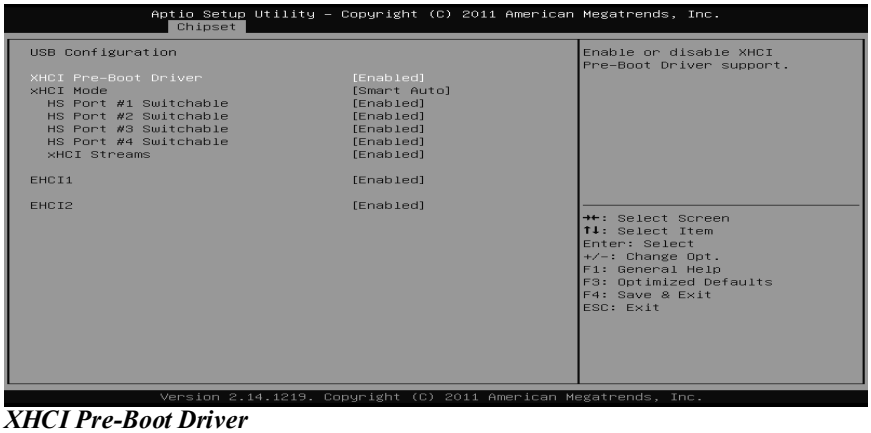
This item controls the PCI Express Root Port.
Options: Enabled (Default) / Disabled

ASPM

This item sets PCI Express Active State Power Management settings.
Options: Disabled (Default) / L0s / L1 / L0sL1 / Auto

PCIe Speed
This item selects PCI Express port speed.
Options: Auto (Default) / Gen1 / Gen2

USB Configuration



XHCI Pre-Boot Driver
This item enables or disables XHCI Pre-Boot Driver support.
Options: Enabled (Default) / Disabled

XHCI Mode
This item sets the mode of operation of XHCI controller.
Options: Smart Auto (Default) / Auto / Enabled / Disabled

HS Port #1 / #2 / #3 / #4 Switchable
This item allows for HS port switching between xHCI and ECHI/ If disabled, port is routed to ECHI, If Hs port is routed to XHCIU, the corresponding SS port is enabled.
Options: Enabled (Default) / Disabled

xHCI Streams
This item enables xHCI maximum primary stream array size.
Options: Enabled (Default) / Disabled

EHCI1/2
This item controls the USB EHCI (USB2.0) functions. One EHCI controller must always be enabled.
Options: Enabled (Default) / Disabled

Azalia
This item controls detection of the Azalia device.
Disabled = Azalia will be unconditionally disabled.
Enabled = Azalia will be unconditionally Enabled.
Auto = Azalia will be enabled if present, disabled otherwise.
Options: Auto (Default) / Disabled / Enabled

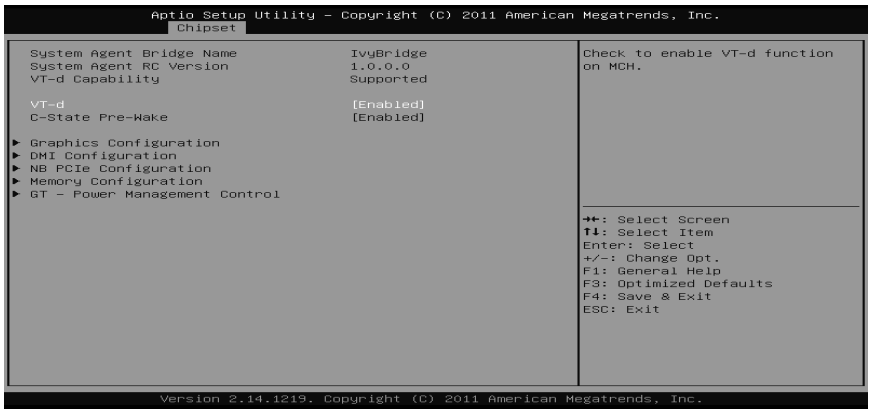
Azalia Internal HDMI Codec
This item enables or disables internal HDMI codec for Azalia.
Options: Auto (Default) / Disabled

EuP Control
When EuP is enabled, the system will meet EuP requirement.
Options: Disabled (Default) / Enabled in S5 / Enabled in S4-S5

High Precision Timer
This item enables or disables the high precision event timer..
Options: Enabled (Default) / Disabled

SLP_S4 Assertion Width
This item selects a minimum assertion width of the SLP_S4# signal.
Options: 4-5 Seconds (Default) / Disabled / 1-2 Seconds / 2-3 Seconds / 3-4 Seconds

System Agent (SA) Configuration



VT-d
This item checks to enable VT-d function on MCH.
Options: Enabled (Default) / Disabled

C-State Pre-Wake
This item controls C-State Pre-Wake feature for ARAT, in SSKPR[57].
Options: Enabled (Default) / Disabled

Graphics Configuration

Graphics turbo IMON Current
This item sets graphics turbo IMON current values supported (14-31).
Options: 31(Default)

Primary Display
This item select which of IGFX/PEG/PCI Graphics device should be Primary Display or select SG for Switchable Gfx.
Options: Auto (Default) / IGFX / PEG / PCI

Internal Graphics
This item keeps IGD enabled based on the setup options.
Options: Auto (Default) / Disabled / Enabled

GTT Size
This item select GTT Size.
Options: 2MB (Default) / 1MB

Aperture Size
This item select Aperature Size.
Options: 256MB (Default) / 128MB / 512MB

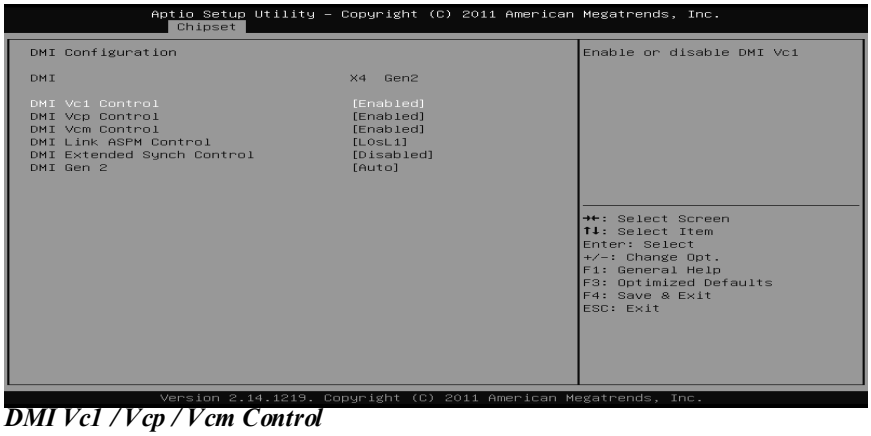
DVMT Pre-Allocated
This item select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.
Options: 64M (Default) / 32M / 96M / 128M / 160M / 192M / 224M / 256M / 288M / 320M / 352M / 384M / 416M / 448M / 480M / 512M / 1024M

DVMT Total Gfx Mem
This item select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.
Options: 256MB (Default) / 128MB / MAX

Gfx Low Power Mode
This option is applicable for SFF only
Options: Enabled (Default) / Disabled

Graphics Performance Analyzers
This item is enables/ disables Intel graphics performance analyzers counters.
Options: Disabled (Default) / Enabled

DMI Configuration



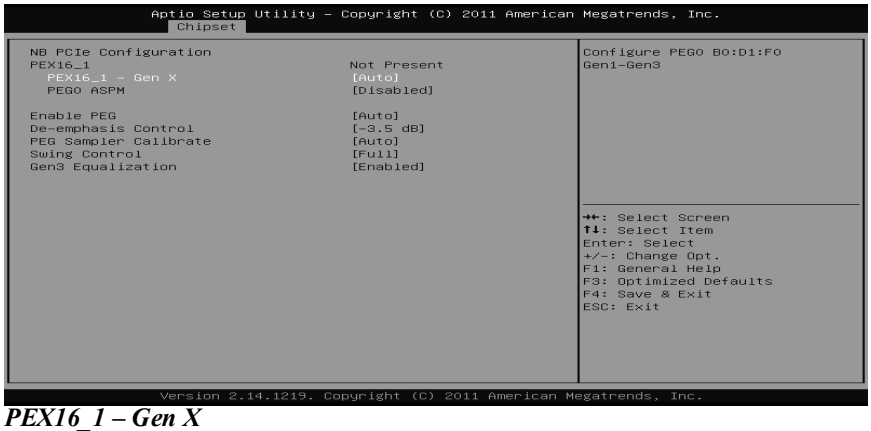
DMI Vc1 / Vcp / Vcm Control
This item enables/ disables DMI Vc1 / Vcp / Vcm
Options: Enabled (Default) / Disabled

DMI Link ASPM Control
This item enables/ disables the control of active state power management on SA side of the DMI link..
Options: L0sL1 (Default) / Disabled / L0S / L1

DMI Extended Synch Control
This item enables/ disables DMI extended synchronization.
Options: Disabled (Default) / Enabled

DMI Gen2
This item enables/ disables DMI Gen2/nAuto means disabled for IVB A0 MB/DT and IVB B0MB, Enabled for other CPUs/
Options: Auto(Default) / Enabled / Disabled

NB PCIe Configuration



PEX16_1 – Gen X
This item configures PEG0 B0:D1:F0 Gen1-Gen3.
Options: Auto (Default) / Gen1 / Gen2 / Gen3

PEG0 ASPM
This item controls ASPM support for the PEG: Device 1 Funtion0. This has no effect if PEG is not the currently active device.
Options: Disabled (Default) / Auto / ASPM L0s / ASPM L1 / ASPM L0sL1

Enable PEG
This item enables/ disables the PEG..
Options: Auto (Default) / Disabled / Enabled

De-emphasis Control
This item configures the De-emphasis control on PEG.
Options: -3.5 dB (Default) / -6 dB

PEG Sampler Calibrate

This item enables or disables PEG Sampler Calibrate. Auto means Disabled for SNB MB/DT, Enabled for IVB A0 B0.

Options: Auto (Default) / Enabled / Disabled

Swing Control

This item performs PEG Swing Control, on IVB C0 and Later.

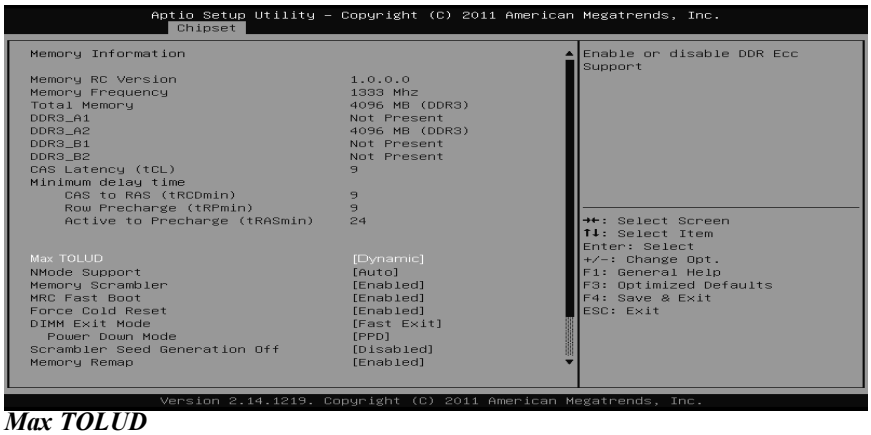
Options: Full (Default) / Reduced / Half

Gen3 Equalization

This item performs PEG Gen3 Equalization steps.

Options: Enabled (Default) / Disabled

Memory Configuration



Max TOLUD

This item sets maximum value of TOLUD. Dynamic assignment would adjust TOLUD automatically based on largest MMIO length of installed graphic controller.

Options: Dynamic (Default) / 1 GB / 1.25 GB / 1.5 GB / 1.75 GB / 2 GB / 2.25 GB / 2.5 GB / 2.75 GB / 3 GB / 3.25 GB

NMode Support

This item sets for NMode support option.

Options: Auto (Default) / 1N Mode / 2N Mode

Memory Scrambler
This item enables or disables memory scrambler support.
Options: Enabled (Default) / Disabled

MRC Fast Boot
This item enables or disables MRC Fast Boot.
Options: Enabled (Default) / Disabled

Force Cold Reset
Force cold reset or choose MRC cold reset mode, when cold boot is required during MRC execution. Note: If ME 5.0MB is present, Force cold reset is required!.
Options: Enabled (Default) / Disabled

DIMM Exit Mode
This item sets DIMM Exit Mode Control..
Options: Fast Exit (Default) / Auto / Slow Exit

Power Down Mode
This item sets power down mode control.
Options: PPD (Default) / No Power Down / APD / APD-PPD

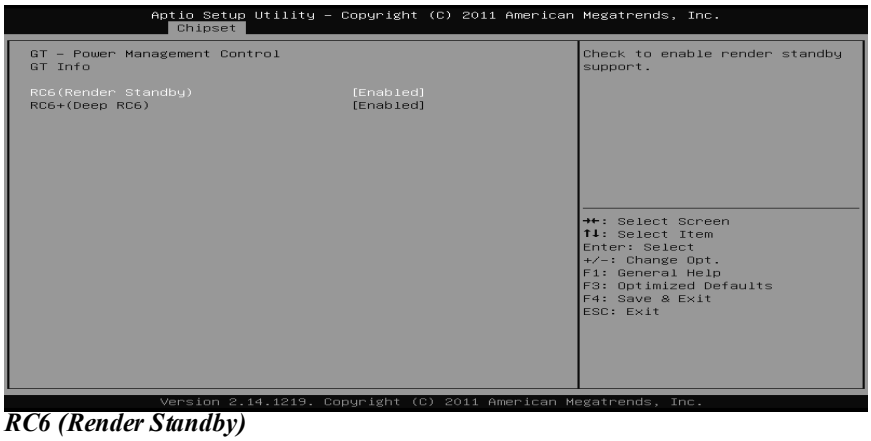
Scrambler Seed Generation Off
This item sets control memory scrambler seed generation.
Enable – do not generation scrambler seed.
Disable – generation scrambler seed always.
Options: Disabled (Default) / Enabled

Memory Remap
This item enables or disables memory remap above 4G.
Options: Enabled (Default) / Disabled

Memory Alias Check
This item enables or disables memory alias check.
Options: Disabled (Default) / Enabled

Channel A / B DIMM Control
This item enables or disables dims on channel A / B.
Options: Enabled Both DIMMS(Default) / Disable DIMM0 / Disable DIMM1 / Disable Both DIMMS.

GT – Power Management Control



RC6 (Render Standby)

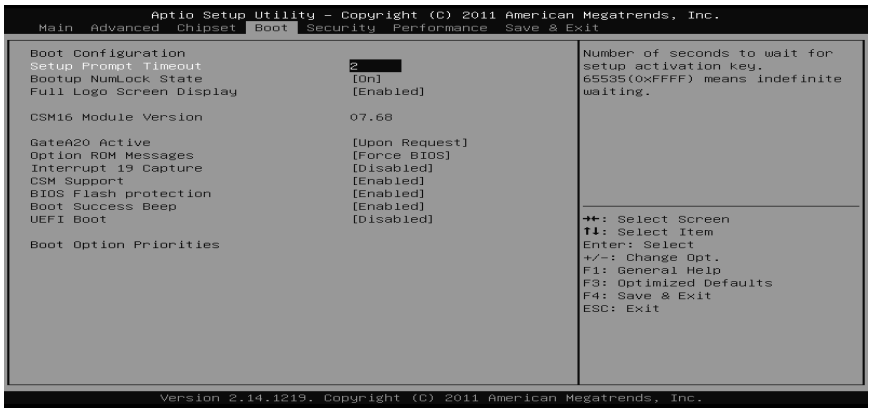
This item checks to enable render standby support.
Options: Enabled (Default) / Disabled

RC6+ (Deep RC6)

This item checks to enable deep RC6 (RC6+) support.
Options: Enabled (Default) / Disabled

4 Boot Menu

This menu allows you to setup the system boot options.



Setup Prompt Timeout

This item sets number of seconds to wait for setup activation key.
Options: 2 (Default)

Bootup NumLock State

This item selects the keyboard NumLock state.
Options: On (Default) / Off

Full Screen LOGO Display

This item allows you to enable/disable Full Screen LOGO Show function.
Options: Enabled (Default) / Disabled

GateA20 Active

Upon Request – GA20 can be disabled using BIOS services. Always – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB
Options: Upon Request (Default) / Always

Option ROM Messages

This item sets the display mode for Option ROM.
Options: Force BIOS (Default) / Keep Current

Interrupt 19 Capture

Interrupt 19 is the software interrupt that handles the boot disk function. When set to Enabled, this item allows the option ROMs to trap interrupt 19.
Options: Disabled (Default) / Enabled

CSM Support

This item enables / disables CSM Support. If Auto is selected, based on OS, CSM will be enabled / disabled automatically.
Options: Enabled (Default) / Disabled / Auto

BIOS Flash protection

While enabled, it can't flash write and flash erase by SMI.
Options: Enabled (Default) / Disabled

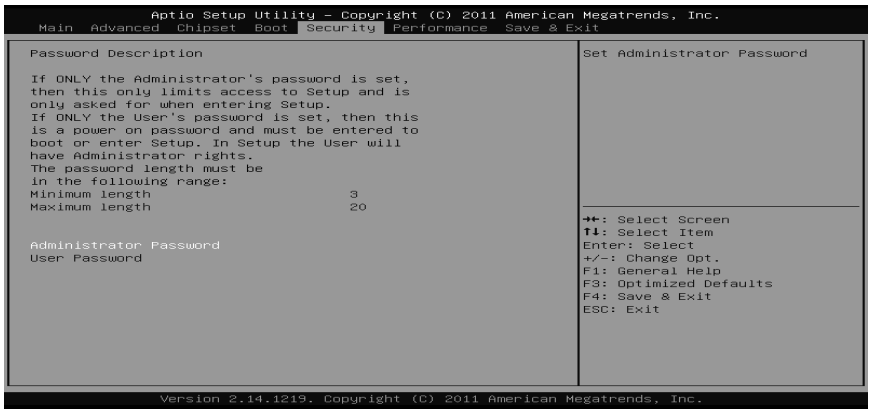
Boot Success Beep

When this item is set to Enabled, BIOS will let user know boot success with beep.
Options: Enabled (Default) / Disabled

UEFI Boot

This option enables/disables boot from the UEFI Devices.
Options: Disabled (Default) / Enabled

5 Security Menu



Administrator Password

This item sets Administrator Password.

User Password

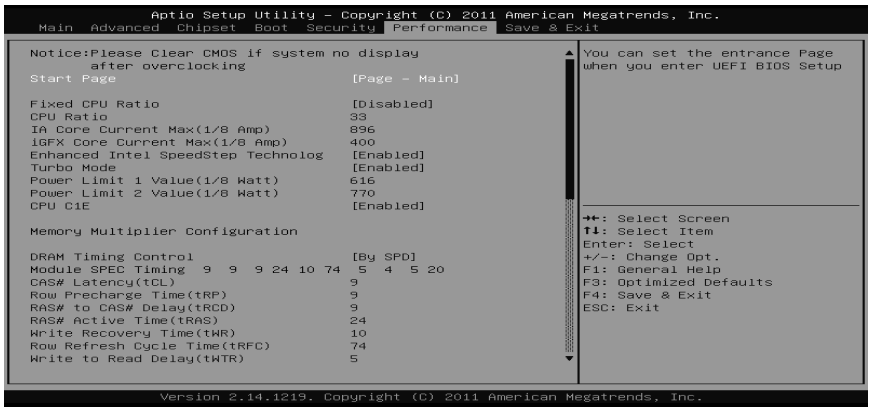
This item sets User Password.

6 Performance

This submenu allows you to change voltage and clock of various devices.
(However, we suggest you use the default setting. Changing the voltage and clock improperly may damage the device.)

Notice

- Beware of that setting inappropriate values in items of this menu may cause system to malfunction.



Start Page

You can set the entrance page when you enter UEFI BIOS Setup.
Options: Page – Main (Default) / Page – Advanced / Page – Chipset / Page – Boot / Page – Security / Page – O.N.E / Page – Save & Exit

Fixed CPU Ratio

This item enables/disables Fixed CPU Ratio all the time.
Options: Disabled (Default) / Enabled

CPU Ratio

This item allows you to set the CPU ratio. This item is adjustable only when Fixed CPU Ratio is set to Enabled.
Options: 33 (Default) / 10 ~ 50

IA Core Current Max (1/8 Amp)

This item sets IA core current MAX
Options: 896 (Default)

iGFX Core Current Max (1/8 Amp)

This item sets iGFX core current MAX
Options: 400 (Default)

Enhanced Intel SpeedStep Technology

This item enables/disables Enhanced Intel SpeedStep Technology.
Options: Enabled (Default) / Disabled

Turbo Mode

This item enables/disables Turbo Mode.
Options: Enabled (Default) / Disabled

Power Limit 1 Value (1/8 Watt)

This item sets the power limit value which CPU must not exceed over a specific time.
Options: 616 (Default)

Power Limit 2 Value (1/8 Watt)

This item sets the power limit value which CPU must not exceed over a specific time.
Options: 770 (Default)

CPU C1E

C1E is "Enhanced Halt State" function, this function helps to save power and decrease heat by lowering CPU frequency while the processor is not working.
Options: Enabled (Default) / Disabled

DRAM Timing Control

This item allows you to choose to manually or automatically regulate the DRAM Timing.
Options: By SPD (Default) / Manual

DDR DRAM Multiplier

This item allows you to set DDR3 DRAM Multiplier.
Options: 14(Default) / 16 / 18 / 20 / 22 / 26 / 28

CAS# Latency (tCL)

This item allows you to select CAS Latency of DDR3.
Options: 9 (Default) / 3 ~ 15

Row Precharge Time (tRP)

This item allows you to select Row Precharge Time of DDR3.
Options: 9 (Default) / 3 ~ 15

RAS# to CAS# Delay (tRCD)

This item allows you to select Row Address to Column Address Delay of DDR3.
Options: 9 (Default) / 3 ~ 15

RAS# Active Time (tRAS)

This item allows you to select Row Active Time of DDR3.
Options: 24 (Default) / 9 ~ 63

Write Recovery Time (tWR)

This item allows you to select Internal Write to Read Command Delay of DDR3.
Options: 10 (Default) / 3 ~ 31

Row Refresh Cycle Time (tRFC)

This item allows you to select Minimum Refresh Recovery Time of DDR3.
Options: 74 (Default) / 15 ~ 255

Write to Read Delay (tWTR)

This item allows you to select Internal Write to Read Command Delay of DDR3.
Options: 5 (Default) / 3 ~ 31

Active to Active Delay (tRRD)

This item allows you to select Row Active to Row Active Delay of DDR3.
Options: 4 (Default) / 4 ~ 15

Read CAS# Precharge (tRTP)

This item allows you to select Read to Precharge Delay of DDR3.
Options: 5 (Default) / 4 ~ 15

Four Active Window Delay (tFAW)

This item allows you to select Four Active Window Delay of DDR3.
Options: 20 (Default) / 4 ~ 63

Graphics Core Ratio Limit

This item sets Graphics Core Ratio Limit.
Options: 26 (Default)

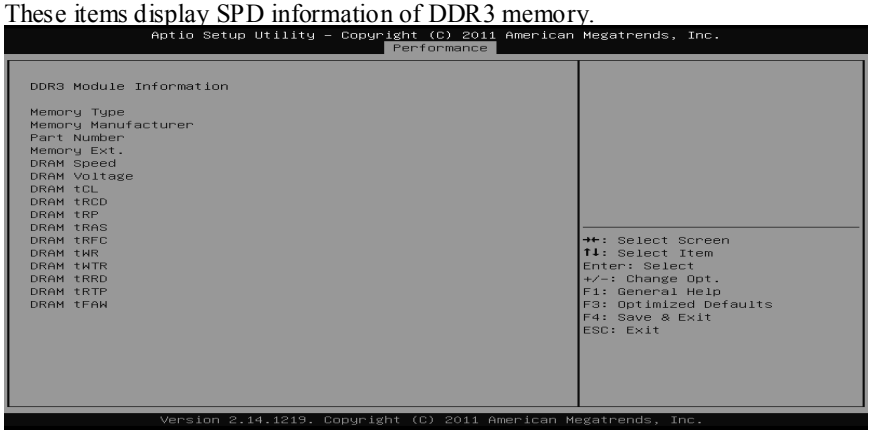
DRAM Voltage

This item sets DRAM Voltage.

BIOSTAR Memory Insight

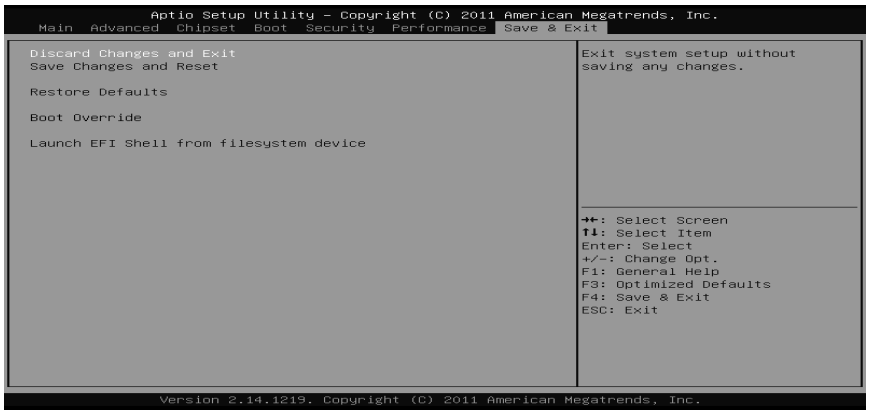
DDR3 1/2/3/4 Information

These items display SPD information of DDR3 memory.



7 Exit Menu

This menu allows you to load the optimal default settings, and save or discard the changes to the BIOS items.



Discard Changes and Exit

Abandon all changes made during the current session and exit setup.

Save Changes and Reset

Reset the system after saving the changes.

Restore Defaults

This selection allows you to reload the BIOS when problem occurs during system booting sequence. These configurations are factory settings optimized for this system.

Built-in EFI Shell

Press enter to execute UEFI BIOS built-in EFI Shell.