

## ***H81M-IDE UEFI BIOS Manual***

---

<b>UEFI BIOS Setup .....</b>	<b>1</b>
<b>1 Main Menu.....</b>	<b>3</b>
<b>2 Advanced Menu.....</b>	<b>4</b>
<b>3 Chipset Menu.....</b>	<b>14</b>
<b>4 Boot Menu.....</b>	<b>18</b>
<b>5 Security Menu.....</b>	<b>20</b>
<b>6 Performance Menu .....</b>	<b>22</b>
<b>7 Exit Menu .....</b>	<b>30</b>

## 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 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**

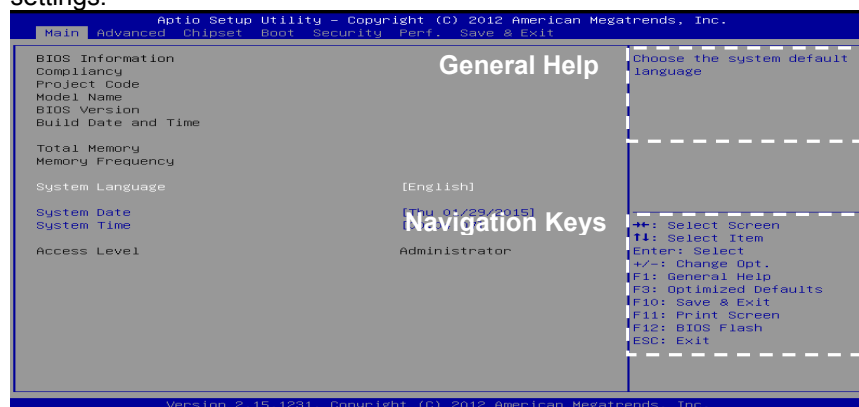
DDR3 SDRAM (Double Data Rate III Synchronous DRAM) is supported.

## H81M-IDE UEFI BIOS Manual

### 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**

It shows system information including UEFI BIOS version, Project Code, Model Name, Build Date and etc.

## **Total Memory**

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

## **System Language**

Choose the system default language.

## **System Date**

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

## **System Time**

Set the system internal clock.

## 2 Advanced Menu

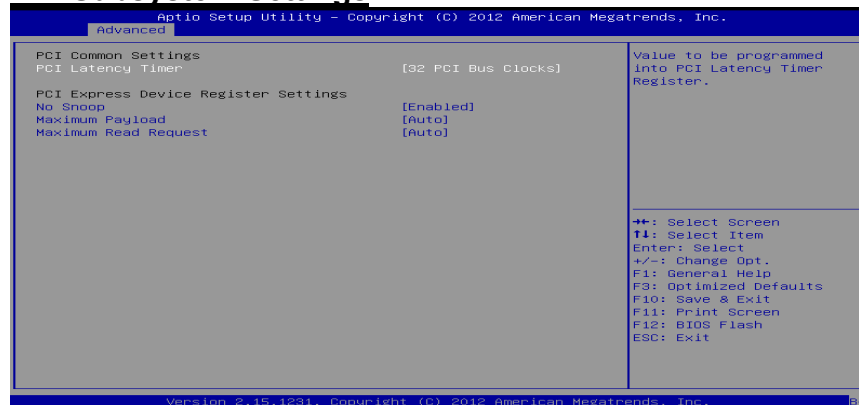
The Advanced Menu allows you to configure the settings of CPU, Super I/O, Power Management, and other system devices.

### Notice

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



### PCI Subsystem Settings



---

## H81M-IDE UEFI BIOS Manual

---

### 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

### 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.

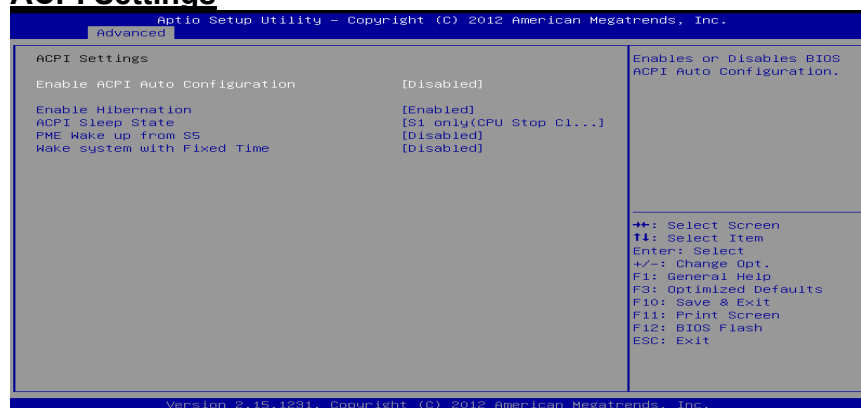
Options: Auto (Default) / 128 Bytes / 256 Bytes / 512 Bytes / 1024 Bytes / 2048 Bytes / 4096 Bytes

### 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

## ACPI Settings



### Enable ACPI Auto Configuration

This item enables or disables BIOS ACPI Auto Configuration.

Options: Disabled (Default) / Enabled

## ***H81M-IDE UEFI BIOS Manual***

### **Enable Hibernation**

This item enables or disables system ability to hibernate (OS/S4 Sleep State). This option may be not effective with some OSes.

Options: Enabled (Default) / Disabled

### **ACPI Sleep State**

This item selects the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

Options: S1 only (CPU Stop Clock) (Default) / Suspend Disabled

### **PME Wake up from S5**

The item enables the system to wake from S5 using PME 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**

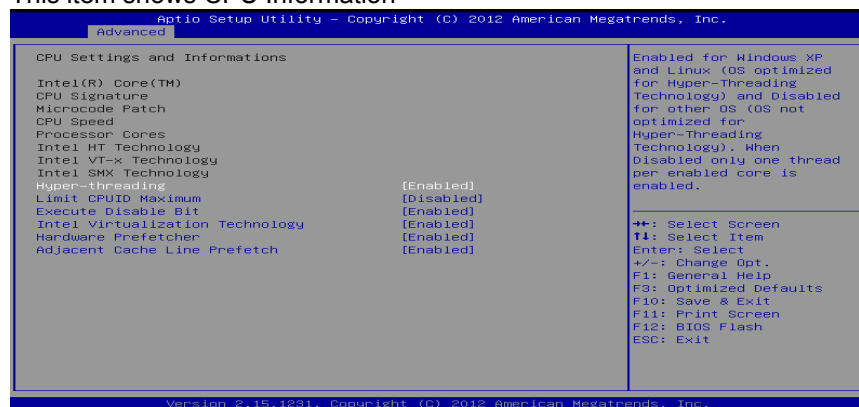
You can choose which date the system will boot up.

### **Wake up hour / Wake up minute / Wake up second**

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

## **CPU Setting and Information**

This item shows CPU Information



### **Hyper-Threading**

This option allows you to enable or disabled Hyper-Threading Technology. "Enabled" for Windows XP and Linux 2.4.x (OS optimized for Hyper-Threading Technology). "Disable" for other OS (OS not optimized for Hyper-Threading Technology).

Options: Enabled (Default) / Disabled

### **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 Technology**

When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology

Options: Enabled (Default) / Disabled

### **Hardware Prefetcher**

This item enables or disables the Mid Level Cache (L2) streamer Prefetcher.

Options: Enabled (Default) / Disabled

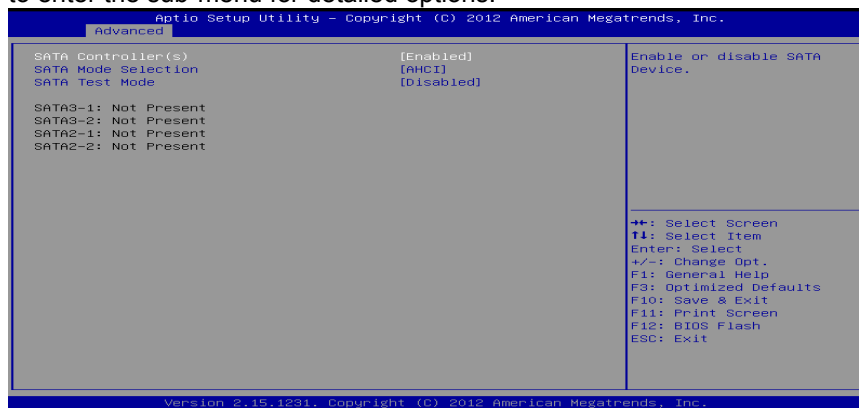
### **Adjacent Cache Line Prefetch**

This item enables or disables the Mid Level Cache (L2) prefetching of adjacent cache lines.

Options: Enabled (Default) / Disabled

### **SATA Configuration**

The BIOS will automatically detect the presence of SATA devices. There is a sub-menu for each SATA device. Select a device and press <Enter> to enter the sub-menu for detailed options.



#### **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.

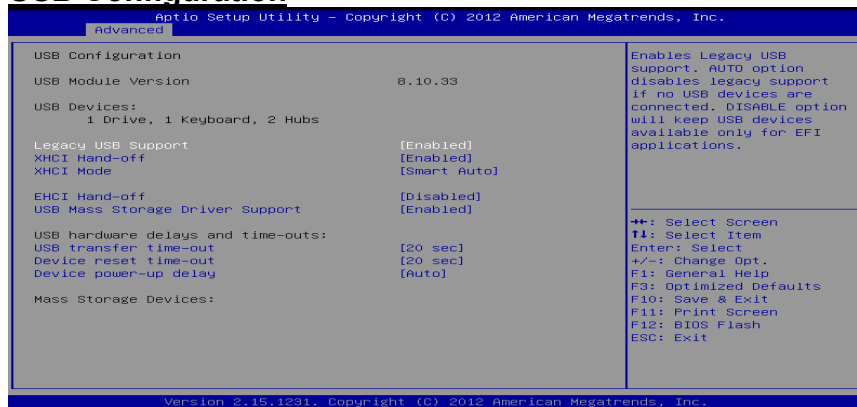
Options: AHCI (Default) / IDE

#### **SMART Self Test**

This item runs SMART Self Test on all HDDs during POST.

Options: Disabled (Default) / Enabled

### USB Configuration



#### Legacy USB Support

The item allows you to enable Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.

Options: Enabled (Default) / Disabled / Auto

#### XHCI Hand-off

This is a workaround for OSes without XHCI hand-off support. This XHCI ownership change should be claimed by XHCI driver.

Options: Enabled (Default) / Disabled

#### XHCI Mode

The item selects Mode of operation of xHCI controller.

Options: Smart Auto (Default) / Auto / Enabled / Disabled / Manual

#### EHCI Hand-off

This is a workaround for OSes without EHCI hand-off support. This EHCI ownership change should be claimed by EHCI driver.

Options: Disabled (Default) / Enabled

#### USB Mass Storage Driver Support

The item allows you to enable or disable USB Mass Storage Driver Support.

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

*Note: The following items appear only when you set the **Device power-up delay** function to [Manual]*

### Device power-up delay in seconds

Delay range is 1 ~ 40 seconds, in one second increments.

Options: 5 (Default)

### Mass Storage Devices

Options: Auto (Default) / Floppy / Forced FDD / Hard Disk / CD-ROM

## 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(°C)

When CPU temperature is lower than this value, the CPU fan will keep lowest RPM.

Options: 10 (°C) (default)

### Fan Ctrl On(°C)

When CPU temperature is higher than this value, the CPU fan controller will turn on.

Options: 20 (°C) (Default)

### Fan Ctrl Start Value

This item sets CPU FAN Start Speed Value.

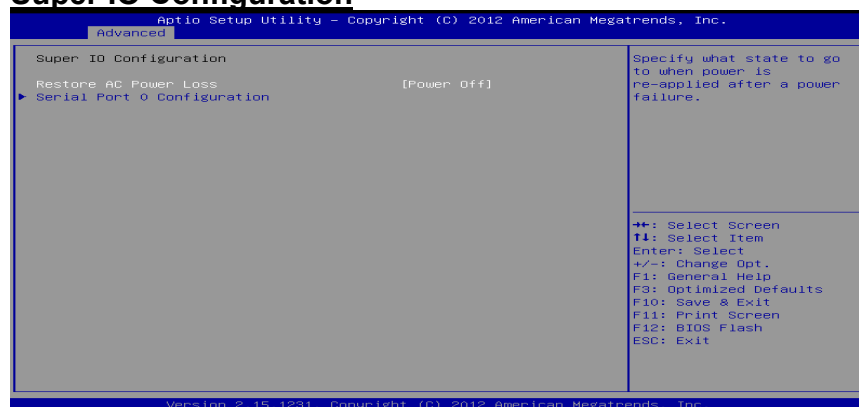
Options: 50 (Default)

### Fan Ctrl Sensitive

The bigger the numeral is, the higher the FAN speed is.

Options: 30 (Default)

## Super IO Configuration



### Restore AC Power Loss

Specify what state to go to when power is re-applied after a power failure.

Options: Power Off (default) / Power On / Last State

## H81M-IDE UEFI BIOS Manual

### Serial Port 0 Configuration

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.	
Advanced	
Serial Port 0 Configuration	
Serial Port	[Enabled]
Device Settings	IO=3F8h; IRQ=4;
Change Settings	[Auto]
Enable or Disable Serial Port (COM)	
++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit	
Version 2.15.1231. Copyright (C) 2012 American Megatrends, Inc.	

#### 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, 9, 10, 11, 12 / IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12 / IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12 / IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12

### H/W Monitor

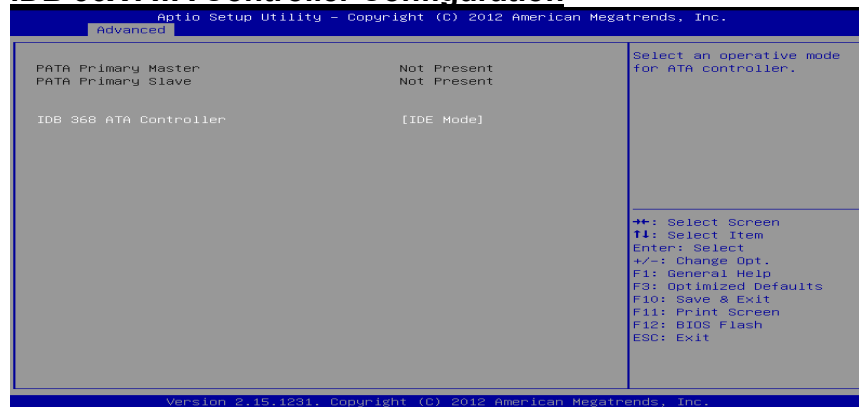
Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.	
Advanced	
Pc Health Status	
ShutDown Temperature	[Disabled]
System temperature	:
CPU temperature	:
CPU FAN Speed	:
SYS FAN Speed	:
CPU VCORE	:
DRAM	:
+12V	:
+ 5V	:
ShutDown Temperature	
++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit	
Version 2.15.1231. Copyright (C) 2012 American Megatrends, Inc.	

#### Shutdown Temperature

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

Options: Disabled (Default) / 70°C/158°F / 75°C/167°F / 80°C/176°F / 85°C/185°F / 90°C/194°F

### IDB 36X ATA Controller Configuration



### IDB 368 ATA Controller

This item selects a operative mode for ATA controller

Options: IDE Mode (Default) / Disabled

### 3 Chipset Menu

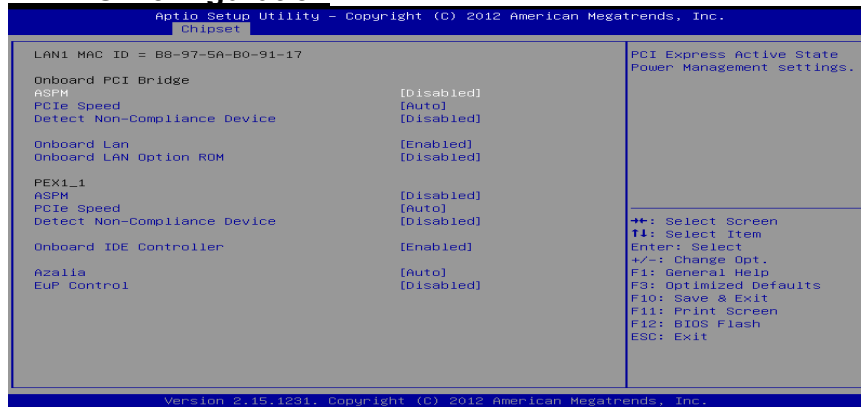
This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components.

#### Notice

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



#### PCH-IO Configuration



### **Onboard PCI Bridge/PEX1\_1**

#### **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

#### **Detect Non-Compliance Device**

Detect Non-Compliance PCI Express Device. If enable, it will take more time at POST time.

Options: Disabled (Default) / Enabled

### **Onboard Lan**

This item enables/disables the Onboard Lan.

Options: Enabled (Default) / Disabled

### **Onboard LAN Option ROM**

This item enables/disables Onboard LAN Option ROM.

Options: Disabled (Default) / Enabled

### **Onboard IDE Controller**

This item enables/disables the Onboard IDE controller.

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.

Options: Auto (Default) / Enabled / Disabled

### **EuP Control**

When EuP is enabled, the system will meet EuP requirement.

Options: Disabled (Default) / Enabled in S5 / Enabled in S4-S5

## H81M-IDE UEFI BIOS Manual

### System Agent (SA) Configuration

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.		
Chipset		
System Agent Bridge Name	Haswell	Check to enable VT-d function on MCH.
VT-d Capability	Supported	
VT-d	[Enabled]	<b>++:</b> Select Screen <b>F1:</b> Select Item <b>Enter:</b> Select <b>+/-:</b> Change Opt. <b>F1:</b> General Help <b>F3:</b> Optimized Defaults <b>F10:</b> Save & Exit <b>F11:</b> Print Screen <b>F12:</b> BIOS Flash <b>ESC:</b> Exit
Primary Display	[Auto]	
Primary PEG	[Auto]	
Primary PCIE	[Auto]	
Internal Graphics	[Auto]	
GTT Size	[2MB]	
Aperture Size	[256MB]	
DVMT Pre-Allocated	[32M]	
DVMT Total Gfx Mem	[256M]	
RC6(Render Standby)	[Enabled]	

Version 2.15.1231, Copyright (C) 2012 American Megatrends, Inc.

#### VT-d

This item enables/disables VT-d function on MCH.

Options: Enabled (Default) / Disabled

#### Primary Display

This item selects which of IGFX/PEG/PCI Graphics device should be Primary Display or select SG for Switchable Gfx.

Options: Auto (Default) / IGFX / PEG / PCIE

#### Primary PEG

This item selects AUTO/PEG11/PEG12 Graphics device should be Primary PEG

Options: Auto (Default) / PEG11/ PEG12

#### Primary PCIE

This item selects AUTO / PCIE1 / PCIE2 / PCIE3 / PCIE4 / PCIE5 / PCIE6 / PCIE7 Graphics device should be Primary PCIE

Options: Auto (Default) / PCIE1 / PCIE2 / PCIE3 / PCIE4 / PCIE5 / PCIE6 / PCIE7

#### Internal Graphics

This item keeps IGD enabled based on the setup options.

Options: Auto (Default) / Disabled / Enabled

#### GTT Size

This item selects the GTT Size.

Options: 2MB (Default) / 1MB

**Aperture Size**

This item selects the Aperture Size.

Options: 256MB (Default) / 128MB / 512MB

**DVMT Pre-Allocated**

This item selects DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

Options: 32M (Default) / 64M / 96M / 128M / 160M / 192M / 224M / 256M / 288M / 320M / 352M / 384M / 416M / 448M / 480M / 512M / 1024M

**DVMT Total Gfx Mem**

This item selects DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.

Options: 256MB (Default) / 128MB / MAX

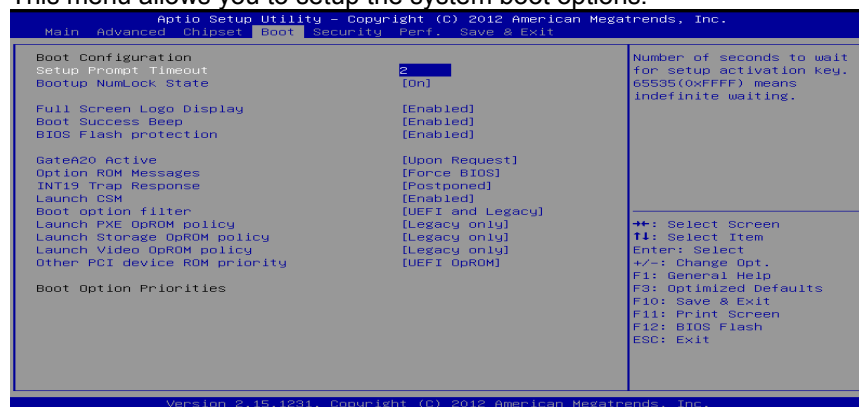
**RC6 (Render Standby)**

This item enables or disables render standby 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

### **Boot Success Beep**

When this item is set to Enabled, BIOS will let user know boot success with beep.

Options: Enabled (Default) / Disabled

### **BIOS Flash protection**

While enabled, it can't flash write and flash erase by SMI.

Options: Enabled (Default) / Disabled

### **GateA20 Active**

Upon Request – FA20 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

**INT19 Trap Response**

BIOS reaction on INT19 trapping by Option ROM: IMMEDIATE – execute the trap right away; POSTPONED – execute the trap during legacy boot.

Options: Postponed (Default) / Immediate

**Launch CSM**

This option controls if CSM will be launched

Options: Enabled (Default) / Disabled

**Boot option filter**

This option controls what devices system can boot to.

Options: UEFI and Legacy (Default) / Legacy only / UEFI only

**Launch PXE OpROM policy**

This option controls the execution of UEFI and Legacy PXE OpROM

Options: Do not launch (Default) / UEFI only / Legacy only

**Launch Storage OpROM policy**

This option controls the execution of UEFI and Legacy Storage OpROM

Options: Legacy only (Default) / UEFI only / Do not launch

**Launch Video OpROM policy**

This option controls the execution of UEFI and Legacy Video OpROM

Options: Legacy only (Default) / UEFI only / Do not launch

**Other PCI device ROM priority**

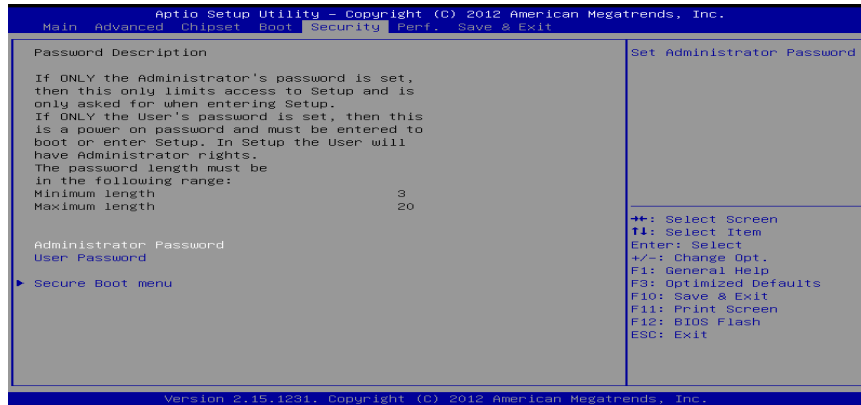
For PCI devices other than Network, Mass storage or video defines which OpROM to launch.

Options: UEFI OpROM (Default) / Legacy OpROM

**Boot Option Priorities**

The items specify the boot device priority sequence from the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system.

# 5 Security Menu



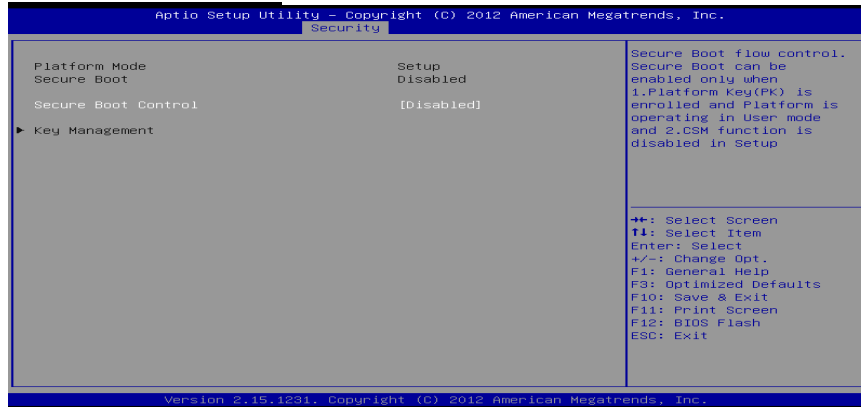
## Administrator Password

This item sets Administrator Password.

## User Password

This item sets User Password.

## Secure Boot Menu



## Secure Boot Control

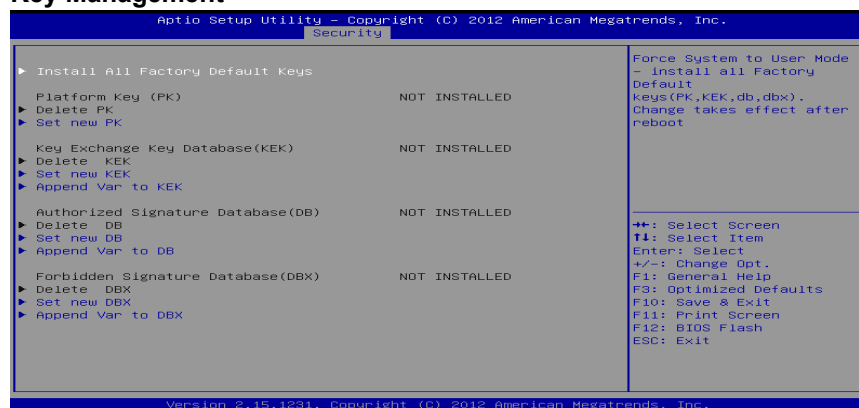
Secure Boot flow control. Secure Boot can be enabled only when 1. Platform Key (PK) is enrolled and Platform is operating in user mode and 2.CSM function is disabled in Setup.

Options: Disabled (Default) / Enabled

## H81M-IDE UEFI BIOS Manual

*Note: The following items appear only when you set the **Secure Boot Control** function to [Enabled]*

### Key Management



#### **Install or Delete All Factory Default Keys**

It allows you to immediately load/clear the default Security Boot keys, Platform key (PK), Key-exchange Key (KEK), Signature database (db), and Revoked Signatures (dbx). The Platform Key (PK) state will change from Unloaded mode to Loaded mode. The settings are applied after reboot or at the next reboot.

#### **Platform Key (PK)**

Delete PK – Allows you to delete the PK file from your system.

Set new PK – Allows you set new PK file.

#### **Key Exchange Key Database (KEK)**

Delete KEK – Allows you to delete the KEK file from your system.

Set new KEK – Allows you set new KEK file.

Append Var to KEK – Allows you append Var to KEK.

#### **Authorized Signature Database (DB)**

Delete DB – Allows you to delete the DB file from your system.

Set new DB – Allows you set new DB file.

Append Var to DB – Allows you append Var to DB.

#### **Forbidden Signature Database (DBX)**

Delete DBX – Allows you to delete the DBX file from your system.

Set new DBX – Allows you set new DBK file.

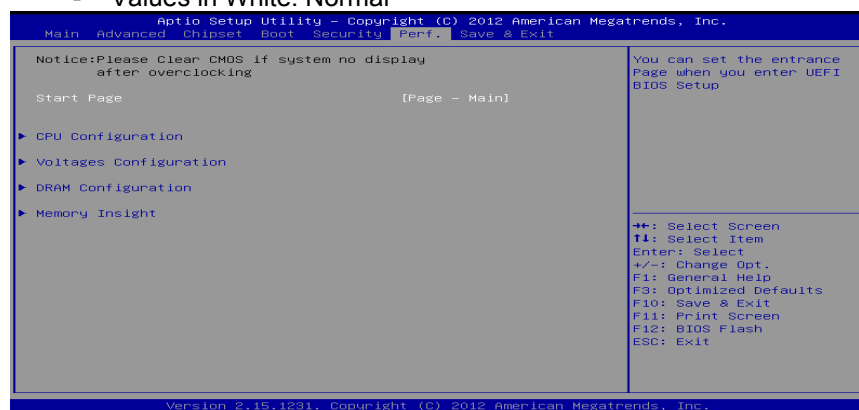
Append Var to DBX – Allows you append Var to DBX.

## 6 Performance Menu

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

- The options and default settings might be different by RAM or CPU models.
- Beware of that setting inappropriate values in items of this menu may cause system to malfunction.
  - Values in Red: Danger
  - Values in Yellow: Warning
  - Values in White: Normal

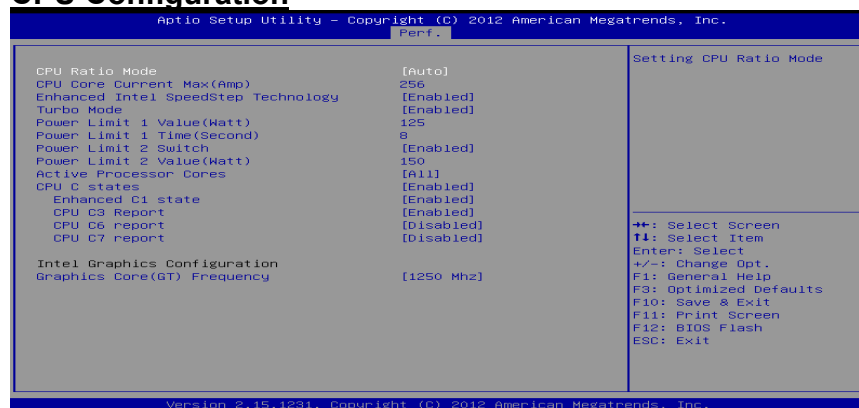


### Start Page

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 – Performance / Page – Save & Exit

### CPU Configuration



#### CPU Ratio Mode

This item sets CPU Ratio Mode.

Options: Auto (Default) / ALL Cores / Per Core / Fixed

#### CPU Core Current Max (Amp)

This item sets the Max instantaneous current allowed at any given time.

Options: 256 (Default)

#### Enhanced Intel SpeedStep Technology

This item enables/disables Enhanced Intel SpeedStep Technology.

Options: Enabled (Default) / Disabled

#### Turbo Mode

This item enables/disables CPU Turbo Mode.

Options: Enabled (Default) / Disabled

#### Power Limit 1 Value (Watt)

This item sets the power limit 1 value (Watt).

Options: 125 (Default)

#### Power Limit 1 Time (Second)

This item sets the power limit 1 time (Second).

Options: 8 (Default)

#### Power Limit 2 Switch

This item enables/disables Power Limit 2 Switch.

Options: Enabled (Default) / Disabled

#### Power Limit 2 Value (Watt)

This item sets the power limit 2 value (Watt).

Options: 150 (Default)

## H81M-IDE UEFI BIOS Manual

### Active Processor Cores

Number of cores to enable in each processor package

Options: All (Default) / 1 / 2 / 3

### CPU C states

This item enables or disables CPU C states.

Options: Enabled (Default) / Disabled

#### Enhanced C1 states

This item enables or disables Enhanced C1 states.

Options: Enabled (Default) / Disabled

#### CPU C3 Report

This item enables or disables CPU C3 report.

Options: Enabled (Default) / Disabled

#### CPU C6 Report

This item enables or disables CPU C6 report.

Options: Disabled (Default) / Enabled

#### CPU C7 Report

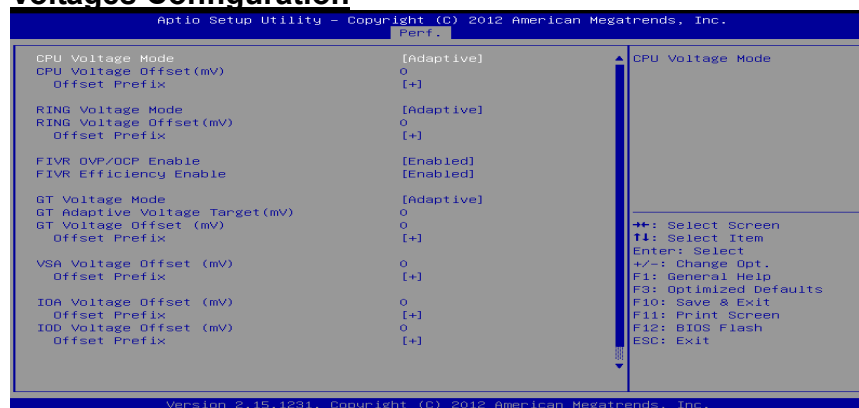
This item enables or disables CPU C7 report.

Options: Disabled (Default) / CPU C7 / CPU C7s

### Graphics Core (GT) Frequency

This item sets Graphics Core (GT) Frequency.

### Voltages Configuration



### CPU Voltage Mode

This item sets CPU Voltage Mode.

Options: Adaptive (Default) / Override

### **CPU Override Voltage Target (mV)**

This item sets CPU Override Voltage Target, 0mV – 2000mV. *(This item appears only when you set the **CPU Voltage Mode** function to [Override])*

### **CPU Voltage Offset (mV)**

This item sets CPU Voltage Offset, -1000mV – 998mV.

### **Offset Prefix**

This item selects the offset value as positive (+) or negative (-).

Options: + (Default) / -

### **RING Voltage Mode**

This item sets RING Voltage Mode.

Options: Adaptive (Default) / Override

### **RING Override Voltage Target (mV)**

This item sets RING Override Voltage Target, 0mV – 1850mV. *(This item appears only when you set the **RING Voltage Mode** function to [Override])*

### **RING Voltage Offset (mV)**

This item sets RING Voltage Offset, -1000mV – 998mV.

### **Offset Prefix**

This item selects the offset value as positive (+) or negative (-).

Options: + (Default) / -

### **FIVR OVP/OCP Enable**

This item sets FIVR OVP/OCP function control.

Options: Enabled (Default) / Disabled

### **FIVR Efficiency Enable**

FIVR Efficiency Enable. If this function be disabled, will not be change until CPU powers down.

Options: Enabled (Default) / Disabled

### **GT Voltage Mode**

This item sets GT Voltage Mode.

Options: Adaptive (Default) / Override

### **GT Override Voltage Target (mV)**

This item sets GT Override Voltage Target, 0mV – 2000mV. *(This item is available only when you set the **GT Voltage Mode** function to [Override])*

### **GT Adaptive Voltage Target (mV)**

This item sets GT Adaptive Voltage Target, 0mV – 2000mV.

### **GT Voltage Offset (mV)**

This item sets GT Voltage Offset, -1000mV – 998mV.

## H81M-IDE UEFI BIOS Manual

### Offset Prefix

This item selects the offset value as positive (+) or negative (-).

Options: + (Default) / -

### VSA Voltage Offset (mV)

This item sets SA Voltage Offset, -1000mV – 998mV.

### Offset Prefix

This item selects the offset value as positive (+) or negative (-).

Options: + (Default) / -

### IOA Voltage Offset (mV)

This item sets IOA Voltage Offset, -1000mV – 998mV.

### Offset Prefix

This item selects the offset value as positive (+) or negative (-).

Options: + (Default) / -

### IOD Voltage Offset (mV)

This item sets IOD Voltage Offset, -1000mV – 998mV.

### Offset Prefix

This item selects the offset value as positive (+) or negative (-).

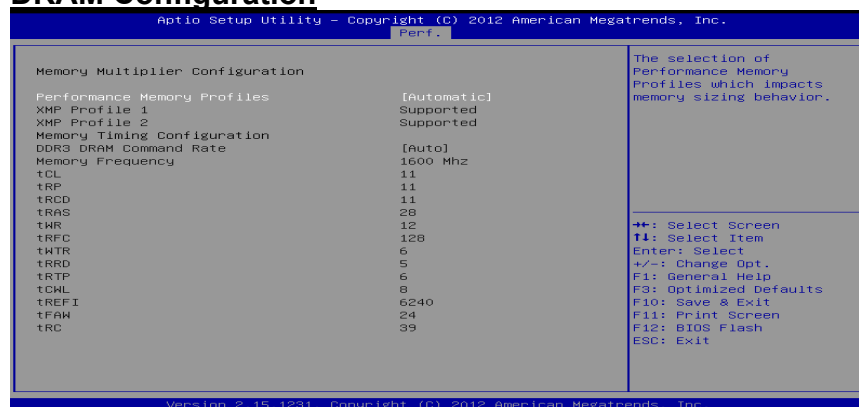
Options: + (Default) / -

Enabled / Disabled

### DDR Voltage

This item sets DDR(V\_SM) Voltage configuration.

### DRAM Configuration



### Performance Memory Profiles

This selection of Performance Memory Profiles impacts memory sizing behavior.

Options: Automatic (Default) / Manual / XMP Profile 1 / XMP Profile 2

*Note: The following items appear only when you set the **Performance Memory Profiles** function to [Manual]*

### DDR3 DRAM Command Rate

This item allows you to set DDR3 DRAM Command Rate

Options: Auto (Default) / 1T / 2T

### Memory Clock Multiplier

This item allows you to set Memory Clock Multiplier.

Options: 1.33 (Default) / 1.00

### Memory Frequency

This item allows you to set Memory Frequency

Options: DDR3 1600Mhz (Default) / DDR3 1067Mhz / DDR3 1333Mhz

### tCL

This item allows you to select CAS Latency Range 4-18

Options: 9 (Default)

### tRP

This item allows you to select Ras Precharge Range 1-38

Options: 9 (Default)

### tRCD

This item allows you to select Row to Col Delay Range 1-38

Options: 9 (Default)

### tRAS

This item allows you to select Ras Active Time 1-586

Options: 24 (Default)

### tWR

This item allows you to select Min Write Recovery Time Range 1-38

Options: 10 (Default)

### tRFC

This item allows you to select Min Refresh Recovery Delay Time 1-9363

Options: 107 (Default)

### tWTR

This item allows you to select Min Internal Write to Read Command Delay Time 1-38

Options: 5 (Default)

## ***H81M-IDE UEFI BIOS Manual***

---

### **tRRD**

This item allows you to select Min Row Active to Row Active Delay Time 1-38

Options: 4 (Default)

### **tRTP**

This item allows you to select Min Internal Read to Precharge Command Delay Time 1-38

Options: 5 (Default)

### **tCWL**

Minimum CAS Write Latency Time (tCWLmin)

Options: 7 (Default)

### **tREFI**

Maximum tREFI Time (Average Periodic Refresh Interval).

Options: 5200 (Default)

### **tFAW**

This item allows you to select Min Four Active Window Delay Time 1-586

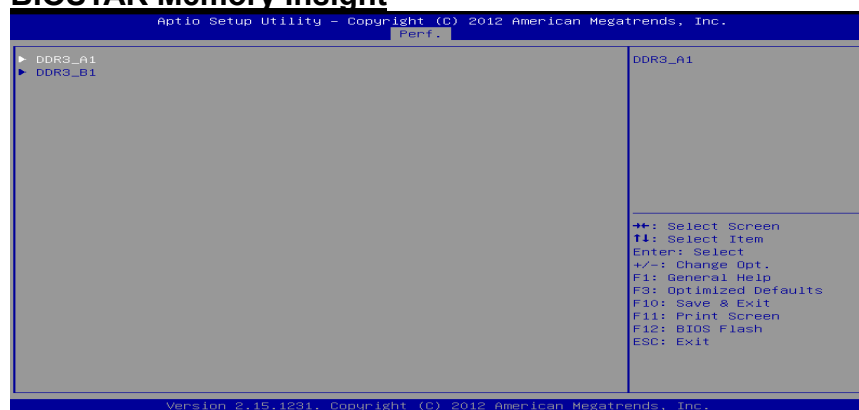
Options: 20 (Default)

### **tRC**

This item allows you to select Min Active to Active/Refresh Delay Time (tRCmin) 1-586

Options: 33 (Default)

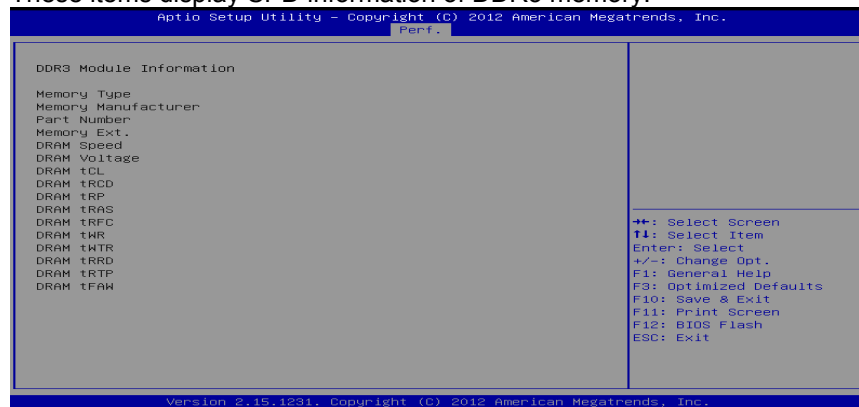
## **BIOSTAR Memory Insight**



## H81M-IDE UEFI BIOS Manual

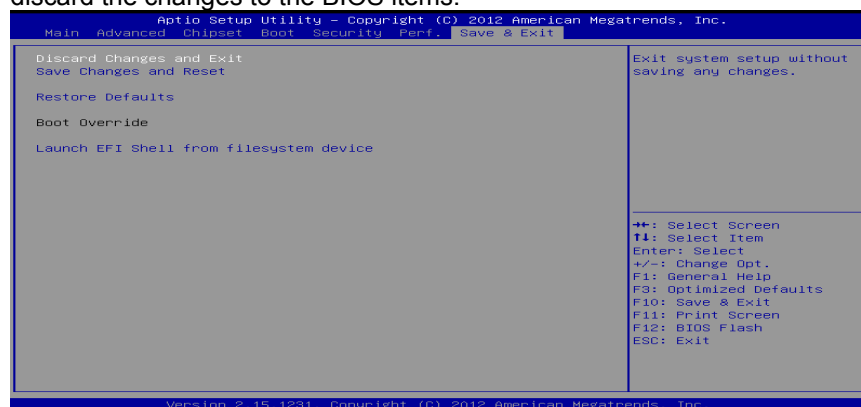
### DDR3 Information

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 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.

### **Launch EFI Shell from filesystem device**

This item attempts to EFI Shell application (Shellx64.efi) from one of the available filesystem devices.