

ASRock®

760GM-HD

User Manual

Version 1.0

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Chapter 1 Introduction

Thank you for purchasing ASRock 760GM-HD motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

In this manual, Chapter 1 and 2 contains the introduction of the motherboard and step-by-step installation guides. Chapter 3 contains the operation guide of the software and utilities. Chapter 4 contains the configuration guide of the BIOS setup.



Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock's website without further notice. If you require technical support related to this motherboard, please visit our website for specific information about the model you are using. You may find the latest VGA cards and CPU support list on ASRock's website as well. ASRock website <http://www.asrock.com>.

1.1 Package Contents

- ASRock 760GM-HD Motherboard (Micro ATX Form Factor)
- ASRock 760GM-HD Quick Installation Guide
- ASRock 760GM-HD Support CD
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x I/O Panel Shield

1.2 Specifications

- Platform**
- Micro ATX Form Factor
 - Solid Capacitor design

- CPU**
- Supports Socket AM3+ processors
 - Supports Socket AM3 processors: AMD Phenom™ II X6 / X4 / X3 / X2 (except 920 / 940) / Athlon II X4 / X3 / X2 / Sempron processors
 - Supports 8-Core CPU
 - Supports AMD OverDrive™ with ACC feature (Advanced Clock Calibration)
 - 4 + 1 Power Phase design
 - Supports CPU up to 125W
 - AMD LIVE!™ Ready
 - Supports AMD's Cool 'n' Quiet Technology
 - FSB 2600 MHz (5.2 GT/s)
 - Supports Untied Overclocking Technology
 - Supports Hyper-Transport 3.0 (HT 3.0) Technology

- Chipset**
- Northbridge: AMD 760G
 - Southbridge: AMD SB710

- Memory**
- Dual Channel DDR3 Memory Technology
 - 2 x DDR3 DIMM Slots
 - Supports DDR3 1800(OC)/1600(OC)/1333/1066 non-ECC, un-buffered memory
 - Max. capacity of system memory: 32GB

- Expansion Slot**
- 1 x PCI Express 2.0 x16 Slot (PCI-E: x16 mode)
 - 1 x PCI Express 2.0 x1 Slot
 - 1 x PCI Slot

- Graphics**
- Integrated AMD Radeon 3000 Graphics
 - DX10 class iGPU, Pixel Shader 4.0
 - Max. shared memory 1024MB
 - Dual graphics output: support HDMI and D-Sub by independent display controllers
 - Supports HDMI 1.4 with max. resolution up to 1920x1080 @ 60Hz

- Supports D-Sub with max. resolution up to 2048x1536 @ 60Hz
- Supports HDCP 1.4 with HDMI 1.4 Port
- Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback with HDMI 1.4 Port

Audio

- 7.1 CH HD Audio (Realtek ALC887 Audio Codec)
- * To configure 7.1 CH HD Audio, it is required to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver.
- Supports Surge Protection
 - ELNA Audio Caps

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111H
- Supports Wake-On-LAN
- Supports Lightning/ESD Protection
- Supports LAN Cable Detection
- Supports Energy Efficient Ethernet 802.3az
- Supports PXE

Rear Panel I/O

- 1 x PS/2 Mouse Port
- 1 x PS/2 Keyboard Port
- 1 x D-Sub Port
- 1 x HDMI Port
- 4 x USB 2.0 Ports (Supports ESD Protection)
- 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED)
- HD Audio Jacks: Line in / Front Speaker / Microphone

Storage

- 4 x SATA2 3.0 Gb/s Connectors, support RAID (RAID 0, RAID 1, RAID 10 and JBOD), NCQ, AHCI and Hot Plug

- Connector**
- 1 x Chassis Intrusion and Speaker Header
 - 1 x CPU Fan Connector (4-pin)
 - 2 x Chassis Fan Connectors (4-pin)
 - 1 x 24 pin ATX Power Connector
 - 1 x 8 pin 12V Power Connector
 - 1 x Front Panel Audio Connector
 - 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) (Supports ESD Protection)

- BIOS Feature**
- AMI Legal BIOS
 - Supports “Plug and Play”
 - ACPI 1.1 Compliance Wake Up Events
 - Supports jumperfree
 - SMBIOS 2.3.1 Support
 - CPU, VCCM, NB Voltage Multi-adjustment

- Hardware Monitor**
- CPU/Chassis temperature sensing
 - CPU/Chassis Fan Tachometer
 - CPU/Chassis Quiet Fan
 - CPU/Chassis Fan multi-speed control
 - CASE OPEN detection
 - Voltage monitoring: +12V, +5V, +3.3V, Vcore

- OS**
- Microsoft® Windows® 10 64-bit / 7 32-bit / 7 64-bit
- * To make sure Win10 19H1 VGA driver works properly, please install OS and drivers from our support CD without LAN cable connected.

- Certifications**
- FCC, CE
 - ErP/EuP ready (ErP/EuP ready power supply is required)

* For detailed product information, please visit our website: <http://www.asrock.com>

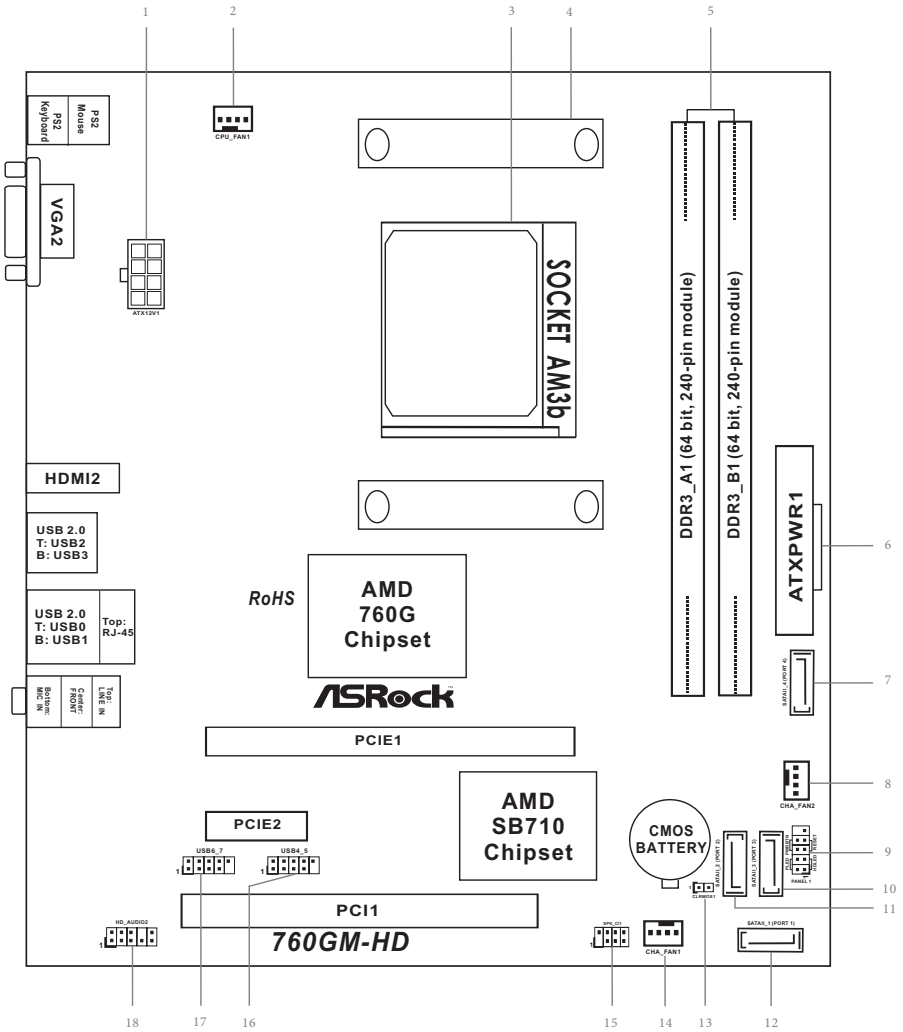


Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.



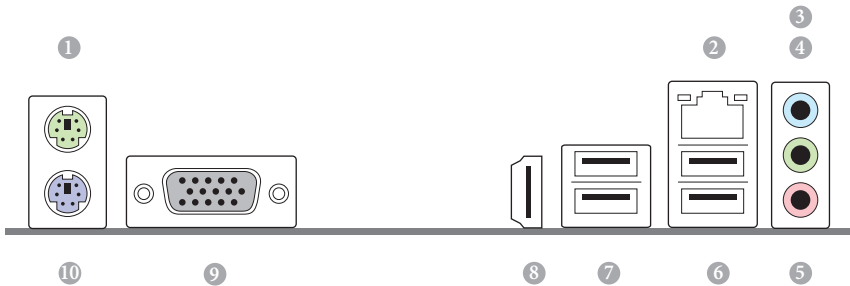
1. Whether 1800/1600MHz memory speed is supported depends on the AM3/AM3+ CPU you adopt. If you want to adopt DDR3 1800/1600 memory module on this motherboard, please refer to the memory support list on our website for the compatible memory modules. ASRock website: <http://www.asrock.com>
2. Due to the operating system limitation, the actual memory size may be less than 4GB for the reservation for system usage under Windows® 32-bit OS. For Windows® 64-bit OS with 64-bit CPU, there is no such limitation.
3. This motherboard does not support RAID mode with HDDs of 3TB and above.

1.3 Motherboard Layout



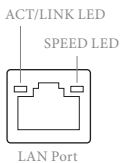
No.	Description
1	ATX 12V Power Connector (ATX12V1)
2	CPU Fan Connector (CPU_FAN1)
3	CPU Socket
4	CPU Heatsink Retention Module
5	2 x 240-pin DDR3 DIMM Slots (DDR3_A1, DDR3_B1)
6	ATX Power Connector (ATXPWR1)
7	SATA2 Connector (SATAII_4 (PORT4))
8	Chassis Fan Connector (CHA_FAN2)
9	System Panel Header (PANEL1)
10	SATA2 Connector (SATAII_3 (PORT3))
11	SATA2 Connector (SATAII_2 (PORT2))
12	SATA2 Connector (SATAII_1 (PORT1))
13	Clear CMOS Jumper (CLRMOS1)
14	Chassis Fan Connector (CHA_FAN1)
15	Chassis Intrusion and Speaker Header (SPK_CI1)
16	USB 2.0 Header (USB4_5)
17	USB 2.0 Header (USB6_7)
18	Front Panel Audio Header (HD_AUDIO2)

1.4 I/O Panel



No.	Description	No.	Description
1	PS/2 Mouse Port	6	USB 2.0 Ports (USB01)
2	LAN RJ-45 Port*	7	USB 2.0 Ports (USB23)
3	Line In (Light Blue)**	8	HDMI Port
4	Front Speaker (Lime)**	9	D-Sub Port
5	Microphone (Pink)**	10	PS/2 Keyboard Port

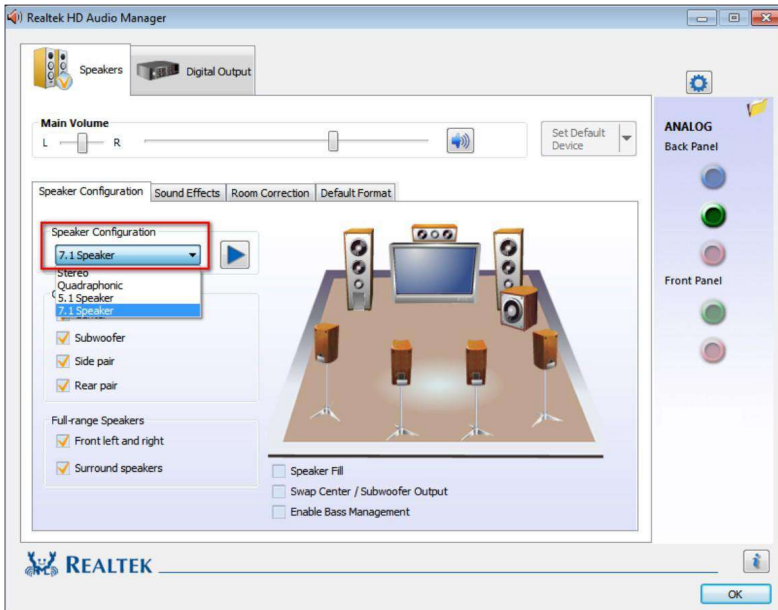
* There are two LEDs on the LAN port. Please refer to the table below for the LAN port LED indications.



Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

** To configure 7.1 CH HD Audio, it is required to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver.

Please set Speaker Configuration to "7.1 Speaker" in the Realtek HD Audio Manager.



Function of the Audio Ports in 7.1-channel Configuration:

Port	Function
Light Blue (Rear panel)	Rear Speaker Out
Lime (Rear panel)	Front Speaker Out
Pink (Rear panel)	Central /Subwoofer Speaker Out
Lime (Front panel)	Side Speaker Out

Chapter 2 Installation

This is a Micro ATX form factor motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

Pre-installation Precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

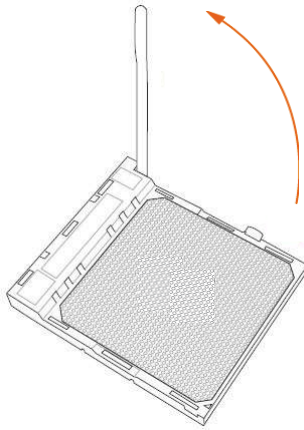
- Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.
- In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly on a carpet. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components.
- Hold components by the edges and do not touch the ICs.
- Whenever you uninstall any components, place them on a grounded anti-static pad or in the bag that comes with the components.
- When placing screws to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

2.1 Installing the CPU

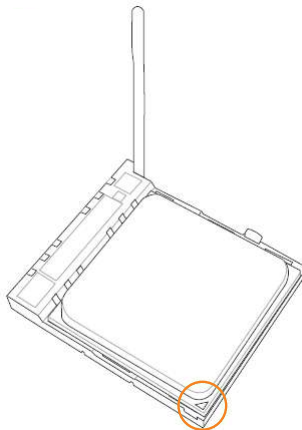


Unplug all power cables before installing the CPU.

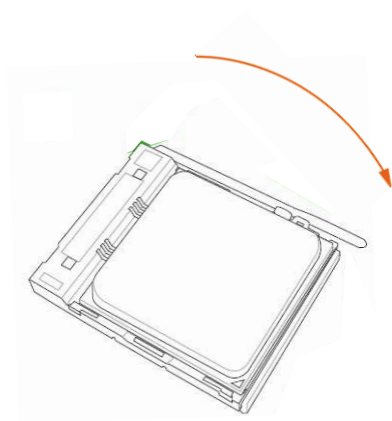
1



2



3



2.2 Installing the CPU Fan and Heatsink

After you install the CPU into this motherboard, it is necessary to install a larger heatsink and cooling fan to dissipate heat. You also need to spray thermal grease between the CPU and the heatsink to improve heat dissipation. Make sure that the CPU and the heatsink are securely fastened and in good contact with each other. Then connect the CPU fan to the CPU FAN connector. For proper installation, please kindly refer to the instruction manuals of the CPU fan and the heatsink.

2.3 Installing Memory Modules (DIMM)

This motherboard provides two 240-pin DDR3 (Double Data Rate 3) DIMM slots, and supports Dual Channel Memory Technology.

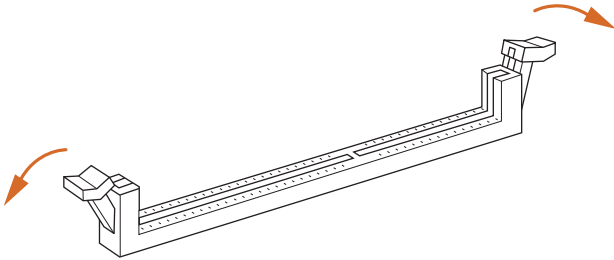


1. For dual channel configuration, you always need to install identical (the same brand, speed, size and chip-type) DDR3 DIMM pairs.
2. It is unable to activate Dual Channel Memory Technology with only one memory module installed.
3. It is not allowed to install a DDR or DDR2 memory module into a DDR3 slot; otherwise, this motherboard and DIMM may be damaged.

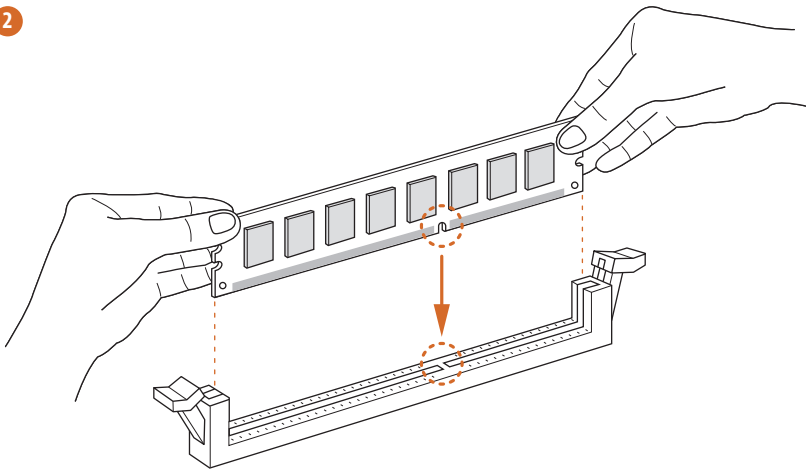


1. The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.
2. The actual color of the DIMM slots may vary with the motherboard version.

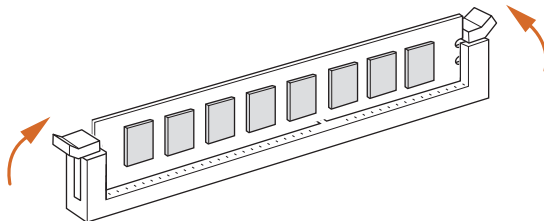
1



2



3



2.4 Expansion Slots (PCI and PCI Express Slots)

There is 1 PCI slot and 2 PCI Express slots on the motherboard.



Before installing an expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.

PCI slot:

The PCI slot is used to install expansion cards that have 32-bit PCI interface.

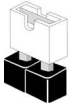
PCIe slots:

PCIe1 (PCIe 2.0 x16 slot) is used for PCI Express x16 lane width graphics cards.

PCIe2 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width cards.

2.5 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on the pins, the jumper is “Short”. If no jumper cap is placed on the pins, the jumper is “Open”.



Short



Open

Clear CMOS Jumper
(CLRMOSE1)
(see p.6, No. 13)



2-pin Jumper

CLRMOSE1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short the pins on CLRMOSE1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, and user default profile will be cleared only if the CMOS battery is removed. Please remember to remove the jumper cap after clearing the CMOS.



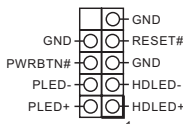
If you clear the CMOS, the case open may be detected. Please adjust the BIOS option “Clear Status” to clear the record of previous chassis intrusion status.

2.6 Onboard Headers and Connectors



Onboard headers and connectors are **NOT** jumpers. Do **NOT** place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage to the motherboard.

System Panel Header
(9-pin PANEL1)
(see p.6, No. 9)



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.



PWRBTN (Power Switch):

Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

RESET (Reset Switch):

Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

PLED (System Power LED):

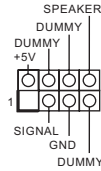
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1/S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

HDLED (Hard Drive Activity LED):

Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

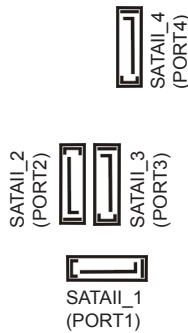
The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Chassis Intrusion and
Speaker Header
(7-pin SPK_CI1)
(see p.6, No. 15)



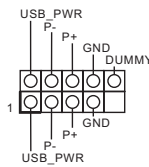
Please connect the
chassis intrusion and the
chassis speaker to this
header.

Serial ATA2 Connectors
(SATAI1_1 (PORT1):
see p.6, No. 12)
(SATAI1_2 (PORT2):
see p.6, No. 11)
(SATAI1_3 (PORT3):
see p.6, No. 10)
(SATAI1_4 (PORT4):
see p.6, No. 7)



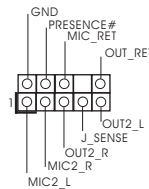
These four SATA2
connectors support SATA
data cables for internal
storage devices with up to
3.0 Gb/s data transfer rate.

USB 2.0 Headers
(9-pin USB4_5)
(see p.6, No. 16)
(9-pin USB6_7)
(see p.6, No. 17)



There are two headers
on this motherboard.
Each USB 2.0 header can
support two ports.

Front Panel Audio Header
(9-pin HD_AUDIO2)
(see p.6, No. 18)



This header is for
connecting audio devices
to the front audio panel.

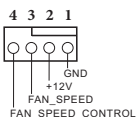


1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.
2. If you use an AC'97 audio panel, please install it to the front panel audio header by the steps below:
 - A. Connect Mic_IN (MIC) to MIC2_L.
 - B. Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
 - C. Connect Ground (GND) to Ground (GND).
 - D. MIC_RET and OUT_RET are for the HD audio panel only. You don't need to connect them for the AC'97 audio panel.
 - E. To activate the front mic, go to the "FrontMic" Tab in the Realtek Control panel and adjust "Recording Volume".

Chassis Fan Connectors

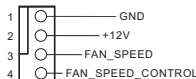
(4-pin CHA_FAN1)

(see p.6, No. 14)



(3-pin CHA_FAN2)

(see p.6, No. 8)

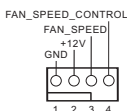


Please connect fan cables to the fan connectors and match the black wire to the ground pin.

CPU Fan Connector

(4-pin CPU_FAN1)

(see p.6, No. 2)



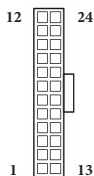
This motherboard provides a 4-Pin CPU fan (Quiet Fan) connector.

If you plan to connect a 3-Pin CPU fan, please connect it to Pin 1-3.

ATX Power Connector

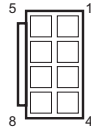
(24-pin ATXPWR1)

(see p.6, No. 6)



This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.

ATX 12V Power
Connector
(8-pin ATX12V1)
(see p.6, No. 1)



This motherboard provides an 8-pin ATX 12V power connector. To use a 4-pin ATX power supply, please plug it along Pin 1 and Pin 5.

Chapter 3 Software and Utilities Operation

3.1 Installing Drivers

The Support CD that comes with the motherboard contains necessary drivers and useful utilities that enhance the motherboard's features.

Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu does not appear automatically, locate and double click on the file "ASRSETUP.EXE" in the Support CD to display the menu.

Drivers Menu


The drivers compatible to your system will be auto-detected and listed on the support CD driver page. Please click **Install All** or follow the order from top to bottom to install those required drivers. Therefore, the drivers you install can work properly.

Utilities Menu

The Utilities Menu shows the application software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

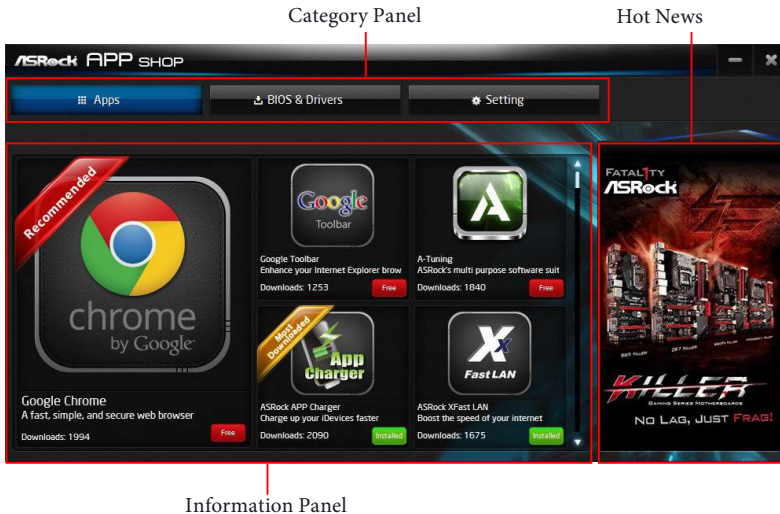
3.2 ASRock Live Update & APP Shop

The ASRock Live Update & APP Shop is an online store for purchasing and downloading software applications for your ASRock computer. You can install various apps and support utilities quickly and easily, and optimize your system and keep your motherboard up to date simply with a few clicks.

Double-click  on your desktop to access ASRock Live Update & APP Shop utility.

**You need to be connected to the Internet to download apps from the ASRock Live Update & APP Shop.*

3.2.1 UI Overview



Category Panel: The category panel contains several category tabs or buttons that when selected the information panel below displays the relative information.

Information Panel: The information panel in the center displays data about the currently selected category and allows users to perform job-related tasks.

Hot News: The hot news section displays the various latest news. Click on the image to visit the website of the selected news and know more.

3.2.2 Apps

When the "Apps" tab is selected, you will see all the available apps on screen for you to download.

Installing an App

Step 1

Find the app you want to install.



The most recommended app appears on the left side of the screen. The other various apps are shown on the right. Please scroll up and down to see more apps listed.

You can check the price of the app and whether you have already installed it or not.


 - The red icon displays the price or "Free" if the app is free of charge.

 - The green "Installed" icon means the app is installed on your computer.

Step 2

Click on the app icon to see more details about the selected app.

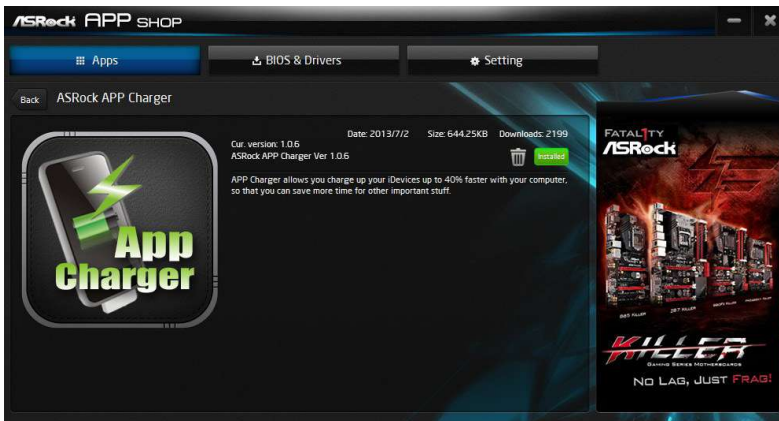
Step 3

If you want to install the app, click on the red icon  to start downloading.




Step 4

When installation completes, you can find the green "Installed" icon appears on the upper right corner.



To uninstall it, simply click on the trash can icon .
*The trash icon may not appear for certain apps.

Upgrading an App

You can only upgrade the apps you have already installed. When there is an available new version for your app, you will find the mark of "New Version"  appears below the installed app icon.



Step 1

Click on the app icon to see more details.

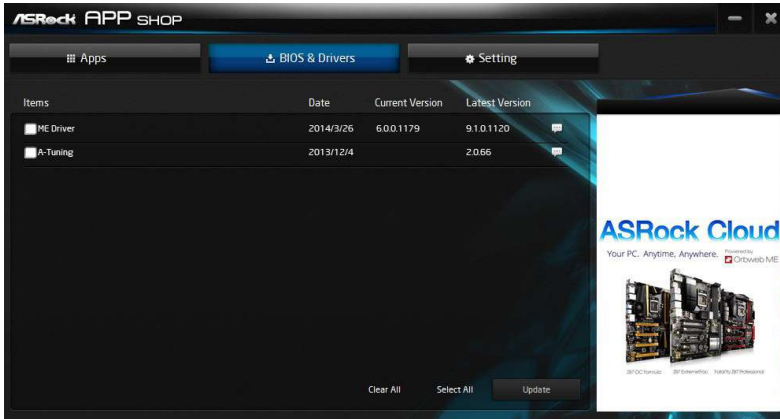
Step 2

Click on the yellow icon  to start upgrading.


3.2.3 BIOS & Drivers

Installing BIOS or Drivers

When the "BIOS & Drivers" tab is selected, you will see a list of recommended or critical updates for the BIOS or drivers. Please update them all soon.



Step 1

Please check the item information before update. Click on  to see more details.

Step 2

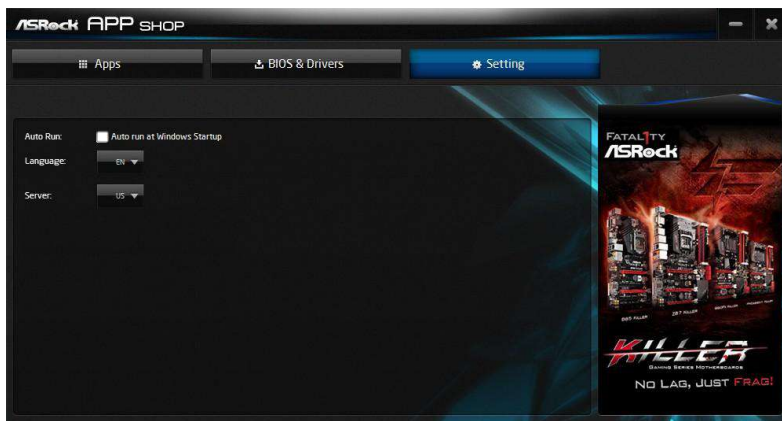
Click to select one or more items you want to update.

Step 3

Click Update to start the update process.

3.2.4 Setting

In the "Setting" page, you can change the language, select the server location, and determine if you want to automatically run the ASRock Live Update & APP Shop on Windows startup.



Chapter 4 BIOS SETUP UTILITY

4.1 Introduction

This section explains how to use the BIOS SETUP UTILITY to configure your system. You may run the BIOS SETUP UTILITY by pressing <F2> or right after you power on the computer, otherwise, the Power-On-Self-Test (POST) will continue with its test routines. If you wish to enter the BIOS SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.



Because the BIOS software is constantly being updated, the following BIOS setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

4.1.1 BIOS Menu Bar

The top of the screen has a menu bar with the following selections:

Main	For setting system time/date information
OC Tweaker	For overclocking configurations
Advanced	For advanced system configurations
H/W Monitor	Displays current hardware status
Boot	For configuring boot settings and boot priority
Security	For security settings
Exit	Exit the current screen or the BIOS Setup Utility

4.1.2 Navigation Keys

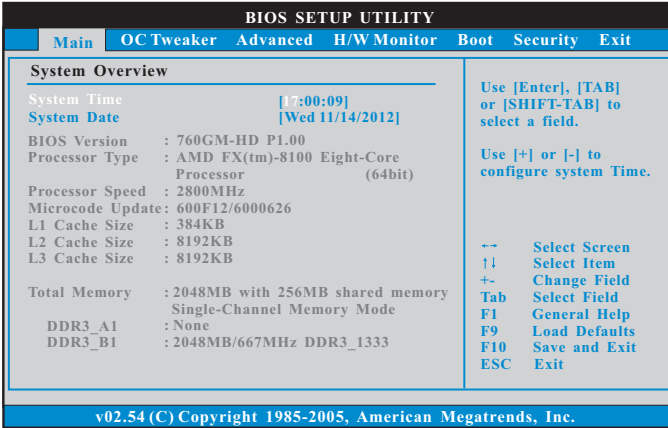
Use <←> key or <→> key to choose among the selections on the menu bar, and use <↑> key or <↓> key to move the cursor up or down to select items, then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.

Please check the following table for the descriptions of each navigation key.

Navigation Key(s)	Description
+ / -	To change option for the selected items
<Tab>	Switch to next function
<PGUP>	Go to the previous page
<PGDN>	Go to the next page
<HOME>	Go to the top of the screen
<END>	Go to the bottom of the screen
<F1>	To display the General Help Screen
<F7>	Discard changes and exit the SETUP UTILITY
<F9>	Load optimal default values for all the settings
<F10>	Save changes and exit the SETUP UTILITY
<ESC>	Jump to the Exit Screen or exit the current screen

4.2 Main Screen

When you enter the BIOS SETUP UTILITY, the Main screen will appear and display the system overview.



System Time [Hour:Minute:Second]

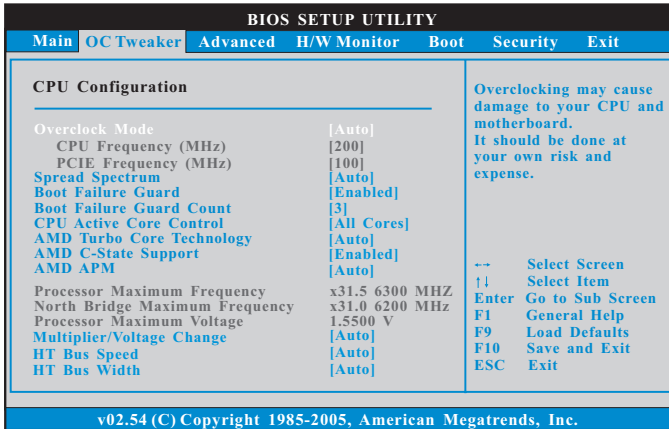
Use this item to specify the system time.

System Date [Day Month/Date/Year]

Use this item to specify the system date.

4.3 OC Tweaker Screen

In the OC Tweaker screen, you can set up overclocking features.



Because the BIOS software is constantly being updated, the following BIOS setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

CPU Configuration

Overclock Mode

Use this to select Overclock Mode. Configuration options: [Auto] and [Manual]. The default value is [Auto].

CPU Frequency (MHz)

Use this option to adjust CPU frequency.

PCIE Frequency (MHz)

Use this option to adjust PCIE frequency.

Spread Spectrum

This item should always be [Auto] for better system stability.

Boot Failure Guard

If the computer fails to boot for a number of times the system automatically restores the default settings.

Boot Failure Guard Count

Configure the number of attempts to boot until the system automatically restores the default settings.

CPU Active Core Control

This allows you to adjust CPU Active Core Control feature. The configuration options depend on the CPU core you adopt. The default value is [Disabled].

AMD Turbo Core Technology

This item appears only when the processor you adopt supports this feature. Use this to select enable or disable AMD Turbo Core Technology. Configuration options: [Auto], [Enabled] and [Disabled]. The default value is [Auto].

AMD C-State Support

This allows you to enable or disable AMD C-State Support. The default value is [Enabled].

AMD APM

Application Power Management (APM) ensures that average power consumption over a thermally significant time period remains at or below the TDP for the CPU mode being used. If [Enabled] is selected, the power consumption is reduced when overclocking.

Processor Maximum Frequency

It will display Processor Maximum Frequency for reference.

North Bridge Maximum Frequency

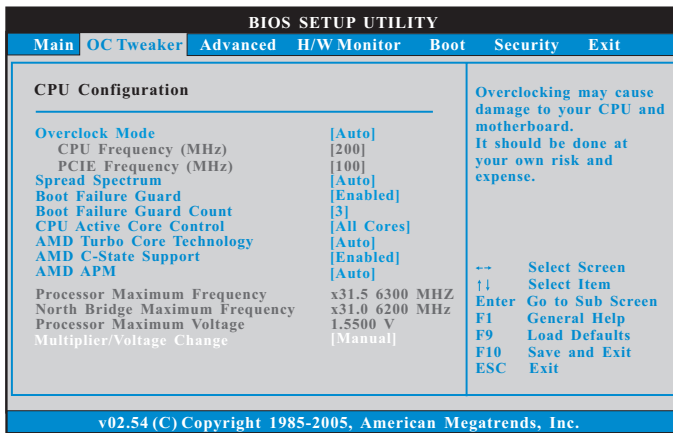
It will display North Bridge Maximum Frequency for reference.

Processor Maximum Voltage

It will display Processor Maximum Voltage for reference.

Multiplier/Voltage Change

This item is set to [Auto] by default. If it is set to [Manual], you may adjust the value of Processor Frequency and Processor Voltage. However, it is recommended to keep the default value for system stability.



CPU Frequency Multiplier

For safety and system stability, it is not recommended to adjust the value of this item.

CPU Voltage

It allows you to adjust the value of CPU voltage. However, for safety and system stability, it is not recommended to adjust the value of this item.

NB Frequency Multiplier

For safety and system stability, it is not recommended to adjust the value of this item.

HT Bus Speed

This feature allows you selecting Hyper-Transport bus speed.

HT Bus Width

This feature allows you selecting Hyper-Transport bus width.

Memory Configuration

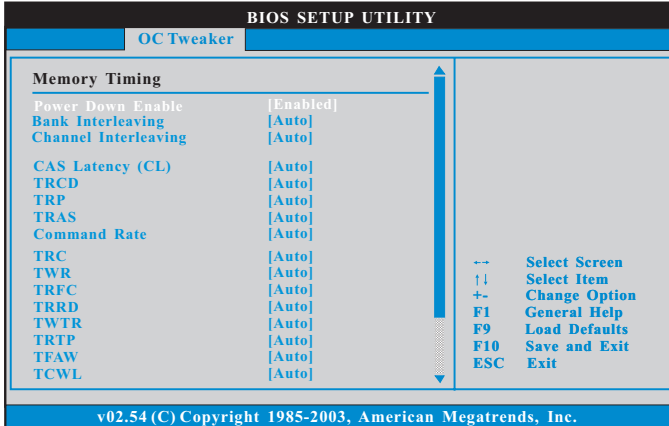
Memory Clock

This item can be set by the code using [Auto]. You can set one of the standard values as listed: [400MHz DDR3_800], [533MHz DDR3_1066], [667MHz DDR3_1333] and [800MHz DDR3_1600].

DRAM Frequency

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assigns appropriate frequency automatically.

Memory Timing



Power Down Enable

Use this item to enable or disable DDR power down mode.

Bank Interleaving

Interleaving allows memory accesses to be spread out over banks on the same node, or across nodes, decreasing access contention.

Channel Interleaving

It allows you to enable Channel Memory Interleaving. Configuration options: [Disabled], [Auto]. The default value is [Auto].

CAS Latency (tCL)

The time between sending a column address to the memory and the beginning of the data in response.

TRCD

Use this item to change TRCD Auto/Manual setting. The default is [Auto].

TRP

Use this item to change TRP Auto/Manual setting. The default is [Auto].

TRAS

Use this item to change TRAS Auto/Manual setting. The default is [Auto].

Command Rate

Use this item to change Command Rate Auto/Manual setting. The default is [Auto].

TRC

Use this item to change TRC Auto/Manual setting. The default is [Auto].

TWR

Use this item to change TWR Auto/Manual setting. The default is [Auto].

TRFC

Use this item to change TRFC Auto/Manual setting. The default is [Auto].

TRRD

Use this item to change TRRD Auto/Manual setting. The default is [Auto].

TWTR

Use this item to change TWTR Auto/Manual setting. The default is [Auto].

TRTP

Use this item to change TRTP Auto/Manual setting. The default is [Auto].

TFAW

Use this item to change TFAW Auto/Manual setting. The default is [Auto].

TCWL

Use this item to change TCWL Auto/Manual setting. The default is [Auto].

Chipset Settings

Onboard GPU Clock Override

This allows you to enable or disable the Onboard GPU Clock Override feature.

Onboard GPU Clock

This option only appears when you enable Onboard GPU ClockOverride.

DRAM Voltage

Use this to configure DRAM Voltage. The default value is [Auto].

+1.1 Voltage

Use this to configure +1.1V Voltage. The default value is [Auto].

+2.5 Voltage

Use this to configure +2.5V Voltage. The default value is [Auto].

VCORE Offset Voltage

Use this to configure Vcore offset Voltage. The default value is [Auto].

VCORE Droop Voltage

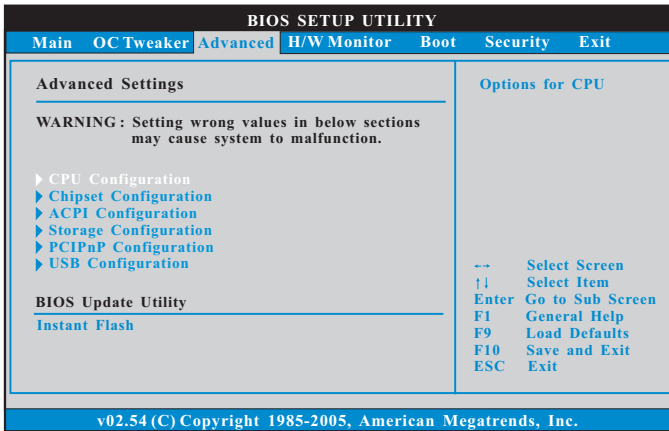
Use this to configure Vcore droop Voltage. The default value is [Auto].

Would you like to save current setting user defaults?

In this option, you are allowed to load and save three user defaults according to your own requirements.

4.4 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, ACPI Configuratio, Storage Configuration, PCIPnP Configuration and USB Configuration.



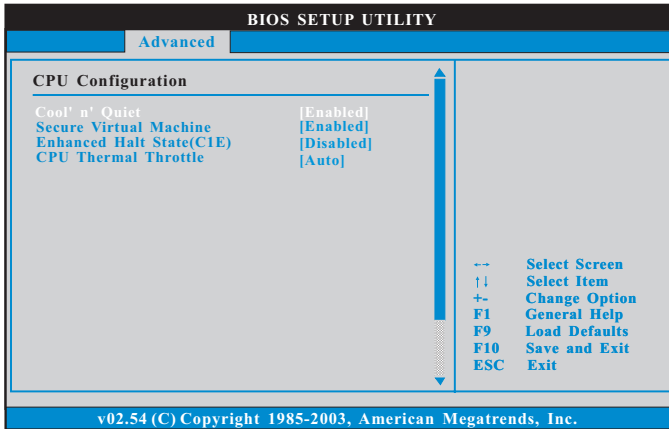
Setting wrong values in this section may cause the system to malfunction.

BIOS Update Utility

Instant Flash

Save BIOS files in your USB storage device and run Instant Flash to update your BIOS.

4.4.1 CPU Configuration



Cool 'n' Quiet

Use this item to enable or disable AMD's Cool 'n' Quiet™ technology. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® OS and want to enable this function, please set this item to [Enabled]. Please note that enabling this function may reduce CPU voltage and memory frequency, and lead to system stability or compatibility issue with some memory modules or power supplies. Please set this item to [Disable] if above issue occurs.

Secure Virtual Machine

When this option is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by AMD-V. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled].

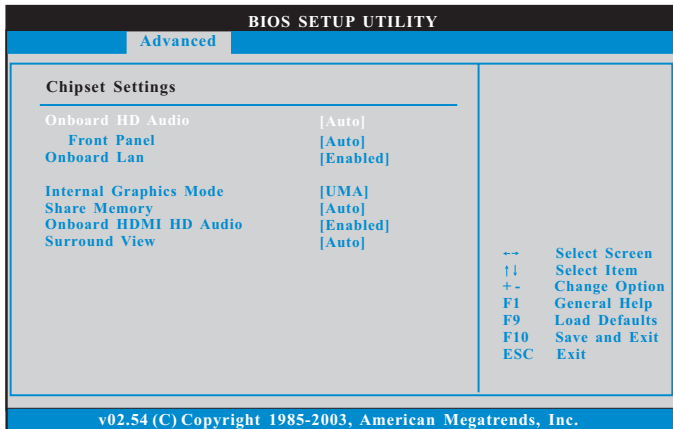
Enhance Halt State (C1E)

All processors support the Halt State (C1). The C1 state is supported through the native processor instructions HLT and MWAIT and requires no hardware support from the chipset. In the C1 power state, the processor maintains the context of the system caches.

CPU Thermal Throttle

Use this item to enable CPU internal thermal control mechanism to keep the CPU from overheated. The default value is [Auto].

4.4.2 Chipset Configuration



Onboard HD Audio

Enable/disable onboard HD audio. Set to Auto to enable onboard HD audio and automatically disable it when a sound card is installed.

Front Panel

Enable/disable front panel HD audio.

Onboard Lan

Enable or disable the onboard network interface controller.

Internal Graphics Mode

This allows you to adjust internal graphics mode. The default value is [UMA].

Configuration options: [UMA] and [Disabled].

Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

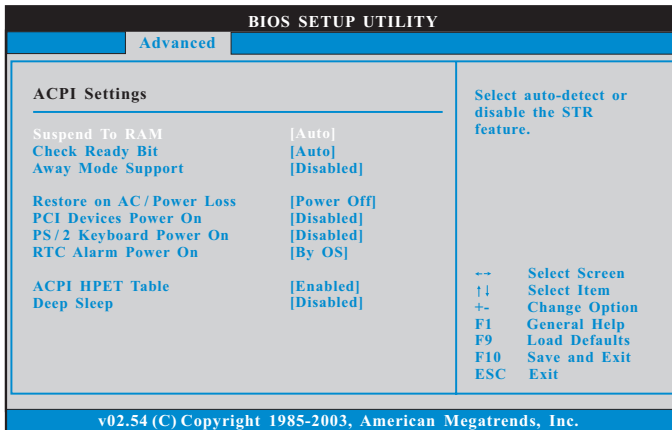
Onboard HDMI HD Audio

Enable audio for the onboard digital outputs.

Surround View

This allows you to enable or disable the Surround View feature.

4.4.3 ACPI Configuration



Suspend to RAM

Select disable for ACPI suspend type S1. It is recommended to select auto for ACPI S3 power saving.

Check Ready Bit

Use this item to enable or disable the feature Check Ready Bit.

Away Mode Support

Use this item to enable or disable Away Mode support under Windows® XP Media Center OS. The default value is [Disabled].

Restore on AC/Power Loss

Select the power state after a power failure. If [Power Off] is selected, the power will remain off when the power recovers. If [Power On] is selected, the system will start to boot up when the power recovers.

PCI Devices Power On

Allow the system to be waked up by a PCI device and enable wake on LAN.

PS/2 Keyboard Power On

Allow the system to be waked up by a PS/2 Keyboard.

RTC Alarm Power On

Allow the system to be waked up by the real time clock alarm. Set it to By OS to let it be handled by your operating system.

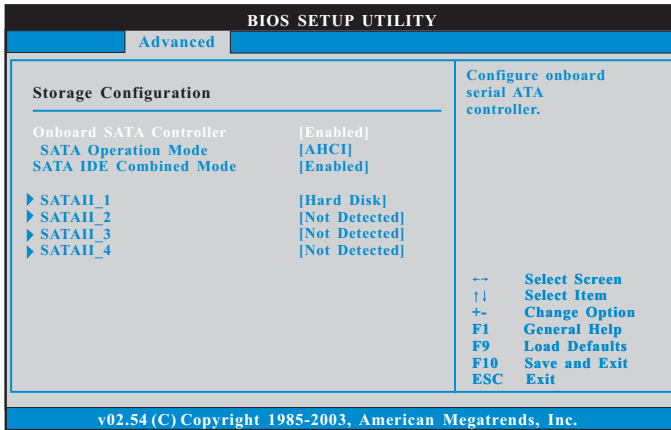
ACPI HPET table

Use this item to enable or disable ACPI HPET Table. The default value is [Enabled]. Please set this option to [Enabled] if you plan to use this motherboard to submit Windows® certification.

Deep Sleep

Configure deep sleep mode for power saving when the computer is shut down

4.4.4 Storage Configuration



Onboard SATA Controller

Enable/disable the SATA controllers.

SATA Operation Mode

IDE: For better compatibility.

AHCI: Supports new features that improve performance.

RAID: Combine multiple disk drives into a logical unit.



If you set this item to RAID mode, it is suggested to install SATA ODD driver on SATAII_3 and SATAII_4 port.

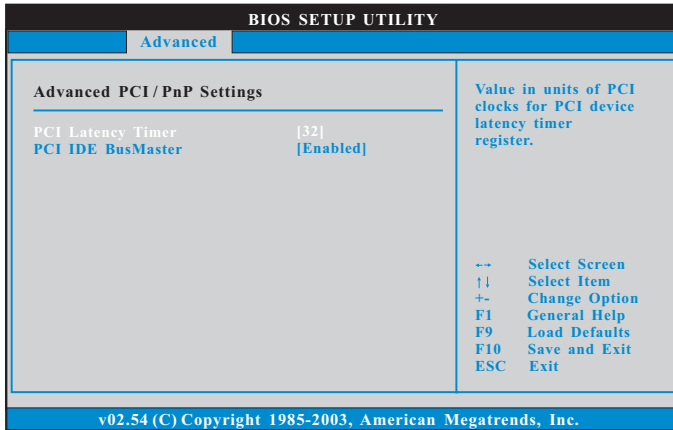
SATA IDE Combined Mode

This item is for SATA3_4 and SATA3_5 ports. Use this item to enable or disable SATA IDE combined mode. The default value is [Enabled].



If you want to build RAID on SATAII_3 and SATAII_4 ports, please disable this item.

4.4.5 PCIPnP Configuration



Setting wrong values in this section may cause the system to malfunction.

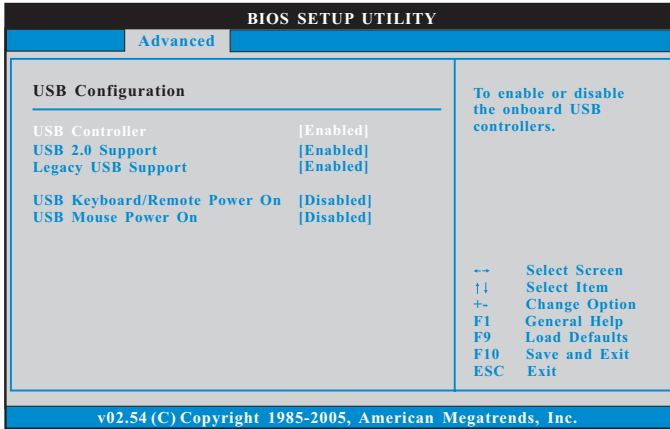
PCI Latency Timer

The default value is 32. It is recommended to keep the default value unless the installed PCI expansion cards specifications require other settings.

PCI IDE BusMaster

Use this item to enable or disable the PCI IDE BusMaster feature.

4.4.6 USB Configuration



USB Controller

Enable or disable all the USB 2.0 ports.

USB 2.0 Support

Use this option to enable or disable support for USB 2.0 devices. The default value is [Enabled].

Legacy USB Support

Enable or disable Legacy OS Support for USB 2.0 devices. If you encounter USB compatibility issues it is recommended to disable legacy USB support. Select BIOS Setup Only to support USB devices under the BIOS setup and Windows/Linux operating systems only.

USB Keyboard/Remote Power On

Allow the system to be waked up by an USB keyboard or remote controller.

USB Mouse Power On

Allow the system to be waked up by an USB mouse.

4.5 Hardware Health Event Monitoring Screen

This section allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, fan speed and voltage.

BIOS SETUP UTILITY						
Main	OC Tweaker	Advanced	H/W Monitor	Boot	Security	Exit
Hardware Health Event Monitoring				Enable/Disable CPU Quiet Fan Function.		
CPU Temperature	:	37°C / 98°F				
M/B Temperature	:	27°C / 80°F				
CPU Fan Speed	:	4722 RPM				
Chassis Fan 1 Speed	:	N/A				
Chassis Fan 2 Speed	:	N/A				
Vcore	:	1.216V				
+ 3.30V	:	3.248V				
+ 5.00V	:	5.136V				
+ 12.00V	:	12.091V				
▶ CPU Fan Setting						
▶ Chassis Fan 1 Setting						
▶ Chassis Fan 2 Setting						
Case Open Feature	:	[Disabled]				
				-->	Select Screen	
				F1	Select Item	
				F1	General Help	
				F9	Load Defaults	
				F10	Save and Exit	
				ESC	Exit	
v02.54 (C) Copyright 1985-2003, American Megatrends, Inc.						

CPU Fan Setting

This allows you to set the CPU fan speed. Configuration options: [Full On] and [Automatic Mode]. The default is value [Full On].

Chassis Fan 1 Setting

This allows you to set the chassis fan 1 speed. Configuration options: [Full On] and [Automatic Mode]. The default is value [Full On].

Chassis Fan 2 Setting

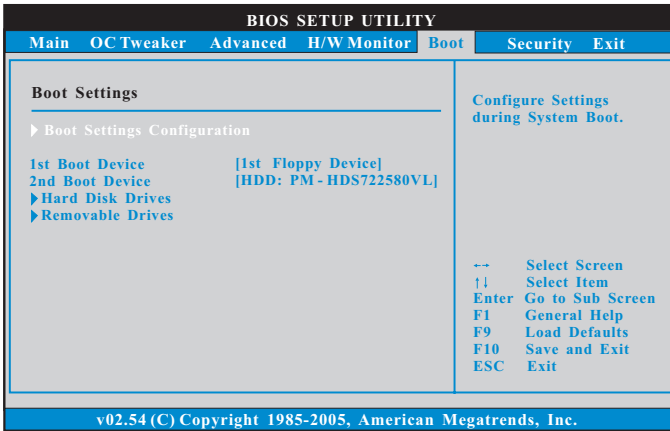
This allows you to set the chassis fan 2 speed. Configuration options: [Full On] and [Manual]. The default is value [Full On].

Case Open Feature

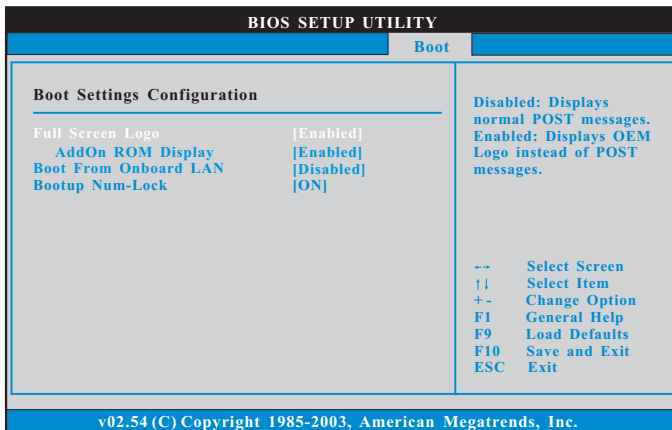
Enable or disable Case Open Feature to detect whether the chassis cover has been removed.

4.6 Boot Screen

This section displays the available devices on your system for you to configure the boot settings and the boot priority.



4.6.1 Boot Screen



Full Screen Logo

Enable to display the boot logo or disable to show normal POST messages.

AddOn ROM Display

Enable AddOn ROM Display to see the AddOn ROM messages or configure the AddOn ROM if you've enabled Full Screen Logo. Disable for faster boot speed.

Boot from Onboard LAN

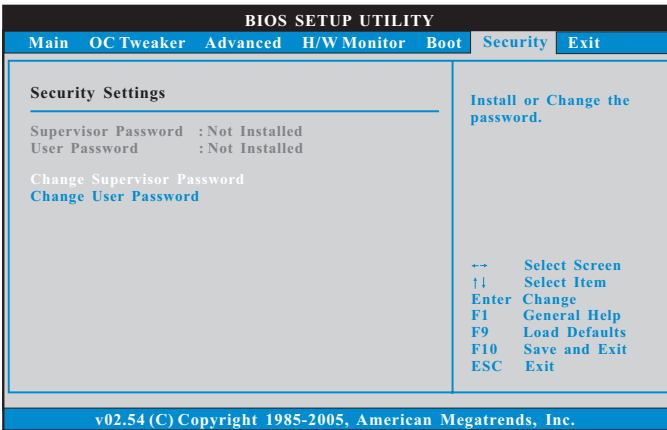
Allow the system to be waked up by the onboard LAN.

Bootup Num-Lock

Select whether Num Lock should be turned on or off when the system boots up.

4.7 Security Screen

In this section you may set or change the supervisor/user password for the system. You may also clear the user password.



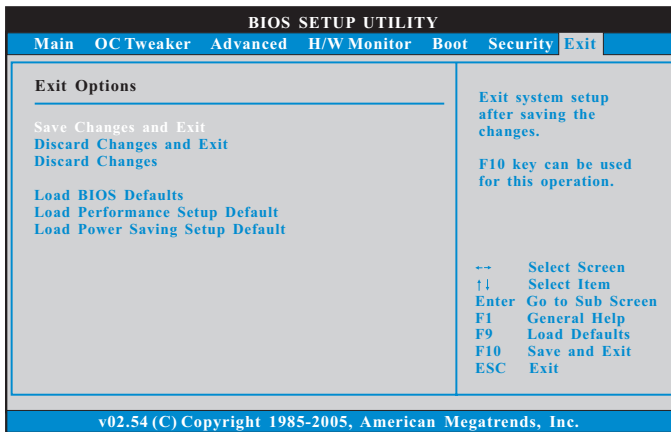
Change Supervisor Password

Change the password for the administrator account. Only the administrator has authority to change the settings in the BIOS Setup Utility. Leave it blank and press enter to remove the password.

Change User Password

Change the password for the user account. Users are unable to change the settings in the BIOS Setup Utility. Leave it blank and press enter to remove the password.

4.8 Exit Screen



Save Changes and Exit

When you select this option the following message, “Save configuration changes and exit setup?” will pop out. Select [OK] to save changes and exit the BIOS SETUP UTILITY.

Discard Changes and Exit

When you select this option the following message, “Discard changes and exit setup?” will pop out. Select [OK] to exit the BIOS SETUP UTILITY without saving any changes.

Discard Changes

When you select this option the following message, “Discard changes?” will pop out. Select [OK] to discard all changes.

Load BIOS Defaults

Load BIOS default values for all options. The F9 key can be used for this operation.

Load Performance Setup Default

This performance setup default may not be compatible with all system configurations. If system boot failure occurs after loading, please resume optimal default settings. F5 key can be used for this operation.

Load Power Saving Setup Default

Load power saving setup default. F6 key can be used for this operation.

Contact Information

If you need to contact ASRock or want to know more about ASRock, you're welcome to visit ASRock's website at <http://www.asrock.com>; or you may contact your dealer for further information. For technical questions, please submit a support request form at <https://event.asrock.com/tsd.asp>

ASRock Incorporation

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U.S.A.

Phone: +1-909-590-8308

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DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



Responsible Party Name: ASRock Incorporation

Address: 13848 Magnolia Ave, Chino, CA91710

Phone/Fax No: +1-909-590-8308/+1-909-590-1026

hereby declares that the product

Product Name : Motherboard

Model Number : 760GM-HD

Conforms to the following specifications:

FCC Part 15, Subpart B, Unintentional Radiators

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name: James

Signature:

A handwritten signature in black ink, appearing to read 'James', written over a horizontal line.

Date: May 12, 2017

EU Declaration of Conformity



For the following equipment:

Motherboard

(Product Name)

760GM-HD / ASRock

(Model Designation / Trade Name)

ASRock Incorporation

(Manufacturer Name)

2F., No.37, Sec. 2, Jhongyang S. Rd., Beitou District, Taipei City 112, Taiwan (R.O.C.)

(Manufacturer Address)

EMC — Directive 2014/30/EU (from April 20th, 2016)

EN 55022:2010/AC:2011 Class B

EN 55024:2010/A1:2015

EN 55032:2012+AC:2013 Class B

EN 61000-3-3:2013

EN 61000-3-2:2014

LVD — Directive 2014/35/EU (from April 20th, 2016)

EN 60950-1 : 2011+ A2: 2013

EN 60950-1 : 2006/A12: 2011

RoHS — Directive 2011/65/EU

CE marking

(EU conformity marking)



ASRock EUROPE B.V.

(Company Name)

Bijsterhuizen 1111 6546 AR Nijmegen The Netherlands

(Company Address)

Person responsible for making this declaration:

(Name, Surname)

A.V.P

(Position / Title)

April 27, 2018

(Date)

P/N: 15G0621700M0AK V1.0