BIOS User Guide

A10N-8800E

BIOSTAR®

WWW.BIOSTAR.COM.TW

BIOS Update

The BIOS can be updated using either of the following utilities:

- BIOSTAR BIOS-FLASHER: Using this utility, the BIOS can be updated from a file on a hard disk, a USB drive (a flash drive or a USB hard drive), or a CD-ROM.
- BIOSTAR BIOS Update Utility: It enables automated updating while in the Windows environment. Using this utility, the BIOS can be updated from a file on a hard disk, a USB drive (a flash drive or a USB hard drive), or a CD-ROM, or from the file location on the Web.

BIOSTAR BIOS-FLASHER

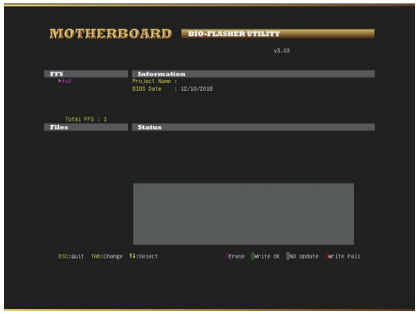
Note

» *This utility only allows storage device with FAT32/16 format and single partition.*
» *Shutting down or resetting the system while updating the BIOS will lead to system boot failure.*

Updating BIOS with BIOSTAR BIOS-FLASHER

1. Go to the website to download the latest BIOS file for the motherboard.
2. Then, copy and save the BIOS file into a USB flash (pen) drive.(Only supported FAT/FAT32 format)
3. Insert the USB pen drive that contains the BIOS file to the USB port.
4. Power on or reset the computer and then press <F12> during the POST process.

5. After entering the POST screen, the BIOS-FLASHER utility pops out. Choose <fs0> to search for the BIOS file.



6. Select the proper BIOS file, and a message asking if you are sure to flash the BIOS file. Click “Yes” to start updating BIOS.

7. A dialog pops out after BIOS flash is completed, asking you to restart the system. Press the <Y> key to restart system.

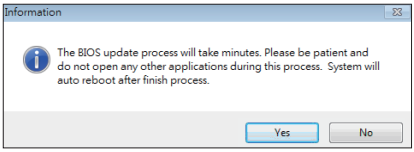
8. While the system boots up and the full screen logo shows up, press <DEL> key to enter BIOS setup.
After entering the BIOS setup, please go to the <Save & Exit>, using the <Restore Defaults> function to load Optimized Defaults, and select <Save Changes and Reset> to restart the computer. Then the BIOS Update is completed.

BIOS Update Utility (through the Internet)

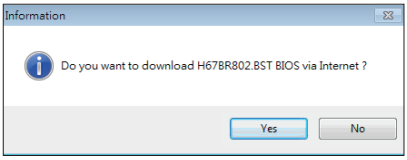
1. Installing BIOS Update Utility from the DVD Driver.
2. Please make sure the system is connected to the internet before using this function.

3. Launch BIOS Update Utility and click the "Online Update" button on the main screen.

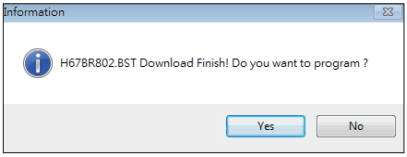
4. An open dialog will show up to request your agreement to start the BIOS update. Click "Yes" to start the online update procedure.



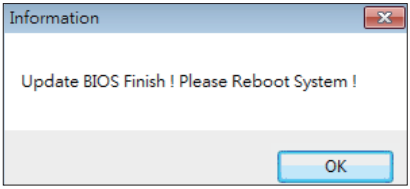
5. If there is a new BIOS version, the utility will ask you to download it. Click "Yes" to proceed.



6. After the download is completed, you will be asked to program (update) the BIOS or not. Click "Yes" to proceed.



7. After the updating process is finished, you will be asked you to reboot the system. Click “OK” to reboot.



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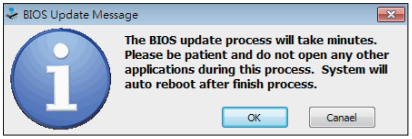
After entering the BIOS setup, please go to the <Save & Exit>, using the <Restore Defaults> function to load Optimized Defaults, and select <Save Changes> and <Reset> to restart the computer. Then, the BIOS Update is completed.

BIOS Update Utility (through a BIOS file)

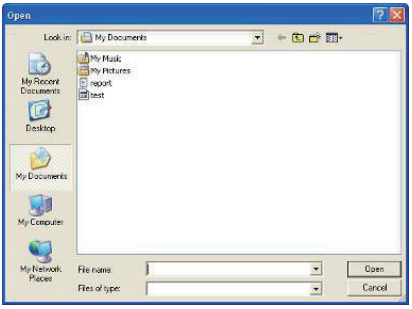
1. Installing BIOS Update Utility from the DVD Driver.
2. Download the proper BIOS from http://www.biostar.com.tw/

3. Launch BIOS Update Utility and click the “Update BIOS” button on the main screen.

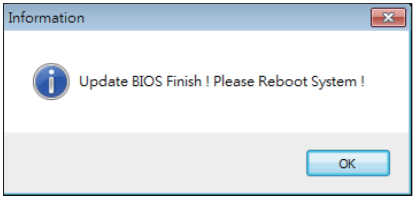
4. A warning message will show up to request your agreement to start the BIOS update. Click “OK” to start the update procedure.



5. Choose the location for your BIOS file in the system. Please select the proper BIOS file, and then click on “Open”. It will take several minutes, please be patient.



6. After the BIOS Update process is finished, click on “OK” to reboot the system.



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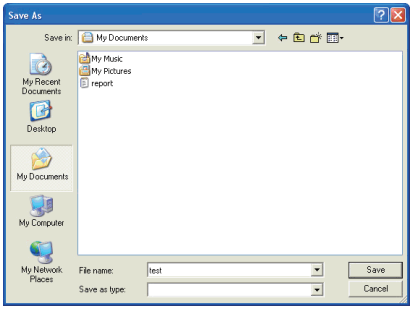
After entering the BIOS setup, please go to the <Save & Exit>, using the <Restore Defaults> function to load Optimized Defaults, and select <Save Changes and Reset> to restart the computer. Then, the BIOS Update is completed.

Backup BIOS

Click the Backup BIOS button on the main screen for the backup of BIOS, and select a proper location for your backup BIOS file in the system, and click “Save”.



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.

Using Setup

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

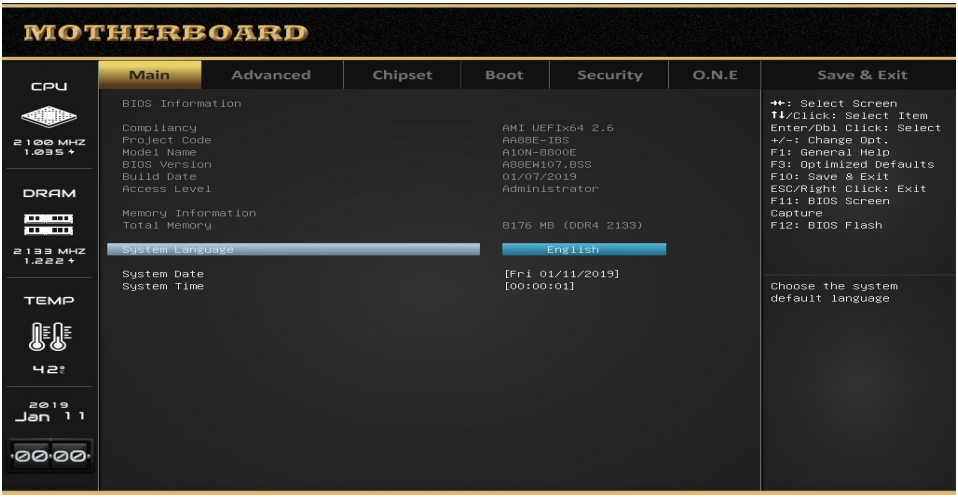
In the UEFI BIOS setup utility, you will see **General Help** description at the top right corner, and this is providing a brief description of the selected item. **Navigation Keys** for that particular menu are at the bottom right corner, and you can use these keys to select item and change the settings.

Note

- *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.

Note

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

ACPI Settings/WakeUp Event control

Enable ACPI Auto Configuration

This item enables or disables BIOS ACPI Auto Configuration.
Options: Disabled (Default) / Enabled

Enable Hibernation

This item enables or disables system ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
Options: Enabled (Default) / Disabled

ACPI Sleep State

This item select ACPI sleep state the system will enter when the SUSPEND button is pressed.
Options: S3 (Suspend to RAM) (Default) / Suspend Disabled

Lock Legacy Resources

This item enables or disables Lock of Legacy Resources.
Options: Disabled (Default) / Enabled

ErP Control

This item enables or disables ErP Control function. When ErP Enabled, system meets ErP requirment. All wake up events do not work except Power Button after power down system(S5).
Options: Disabled (Default) / Enabled

Restore AC Power Loss

The item specify what state to go to when power is re-applied after a power failure.
Options: Power Off (Default) / Power On / Last State

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.

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

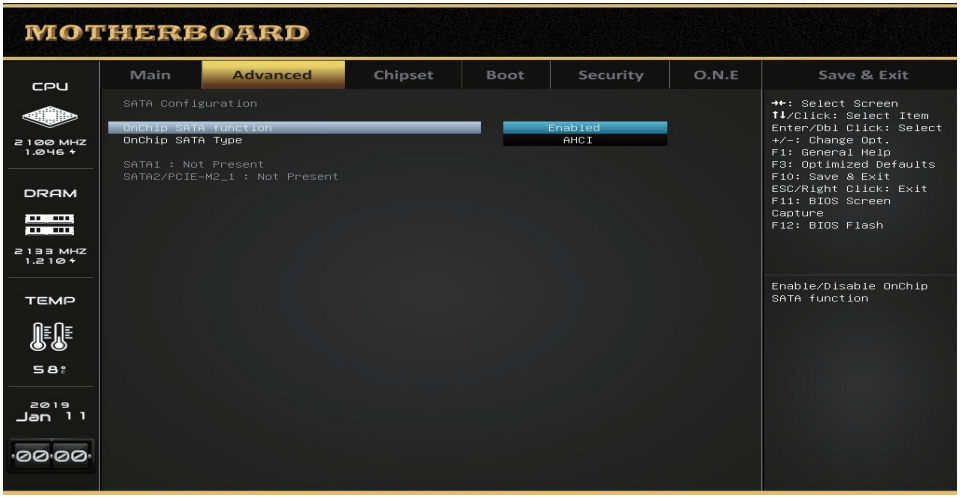
PS2 Mouse PowerOn

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 set USB Device Wakeup from S3/S4.
Options: Enabled (Default) / Disabled

SATA Configuration



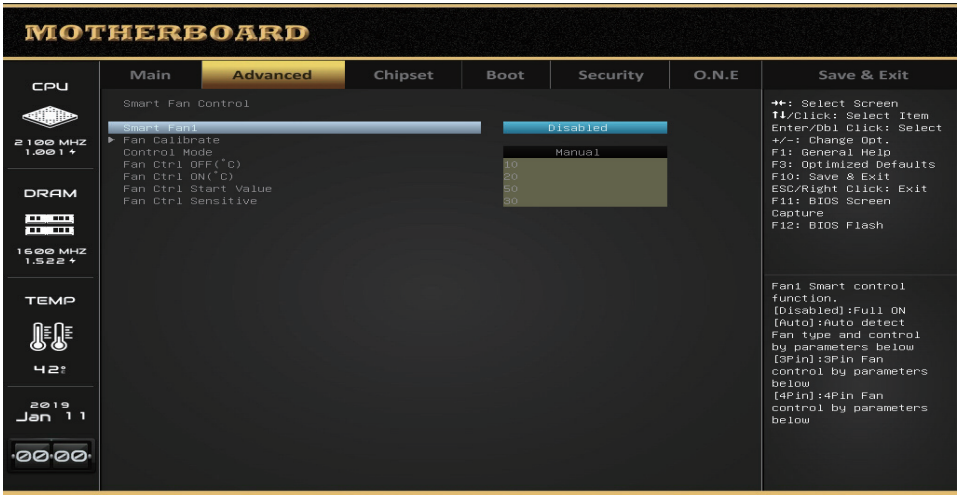
OnChip SATA function

This item enables or disables OnChip SATA function.
Options: Enabled (Default) / Disabled

OnChip SATA Type

This item select OnChip SATA Type.
Options: AHCI (Default) / Native IDE / Legacy IDE

Smart Fan Control



Smart Fan1

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

Note

» *The following items appear only when you set the Smart Fan function to [Auto].*

CPU Fan Calibrate

Press [ENTER] to calibrate CPU Fan speed.

Control Mode

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

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)

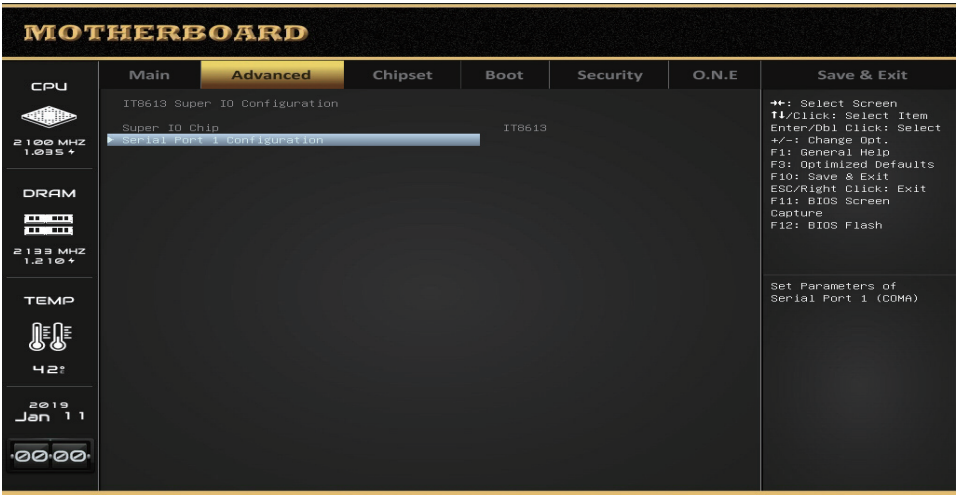
Fan Ctrl Start Value

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

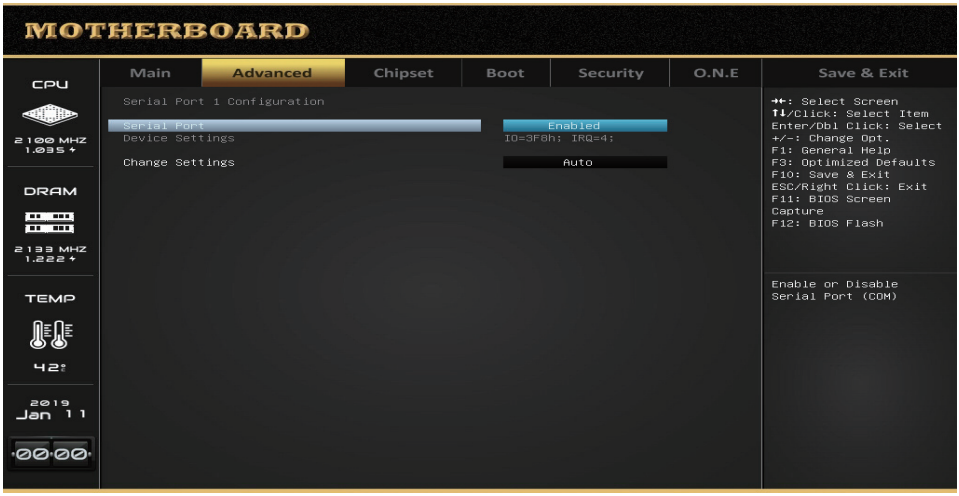
Fan Ctrl Sensitive

Themuneral is bigger, the Fan speed is higher.
Options: 30 (Default)

IT8613 Super IO Configuration



Serial Port 1 Configuration



Serial Port

This item enabled or Disabled Serial Port (COM).

Options: Enabled (Default) / Disabled

Change Settings

This item select an optimal settings 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

PWM Processor Hot

Options: Enabled (Default) / Disabled

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

CPU Configuration

This item shows CPU Information.

PowerNow

This item enables or disables the generation of ACPI _PPC, _PSS, and _PCT objects.
Options: Enabled (Default) / Disabled

PSTATE Adjustment

This item allows you to adjust startup P-state level.
Options: PState 0 (Default) / PState 1 / PState 2 / PState 3 / PState 4 / PState 5 / PState 6 / PState 7

PPC Adjustment

This item allows you to adjust PPC object.
Options: PState 0 (Default) / PState 1 / PState 2

NX Mode

This item enables or disables No-execute page protection Function.
Options: Enabled (Default) / Disabled

SVM Mode

This item enables or disables CPU Virtualization.
Options: Enabled (Default) / Disabled

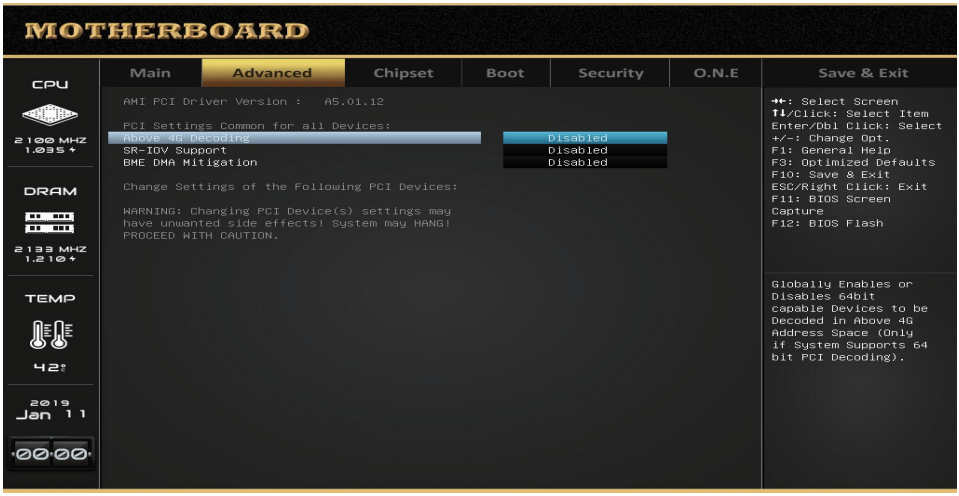
CPB Mode

This item enables or disables Specifies the method of core performance boost enablement.
Options: Auto (Default) / Disabled

C6 Mode

This item enables or disables C6.
Options: Enabled (Default) / Disabled

PCI Subsystem Settings



ABove 4G Decoding

This item enables or disables 64bit capable Devices to be Decoded in Above 4G Address Space (Only if System Supports 64bit PCI Decoding).
Options: Disabled (Default) / Enabled

SR-IOV Support

This item if system has SR-IOV capable PCIe Devices, this option enables or disables Single Root IO Virtualization Support.
Options: Disabled (Default) / Enabled

BME DMA Mitigation

This item Re-enable Bus Master Attribute disabled during Pci enumeration for PCI Bridges after SMM Locked.
Options: Disabled (Default) / Enabled

Network Stack Configuration

Network Stack

This item enables or disables UEFI network stack.
Options: Disabled (Default) / Enabled

Note

» *The following items appear only when you set the Network Stack function to [Enabled]*

IPv4 PXE Support

This item enables or disables IPv4 PXE Boot Support. If disabled IPv4 PXE boot option will not be created.
Options: Disabled (Default) / Enabled

IPv4 HTTP Support

This item enables or disables IPv4 HTTP Boot Support. If disabled IPV4 HTTP boot option will not be created.
Options: Disabled (Default) / Enabled

IPv6 PXE Support

This item enables or disables IPv6 PXE Boot Support. If disabled IPv6 PXE boot option will not be created.
Options: Disabled (Default) / Enabled

IPv6 HTTP Support

This item enables or disables IPv6 HTTP Boot Support. If disabled IPv6 HTTP boot option will not be created.
Options: Disabled (Default) / Enabled

PXE boot wait time

Wait time to press ESC key to abort the PXE boot.

Media detect count

Number of times presence of media will be checked.

CSM Configuration

CSM Support

This option enables or disables CSM support.
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 set display mode for Option ROM.
Options: Force BIOS (Default) / Keep Current

INT19 Trap Response

This item BIOS reaction on INT19 trapping by Option ROM: IMMEDIATE - execute the trap right away ; POSTPONED - execute the trap during legacy boot.
Options: Immediate (Default) / Postponed

Boot option filter

This option controls Legacy/UEFI ROMs priority.
Options: UEFI and Legacy (Default) / Legacy only / UEFI only

Network

This option controls the execution of UEFI and Legacy PXE OpROM
Options: Legacy (Default) / UEFI / Do not launch

Storage

This option controls the execution of UEFI and Legacy Storage OpROM
Options: Legacy (Default) / UEFI / Do not launch

Video

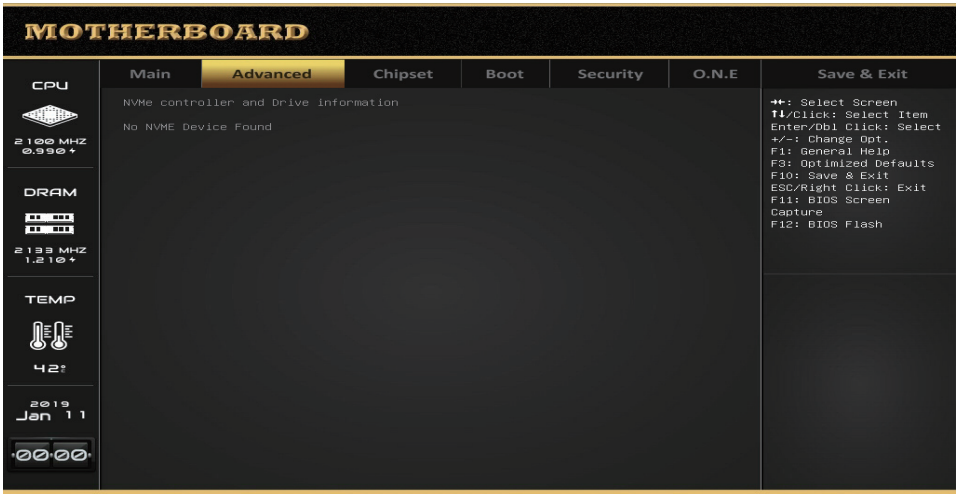
This option controls the execution of UEFI and Legacy Video OpROM
Options: Legacy (Default) / UEFI / Do not launch

Other PCI device ROM priority

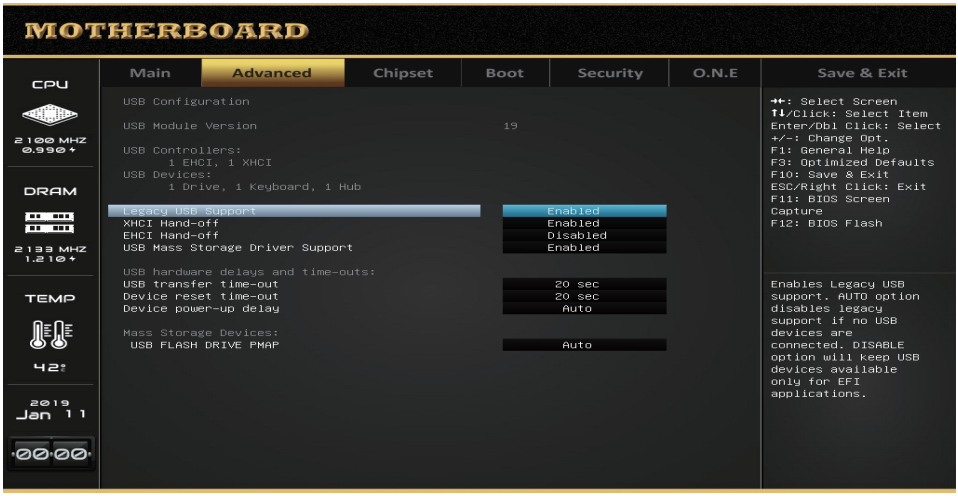
This item for PCI devices other than Network, Mass storage or Video defines which OpROM to launch.
Options: Legacy (Default) / Do not launch / UEFI

NVMe Configuration

The item shows NVMe controller and driver information.



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. 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

USB Mass Storage Driver Support

This item enables or disables USB Mass Storage Driver Support.
Options: Disabled (Default) / Enabled

USB transfer time-out

This item-out value for control, Bulk, and Interrupt transfers.
Options: 20 sec (Default) / 1 sec / 5 sec / 10 sec

Device reset time-out

This item allows you to set USB mass storage device start Unit command time-out.
Options: 20 sec (Default) / 10 sec / 30 sec / 40 sec

Device power-up delay

This item maximum time the device will take before it properly reports itself to the Host controller. “Auto”uses default value: for a Root port it is 100 ms, 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)

USB FLASH DRIVE PMAP

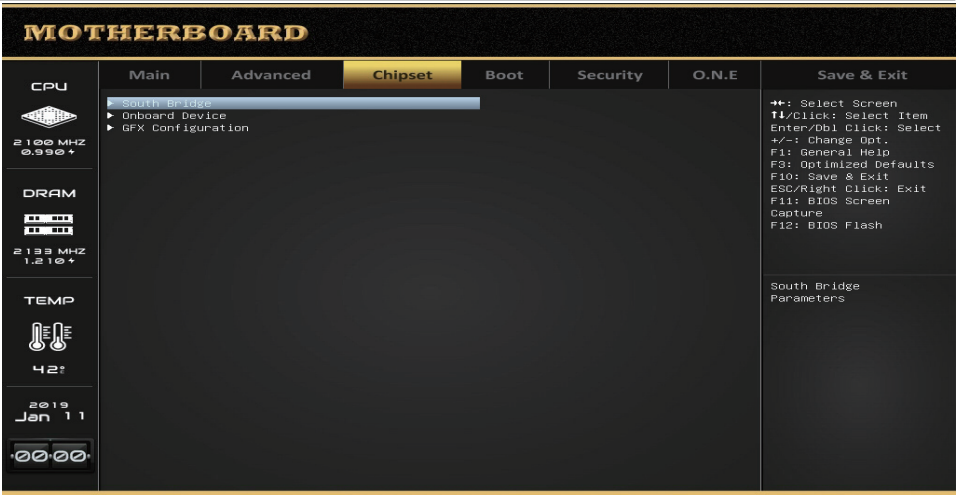
This item Mass storage device emulation type. ‘AUTO‘ enumerates devices according to their media format. Optical drives are emulated as ‘CDROM’ , drives with no media will be emulated according to a drive type.
Options: Auto (Default) / Floppy / Forced FDD / Hard Disk / CD-ROM

3. Chipset Menu

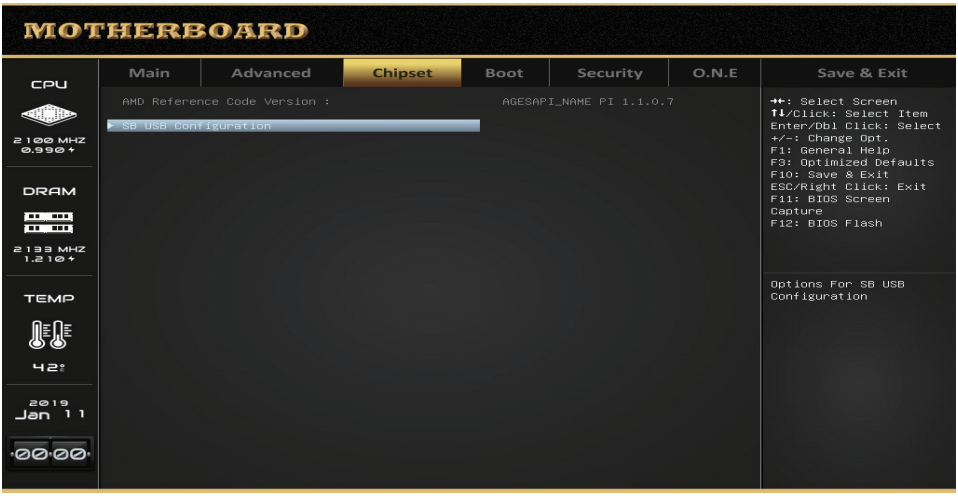
This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components.

Note

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



South Bridge



South Bridge

XHCI Controller

Options: Enabled (Default) / Disabled

XHCI Port 0/1/2/3

Options: Enabled (Default) / Disabled

EHCI HC(Bus 0 Dev 18 Fn 0)

Options: Enabled (Default) / Disabled

USB Internal Port 0

Options: Enabled (Default) / Disabled

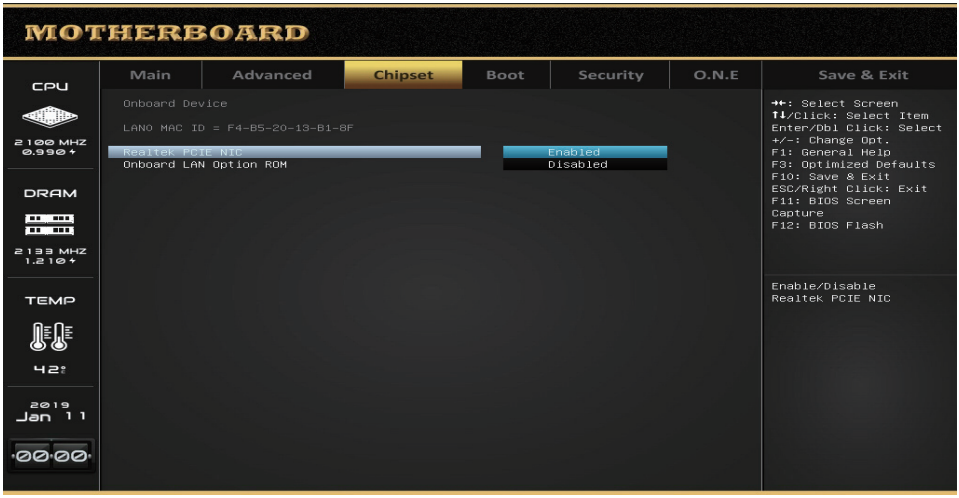
HUB Port 0/1/2/3

Options: Enabled (Default) / Disabled

USB Internal Port 1

Options: Enabled (Default) / Disabled

Onboard Device



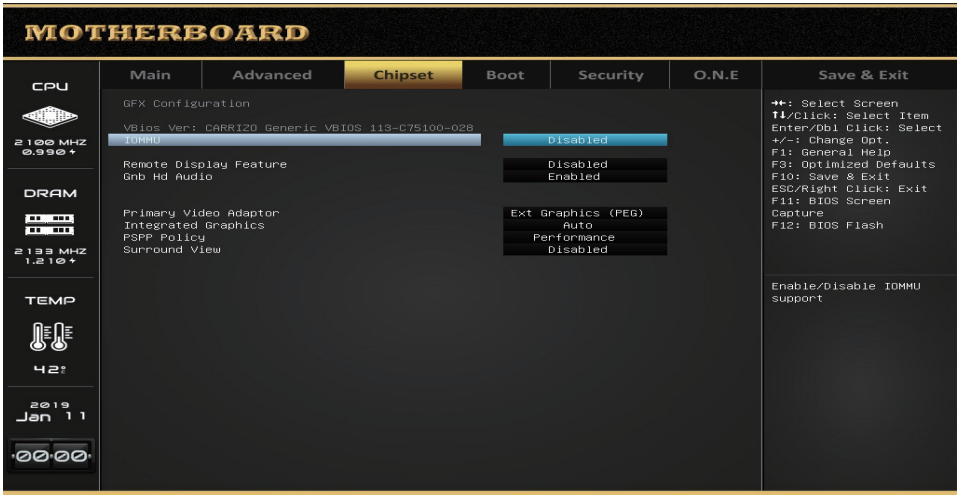
Realtek PCIE NIC

This item enables or disables Realtek PCIE NIC.
Options: Enabled (Default) / Disabled

Onboard LAN Option ROM

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

GFX Configuration



IOMMU

This item enables or disables IOMMU support.
Options: Disabled (Default) / Enabled

Remote Display Feature

This item enables or disables Remote Display Feature.
Options: Disabled (Default) / Enabled

Gnb Hd Audio

This item enables or disables Gnb Hd Audio.
Options: Enabled (Default) / Disabled

Primary Video Adaptor

This item allows you to select Primary Video Adaptor.
Options: Ext Graphics (PEG) (Default) / Int Graphics (IGD)

Integrated Graphics

This item allows you to controller the Integrated Graphics function.
Options: Force (Default) / Auto / Disabled

PSPP Policy

This item allows you to set PCIe speed power policy.
Options: Performance (Default) / Disabled / Balanced-High / Balanced-Low / Power Saving

Surround View

This item support multi-display function.
Options: Disabled (Default) / Enabled

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 Option #1/#2

This item allows you to set Boot Option #1/#2.

Fast Boot

This item allows you to enable/disable boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.
Options: Disabled (Default) / Enabled

Note

» *The following items appear only when you set the Fast Boot function to [Enabled]*

SATA Support

Options: Last Boot HDD Only (Default) / All Sata Devices

VGA Support
If Auto, only install Legacy OpRom with Legacy OS and logo would NOT be shown during post. EFI driver will still installed with EFI OS.
Options: EFI Driver (Default) / Auto

USB Support
If Disabled, all USB devices will NOT be available until after OS boot. If Partial Initial, USB Mass Storage and specific USB port/device will NOT be available before OS boot. If Enabled, all USB devices will be available in OS and Post.
Options: Full Initial (Default) / Disabled / Partial Initial

PS2 Devices Support
If Disabled, PS2 devices will be skipped.
Options: Enabled (Default) / Disabled

Network Stack Driver Support
If Disabled, Network Stack Drivers will be skipped.
Options: Disabled (Default) / Enabled

Redirection Support
If Disabled, Redirection function will be disabled.
Options: Disabled (Default) / Enabled

Boot Success Beep

This item BIOS boot post beep message.
Options: Enabled (Default) / Disabled

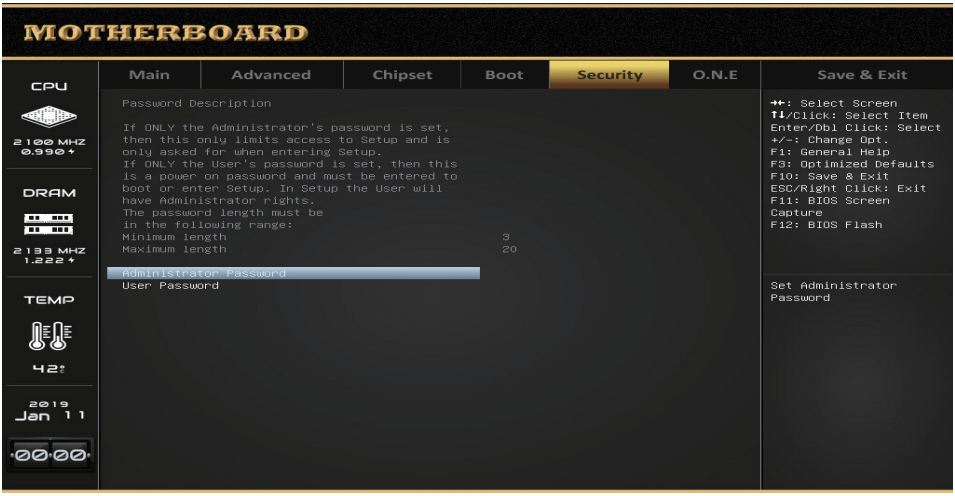
BIOS Flash protection

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

NEW Boot Option Policy

This item allows you to controls the placement of newly detected UEFI boot options.
Options: Default (Default) / Place First / Place Last

5. Security Menu



Administrator Password

This item sets Administrator Password.

User Password

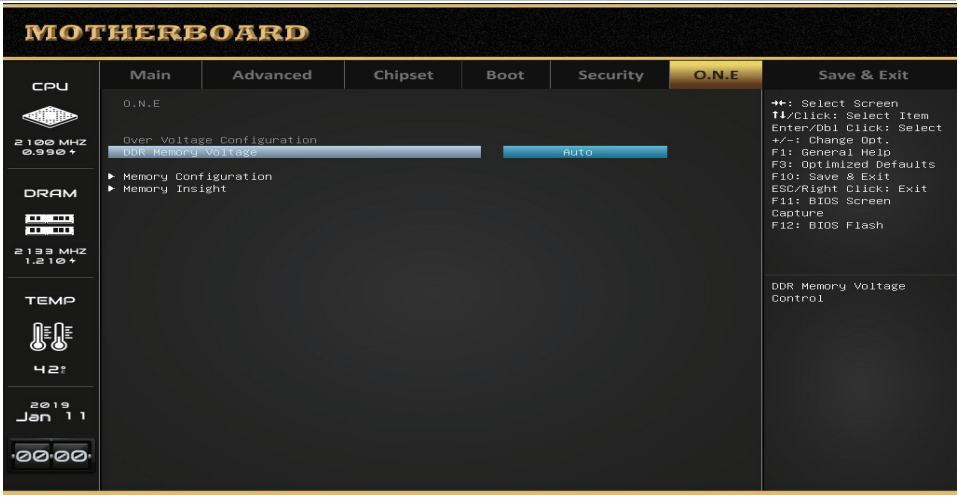
This item sets User Password.

6. O.N.E Menu

This submenu allows you to change voltage and clock of various devices.

Note

» *We suggest you use the default setting. Changing the voltage and clock improperly may damage the device.*
» *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*



DDR Memory Voltage

This item DDR Memory Voltage Control.
Options: Auto (Default) / 1.27V

Memory Configuration

Memory Clock

This item allows you to select different Memory Clock.
Options: Auto (Default)

Bank Interleaving

This item enables or disables Bank Interleaving.
Options: Enabled (Default) / Disabled

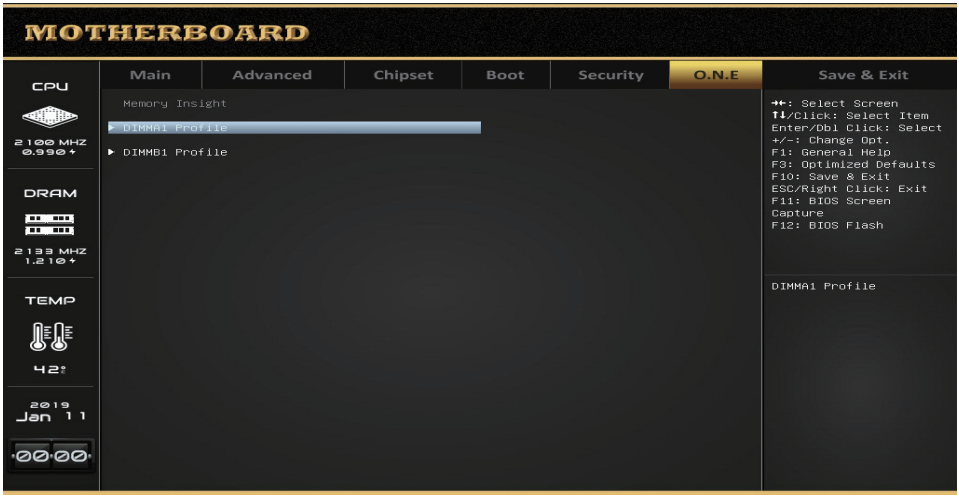
Channel Interleaving

This item enables or disables Channel Interleaving.
Options: Enabled (Default) / Disabled

Memory Clear

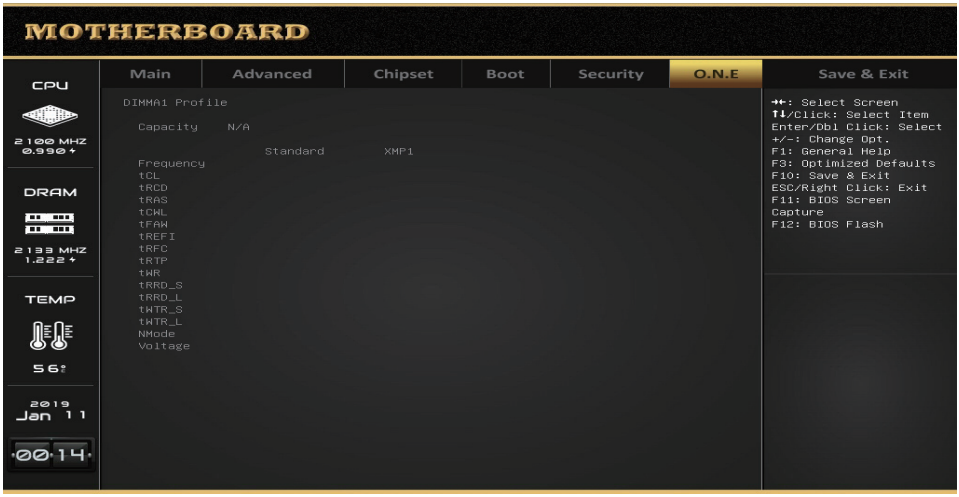
This item enables or disables Memory Clear function.
Options: Disabled (Default) / Enabled

Memory Insight



DIMM Profile

These items display memory information.



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

Restore/Load Default values for all the setup options.

Launch Shell from device

Attempts to EFI Shell application (Shell.efi) from one of the available devices.