BIOS User Guide

X470MH

BIOSTAR®
WWW.BIOSTAR.COM.TW

BIOS Update

The BIOS can be updated using either of the following utilities:
- BIOSTAR BIO-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 BIO-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 BIO-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.
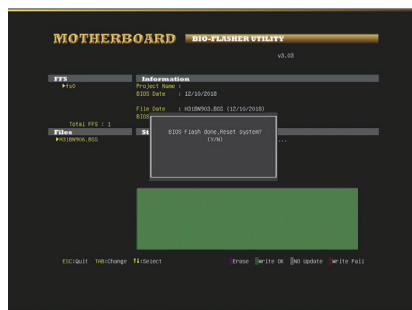
5. After entering the POST screen, the BIO-FLASHER utility pops out. Choose <fs0> to search for the BIOS file.
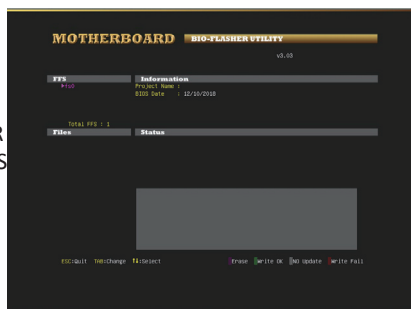
6. Select the proper BIOS file, and a message asking if you are sure to flash the BIOS file. Click "Yes" to start updating BIOS.
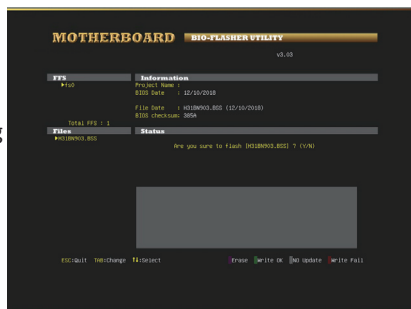
7. A dialog pops out after BIOS flash is completed, asking you to restart the system. Press the <Y> key to restart system.

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.
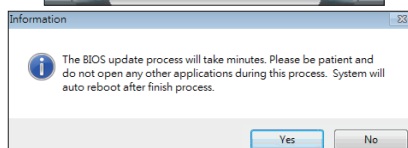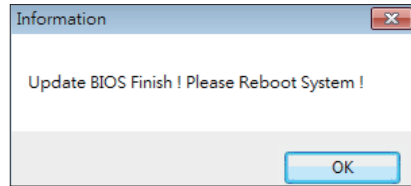
5. If there is a new BIOS version, the utility will ask you to download it. Click "Yes" to proceed.
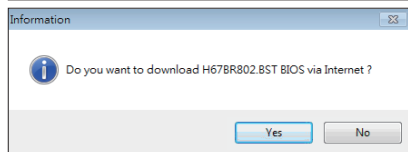
6. After the download is completed, you will be asked to program (update) the BIOS or not. Click "Yes" to proceed.
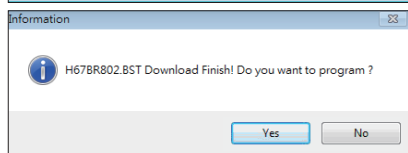
7. After the updating process is finished, you will be asked you to reboot the system. Click "OK" to reboot.

Information

Update BIOS Finish ! Please Reboot System !

OK

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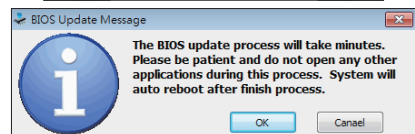
BIOS Update Utility (through a BIOS file)
1. Installing BIOS Update Utility from the DVD Driver.
2. Download the proper BIOS from http://www.biostar.com.tw/

BIOS Update
AMI BIOS Model Name

BIOS Date Version

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

Online Update

update BIOS   backup BIOS

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

BIOS Update Message

The BIOS update process will take minutes. Please be patient and do not open any other applications during this process. System will auto reboot after finish process.

OK   Canael

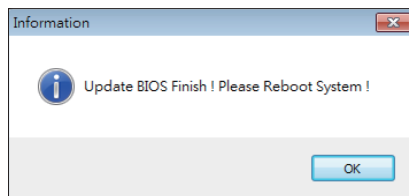5. Choose the location for your BIOS file in the system. Please select the proper BIOS file, and then click on "Open". It will take several minutes, please be patient.

Open

Look in: My Documents

My Musk
My Pictures
report
test

My Recent Documents
Desktop
My Documents
My Computer
My Network Places

File name: Open
Files of type: Cancel

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

7. 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.

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".
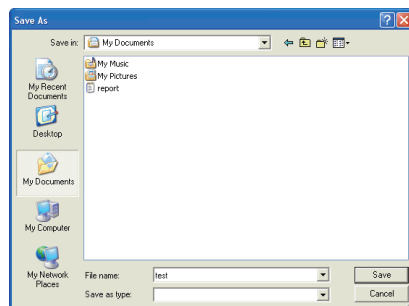
UEFI BIOS Setup

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.
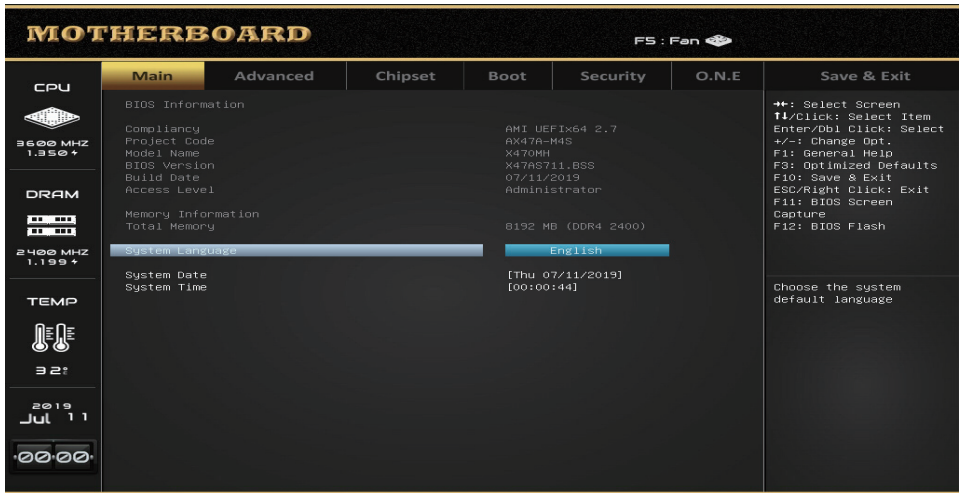
BIOS Information

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.

![BIOSTAR logo]

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.*

Trusted Computing

Security Device Support
This item enables or disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.
Options: Enabled (Default) / Disabled

SHA-1 PCR Bank

This item enables or disables SHA-1 PCR Bank.
Options: Enabled (Default) / Disabled

SHA256 PCR Bank

This item enables or disables SHA256 PCR Bank.
Options: Enabled (Default) / Disabled

Pending operation

This item Schedule an Operation for the Security Device.
Options: None (Default) / TPM Clear
  » *Your computer will reboot during restart in order to change state of Security Device.*

Platform Hierarchy

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

Storage Hierarchy

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

Endorsement Hierarchy

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

TPM2.0 UEFI Spec Version

This item select the TCG2 Spec Version support. TCG_1_2: the Compatible mode for Win8/Win10
; TCG_2: Support new TCG2 protocol and event format for Win10 or later.
Options: TCG_2 (Default) / TCG_1_2

Physical Presence Spec Version

This item select to tell O.S. to support PPI Spec Version 1.2 or 1.3 .
Options: 1.3 (Default) / 1.2
  » *Note some HCK tests might not support 1.3 .*

![BIOSTAR logo]

ACPI Settings / WakeUp Event control

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

ACPI Sleep State

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

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
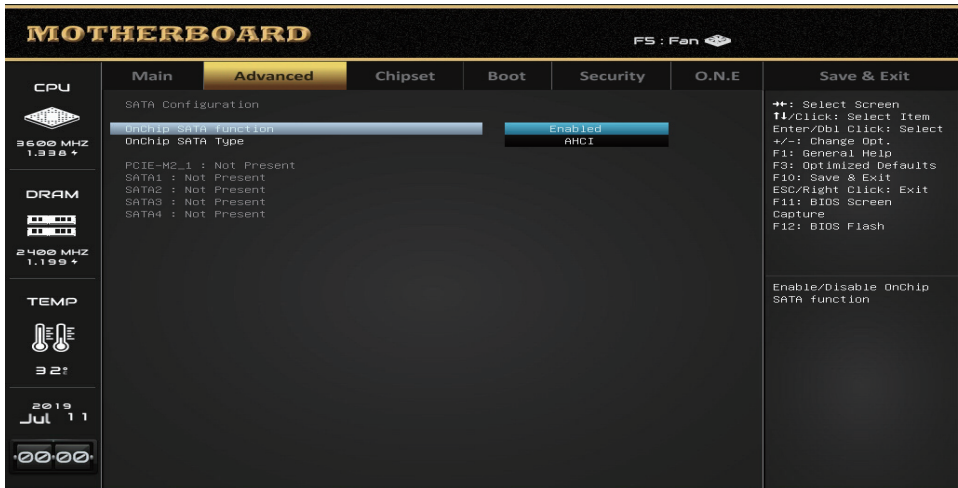
Specific Key

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 PowerOn.
Options: Disabled (Default) / Enabled

SATA Configuration

OnChip SATA function

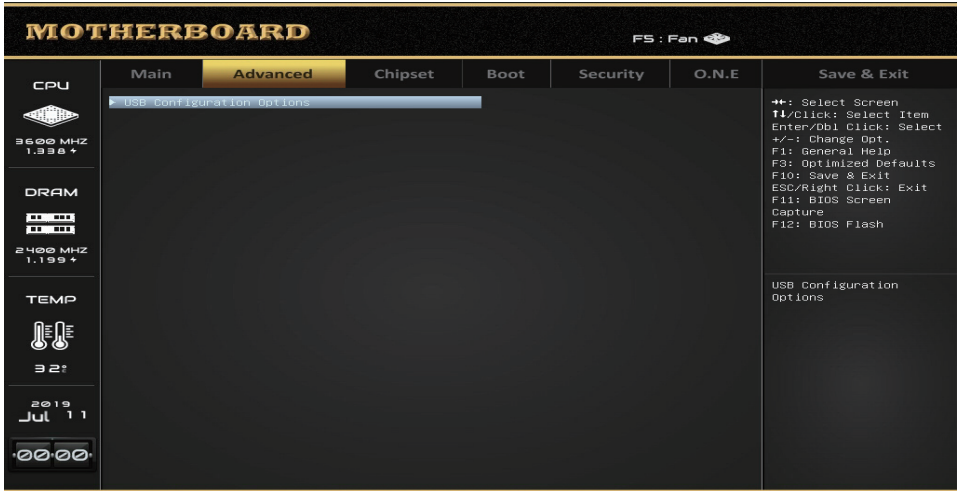This item enables or disables OnChip SATA function.
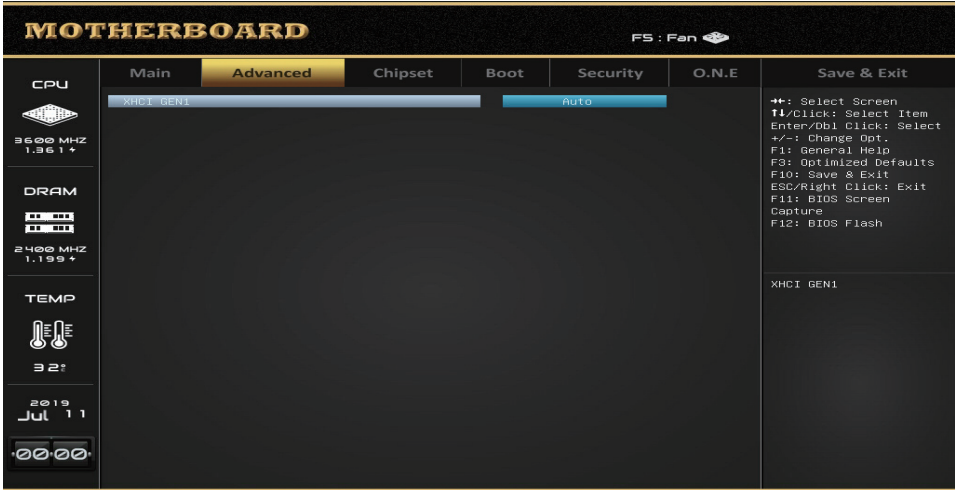Options: Enabled (Default) / Disabled

OnChip SATA Type

This item select OnChip SATA Type.
Options: AHCI (Default) / RAID

Chipset Common Options
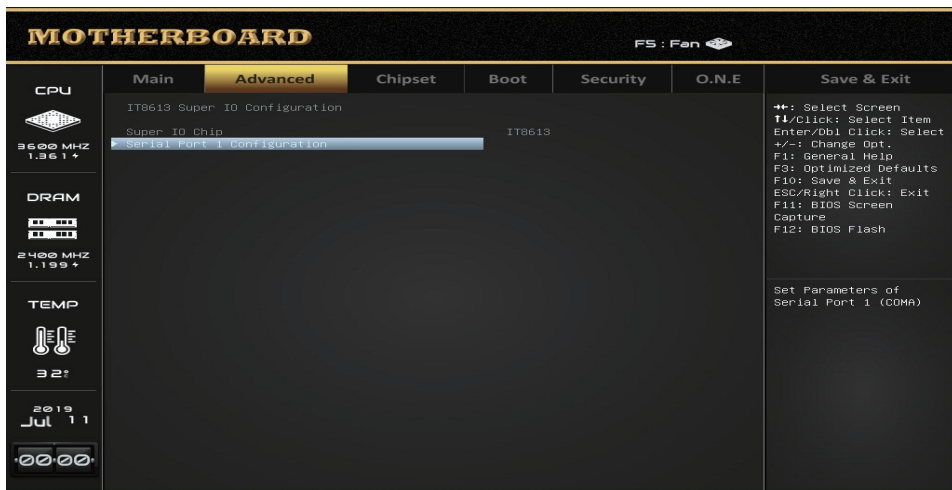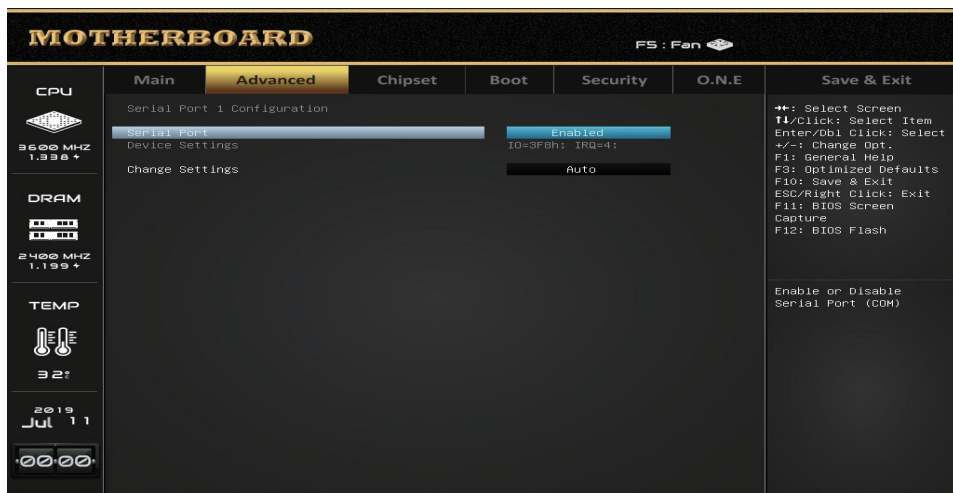

USB Configuration Options

XHCI GEN1

Options: Auto (Default) / Disabled / Enabled

IT8613 Super IO Configuration

Serial Port Configuration

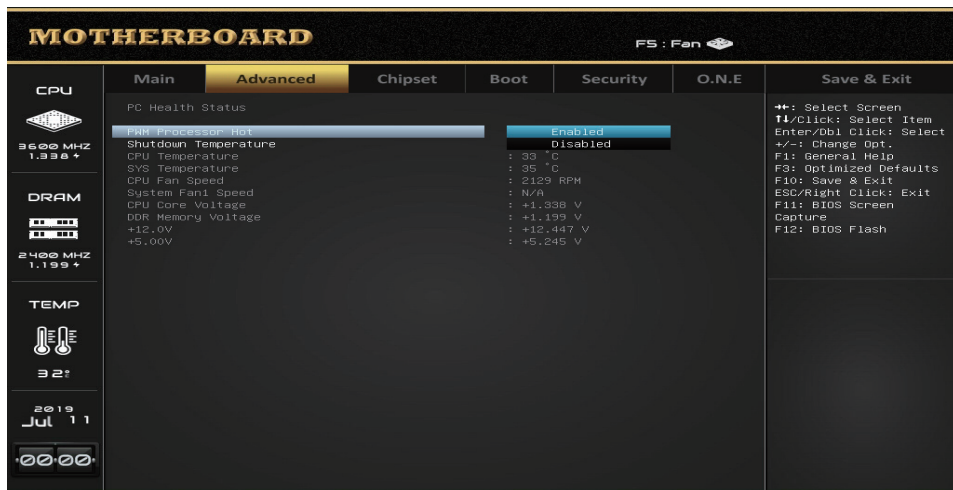**Serial Port**

This item enables or disables serial Port.

Options: Enabled (Default) / Disabled

Change Settings

This item allows you to 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

![BIOSTAR]

H/W Monitor

PWM Processor Hot

Options: Enabled (Default) / Disabled

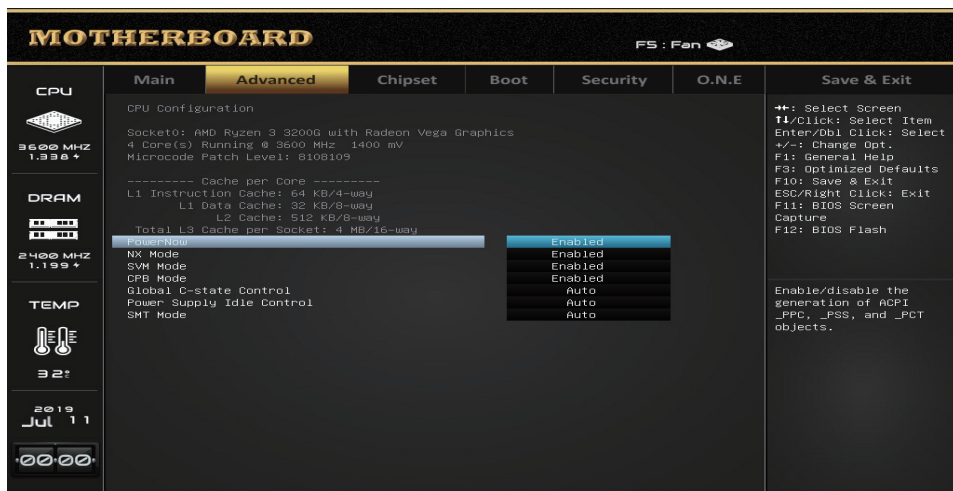**Shutdown Temperature**

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

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 specifies the method of core performance boost enablement.
Options: Enabled (Default) / Disabled

Global C-state Control
This item allows you to controls IO based C-state generation and DF C-states.
Options: Auto (Default) / Enabled / Disabled

Power Supply Idle Control
This item enables or disables C6.
Options: Auto (Default) / Low Current Idle / Typical Current Idle

SMT Mode
This item enables or disables Simultaneous multithreading. WARNING - S3 is NOT SUPPORTED on systems where SMT is disabled.
Options: Auto (Default) / Disabled

PCI Subsystem Settings

PCI Latency Timer
This item 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

PCI-X Latency Timer

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

VGA Palette Snoop

This item enables or disables VGA Palette Registers Snooping.
Options: Disabled (Default) / Enabled

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.
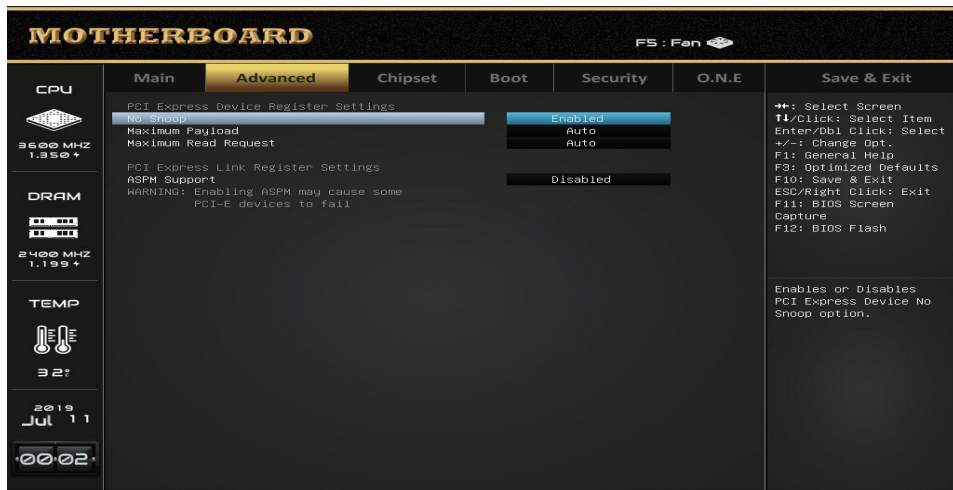Options: Disabled (Default) / Enabled

BME DMA Mitigation

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

PCI Express Settings

No Snoop

This item enables or disables PCI Express Device No Snoop option.
Options: Enabled (Default) / Disabled

Maximum Payload

This item set Maximum Payload of PCI Express Device or allow 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 set Maximum Read Request Size of PCI Express Device or allow system BIOS to select the value.
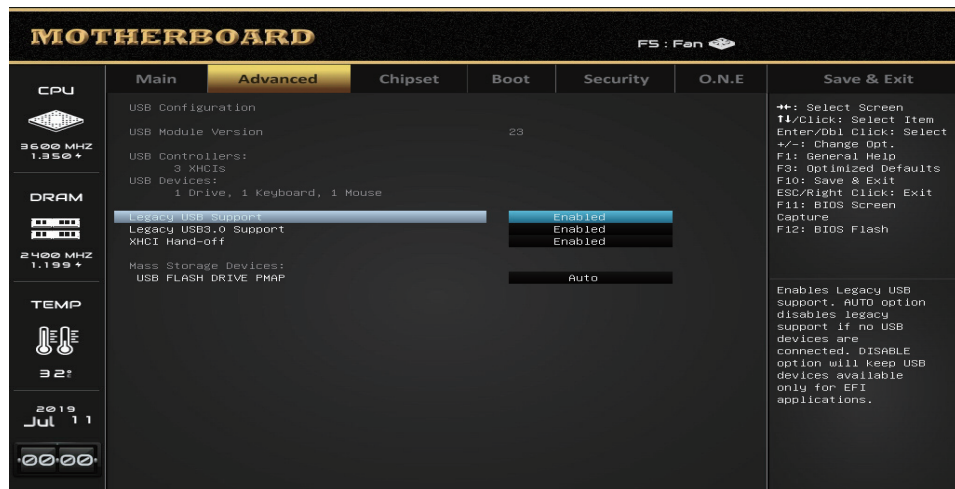
Options: Auto (Default) / 128 Bytes / 256 Bytes / 512 Bytes / 1024 Bytes / 2048 Bytes / 4096 Bytes

ASPM Support

This item set the ASPM Level: Force L0s - Force all links to L0s State ; AUTO - BIOS auto configure ; Disable - Disable ASPM.

Options: Disabled (Default) / Auto / Force L0s

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

Legacy USB3.0 Support

The item enables or disables legacy USB3.0 support.

Options: Enabled (Default) / Disabled

XHCI Hand-off

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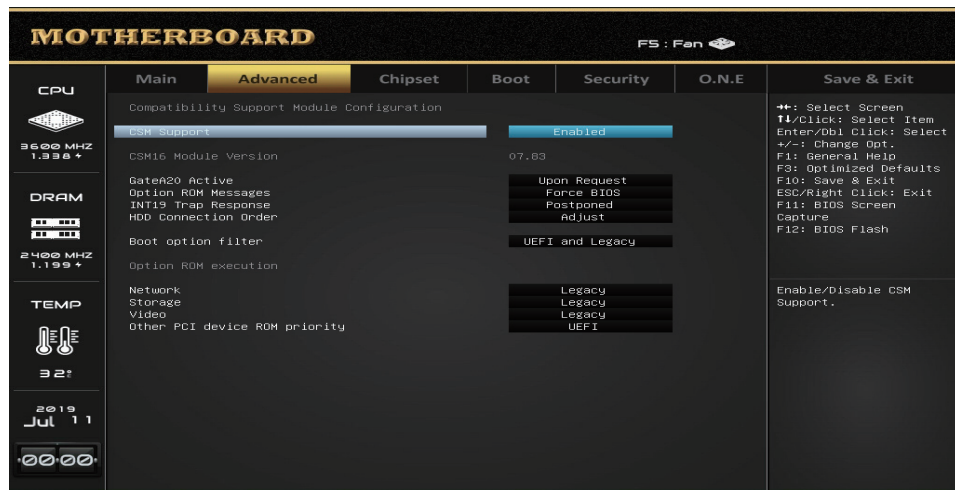
Options: Enabled (Default) / Disabled

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

CSM Configuration

```
MOTHERBOARD                                    F5 : Fan

         Main    Advanced    Chipset    Boot    Security    O.N.E    Save & Exit
CPU
         Compatibility Support Module Configuration            ↔: Select Screen
                                                               ↑↓/Click: Select Item
         CSM Support                         Enabled           Enter/Dbl Click: Select
3600 MHZ                                                       +/-: Change Opt.
1.338v   CSM16 Module Version                07.83             F1: General Help
                                                               F3: Optimized Defaults
         GateA20 Active                    Upon Request        F10: Save & Exit
DRAM     Option ROM Messages                Force BIOS         ESC/Right Click: Exit
         INT19 Trap Response                 Postponed         F11: BIOS Screen
         HDD Connection Order                 Adjust           Capture
2400 MHZ                                                       F12: BIOS Flash
1.199v   Boot option filter              UEFI and Legacy

         Option ROM execution

TEMP     Network                             Legacy            Enable/Disable CSM
         Storage                             Legacy            Support.
         Video                               Legacy
         Other PCI device ROM priority        UEFI
32°


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```

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: Postponed (Default) / Immediate

HDD Connection Order

This some OS require HDD handles to be adjusted, i.e. OS is installed on drive 80h.
Options: Adjust (Default) / Keep

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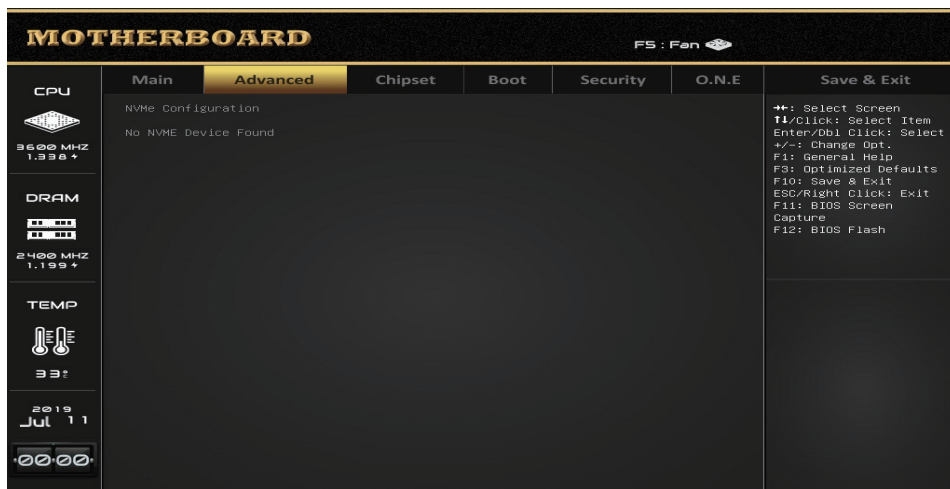Options: Legacy (Default) / UEFI / Do not launch

Other PCI device ROM priority

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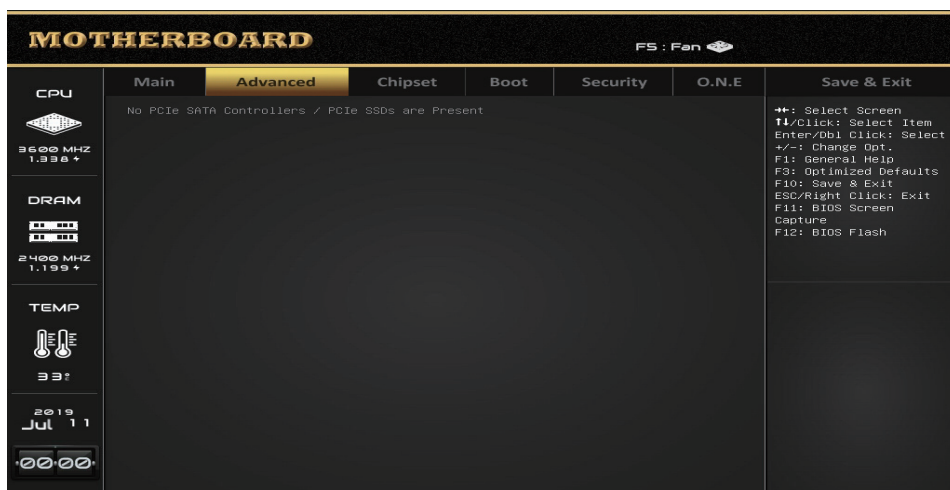Options: UEFI (Default) / Legacy / Do not launch

NVMe Configuration

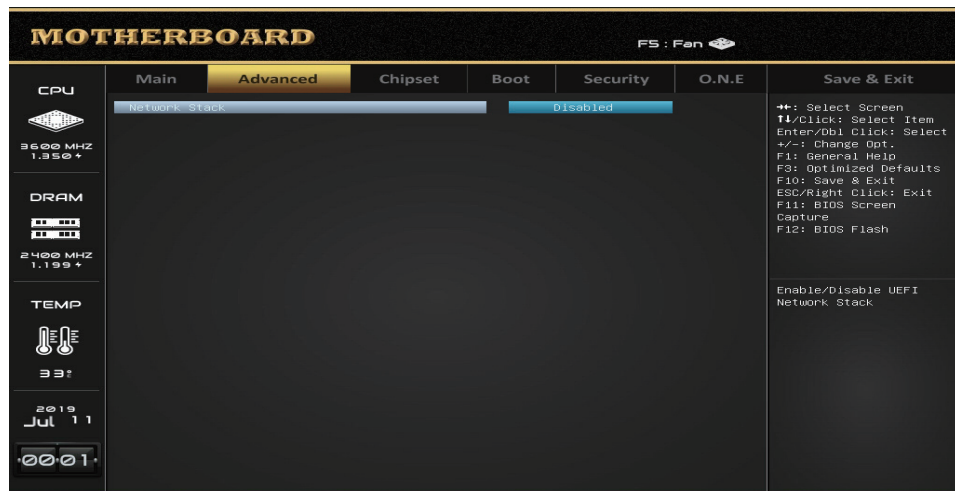The item shows NVMe controller and driver information.

Offboard PCIe SATA Controller

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 support 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 support will not be available.
Options: Disabled (Default) / Enabled

IPSEC Certificate

This item enables or disables IPSEC certificate for Ikev.
Options: Enabled (Default) / Disabled

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.
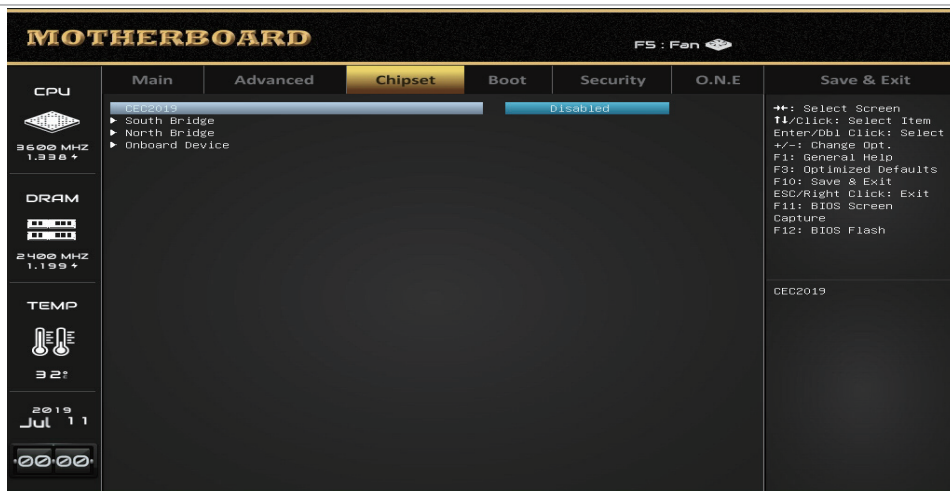
3. Chipset Menu

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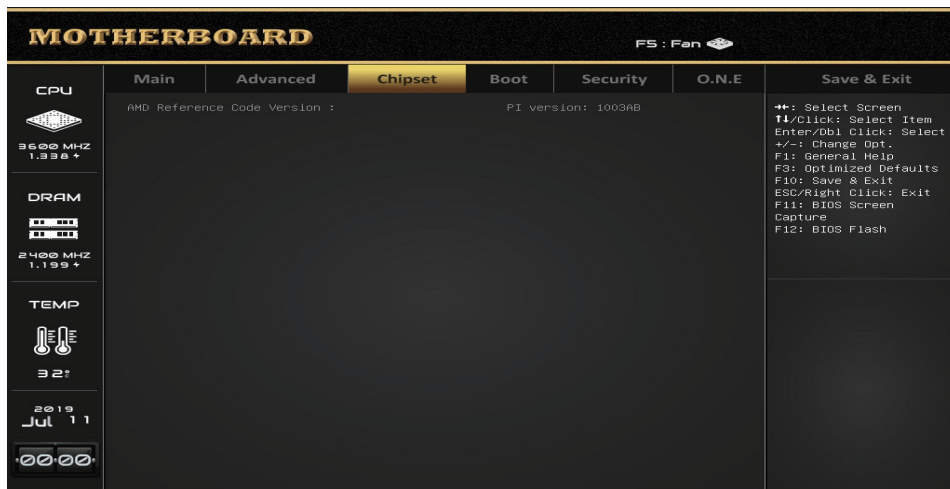 » *Beware of that setting inappropriate values in items of this menu may cause system to malfunction.*

CEC2019
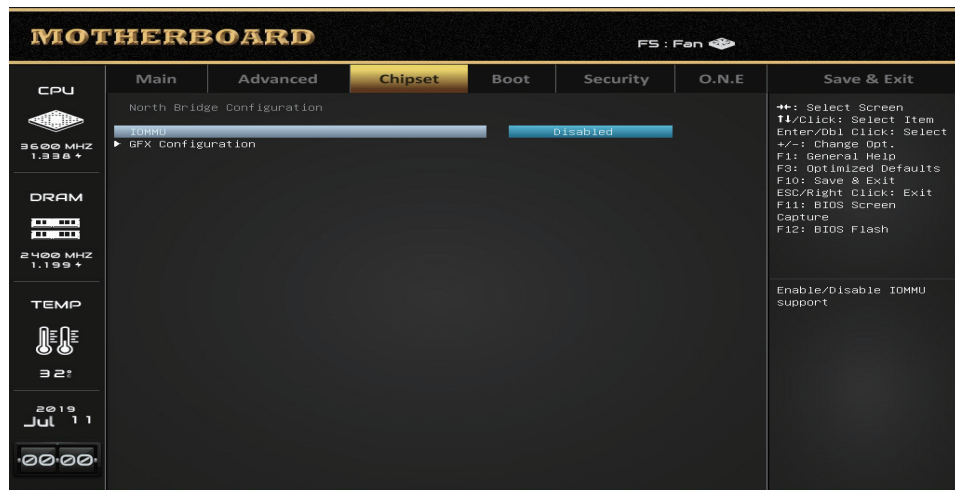
This item enables or disables CEC2019.
Options: Disabled (Default) / Enabled
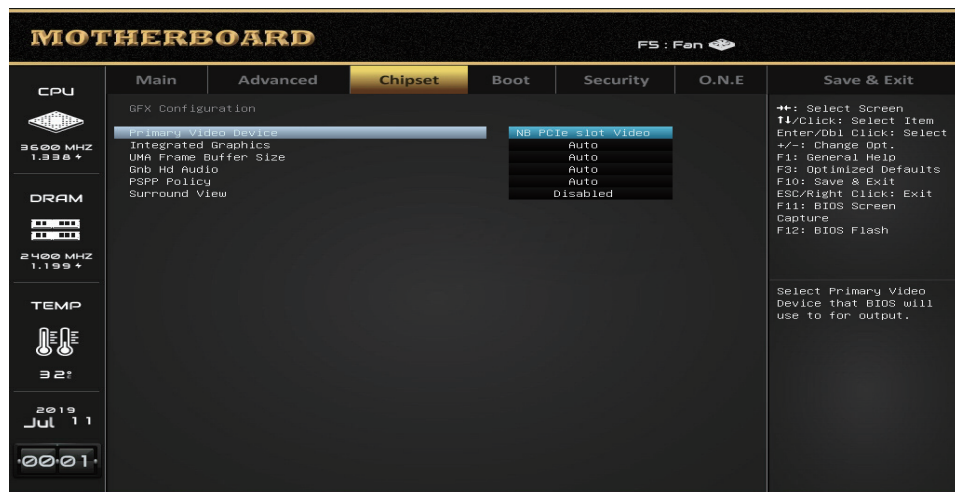
South Bridge

![BIOSTAR logo]

North Bridge

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

GFX Configuration

▶Note
» *The menu contents of the GFX Configuration will be slightly different depending on the CPU of the motherboard configuration.*

Primary Video Device
This item select Primary Video Device that BIOS will use to for output.
Options: NB PCIe slot Video (Default) / IGD Video

Integrated Graphics
This item allows you to controller the Integrated Graphics function.
Options: Auto (Default) / Disabled
UMA Frame Buffer Size
This item allows you to set UMA FB Size.
Options: Auto (Default) / 64M / 80M / 96M / 128M / 256M / 384M/ 512M / 768M /1G / 2G / 3G / 4G / 8G / 16G
Gnb Hd Audio
This item enable or disable Gnb Hd Audio Support.
Options: Auto (Default) / Enabled / Disabled
PSPP Policy
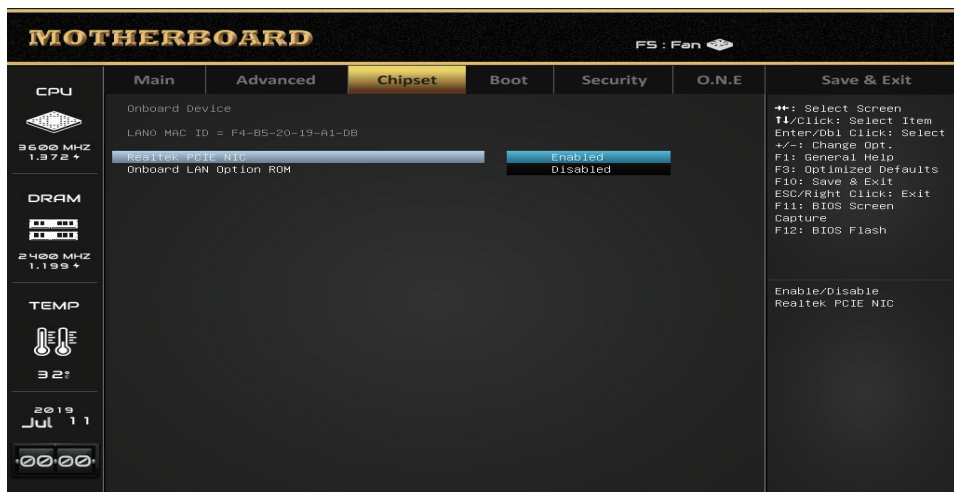This item allows you to set PCIe speed power policy.
Options: Auto (Default) / Disabled / Performance / Balanced-High / Balanced-Low / Power Saving
Surround View
This item support multi-display function.
Options: Disabled (Default) / Auto

Onboard Device

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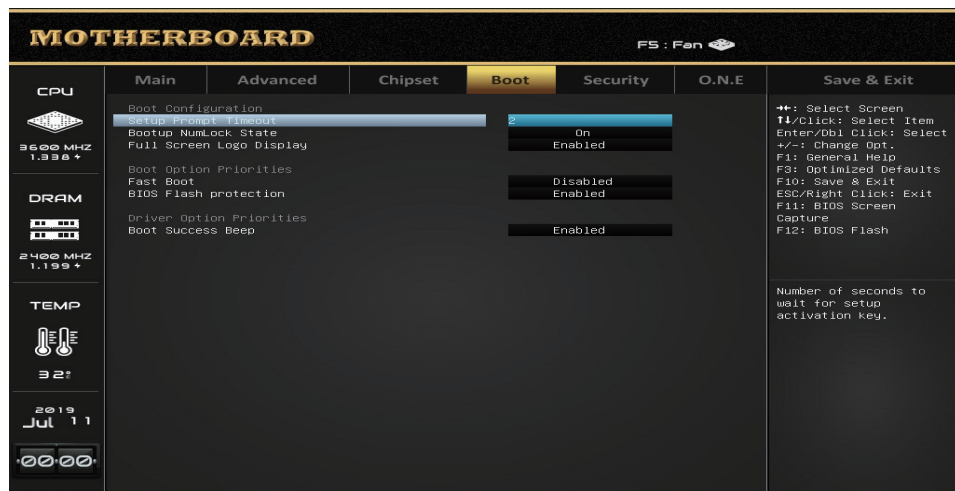Options: Enabled (Default) / Disabled

Onboard LAN Option ROM
This item enables or disables Onboard LAN Option ROM.
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 enable or disable Full Screen Logo Show function.
Options: Enabled (Default) / Disabled

Fast Boot

This item enable or 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

If Last Boot HDD Only, Only last boot HDD device will be available in Post. If All Sata Devices, all SATA devices will be available in OS and Post.
Options: Last Boot SATA Device Only (Default) / All Sata Devices

NVMe Support

This item enable or disable NVMe Support. If Disabled, NVMe device will be skipped.
Options: Enabled (Default) / Disabled

VGA Support

If Auto, only install Legacy OpRom with Legacy OS and logo would NOT be shown during post. EFI driver will still be 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

BIOS Flash protection

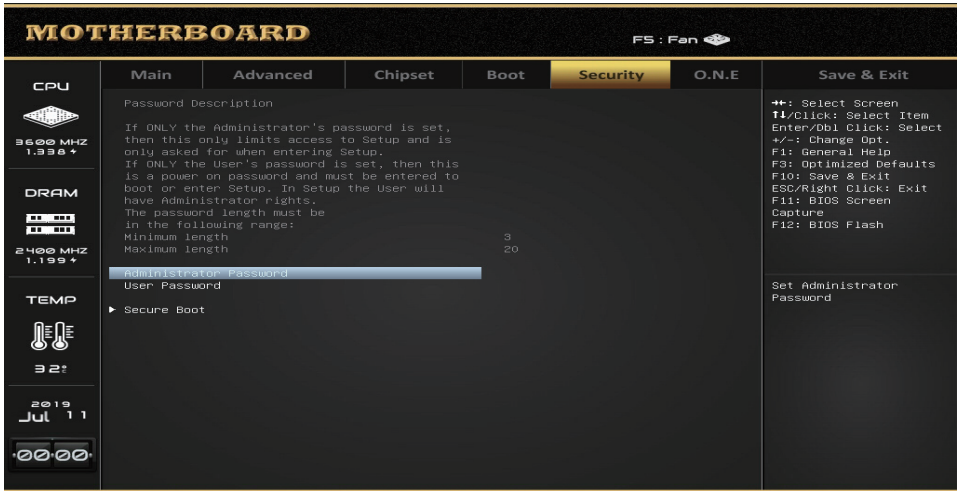While enabled, it can't flash write and flash erase by SMI.

Options: Enabled (Default) / Disabled

Boot Success Beep

This item BIOS boot post beep message.

Options: Enabled (Default) / Disabled
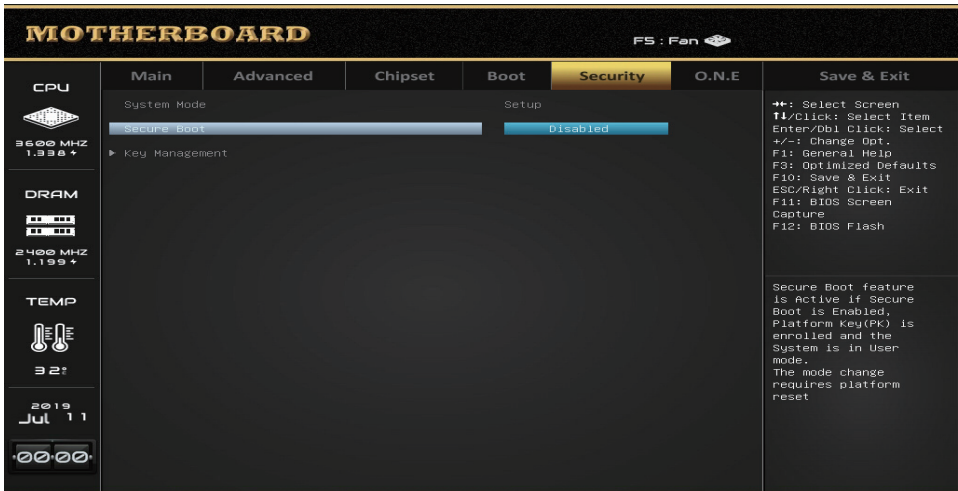
![BIOSTAR logo]

5. Security Menu

Administrator Password

This item sets Administrator Password.

User Password

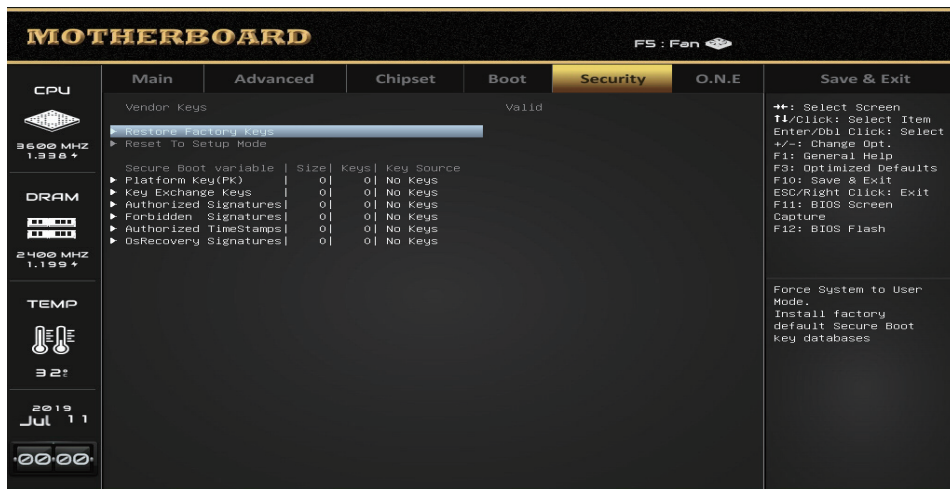This item sets User Password.

Secure Boot Menu

Secure Boot

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

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

Key Management

Restore Factory keys
Force System to User Mode. Force system to user.

Reset To Setup Mode
This item delete NVRAM content of all UEFI Secure Boot Key databases.

Platform Key (PK)
Options: Details / Export / Update / Delete

Key Exchange Keys
Options: Details / Export / Update / Append / Delete

Authorized Signatures
Options: Details / Export / Update / Append / Delete

Forbidden Signatures
Options: Details / Export / Update / Append / Delete

Authorized Timestamps
Options: Update / Append

OsRecovery Signatures
Options: Update / Append

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*
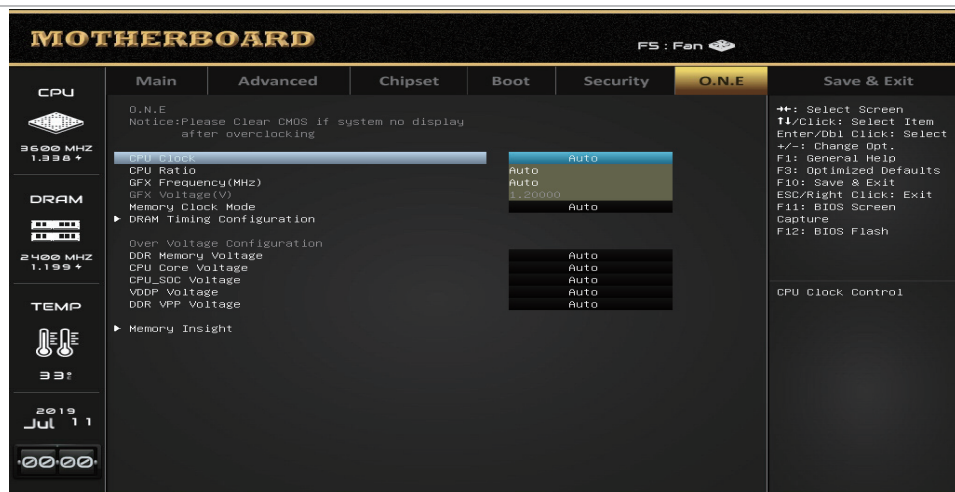
> **Note**
> » *The menu contents of the O.N.E will be slightly different depending on the CPU of the motherboard configuration.*

CPU Clock

This item allows you to select CPU clock.
Options: Auto (Default)

CPU Ratio

This item allows you to set the CPU Ratio.
Options: Auto (Default)

GFX Frequency (MHz)

This item allows you to set the GFX frequency in MHz.
Options: Auto (Default)

Memory Clock Mode

This item select the DRAM Frequency programming method. If Auto, the DRAM speed will be based on SPDs. If Manual, the DRAM speed specified will be programmed regardless of SPD.
Options: Auto (Default) / Manual

> **Note**
> » *The menu contents of the Memory clock mode will be slightly different depending on the memory card used by the user.*
> » *The following items appear only when you set the Memory Clock Mode function to [Manual].*

Memory Frequency

This item select the memory clock value in MHz.
Options: Auto (Default)

DRAM Timing Configuration

This item select the DRAM Timing Configuration.
Options: Auto (Default)

DDR Memory Voltage

This item allows you to control DDR Memory Voltage.
Options: Auto (Default)

CPU Core Voltage

This item allows you to control CPU Core Voltage.
Options: Auto (Default)

CPU_SOC Voltage

This item allows you to control CPU_SOC Voltage Control.
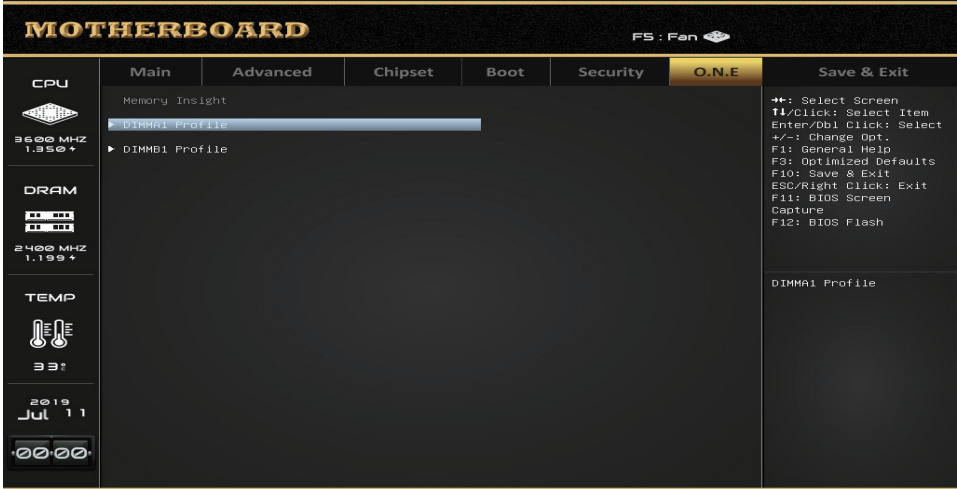Options: Auto (Default)

VDDP Voltage

This item allows you to control VDDP.
Options: Auto (Default)
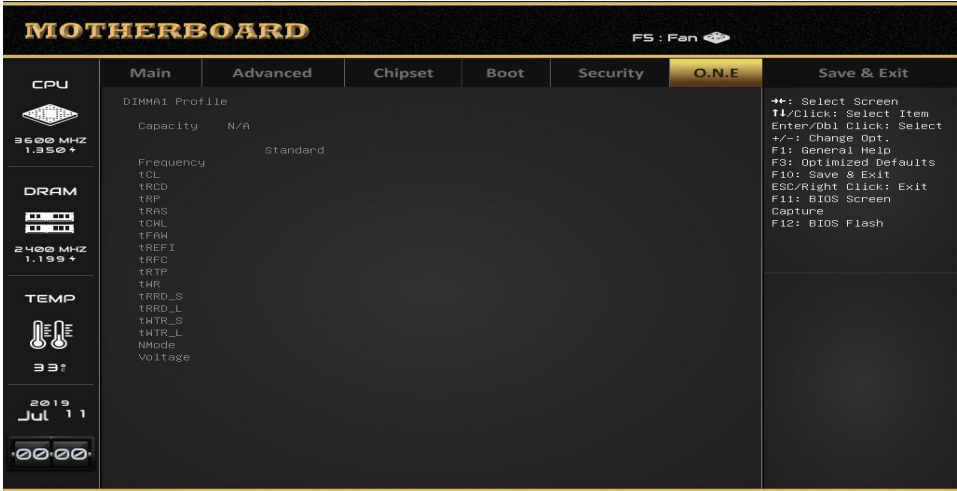
DDR VPP Voltage

This item allows you to control DDR VPP Voltage.
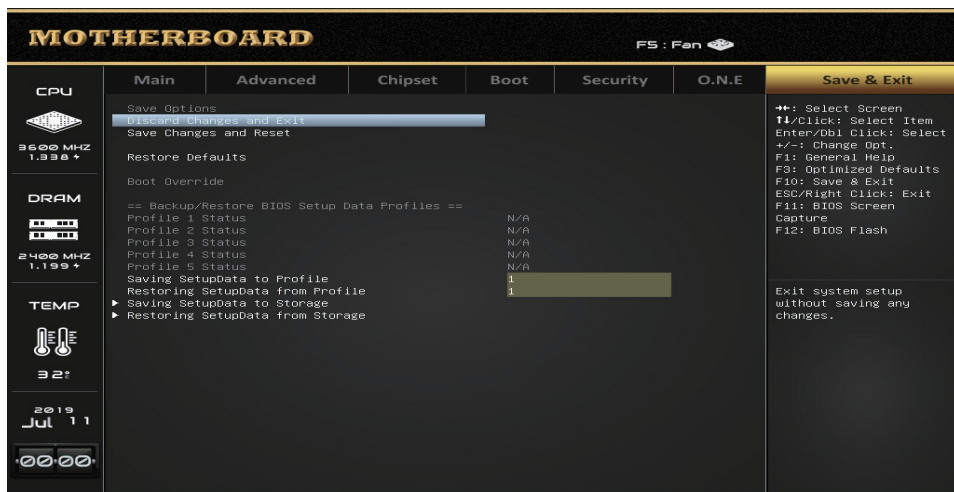Options: Auto (Default)

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.

Saving SetupData to Profile

This item Saving SetupData to Profile.
Options: 1

Restoring SetupData from Profile

This item Restoring SetupData from Profile.
Options: 1

Saving SetupData to Storage

This item saves your current BIOS Setup Data to storage devices.

Restoring SetupData from Storage

This item restores your BIOS Setup Data from storage devices.