BIOS User Guide

RACING P1

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.*

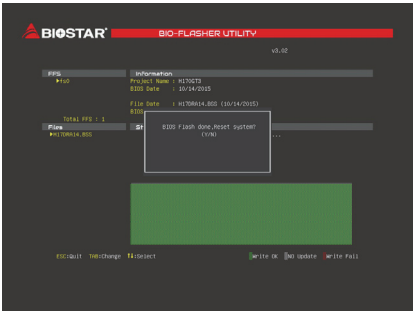
Updating BIOS with BIOSTAR BIOS-FLASHER

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.
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.



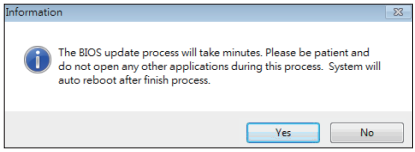
8. While the system boots up and the full screen logo shows up, press <DEL> key to enter BIOS setup.
After entering the BIOS setup, please go to the <Save & Exit>, using the <Restore Defaults> function to load Optimized Defaults, and select <Save Changes and Reset> to restart the computer. Then the BIOS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

BIOS Update Utility (through the Internet)

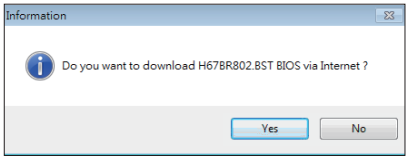
1. Installing BIOS Update Utility from the DVD Driver.
2. Please make sure the system is connected to the internet before using this function.

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

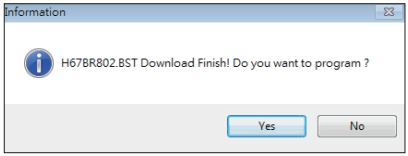
4. An open dialog will show up to request your agreement to start the BIOS update. Click "Yes" to start the online update procedure.



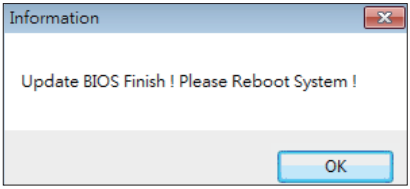
5. If there is a new BIOS version, the utility will ask you to download it. Click "Yes" to proceed.



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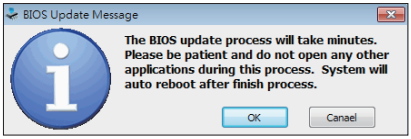
After entering the BIOS setup, please go to the <Save & Exit>, using the <Restore Defaults> function to load Optimized Defaults, and select <Save Changes> and <Reset> to restart the computer. Then, the BIOS Update is completed.

BIOS Update Utility (through a BIOS file)

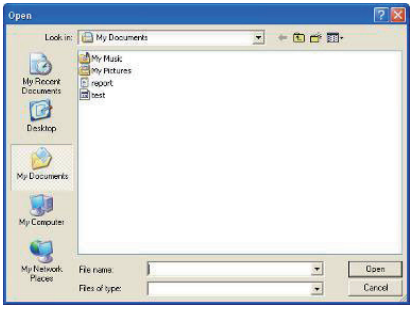
1. Installing BIOS Update Utility from the DVD Driver.
2. Download the proper BIOS from http://www.biostar.com.tw/

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

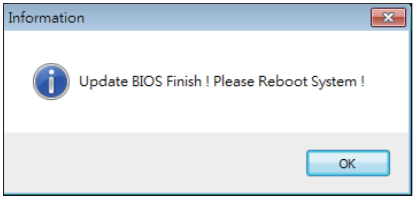
4. A warning message will show up to request your agreement to start the BIOS update. Click “OK” to start the update procedure.



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.



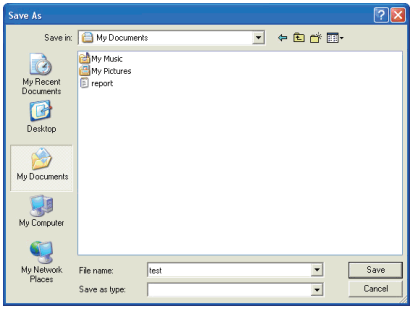
6. After the BIOS Update process is finished, click on “OK” to reboot the system.



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.

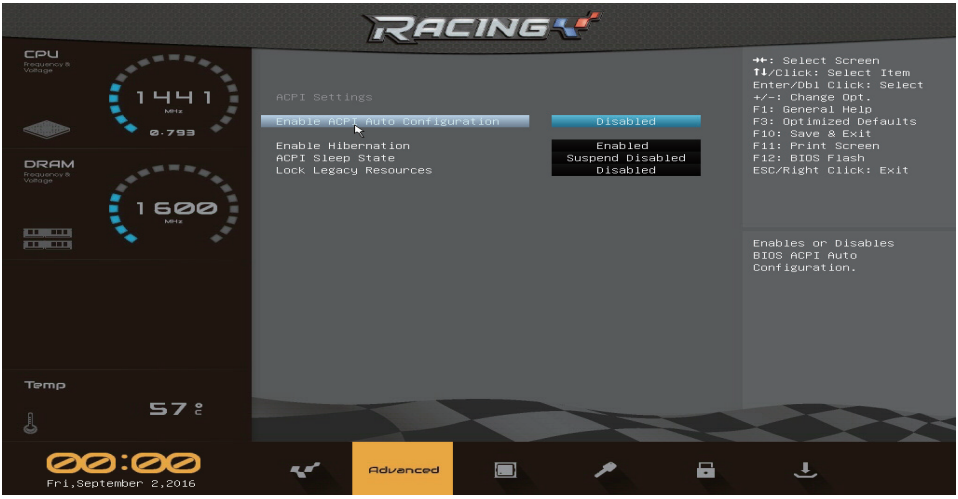
2. Advanced Menu

The Advanced Menu allows you to configure the settings of CPU, SDIO, USB, and other system devices.

Note

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

ACPI Settings



Enable ACPI Auto Configuration

This item enables or disables BIOS ACPI auto configuration function.
Options: Disabled (Default) / Enabled

Enable Hibernation

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

ACPI Sleep State

This item selects the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
Options: Suspend Disabled (Default)

Lock Legacy Resources

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

CPU Configuration

This item shows CPU Information

Socket CPU Information

This item shows socket specific CPU information.

Limit CPUID Maximum

This item disabled for Windows XP.
Options: Disabled (Default) / Enabled

Bi-directional PROCHOT

When a processor thermal sensor trips (either core), the PROCHOT will be driven. If bi-direction is enabled, external agents can drive PROCHOT to throttle the processor.
Options: Disabled (Default) / Enabled

Intel Virtualization Technology

When enabled, a VMM can utilize the additional hardware capabilitles provided by vanderpool technology.
Options: Enabled (Default) / Disabled

Power Technology

This item enable the power management features.
Options: Energy Efficient (Default) / Disable / Custom

Note

» *The following items appear only when you set the Power Technology to [Custom].*

EIST

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

Turbo Mode

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

P-STATE Coordination

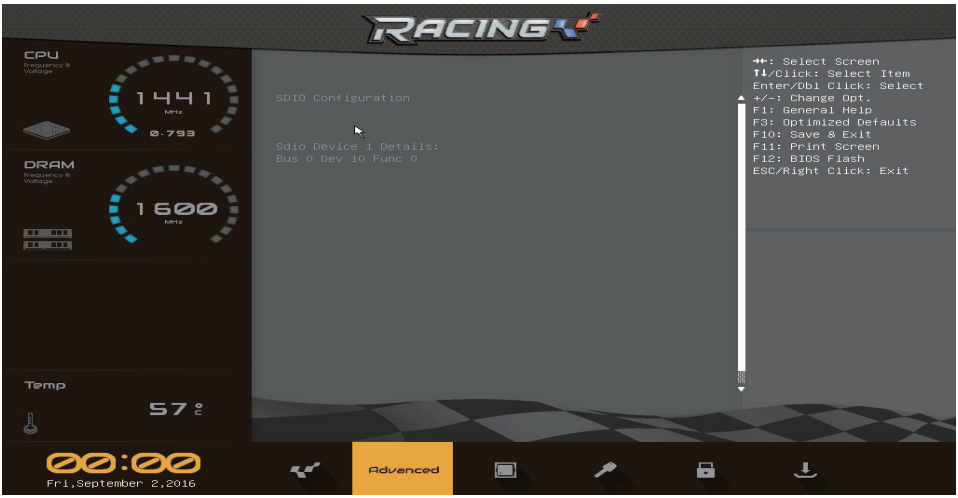
This item Change P-STATE Coordination type.
Options: HW_ALL (Default) / SW_ALL / SW_ANY

Package C State limit

This item package C state limit.
Options: C1 (Default) / C3 / C6 / C7

SDIO Configuration

The item shows SDIO Configuration information.



USB Configuration

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 Mass Storage Driver Support

The item allows you to enable or disable USB Mass Storage Driver Support.
Options: Enabled (Default) / Disabled

USB transfer time-out

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

Device reset time-out

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

Device power-up delay

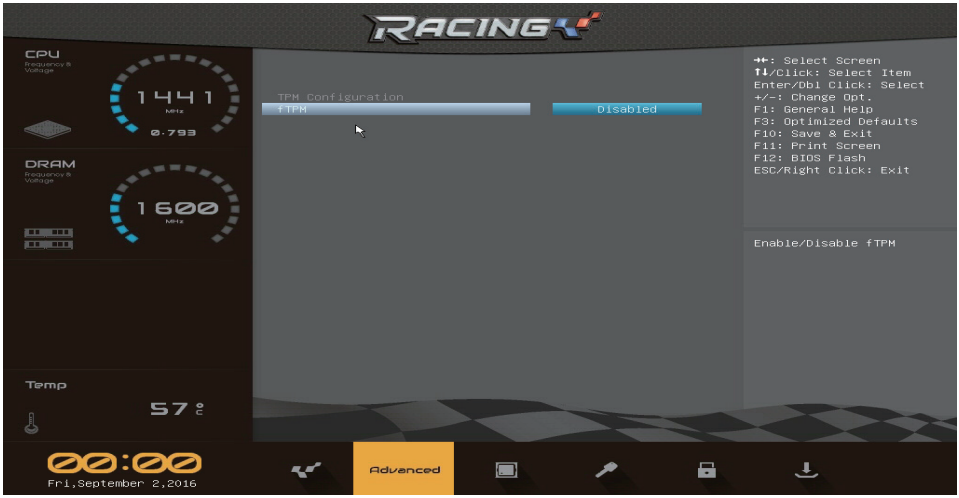
"Auto" uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.
Options: Auto (Default) / Manual

Note

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

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

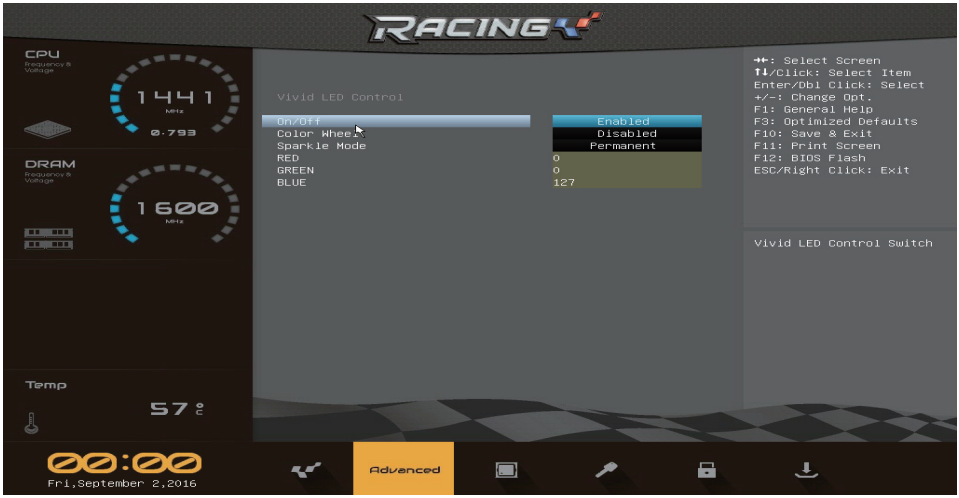
Platform Trust Technology



fTPM

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

Vivid LED Control



On/Off

This item Vivid LED Control Switch.
Options: Enabled (Default) / Disabled

Color Wheel

This item Vivid LED Color Wheel.
Options: Disabled (Default) / Enabled

Sparkle Mode

This item Vivid LED Sparkle Mode.
Options: Permanent (Default) / Shine / Breathe

RED

This item allows you to adjust the value for RED color model.
Options: 0 (Default)

GREEN

This item allows you to adjust the value for GREEN color model.
Options: 0 (Default)

BLUE

This item allows you to adjust the value for BLUE color model.
Options:127 (Default)

Realtek PCIe GBE Family Controller

The item shows Realtek PCIe GBE Family Controller information.

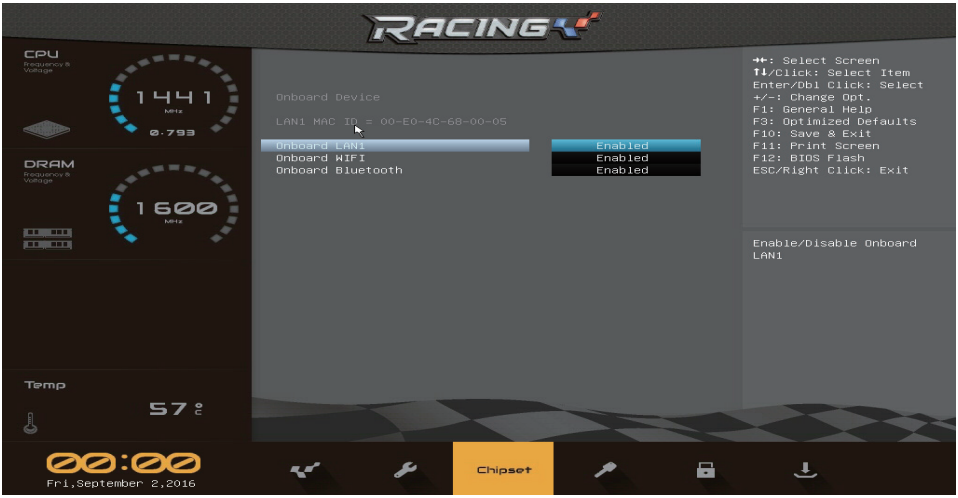
3. Chipset Menu

The Chipset Menu allows you to configure the settings of onboard, North / South Bridge devices.

Note

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

Onboard Device



Onboard LAN1

This item enables or disables onboard LAN1.
Options: Enabled (Default) / Disabled

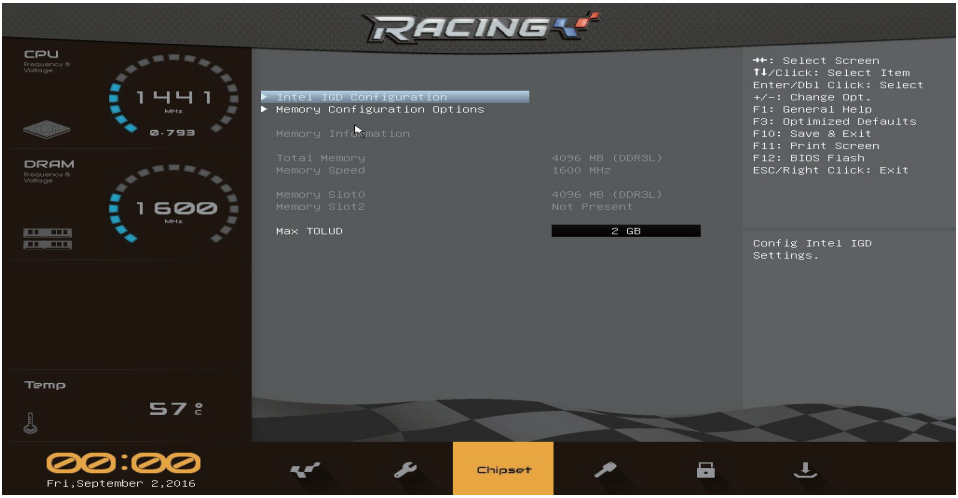
Onboard WIFI

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

Onboard Bluetooth

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

North Bridge



Intel IGD Configuration

IGD Turbo Enable

Select the IGD Turbo feature, if auto selected, IGD Turbo will only be enabled when SOC stepping is B0 or above.

Options: Auto (Default) / Disabled / Enabled

GFX Boost

This item enables or disables GFX Boost.

Options: Disabled (Default) / Enabled

DVMT Pre-Allocated

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

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

DVMT Total Gfx Mem

Select DVMT 5.0 total graphic memory size used by the internal graphics device.

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

Aperture Size

The item allows you to select the Aperture Size.

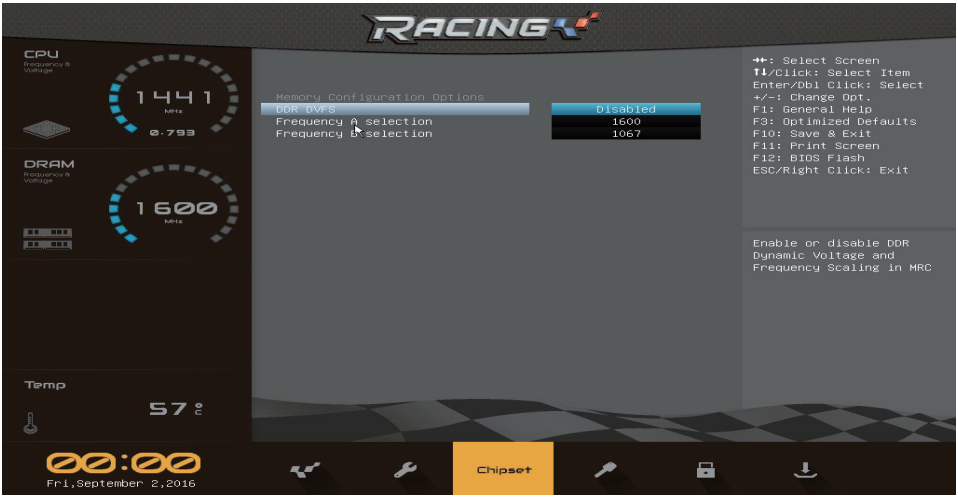
Options: 256MB (Default) / 128MB / 512MB

GTT Size

The item allows you to select the GTT Size.

Options: 4MB (Default) / 2MB / 8MB

Memory Configuration Options



DDR DVFS

This item enables or disables DDR dynamic voltage and frequency scaling in MRC.

Options: Disabled (Default) / Enabled

Frequency A selection

The item allows you to Frequency a selection.

Options: 1600 (Default) / Auto / 800 / 1067 / 800 (SKU333) / 1000 (SKU333) / 1333 (SKU333) / 900 (SKU360) / 1800 (SKU360) / 933 (SKU373) / 1866 (SKU373)

Frequency B selection

This item option to select Frequency B selection (Min DDR DVFS Frequency).

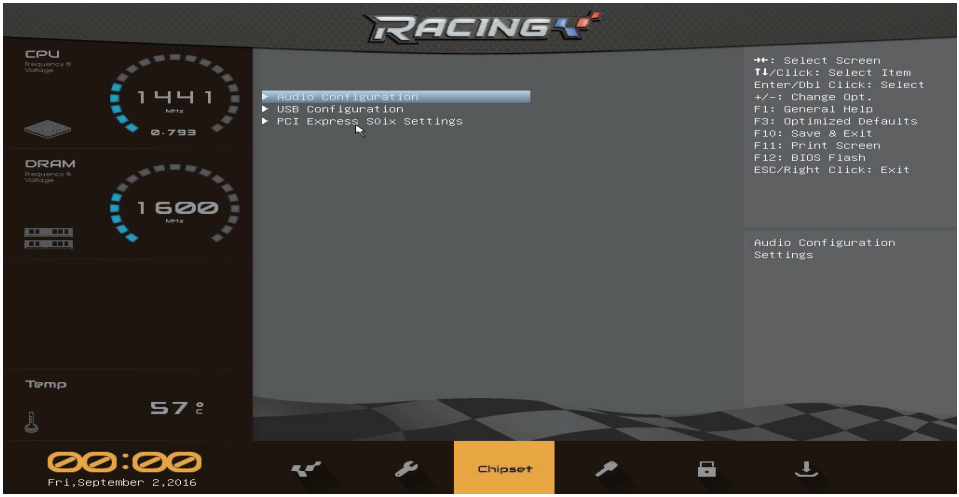
Options: 1067 (Default) / Auto / 800 / 800 (SKU333) / 1000 (SKU333) / 900 (SKU360) / 933 (SKU373)

Max TOLUD

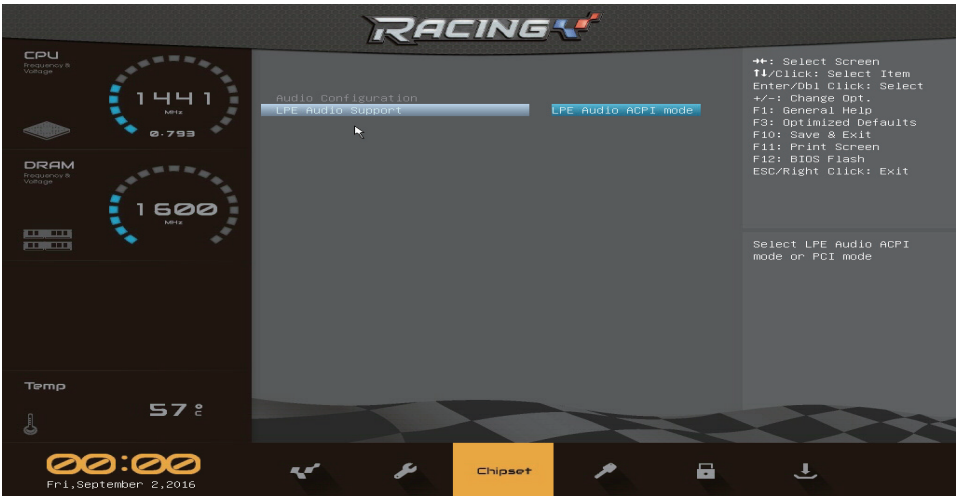
This item Maximum Value of TOLUD.

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

South Bridge



Audio Configuration



LPE AUDIO Support

This item select LPE AUDIO ACPI mode or PCI mode.

Options: LPE Audio ACPI mode (Default) / Disabled / LPE Audio PCI mode

USB Configuration

XHCI Controller

This item enables or disables XHCI Controller.

Options: Enabled (Default) / Disabled

Note

» *The following items appear only when you set the XHCI Controller function to [Enabled].*

XHCI Mode

This item mode of operation of XHCI Controller.

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

USB2 Port 1/2/3/4

This item enables or disables USB Port 1/2/3/4.

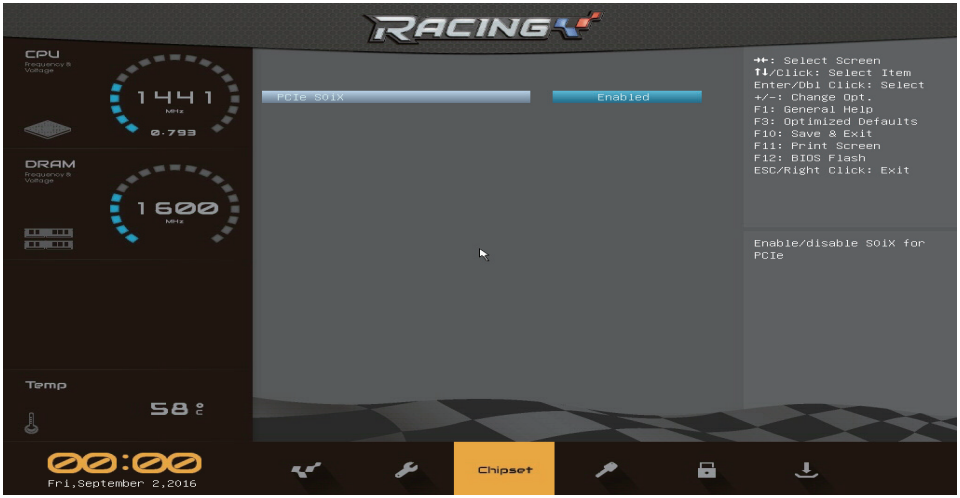
Options: Enabled (Default) / Disabled

USB3 Port 1/2/3/4

This item enables or disables USB Port 1/2/3/4.

Options: Enabled (Default) / Disabled

PCI Express S0ix Settings

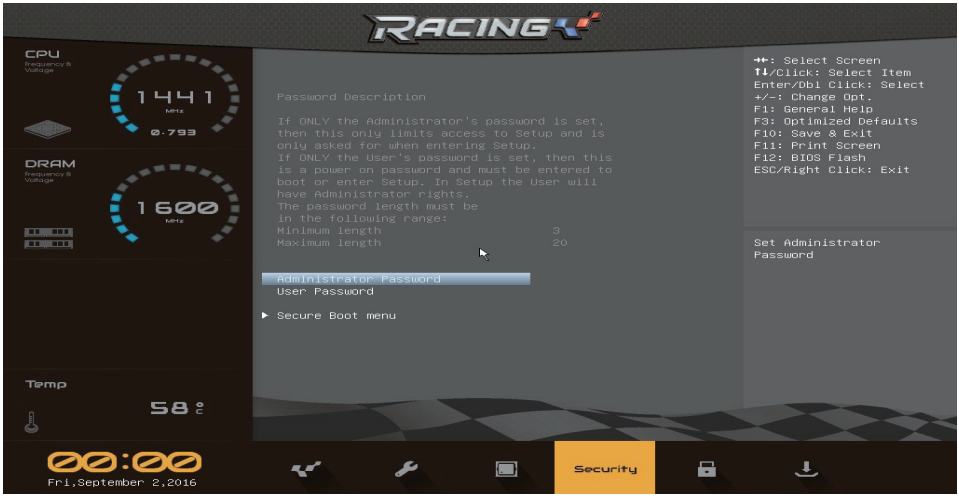


PCIe S0IX

This item enables or disables S0ix for PCIe.

Options: Enabled (Default) / Disabled

4. Security Menu



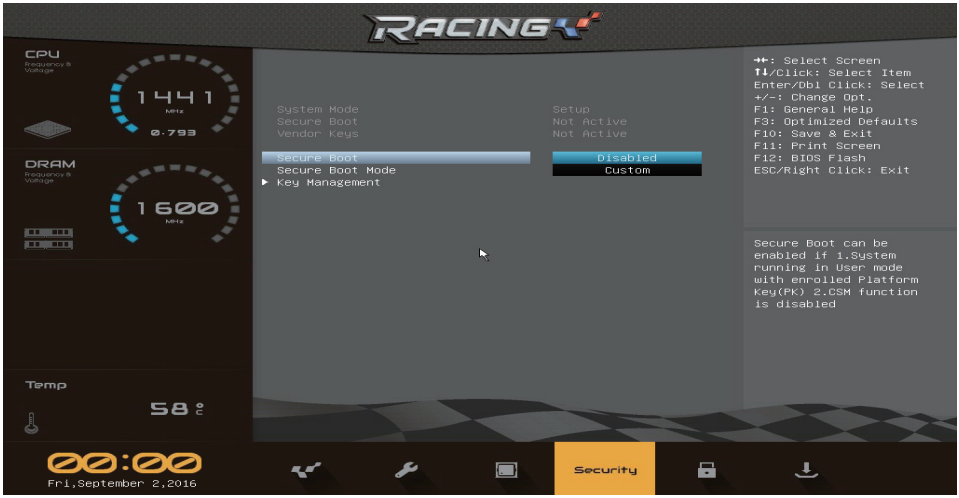
Administrator Password

This item sets Administrator Password.

User Password

This item sets User Password.

Secure Boot Menu



Secure Boot

Secure Boot can be enabled if 1. System running in user mode with enrolled Platform Key(PK) 2.CSM function is disabled.
Options: Disabled (Default) / Enabled

Secure Boot Mode

Secure Boot mode selector. 'Custom' mode enables users to change Image Execution policy and manage Secure Boot Keys.
Options: Custom (Default) / Standard

Key Management

Provision Factory Default Keys

Install factory default Secure Boot Keys when system is in setup mode.
Options: Disabled (Default) / Enabled

Enroll all Factory Default Keys

Force System to User Mode - install all Factory Default Keys(PK, KEK, , dbt, dbx). Change takes effect after reboot.

Save all Factory Default Keys

Save NVRAM content of all Secure Boot Variables to the files (EFI_SIGNATURE_LIST data format) in root folder on a target file system device.

Platform Key (PK)

Delete Key – Allows you to delete the PK file from your system.
Set new Key – Allows you set new PK file.

Key Exchange Keys

Delete Key – Allows you to delete the KEK file from your system.
Set new Key – Allows you set new KEK file.
Append Key – Allows you append Var to KEK.

Authorized Signature

Delete Key – Allows you to delete the DB file from your system.
Set new Key – Allows you set new DB file.
Append Key – Allows you append Var to DB.

Forbidden Signatures

Delete Key – Allows you to delete the DBX file from your system.
Set new Key – Allows you set new DBX file.
Append Key – Allows you append Var to DBX.

Authorized Timestamps

Set new Key – Allows you set new DBT file.
Append Key – Allows you append Var to DBT.

5. 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: 1 (Default)

Bootup NumLock State

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

Quiet Boot

This item enables or disables Quiet Boot option.
Options: Enabled (Default) / Disabled

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

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

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.
Options: EFI Driver (Default) / Auto

USB Support

If Disabled, all USB devices will NOT be available until after OS boot. If Partial Initial, specific USB port/device will NOT be available before OS boot. If Enabled, all USB devices will be available in OS and Post.

Options: Partial Initial (Default) / Full Initial / Disabled

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 Option #1/#2/#3

This item sets the system boot order.

Options: Windows Boot Manager (MMC - DF4064) (Default) / UEFI: Built - in EFI Shell / Disabled

6. Exit Menu

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

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Exit

Reset system setup.

Restore Defaults

This item Restore / Load default values for all the setup options.

UEFI: Built-in EFI Shell

This menu allows you to save configuration and reset the UEFI items.

Windows Boot Manager (MMC - DF4064)

This menu allows you to save configuration and reset the Windows Boot Manager.

Launch EFI Shell from filesystem device

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