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# BIOS Setup

RenderCube XL Rev. 2  
Single CPU

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# BIOS Setup

## 3.1 Knowing BIOS



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The new UEFI BIOS is a Unified Extensible Interface that complies with UEFI architecture, offering a user-friendly interface that goes beyond the traditional keyboard-only BIOS controls to enable a more flexible and convenient mouse input. You can easily navigate the new UEFI BIOS with the same smoothness as your operating system. The term "BIOS" in this user manual refers to "UEFI BIOS" unless otherwise specified.

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BIOS (Basic Input and Output System) stores system hardware settings such as storage device configuration, overclocking settings, advanced power management, and boot device configuration that are needed for system startup in the motherboard CMOS. In normal circumstances, the default BIOS settings apply to most conditions to ensure optimal performance. **DO NOT change the default BIOS settings** except in the following circumstances:

- An error message appears on the screen during the system bootup and requests you to run the BIOS Setup.
- You have installed a new system component that requires further BIOS settings or update.



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Inappropriate BIOS settings may result to instability or boot failure. **We strongly recommend that you change the BIOS settings only with the help of a trained service personnel.**

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- When downloading or updating the BIOS file, rename it as **WSCSE.CAP** for this motherboard.
  - BIOS settings and options may vary due to different BIOS release versions. Please refer to the latest BIOS version for settings and options.
-

## 3.2 BIOS setup program

Use the BIOS Setup to update the BIOS or configure its parameters. The BIOS screen include navigation keys and brief onscreen help to guide you in using the BIOS Setup program.

### Entering BIOS at startup

To enter BIOS Setup at startup, press <Delete> or <F2> during the Power-On Self Test (POST). If you do not press <Delete> or <F2>, POST continues with its routines.

### Entering BIOS Setup after POST

To enter BIOS Setup after POST:

- Press <Ctrl>+<Alt>+<Delete> simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on. Do this option only if you failed to enter BIOS Setup using the first two options.

After doing either of the three options, press <Delete> key to enter BIOS.



- 
- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
  - Ensure that a USB mouse is connected to your motherboard if you want to use the mouse to control the BIOS setup program.
  - If the system becomes unstable after changing any BIOS setting, load the default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the **Exit** menu or press hotkey <F5>. See section **3.8 Exit Menu** for details.
  - If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. See section **1.1.6 Onboard buttons and switches** for information on how to erase the RTC RAM via the Clear CMOS button.
  - The BIOS setup program does not support the Bluetooth devices.
- 



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Please visit [website](#) for the detailed BIOS content manual.

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### BIOS menu screen

The BIOS Setup program can be used under two modes: **EZ Mode** and **Advanced Mode**. You can change modes from **Setup Mode** in **Boot menu** or by pressing the <F7> hotkey.

### 3.2.1 EZ Mode

By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance, mode and boot device priority. To access the Advanced Mode, select **Advanced Mode** or press the <F7> hotkey for the advanced BIOS settings.



The default screen for entering the BIOS setup program can be changed. Refer to the **Setup Mode** item in section **Boot menu** for details.

The screenshot shows the ASUS UEFI BIOS Utility in EZ Mode. The interface is dark-themed with blue highlights. At the top, it displays the date (09/18/2017), time (15:01), language (English), and EZ Tuning Wizard (F11). The main area is divided into several sections: Information (system model, BIOS version, CPU, speed, memory), CPU Temperature (43°C), CPU Core Voltage (0.882 V), Motherboard Temperature (33°C), DRAM Status, SATA Information, Intel Rapid Storage Technology (On/Off), EZ System Tuning (Normal), and Boot Priority (AMI Virtual CDROM0 1.00, UEFI: JetFlashTranscend 4GB 8.07, Partition 1 (3830MB), JetFlashTranscend 4GB 8.07 (3830MB)). At the bottom, there are navigation buttons: Default(F5), Save & Exit(F10), Advanced Mode(F7) [-], and Search on FAQ.

Callouts and their descriptions:

- Displays a quick overview of the system status**: Points to the Information section.
- Selects the display language of the BIOS setup program**: Points to the English language selection.
- Creates storage RAID and configures system overlocking**: Points to the EZ System Tuning section.
- Displays the system properties of the selected mode. Click < > to switch EZ System Tuning modes**: Points to the Normal tuning mode.
- Enables or disables the SATA RAID mode for Intel Rapid Storage Technology enterprise**: Points to the SATA Information section.
- Loads optimized default settings**: Points to the Default(F5) button.
- Saves the changes and resets the system**: Points to the Save & Exit(F10) button.
- Click to go to Advanced mode**: Points to the Advanced Mode(F7) [-] button.
- Search on the FAQ**: Points to the Search on FAQ button.
- Click to display boot devices**: Points to the Boot Priority section.
- Selects the boot device priority**: Points to the boot device list in the Boot Priority section.



The boot device options vary depending on the devices you installed to the system.

### 3.2.2 Advanced Mode

The Advanced Mode provides advanced options for experienced end-users to configure the BIOS settings. The figure below shows an example of the Advanced Mode. Refer to the following sections for the detailed configurations.



To switch from EZ Mode to Advanced Mode, click **Advanced Mode(F7)** or press the <F7> hotkey.

The screenshot shows the ASUS UEFI BIOS Utility in Advanced Mode. The interface includes a top menu bar with options like Language, MyFavorite(F3), EZ Tuning Wizard(F11), and Hot Keys. A scroll bar is visible on the right. The main area displays configuration fields such as Hyper-Threading (set to Enabled), Max CPUID Value Limit (set to Disabled), and Hardware Prefetcher (set to Enabled). A Hardware Monitor panel on the right provides a quick overview of system status, including CPU frequency (4300 MHz), temperature (57°C), and memory usage. The bottom of the screen shows menu items, general help, last modified settings, and a 'Go back to EZ Mode' button. A search bar for the FAQ is also present.

**Configuration fields**

**Pop-up Menu**

**Menu bar** Language MyFavorite(F3) EZ Tuning Wizard(F11) Hot Keys

**Scroll bar**

ASUS UEFI BIOS Utility - Advanced Mode

09/18/2017 Monday 16:32 English MyFavorite(F3) EZ Tuning Wizard(F11) Hot Keys

My Favorites Main **Advanced** Boot Tool Exit Server Mgmt

L2 Cache RAM 1024KB

L3 Cache RAM 11264KB

Hyper-Threading [ALL] Enabled

Max CPUID Value Limit Disabled

Execute Disable Bit Enabled

Hardware Prefetcher Enabled

Adjacent Cache Prefetch Enabled

VMX Enabled

Boot performance mode Max Performance

Maximum CPU Core Temperature Auto

Active Processor Cores

CPU Power Management Configuration

Enables Hyper Threading (Software Method to Enable/Disable Logical Processor threads.)

**Hardware Monitor**

**CPU**

Frequency 4300 MHz Temperature 57°C

BCLK 100.0 MHz Core Voltage 1.164 V

Ratio 43x

**Memory**

Frequency 2133 MHz Vol\_CHAB 1.184 V

Capacity 8192 MB Vol\_CHCD 1.200 V

**Voltage**

+12V +5V

12.192 V 5.040 V

+3.3V

3.376 V

Version 2.17.1246. Copyright (C) 2017 American Megatrends, Inc.

Last Modified EzMode(F7) Search on FAQ

**Menu items** **General help** **Last modified settings** **Go back to EZ Mode** **Search on the FAQ**

**Displays a quick overview of the system status**

## Menu bar

The menu bar on top of the screen has the following main items:

<b>My Favorites</b>	For saving the frequently-used system settings and configuration.
<b>Main</b>	For changing the basic system configuration
<b>Advanced</b>	For changing the advanced system settings
<b>Boot</b>	For changing the system boot configuration
<b>Tool</b>	For configuring options for special functions
<b>Exit</b>	For selecting the exit options and loading default settings
<b>Server Mgmt</b>	For changing the server mgmt settings

## Menu items

The highlighted item on the menu bar displays the specific items for that menu. For example, selecting **Main** shows the Main menu items.

The other items (My Favorites, Advanced, Boot, Tool, Exit, and Server Mgmt) on the menu bar have their respective menu items.

## Submenu items

A greater than sign (>) before each item on any menu screen means that the item has a submenu. To display the submenu, select the item and press <Enter>.

## Language

This button above the menu bar contains the languages that you can select for your BIOS. Click this button to select the language that you want to display in your BIOS screen.

## My Favorites (F3)

This button above the menu bar shows all BIOS items in a Tree Map setup. Select frequently-used BIOS settings and save it to MyFavorites menu.



---

Refer to section **3.3 My Favorites** for more information.

---

## EZ Tuning Wizard (F11)

This button above the menu bar allows you to view and tweak the overclocking settings of your system. It also allows you to change the motherboard's SATA mode from AHCI to RAID mode.



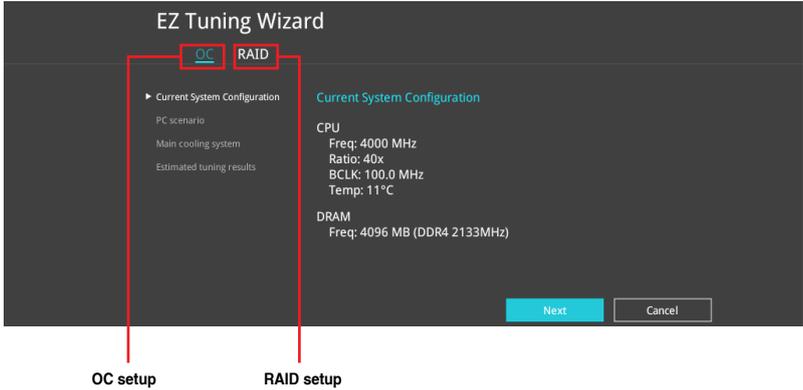
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Refer to section **3.2.3 EZ Tuning Wizard** for more information.

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### 3.2.3 EZ Tuning Wizard

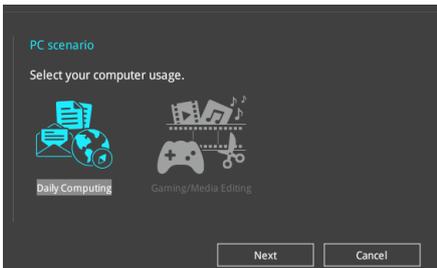
EZ Tuning Wizard allows you to easily overclock your CPU and DRAM, computer usage, and CPU fan to their best settings. You can also set RAID in your system using this feature.



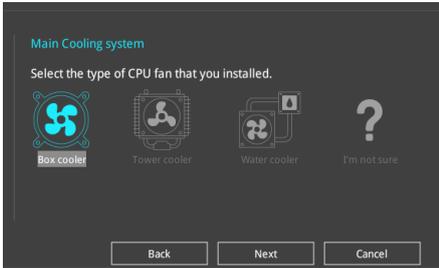
#### OC Tuning

To start OC Tuning:

1. Press <F11> on your keyboard or click  from the BIOS screen to open EZ Tuning Wizard screen.
2. Click **OC** then click **Next**.
3. Select a PC scenario **Daily Computing** or **Gaming/Media Editing**, then click **Next**.



4. Select a Main Cooling System **BOX cooler**, **Tower cooler**, **Water cooler**, or **I'm not sure**, then click **Next**.



5. After selecting the Main Cooling System, click **Next** then click **Yes** to start the OC Tuning.

## Creating RAID

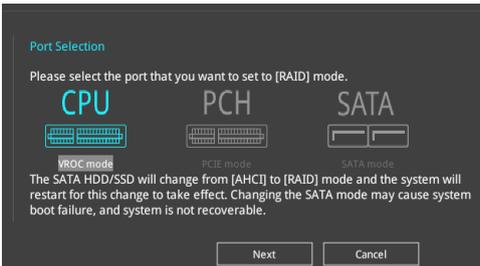
To create RAID:

1. Press <F11> on your keyboard or click **EZ Tuning Wizard(F11)** from the BIOS screen to open EZ Tuning Wizard screen.
2. Click **Yes** to enable RAID.



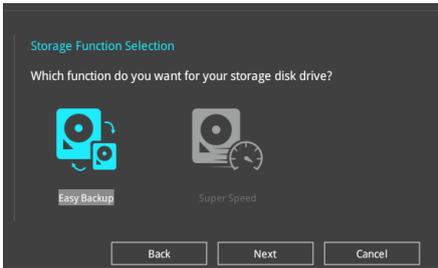
- Ensure that your HDDs have no existing RAID volumes.
- Ensure to connect your HDDs to Intel® SATA connectors.

3. Select the port that you want to set to [RAID] mode, **CPU**, **PCIE** or **SATA**, then click **Next**.

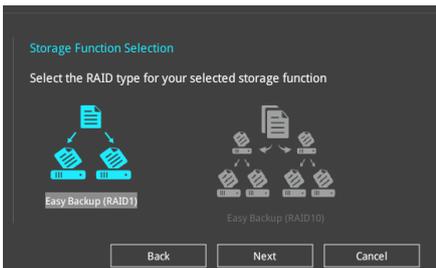


- **CPU (VROC mode):** Supports Intel® Virtual Raid on CPU. This feature requires a KEY module (purchased separately) and Intel® SSD modules.
- **PCH (PCIE mode):** Supports U.2, and M.2 PCIE mode RAID.
- **SATA (SATA mode):** Supports SATA RAID.

4. Select the type of storage for your RAID, **Easy Backup** or **Super Speed**, then click **Next**.



- a. For Easy Backup, click **Next** then select from **Easy Backup (RAID 1)** or **Easy Backup (RAID 10)**.

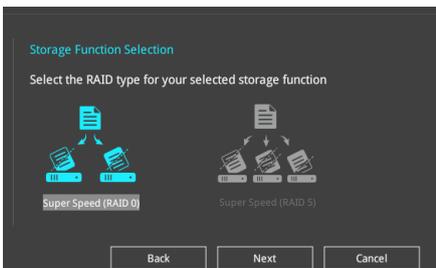


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You can only select Easy Backup (RAID 10) if you connect four (4) HDDs.

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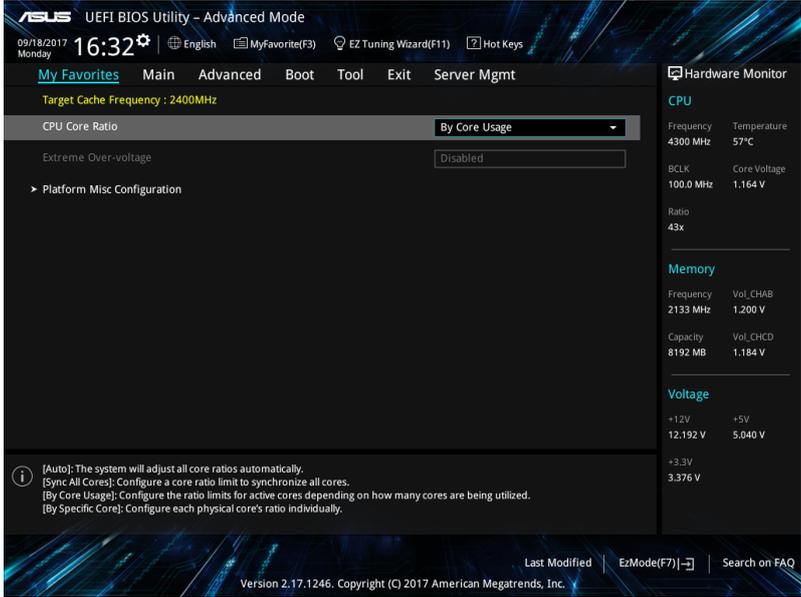
- b. For Super Speed, click **Next** then select from **Super Speed (RAID 0)** or **Super Speed (RAID 5)**.



5. After selecting the type of RAID, click **Next** then click **Yes** to continue the RAID setup.
6. After the RAID setup is done, click **Yes** to exit the setup then click **OK** to reset your system.

### 3.3 My Favorites

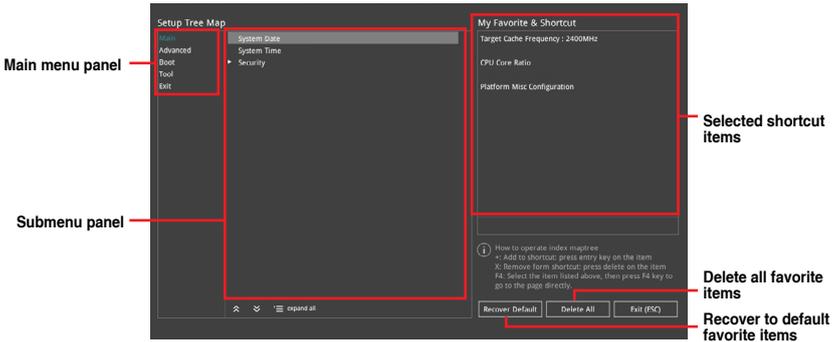
My Favorites is your personal space where you can easily save and access your favorite BIOS items. My Favorites comes with several performance, power saving, and fast boot related items by default. You can personalize this screen by adding or removing items.



## Adding items to My Favorites

To add BIOS items:

1. Press <F3> on your keyboard or click  (F3)MyFavorite from the BIOS screen to open Setup Tree Map screen.
2. On the Setup Tree Map screen, select the BIOS items that you want to save in My Favorites screen.



3. Select an item from main menu panel, then click the submenu that you want to save as favorite from the submenu panel and click  or press <Enter> on your keyboard.



You cannot add the following items to My Favorite items:

- Items with submenu options
- User-managed items such as language and boot order
- Configuration items such as Memory SPD Information, system time and date.

4. Click **Exit (ESC)** or press <Esc> key to close Setup Tree Map screen.
5. Go to My Favorites menu to view the saved BIOS items.

## 3.4 Main menu

The Main menu screen appears when you enter the Advanced Mode of the BIOS Setup program. The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.

### Security

The Security menu items allow you to change the system security settings.



- 
- If you have forgotten your BIOS password, erase the CMOS Real Time Clock (RTC) RAM to clear the BIOS password. See section 1.1.6 **Onboard buttons and switches** for information on how to erase the RTC RAM via the Clear CMOS button.
  - The Administrator or User Password items on top of the screen show the default **[Not Installed]**. After you set a password, these items show **[Installed]**.
- 

## 3.5 Advanced menu

The Advanced menu items allow you to change the settings for the CPU and other system devices.



---

Be cautious when changing the settings of the Advanced menu items. Incorrect field values can cause the system to malfunction.

---

### 3.5.1 CPU Configuration

The items in this menu show the CPU-related information that the BIOS automatically detects.



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The items in this menu may vary based on the CPU installed.

---

#### Hyper-threading [ALL]

This item allows a hyper-threading processor to appear as two logical processors, allowing the operating system to schedule two threads or processors simultaneously.

Configuration options: [Disabled] [Enabled]

#### CPU Power Management Configuration

This item allows you to manage and configure the CPU's power.

##### Enhanced Intel SpeedStep Technology

This item allows more than two frequency to be supported.

Configuration options: [Auto] [Enabled] [Disabled]

##### Turbo Mode

This item allows you to automatically set the CPU cores to run faster than the base operating frequency when it is below the operating power, current and temperature specification limit.

Configuration options: [Enabled] [Disabled]

### **Autonomous Core C-State**

This item allows you to enable or disable Autonomous Core C-State Control.  
Configuration options: [Auto] [Disabled] [Enabled]

## **3.5.2 Platform Misc Configuration**

The items in this menu allow you to change the ASPM for PCH and SA PCI Express.

## **3.5.3 System Agent (SA) Configuration**

The items in this menu allow you to adjust the Link Speed for PEG Port and Multi-Monitor.

## **3.5.4 PCH Configuration**

The items in this menu allow you to adjust the PCH PCI Express speed.

### **PCI Express Configuration**

This item allows you to configure the PCI Express slots.

#### **PCIe Speed**

This item allows your system to automatically select the PCI Express port speed.  
Configuration options: [Auto] [Gen1 (2.5 GT/s)] [Gen2 (5 GT/s)] [Gen3 (8 GT/s)]

## **3.5.5 PCH Storage Configuration**

While entering Setup, the BIOS automatically detects the presence of SATA devices. The SATA Port items show **Not Present** if no SATA device is installed to the corresponding SATA port.

### **SATA Controller(s)**

This item allows you to enable or disable the SATA Device.  
Configuration options: [Disabled] [Enabled]

### **SATA Mode Selection**

This item allows you to set the SATA configuration.

[AHCI]	Set to [AHCI] when you want the SATA hard disk drives to use the AHCI (Advanced Host Controller Interface). The AHCI allows the onboard storage driver to enable advanced Serial ATA features that increases storage performance on random workloads by allowing the drive to internally optimize the order of commands.
[Intel RST Premium (RAID)]	Set to [Intel RST Premium (RAID)] when you want to create a RAID configuration from the SATA hard disk drives.

### **S.M.A.R.T. Status Check**

SMART (Self-Monitoring, Analysis and Reporting Technology) is a monitoring system that shows a warning message during POST (Power-on Self Test) when an error occurs in the hard disks.

Configuration options: [On] [Off]

## SATA6G\_1 - SATA6G\_6

### SATA6G\_1 - SATA6G\_6

This item allows you to enable or disable the selected SATA port.

Configuration options: [Disabled] [Enabled]

### Hot Plug

These items appear only when the SATA Mode Selection is set to [AHCI] and allows you to enable or disable SATA Hot Plug Support.

Configuration options: [Disabled] [Enabled]

## 3.5.6 Serial Port Console Redirection

The items in this menu allow you to configure the Serial Port Console Redirection settings.

## 3.5.7 CPU Storage Configuration

The items in this menu allow you to configure CPU storage configurations.



---

Due to CPU behavior, CPU RAID functions with Intel® CPU RSTe only supports Intel® Skylake-W Series Processors and Intel® SSD modules.

---

## 3.5.8 Onboard Devices Configuration

The items in this menu allow you to switch between PCIe Lanes and configure onboard devices.

### HD Audio Controller

This item allows you to use the Azalia High Definition Audio Controller.

Configuration options: [Disabled] [Enabled]

### M2\_2 and U.2 Switch Function

[Auto] If a device is detected in M.2\_2, M.2\_2 will be enabled and U.2 will be disabled.

[U.2] Enable U.2 and disable M.2\_2.

### USB Type C Power Switch

[Auto] The system will automatically detect your USB Type C devices and provide suitable power if needed.

[Enabled] The USB Type C port will always provide power to your devices.

### RGB LED lighting

#### When system is in working state

This item allows you to turn the RGB LED lighting on or off when the system is in the working state.

Configuration options: [On] [Off]

#### When system is in sleep, hibernate or soft off states

This item allows you to turn the RGB LED lighting on or off when the system is in the sleep, hibernate or soft off states.

Configuration options: [On] [Off]

## Intel LAN1 / LAN2 Controller

This item allows you to enable or disable the Intel LAN / LAN2 controllers.  
Configuration options: [Disabled] [Enabled]

### 3.5.9 APM Configuration

The items in this menu allow you to set system wake and sleep settings.

#### ErP Ready

This item allows you to switch off some power at S4+S5 or S5 to get the system ready for ErP requirement. When set to **[Enabled]**, all other PME options are switched off.

Configuration options: [Disabled] [Enable(S4+S5)] [Enable(S5)]

### 3.5.10 Network Stack Configuration

The items in this menu allow you to configure Ipv4 / Ipv6 PXE support.

### 3.5.11 HDD/SSD SMART Information

This menu displays the SMART information of the connected devices.



---

NVM Express devices do not support SMART information.

---

### 3.5.12 USB Configuration

The items in this menu allow you to change the USB-related features.



---

The **Mass Storage Devices** item shows the auto-detected values. If no USB device is detected, the item shows **None**.

---

#### USB Single Port Control

This item allows you to enable or disable the individual USB ports.



---

Refer to section 1.1.2 **Motherboard layout** for the location of the USB ports.

---

### 3.5.13 Thunderbolt(TM) Configuration

The items in this menu allow you to configure Thunderbolt settings.

#### TBT Root port Selector

This item allows you to select the thunder root port.

Configuration options: [Thunderbolt Disabled] [PCIE4\_1] [PCIE16\_1] [PCIE16\_2] [PCIE16\_3] [PCIE16\_4]

### 3.5.14 PCH-FW Configuration

This item allows you to configure the firmware TPM.

## 3.6 Boot menu

The Boot menu items allow you to change the system boot options.

### Fast Boot

[Disabled] Allows your system to go back to its normal boot speed.

[Enabled] Allows your system to accelerate the boot speed.



---

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

---

### Next Boot after AC Power Loss

[Normal Boot] Returns to normal boot on the next boot after an AC power loss.

[Fast Boot] Accelerates the boot speed on the next boot after an AC power loss.

## Boot Configuration

### Setup Mode

[Advanced Mode] This item allows you to go to Advanced Mode of the BIOS after POST.

[EZ Mode] This item allows you to go to EZ Mode of the BIOS after POST.

## CSM (Compatibility Support Module)

This item allows you to configure the CSM (Compatibility Support Module) items to fully support the various VGA, bootable devices and add-on devices for better compatibility.

### Launch CSM

[Auto] The system automatically detects the bootable devices and the add-on devices.

[Enabled] For better compatibility, enable the CSM to fully support the non-UEFI driver add-on devices or the Windows® UEFI mode.

[Disabled] Disable the CSM to fully support the non-UEFI driver add-on devices or the Windows® UEFI mode.



---

The following items appear only when you set the Launch CSM to **[Enabled]**.

---

### Boot Device Control

This item allows you to select the type of devices that you want to boot.

Configuration options: [UEFI and Legacy OPROM] [Legacy OPROM only] [UEFI only]

### Boot from Network Devices

This item allows you to select the type of network devices that you want to launch.

Configuration options: [Ignore] [Legacy only] [UEFI driver first]

### Boot from Storage Devices

This item allows you to select the type of storage devices that you want to launch.

Configuration options: [Ignore] [Legacy only] [UEFI driver first]

### **Boot from PCI-E/PCI Expansion Devices**

This item allows you to select the type of PCI-E/PCI expansion devices that you want to launch.

Configuration options: [Legacy only] [UEFI driver first]

### **Secure Boot**

This item allows you to configure the Windows® Secure Boot settings and manage its keys to protect the system from unauthorized access and malwares during POST.

### **Boot Option Priorities**

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



- 
- To access Windows® OS in Safe Mode, press <F8> after POST (Windows® 8 not supported).
  - To select the boot device during system startup, press <F8> when the Logo appears.
- 

### **Boot Override**

These items displays the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system. Click an item to start booting from the selected device.

## 3.7 Tool menu

The Tool menu items allow you to configure options for special functions. Select an item then press <Enter> to display the submenu.

### Setup Animator

This item allows you to enable or disable the Setup animator.

Configuration options: [Disabled] [Enabled]

### 3.7.1 EZ Flash 3 Utility

This item allows you to run EZ Flash 3. When you press <Enter>, a confirmation message appears. Use the left/right arrow key to select between [Yes] or [No], then press <Enter> to confirm your choice.



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For more details, refer to section **3.10.2 EZ Flash 3**.

---

### 3.7.2 Secure Erase

SSD speeds may lower over time as with any storage medium due to data processing. Secure Erase completely and safely cleans your SSD, restoring it to factory performance levels.



---

Secure Erase is only available in AHCI mode. Ensure to set the SATA mode to AHCI. Click **Advanced > PCH Storage Configuration > SATA Mode Selection > AHCI**.

---

To launch Secure Erase, click **Tool > Secure Erase** on the Advanced mode menu.



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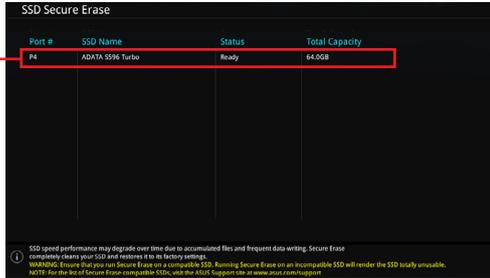
Check the support site for a full list of SSDs tested with Secure Erase. The drive may become unstable if you run Secure Erase on an incompatible SSD.

---



- The time to erase the contents of your SSD may take a while depending on its size. Do not turn off the system during the process.
  - Secure Erase is only supported on Intel SATA port. For more information about Intel SATA ports, refer to section **1.1.2 Motherboard layout** of this manual.
-

Displays the available SSDs



Port #	SSD Name	Status	Total Capacity
04	ADATA S596 Turbo	Ready	64.0GB

SSD speed performance may degrade over time due to accumulated files and frequent data writing. Secure Erase completely clears your SSD and restores it to its factory settings.  
WARNING: Always plug your SSD Secure Erase on a compatible SSD. Running Secure Erase on an incompatible SSD will render the SSD totally unusable.  
NOTE: For the list of Secure Erase compatible SSDs, visit the ASUS Support site at [www.asus.com/support](http://www.asus.com/support)



---

### Status definition:

- **Frozen.** The frozen state is the result of a BIOS protective measure. The BIOS guards drives that do not have password protection by freezing them prior to booting. If the drive is frozen, a power off or hard reset of your PC must be performed to proceed with the Secure Erase.
  - **Locked.** SSDs might be locked if the Secure Erase process is either incomplete or was stopped. This may be due to a third party software that uses a different password defined by . You have to unlock the SSD in the software before proceeding with Secure Erase.
-

### 3.7.3 Overclocking Profile

This item allows you to store or load multiple BIOS settings.

#### Load from Profile

This item allows you to load the previous BIOS settings saved in the BIOS Flash. Key in the profile number that saved your BIOS settings, press <Enter>, and then select **Yes**.



- DO NOT shut down or reset the system while updating the BIOS to prevent the system boot failure!
- We recommend that you update the BIOS file only coming from the same memory/ CPU configuration and BIOS version.

#### Profile Name

This item allows you to key in a profile name.

#### Save to Profile

This item allows you to save the current BIOS settings to the BIOS Flash, and create a profile. Key in a profile number from one to eight, press <Enter>, and then select **Yes**.

#### Load/Save Profile from/to USB Drive

This item allows you to load or save profile from your USB drive, load and save profile to your USB drive.

### 3.7.4 SPD Information

This item allows you to view the DRAM SPD information.

### 3.7.5 IPMI HWM

Allows you to run the IPMI hardware monitor.

### 3.7.6 Graphics Card Information

This item displays the information about the graphics card installed in your system.

#### GPU Post

This item displays the information and recommended configuration for the PCIE slots that the graphics card is installed in your system.



This feature is only supported on selected graphics cards.

#### Bus Interface

This item allows you to select the bus interface.

Configuration options: [PCIEX16\_1] [PCIEX16\_2] [PCIEX16\_3] [PCIEX16\_4] [PCIE4\_1]

## 3.8 Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the EZ Mode from the Exit menu.

### Load Optimized Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select **OK** to load the default values.

### Save Changes & Reset

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved. When you select this option or if you press <F10>, a confirmation window appears. Select **OK** to save changes and exit.

### Discard Changes & Exit

This option allows you to exit the Setup program without saving your changes. When you select this option or if you press <Esc>, a confirmation window appears. Select **Yes** to discard changes and exit.

### Launch EFI Shell from filesystem device

This item allows you to attempt to launch the EFI Shell application (shellx64.efi) from one of the available filesystem devices.

## 3.9 Server Mgmt menu

The Server Management menu displays the server management status and allows you to change the settings.

## 3.10 Updating BIOS

The website publishes the latest BIOS versions to provide enhancements on system stability, compatibility, and performance. However, BIOS updating is potentially risky. If there is no problem using the current version of BIOS, DO NOT manually update the BIOS. Inappropriate BIOS updating may result to system's failure to boot. Carefully follow the instructions in this chapter to update your BIOS when necessary.

The following utilities allow you to manage and update the motherboard BIOS setup program.

1. EZ Update: Updates the BIOS in Windows® environment.
2. EZ Flash 3: Updates the BIOS using a USB flash drive.
3. CrashFree BIOS 3: Restores the BIOS using the motherboard support DVD or a USB flash drive when the BIOS file fails or gets corrupted.

### 3.10.1 EZ Update

The EZ Update is a utility that allows you to update the motherboard BIOS in Windows® environment.



- EZ Update requires an Internet connection either through a network or an ISP (Internet Service Provider).
  - This utility is available in the support DVD that comes with the motherboard package.
-

### 3.10.2 EZ Flash 3

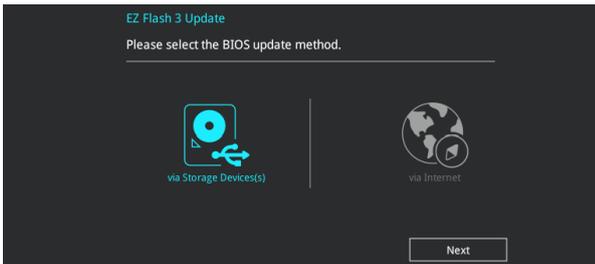
EZ Flash 3 allows you to download and update to the latest BIOS through the Internet without having to use a bootable floppy disk or an OS-based utility.



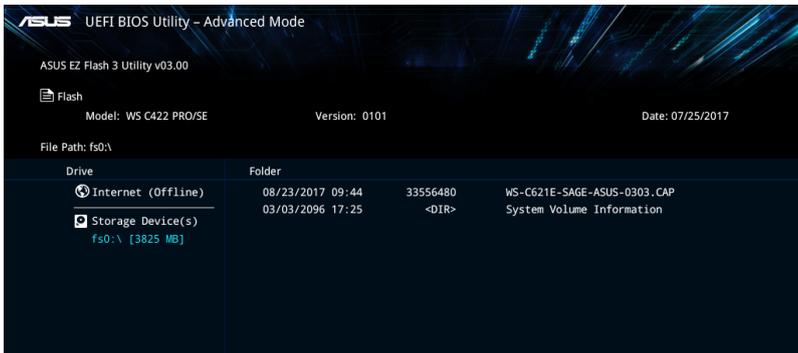
Updating through the Internet varies per region and Internet conditions. Check your local Internet connection before updating through the Internet.

#### To update the BIOS by USB:

1. Enter the Advanced Mode of the BIOS setup program. Go to the Tool menu to select **EZ Flash 3 Utility** and press <Enter>.
2. Insert the USB flash disk that contains the latest BIOS file to the USB port.
3. Select **via Storage Device(s)**.



4. Press <Tab> to switch to the Drive field.
5. Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
6. Press <Tab> to switch to the Folder Info field.
7. Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process. Reboot the system when the update process is done.





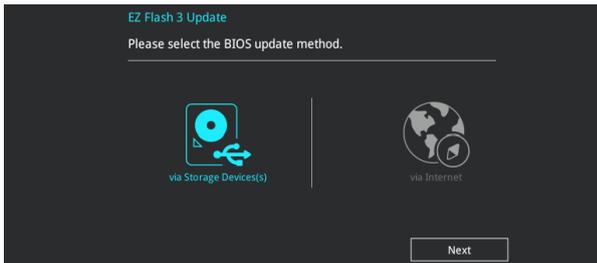
- This function can support devices such as a USB flash disk with FAT 32/16 format and single partition only.
- DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!



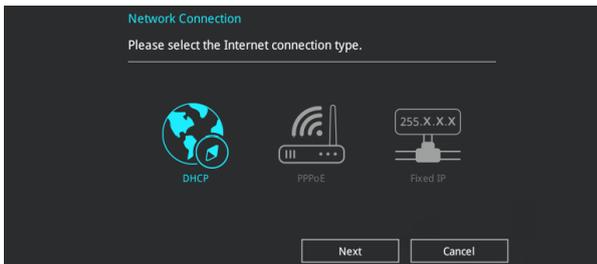
Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. See section 3.8 **Exit Menu** for details.

### To update the BIOS by Internet:

1. Enter the Advanced Mode of the BIOS setup program. Go to the Tool menu to select **EZ Flash 3 Utility** and press <Enter>.
2. Select **via Internet**.



3. Press the Left/Right arrow keys to select an Internet connection method, and then press <Enter>.



4. Follow the onscreen instructions to complete the update.
5. Reboot the system when the update process is done.



Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. See section 3.10 **Exit Menu** for details.

### 3.10.3 CrashFree BIOS 3

The CrashFree BIOS 3 utility is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the BIOS file.



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The BIOS file in the motherboard support DVD may be older than the BIOS file published on the official website. If you want to use the newer BIOS file, download the file at <https://www..com/support/> and save it to a USB flash drive.

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#### Recovering the BIOS

##### To recover the BIOS:

1. Turn on the system.
2. Insert the motherboard support DVD to the optical drive, or the USB flash drive containing the BIOS file to the USB port.
3. The utility automatically checks the devices for the BIOS file. When found, the utility reads the BIOS file and enters EZ Flash 3 automatically.
4. The system requires you to enter BIOS Setup to recover the BIOS setting. To ensure system compatibility and stability, we recommend that you press <F5> to load default BIOS values.



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**DO NOT** shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!

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