BIOS Setup Manual

BIOS Setup

BIOS (Basic Input and Output System) is a UEFI interface that allows you to setup and configure your system for optimum use. Using your mouse and keyboard, users can change BIOS settings, monitor CPU temperature, select the boot device priority and view system information such as the CPU name, DRAM capacity, and the BIOS version.

To access the BIOS setup program, press the **<Delete>** key during the POST (Power-On Self-Test) when the power is turned on.

< ↑ >< ↓ >	Move the selection bar to select an item	
<><→>	Move the selection bar to select the screen	
<enter> or <double click=""></double></enter>	Execute command or enter the submenu	
<esc> or <right click=""></right></esc>	Main Menu: Exit the BIOS Setup program	
	Submenus: Exit current submenu	
<+>	Increase the numeric value or make changes	
<->	Decrease the numeric value or make changes	
<f1></f1>	General Help	
<f2></f2>	Restore the previous BIOS settings for the current submenus	
<f3></f3>	Load the Optimized BIOS default settings for the current submenu	
<f4></f4>	Save all the changes and exit the BIOS Setup program	

BIOS Setup Program Function Keys

Main

This setup page includes all the items in standard compatible BIOS

Advanced

This setup page includes all the items of BRIX enhanced features.

Chipset

Platform Controller Hub additional features configuration.

Security

Change, set or disable supervisor and user password. Configuration supervisor password allows you to restrict access to the

system and BIOS Setup.

A supervisor password allows you to make changes in BIOS Setup.

A user password only allows you to view the BIOS settings but not to make changes.

Boot

This setup page provides items for configuration of boot sequence.

Save & Exit

Save all the changes made in the BIOS Setup program to and exit. (Pressing <F10> can also carry out this task.)

Abandon all changes and the previous settings remain in effect. Pressing <Y> to the confirmation message will exit BIOS Setup.

(Pressing <Esc> can also carry out this task.)



• BIOS flashing is potentially risky, if you do not encounter problems of using the current BIOS version, it is recommended that you don't flash the BIOS. To flash the BIOS, do it with caution. Inadequate BIOS flashing may result in system malfunction.

It is recommended that you not alter the default settings (unless you need to) to prevent system instability or
other unexpected results. Inadequately altering the settings may result in system's failure to boot. If this occurs,
try to clear the CMOS values and reset the board to default values.

The Main Menu

Once you enter the BIOS Setup program, the Main Menu (as shown below) appears on the screen. Use arrow keys to move

among the items and press **<Enter>** to accept or enter other sub-menu.

Main Menu Help

The on-screen description of a highlighted setup option is displayed on the bottom line of the Main Menu.

Submenu Help

While in a submenu, press <F1> to display a help screen (General Help) of function keys available for the menu. Press <ESC> to

exit the help screen. Help for each item is in the Item Help block on the right side of the submenu.



BIOS Information

Project Name

Displays Project name.

BIOS Version

Displays version of the BIOS.

Build Data and Time

Displays the date and time when the BIOS setup utility was created.

LAN MAC Address

Displays the MAC address information.

Total Memory

Determines how much total memory is present during the POST.

ME FW Version

Displays the ME firmware version.

System Date

Set the date following the weekly-month-day-year format.

System Time

Set the system time following the hour-minute- second format.



• If you do not find the settings you want in the Main Menu or a submenu, press <Ctrl> + <F1> to access more advanced options.

When the system is not stable as usual, select the Restore Defaults item to set your system to its defaults.
The BIOS Setup menus described in this chapter are for reference only and may differ by BIOS version.

Advanced Menu

The Advanced menu display submenu options for configuring the function of various hardware components.

Select a submenu item, then press **<Enter>** to access the related submenu screen.



Trusted Computing

Configures trusted computing setting.

OverClocking Performance Menu

Configures OverClocking setting

*This item depends on purchasing product.

H/W Monitor

Displays a real-time record of the CPU / system temperature and fan speed.

S5 RTC Wake Setting

Enable system to wake up from S5 mode using RTC alarm

CPU Configuration

Configures the CPU features in this entry.

SATA Configuration

Configures the SATA settings in this entry.

OS selection

Selecting allow you to select the OS system in this entry.

NVMe Configuration

Optional item by models.

H/W Monitor

Enter to view the Hardware Monitor screen which displays a real-time record of the CPU / system temperature and fan speed.

Aptio Setup Utility - Advanced	· Copyright (C) 2016 Ameri	ican Megatrends, Inc.
System Fan Fail Warning	[Enabled]	Enable to set a warning
System Fan Speed Control	[Normal]	disconnected.
CPU Temperature GPU Temperature System Fan Speed	: +70 % : +35 % : 1991 RPM	
	R	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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System Fan Fail Warning (Default: Enabled)

Enable system fan stop warming function.

Set waring message when system fan failed.

System Fan Speed Control (Default: Normal)

Set Normal by default.

Option available: Full Speed / Normal.

CPU Temperature

Displays current system temperature.

GPU Temperature

Displays current GPU temperature.

System Fan Speed

Displays current CPU fan speed.

CPU Configuration

Your CPU features / instructions are displayed and can be individually enabled / disabled in the CPU features list showed below.

Aptio Setup Utility - Advanced	· Copyright (C) 2016 American	Megatrends, Inc.
CPU Configuration		When enabled, a VMM can utilize the additional
Intel(R) Core(TM)	1.6091E	hardware capabilities provided
CPU Signature	506E3	by Vanderpool Technology
Microcode Patch	74	
Processor Cores	4	
Hyper Threading Technology	Supported	
Intel VT-x Technology	Supported	
Intel SMX Technology	Not Supported	
64-bit	Supported	
L1 Data Cache	32 kB × 4	
L1 Code Cache	32 kB x 4	
L2 Cache	256 kB x 4	↔: Select Screen
L3 Cache	6 MB	†∔: Select Item
		Enter: Select
	[Enabled]	+/-: Change Opt.
CPU P States	[Enabled]	F1: General Help
EIST	[Enabled]	F2: Previous Values
lurbo Mode	[Enabled]	F3: Uptimized Defaults
UPU C States	[Enabled]	F4: Save & EXIT
UFG IOCK	[V1Sabled]	ESU: EXIT

CPU Model Name

Displays the processor type information.

CPU processor type depends on actual model.

CPU Signature

Displays the processor ID information.

Microcode Patch

Displays the information of the processor microcode patch.

Processor Cores

Displays the information of the processor core.

64-bit

Displays the supported information of installed CPU.

L1 Data Cache

Displays the information of L1 Data Cache.

L1 Code Cache

Displays the information of L1 Code Cache.

L2 Cache

Displays the information of L2 Cache per Core.

L3 Cache

Displays the information of total L3 Cache per socket.

SATA Configuration

Let you select the on chip SATA type.

Aptio S Advanced	Setup Utility – Copyright (C) 2016 Americar	Megatrends, Inc.
SATA Mode Selection	[AHCI]	Determines how SATA
Serial ATA Port 1 Serial ATA Port 2 M.2 SATA device	Empty INTEL SSDSC2BW (240.0GB) Empty	
	R	 ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Versio		

SATA Mode Selection (Default: AHCI)

SATA controller enable its AHCI functionality.

The RAID function is disabled and cannot be access the RAID setup utility at boot

time.

Aptio Setu Advanced	o Utility – Copyright (C) 2016 Americar	n Megatrends, Inc.
SATA Mode Selection Serial ATA Port 1 Serial ATA Port 2 M.2 SATA device	[AHCI] Empty INTEL SSDSC2BW (240.06B) Empty	Determines how SATA controller(s) operate.
	SATA Mode Selection AHCI RAID	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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SATA Port

Displays the hard drive information connected to your SATA port.

M.2 SATA device

Displays the hard drive information connected to your M.2 SATA device.

OS Selection

Selecting allow you to select the OS system in this entry



OS Selection

Selecting OS before installation..

LAN PXE OpROM (Default: Disabled)

Allows you to select whether to enable the legacy option ROM for the LAN controller t.

Default: Disabled.

Storage (Default: Do not launch)

Controls the execution of UEFI and Legacy storage OpROM.

When setting RAID function and select UEFI or Legacy mode to control.

Aptio Set Advanced	up Utility – Copyright (C) 2016 Americar	n Megatrends, Inc.
OS Selection	[Windows 7]	Controls the execution of UEFI
LAN PXE OpROM	[Disabled]	and Legacy storage option
Storage		
	Do not launch	
	UEFI Legacy	↔: Select Screen t↓: Select Item Enter: Select
		+/−: Change Opt. F1: General Help
		F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
Version	2.17.1254. Copyright (C) 2016 American ⊧	legatrends, Inc.

Chipset

Allows users to view and configure the system chipset features.

Aptio Setup Utility - Main Advanced Chipset Security	Copyright (C) 2016 American Boot Save & Exit	Megatrends, Inc.
VT-d	[Enabled]	VT-d capability
Onboard Audio Onboard LAN	[Enabled] [Enabled]	
ERP Lowest Power State Mode USB S5 Wakeup Support XHCI Hand-off Restore AC Power Loss Power LED Support	[Disabled] [Disabled] [Disabled] [Power Off] [Enabled]	
	K	 ↔: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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VT-d (Default: Enabled)

Enables guest virtual machines to directly use peripheral devices through DMA and interrupt remapping.

Option available: Enabled / Disabled.

Onboard Audio (Default: Enabled)

Enabled / Disabled onboard audio controller.

Option available: Enabled / Disabled.

Onboard LAN (Default: Enabled)

Enabled / Disabled onboard LAN controller.

Option available: Enabled / Disabled.

ERP Lowest Power State Mode (Default: Disabled)

Enabled / Disabled ERP support function.

Option available: Enabled / Disabled.

XHCI Hand-off (Default: Disabled)

Set USB port behavior.

Option available: Enabled / Disabled.

Restore AC Power Loss (Default: Power off)

This option provides user to set the mode if an AC power loss occurs.

Power LED Support (Default: Enabled)

This option provides user to set the mode for Power LED behavior.

Security

Allows you to safeguard a protect the system from unauthorized use by setting up access passwords.



Administrator Password

Press **<Enter>** to configure the administrator password.

User Password

Press **<Enter>** to configure the user password.

Secure Boot menu

Aptio Setup Utility - Security	Copyright (C) 2016 American	Megatrends, Inc.
System Mode Secure Boot Vendor Keys Secure Boot Secure Boot Mode ▶ Key Management	Setup Not Active Not Active [Disabled] [Sgandard]	Secure Boot can be enabled if 1.System running in User mode with enrolled Platform Key(PK) 2.CSM function is disabled
		<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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Secure Boot Support (Default: Disabled)

Secure Boot requires all the applications that are running during the booting process to be pre-signed with valid digital

certificates. This way, the system knows all the files being loaded before UEFI OS loads and gets to the login screen have not

been tampered with.

Option available: Enabled / Disabled.

Allows you to safeguard an protect the system from unauthorized use by setting up access passwords.

Define the Secure Boot Mode.

Option available: Standard / Custom.

The Key Management below can be selected if Secure Boot Mode is Custom.

Key Management

For an experienced user to modify Secure Boot variables.

Boot

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 Main Advanced Chipset Security
 Boot Save & Exit

 Full Screen LOGO Show
 [Enabled]

 Boot Option Priorities
 [Enabled]

 Boot Option #1
 [P1: INTEL

 SUBSC2BW240H6
 1

 Boot Option #2
 [Windows Boot Manager (P1: INTEL

 SUBSC2BW240H6)1
 UEFI: SanDisk Cruzer 7.01, Partition 11

 Boot Option #3
 [UEFI: Built-in EFI Shell]

 Hand Drive BBS Priorities
 **: Select Screen 11: Select Item Enter: Select */-: Change Opt.

 Hand Drive BBS Priorities
 File Comparison Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Allows you to set the logo post on screen and the device priority during system boot-up.

Boot Option Priorities

Full Screen LOGO Show (Default: Enabled)

Allow user to determine whether to display the logo at system startup.

Boot Option (Default: #1)

Press **<Enter>** to configure the boot priority.

Option may vary depends on your connected HDD numbers: #1 / (#2) / (#3) / (#4).

Save & Exit

The Save & Exit menu displays the various options to quit from the BIOS setup. Highlight any of the exit options then press

<Enter>.



Save Changes and Reset

Active this option to reset system after saving the changes.

Option available: Yes / No.

Discard Changes and Reset

Discards changes made and close the BIOS setup and exit.

Option available: Yes / No.

Restore Defaults

Press **<Enter>** on this item and then press **<Y>** key to load the default BIOS settings.

Option available: Yes / No.

ME FW Image Re-Flash

Press <Enter> to configure ME FW Image Re-Flash function.

Option available: Disabled / Enabled