

Hi-Fi A85W 3D UEFI BIOS Manual

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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.

DRAM Support

DDR3 SDRAM (Double Data Rate III Synchronous DRAM) is supported.

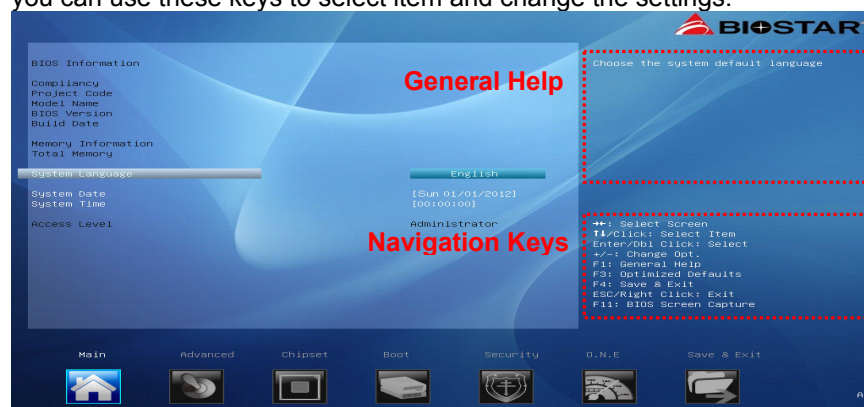
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Using Setup

When starting up the computer, press 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.



Notice

- 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.

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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.

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2 Advanced Menu

The Advanced Menu allows you to configure the settings of CPU, Super I/O, Power Management, and other system devices.

Notice

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



PCI Subsystem Settings



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PCI Latency Timer

This item sets the 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

VGA Palette Snoop

This item enables or disables VGA Palette Registers Snooping.

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 sets Maximum Payload of PCI Express Device or allows 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 sets Maximum Read Request Size of PCI Express Device or allows System BIOS to select the value.

Options: Auto (Default) / 128 Bytes / 256 Bytes / 512 Bytes / 1024 Bytes / 2048 Bytes / 4096 Bytes

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ASPM Support

This item sets the ASPM Level: Force LO – Force all links to LO State; Auto – BIOS auto configures; Disabled – Disables ASPM.

Options: Disabled (Default) / Auto / Force L0s

ACPI Settings/ WakeUp Event control



EuP Control

When EuP is enabled, the system will meet EuP requirement.

Options: Disabled (Default) / Enabled

ACPI Sleep State

This item selects the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

Options: S3 only (Suspend to RAM) (Default) / Suspend Disabled

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.

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Wake up hour / Wake up minute / Wake up second

You can choose the system boot up time, input hour, minute and second to specify.

Ring-In Wake up from S5

This item enables the system to wake from S5 using Ring-In event.

Options: Disabled (Default) / Enabled

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 Selected

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 Enter

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

PS2 Mouse PowerOn

This item allows you to control the mouse power on function.

Options: Disabled (Default) / Enabled

USB Device Wakeup from S3/S4

This item allows you to enable or disabled the USB resume from S3/S4 function.

Options: Disabled (Default) / Enabled

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CPU Configuration



PowerNow

This item allows you to enable or disable the PowerNow power saving technology.

Options: Enabled (Default) / Disabled

NX Mode

This item allows you to enable or disable No-execute page protection Function.

Options: Enabled (Default) / Disabled

SVM

This item allows you to enable or disable CPU virtualization.

Options: Enabled (Default) / Disabled

CPB Mode

This item allows you to enable or disable core performance boost.

Options: Auto (Default) / Disabled

C6 Mode

This item allows you to enable or disable C6.

Options: Enabled (Default) / Disabled

Core Leveling

This item allows you to activate Core Leveling function.

Options: Auto (Default) / Manual

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*Note: The following items appear only when you set the **Core Leveling** item to [Manual]*

Compute Unit0/1

The item allows you to enable or disable CPU Computer Unit0/1.

Options: Enabled (Default) / Disabled

HTC temperature limit

This item allows you to set HTC temperature limit. Range: 70°C - 85°C

Options: 75°C (Default)

SATA Configuration

The BIOS will automatically detect the presence of SATA devices. There is a sub-menu for each SATA device. Select a device and press <Enter> to enter the sub-menu for detailed options.



OnChip SATA Channel

This item allows you to enable or disable OnChip SATA Channel.

Options: Enabled (Default) / Disabled

OnChip SATA Type

This item allows you to choose OnChip SATA Type.

Options: Native IDE (Default) / RAID / AHCI / Legacy IDE

SATA IDE Combined Mode

This item allows you to enable or disable SATA IDE Combined Mode.

Options: Enabled (Default) / Disabled

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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 allows you to enable or disable Legacy USB3.0 (XHCI) Controller 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

EHCI Hand-Off

This is a workaround for OSeS without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.

Options: Disabled (Default) / Enabled

Mass Storage Devices

Mass storage device emulation type. 'Auto' enumerates devices according to their media format. Optical drives are emulated as 'CDROM', drivers with no media will be emulated according to a driver type.

Options: Auto (Default) / Floppy / Forced FDD / Hard Disk / CR-ROM

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SMART FAN Control



CPU Smart FAN

This item allows you to control the CPU Smart Fan function.
Options: Disabled (Default) / Auto / 4Pin / 3Pin

CPU FAN Calibrate

Press [ENTER] to calibrate CPU FAN.

Control Mode

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

Fan Ctrl OFF(°C)

When CPU temperature is lower than this value, the CPU fan will keep lowest RPM.

Options: 10 (°C) (default)

Fan Ctrl On(°C)

When CPU temperature is higher than this value, the CPU fan controller will turn on.

Options: 20 (°C) (Default)

Fan Ctrl Start Value

This item sets CPU FAN Start Speed Value.

Options: 50 (Default)

Fan Ctrl Sensitive

The bigger the numeral is, the higher the FAN speed is.

Options: 30 (Default)

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Super IO Configuration



Restore AC Power Loss

This setting specifies what state to go to when power is re-applied after a power failure.

Options: Power Off (Default) / Power On / Last State

Serial Port 1 Configuration



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Serial Port

This item enables or disables Serial Port (COM).

Options: Enabled (Default) / Disabled

Change Settings

This item allows you to select an optimal setting for Super IO device.

Options: Auto (Default) / IO=3F8h; IRQ=4 / IO=3F8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12 / IO=2F8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12 / IO=3E8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12 / IO=2E8h; IRQ=3, 4, 5, 6, 7, 10, 11, 12

CIR Controller Configuration



CIR Controller

This item enables or disables CIR Controller.

Options: Disabled (Default) / Enabled

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H/W Monitor



PWM Processor Hot

This item enables or disables 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

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Network Stack



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 booth option will not be created.

Options: Enabled (Default) / Disabled

IPv6 PXE Support

This item enables or disables IPv6 PXE Boot Support. If disabled IPv6 booth option will not be created.

Options: Enabled (Default) / Disabled

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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.

Notice

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



South Bridge Configuration



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SB USB Configuration



XHCI Switch

This item allows you to switch XHCI

Options: Enabled (Default) / Disabled

OHCI HC (Bus 0 Dev 18/19 Fn 0)

This item allows you to control OHCI host controller. (USB 1.1 Device)

Options: Enabled (Default) / Disabled

EHCI HC (Bus 0 Dev 18/19 Fn 2)

This item allows you to control EHCI host controller. (USB 2.0 Device)

Options: Enabled (Default) / Disabled

*Note: OHCI HC (Bus 0 Dev 22 Fn 0) and EHCI HC (Bus 0 Dev 22 Fn 2) items will appear, when you set the **XHCI Controller** item to disabled.*

SB GPP Port Configuration



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GPP Link ASPM

Options: Disabled (Default) / L0s / L1 / L0s + L1

GPP Gen2/ UMI Gen2

Options: Enabled (Default) / Disabled

SB HD Azalia Configuration



HD Audio Azalia Device

This item allows you to control the HD audio device.

Options: Enabled (Default) / Auto / Disabled

North Bridge



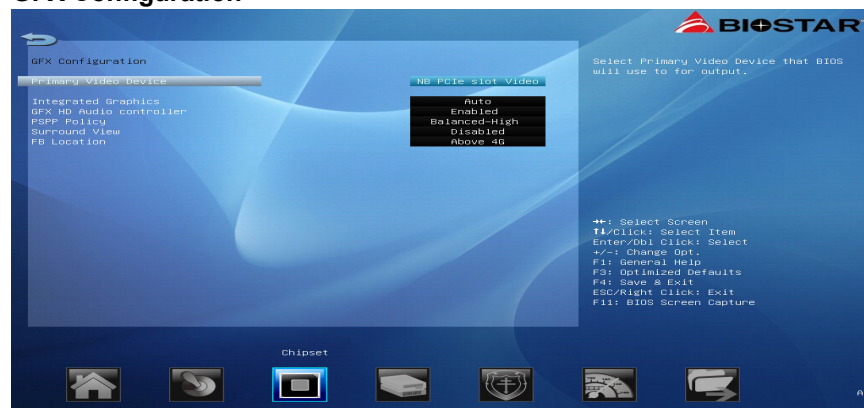
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IOMMU

This item allows you to enable or disable IOMMU support.

Options: Disabled (Default) / Enabled

GFX Configuration



Primary Video Device

This item allows you to select Primary Video Device that BIOS will use to for output.

Options: NB PCIe slot Video (Default) / IGD Video

Integrated Graphics

This item set integrated graphics controller.

Options: Auto (Default) / Disabled / Force

Note: The following items appear only when you set the Integrated Graphics item to [Force]

UMA Frame Buffer Size: 32M / 64M / 128 M / 256 M / 512M / 1G / 2G

GFX HD Audio controller

This item enables or disables GFX HD Audio Controller.

Options: Enabled (Default) / Disabled

PSPP Policy

This item allows you to set PCIe speed power policy.

Options: Balanced-High (Default) / Disabled / Performance / Balanced-Low / Power Saving

Surround View

This item supports multi-display function.

Options: Disabled (Default) / Enabled

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FB Location

This item allows you to set FB Location

Options: Above 4G (Default) / Below 4G

Onboard Devices



Realtek PCIE NIC

This item allows you to enable or disable Realtek PCIE NIC.

Options: Enabled (Default) / Disabled

Onboard LAN Option ROM

This item allows you to enable or disable Onboard LAN Option ROM

Options: Disabled (Default) / Enabled

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4 Boot Menu

This menu allows you to setup the system boot options.



Setup Prompt Timeout

This item sets number of seconds to wait for setup activation key.

Options: 2 (Default)

Bootup NumLock State

This item selects the keyboard NumLock state.

Options: On (Default) / Off

Full Screen Logo Display

This item allows you to enable/disable Full Screen Logo Show function.

Options: Enabled (Default) / Disabled

GateA20 Active

Upon Request – FA20 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

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Option ROM Messages

This item sets the display mode for option ROM.

Options: Force BIOS (Default) / Keep Current

INT19 Trap Response

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

BIOS Flash protection

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

Options: Enabled (Default) / Disabled

BOOT Success Beep

When this item is set to Enabled, BIOS will let user know boot success with beep.

Options: Enabled (Default) / Disabled

Boot Option

The 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.

Hard Drive BBS Priorities

This item sets the order of the devices in this group.

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CSM parameters



Launch CSM

This option controls if CSM will be launched.

Options: Always (Default) / Never

Boot option filter

This option controls what devices system can boot to.

Options: UEFI and Legacy (Default) / Legacy only / UEFI only

Launch PXE OpROM policy

This item controls the execution of UEFI and Legacy PXE OpROM

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

Launch Storage OpROM policy

This item controls the execution of UEFI and Legacy Storage OpROM

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

Launch Video OpROM policy

This item controls the execution of UEFI and Legacy Video OpROM

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

Other PCI device ROM priority

For PCI devices other than Network, Mass storage or Video defines which OpROM to launch

Options: Legacy OpROM (Default) / UEFI OpROM

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5 Security Menu



Administrator Password

This item sets Administrator Password.

User Password

This item sets User Password.

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6 O.N.E Menu

This submenu allows you to change voltage and clock of various devices. (However, we suggest you use the default setting. Changing the voltage and clock improperly may damage the device.)

Notice

- Beware of that setting inappropriate values in items of this menu may cause system to malfunction.
- The options and default settings might be different by RAM or CPU models.



CPU Clock

This item allows BIOS to select CPU Clock (MHz).

Options: 100 (Default) / 100~300

Spread Spectrum

This item allows you to enable or disable spread spectrum for CPU/ATIG/SRC clock.

Options: Disabled (Default) / Enabled

IGD Clock Control

This item allows user to adjust IGD clock

Options: Auto (Default) / Enabled

*Note: The following items appear only when you set the **IGD Clock Control** item to [Enabled]*

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IGD Clock

Allow BIOS to Select IGD clock, Range 300MHz-2000MHz

Memory Clock Mode

This item allows user to 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. If AMP/XMP/XMP2, the DRAM speed specified will be refer memory profile.

Options: Auto (Default) / Manual / AMP / XMP1 / XMP2

*Note: The following items appear only when you set the **Memory Clock Mode** item to [Manual]*

Memory Frequency: DDR 800 / DDR3 1066 / DDR3 1333 / DDR3 1600 / DDR3 1866 / DDR3 2133 / DDR3 2400

AMD Pstate Configuration



Custom P-States

This item will tell BIOS whether to use the step option below this configure the P-State, or whether to configure the P-States automatically.

Options: Disabled (Default) / Enabled

*Note: The following items appear only when you set the **Custom P-State** item to [Enabled]*

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Core FID

This item sets the frequency to use for Core P-State selected. Value is saved in the _PSS object.

Options: x16 1600MHz ~ x63 6300MHz

Core VID

This function allows you to adjust the voltage of Core.

Core DID

This is the Core Divider.

Options: Divided by 1 (Default) / Divided by 2 / Divided by 4 / Divided by 8 / Divided by 16

Custom NB P-States

It tells BIOS whether to use the setup options below this to configure the NB P-state, or whether to configure the NB P-State automatically.

Options: Disabled (Default) / Enabled

*Note: The following items appear only when you set the **NB P-State** item to [Enabled]*

NB FID

This item sets the frequency to use for NB P-State selected. Value is saved in the _PSS object.

Options: 400 MHz ~ 3400 MHz

DRAM Timing Configuration



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DRAM Timing Mode

This item selects DRAM Timing Mode.

Options: Auto (Default) / DCT0 / DCT1 / Both

*Note: The following items appear only when you set the **DRAM Timing Mode** item to [DCT0 / DCT1 / Both]*

2TCMD

Options: Auto (Default) / 1T / 2T

CL

Options: Auto (Default) / 5~16 CLK

TRCD

Options: Auto (Default) / 2~19 CLK

TRP

Options: Auto (Default) / 5~19 CLK

TRAS

Options: Auto (Default) / 8~42 CLK

TRC

Options: Auto (Default) / 10~58 CLK

TRFC

Options: Auto (Default) / 90ns / 110ns / 160ns / 300ns / 350ns

TWR

Options: Auto (Default) / 5~8 / 10 / 12 / 14 / 16 / 18 CLK

TWTR

Options: Auto (Default) / 4~11 CLK

TRRD

Options: Auto (Default) / 1~9 CLK

TRTP

Options: Auto (Default) / 4~11 CLK

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MCT Configuration



Bank Interleaving

This item allows you to enable or disable Memory Bank interleaving.

Options: Enabled (Default) / Disabled

Channel Interleaving

This item allows you to control the Memory Channel interleaving.

Options: Enabled (Default) / Disabled

Memory Hole Remapping

This item allows you to enable or disable the Memory Remapping Around Memory Hole

Options: Enabled (Default) / Disabled

Power Down Enable

This item allows you to enable or disable DDR3 power down mode.

Options: Disabled (Default) / Enabled

DDR Memory Voltage

This item allows you to select DDR Memory Voltage Control.

APU DDR-PHY/PCI-E Voltage

This item allows you to select APU DDR-PHY/PCI-E Voltage Control.

FCH Voltage

This item allows you to select FCH Voltage Control.

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APU-Core Voltage

This item allows you to select APU-Core Voltage Control.

APU-NB Voltage

This item allows you to select APU-NB Voltage Control.

PWM Core/ PWM NB Load Line Control

This item allows you to set PWM Core/ PWM NB Load Line Control

Options: 0% (Default) / Disabled / -40% / -20% / +20% / +40% / +60% / +80%

BIOSTAR Memory Insight



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DDR3_A1/A2/B1/B2

These items display SPD information of DDR3 memory.



G.P.U Phase Control



G.P.U Phase Mode

This item allows you to control G.P.U Phase Mode (power saving technology)

It only works under ACPI OS with CnQ enabled.

Options: Auto (Default) / Off

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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

This selection allows you to reload the BIOS when problem occurs during system booting sequence. These configurations are factory settings optimized for this system.

Launch Shell from device

This item attempts to EFI Shell application (Shellx64.efi) from one of the available devices..

Saving SetupData to Profile

This item saves your current BIOS Setup Data to profile 1 ~ 5.

Restoring SetupData from Profile

This item restore your BIOS Setup Data from profile 1 ~ 5.

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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.