# **BIOS User Guide**

## **B850M-SILVER**

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## **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 BIO-FLASHER**

#### ⊳Note

- » This utility only allows storage device with FAT32/16 format and single partition.
- » Shutting down or resetting the system while updating the BIOS will lead to system boot failure.

#### Updating BIOS with BIOSTAR BIO-FLASHER

- 1. Go to the website to download the latest BIOS file for the motherboard.
- 2. Then, copy and save the BIOS file into a USB flash (pen) drive.(Only supported FAT/FAT32 format)
- 3. Insert the USB pen drive that contains the BIOS file to the USB port.
- 4. Power on or reset the computer and then press <F12> during the POST process.
- 5. After entering the POST screen, the BIO-FLASHER utility pops out. Choose <fs0> to search for the BIOS file.



6. Select the proper BIOS file, and a message asking if you are sure to flash the BIOS file. Click "Yes" to start updating BIOS.

#### B850M-SILVER <

FFS	Information
	Project Name : 2690670 8108 Gate : 07/13/2021
Total FFS : 2	File BTOS BIDS Fiash done,Reset system? (Y/N)
Files	Stati
B664V706.85T ▲ 34184708.885 H5144421.P40 8454K616.805 X5746645.85T ▲55862735.85T APL00004.855 ▼	Flathing (2000/13.607) No Loddre 111

- 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.
- After the download is completed, you will be asked to program (update) the BIOS or not. Click "Yes" to proceed.





7. After the updating process is finished, you will be asked you to reboot the system. Click "OK" to reboot.

Information	×
Update BIOS Finish ! Please Rel	boot System !
	ОК

8. While the system boots up and the full screen logo shows up, press <DEL> key to enter BIOS setup.

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

#### BIOS Update Utility (through a BIOS file)

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

Save As		? 🛛
Save in:	🔁 My Documents 💽 🗢 🖻 👘 📰 -	
My Recent Documents Desktop My Documents	e∰MY Make ∰MY Make € report	
My Computer		
My Network Places	File name: test	Save Cancel



## **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.

## EZ Mode

In EZ mode, it allows you to quickly operate the basic system setting. Press <F7> to display the EZ Mode menu.

14D1 (	@ 07:23	VIVID LED DJ F7 A	vanced	F12 BIO-Flasher	F10 Save & Exit	I English
MB Info		HW Monitor			EZ Setting	0
AMD Ryzen 9 /900X	12-Core Processor	CPU Frequency Memory Frequency		4700 MHZ 7600 MHZ	CSM	VEFI
	B850M-SILVER				ErP Contro	of Off
BIOS Version Build Date	B85AQB08.BST 11/08/2024	System Temperature		25 °C 0.900 V		Other
Total Memory	32768 MB	Memory Voltage		1.395 V	E CEFIEAN	Dilvei
DRAM Status	XMP/EXPO :	XMP 1 >	Storage	Info M.2	SATA	
	VMP1 · 760	36-45-45-84	M2M CPI			
	AII 1 180	0 30 43 43 64	M2M_CPL			
DDR5_A1 : N/f			M2M_SB			
DDR5_A2 : Team Gro	oup Inc. 16384 ME	5600 MHz				
DDR5_82 : Team Gro	, Dup Inc. 16384 ME	5600 MHz				
		CPU_FAN	CPU_OPT	SYS_FAN1	SYS_FAN2	
A.I.F.	AN S	1445 RPM				
	N Utility					
Open the A.I FA						

- 1. System Time: Display the system clock.
- 2. Boot Priority Bar: you can move the device icons to change the boot priority.
- **3. Hardware Information:** Shows the CPU/ MB temperature, memory size, BIOS version and build date.
- **4. AHCI/ RAID/ CSM/ UEFI Function Settings Buttons:** Click on this button to sets the AHCI/ RAID, CSM/ UEFI.
- 5. Vivid Led DJ/ Erp Control/ UEFI LAN Driver Switch: This item enable or disable the UEFI LAN Driver, ErP Control, Vivid Led DJ.
- **6. Setup Function Keys:** This item allows you to sets Save & Exit. Press F7/ F12 key to switch between Advanced mode and BIO-Flasher.
- 7. Language Settings: This item allows you to change language.
- 8. XMP/EXPO Settings & AI FAN Palette Interface: Enables or disables the XMP menu. It also allows you to click or press the A.I FAN button to enter the fan setting interface.
- 9. CPU/ Memory/ Storage Information: This item display CPU/ Memory/ Storage information.

#### ⊳Note

» Menu contents will be different slightly, depending on different motherboard of users' computers.



## **FAN Control**

Press <F5> to display the FAN Control menu.



- 1. CPU FAN/ CPU OPT/ System1/ System2: Click button to set the status value of CPU FAN, SYSTEM FAN.
- **2. PWM/ Temperature Panel:** According to the fan PWM value corresponding to CPU and system temperature to adjust the fan speed.
- » Allows you to adjust according to your preferences.
- 3. Temperature: Shows the current CPU and system temperature.
- 4. Control Mode: Allows you to control mode of the fans.
- Quiet: Enable Quiet mode.
- Aggressive: Enable Aggressive mode.
- Manual: Enable Manual mode.
- Full on: Enable Full On mode.

#### ▶ Note

- » Menu contents will be different slightly, depending on different motherboard of users' computers.
- » Once you are finished making your selections, choose the <Save & Exit> menu to save.

## **VIVID LED Control**

Press <F6> to display the VIVID LED DJ Control menu.



- 1. LED SPARKLE: Allows to you choose sparkle of the LEDs.
- Permanent: LEDs are constantly lit.
- Breath: LEDs gradually flash on and off.
- Shine: LEDs flash at a specific frequency.
- **OFF:** Allows you to enable or disable VIVID LED of a single item.
- 2. LED Type: Select the LED lighting blocks.
- SYSTEM: System LED illuminations. (ARMOR GEAR LED)
- **12V LED:** The 12V LED illumination. (12V\_LED Device)
- 5V LED: The 5V LED illumination. (5V\_LED Device)
- 3. ON/OFF: To enable or disable VIVID LED function.
- 4. Color Palette: Allows to you choose specific color of the LEDs.
- 5. LED Brightness Bar: Allows you to adjust the LED brightness.

#### ▶ Note

- » Menu contents will be different slightly, depending on different motherboard of users' computers.
- » Once you are finished making your selections, choose the <Save & Exit> menu to save.



## 1. Favorite

	ILVER	F5	A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
501	Favorite Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
4700 MHZ 0.900+	Favorite ▶•Memory Insight ★Memory Clock Mode ★ Memory Frequency			XMP1 7	600(36-45 Auto		++: Select Screen 14/Click: Select Item Enter/Dbl Click: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults
DRAM							Fi0: Save & Exit ESC/Right Click: Exit Fi1: Print Screen F12: BIOS Flash Insert: Add/Del Favorite Item
темр 10:							Memory Insight
07:22							
	ILVER	<b>R</b> F5	A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
	Favorite Main	F5 Advanced	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode	Save & Exit
СР-Ц Ш ч700 мнz 0.922 +	Favorite Main Hemory Insight • DORS_A1 Profile • DORS_A2 Profile	Advanced	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit ++: Seloct Screen Inter/Obl Click: Select +/-: Ohnige Bot. Fi: Genreal Help
СРЦ 1700 МНZ 0.922 +	Favorite Main Hemory Insight DORS_A1 Profile > DORS_A2 Profile > DORS_B1 Profile	R F5 Advanced	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit +*: Select Screen H/Click: Select Trem Enter/Obi Click: Select +: Change Opt. Fil: General Help Fil: Star & Exit ESORAJHO CLICK: Exit
СРЧ 	Favorite         Main           Hemory Insight           BORS_A1 Profile           0 DORS_A2 Profile           0 DORS_B1 Profile           0 DORS_B2 Profile	R F5 Advanced	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit +*: Select Screen H/Click: Select Ttem Enter/Obl CLIck: Select Fi: General Melp Fi: General Melp Fisoriate Defaults Fisoriate Defaults Fisoriate Content Fisoriate
CPU 47.00 MHZ 0.922 + DRAM B 0.04 MHZ 1.410+	Favorite Main Hemory Insight DORS_A2 Profile > DORS_A2 Profile > DORS_B2 Profile	R F5	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit **: Select Screen 1//Click: Select Trem fatr/Obiolick: Select */-: Change Opt. Fil: General websuits Fil: Provide Websuits Exorraph Click: Exit Fil: Pint Screen Fil: Pint Screen Fil: Pint Screen Fil: Pint Screen Fil: Pint Screen Fil: Pint Screen Fil: Bind Filesh Insert: Add/Del Favorite Item
СРЦ 47.00 мн2 0.922+ DRAM 26.00 мн2 1.410+ ТЕМР	Favorite Main Hemory Insight • DORS_A1 Profile • DORS_A2 Profile • DORS_B1 Profile • DORS_B2 Profile	R FS	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit ++: Select Screen H/Cilck: Select Item Enter/DO Cilck: Select Fil: Select Select Fil: Select ESC/Fight Cilck: Exit ESC/Fight Cilck: ESC/Fight Cilck: Exit ESC/Fight Cilck: ESC/Fight Cilck: Exit ESC/Fight Cilck: ESC/Fight Cil
СРU 17.00 М.Н.2 DRAM 27.000 М.Н.2 7.000 М.Н.2 7.000 М.Н.2 ТЕМР 1	Favorite Main Henory Insight DORS_A2 Profile 00RS_A2 Profile 00RS_B2 Profile	R F5 Advanced	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode	Save & Exit **: Saloct Screen 11/Click: Select 1tem ter/CDI Click: Select */-: Change OoL. F1: General Heujts F1: General Heujts F1: Sole 20. Act Put F1: Sole 20. Act Put Sole 20. Act Put Sole 20. Act Put F1: Sole 20. Act Put Sole 20. Act Put F1: Sole
	Favorite Main Hemory Insight DORS_A1 Profile DORS_A2 Profile DORS_B1 Profile DORS_B2 Profile	R F5	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit **: Select Screen 1//Click: Select Trem Far/Obiolick: Select Trem Far:Obiolick: Select Far:Obiolick: Select Far:Obiolick: Select Fils:Physical Resources DorNept Click: Exit Fils:Physical Screen Fil: Side Thin Screen Fil: Side Thin Screen Fil: Side Thin Screen Fil: Side Thin Screen Favorite Item DORS_A1 Profile
CPU 1700 MHZ 1700 MHZ 109221 DRAM DRAM 1.1101 TEMP 602 2024 000 2024 000 2024 000 2024 000 000	Favorite Main Hemory Insight DORS_A2 Profile DORS_A2 Profile DORS_B2 Profile	R F5	A.I FAN Chipset	F6 Vivid Boot	Led DJ Security	F7 EZ Mode Tweaker	Save & Exit **: Seinct Screen 1//Click: Select Trem Far/Obi Click: Select 7-3: Optimized Brienouits Fais Optimized Brienouits Exportight Click: Exit Fils Print Screen Fils: Bloch Flash Insert: Add/Del Favorite Item DDRS_AI Profile

## **Memory Insight**

These items display memory information. DDR5\_B1 Profile DDR5\_B2 Profile DDR5\_A1 Profile DDR5\_A2 Profile DDR Vender DRAM Manuf. PMIC Vender DataCode Capacity Frequency | Standard | Custom | XMP1 | EXPO1 tCL tRCD tRAS tCWL tFAW tREFI tRFC tRTP tWR tRRD L tRRD S tWTR L tWTR S NMode VDD VDDQ

VPP

## Memory Clock Mode

### Memory Frequency

Select DIMM timing profile. The below values start with the currently running values and don't auto populate.

Default Profile Custom Profile XMP Profile 1 EXPO Profile 1



## 2. 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.

	ILVE	<b>२</b> F5	A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
сец	Favorite Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
4700 MHZ 0.9111	BIOS Information Compliancy Project Code Nodel Name BIOS Version Build Date Access Level Memory Information Total Memory XMP Profile 1 VMP Profile 1			AMI UEI AB85A-I B850M-: B85AB 11/08/: Admini: 32768 I DDR5 7: DDR5 6	FIX64 2.9 45T SILVER 90.BST 2024 strator 48 (DDR5 7600 100 36-45-45-		++: Select Screen TI/Click: Select Item Enter/Obl Click: Select +/-: Change Opt. Fi: General Help F3: Optimized Defaults F1: Saves & Exit ESC/Right Click: Exit F11: Print Screen F12: BIDS Flash Insert: Add/Pel Favorite Item
TEMP	XMP Profile 3 EXPO Profile 1 EXPO Profile 2			None None None			Choose the system default language
<b>1</b>	System Language System Date System Time			[Wed 1: [07:24	2/25/2024] 14]		
Dec 25							

## 2-1 BIOS Information

It shows system information including UEFI BIOS version, Project Code, Model Name, Build Date and etc.

## 2-2 Total Memory

Shows system memory size, VGA shard memory will be excluded.

## 2-3 Memory Frequency

Shows the system memory frequency.

## 2-4 System Language

Choose the system default language.

## 2-5 System Date

Set the system date. Note that the 'Day' automatically changes when you set the date.

#### 2-6 System Time

Set the system internal clock.

## 3. Advanced Menu

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

### ⊳Note

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

	ILVER	F5 A.I FAN	F6 Vivid Led DJ	F7 EZ Mode	
5011	Favorite Main Advance	ed Chipset	Boot Security	Tweaker	Save & Exit
4700 MHZ 0.877+	<ul> <li>Trusted Computing</li> <li>ACPI Settings/HakeUp Event cc</li> <li>SATA Configuration</li> <li>TB625 Super ID Configuration</li> <li>Hardware Monitor</li> <li>CPU Configuration</li> </ul>	intra1			++: Select Screen 11/Click: Select Item Enter/Dbl Click: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults
DRAM	<ul> <li>PCI Subsystem Settings</li> <li>USB Configuration</li> <li>Network Stack Configuration</li> <li>CSM Configuration</li> <li>NVMe Configuration</li> </ul>				F10: Save & Exit ESC/Right Click: Exit F11: Print Screen F12: BIOS Flash Insert: Add/Del
7600 MHZ 1.395 +	AND CBS     AND Overclocking				Favorite Item
					Trusted Computing Settings
Ţ∭: 64:					
2024 Dec 25					
·07·24·					
	ILVER	F5 A.I FAN	F6 Vivid Led DJ	F7 EZ Mode	
сри	Favorite Main Advance	ed Chipset	Boot Security	Tweaker	Save & Exit
Ē	TPM 2.0 Device Found Firmware Version: Vendor:				++: Select Screen f4/Click: Select Item Enter/Db1 Click: Select
4700 MHZ 0.900 +	Security Device Support Active PCR banks Available PCR banks		Enabled SHA256 SHA256,SHA384		F1: General Help F3: Optimized Defaults F10: Save & Exit
	SHA256 PCR Bank SHA384 PCR Bank		Enabled Disabled		F11: Print Screen F12: BIOS Flash Insert: Add/Del
7600 MHZ 1.395 +	Pending operation Platform Hierarchy Storage Hierarchy Endorsement Hierarchy		None Enabled Enabled Enabled		Favorite Item
TEMP	Physical Presence Spec Vers TPM 2.0 InterfaceType		1.3 CRB		Enables or Disables BIOS support for security device. O.S. will not show
<b>1</b>					Security Device. TCG EFI protocol and INTIA interface will
2024					not be available.
·07·26					

## **3-1 Trusted Computing**

**Trusted Computing Settings** 

## Configuration

**Security Device Support** 



Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

#### SHA256 PCR Bank

Enable or Disable SHA256 PCR Bank

#### SHA384 PCR Bank

Enable or Disable SHA384 PCR Bank

#### **Pending operation**

Schedule an Operation for the Security Device. » Note: Your Computer will reboot during restart in order to change State of Security Device.

#### **Platform Hierarchy**

Enable or Disable Platform Hierarchy

#### **Storage Hierarchy**

Enable or Disable Storage Hierarchy

#### **Endorsement Hierarchy**

Enable or Disable Endorsement Hierarchy

#### **Physical Presence Spec Version**

Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3.

» Note: some HCK tests might not support 1.3

	ILVE	R FS	A.I FAN	F6 Vivio	Led DJ	F7 EZ Mode			
5011	Favorite Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit		
	ACPI Settings/Wak	eUp Event contro	1		Enabled		++: Select Screen 14/Click: Select Item Enter/Dbl Click: Select		
4700 MHZ 0.933 *	ErP Control ACPI Sleep State Restore AC Power	Loss		S3 (Su P	Disabled spend to RAM) ower Off		Enter/Dbl Click: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults		
DRAM	PME Wake up from Wake system with Wake up date Wake up hour	S5 Fixed Time		0	Disabled Disabled EveryDay	F10: Save & Exit ESC/Right Click: Exit F11: Print Screen			
7600 MHZ	Wake up minute Wake up second	p risting 0 b minute 0 b second 0					Insert: Add/Del Favorite Item		
TEMP	Stroke key Specific key PS2 Mouse PowerOn	run			Disabled Wake Key Disabled		Enables or Disables System ability to		
ţ							Hibernate (OS/S4 Sleep State). This option may not be effective with some onerating sustems		
62: 									
Dec 25									
19727									

## 3-2 ACPI Settings/WakeUp Event control

System ACPI Parameters and Wakeup event control

#### **Enable Hibernation**

Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may not be effective with some operating systems.

#### **ErP Control**

When ErP Enabled. System meets ErP requirment. All wake up events do not work except Power Button after power down system (S5).

#### **ACPI Sleep State**

Select ACPI sleep state the system will wnter when the SUSPEND button is pressed.

#### **Restore AC Power Loss**

Specify what state to go to when power is re-applied after a power failure.

#### PME Wake up from S5

Enable system to wake from S5 using PME event.

#### Wake system with Fixed Time

Enable or Disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified.

#### Wake up date

Select Wake up date

#### Wake up hour

Select 0-23 for example enter 3 for 3am and 15 for 3pm

#### Wake up minute

0-59

#### Wake up second

0-59

#### **PS2 Keyboard PowerOn**

#### PS2 Mouse PowerOn



## **3-3 SATA Configuration**

SATA Devices configuration

#### **OnChip SATA function**

Enable/Disable OnChip SATA function

#### **OnChip SATA Type**

Select OnChip SATA Type



## NVMe RAID mode

Enable or Disable NVMe RAID mode



## 3-4 IT8625 Super IO Configuration

System Super IO Chip Parameters

#### **Super IO Chip**

System Super IO Chip Parameters

#### **Serial Port 1 Configuration**

Set Parameters of Serial Port 1 (COMA)

#### Serial Port

Enable or Disable Serial Port (COM)

#### **Device Settings**

Set Parameters of Serial Port 1 (COMA)

#### **Change Settings**

Select an optimal settings for Super IO Device

	ILVE	<b>२</b> F5	A.I FAN	F6 Vivio	l Led DJ	F7 EZ Mode			
5011	Favorite Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit		
	PC Health Status						↔: Select Screen †↓/Click: Select Item		
4700 MHZ 0.900+	A:1 H Pontrol Shutdam Temperture CPU temperature MS Temperature SYS Temperature CPU Speed CPU Opt Speed System Fant Speed System Fant Speed CPU Vore Voltage				Disabled Disabled C C C		Enter/Dbl Click: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults F10: Save & Exit		
							ESC/Right Click: Exit Fi1: Print Screen F12: BIOS Flash Insert: Add/Del Favorite Item		
7600 MHZ 1.410+									
ТЕМР	CPU MISC Voltage CPU VDD Voltage CPU SOC Voltage						A.I TP Control		
ţ									
63:									
Dec 25									
·07·29·									

## 3-5 Hardware Monitor

Monitor hardware states

## **PC Health Status**

#### **A.I TP Control**

#### **Shutdown Temperature**



## **3-6 CPU Configuration**

**CPU Configuration Parameters** 



#### PowerNow

Enable/Disable the generation of ACPI\_PPC,\_PPS, and \_PCT objects.

#### NX Mode

Enable/Disable No-execute page protection Function.

#### SVM Mode

Enable/Disable CPU Virtualization

#### **CPB Mode**

Specifies the method of core performance boost enablement

#### **Global C-state Control**

Controls IO based C-state generation and DF C-states.

#### **Power Supply Idle Control**

Power Supply Idle Control.

#### SMT Mode

Enable/Disable Simultaneous multithreading.

» WARING: S3 is NOT Supported on systems where SMT is disabled.



## **3-7 PCI Subsystem Settings**

PCI Subsystem Settings

#### PCI Settings Common for all Devices:

#### Above 4G Decoding

Globally Enables or Disables 64bit capable Devices to be Decoded in Above 4G Address Space (Only if System Supports 64bit PCI Decoding)

#### **Re-Size BAR Support**

If system has Resizable BAR capable PCIe Devices, this option Enables or Disables Resizable BAR Support.

#### **SR-IOV Support**

If system has SR-IOV capable PCIe Devices, this option Enables or Disables Single Root IO Virtualization Support.

#### **BME DMA Mitigation**

Re-enable Bus Master Attribute disabled during PCI enumeration for PCI Bridges after SMM Locked.

#### **Hot-Plug Support**

Globally Enables or Disables Hot-Plug support for the entire System. If System has Hot-Plug capable Slots and this option set to Enabled, it provides a Setup screen for selecting PCI resource padding for Hot-Plug.

#### **Change Settings of the Following PCI Devices:**

» WARNING: Changing PCI Device(s) settings may have unwanted side effects! System may HANG! PROCEED WITH CAUTION.

L			<b>२</b> ह	5 A.I FAN	F6 Vivio	d Led DJ	F7 EZ Mode	
	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
	USB Confi USB Modul USB Contr 4 > USB Devic 1 C Legacy US XHCI Hanc	guration ollers: HCIs es: rive, 1 Ki B Support B3.0 Support	eyboard, 3 Hubs prt		37	Enabled Enabled Enabled		++: Select Screen I/(Dis:: Select Item Enter/Obl Click: Select +/-: Change Oot. F1: General Help F3: Optimized Defaults F10: Save & Exit ESC/Right Click: Exit F11: Frint Screen F12: BIOS Flash Insert: Add/Del Favorite Item
7600 MHZ 1.395 *								
темр 1	USB FLAS	H DRIVE P	MAP			Auto		Enables 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.
لكلي								

## **3-8 USB Configuration**

**USB Configuration Parameters** 

#### Legacy USB Support

Enables 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.

#### Legacy USB3.0 Support

Enable/Disable legacy USB 3.0 support.

#### **XHCI Hand-off**

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

#### Mass Storage Devices:

#### **USB FLASH DRIVE PMAP**

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





## **3-9 Network Stack Configuration**

Network Stack Settings

#### **Network Stack**

Enable/Disable UEFI Network Stack

#### **IPv4 PXE Support**

Enable IPv4 PXE Boot Support. If disabled IPv4 PXE boot option will not be created.

#### **IPv4 HTTP Support**

Enable/Disable IPv4 HTTP boot support. If disabled, IPv4 HTTP boot support will not be available.

#### **IPv6 PXE Support**

Enable IPv6 PXE Boot Support. If disabled IPv6 PXE boot option will not be created.

#### **IPv6 HTTP Support**

Enable/Disable IPv6 HTTP boot support. If disabled, IPv6 HTTP boot support will not be available.

#### PXE boot wait time

Wait time in seconds to press ESC key to abort the PXE boot. Use either +/- or numeric keys to set the value.

#### Media detect count

Number of times the presence of media will be checked. Use either +/- or numeric keys to set the value.



## 3-10 CSM Configuration

CSM Configuration: Enable/Disable, Option ROM execution settings, etc.

### **Compatibility Support Module Configuration**

#### **CSM Support**

Enable/Disable CSM Support

#### **CSM16 Module Version**

CSM16 Module Version

#### GateA20 Active

UPON REQUEST - GA20 can be disabled using BIOS services. ALWAYS - do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

#### **Option ROM Messages**

Set display mode for Option ROM

#### **INT19 Trap Response**

BIOS reaction on INT19 trapping by Option ROM: IMMEDIATE - execute the trap right away; POSTPONED - execute the trap during legacy boot.

#### **HDD Connection Order**

Some OS require HDD handles to be adjusted, i.e. OS is installed on drive 80h.

#### **Option ROM execution**

#### Network

Controls the execution of UEFI and Legacy Network OpROM.

#### Storage

Controls the execution of UEFI and Legacy Storage OpROM.

#### Video

Controls the execution of UEFI and Legacy Video OpROM.

#### Other PCI device ROM priority

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





## **3-11 NVMe Configuration**

NVMe Device Options Settings NVMe controller and Drive information

			<b>२</b> <sub>F5</sub>	A.I FAN	F6 Vivio	Led DJ	F7 EZ Mode	
COU	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
	AND CBS • UMC Commo • NBIO Comm • SOC Misce	n Options non Option: llaneous (	s Control					++: Select Screen T4/Click: Select Item Enter/Db1 Click: Select +/-: Change Opt. F1: Beneral Help F3: Optimized Defaults F10: Save & Exit ESC/Right Click: Exit F11: Print Screen
7600 MHZ 1.410+								F12: BIOS Flash Insert: Add/Del Favorite Item
ТЕМР								UMC Common Options
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		ER	F5 A.I FAN	F6 Vivi	d Led DJ	F7 EZ Mode	
гоц	Favorite f	Main Adva	nced Chipset	Boot	Security	Tweaker	Save & Exit
4700 MHZ 0.8774	UMC Common   DOR Options	Options					++: Select Screen 1//Click: Select Item Enter/Dbl Click: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults F10: Save & Exit
DRAM							ESC/Right Click: Exit Fi1: Print Screen Fi2: BIOS Flash Insert: Add/Del Favorite Item
темр 1011							DDR Options
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			<b>२</b> F5	A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
сец	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
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								DOR RAS

L	ILVER	F5 A.I FAN	F6 Vivio	Led DJ	F7 EZ Mode	
сри	Favorite Main Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
	NBIO Common Options IOMMU PCIe ARI Support		-	Auto Auto		++: Select Screen ↑↓/Click: Select Item Enter/Dbl Click: Select +/-: Change Opt.
0.877+	PCIe All Port ECRC Advanced Error Reporting (AER)			Auto Auto		F1: General Help F3: Optimized Defaults
DRAM	PCIE HAY Enumeration PCIE loopback Mode Persistence mode for legacy end EQ Bypass To Highest Rate	points		Auto Auto Auto		FIG: Save & Exit ESC/Right Click: Exit F11: Print Screen F12: BIOS Flash
7600 MHZ 1.410+	Retimer margining support			Auto		Insert: Add∕Del Favorite Item
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## 3-12 AMD CBS

AMD CBS Setup Page

#### **UMC Common Options**

**DDR Options** 

DDR RAS

**Disable Memory Error Injection** 

**DDR Security** 

TSME

Data Scramble

DDR Addressing Options

Chipselect Interleaving

Address Hash Bank Address Hash CS

BankSwapMode

**DDR Training Options** 

**DFE Read Training** 

**DRAM FDA Enumerate ID Programming Mode** 

**DDR Memory MBIST** 

**MBIST Enable** 

**MBIST Test Mode** 

**MBIST Aggressors** 

**MBIST Per Bit Slave Die Reporting** 

DDR Data Eye

**NBIO Common Options** 

IOMMU

PCIe ARI Support



PCIe ARI Enumeration PSPP Ploicy PCIe loopback Mode Advanced Error Reporting (AER) SOC Miscellaneous Control Trusted Platform Module

	<b>ILV</b>		7	F5 A.I FAN	F6 Vivio	d Led DJ	F7 EZ Mode	
5011	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
4700 MHZ 0.9004 DRAM	<pre>WARNING - IN EXCESS MAY NOT BE Operating settings, or shorter instabili' result in issues or specifica ▶ Accept ▶ Decline</pre>	DAMAGE C OF FACTO E COVERED your AND includin includin in the lift ties (e.g total sy damages tions or	AUSED BY USE RY SETTINGS AL BY YOUR SYST processor Ou g but not lim e of your pro- , data loss : ., data loss : stem failure. related to us in excess of :	D YOUR AND PRO RE NOT COVERED EN MANUPATURES Lide of specif ited to overclo cessor or other and corrupted i AND does not p e of an AND pro factory setting	CESSOR OUTS UNDER YOUR 'S WARRANTY ication or cking, and system com mages) and rovide supp cessor outs s.	IDE OF SPECIF AMD PRODUCT W in excess of undervolting, ponents, crea in extreme ca ort or servic ide of proces	LIGATION OR ARRANTY AND factory may damage te system ses may e for sor	++: Select Screen TL/Clic: Select Item Enter/Db1/Clic: Select +/-: Change Dot. F1: General HelD F3: Outimized Defaults F10: Save & Exit ESC/Right Clic:: Exit F11: Print Screen F12: BIDS Flach Insert: Add/De1 Favorite Item
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СР	Favorite AMD Overc. Precision > SoC/Uncore > LCLK Freque	Main Locking Boost Ov e OC Hode	Advanced	F5 A.I FAN Chipset	F6 Vivio	l Led DJ Security	F7 EZ Mode	Save & Exit +: Select Screen 11/Click: Select Item Enter/Obl Click: Select +/-: Change Oot. F1: General Help F3: Optimized Defaults
	Favorite AKD Overc: Precision Soc/Uncore LKZ Mode LCLK Frequ	Main Locking Boost Ov e OC Hode Lency Con	Advanced erdnive	Chipset	F6 Vivia Boot	d Led DJ Security	F7 EZ Mode	Save & Exit +*: Select Screen 1//21ick: Select 1em forker/bit (2106: Select +/-: Change DOL. F3: Optimized Defaults SGJ/Right Click: Exit SGJ/Right Click: Exit SGJ/Right Click: Exit
СРU 1700 МНZ 9.9001 В ПЯАМ	Favorite AMD Overc. Precision SoC/Uncore LU2 Mode LU2 Mode	Main Locking Boost Ov e OC Hode Juency Con	Advanced endrive	F5 A.I FAN Chipset	F6 Vivia Boot	d Led DJ Security	F7 EZ Mode	Save & Exit +*: Select Screen IV/Click: Select Trem Hor/Obi Click: Select +-: Change GOL. F3: Optimized Defaults F3: Opt
CPU 47.00 MHZ 2.900 H DRAM DRAM 2.600 MHZ 1.395 4	Favorite AHD Overc: • Precision • SoC/Incension • LU2 K Frequ	Main Locking Boost OV 9 OC Hode Jency Con	Advanced endnive	Chipset	F6 Vivia Boot	I Led DJ Security	F7 EZ Mode	Save & Exit +:: Select Screen IV/211ct: Select Team Enter/Diclin:: Select +:: Change Out. Fil: General Help Fil: Othinge Out. Fil: Screen Fil: Screen Fil: Screen Fil: Schift Clini: Exit Fil: Fil: Schift Screen Fil: Schift Clini: Exit Fil: Schift Clini: Select Schift Clini: Select Fil: Schift C
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СРU Ч7.000 МН2 0.9991 DRAM В Л.9951 ТЕМР 1↓€	Favorite AND Overc: Precision • SocUncore • Un2 Mode • LOLK Frequ	Main locking Boost OV e OC Hode Jency Con	<b>R</b> F Advanced erdrlve tro1	Chipset	F6 Vivic	i Led DJ Security	F7 EZ Mode	Save & Exit +*: Select Screen HJ/Click: Select Item Enter/Ob Click: Select +/: Obmase Obt. Sel: Obtimized Defaults FDI: Save à Exit ESORaft Click: Exit FII: Phint Screen FI2: EDOS Flash Insert: Add/Del Favorite Item Precision Boost Overdrive
СРU 47.000.0447 DRAM DRAM 25600.0447 1.9954 ТЕМР 6.21	Favorite AND Dverc. FreeSisten 5 SoC/Incols 0 UK2 Mode 1 UCLK Free	Main locking Boost Ow OC Hode Jency Con	Advanced endrive	Chipset	F6 Vivia Boot	l Led DJ Security	F7 EZ Mode	Save & Exit **: Select Corem I/Uller's Select Tem EnterVoil Clin's Select *-: Change Out Defailts Fill Seneral Heip Fill Optimized Defailts Fill Stave & Exit ESXRight Clin's Exit Fill Seneral Heip Fill Select ESXRight Clin's Exit Insert: ndd/Cel Favorite Item Precision Boost Qverdrive
СРЧ Ч7.000 МН2 Ч7.000 МН2 ОРАМ ПОСОВИНСТВО СОСОВИНОВИНИИ СОСОВИНИ СОСОВИНИ СОСОВИНИ СОСОВИНИ СОСОВИНИИ СОСОВИНИИ СОСОВИНИ СОСОВИНИ СОСОВИНИ СОСОВИНИИ СОСОВИННИ СОСОВИННИ СОСОВИНИ СОСОВИ	Favorite And Overc: - And Ove	Main Lecking Boost GV Leckory Con	<b>R</b> Advanced erdrlve tro1	Chipset	F6 Vivia Boot	I Led DJ	F7 EZ Mode	Save & Exit +*: Select Screen IJ/Click: Select Tem EntroPhol Click: Select *.: Change Obt Sel Optimized Defaults Filo: Span 2 Exit ESORaph Click: Exit Fils: Phint Screen Fil: Bish Insert: Add/Del Favorite Item Precision Boost Overdrive







## 3-13 AMD Overclocking

AMD Overclocking Setup Page

#### Accept

#### **Precision Boost Overdrive**

#### **Precision Boost Overdrive**

#### **Precision Boost Overdrive Scalar Ctrl**

#### **CPU Boost Clock Override**

» Increases (Positive) or Decreases (Negative) the maximum CPU frequency that may be automatically achieved by the CPU Boost Algorithm

#### **Platform Thermal Throttle Ctrl**

» Allow the user to decrease the maximum allowed processor temperature (celsius).



#### **GFX Curve Optimizer**

» Allows the user to shift the GFX Voltage/Frequency (AVFS) curve to include higher voltages (positive values) or lower voltages (nrgative values). The larger the value entered the larger the magnitude of the voltage shift.

#### **Curve Optimizer**

» Allows the user to shift the GFX Voltage/Frequency (AVFS) curve to include higher voltages (positive values) or lower voltages (nrgative values). The larger the value entered the larger the magnitude of the voltage shift.

### **LCLK Frequency Control**

» AUTO: Default Settings, Manual: manually configure LCLK frequency.

### Decline

## 4. Chipset Menu

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components.

#### ⊳ Note

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



## 4-1 PCIe Link Speed

Force PCIe Link Speed Maximum

## 4-2 PCIe ASPM Mode

PCIe ASPM Mode Control





## 4-3 South Bridge

South Bridge Parameters

	ilver	<b>२</b> ह	5 A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
5011	Favorite Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
47.00 MHZ 0.900 + DRAM	North Bridge Confi F GFX Configuration Above 468 MMIO Lim	guration it		40	bit (1TB)		++: Select Screen 1/Click: Select Item Enter/Obl Click: Select +/-: Change Opt. Fi: General HelD F3: Outimized Defaults F1: Several HelD F3: Outimized Defaults F1: Point Screen F1: Point Screen F1: Point Screen F1: Biss Flash Insert: Add/Del Favorite Item
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Ľ	ILVE	₹ ₽	5 A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
CPU 47.000 MHZ 9.888 + DRAM 0 RAM 1.4118 +	Favorite Main Internated craphic UMA Frame Buffer S PTCTK16. Lanes Cor Surround View	Advanced Size Infiguration	5 A.I FAN Chipset	F6 Vivid	Auto Auto Auto Auto Auto	F7 EZ Mode	Save & Exit **: Select Screen 1//2104: Select Tem for/2012(1): Select */-: Change GOL. F3: Gorinized Defaults ESU-Algen Cul-Sc. Exit ESU-Algen Cul-Sc. Exit ESU-Algen Cul-Sc. Exit 10: Seve 8 - Colored F3: SOUS Fishen Insert: Add/Del Favorite Item

## 4-4 North Bridge

Nouth Bridge Parameters

## North Bridge Configuration

#### **GFX** Configuration

**GFX** Configuration

## **Integrated Graphics**

Enable Integrate Graphics Controller

## **UMA Frame Buffer Size**

Set UMA FB Size to support 4GB or above, please make sure total memory size and disable CSM first.



### **Surround View**

It support multi-display function.

## Above 4GB MMIO Limit

Select Above 4GB MMIO Limit to 38~43 bits limit. This option works only when 'Above 4G decoding' is enabled.

5	il.v	EI)	<b>२</b> F5	5 A.I FAN	F6 Vivio	l Led DJ	F7 EZ Mode	
COLI	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
4700 MHZ 0.888+	Onboard   LANO MAC Realtek	Device ID = F4-B PCIE NIC	5-20-60-92-67			Enabled		++: Select Screen 1/Click: Select Item Enter/Dbl Click: Select +/-: Change Opt. F1: General Help F3: Optimized Defaults
DRAM								F10: Save & Exit ESC/Right Click: Exit F11: Print Screen F12: BIOS Flash Insert: Add/Del Favorite Item
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## 4-5 Onboard Device

**Onboard Device Parameters** 

## **Realtek PCIE NIC**

Enable/Disable Realtek PCIE NIC

## 5. Boot Menu

This menu allows you to setup the system boot options.



## 5-1 Setup Prompt Timeout

This item sets number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

#### 5-2 Bootup NumLock State

This item selects the keyboard NumLock state.

#### 5-3 Full Screen Logo Display

This item enables or disables Full Screen Logo Show function.

#### 5-4 Fast Boot

This item allows you to enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

### 5-5 Auto Installer

Windows Platform Auto Install.

#### 5-6 ROM Armor 3 Support

ROM Armor 3 function.

#### 5-7 POST Delay Time (sec)

POST Delay Time.

#### 5-8 Boot Success Beep

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



## 5-9 Boot mode select

Select boot mode LEGACY/UEFI.

## **5-10 Fixed Boot order Priorities**

## Boot Option #1/ #2/ #3/ #4/ #5/ #6/ #7

It controls the placement of newly detected UEFI boot options. #1 Options: UEFI Hard Disk (Default) #2 Options: UEFI NVME (Default) #3 Options: UEFI CD/DVD (Default) #4 Options: UEFI USB Hard Disk (Default)

#5 Options: UEFI USB CD/DVD (Default)

#6 Options: UEFI USB Key (Default)

#7 Options: UEFI Network (Default)

## 6. Security Menu



## 6-1 Administrator Password

This item sets Administrator Password.

### 6-2 User Password

This item sets User Password.



#### 6-3 Secure Boot

Secure Boot feature is activate if secure boot is enabled. Platform Key (PK) is enrolled and the system is in user mode. The mode change requires platform reset.



## 7. Tweaker Menu

This submenu allows you to change voltage and clock of various devices.

#### ⊳Note

- » We suggest you use the default setting. Changing the voltage and clock improperly may damage the device.
- » The options and default settings might be different by RAM or CPU models.
- » Beware of that setting inappropriate values in items of this menu may cause system to malfunction.
  - Values in Red: Danger
  - Values in Yellow: Warning
  - Values in White: Normal

y	ILVER F5 A.I F4	N F6 Vivid Lee	d DJ F7 EZ Mod	e
	Favorite Main Advanced Chip	set Boot S	ecurity Tweaker	Save & Exit
47.00 MHZ 1.035+	Tuesker Notice:Please Clear CHOS If system no di after overclocking Ord Clock Ord Parts Wennyr, Clock Kode * Mennyr, Frequency XMFCFXD Frotile HHOH-EFFCIENCY MOE FCLK Frequency UCLK DV1 MOE FCLK Frequency UCLK DV1 MOE FCLK Frequency UCLK DV1 MOE	play Auto XMP1 7600 Support Au Au Au	10 136-45 10 10 10 10 10	++: Select Screen H/Click Select Item Enter/Dollick Select +-: Change Opt. F: General HeiD F: Optimizer Domains ESCRight Click: Exit ESCRight Click: Exit Fil: EIOS Flash Insert: Add/Del Favorite Item
темр <b>1</b> 6 э: <sup>2024</sup> Dec <sup>25</sup>	GPU Work Voltage GPU SDC Voltage GPU HDC Voltage GPU UDC HDC Voltage GPU UDC HDC Voltage GPU VDC Voltage CPU VDC VOLTAG	Auto Auto Auto Auto Auto Auto Auto Auto		CPU Elock Control

### 7-1 CPU Clock

**CPU Base Clock** 

#### 7-2 CPU Ratio

Set the CPU Ratio

#### 7-3 Memory Clock Mode

If XMP/EXPO, use Ryzen XMP/EXPO memory better. If Auto, the DRAM speed will be based on SPDs. If Manual, the DRAM speed specified will be programmed regardless of SPD.

#### Memory Frequency

Select the memory clock value in MHz

#### 7-4 XMP/EXPO Profile

Increased training time improves memory stability

#### 7-5 Memory Training Time

Support

#### 7-6 HIGH-EFFICIENCY MODE

Enable or Disable HIGH-EFFICIENCY MODE

#### 7-7 FCLK Frequency

Specifies the FCLK Frequency.

#### 7-8 UCLK DIV1 MODE

Set UCLK DIV mode



## 7-9 DRAM Timing Configuration

**DRAM Timing Configuration** tCL CAS latency tRCDRD RAS to CAS delay tRP Row precharge time tRAS Row active strobe TRC Row cycle time TFAW Specify Tfaw TRFC Auto refresh row cycle time TRFC2 Auto refresh row cycle time TRFCSB **Refresh Recovery Delay Time** TRTP Read CAS to precharge time



## TWR

Write recovery

#### TRRD\_S

Activate to Activate Delay Time, different bank group

#### TRRD\_L

Activate to Activate Delay Time, same bank group

#### TWTR\_S

Minimum Write to Read Time, different bank group

#### TWTR\_L

Minimum Write to Read Time, same bank group

	<b>ILV</b>		<b>२</b> F5	A.I FAN	F6 Vivid	l Led DJ	F7 EZ Mode	
	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
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0.888 *	tWRWRSc				Auto			F1: General Help
	tWRWRSd				Auto			F3: Optimized Defaults
	t KRWRDd tRDRDSc				Auto			F10: Save & Exit FSC/Right Click: Exit
DRAM	tRDRDSd				Auto			F11: Print Screen
(	tRDRDDd				Auto			F12: BIOS Flash
	t KUWK t WRRD				Auto			Eavorite Item
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#### DRAM Non-SPD Timing DRAM Non-SPD Timing

	<b>ILV</b>		<b>२</b> F5	A.I FAN	F6 Vivio	l Led DJ	F7 EZ Mode	
5011	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
47.00 MHZ 0.888+ DRAM	NCT Confis Proc DA Dr Proc DQ Dr ProcDJ DARM DQ Dr DRAM Rtt P DRAM Rtt P DRAM Rtt P DRAM Rtt P DRAM RT F	guration rv Streng rv Streng Nom Hr Nom Rd Ar Park Rtt Park	th th th			Auto Auto Auto Auto Auto Auto Auto Auto		++: Select Screen 11/Click: Select Item Enter/Dbl (lick) Select +/-: Change Opt. F3: General Hein F3: Gordinized Defaults F1: Gaven Keit ESCRight Click: Exit F11: Frint Screen F12: BIOS Flash Insert: Add/Del Favorite Item
темр 1))) 63: Dec 25 :07:56:								Select the drive strength for all DAO-13 IOS

#### **DRAM Bus Configuration**

#### **DRAM Bus Configuration**

#### **Memory Context Restore**

Configure the memory context restore mode. When enabled, DRAM re-retraining is avoided when possible and the POST latency is minimized.

#### **Power Down**

Enable or Disable DDR power down mode

#### Gear Down

Specifies DDR5 GearDown Mode.

#### 7-10 CPU SOC Voltage

CPU SOC Voltage Contril CPU SOC Adjust Voltage CPU SOC Adjust Voltage Range: 1.000V - 2.000V CPU SOC Offset Prefix CPU SOC Offset Prefix CPU SOC Offset Voltage CPU SOC Offset Voltage Range: 0.000V - 0.635V

#### 7-11 CPU MISC Voltage

CPU MISC Voltage Control CPU MISC Adjust Voltage CPU MISC Adjust Voltage Range: 1.000V - 2.000V CPU MISC Offset Prefix CPU MISC Offset Prefix CPU MISC Offset Voltage CPU MISC Offset Voltage Range: 0.000V - 0.635V

#### 7-12 CPU DDR IMC Voltage

CPU DDR IMC Voltage Control.

#### 7-13 CPU VDD Voltage

CPU VDD Voltage Control.

#### 7-14 VDDP Voltage Control

Manual = User can set customized VDDP voltage. VDDP Voltage

#### 7-15 VDDG Voltage Control

Manual = User can set customized VDDG voltage. VDDP Voltage

## 7-16 DIMM VDD

**DIMM VDD Voltage** 

#### 7-17 DIMM VDDQ

DIMM VDDQ Voltage

### 7-18 DIMM VPP

DIMM VPP Voltage



	<b>iLV</b>		<b>२</b> <sub>F5</sub>	A.I FAN	F6 Vivid	Led DJ	F7 EZ Mode	
רפון	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
цро П 4700 мнz	Nemory In ▶ DDR5_A1 P	sight rofile						++: Select Screen 14/Click: Select Item Enter/Dbl Click: Select +/-: Change Opt.
0.888+	DDR5_A2 P							F1: General Help F3: Optimized Defaults
DRAM	<ul> <li>DDR5_B1 P</li> <li>DDR5_B2 P</li> </ul>	rotile						F10: Save & Exit ESC/Right Click: Exit E11: Print Screen
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			F5	A.I FAN	F6 V	vid Led DJ	F7 EZ Mode	
	Favorite Ma	ain Adv	anced	Chipset	Воо	t Security	Tweaker	Save & Exit
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1								T1/Click: Select Item Enter/Db1 Click: Select
инд								+/-: Change Opt.
								F1: General Help
								F3: Optimized Defaults
								F10: Save & Exit
								ESC/Right Click: Exit
								F11: Print Screen
								F12: BIOS Flash
								Insert: Add/Del
								Favorite Item
	TREFI							
	TREC							
	+PPD C							
	tPPD I							
	TWTR S							

## 7-19 Memory Insight

DDR5\_A1 Profile Capacity N/A Standard XMP1 XMP2 Frequency tCL tRCD tRP tRAS tCWL tFAW tREFI tRFC

42 | 7. Tweaker Menu

tRTP tWR tRRD S tRRD L tWTR S tWTR L NMode VDD VDD VDDQ VPP DDR5 A2 Profile Capacity N/A Standard XMP1 XMP2 Frequency tCL tRCD tRP tRAS tCWL tFAW tREFI tRFC tRTP tWR tRRD S tRRD L tWTR S tWTR L NMode VDD VDD VDDQ VPP DDR5\_B1 Profile Capacity N/A Standard XMP1 XMP2 Frequency tCL tRCD tRP tRAS tCWL tFAW tREFI tRFC tRTP tWR



tRRD S tRRD\_L tWTR S tWTR L NMode VDD VDD VDDQ VPP DDR5 B2 Profile Capacity N/A Standard XMP1 XMP2 Frequency tCL tRCD tRP tRAS tCWL tFAW tREFI tRFC tRTP tWR tRRD S tRRD\_L tWTR S tWTR L NMode VDD VDD VDDQ VPP

## 8. Save & Exit Menu

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

	<b>ILV</b>		<b>२</b> <sub>F5</sub>	A.I FAN	F6 Vivid	l Led DJ	F7 EZ Mode	
רפע	Favorite	Main	Advanced	Chipset	Boot	Security	Tweaker	Save & Exit
4700 MHZ 0.8884 DRAM	Save Optic Discard CF Save Chang Restore De Boot Overr Launch She == Backup/ Profile 1 Profile 2 Profile 3	ons hanges and ges and R efaults hide ell from ( /Restore ) Status Status Status	d Exit eset device BIOS Setup Data	Profiles ==	N/A N/A N/A			++: Select Screen TL/Click: Select Item Enter/Obl Click: Select +/-: Change Opt. F3: General Help F3: Optimized Defaults F3: Optimized Defaults F3: Save & Exit ESC/Right Click: Exit F11: Print Screen F12: BIDS Flash Insert: Add/Del Favorite Item
	Profile 4 Profile 5 Saving Set Restoring • Saving Set • Restoring	Status Status tupData tu SetupData tupData t SetupDat	o Profile a from Profile o Storage a from Storage		N/A N/A 1			Exit system setup without saving any changes.
·07·58·								

## 8-1 Discard Changes and Exit

Abandon all changes made during the current session and exit setup.

## 8-2 Save Changes and Reset

Reset the system after saving the changes.

## 8-3 Restore Defaults

Restore/Load Default values for all the setup options.

## 8-4 Launch Shell from device

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

## 8-5 Saving SetupData to Profile

Saving SetupData to Profile.

#### 8-6 Restoring SetupData from Profile

Restoring SetupData from Profile.

#### 8-7 Saving SetupData to Storage

Saving SetupData to Storage.

#### 8-8 Restoring SetupData from Storage

Saving SetupData to Storage.