BIOS Setup (AMD 800 Series)

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The BIOS Setup menus described in this section may differ from the exact settings for your motherboard. The actual BIOS Setup menu options you will see shall depend on the motherboard you have and the BIOS version.

BIOS Setup

BIOS (Basic Input and Output System) records hardware parameters of the system in the CMOS on the motherboard. Its major functions include conducting the Power-On Self-Test (POST) during system startup, saving system parameters and loading operating system, etc. BIOS includes a BIOS Setup program that allows the user to modify basic system configuration settings or to activate certain system features.

When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS to keep the configuration values in the CMOS.

To access the BIOS Setup program, press the <Delete> key during the POST when the power is turned on.

To upgrade the BIOS, use either the GIGABYTE Q-Flash or Q-Flash Plus.

- Q-Flash allows the user to quickly and easily upgrade or back up BIOS without entering the operating system.
- Q-Flash Plus allows you to update the BIOS when your system is off (S5 shutdown state). Save the latest
 BIOS on a USB thumb drive and plug it into the dedicated port, and then you can now flash the BIOS
 automatically by simply pressing the Q-Flash Plus button.

For instructions on using the Q-Flash and Q-Flash Plus utilities, please navigate to the "Unique Features" page of GIGABYTE's website and search for "BIOS Update Utilities."



- Because BIOS flashing is potentially risky, if you do not encounter problems using the current version of BIOS, it is recommended that you not 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.
- Refer to the introductions of the battery/clear CMOS jumper/button in user's manual or refer to the "Load Optimized Defaults" section for how to clear the CMOS values.

Startup Screen

The following startup Logo screen will appear when the computer boots. (The screen may vary from motherboards.)



Function Keys:

: BIOS SETUP\Q-FLASH

Press the <Delete> key to enter BIOS Setup or to access the Q-Flash utility in BIOS Setup.

<F12>: BOOT MENU

Boot Menu allows you to set the first boot device without entering BIOS Setup. In Boot Menu, use the up arrow key $<\uparrow>$ or the down arrow key $<\downarrow>$ to select the first boot device, then press <Enter> to accept. The system will boot from the device immediately.

Note: The setting in Boot Menu is effective for one time only. After system restart, the device boot order will still be based on BIOS Setup settings.

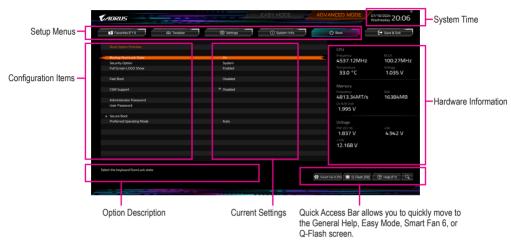
<END>: Q-FLASH

Press the <End> key to access the Q-Flash utility directly without having to enter BIOS Setup first.

The Main Menu

Advanced Mode

The Advanced Mode provides detailed BIOS settings. You can press the arrow keys on your keyboard to move among the items and press <Enter> to accept or enter a sub-menu. Or you can use your mouse to select the item you want.



Advanced Mode Function Keys

<←><→>	Move the selection bar to select a setup menu
<^><↓>	Move the selection bar to select a configuration item on a menu
<enter>/Double Click</enter>	Execute command or enter a menu
<+>/ <page up=""></page>	Increase the numeric value or make changes
<->/ <page down=""></page>	Decrease the numeric value or make changes
<f1></f1>	Show descriptions of the function keys
<f2></f2>	Switch to Easy Mode
<f3></f3>	Save the current BIOS settings to a profile
<f4></f4>	Load the BIOS settings from a profile created before
<f5></f5>	Restore the previous BIOS settings for the current submenus
<f6></f6>	Display the Smart Fan 6 screen
<f7></f7>	Load the Optimized BIOS default settings for the current submenus
<f8></f8>	Access the Q-Flash utility
<f10></f10>	Save all the changes and exit the BIOS Setup program
<f11></f11>	Switch to the Favorites submenu
<f12></f12>	Capture the current screen as an image and save it to your USB drive
<insert></insert>	Add or remove a favorite option
<ctrl>+<s></s></ctrl>	Display information on the installed memory
<esc></esc>	Main Menu: Exit the BIOS Setup program
<u> </u>	Submenus: Exit current submenu

B. Easy Mode

Easy Mode allows users to quickly view their current system information or to make adjustments for optimum performance. In Easy Mode, you can use your mouse to move through configuration items or press <F2> to switch to the Advanced Mode screen.

@н	elp (F1)	English	Coad Defaults (F7)	🕞 Save	8 Evit (F10)	 Favorites (F11) 	Q Search (Alt-F)
Information			CPU Frequency	CPU Temp.	CPU Voltage		Sec. 1
	X870E AORUS MASTER		4537.17 MHz	33.0 °c	1.035 v		Local Contraction
			4007.17 MHz	33.0 °C	1.000		
	AMD Ryzen 7 7700X 8-Core		Memory Frequency		Memory Voltage		
	Processor 16GB		4815.64 _{MT/s}	37.0 ∘c	1.995 v		
	ComboAMSPI 1.2.0.0						
	Composition 1.2.0.0	Smart Fan 6		Periphe	rak	Boot Sequence	
		🛞 CPU_FAN	S CPU_OPT				
		N/A	1610 RPM	PCIE	:16 : PCle 3.0 x16 @ 1/	0 v16	
RAM Status			Smart Fan 6			No	Bootable Device Found
	ADATA 16GB 4800MT/s		Smart Fan 6				
	N/A						
DOR5_B2		Quick Access					
		QUICK ACCESS					
		ſ	Q-Flash		SPD Info		🚥 SPD Setup
OR5 Auto Ba	Auto	Re-Size BAR S	upport	Preferred Oc	erating Mode	uto 🗵 CSM Support	
MP/D/P0 Pr	ofie Disabled	T					
	eh Bandwidth Support	Fast Boot	Disabled	T ErP		Onboard LAN Co	ntroller
	lanort						

Smart Fan 6

					Smart Fa	n 6				Wednesday	20:05
	В Тетре	ature			🛠 Fan S	pred					
CPU FAN									CPU_FAN Speed Cor	ntrol	Normal
CPU_OPT									Fan Control Use Tem	perature loout	CPU
SYS_FAN1									Temperature Interval		
YS_FAN2											1
S FAN3									CPU_FAN Control m	ode	Auto
S_FAN4									CPU_FAN Stop		Disabled
S_FAN5_PUMP									CPU_FAN Mode		Slope
S_FAN6_PUMP									A CPU_FAN Fail	Marning	Disabled
									CPU System 2	32.0 °C 🕴 System 1	36. 49.
									POEX16	41.0 °C VRM MOS	35
									POEX4	41.0 °C EC_TEMP1	
									EC_TEMP2		
	Manual Cont	rol Settings									
					3 4						
UNEALL	PWM(%)	25						100	Load Fan Profile (F4)	Save Fan Profile (F3)	Back
TOINE MLC	Temp(C)	20	30	40	50	60	65	70			

Use the <F6> function key to quickly switch to this screen. This screen allows you to configure fan speed related settings for each fan header or monitor your system/CPU temperature.

☞ TUNE ALL

Allows you to apply the current settings to all fan headers.

∽ Temperature

Displays the current temperature of the selected target area.

☞ Fan Speed

Displays current fan/pump speeds.

☞ Flow Rate

Displays the flow rate of your water cooling system. Press <Enter> on Fan Speed to switch to this function.

☞ Fan Speed Control

Allows you to determine whether to enable the fan speed control function and adjust the fan speed.

- Silent Allows the fan to run at slow speeds.
- Manual Allows you to drag the curve nodes to adjust fan speed. Or you can use the EZ Tuning feature. After adjusting the node position, press Apply to automatically calculate the slope of the curve.
- ➡ Full Speed Allows the fan to run at full speeds.

∽ Fan Control Use Temperature Input

Allows you to select the reference temperature for fan speed control.

Temperature Interval

Allows you to select the temperature interval for fan speed change.

☞ FAN/PUMP Control Mode

- Auto Lets the BIOS automatically detect the type of fan installed and sets the optimal control mode.
- ▶ PWM PWM mode is recommended for a 4-pin fan/pump.

☞ FAN/PUMP Stop

Enables or disables the fan/pump stop function. You can set the temperature limit using the temperature curve. The fan or pump stops operation when the temperature is lower than the limit.

☞ FAN/PUMP Mode

Allows you to set the operating mode for the fan.

- Slope Adjusts the fan speed linearly based on the temperature.
- Stair Adjusts the fan speed stepwise based on the temperature.

☞ FAN/PUMP Fail Warning

Allows the system to emit warning sound if the fan/pump is not connected or fails. Check the fan/pump condition or fan/pump connection when this occurs.

∽ Save Fan Profile (F3)

This function allows you to save the current settings to a profile. You can save the profile in the BIOS or select **Select File in HDD/FDD/USB** to save the profile to your storage device.

∽ Load Fan Profile (F4)

This function allows you to load a previously saved BIOS profile without the hassles of reconfiguring the BIOS settings. Or you can select **Select File in HDD/FDD/USB** to load a profile from your storage device.

Favorites (F11)

Learning program haven Lago Tao Jones from Strate California CPU California Rev Californi Rev California Rev California Rev Californi Rev Cal	* Auto * Auto * Disabled * Auto * Auto * Disabled	45.00 100.00MHz	CPU Frequency 4532.94 Temperature 33.0 °(Memory	
			Frequency 4809.64 Ch A/B Volt	
			Volitage PM vCc18 1.826 V -12V 12.186	V V 4.942

Set your frequently used options as your favorites and use the <F11> key to quickly switch to the page where all of your favorite options are located. To add or remove a favorite option, go to its original page and press <Insert> on the option. The option is marked with a star sign if set as a "favorite."

Tweaker

Favorites (F11) Ga Tweaker	Settings	System Info.	() Boot	🕞 Save & Exit
CPU Clack Control	* Auto	100.00MHz	I	
Async CPU/PCIe Clock	Disabled		CPU	
CPU Ratio Mode	All cores			
CPU Clock Ratio	* Auto	45.00	4534.92MHz	100.29Mi
Active OC Tuner	Disabled			
GFX Clock Frequency	Auto		33.0 °C	1.035 V
Precision Boost Overdrive(PBO) Enhancement	Disabled			
Advanced CPU Settings			Memory	
			Frequency	
DOR5 Auto Booster	Auto		4813.92MT/s	500 16384ME
XMP/EXPO Profile	Disabled			163841015
System Memory Multiplier	Auto	48.00		
Infinity Fabric Frequency and Dividers	Auto		1.995 V	
UCLK DIV1 MODE	Auto			
Advanced Memory Settings			Voltage	
			PM VCC18	
CPU Vcore	* Auto		1.826 V	4.950 V
				4.550 0
VCORE SOC			+12V	
			12.150 V	
CPU_VDDIO_MEM	Auto	1.100V		
DOR_VDD Voltage	Auto	1.100V		



Whether the system will work stably with the overclock/overvoltage settings you made is dependent on your overall system configurations. Incorrectly doing overclock/overvoltage may result in damage to CPU, chipset, or memory and reduce the useful life of these components. This page is for advanced users only and we recommend you not to alter the default settings to prevent system instability or other unexpected results. (Inadequately altering the settings may result in system's failure to boot. If this occurs, clear the CMOS values and reset the board to default values.)

☞ CPU Clock Control

Allows you to manually set the CPU base clock in 0.01 MHz increments. **Important:** It is highly recommended that the CPU frequency be set in accordance with the CPU specifications.

∽ Async CPU/PCIe Clock

Allows for asynchronous CPU/PCIe clock.

∽ CPU Ratio Mode

Allows you to set the core ratio for all CPU cores or individual cores.

CPU Clock Ratio

Allows you to alter the clock ratio for the installed CPU. The adjustable range is dependent on the PU being installed.

∽ Active OC Tuner

Enables or disables the Active OC Tuner feature.

☞ GFX Clock Frequency

Allows you to alter the frequency for the GPU.

NOTE: The adjustable range is dependent on the CPU being installed. Auto lets the BIOS automatically configure this setting.



Some of the BIOS settings are available only when the motherboard chipset and the CPU/memory used support the feature. For more information about AMD CPUs' unique features, please visit AMD's website.

∽ Precision Boost Overdrive(PBO) Enhancement

Offers five boost levels for three targeted 90/80/70 °C CPU temperature. One can choose the most suitable thermal limit/boost level combinations to reach higher CPU frequency. Note: Workable settings/results may vary by different CPUs' condition.

Advanced CPU Settings

AORUS				/10/2024 20:04
Favorites (F11) Ga Tweake	Settings	System Info.	() Boot	🕞 Save & Dit
Core Performance Boost	Auto		CPU	
SVM Enable			Frequency	
PSS Support	Enabled		4539.06MHz	100.26MH
PPC Adjustment	PState 0			
Global C-state Control				
Power Supply Idle Control			33.0 °C	1.035 V
SMT Mode	Auto			
Precision Boost Overdrive			Memory	
Power Slow Slew Rate	Disabled			
			4812.52MT/s	16384MB
			1.995 V	
			1.555 V	
			Voltage	
			1.826 V	4.942 V
				4,542 0
			+12V	
			12.168 V	
Isable CPB				
			🛠 Smart Fan 6 (F6) 🔲 Q-Flash (F8)	Help (F1) Q

∽ Core Performance Boost

Allows you to determine whether to enable the Core Performance Boost (CPB) technology, a CPU performance-boost technology.

∽ SVM Mode

Virtualization enhanced by Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems.

☞ PSS Support

Enables or disables the generation of ACPI_PPC, _PSS, and _PCT objects.

→ PPC Adjustment

Allows you to fix the PState of the CPU.

☞ Global C-state Control

Allows you to determine whether to let the CPU enter C states. When enabled, the CPU core frequency will be reduced during system halt state to decrease power consumption.

∽ Power Supply Idle Control

Enables or disables Package C6 State.

- Typical Current Idle
 Disables this function.
- ► Low Current Idle Enables this function.
- ➡ Auto Lets the BIOS automatically configure this setting.

〜 SMT Mode

Allows you to enable or disable the CPU Simultaneous Multi-Threading technology.

Precision Boost Overdrive

Allows you to determine whether to automatically increase CPU clock and working performance.

∽ Power Slow Slew Rate

Allows you to select a different level of Power Slot Slew Rate.

☞ DDR5 Auto Booster

Enables or disables the DDR5 Dynamic Turbo Boost feature, which allows automatic switching between default frequency and boosted frequency. Auto lets the BIOS automatically configure this setting.

∽ XMP/EXPO Profile

Allows the BIOS to read the SPD data on XMP/EXPO memory module(s) to enhance memory performance when enabled. Selections are available only when an XMP or EXPO memory module is installed.

∽ System Memory Multiplier

Allows you to set the system memory multiplier. Auto sets memory multiplier according to memory SPD data.

$^{\circ \sim}$ Infinity Fabric Frequency and Dividers

Allows you to set the FCLK frequency.

→ UCLK DIV1 MODE

Allows you to specify the UCLK DIV1 mode.

Advanced Memory Settings

Power Davie Charles Auto Tourseour State Auto Auto State Auto State Auto State Auto State Auto Auto State Auto Auto Auto Auto Auto Auto Auto Auto	Favorites (F11)	CO Tweaker	Settings	System Info.	U Boot	Save & Evit
Voltage PMVCCa +9V	SPD Info SPD Setup Power Down Enable Gear Down Mode		Auto		Frequency 4532,80MHz Temparature 33,0 °C Memory Frequency 4815,50MT/ Ch Alti Vot	2 100.32MH Votage 1.032 V
1826 V 4.950 -120 12.168 V					Voltage PM VC18 1.826 V +12V	-9V 4,950 V

- Memory Subtimings
- ▼ Standard Timing Control, Advanced Timing Control, Data Bus Configuration

These sections provide memory timing settings. Note: Your system may become unstable or fail to boot after you make changes on the memory timings. If this occurs, please reset the board to default values by loading optimized defaults or clearing the CMOS values.

SPD Info

Displays information on the installed memory.

- SPD Setup Allows you to configure memory parameters for the installed memory.
- Power Down Enable Enables or disables Power Down support.
- Gear Down Mode Enables or disables Gear Down mode.
- ∽ Memory Context Restore

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

- CPU Vcore/Dynamic Vcore(DVID)/VCORE SOC/Dynamic VCORE SOC(DVID)/ CPU_VDDIO_MEM/DDR_VDD Voltage/DDR_VDDQ Voltage/DDR_VPP Voltage These items allow you to adjust the CPU Vcore and memory voltages. The displayed items and values may vary depending on motherboard chipset and the CPU used.
- Advanced Voltage Settings

Allows you to adjust the VDDG/VDDP and other voltage settings.

CPU/VRM Settings

This submenu allows you to configure Load-Line Calibration level.

Settings

		System Info.	🖒 Boot	🕞 Save & Exit
Platform Power IO Ports Miscellaneous AMD CBS AMD PBS			CPU Frequency 3827.93MHz Temperature 28.0 °C	BCLK 100.27MH Voltage 0.888 V
 PC Health 			Memory Frequency 4813.24MT/s Ch Ar8 Volt 1,992 V	Size 8192MB
			Voltage PM VCC18 1.837 V +12V 12.204 V	+5V 4.957 V

Platform Power

AC BACK Alway E/P Disable Soft-Off by PWR-BTTN Instant Power Loading Auto	id .	-	
Resonance Johann Diada Visiteirigg of hyperbolic 0 Visiteirigg of hyperbolic 0 Visiteirigg of hyperbolic 0 Visiteirigg of hyperbolic 0 Visiteirigg of hyperbolic 0		CPU Preasev 4535.50MHz 33.0 °C Memory Preasev 4793.18MT/4 Cn.4/8 Vot 1.995 V	Voltage 1.035 V Size
		Voltage PM VCC18 1.826 V =12/ 12.168 V	^{+SV} 4.950 V

🗢 AC BACK

Determines the state of the system after the return of power from an AC power loss.

- Memory The system returns to its last known awake state upon the return of the AC power.
- Always On The system is turned on upon the return of the AC power.
- ➤ Always Off The system stays off upon the return of the AC power.

∽ ErP

Determines whether to let the system consume least power in S5 (shutdown) state.

Note: When this item is set to Enabled, the Resume by Alarm function becomes unavailable.

∽ Soft-Off by PWR-BTTN

Configures the way to turn off the computer in MS-DOS mode using the power button.

- > Instant-Off Press the power button and then the system will be turned off instantly.
- ➤ Delay 4 Sec. Press and hold the power button for 4 seconds to turn off the system. If the power button is pressed for less than 4 seconds, the system will enter suspend mode.

∽ Power Loading

Enables or disables dummy load. When the power supply is at low load, a self-protection will activate causing it to shutdown or fail. If this occurs, please set to **Enabled**. **Auto** lets the BIOS automatically configure this setting.

∽ Resume by Alarm

Determines whether to power on the system at a desired time.

If enabled, set the date and time as following:

Wake up day: Turn on the system at a specific time on each day or on a specific day in a month.

>> Wake up hour/minute/second: Set the time at which the system will be powered on automatically. Note: When using this function, avoid inadequate shutdown from the operating system or removal of the AC power, or the settings may not be effective.

IO Ports

Favorites (F11)	da Tweaker	Settings	System Info.	U Boot	🕒 Save & Exit
Initial Display Output		PCie 1 Slot		-	
Integrated Graphics		Auto		CPU	
HD Audio Controller		Enabled			
PCIEX16 Bifurcation		Auto		4537.84MHz	100.25MH
Above 4G Decoding		Enabled			
Re-Size BAR Support		Enabled		33.0 °C	1.035 V
SR-IOV Support		Disabled			
Onboard LAN Controller		Enabled		Memory	
				Frequency	
Gigabyte Utilities Downloader Co	onfiguration			4812.43MT/s	16384MB
USB Configuration					16384IVIB
NVMe Configuration					
SATA Configuration				1.995 V	
Network Stack Configuration					
				Voltage	
Realtek PCIe 5 GBE Family Cont	roler (MAC:74:56:3C B6:25:58)			PM VCC18	
				1.826 V	4.950 V
				+121/	4.550 0
				12.186 V	
ect which video display output will	be enabled during POST				
ect which video display output will	be enabled during POST				

∽ Initial Display Output

Specifies the first initiation of the monitor display from the installed PCI Express graphics card or the onboard araphics.

▶ IGD Video	Sets the onboard graphics as the first display. (This item is present only when
	you install a CPU that supports this feature.)

Sets the graphics card on the PCIEX16 slot as the first display.

▶ PCle 1 Slot

∽ Integrated Graphics

Enables or disables the onboard graphics function.

- ► Auto The BIOS will automatically enable or disable the onboard graphics depending on the graphics card being installed.
- ➡ Forces Enables the onboard graphics.
- ➡ Disabled Disables the onboard graphics.

Specify the UMA mode.

- ► Auto
- Lets the BIOS automatically configure this setting. Sets the UMA Frame Buffer Size.
- ► UMA Specified
- ► UMA Auto Sets the display resolution.
- Adjusts the frame buffer size based on the total system memory size. ► UMA Game Optimized

This item is configurable only when Integrated Graphics is set to Forces.

☞ UMA Frame Buffer Size

Frame buffer size is the total amount of system memory allocated solely for the onboard graphics controller. MS-DOS, for example, will use only this memory for display. Options are: Auto, 64M~16G. This item is configurable only when **UMA Mode** is set to **UMA Specified**.

→ HD Audio Controller

Enables or disables the onboard audio function.

If you wish to install a 3rd party add-in audio card instead of using the onboard audio, set this item to **Disabled**.

☞ PCIEX16 Bifurcation

Allows you to determine how the bandwidth of the PCIEX16 slot is divided. The adjustable range may vary by CPU.

∽ Above 4G Decoding

Enables or disables 64-bit capable devices to be decoded in above 4 GB address space (only if your system supports 64-bit PCI decoding). Set to **Enabled** if more than one advanced graphics card are installed and their drivers are not able to be launched when entering the operating system (because of the limited 4 GB memory address space).

☞ Re-Size BAR Support

Enables or disables support for Resizable BAR.

☞ SR-IOV Support

Enables or disables support for Single Root I/O Virtualization (SR-IOV).

∽ Onboard LAN Controller

Enables or disables the onboard LAN function.

If you wish to install a 3rd party add-in network card instead of using the onboard LAN, set this item to **Disabled**.

Gigabyte Utilities Downloader Configuration

∽ Gigabyte Utilities Downloader Configuration

Allows you to determine whether to automatically download and install GIGABYTE Control Center after entering the operating system. Before the installation, make sure the system is connected to the Internet.

USB Configuration

☞ Legacy USB Support

Allows USB keyboard/mouse to be used in MS-DOS.

∽ XHCI Hand-off

Determines whether to enable XHCI Hand-off feature for an operating system without XHCI Hand-off support.

☞ USB Mass Storage Driver Support

Enables or disables support for USB storage devices.

☞ Port 60/64 Emulation

Enables or disables emulation of I/O ports 64h and 60h. This should be enabled for full legacy support for USB keyboards/mice in MS-DOS or in operating system that does not natively support USB devices.

☞ Mass Storage Devices

Displays a list of connected USB mass storage devices. This item appears only when a USB storage device is installed.

NVMe Configuration

Displays information on your M.2 NVME PCIe SSD if installed.

SATA Configuration

∽ SATA Mode

Enables or disables RAID for the SATA controllers integrated in the Chipset or configures the SATA controllers to AHCI mode.

- ➡ RAID Enables RAID for the SATA controller.
- AHCI Configures the SATA controllers to AHCI mode. Advanced Host Controller Interface (AHCI) is an interface specification that allows the storage driver to enable advanced Serial ATA features such as Native Command Queuing and hot plug.

∽ NVMe RAID mode

Allows you to determine whether to use your M.2 NVMe PCIe SSDs to configure RAID.

- Chipset SATA Port Enable
 Enables or disables the integrated SATA controllers.
- Chipset SATA Port Hot plug Enables or disable the hot plug capability for each SATA port.

∽ Chipset SATA Port

Displays the information of the connected SATA device(s).

Network Stack Configuration

Over the stack of the stack

Disables or enables booting from the network to install a GPT format OS, such as installing the OS from the Windows Deployment Services server.

☞ IPv4 PXE Support

Enables or disables IPv4 PXE Support. This item is configurable only when Network Stack is enabled.

☞ IPv4 HTTP Support

Enables or disables HTTP boot support for IPv4. This item is configurable only when $\ensuremath{\textbf{Network Stack}}$ is enabled.

☞ IPv6 PXE Support

Enables or disables IPv6 PXE Support. This item is configurable only when Network Stack is enabled.

☞ IPv6 HTTP Support

Enables or disables HTTP boot support for IPv6. This item is configurable only when **Network Stack** is enabled.

☞ PXE boot wait time

Allows you to configure how long to wait before you can press <Esc> to abort the PXE boot. This item is configurable only when **Network Stack** is enabled.

∽ Media detect count

Allows you to set the number of times to check the presence of media. This item is configurable only when **Network Stack** is enabled.

Ethernet Controller / PCIe GBE Family Controller

This sub-menu provides information on LAN configuration and related configuration options.

Miscellaneous

Favorites (F11) Ga Tweaker	Settings ① System Info.	🖒 Boot 🕞 Save & Exit
LEDs in System Power On State	Cn	CPU
RST_SW (MULTIKEY)	Set this button to HW Reset	
Onboard Button Light		Frequency BCLK
PCIEX16 Slot Link Speed	Auto	4532.58MHz 100.22MH
PCIEX4_1 Slot Link Speed	Auto	
PCIEX4_2 Slot Link Speed	Auto	33.0 °C 1.035 V
PCIe Slot Link Speed	Auto	
PCIe ASPM Mode	Disabled	Memory
3DMark01 Enhancement	Disabled	
IOMMU	Auto	Frequency 522 4810.80MT/s 16384MB
TSME	Auto	
Trusted Platform Module	Auto	1.995 V
Trusted Computing 2.0		
		Voltage
		PM VCC18 +5V
		1.826 V 4.942 V
		+12V
		12.186 V
s in System Power On State: On/Off		

∽ LEDs in System Power On State

Allows you to enable or disable motherboard LED lighting when the system is on.

- ➤ Off Disables the selected lighting mode when the system is on.
- ➤ On Enables the selected lighting mode when the system is on.

∽ RST_SW (MULTIKEY) (Functionality of the RST_SW Button)

- ➡ Set this button to HW Reset
- Use the button to reset your system.
- Set this button to Switch LED On/Off Use the button to turn on/off the motherboard LEDs.
- Set this button to Enter BIOS Setup Use the button to enter the BIOS Setup.
- ➡ Set this button to Boot on Safe Mode
 - Use the button to boot the system in safe mode.

∽ Onboard Button Light

Allows you to enable or disable the LED lighting of the onboard quick buttons when the system is on.

☞ PCIEX16 Slot Link Speed

Allows you to set the operation mode of the PCIEX16 slot. Actual operation mode is subject to the hardware specification of each slot. **Auto** lets the BIOS automatically configure this setting.

∽ PCIEX4_1 Slot Link Speed

Allows you to set the operation mode of the PCIEX4_1 slot. Actual operation mode is subject to the hardware specification of each slot. **Auto** lets the BIOS automatically configure this setting.

∽ PCIEX4_2 Slot Link Speed

Allows you to set the operation mode of the PCIEX4_2 slot. Actual operation mode is subject to the hardware specification of each slot. **Auto** lets the BIOS automatically configure this setting.

☞ PCle Slot Link Speed

Allows you to set the operation mode of the PCI Express slots and M.2 connectors. Actual operation mode is subject to the hardware specification of each slot. **Auto** lets the BIOS automatically configure this setting.

☞ PCIe ASPM Mode

Allows you to configure the ASPM mode for the device connected to the CPU/Chipset PCI Express bus.

→ 3DMark01 Enhancement

Allows you to determine whether to enhance some legacy benchmark performance.

∽ IOMMU

Enables or disables AMD IOMMU support.

☞ TSME

Enables or disables TSME support.

∽ Trusted Platform Module

Allows you to configure the TPM function.

- ➤ Auto Lets the BIOS automatically configure this setting.
- ► Disabled Disables this function.
- ➤ Enable dTPM Enables the TPM function provided by the TPM module (optional) installed in the SPI TPM header
- ► Enable ASP fTPM Enables AMD CPU fTPM.
- ► Enable Pluton fTPM Enables the Pluton TPM function.

Trusted Computing 2.0

Enables or disables Trusted Platform Module (TPM).

AMD CBS

Favorites (F11)	63 Tweaker	Settings	③ System Info.		() Boot	🕒 Save & Exit
AMD CBS						
AMD CBS Revision Number		0x0			CPU Frequency	BCLK
CPU Common Options				_	4556.07MHz	100.25MF
DF Common Options						
UMC Common Options					33.0 °C	1.035 V
NBIO Common Options						
FCH Common Options					Memory	
SMU Common Options					Frequency	
 SOC Miscellaneous Control 					4812.09MT/s Ch A/B Valt 1.992 V	16384MB
					Voltage PM VCC18 1.826 V +12V 12.186 V	+5¥ 4.942 V
J Common Options				* 5	nart Fan 6 (F6) 💿 Q-Flash (F8)	@ Help (F1)

This sub-menu provides AMD CBS-related configuration options.

AMD PBS

 Favorites (F11) 	63 Tweaker	Settings	 System Info. 	() Boot	Save & Exit
AMD CBS					
AMD CBS Revision Number		0-0			
CPU Common Options				4556.07MHz	100.25M
DF Common Options					
UMC Common Options				33.0 °C	1.035 V
NBIO Common Options					
FCH Common Options				Memory	
SMU Common Options				Frequency	
 SOC Miscellaneous Control 				4812.09MT/s	16384M
					10304101
				Ch A/B Volt	
				1.992 V	
				Voltage	
				1.826 V	4.942 V
				12.186 V	

This sub-menu provides USB4® related configuration options.

AMD Overclocking

SETTINGS ARE NOT COVER MANUFACTURER'S WARRA	SED BY USE OF YOUR AMD PROCESS ED UNDER YOUR AMD PRODUCT WA		OR IN EXCESS OF FACTORY		
not limited to overclocking a system components, create cases may result in total syst	ATV. ser outside of specification or in excess ind undervolting, may damage or shor system instabilities (e.g., data loss and tem failure. ont or service for issues or damages re	of factory siettings, including but sen the life of your processor or o corrupted images) and in extreme		CPU Prequercy 4535609MHz Texpenditure 33.0 °C Memory Presuarcy 4813.48MT/s Cs. NB Vet 1.992 V	BCLK 100.28MH Votage 1.035 V Sze 16384MB
				Voltage PM VCC18 1.826 V -12V 12.186 V	+5∀ 4,942 V

This sub-menu provides AMD overclocking-related configuration options.

PC Health

 Favorites (F11) 	40 Twesker	Settings	③ System Info.	🖒 Boot	E+ Save & Ext
Asset Case Open Status Case Open Case Open CPU Vcore CPU vcore CPU Vcore CPU vcore CPU Vcore CPU vcore CPU Vcore CPU vcore M VCD10 MEM PM VCD10 MEM MVCC18 +12/ CPU vcore Soc CPU vcore		Deskfed YES 1032 V 1366 V 1995 V 1995 V 3314 V 4995 V 1256 V 1256 V 12168 V 1005 V		CPU Freazery 4532.70% 33.0 °C Memory Freazery 4812.520 Ch Alft Vet 1.995 V	Voltage 1.032 V
				Voltage PM VCC18 1.826 V +12V 12.168 V	+5¥ 4.950 V

∽ Reset Case Open Status

➡ Disabled

Keeps or clears the record of previous chassis intrusion status.

Enabled Clears the record of previous chassis intrusion status and the Case Open field will show "No" at next boot.

∽ Case Open

Displays the detection status of the chassis intrusion detection device attached to the motherboard CI header. If the system chassis cover is removed, this field will show "Yes", otherwise it will show "No". To clear the chassis intrusion status record, set **Reset Case Open Status** to **Enabled**, save the settings to the CMOS, and then restart your system.

☞ CPU Vcore/CPU VCORE MISC/CPU VDD18/PM VDD1V/+3.3V/+5V/PM VCC18/+12V/CPU VCORE SOC

Displays the current system voltages.

System Info.

Favorites (F11)	63 Tweaker	Settings	 System Info. 		b Boot	🕞 Save & Ext
Model Name BIOS Version BIOS Date BIOS ID RGESA Version		X820E AORUS MASTER F1 06/28/2024 8ARPL302 ComboAM5PI 1.2.0.0			CPU Frequency 4532.76MHz Temperature 33.0 °C	BCLK 100.20MI Voltage 1.035 V
System Language		English			33.0 °C	1.035 V
Processor Type Processor CPUID Processor Speed Processor Clock Installed Memory		AMD Ryzen 7 7700X 8-1 00A60F12 100.24MHz 4532.53MHz 16384MB	Core Processor		Memory Frequency 4809.74MT/s Ch A/B Volt 1.992 V	5220 16384MB
LAN MAC Address System Date		74563CB62558) West		Voltage PM VCC18	+51
System Time		[20 : 06 : 23]	1 1/100		1.826 V +12V	4.950 V
Access Level		Administrator			12.186 V	
Plug in Devices Info						
e Date. Use Tab to switch betv	veen Date elements.					
				🏶 Smart Fa	an 6 (F6) 🔲 Q-Flash (F8)	() Help (F1)

This section provides information on your motherboard model and BIOS version. You can also select the default language used by the BIOS and manually set the system time.

∽ System Language

Selects the default language used by the BIOS.

∽ System Date

Sets the system date. The date format is week (read-only), month, date, and year. Use <Enter> to switch between the Month, Date, and Year fields and use the <Page Up> or <Page Down> key to set the desired value.

∽ System Time

Sets the system time. The time format is hour, minute, and second. For example, 1 p.m. is 13:00:00. Use <Enter> to switch between the Hour, Minute, and Second fields and use the <Page Up> or <Page Down> key to set the desired value.

∽ Access Level

Displays the current access level depending on the type of password protection used. (If no password is set, the default will display as **Administrator**.) The Administrator level allows you to make changes to all BIOS settings; the User level only allows you to make changes to certain BIOS settings but not all.

Plug in Devices Info

Displays information on your PCI Express and M.2 devices if installed.

SPD Info

Displays information on the installed memory.

Q-Flash

Allows you to access the Q-Flash utility to update the BIOS or back up the current BIOS configuration.

Boot

Favorites (F11)	43 Tweaker	Settings	 System Info. 	() Boot	🕞 Save & Evit
Bootup NumLock State		Cn		4537.12MHz	100.27M
Security Option		System			
Full Screen LOGO Show		Enabled		Temperature 33.0 °C	Voltage 1.035 V
Fast Boot		Disabled			
CSM Support		* Disabled		Memory Frequency	520 16384MB
Administrator Password				4813.34MT/s	
User Password				Ch A/B Volt 1.995 V	
 Secure Boot 					
Preferred Operating Mode		Auto		Voltage PM VCC18 1.837 V +12V 12.168 V	+5V 4.942 V
ect the keyboard NumLock state				🔆 Smart Fan 6 (F6) 🔳 Q-Flash (F8)	@ Help (F1)

☞ Boot Option Priorities

Specifies the overall boot order from the available devices. Removable storage devices that support GPT format will be prefixed with "UEFI:" string on the boot device list. To boot from an operating system that supports GPT partitioning, select the device prefixed with "UEFI:" string.

Or if you want to install an operating system that supports GPT partitioning such as Windows 11 64-bit, select the optical drive that contains the Windows 11 64-bit installation disc and is prefixed with "UEFI:" string.

☞ Bootup NumLock State

Enables or disables Numlock feature on the numeric keypad of the keyboard after the POST.

∽ Security Option

Specifies whether a password is required every time the system boots, or only when you enter BIOS Setup. After configuring this item, set the password(s) under the Administrator Password/User Password item.

Setup A password is only required for entering the BIOS Setup program.

System A password is required for booting the system and for entering the BIOS Setup program.

☞ Full Screen LOGO Show

Allows you to determine whether to display the GIGABYTE Logo at system startup. **Disabled** skips the GIGABYTE Logo when the system starts up.

Fast Boot

Enables or disables Fast Boot to shorten the OS boot process. Ultra Fast provides the fastest bootup speed.

☞ SATA Support

Last Boot SATA Devices Only Except for the previous boot drive, all SATA devices are disabled before the OS boot process completes.

► All SATA Devices All SATA devices are functional in the operating system and during the POST. This item is configurable only when Fast Boot is set to Enabled or Ultra Fast.

∽ NVMe Support

Allows you to enable or disable NVMe device(s).

This item is configurable only when Fast Boot is set to Enabled or Ultra Fast.

☞ VGA Support

Allows you to select which type of operating system to boot.

- ➤ Auto Enables legacy option ROM only.
- ➡ EFI Driver Enables EFI option ROM.

This item is configurable only when Fast Boot is set to Enabled or Ultra Fast.

☞ USB Support

- Disabled
 All USB devices are disabled before the OS boot process completes.
- ➡ Full Initial All USB devices are functional in the operating system and during the POST.
- ✤ Partial Initial
 Part of the USB devices are disabled before the OS boot process completes.

This item is configurable only when Fast Boot is set to Enabled. This function is disabled when Fast Boot is set to Ultra Fast.

∽ NetWork Stack Driver Support

- Disabled Disables booting from the network.
- Enabled Enables booting from the network.

This item is configurable only when Fast Boot is set to Enabled or Ultra Fast.

☞ CSM Support

Enables or disables UEFI CSM (Compatibility Support Module) to support a legacy PC boot process.

- Disabled Disables UEFI CSM and supports UEFI BIOS boot process only.
- ➡ Enabled Enables UEFI CSM.

∽ LAN PXE Boot Option ROM

Allows you to select whether to enable the legacy option ROM for the LAN controller. This item is configurable only when **CSM Support** is set to **Enabled**.

∽ Storage Boot Option Control

Allows you to select whether to enable the UEFI or legacy option ROM for the storage device controller.

- ➡ Disabled Disables option ROM.
- ➡ UEFI Only Enables UEFI option ROM only.
- ➡ Legacy Only Enables legacy option ROM only.

This item is configurable only when CSM Support is set to Enabled.

∽ Other PCI Device ROM Priority

Allows you to select whether to enable the UEFI or Legacy option ROM for the PCI device controller other than the LAN, storage device, and graphics controllers.

- ✤ Disabled Disables option ROM.
- ➡ UEFI Only Enables UEFI option ROM only.
- ➡ Legacy Only Enables legacy option ROM only.

This item is configurable only when CSM Support is set to Enabled.

∽ Administrator Password

Allows you to configure an administrator password. Press <Enter> on this item, type the password, and then press <Enter>. You will be requested to confirm the password. Type the password again and press <Enter>. You must enter the administrator password (or user password) at system startup and when entering BIOS Setup. Differing from the user password, the administrator password allows you to make changes to all BIOS settings.

☞ User Password

Allows you to configure a user password. Press <Enter> on this item, type the password, and then press <Enter>. You will be requested to confirm the password. Type the password again and press <Enter>. You must enter the administrator password (or user password) at system startup and when entering BIOS Setup. However, the user password only allows you to make changes to certain BIOS settings but not all. To cancel the password, press <Enter> on the password item and when requested for the password, enter the correct one first. When prompted for a new password, press <Enter> without entering any password. Press <Enter> again when prompted to confirm.

NOTE: Before setting the User Password, be sure to set the Administrator Password first.

Secure Boot

Allows you to enable or disable Secure Boot and configure related settings. This item is configurable only when **CSM Support** is set to **Disabled**.

∽ Preferred Operating Mode

Allows you to select whether to enter Easy mode or Advanced mode after entering BIOS Setup. Auto enters the BIOS mode where it was last time.

Save & Exit

Saké Deshalap Control	CPU Frequency 4534.38MHz Temperature	BCLK 100.28MH
Sue Portes	33.0 °C	1.029 V
	Memory Frequency 4813.44MT/s Ch A/B Volt 1.995 V	520 16384MB
	Voltage PM VCC18 1.826 V +12V 12.186 V	-∍v 4.950 V

∽ Save & Exit Setup

Press <Enter> on this item and select **Yes**. This saves the changes to the CMOS and exits the BIOS Setup program. Select **No** or press <Esc> to return to the BIOS Setup Main Menu.

☞ Exit Without Saving

Press <Enter> on this item and select **Yes**. This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS. Select **No** or press <Esc> to return to the BIOS Setup Main Menu.

∽ Load Optimized Defaults

Press <Enter> on this item and select **Yes** to load the optimal BIOS default settings. The BIOS defaults settings help the system to operate in optimum state. Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values.

∽ Boot Override

Allows you to select a device to boot immediately. Press <Enter> on the device you select and select Yes to confirm. Your system will restart automatically and boot from that device.

∽ Save Profiles

This function allows you to save the current BIOS settings to a profile. You can create up to 8 profiles and save as Setup Profile 1~ Setup Profile 8. Press <Enter> to complete. Or you can select **Select File in HDD/FDD/USB** to save the profile to your storage device.

∽ Load Profiles

If your system becomes unstable and you have loaded the BIOS default settings, you can use this function to load the BIOS settings from a profile created before, without the hassles of reconfiguring the BIOS settings. First select the profile you wish to load and then press <Enter> to complete. You can select **Select File in HDD/FDD/USB** to input the profile previously created from your storage device or load the profile automatically created by the BIOS, such as reverting the BIOS settings to the last settings that worked properly (last known good record).