User Manual

SXC-FP530 V1.0



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SXC-FP530 User Manual

(Version 1.0)

Release Notes：		
No.	Description	Date
V1.0	Initial Version	2025/10/25

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Warning

1. Before using the product, carefully read the manual to ensure proper installation and operation.
2. If you are not ready to install any extension card, store it in an anti-static protective bag to prevent damage.
3. To discharge any static electricity, briefly touch a grounded metal object before removing the extension card from the protective bag.
4. Always wear anti-static gloves and handle the card by its edges to avoid damaging sensitive components.
5. Verify that the power supply voltage is correct before connecting the motherboard to the power supply.
6. To prevent electric shock or damage, always turn off the AC power or unplug the power cord before removing or reconfiguring the motherboard or any components.
7. Unplug the AC power cord from the outlet before relocating the motherboard or any components.
8. Ensure all power cords are unplugged before connecting or disconnecting any equipment to avoid electrical hazards.
9. Wait at least 30 seconds after powering off the system before powering it on again to prevent unnecessary wear.
10. If any issues arise during operation, consult a qualified professional for assistance.
11. This product may cause radio interference in certain environments; if necessary, users should take appropriate measures to mitigate such interference.

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Chapter 1 Product Introduction

1.1 Brief Introduction

The SXC-FP530 is an embedded Mini PC based on AMD Ryzen™ Embedded R2000 Series processors, designed for industrial and commercial computing applications.

1.2 Parameters

CPU: AMD Ryzen™ Embedded R2000 Series

CPU	Cores/Threads	Base Freq.	Max Freq.	Total L3 Cache	Nominal TDP (cTDP Range)
R2314	4C/4T	2.1GHz	3.5GHz	4MB	15W(12-35W) Default (Passive: 15W, Active:35W)
R2514	4C/8T	2.1GHz	3.5GHz	4MB	15W(12-35W) Default (Passive: 15W, Active:35W)

GPU: AMD Radeon™ Graphics

Display Interfaces: 4 x HDMI2.0, support Hot Plug Detect (HPD) Lock.

RAM: 2 x SO-DIMM DDR4-2667MHz slots, supports dual-channel, maximum capacity: 64GB

Storage/Expansion:

- 1 x M.2 Key M slot (labeled M.2_N/S on board), supporting 2280 SATA/NVMe SSD
- 1 x M.2 Key B slot (labeled M.2_W/S on board), supporting 2242 SATA SSD/3042 4G modules
- 1 × M.2 Key E slot (labeled M.2_E on board), supporting 2230 Wi-Fi & Bluetooth modules

Audio: Realtek HD ALC897 High-Definition Audio Codec, support 1 x Line-out, 1 x Mic-in.

Ethernet: 2 x Realtek RTL8111H Controllers, RJ45 interfaces. Date Rate Per Port: 1.0GbEs.

USB:

- 1 × USB 3.2 Gen 1 Type-A port, up to 5 Gbps (labeled USB30 on board)
- 1 × USB 3.2 Gen 2 Type-A port, up to 10 Gbps (labeled USB30 on board)
- 4 × USB 2.0 Type-A ports, up to 480 Mbps (labeled USB20, USB2_1, and USB2_2 on board)
- 1 × USB 3.2 Gen 2 Type-C port, up to 10 Gbps (labeled USB_C on board)

Serial COM: 2 x COM headers (labeled COM1, COM2 on board), supporting RS232 by default, RS485 optional through hardware changes.

TPM: External TPM module support (Infineon SLB9670, optional).

Other I/O:

- 1 × JAT auto power-on header (labeled JAT on board, 2.0 mm)
- 1 × JBAT_MCU header (labeled JBAT_MCU on board)
- 1 × JMCU header (labeled JMCU on board)
- 1 × JBAT header (labeled JBAT on board)
- 1 × Nano SIM card slot (labeled SIM on board)
- 1 × 12V 4-pin CPU fan header (labeled CPU_FAN on board, 1.25 mm)
- 1 × 12V 4-pin system fan header (labeled SYS_FAN on board, 1.25 mm, optional)
- 1 × Clear CMOS header (labeled CLR_CMOS on board, 2.0 mm)
- 1 × FP_OUT wired control header (labeled FP_OUT on board, 2.0 mm)

Power: 12V/19V DC-IN (5.5 mm x 2.5 mm DC jack) or Phoenix optional

Board Dimension: 179mm x 132mm

Chassis Dimension: 190mm x 150mm x 35mm (L x W x H)

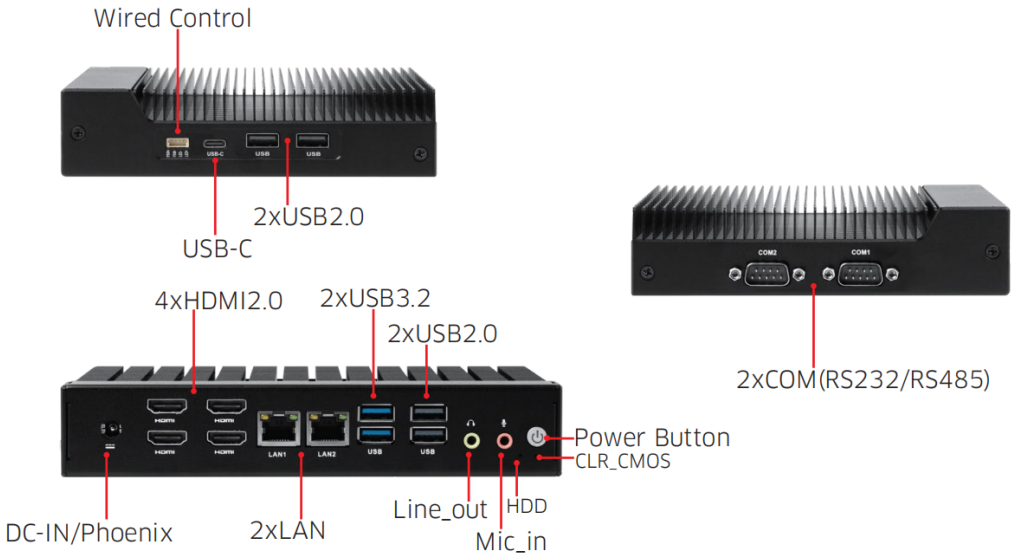
Operating Temperature: -20°C to 60°C

Cooling Method: Passive/Active

OS Support: Windows 10/11 64bit, Linux 64bit

1.3 Product Overview

I/O Interfaces



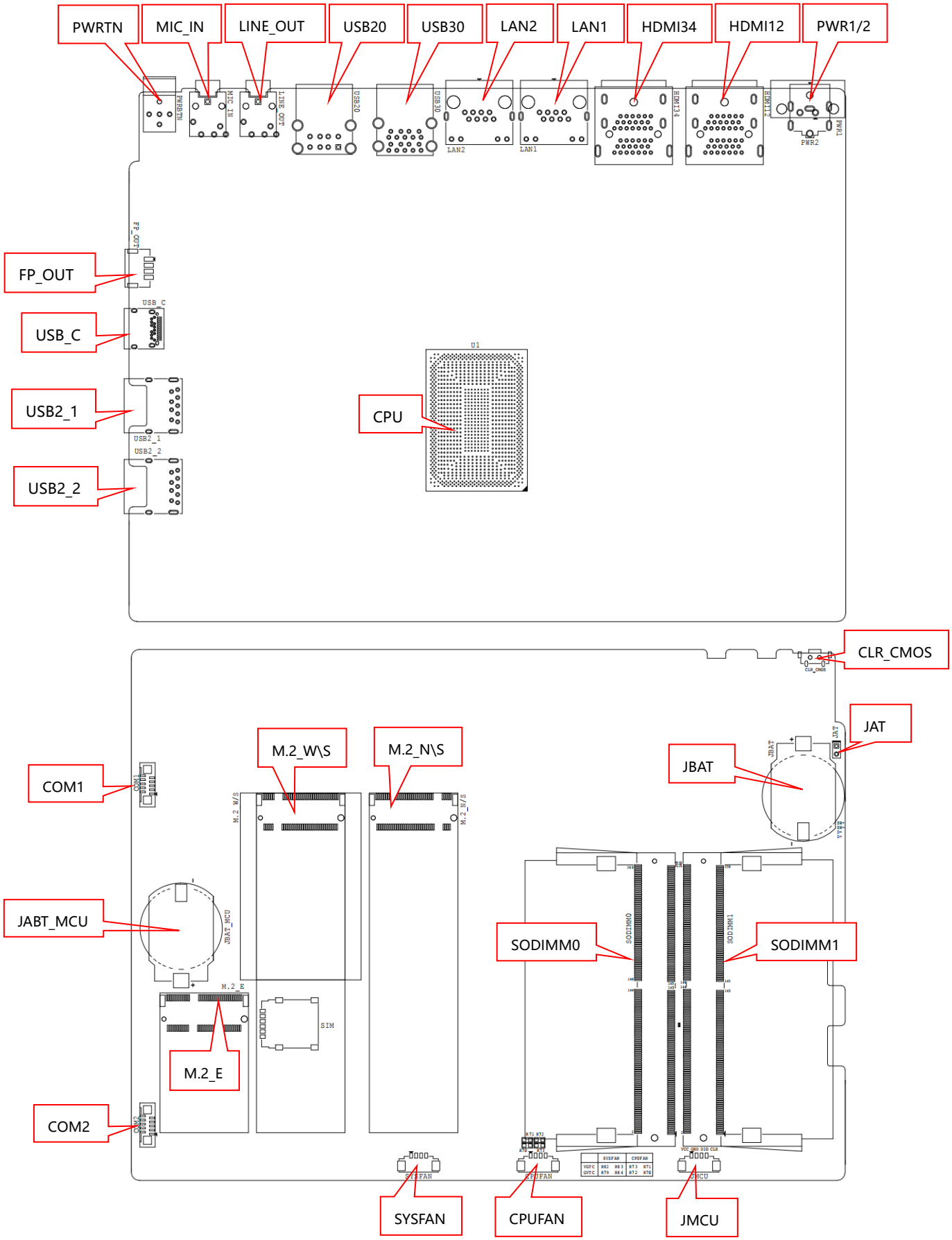
SXC-FP530 (Passive Cooling)



SXC-FP530-F (Active Cooling)



1.4 Connector Diagram



Chapter 2 Hardware

2.1 Installations

Please refer to the following steps for installation:

1. Read the user manual carefully to make sure all the adjustments on the SXC-FP530/SXC-FP530-F are correct.
2. Installing the Memory:
   - Press the ejector tab of the memory slot outwards with your fingertips.
   - Hold the memory module and align the key to the module with that on the memory slot.
   - Gently push the module into the slot until the ejector levers return completely to the closed position, holding the module in place when the module touches the bottom of the slot. To remove the module, press the ejector levers outwards to unseat the module.
3. Installing the expansion cards:
   - Locate the expansion slots and remove the screw, insert the cards into the slot at a 45-degree angle then attach the screw to the expansion cards, gently press down on it then install the screw back.
4. Connect all signal wires, cables, panel control wiring, and power supplies.
5. Start the computer and complete the setup of the BIOS program.

The board's components are integrated circuits and can easily be damaged by Electrostatic Discharge or ESD; therefore, please follow the instructions:

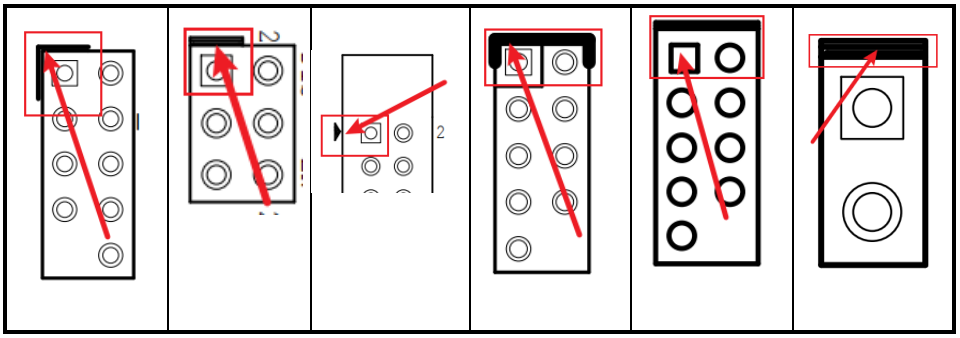
- Hold the board's edge when handing, and do not touch onboard pins, components, or plug sockets.
- When touching integrated circuit components (such as CPU, RAM, etc.), please wear an anti-static wrist strap/glove to avoid electrostatic discharge damage to the board or other sensitive components.
- Before installing the integrated circuits/sensitive components, place the sensitive components in anti-static bags to keep them safe from ESD.
- Please make sure the power switch is OFF before plugging the power plug.

2.2 Jumper Setting

Please configure the jumpers according to your requirements before installing the hardware.

How to identify the first header of jumpers and pins: Observe the mark beside the jumper or pins and find the header marked by “1” or bold line or triangular symbol. Or observe the rear panel and the header with a square solder pad is the first header.

Illustration:



2.3 Memory

The board provides 2x DDR4-2667 MHz SO-DIMM slots, supporting dual-channel with a maximum total capacity of 64 GB.

Ensure the memory module is aligned with the slot key before insertion. When selecting memory, verify that the module meets the required specifications.

Please Note: When using dual-rank (dual-sided) memory modules with a total of 16 memory dies, the AMD Embedded R2314 processor supports a maximum memory frequency of 2400 MT/s. When using dual-rank modules with a total of 8 memory dies, or single-rank (single-sided) modules with a total of 4 memory dies, the maximum supported memory frequency is 2667 MT/s. For additional details, refer to the relevant sections of the AMD processor development documentation.

R2000 MAX DDR4 DATA RATE

SO-DIMM OR UDIMM

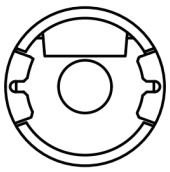
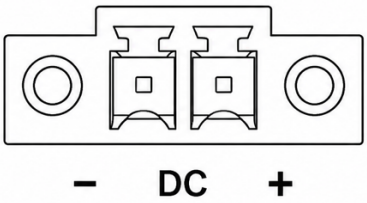
SoC TDP	Memory Rank	Number of DIMM Socket on Each Channel	Max Data Rate (MT/s)
R2544	Single Rank	1	DDR4-3200
	Dual Rank	1	DDR4-2400
R2314 & R2514	Single Rank	1	DDR4-2667
	Dual Rank	1	DDR4-2400
R2312	Single Rank	1	DDR4-2400
	Dual Rank	1	DDR4-2400

2.4 Power Input (Labeled PWR1/PWR2 onboard)

The board supports two power input configurations:

- DC 12V/19V power adapter via a 5.5 mm × 2.5 mm DC jack.
- Optional 9V–36V wide-range DC power input via a 2-pin Phoenix terminal block (3.81 mm pitch).

The available power input interface depends on the product configuration.

DC 12V/19V Input (5.5 × 2.5 mm)	Optional 2-Pin Phoenix Terminal Block
	

Note:

The AMD Ryzen™ Embedded R2314 processor is designed for industrial applications. Since most third-party monitoring utilities are developed for consumer platforms, they may not fully support this processor and could report inaccurate power consumption values. For accurate power monitoring, please refer to the ***AMD SystemDeck Tool (Windows)*** *and use the readings displayed under the PM tab.*

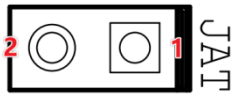
- ***SXC-FP530 (Passive):*** *Configured with a 15W TDP setting in BIOS. Some monitoring utilities may report power consumption of approximately 6W under a sustained workload, while the actual value is typically between 12W and 15W.*
- ***SXC-FP530-F (Active):*** *Configured with a 35W TDP setting in BIOS. Some monitoring utilities may report power consumption of approximately 10W under a sustained workload, while the actual value is typically between 22W and 24W.*

2.5 Auto Power-On (labeled JAT onboard)

The JAT header (labeled JAT onboard) controls the Auto Power-On function. Install the appropriate jumper to enable or disable this feature.

JAT Settings:

Enable	Disable
1-2	NC

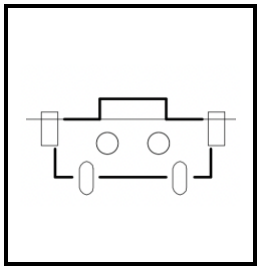


2.6 CMOS Clearance/Retention (labeled CLR_CMOS onboard)

The CLR_CMOS button (labeled CLR_CMOS on board) is used to clear the CMOS settings.

CMOS is powered by the onboard battery. Clearing CMOS will permanently erase all previous BIOS settings and restore the BIOS to its factory default settings.

Clear CMOS



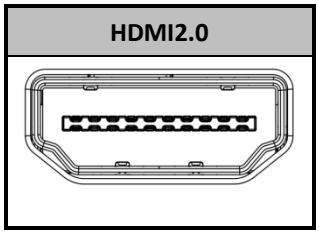
To clear CMOS:

1. Shut down the system and disconnect the power supply.
2. Press and hold the CLR_CMOS button for more than 3 seconds.
3. Power on the system and press <Del> to enter the BIOS Setup Utility.
4. Press F9 to load the optimized default settings, then save the changes and exit.

⚠ Caution: Do not clear CMOS while the system is powered on, as this may damage the motherboard.

2.7 Display Interfaces

The board is equipped with four HDMI 2.0 ports and supports HDMI HPD Lock (Hot Plug Detect Lock).



The maximum display resolution and number of supported displays vary by processor model. Refer to the table below for detailed specifications.

AMD RYZEN™ EMBEDDED - R2000 FAMILY AMD

MODEL	Nominal TDP (cTDP Range)	Core/Thread Count	Base CPU Freq. (GHz)	1T Boost CPU Freq. (GHz) (up to)**	GPU Compute Units (SIMD)	Max GPU Freq. (GHz) (up to)	Max # of display interfaces	Max # of external 4K displays	Multimedia HW Decode	Max DDR4 Rate MT/s (up to)*	Ethernet Ports (Gb)	Max # of PCIe Lanes
R2544	45W (35-54W)	4 / 8	3.35	3.7	8	1.3	4	4x 4K	Up to 1x 4K60	3,200	-	16L Gen3
R2514	15W (12-35W)	4 / 8	2.1	3.7	8	1.2	4	3x 4K	Up to 1x 4K60	2,667	-	16L Gen3
R2314	15W (12-35W)	4 / 4	2.1	3.5	6	1.2	4	3x 4K	Up to 1x 4K60	2,667	-	16L Gen3
R2312	15W (12-25W)	2 / 4	2.7	3.5	3	1.2	3	3x 4K	Up to 1x 4K60	2,400	-	8L Gen3

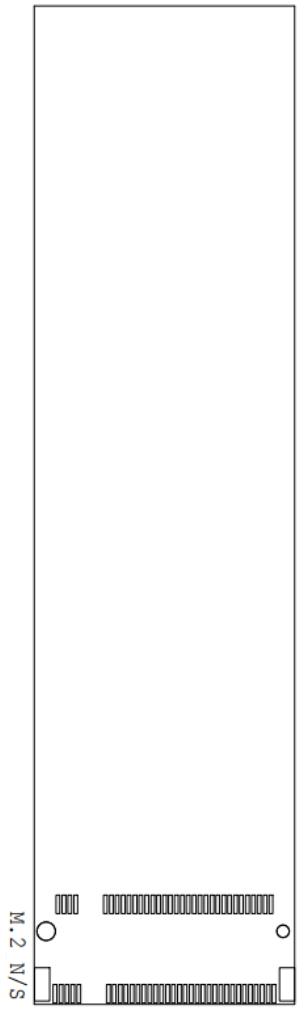
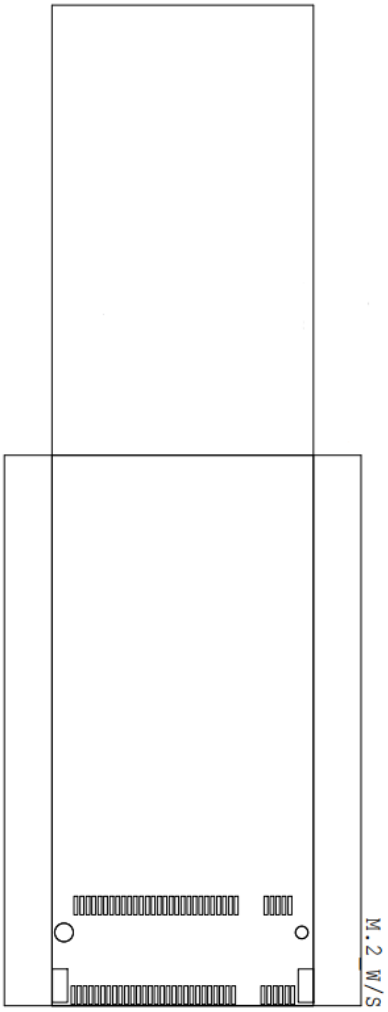
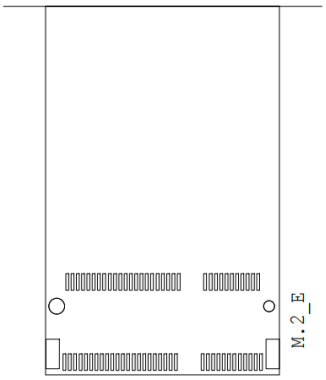
*Max DDR4 rates are only attainable using Single Rank DDR4 modules
**GD-150 in endnotes.

AMD confidential - chenxiao@datangpc.com 2025年6月23日 UTC 03:57:21

2.8 Storage & Expansion (Labeled M.2_N/S, M.2_W/S, M.2_E Onboard)

The board provides three M.2 interfaces for storage and expansion, including one M.2 Key M slot, one M.2 Key B slot, and one M.2 Key E slot.

- M.2_N/S: 1 × M.2 Key M slot, supporting 2280 SATA or NVMe SSDs.
- M.2_W/S: 1 × M.2 Key B slot, supporting 2242/2280 SATA SSDs or 3042 4G modules.
- M.2_E: 1 × M.2 Key E slot, supporting 2230 Wi-Fi and Bluetooth modules.

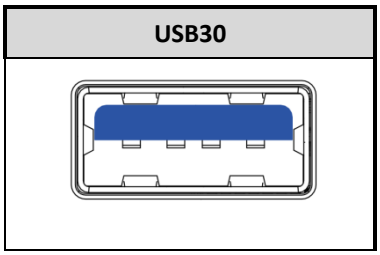
M.2_N/S	M.2_W/S	M.2_E
		

2.9 USB Interfaces (Labeled USB30, USB20, F_USB21, F_USB22 Onboard)

The board provides seven USB ports, including 1 x USB 3.2 Gen 1 Type-A port, 1 x USB 3.2 Gen 2 Type-A port, 4 x USB 2.0 Type-A ports, and 1 x USB 3.2 Gen 2 Type-C port.

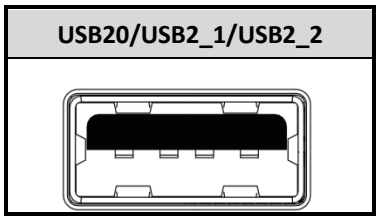
USB3.2

- 1 x USB 3.2 Gen 1 Type-A port (labeled USB30 onboard), supporting data transfer rates up to 5 Gbps vary by processor model (located on the **upper side** of the rear I/O panel).
- 1 x USB 3.2 Gen 2 Type-A port (labeled USB30 onboard), supporting data transfer rates up to 10 Gbps (located on the **lower side** of the rear I/O panel).



USB2.0

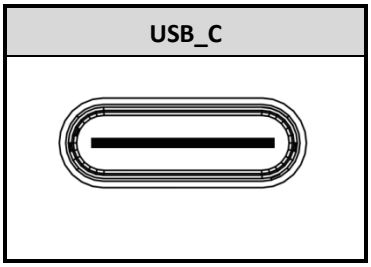
4 x USB 2.0 Type-A ports (USB20 / F_USB21 / F_USB22), supporting data transfer rates up to 480 Mbps.



The rear USB 2.0 ports (labeled USB20 onboard) support 5V standby power. When the system is in sleep mode or soft-off state (AC power connected), a USB keyboard or mouse connected to these ports can be used to wake the system. These ports can also provide power to external devices up to 5V/0.5A.

USB-C

1 x USB 3.2 Gen 2 Type-C port (labeled USB_C onboard), supporting data transfer rates up to 10 Gbps.



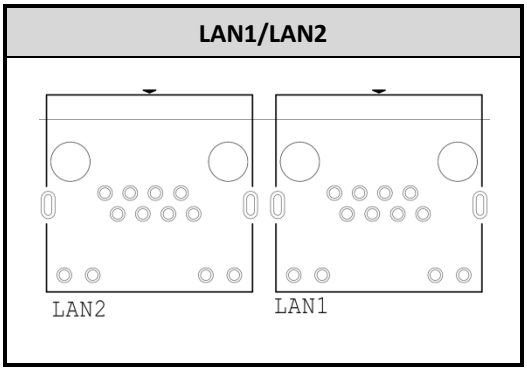
2.10 Ethernet (Labeled LAN1, LAN2 Onboard)

The board provides two Gigabit Ethernet RJ45 ports based on Realtek RTL8111H controllers. Both ports support Wake-on-LAN (WoL) via Magic Packet, while LAN1 additionally supports UEFI PXE boot.

- LAN1: 1 × RJ45 Gigabit Ethernet port, supporting UEFI PXE boot.
- LAN2: 1 × RJ45 Gigabit Ethernet port.

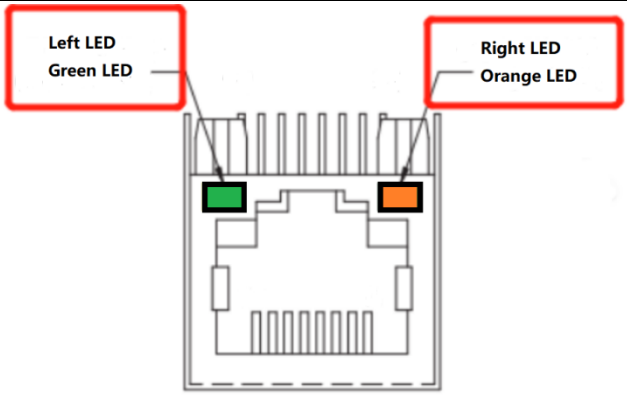
To boot from the network using UEFI PXE, set IPv4 PXE Support to Enabled in the BIOS Setup Utility.

LAN1/LAN2



LAN Port LED Status Indicators:

LI_LED (Green)	Function	ACT_LED (Orange)	Function
On	Link Established	Blinking	Network Activity

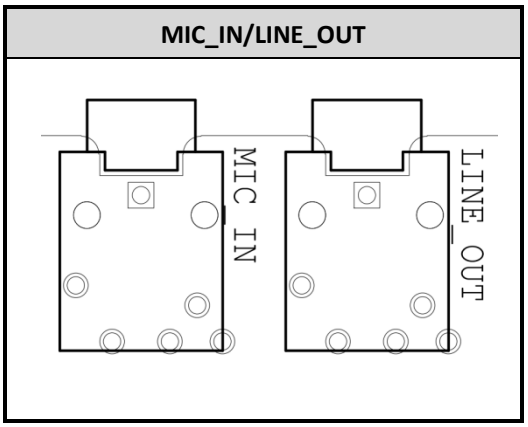


2.11 Audio (Labeled MIC_IN, LINE_OUT Onboard)

The board provides one set of rear audio interfaces based on the Realtek ALC897 High-Definition Audio codec, including a microphone input and an audio output.

- MIC_IN: 3.5 mm microphone input jack (pink).
- LINE_OUT: 3.5 mm audio output jack (green).

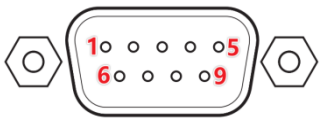
MIC_IN/LINE_OUT

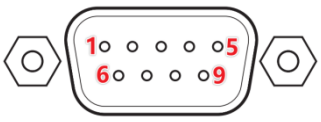


2.12 Serial Ports (Labeled as COM1, COM2 Onboard)

The board provides two serial ports (COM1 and COM2), supporting RS-232 by default. RS-485 is available through hardware modification.

The pin definitions for COM1 and COM2 are shown below.



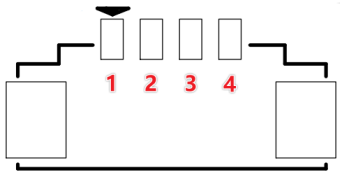
	RS232 Mode					
	Pin	1	2	3	4	5
	Signal	DCD#	RXD	TXD	DTR#	GND
	Pin	6	7	8	9	
	Signal	DSR#	RTS#	CTS#	RI#	
	**RS485 Mode (optional)**					
	Pin	1	2	3	4	5
	Signal	DATE-	DATE+	(NC)	(NC)	(NC)
	Pin	6	7	8	9	
	Signal	(NC)	(NC)	(NC)	(NC)	

2.13 CPU Fan/System Fan Headers (Labeled CPUFAN, SYSFAN Onboard)

The board provides one CPU fan header and one optional system fan header for cooling applications.

- CPUFAN: 1 × 5V 4-pin CPU fan header (1.25 mm pitch).
- SYSFAN: 1 × 5V 4-pin system fan header (1.25 mm pitch, optional).

CPUFAN Pin Definition (Labeled CPUFAN)

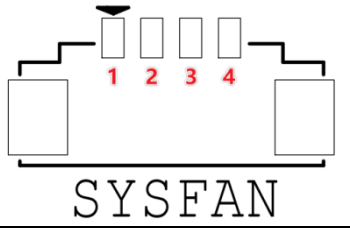


	SYSFAN		CPUFAN	
VGTC	R82	R83	R73	R71
GVTC	R79	R84	R72	R70

Default Configuration (R73 and R71 populated)				
Pin	1	2	3	4
Signal	5V	GND	TAC	CTL

Optional Configuration (R72 and R70 populated)				
Pin	1	2	3	4
Signal	GND	5V	TAC	CTL

SYSFAN Pin Definition (Labeled SYSFAN, Optional)



	SYSFAN		CPUFAN	
VGTC	R82	R83	R73	R71
GVTC	R79	R84	R72	R70

Default Configuration (R82 and R83 populated)				
Pin	1	2	3	4
Signal	5V	GND	TAC	CTL

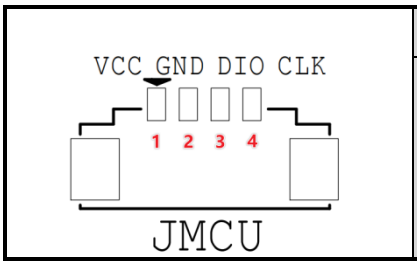
Optional Configuration (R79 and R84 populated)				
Pin	1	2	3	4
Signal	GND	5V	TAC	CTL

2.14 MCU Timer

The board integrates an MCU timer that supports scheduled power-on and power-off operations. Independent schedules can be configured for each day of the week in the BIOS Setup Utility.

JMCU Programming Header (Labeled JMCU Onboard)

The JMCU header is reserved for MCU firmware programming.



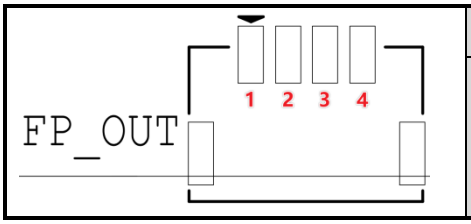
Pin	1	2	3	4
Signal	VCC	GND	DIO	CLK

***Caution: Do not reprogram the MCU firmware unless instructed by MAXTANG technical support. Improper firmware programming may result in system malfunction or motherboard damage.

2.15 Remote Control Switch (labeled FP_OUT Onboard)

The board integrates a remote-control switch interface, allowing users to power the system on or off through an external switch.

FP_OUT Pin Definition (Labeled: FP_OUT Onboard)

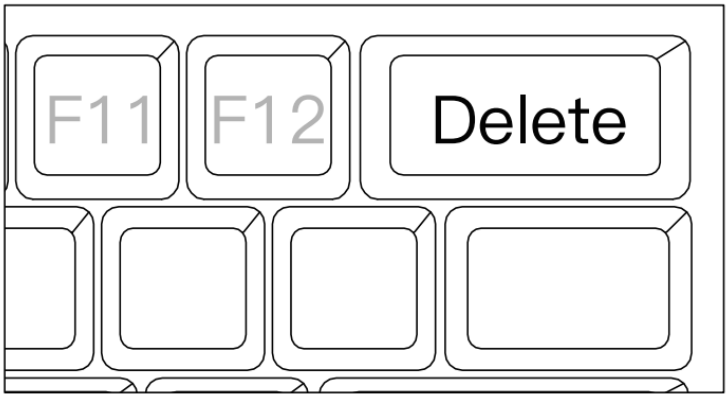


Pin	1	2	3	4
Signal	SW+	SW-	D-	D+

Chapter 3 BIOS Setup

3.1 Entering the BIOS

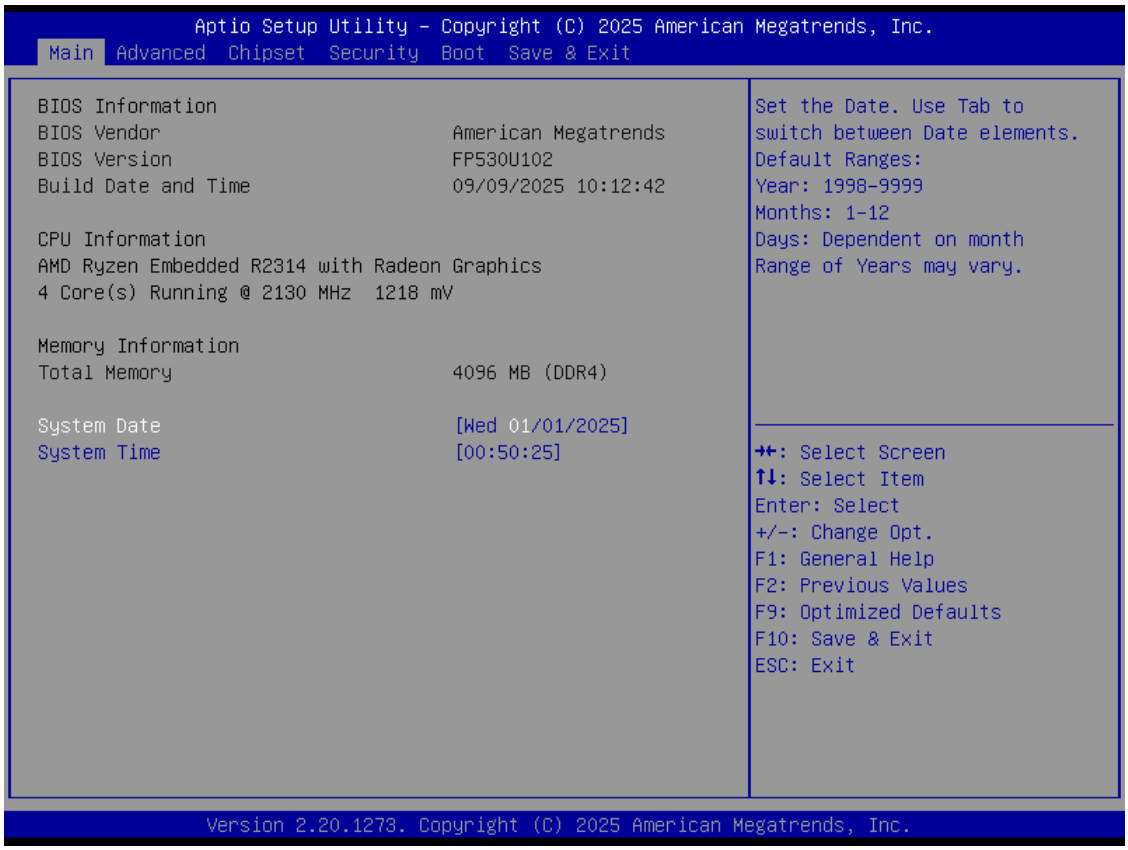
Entering BIOS Setup: Press the <Delete> key repeatedly during system startup to enter the BIOS Setup Utility.



BIOS Hot Keys:

Key	Function	Description
→ ←	Select Screen	Navigate between menu screens.
↑↓	Select Item	Move between menu items or options.
Enter	Select	Open a submenu or confirm a selection.
+/-	Change Option	Adjust values or change settings.
F1	General Help	Displays helpful information for the selected item.
F2	Previous Values	Load the previously saved settings.
F9	Optimized Defaults	Restore factory default settings.
F10	Save & Exit	Save changes and exit BIOS.
ESC	Exit	Exit BIOS or return to the previous menu.

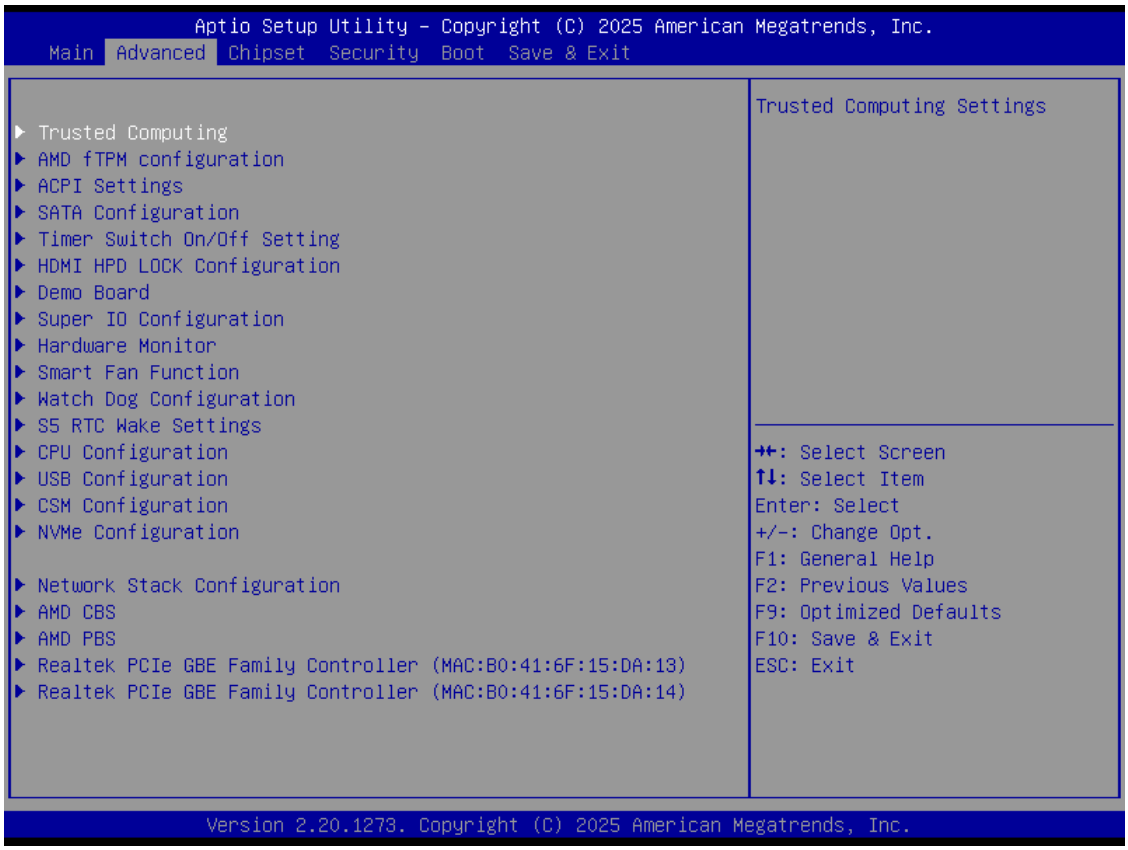
3.2 Main Menu (BIOS Info, Date, Time)



BIOS Information

- BIOS Vendor: American Megatrends
- BIOS Version: Displays the current BIOS version
- Build Date and Time: BIOS build timestamp
- CPU Information: CPU identification details
- Memory Information: Installed system memory
- System Date: System date setting (format: MM/DD/YYYY)
- System Time: System time setting (format: HH:MM:SS)

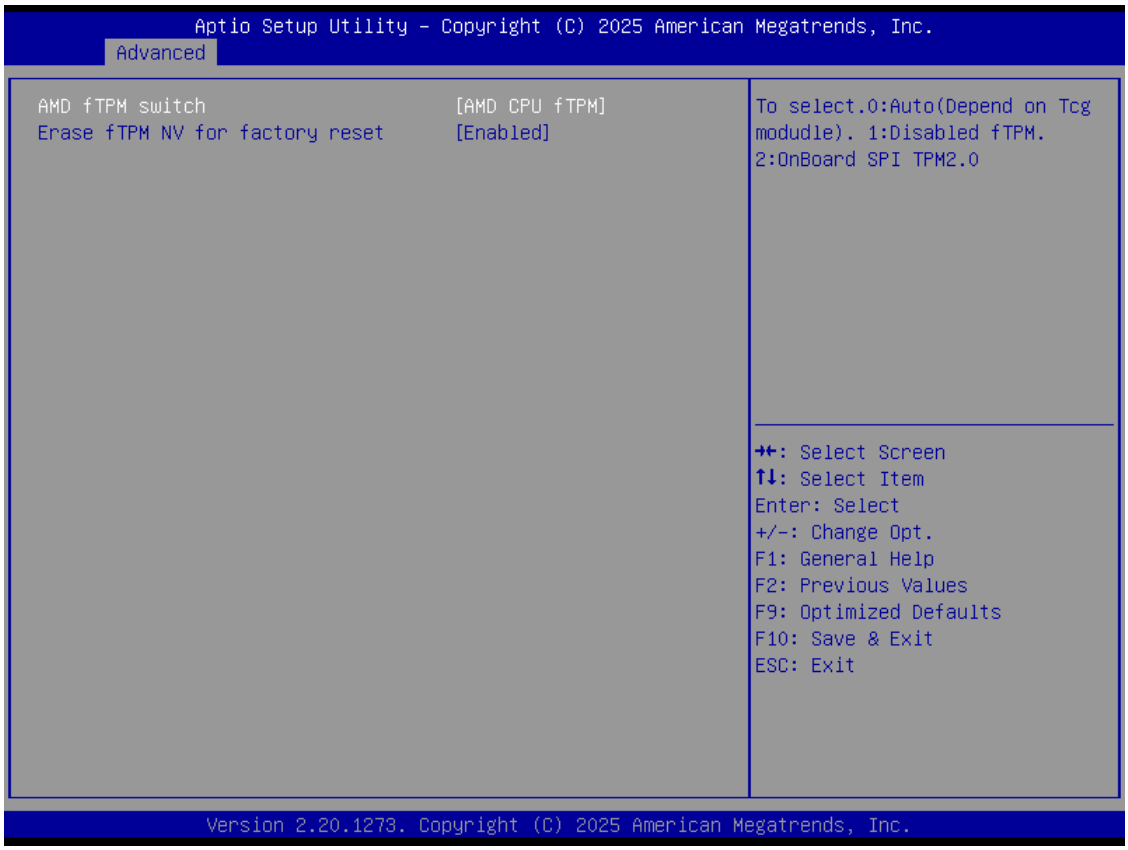
3.3 Advanced Settings



Selecting any item in the left pane opens its corresponding Advanced submenu. The Advanced section allows you to configure system features, adjust platform behavior, and modify CPU-related settings.

- Trusted Computing
- AMD fTPM Configuration
- ACPI Settings
- SATA Configuration
- Timer Switch On/Off Setting
- HDMI HPD Lock Configuration
- Demo Board (Not Supported)
- Super I/O Configuration
- Hardware Monitor
- Smart Fan Function
- Watchdog Configuration
- S5 RTC Wake Settings
- CPU Configuration
- USB Configuration
- CSM Configuration
- NVMe Configuration
- Network Stack Configuration
- AMD CBS
- AMD PBS

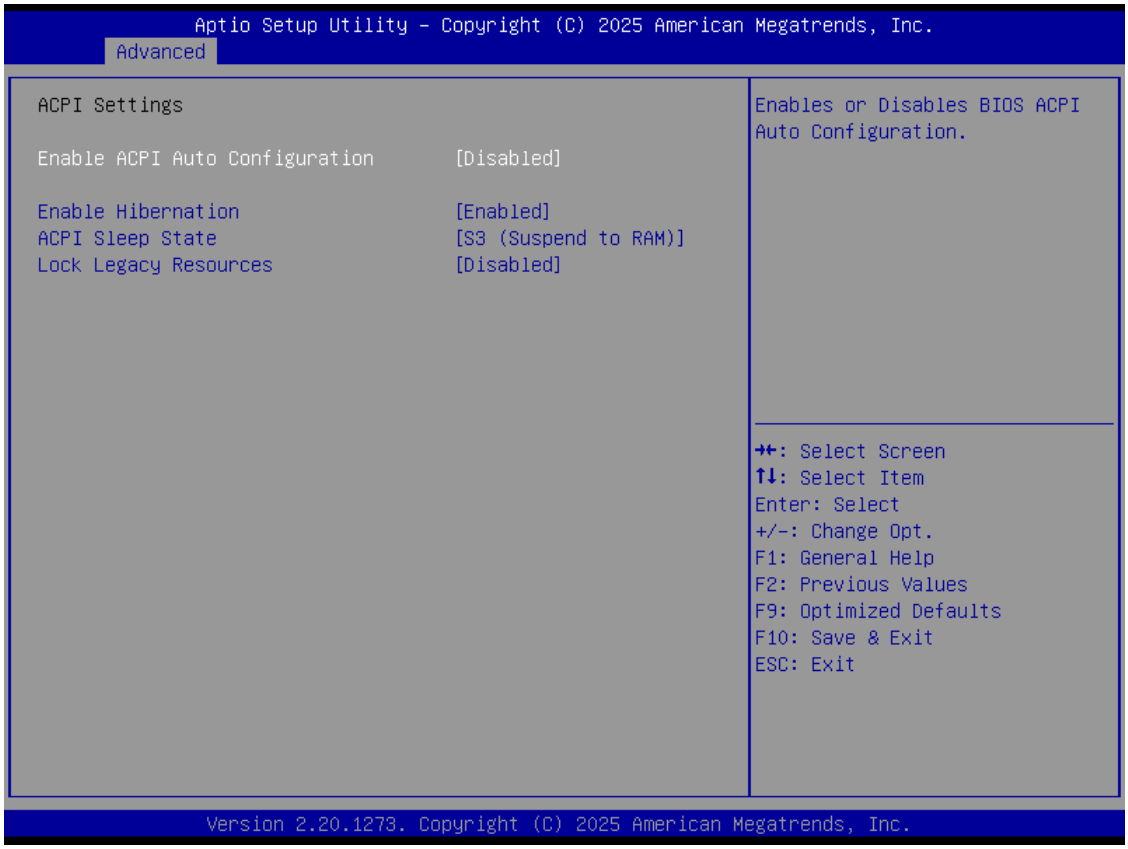
3.3.1 AMD fTPM configuration



AMD fTPM Configuration: Allows users to configure AMD fTPM settings.

- **Erase fTPM NV for Factory Reset**: Resets the fTPM non-volatile (NV) storage to its factory default state. This option may be required when a new CPU is installed.
    - Default: **Enabled**

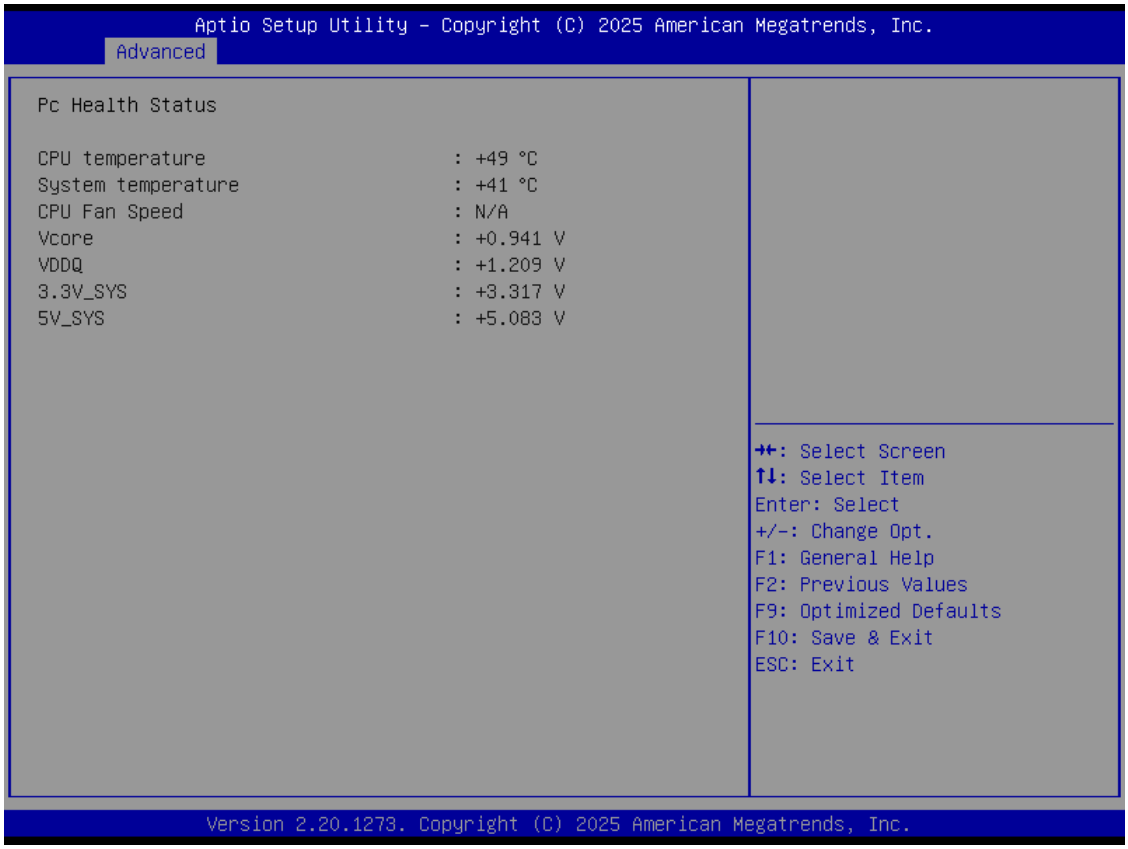
3.3.2 ACPI Settings



ACPI Settings

- **Enable ACPI Auto Configuration**: Enables or disables automatic ACPI configuration. Disabled by default.
- **Enable Hibernation**: Enables or disables system hibernation support.
- **ACPI Sleep State**: Selects the system ACPI sleep state.
- **Lock Legacy Resources**: Enables or disables locking of legacy system resource

3.3.3 Hardware Monitor

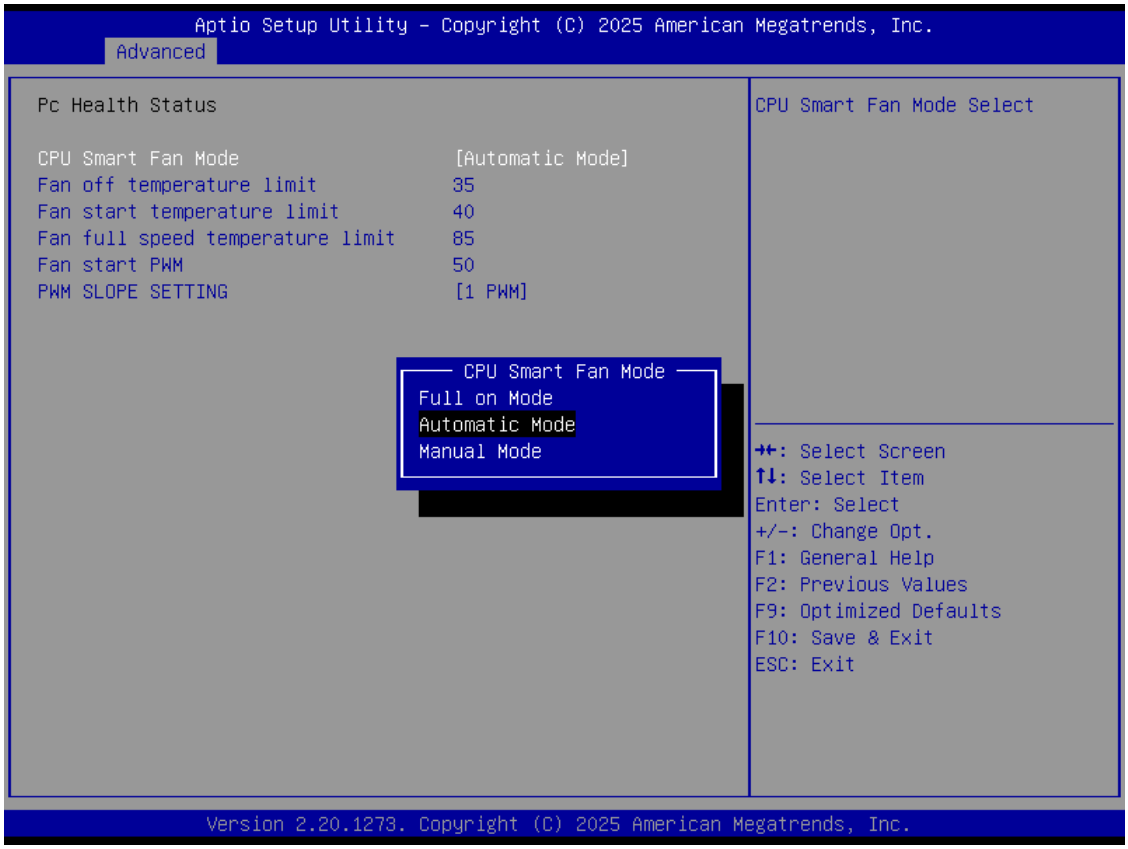


PC Health Status

The PC health status displays CPU temperature, system temperature, fan speed, and other relevant voltage values.

- **CPU Temperature:** Displays the current CPU temperature.
- **System Temperature:** Displays the current system temperature.
- **CPU Fan Speed:** Displays the current CPU fan speed.
- **Vcore:** Displays the CPU core voltage.
- **VDDQ:** Displays the memory I/O voltage.
- **3.3V_SYS:** Displays the system 3.3V voltage.
- **5V_SYS:** Displays the system 5V voltage

3.3.4 Smart Fan Function



PC Health Status → Smart CPU_Fan Mode

CPU Smart Fan Mode: allows users to configure CPU fan control settings.

- **Automatic Mode:** Automatically adjusts the fan speed according to system temperature. (Default)
- **Full On Mode:** Operates the fan at full speed continuously.
- **Manual Mode:** Allows users to manually configure fan control parameters.

Fan Off Temperature Limit: Sets the temperature below which the fan stops operating.

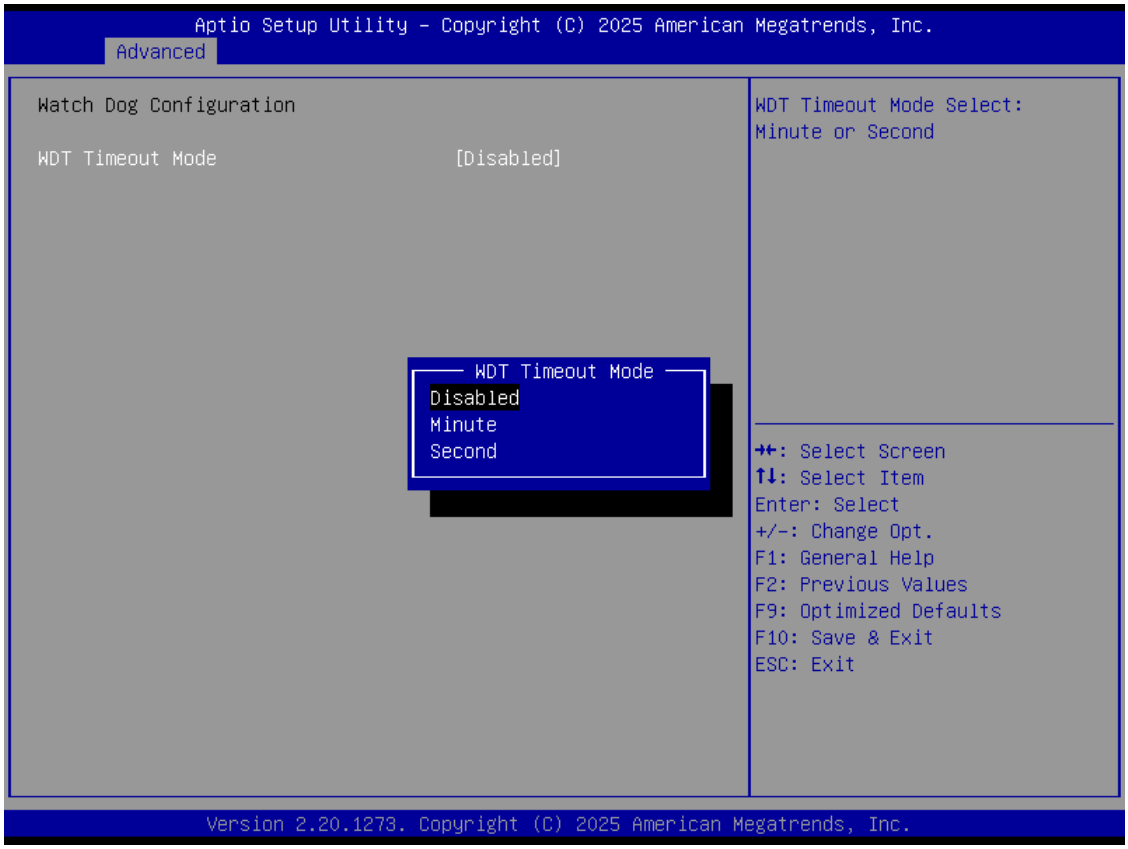
Fan Start Temperature Limit: Sets the temperature at which the fan starts operating.

Fan Full Speed Temperature Limit: Sets the temperature at which the fan operates at full speed.

Fan Start PWM: Sets the initial PWM duty cycle when the fan starts.

PWM Slope Setting: Adjusts the rate at which the PWM duty cycle increases as temperature rises.

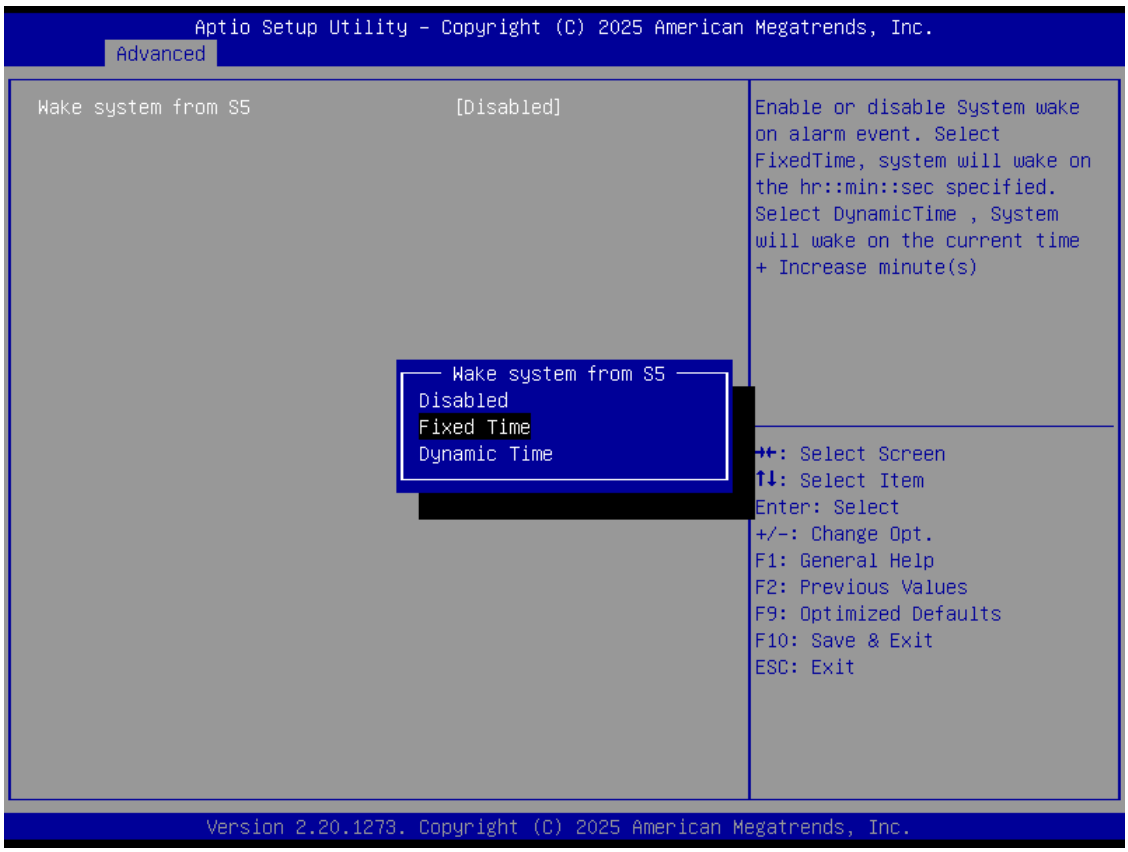
3.3.5 Watch Dog Configuration



Watch Dog Configuration

- WDT Timeout Mode: Select Minute or Second

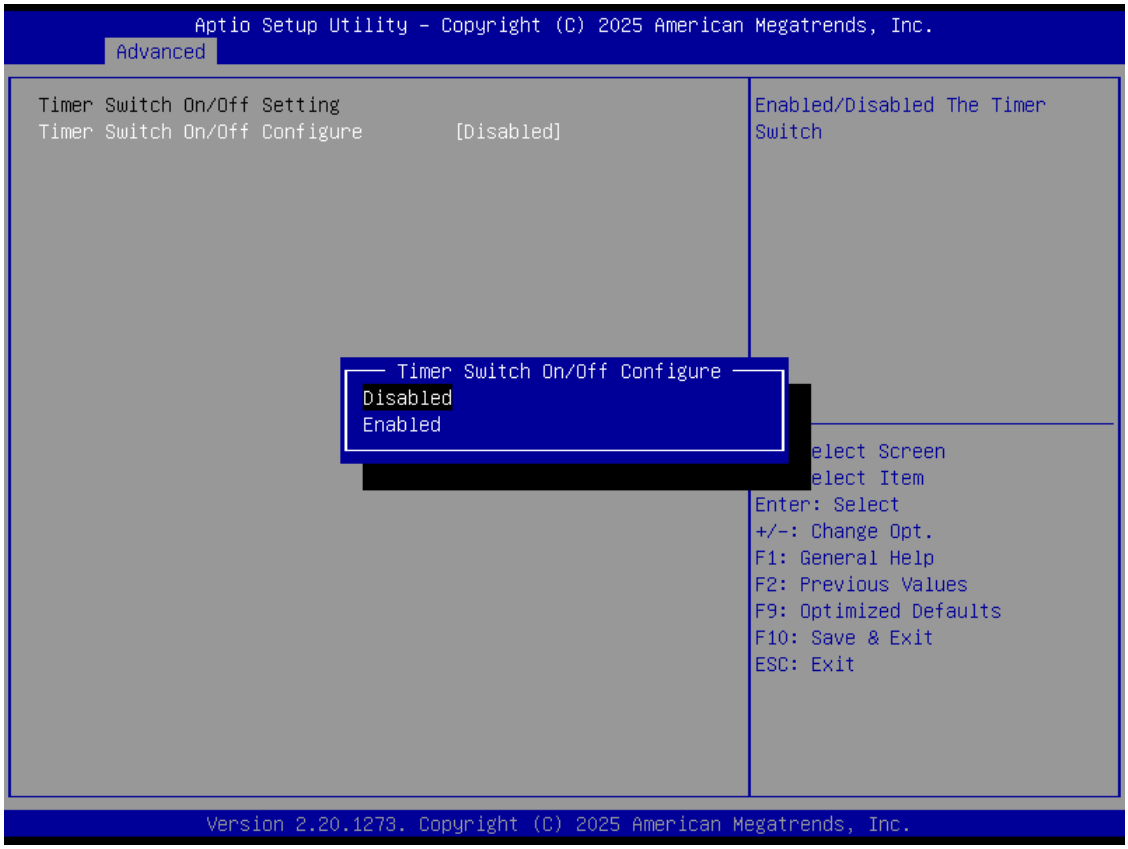
3.3.6 S5 RTC Wake Settings



S5 RTC Wake Settings

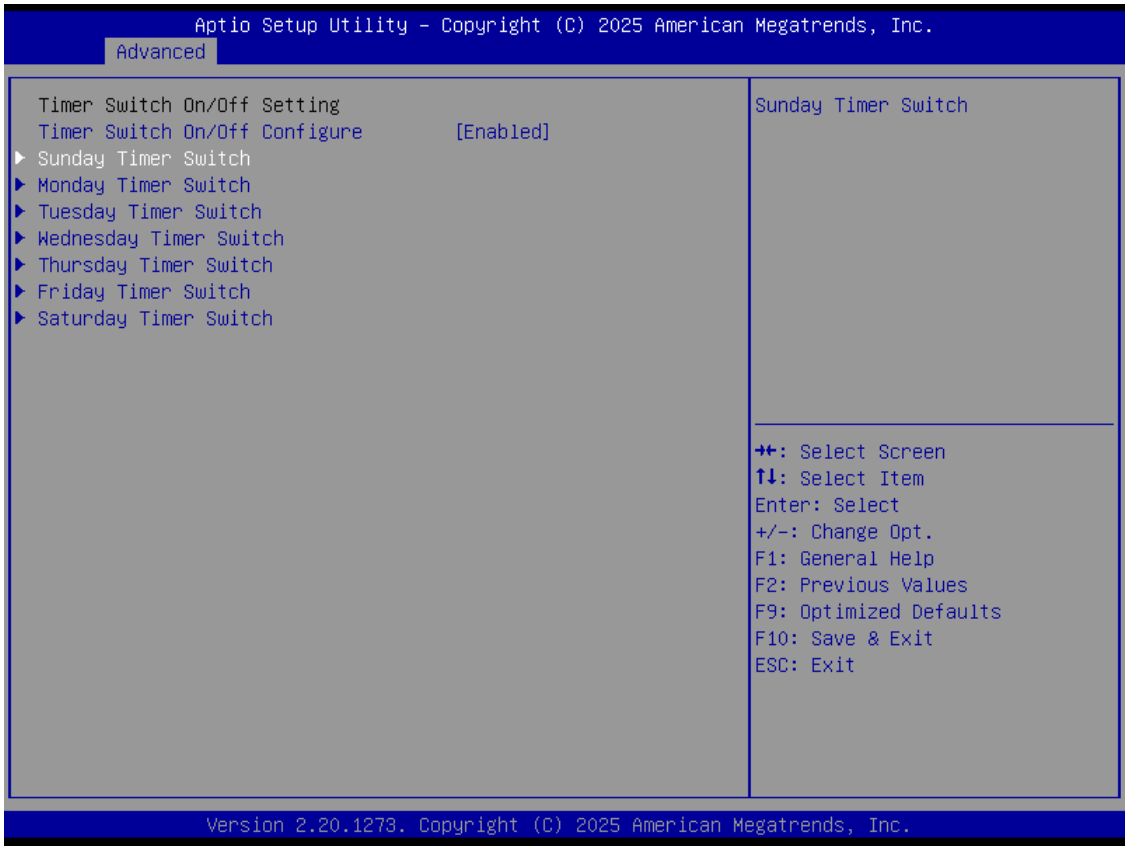
- **Wake System From S5**: Enables or disables automatic system power-on from the S5 (shutdown) state.
  Default: Disabled
- **Wake Time Mode**: Selects the wake-up timing mode.
  - **Fixed Time**: When selected, the system wakes at the specified **Hour:Minute:Second**.
  - **Dynamic Time**: When selected, the system wakes after a dynamically calculated time interval.

3.3.8 Timer Switch On/Off Setting



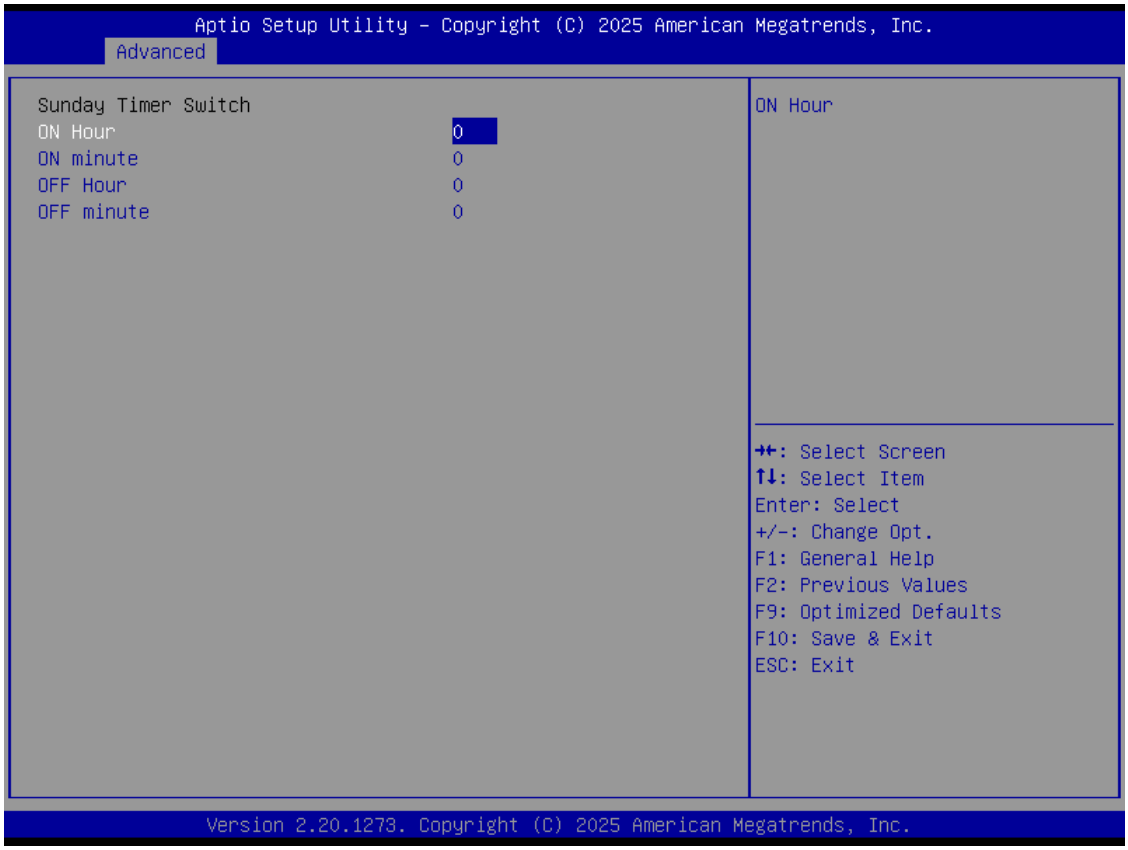
The **Timer Switch On/Off function** allows users to configure scheduled power-on and power-off operations using the RTC and onboard MCU timer. Independent schedules can be configured for each day of the week.

- Default: **Disabled**



To configure a timer schedule:

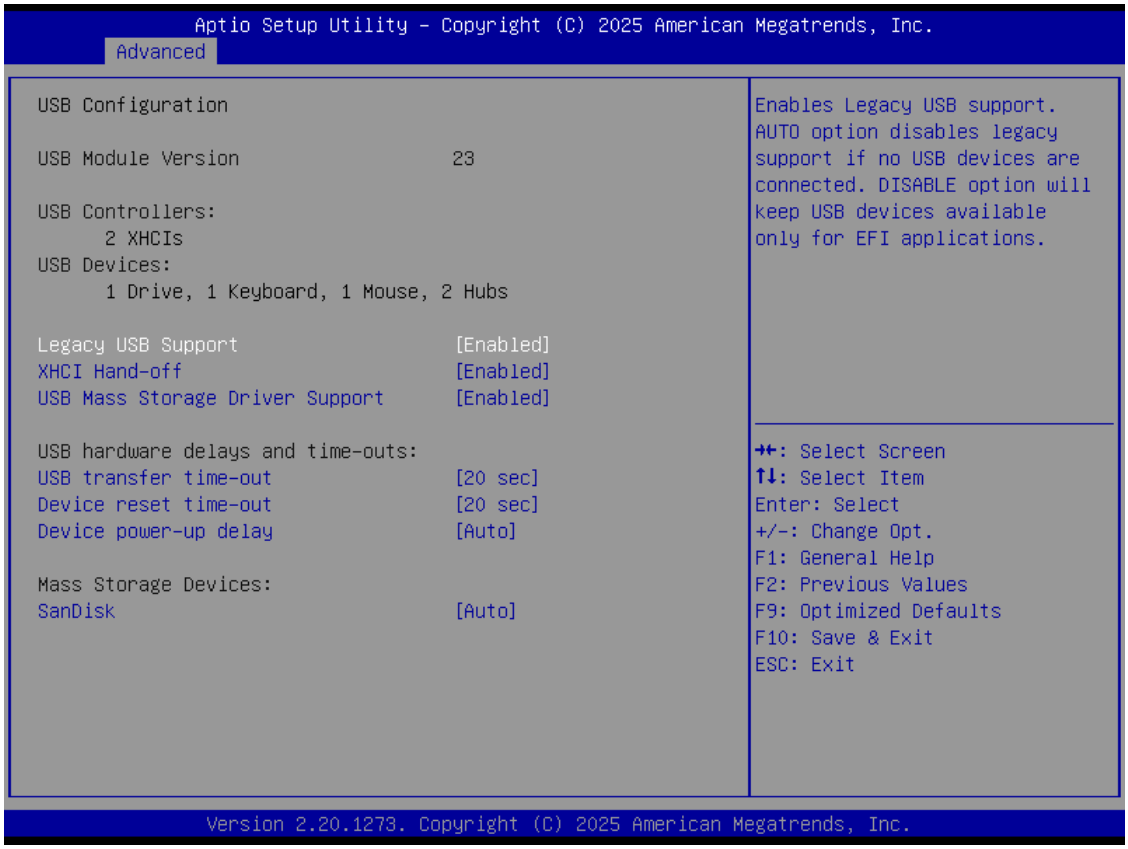
1. Enter **Timer Switch On/Off Configuration** and set the option to **Enabled**.
2. Select the desired day of the week (Sunday through Saturday).
    - **Sunday Timer Switch:** Configures the power-on and power-off schedule for Sunday.
    - **Monday Timer Switch:** Configures the power-on and power-off schedule for Monday.
    - **Tuesday Timer Switch:** Configures the power-on and power-off schedule for Tuesday.
    - **Wednesday Timer Switch:** Configures the power-on and power-off schedule for Wednesday.
    - **Thursday Timer Switch:** Configures the power-on and power-off schedule for Thursday.
    - **Friday Timer Switch:** Configures the power-on and power-off schedule for Friday.
    - **Saturday Timer Switch:** Configures the power-on and power-off schedule for Saturday.



Select the desired Time of the day

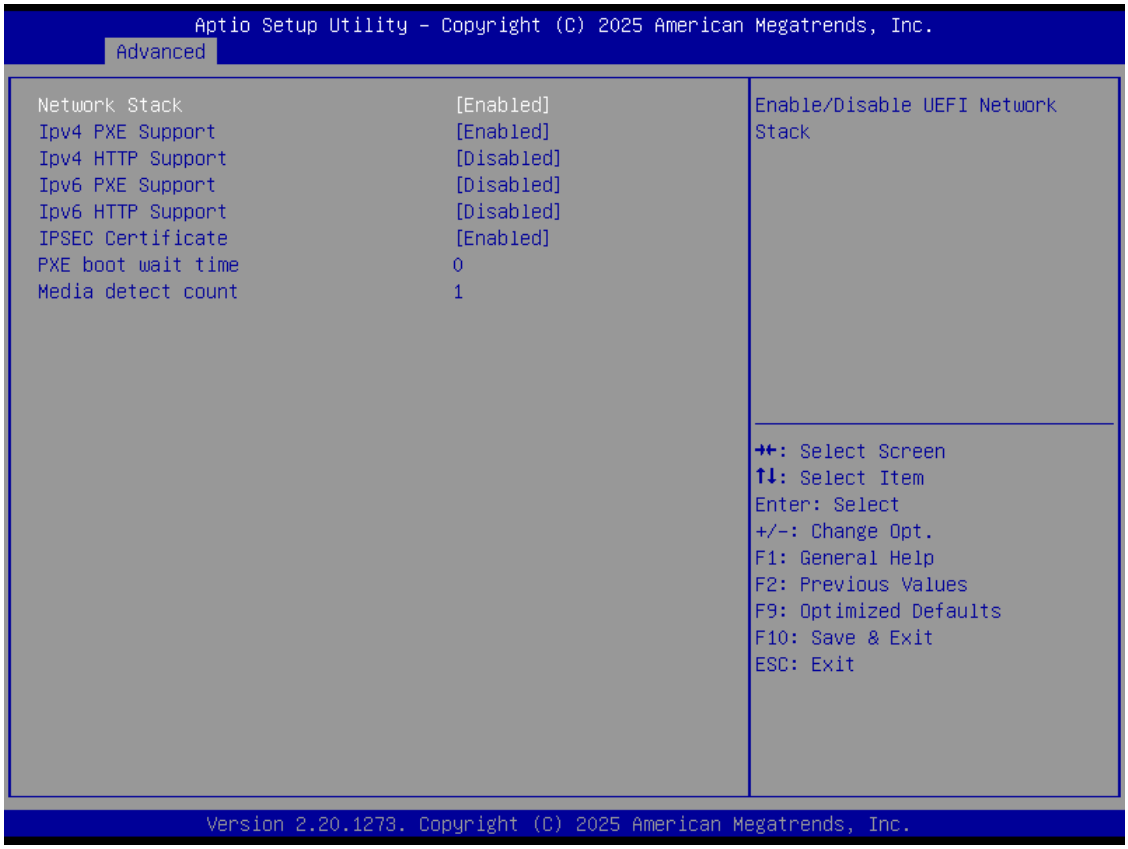
- **ON Hour:** Sets the power-on hour.
- **ON Minute:** Sets the power-on minute.
- **OFF Hour:** Sets the power-off hour.
- **OFF Minute:** Sets the power-off minute.

3.3.8 USB Configuration



- **Legacy USB Support:** Enable Legacy USB support. Disables legacy support if no USB devices are connected. Select enable will keep USB devices available under UEFI's support.
- **XHCI Hand-off:** A workaround for OS without XHCI hand-off support. The XHCI ownership change should be claimed by the USB XCHI driver.
- **USB Mass Storage Driver Support:** Enable(default) or disable USB Mass Storage Driver Support.
- **USB transfer time-out:** Time-out value for control, bulk, and interrupt transfers, default time:20 second.
- **Device reset time-out:** USB mass storage device starts unit command time-out, default time:20 second.
- **Device Power-up Delay:** Maximum time the device will take before it properly reports itself to the host controller.

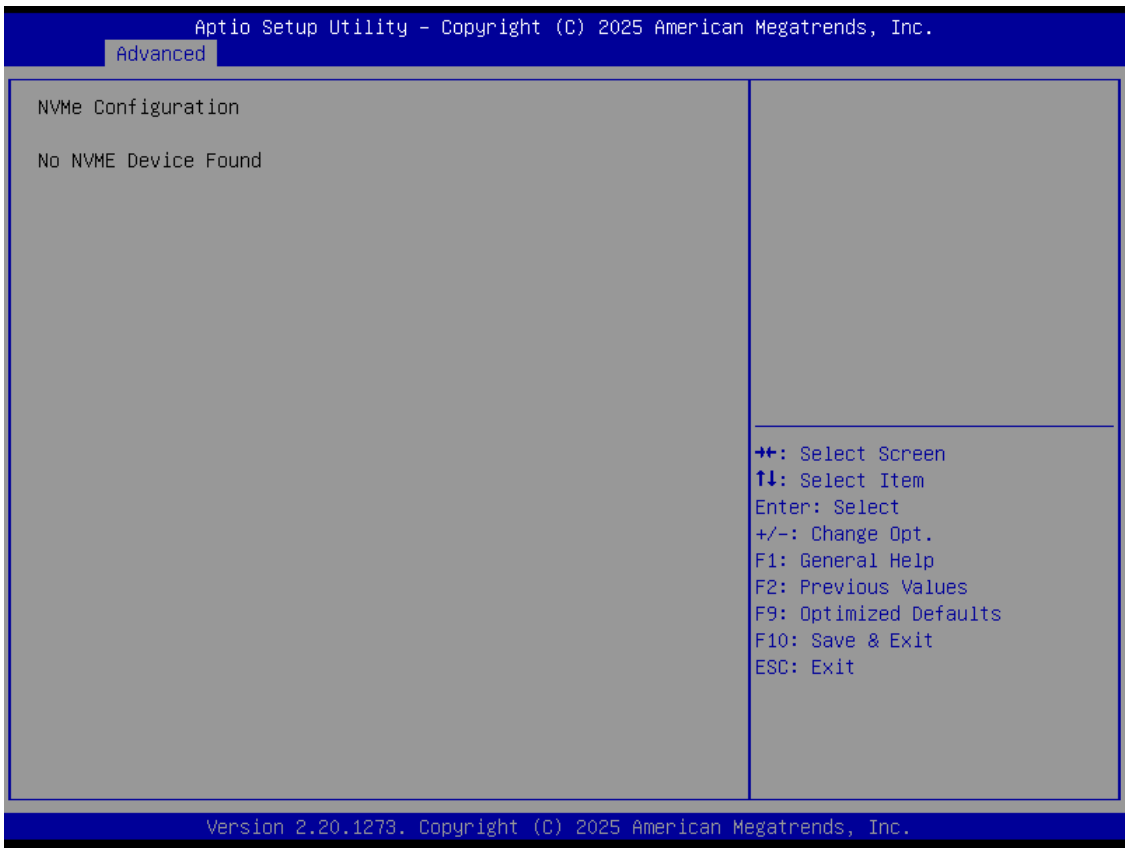
3.3.9 Network Stack Configuration



The Network Stack controls UEFI network boot (PXE/HTTP) and is disabled by default.

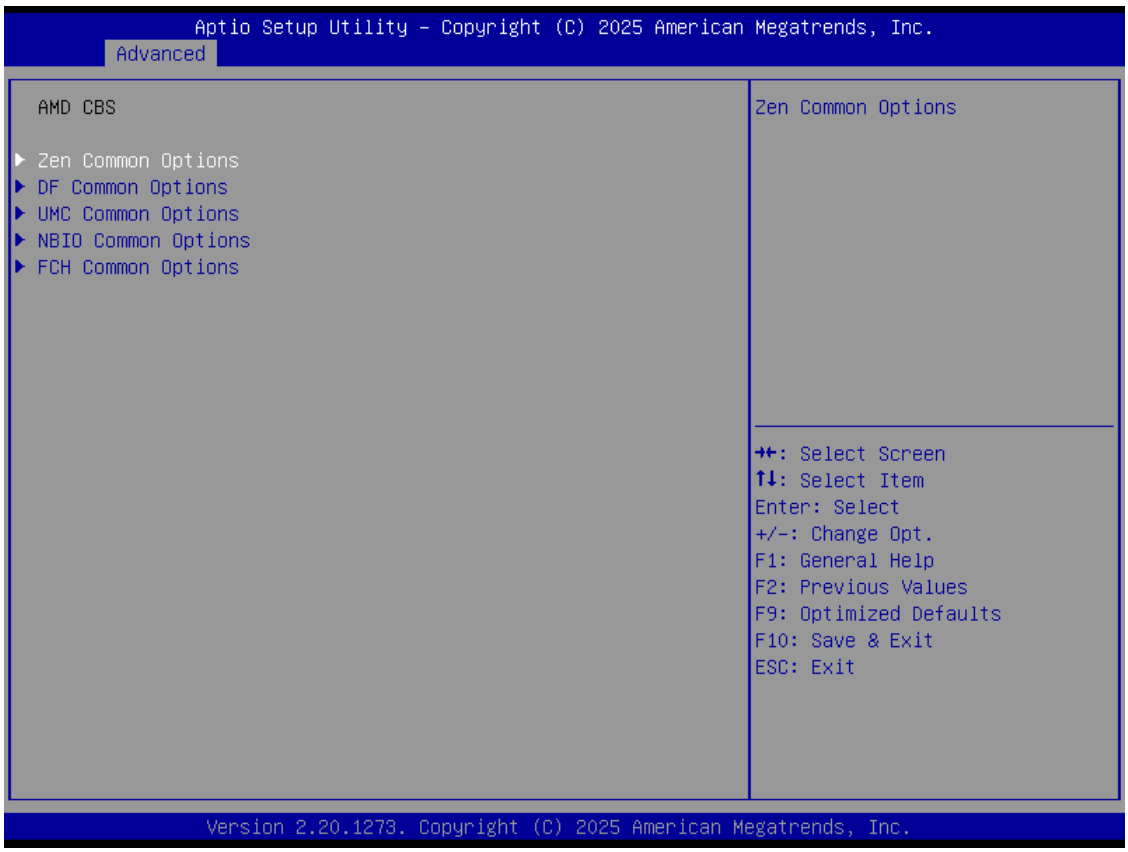
- **IPv4 PXE Support:** PXE boot over IPv4
- **IPv4 HTTP Support:** HTTP boot over IPv4
- **IPv6 PXE Support:** PXE boot over IPv6
- **IPv6 HTTP Support:** HTTP boot over IPv6
- **PXE Boot Wait Time:** Timeout delay for PXE boot
- **Media Detect Count:** Retry count for network device detection

3.3.10 NVME Configuration



When an NVMe SSD is installed, this menu displays information such as the drive model and storage capacity.

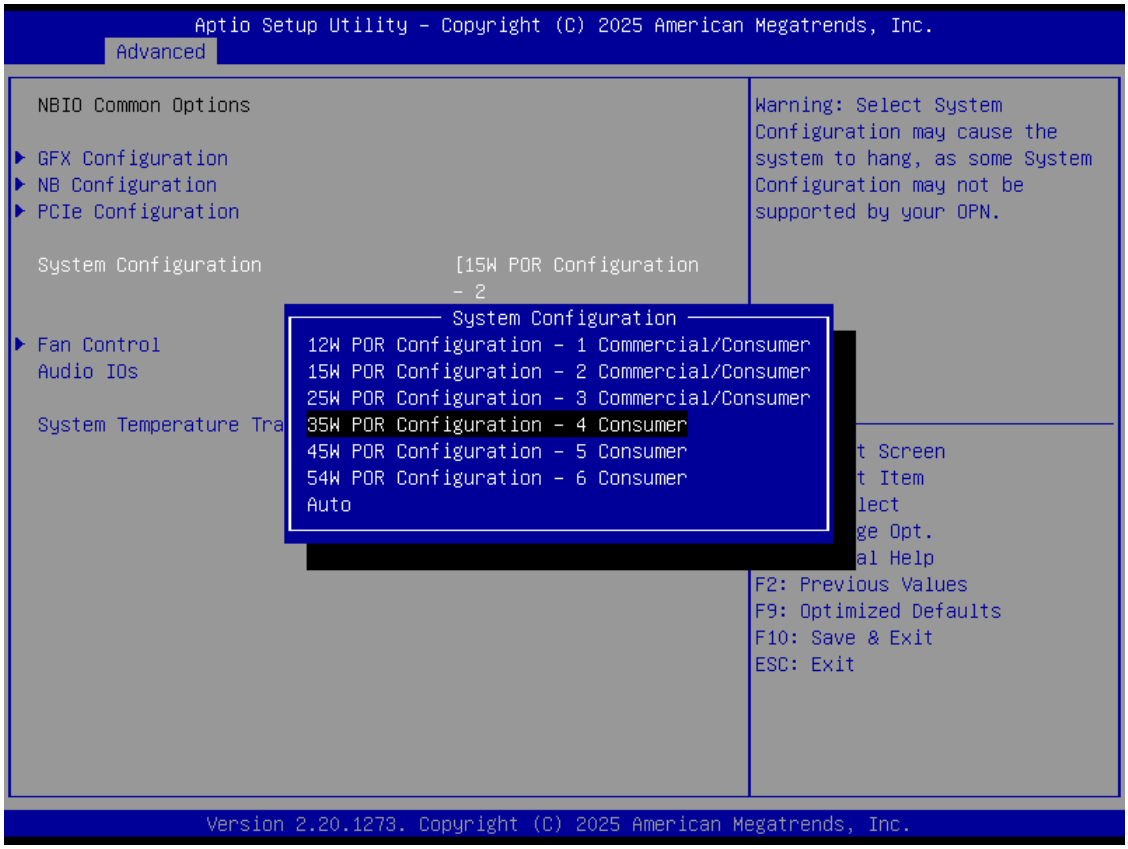
3.3.11 AMD CBS



The AMD CBS (Common BIOS Settings) menu provides access to advanced AMD platform configuration options.

- **Zen Common Options:** CPU configuration options
- **DF Common Options:** Data Fabric configuration options
- **UMC Common Options**: Unified Memory Controller options
- **NBIO Common Options:** Northbridge I/O options
- **FCH Common Options:** Fusion Controller Hub options

3.3.12 NBIO Common Options



NBIO Common Options

System Configuration: This menu allows users to configure the CPU TDP limit according to system cooling capabilities.

- **12W:** Low power consumption
- **15W:** Balanced performance and power consumption
- **35W:** Maximum performance (requires adequate cooling)

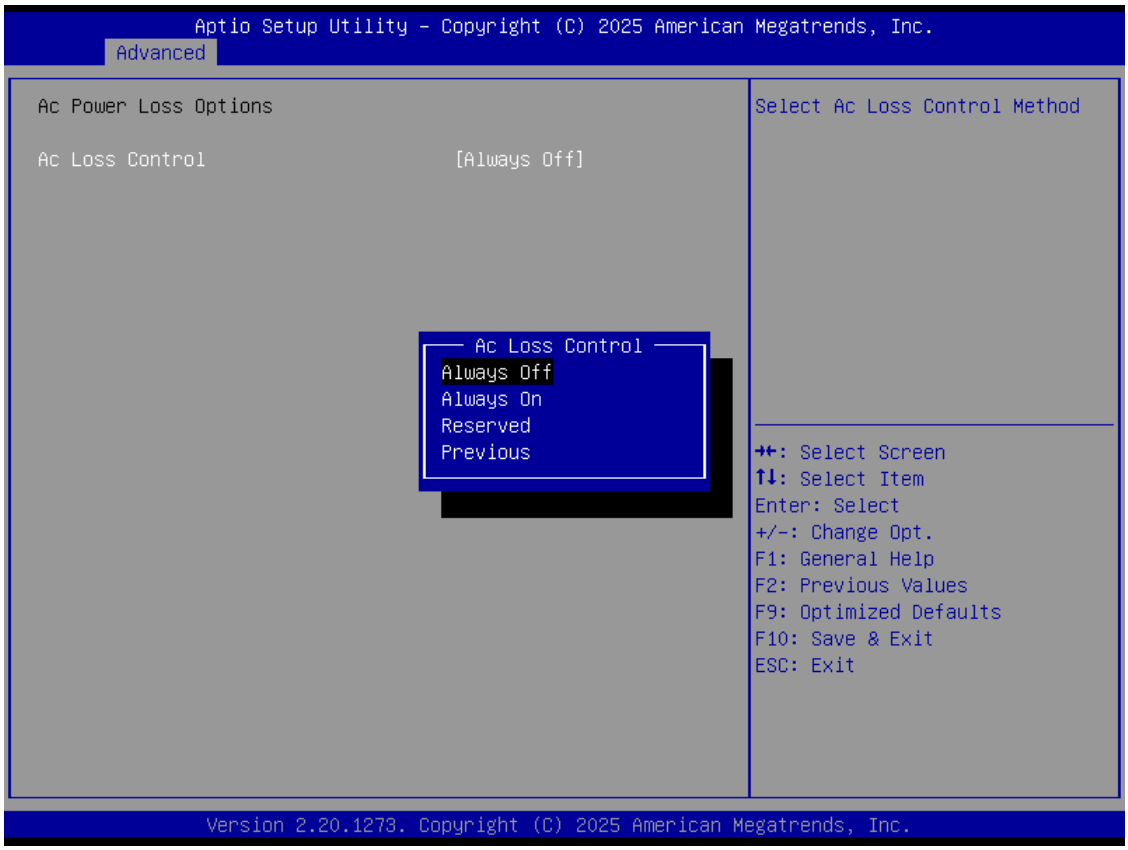
Default:

- SXC-FP530 (Fanless): 15W
- SXC-FP530-F (Active Cooling): 35W

Advanced → AMD CBS → NBIO Common Options → System Configuration → 12W/15W/35W POR Configuration → 1/2/3 Commercial/Consumer

Note: Some third-party monitoring utilities may report inaccurate power consumption values for the AMD Ryzen™ Embedded R2314 processor. For accurate readings, use the AMD SystemDeck Tool (Windows) and refer to the PM tab.

3.3.13 FCH Common Options



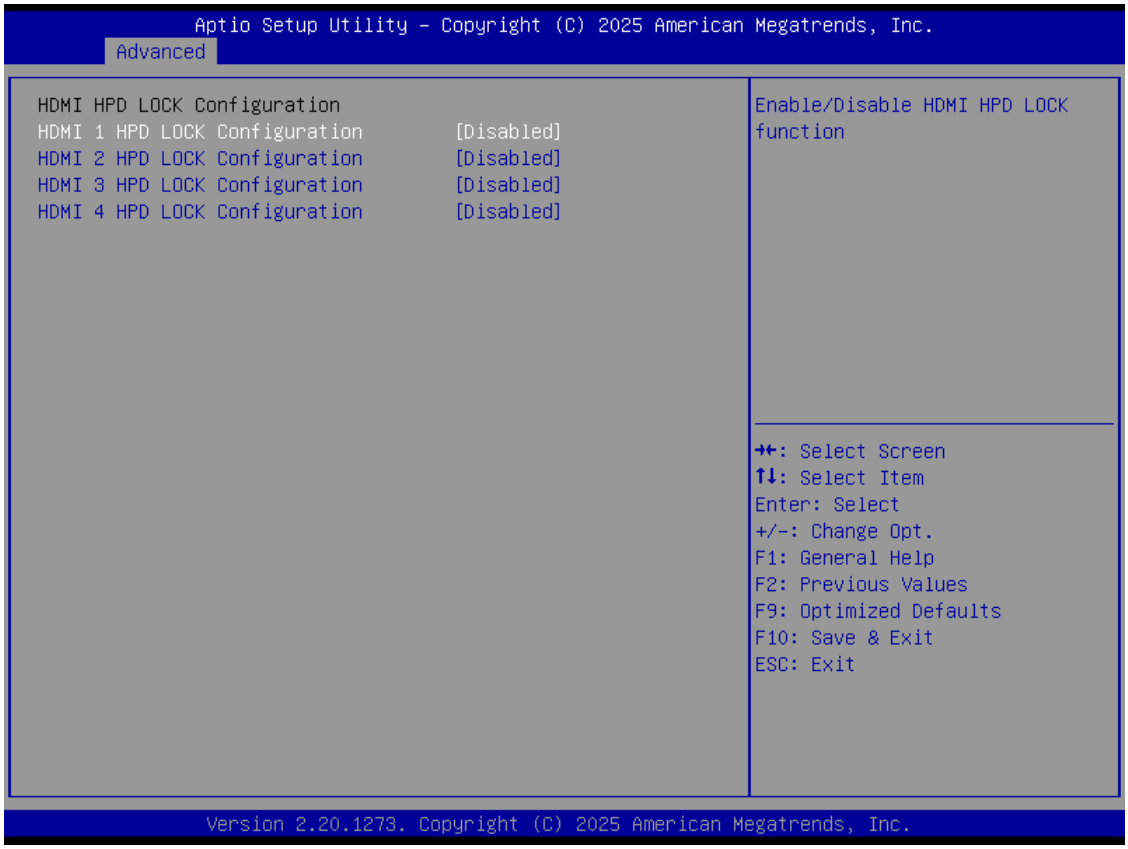
The FCH Common Options configure chipset-level power management and ACPI-related behavior, including system power-on behavior after AC power restoration.

Advanced > AMD CBS > FCH Common Options > AC Loss Control

AC Power Loss Options: Controls system behavior after AC power is restored.

- **Always Off (Default):** The system remains powered off when AC power is restored.
- **Always On:** The system automatically powers on when AC power is restored.
- **Reserved/Previous:** The system remains off after a normal shutdown. If AC power is lost unexpectedly, the system restores its previous power state when power is recovered**.**

3.3.14 HDMI HPD LOCK Configuration



Configure HDMI Hot Plug Detect (HPD) lock settings for each HDMI port.

HDMI 1 HPD Lock Configuration

- Enable or disable HDMI HPD lock for HDMI 1. When enabled, the display output remains active even if the connected display is disconnected or powered off.

HDMI 2 HPD Lock Configuration

- Enable or disable HDMI HPD lock for HDMI 2.

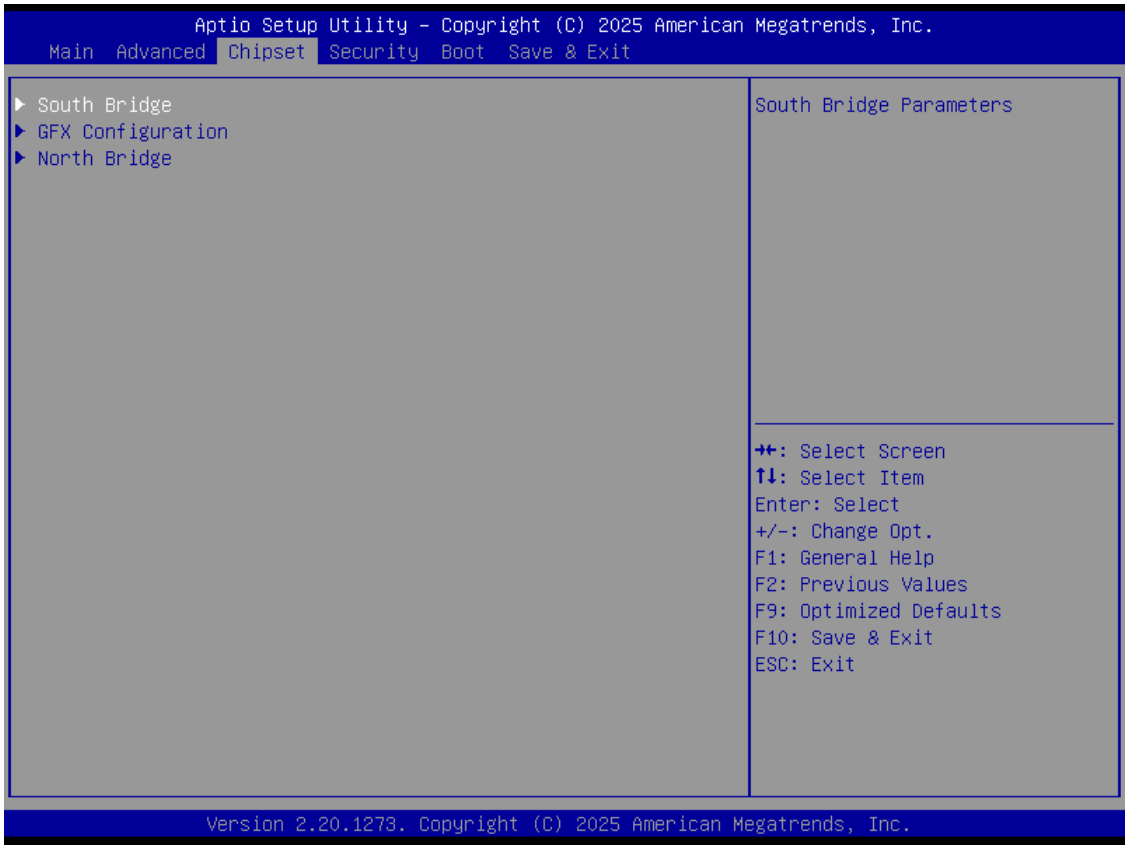
HDMI 3 HPD Lock Configuration

- Enable or disable HDMI HPD lock for HDMI 3.

HDMI 4 HPD Lock Configuration

- Enable or disable HDMI HPD lock for HDMI 4.

3.4 Chipset

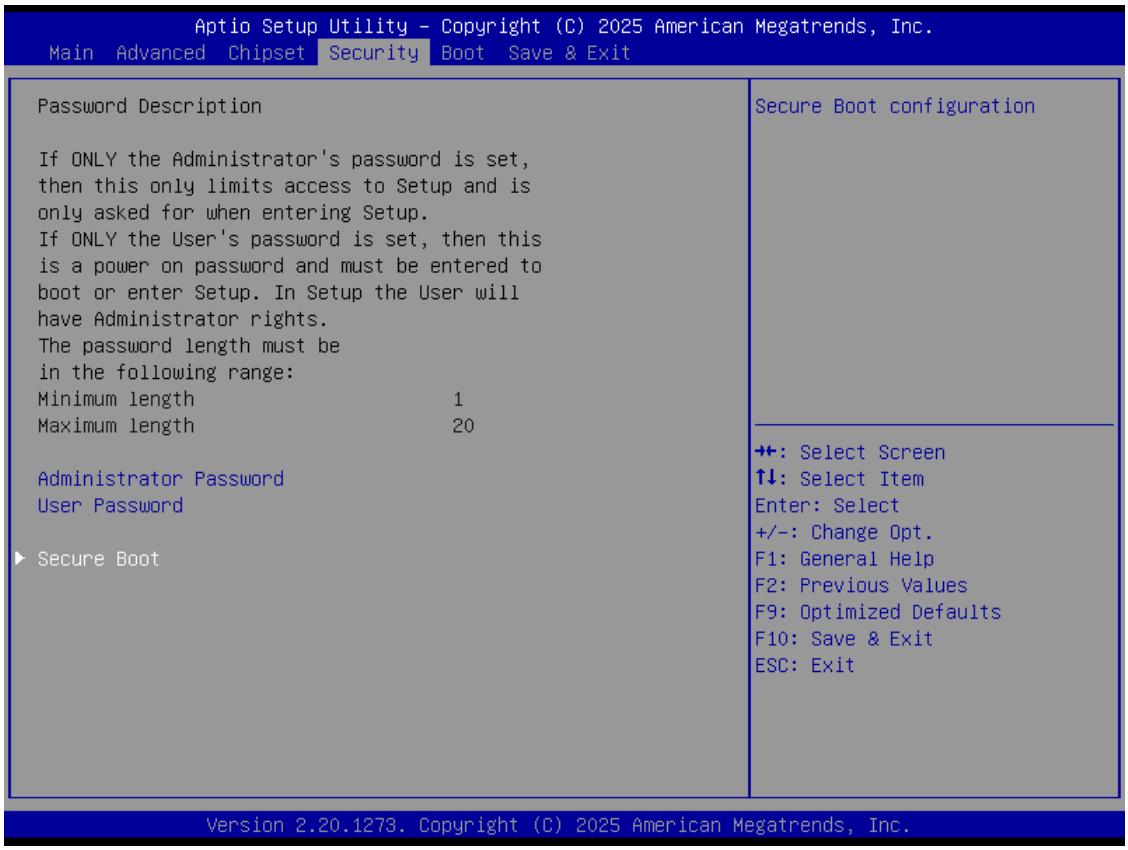


South Bridge: Configures South Bridge–related settings and peripheral functions.

GFX Configuration (Not Supported): Configures integrated graphics settings.

North Bridge: Configures North Bridge–related settings.

3.5 Security

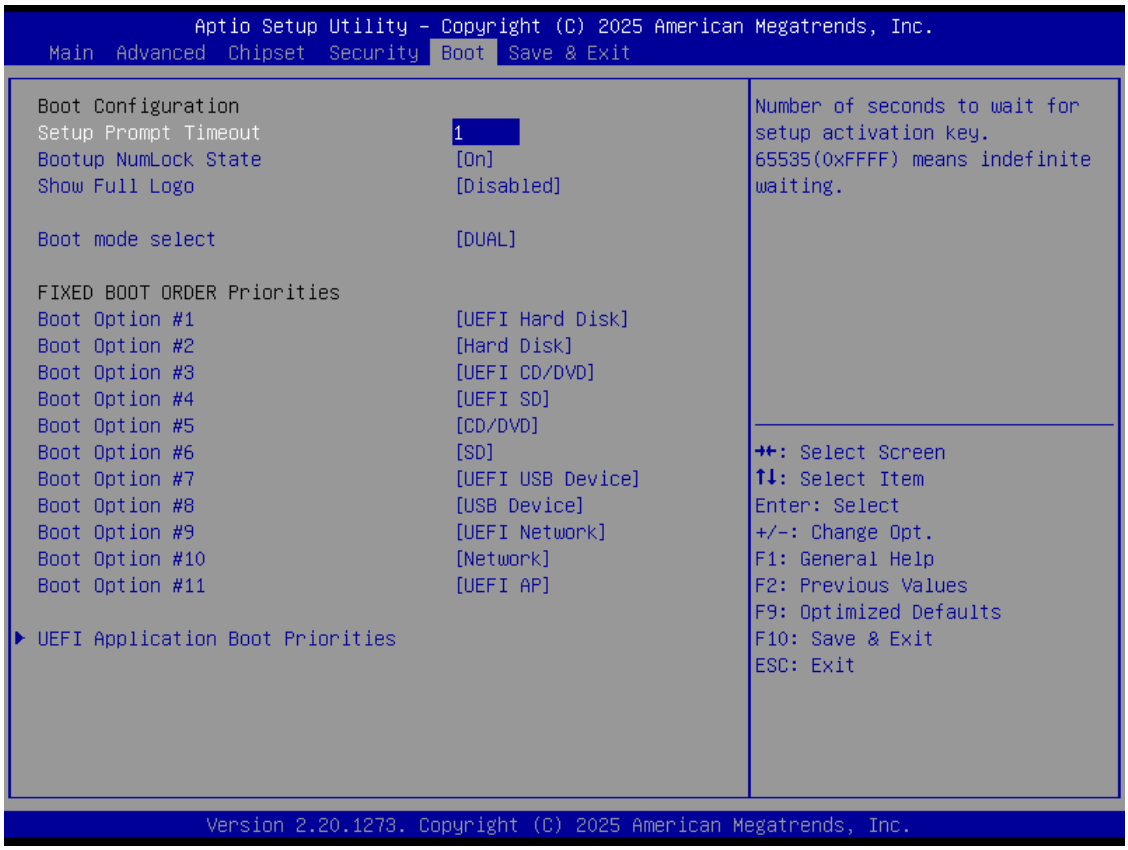


Administrator Password: Set the Administrator Password.

User Password: Set User Password.

Secure Boot: Configures Secure Boot settings.

3.6 BOOT



Boot Configuration

Setup Prompt Timeout: Sets the timeout period before the default boot option is initiated. A value of **0** starts the default boot option immediately, while **65535 (0xFFFF)** causes the firmware to wait indefinitely for user input before booting.

Bootup NumLock State: Selects the keyboard NumLock state after system startup.

- **On (Default):** Enables the numeric keypad for number entry.
- **Off:** Configures the numeric keypad to operate as cursor control keys.

Show Full Logo: Enables or disables the display of the customized boot logo.

- **Enabled:** Displays the boot logo.
- **Disabled:** Hides the boot logo.

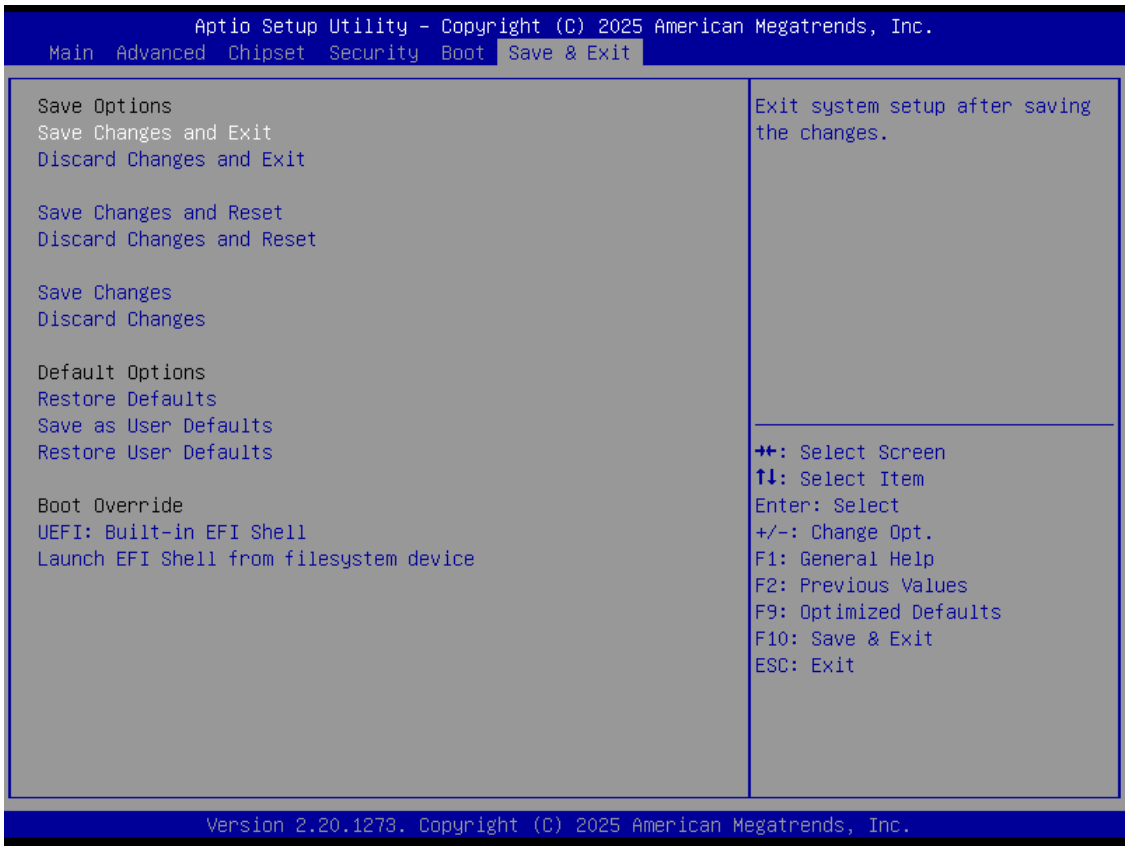
Boot Mode Select: Selects the system boot mode.

- **UEFI:** Supports UEFI boot only.
- **Legacy:** Supports Legacy BIOS boot only.
- **Dual (Default):** Supports both UEFI and Legacy BIOS boot.

Boot Option #1–#11: Configures the boot priority order of available boot devices.

UEFI Application Boot Priorities: Configures the boot priority of UEFI applications.

3.7 Save & Exit



Save Changes and Exit: Exit the system setup after saving the changes and continue to start the computer.

Discard Changes and Exit: Exit the system setup without saving any changes and continue to start the computer.

Save Changes and Reset: Reset the system after saving the changes.

Discard changes and Reset: Reset the system without saving any changes.

Save Changes: Save changes done so far to any of the options.

Discard Changes: Discard changes done so far to any of the options.

Restore Defaults: Restore/load default values for all the options.

Save as User Defaults: Save the changes done so far as the user defaults.

Restore User Defaults: Restore the user defaults to all the options.

Boot Override: Boot device selection can override your boot priority. Select the specified boot device such as SATA, USB Flash Disk, EFI Shell, PXE, etc., and boot directly. Or press F11 boot by selecting the specified boot device.

- **UEFI: Built-in EFI Shell**: Launches the built-in UEFI EFI Shell.
- **Launch EFI Shell From Filesystem Device**: Launches the EFI Shell from a filesystem device.