



MODEL:
PUZZLE-1100

**Desktop Network Appliance with
Intel® Atom® X-Series Processor**

User Manual

Revision

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Manual Conventions



WARNING

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.



CAUTION

Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.



NOTE

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

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Chapter

1

Introduction

1.1 Overview

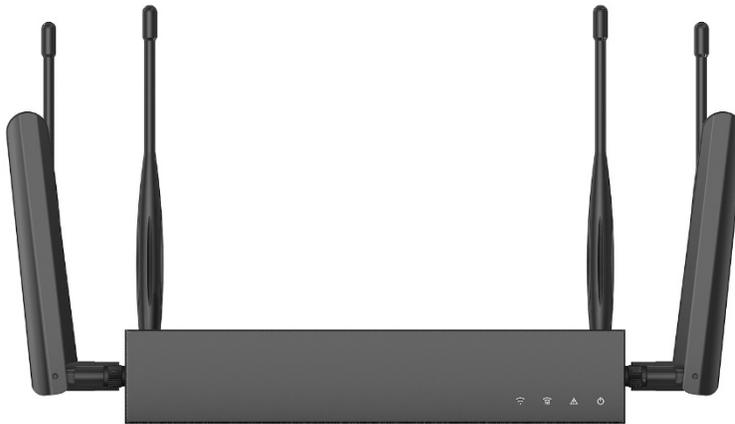


Figure 1-1: PUZZLE-1100 Series

The PUZZLE-1100 is a desktop network appliance powered by the Intel® Atom® X-series processor (codenamed Amston Lake), delivering efficient performance for small to medium-scale networking tasks. It features a single DDR5 SO-DIMM 4800MHz slot, 128GB eMMC storage, and multiple expansion options including an M.2 B-key for 5G/LTE, PCIe Mini for Wi-Fi, and M.2 B-key SATA SSD. Connectivity is robust with four 2.5GbE LAN ports, two USB 10Gb/s Type-A ports, and a Type-C console port. Designed for versatility, it supports Ubuntu Linux, offers an optional IPMI module for remote management, and includes eight reserved antenna holes for flexible wireless deployment. This compact appliance provides high-speed networking, flexible storage, and advanced management capabilities in a desktop form factor.

PUZZLE-1100**1.2 Model Variations**

The model variations of the PUZZLE-1100 series are listed below.

Model	CPU	Memory	HDMI
PUZZLE-1100-x7405C-8G	Intel® Atom® x7405C	8GB DDR5	N/A
PUZZLE-1100-x7405C	Intel® Atom® x7405C	N/A	N/A
PUZZLE-1100-x7203C-8G	Intel® Atom® x7203C	8GB DDR5	N/A
PUZZLE-1100-x7203C	Intel® Atom® x7203C	N/A	N/A
PUZZLE-1100-x7835RE-8G	Intel® Atom® x7835RE	8GB DDR5	One
PUZZLE-1100-x7835RE	Intel® Atom® x7835RE	N/A	One
PUZZLE-1100-x7433RE-8G	Intel® Atom® x7433RE	8GB DDR5	One
PUZZLE-1100-x7433RE	Intel® Atom® x7433RE	N/A	One

1.3 Features

The PUZZLE-1100 features are listed below:

- Powered by Intel® Atom® X-series processor
- Support one DDR5 4800MHz SO-DIMM slot
- Support four 2.5GbE RJ45 LAN ports
- Two USB 3.2 10Gb/s ports; one USB Type-C console port
- Expansion includes
 - 1 x M.2 B-key for 5G/LTE
 - 1 x PCIe Mini for Wi-Fi
 - 1 x M.2 B-key for SATA SSD
- 128GB eMMC

1.4 Front Panel

The overview of the front panel is shown in **Figure 1-2**.



Figure 1-2: PUZZLE-1100 Front Panel

The states of the LED indicators located on the front panel are listed below.

 Power LED	Off	The system is turned off.
	Blue	The system is turned on.
 Alert LED	Off	No alert
	Red	Alert message
 5G LED	Off	No 5G connection
	Blue	5G connection established
 Wi-Fi LED	Off	No Wi-Fi connection
	Blue	Wi-Fi connection established

PUZZLE-1100

1.5 Rear Panel

An overview of the PUZZLE-1100 rear panel is shown in **Figure 1-3** below.

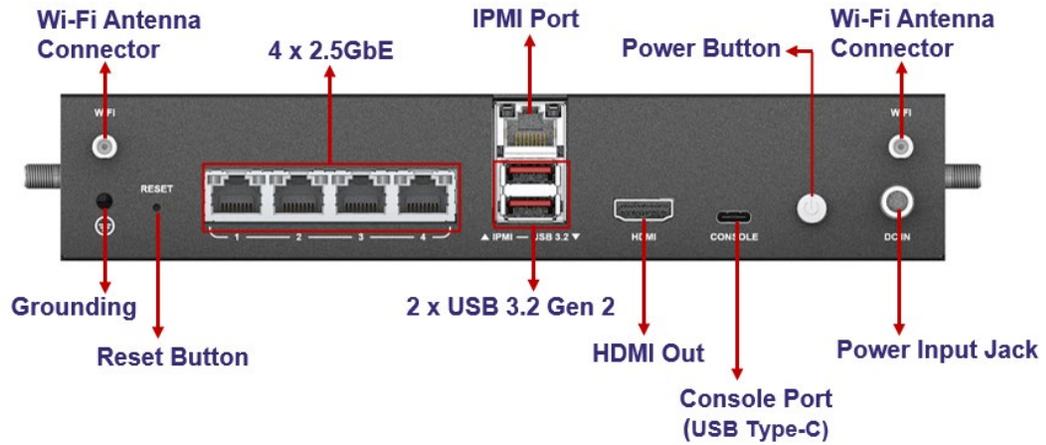


Figure 1-3: PUZZLE-1100 Rear Panel

1.6 Side Panels

An overview of the PUZZLE-1100 side panels is shown in **Figure 1-4** below.

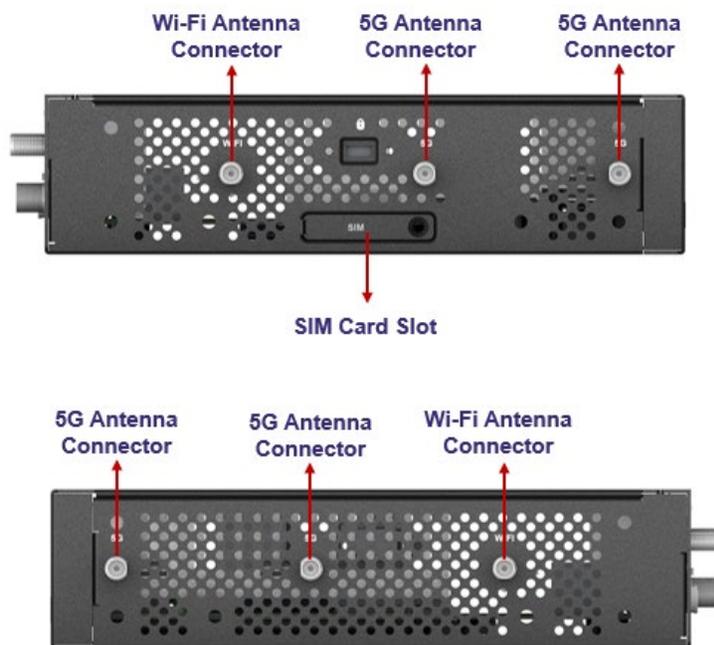


Figure 1-4: PUZZLE-1100 Side Panels

1.7 Technical Specifications

The PUZZLE-1100 technical specifications are listed in **Table 1-1**.

System	
Form Factor	Desktop
CPU (SoC)	Intel® Atom® X-series processor (codenamed Amston Lake)
Chipset	Integrated in CPU
Memory	1 x DDR5 SO-DIMM slot (max. 4800 MHz)
TPM	1 x TPM 2.0 pin header
BMC Solution	1 x IEI iRIS4 connector for optional IPMI module
Networking	Four Intel I226-V 2.5GbE Ethernet controllers 4 x 2.5GbE RJ-45 LAN ports 1 x 10/100 Mbps IPMI port
Storage	1 x M.2 B-key 2240/2280, supporting SATA SSD (PCIe 3.0 x1)
Processor Cooling	Fan and heatsink
Expansion	
PCIe Mini	1 x PCIe Mini for Wi-Fi module
M.2	1 x M.2 B-key 3042/3052 slot for 5G/LTE
I/O and Indicators	
Console	1 x USB Type-C port
USB	2 x USB 3.2 Gen 2 (10 Gb/s) port (external, Type A)
Indicators	Power status (blue) Alert LED (red) 5G LED (blue) Wi-Fi LED (blue)
Buttons	Power button Reset button
Antenna	8 x Antenna hole (reserved)

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Power	
Power Input	1 x 12V DC jack
Power Adapter	12V/5A AC-DC power adapter
Environmental and Mechanical	
Operating Temperature	0°C~40°C (32°F~104°F)
Storage Temperature	-10°C~50°C (14°F~122°F)
Operating Humidity	5%~90%, non-condensing
Safety	By customer request
Weight	<3 kg
Physical Dimensions	224.5 mm x 42.5 mm x 170.5 mm (W x H x D)
Operating System	Linux based OS, Ubuntu

Table 1-1: Technical Specifications

1.8 Dimensions

The physical dimensions are shown below:

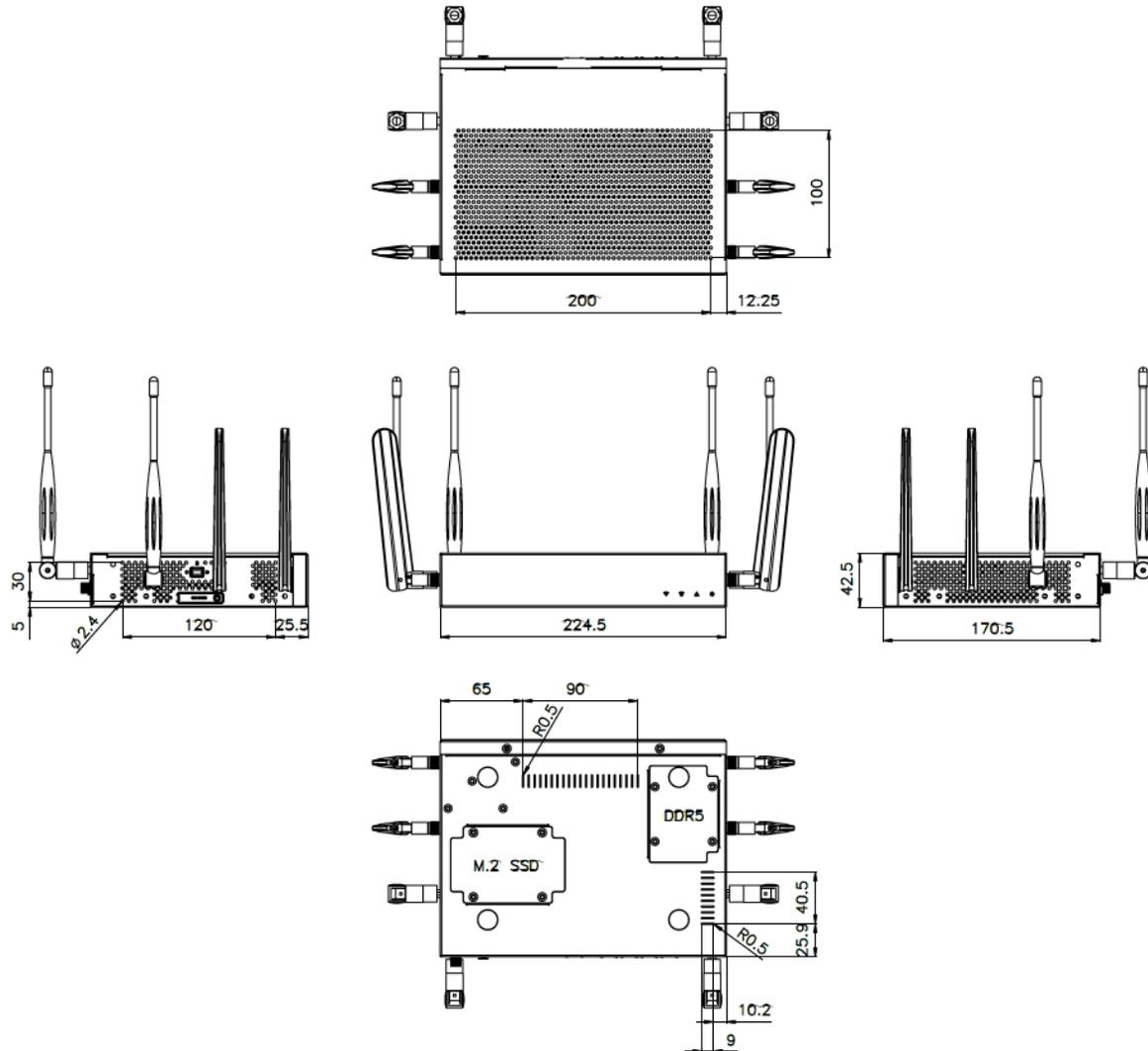


Figure 1-5: Physical Dimensions (millimeters)

Chapter

2

Unpacking

2.1 Anti-static Precautions



WARNING:

Failure to take ESD precautions during installation may result in permanent damage to the PUZZLE-1100 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the PUZZLE-1100. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the PUZZLE-1100 or any other electrical component is handled, the following anti-static precautions are strictly adhered to.

- **Wear an anti-static wristband:** Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- **Self-grounding:** Before handling the board, touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- **Use an anti-static pad:** When configuring the PUZZLE-1100, place it on an anti-static pad. This reduces the possibility of ESD damaging the PUZZLE-1100.

2.2 Unpacking Precautions

When the PUZZLE-1100 is unpacked, please do the following:

- Follow the anti-static precautions outlined in **Section 2.1**.
- Make sure the packing box is facing upwards so the PUZZLE-1100 does not fall out of the box.
- Make sure all the components shown in **Section 2.3** are present.

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2.3 Packing List



NOTE:

If some of the components listed in the checklist below are missing, please do not proceed with the installation. Contact the IEI reseller or vendor you purchased the PUZZLE-1100 from or contact an IEI sales representative directly. To contact an IEI sales representative, please send an email to sales@ieiworld.com.

The PUZZLE-1100 is shipped with the following components:

Quantity	Item	Image
1	PUZZLE-1100	
1	Power cord	
1	Power adapter	

Chapter

3

Installation

PUZZLE-1100

3.1 Installation Precautions

During installation, be aware of the precautions below:

- **Read the user manual:** The user manual provides a complete description of the PUZZLE-1100, installation instructions and configuration options.
- **DANGER! Disconnect Power:** Power to the PUZZLE-1100 must be disconnected during the installation process. Failing to disconnect the power may cause severe injury to the body and/or damage to the system.
- **Qualified Personnel:** The PUZZLE-1100 must be installed and operated only by trained and qualified personnel. Maintenance, upgrades, or repairs may only be carried out by qualified personnel who are familiar with the associated dangers.
- **Air Circulation:** Make sure there is sufficient air circulation when installing the PUZZLE-1100. The PUZZLE-1100's cooling vents must not be obstructed by any objects. Blocking the vents can cause overheating of the PUZZLE-1100. Leave at least 5 cm of clearance around the PUZZLE-1100 to prevent overheating.
- **Grounding:** The PUZZLE-1100 should be properly grounded. The voltage feeds must not be overloaded. Adjust the cabling and provide external overcharge protection per the electrical values indicated on the label attached to the back of the PUZZLE-1100.

3.2 SO-DIMM Installation

To install SO-DIMM modules, please follow the steps below.

Step 1: Turn the system over so the bottom side is facing up.

Step 2: Locate the DDR5 slot cover and remove the four screws securing it, as shown in the diagram.

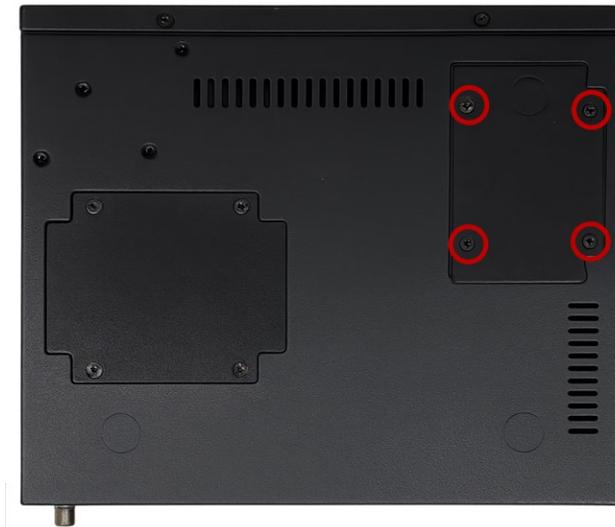


Figure 3-1: DDR5 Slot Cover Retention Screws

Step 3: Align the SO-DIMM so the notch on the memory lines up with the notch on the memory socket.

Step 4: Once aligned, press down until the SO-DIMM is properly seated.

3.3 M.2 SSD Module Installation

The M.2 SSD slot is keyed in the B position and provide mounting screw position for 2240-size or 2280-size M.2 modules. To install an M.2 SSD module, please follow the steps below.

Step 1: Turn the system over so the bottom side is facing up.

Step 2: Locate the M.2 SSD slot cover and remove the four screws securing it, as shown in the diagram.

PUZZLE-1100



Figure 3-2: M.2 SSD Slot Cover Retention Screws

Step 3: Lift and remove the cover.

Step 4: Remove the on-board retention screw.

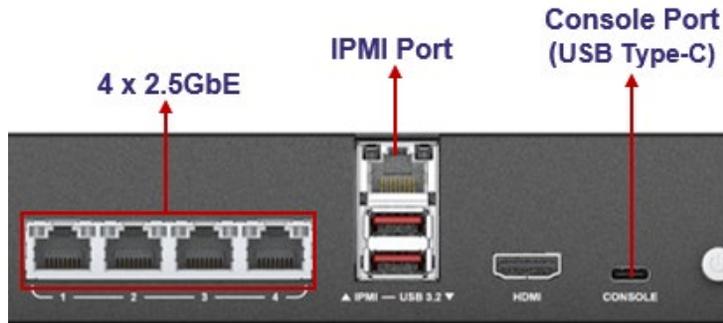
Step 5: Line up the notch on the module with the notch on the slot. Slide the M.2 SSD module into the socket at an angle of about 20°.

Step 6: Push the M.2 SSD module down and secure it with the previously removed retention screw.

Step 7: Reinstall the M.2 slot cover using the four screws removed earlier.

3.4 External Interface Connection

The rear panel has several external I/O ports. The pinouts of these I/O ports are listed in the following sections.



3.4.1 LAN Connection – 2.5GbE

The four 2.5GbE LAN connectors on the rear panel allow connection to an external network. The pinouts of the LAN connectors are listed below.

Pin	Description	Pin	Description
1	MDIA3-	5	MDIA1+
2	MDIA3+	6	MDIA2+
3	MDIA2-	7	MDIA0-
4	MDIA1-	8	MDIA0+

The image shows a close-up of an RJ-45 connector. Two LEDs are visible at the top: a yellow one labeled 'LED A' and a green/amber one labeled 'LED B'. A red arrow points to the top-left pin, labeled 'Pin 1'.

Table 3-1: 2.5GbE Port Pinouts

The RJ-45 Ethernet connector has two status LEDs, one yellow and one green/amber. The yellow LED indicates activity on the port and the green/orange LED indicates the speed. See **Table 3-2**.

LED	Description	LED	Description
A	on: linked blinking: data is being sent/received	B	off: 10 Mb/s amber: less than 2500 Mb/s green: 2500 Mb/s

Table 3-2: RJ-45 2.5GbE Connector LEDs

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3.4.2 IPMI Connection

The IPMI connector on the rear panel allows users to perform remote management through the optional iRIS module. **Note:** This port is functional only when the optional iRIS IPMI module is installed.

The pinouts of the IPMI connector are listed below.

Pin	Description	Pin	Description
1	IPMI_MDI0+	5	IPMI_MDI2+
2	IPMI_MDI0-	6	IPMI_MDI2-
3	IPMI_MDI1+	7	IPMI_MDI3+
4	IPMI_MDI1-	8	IPMI_MDI3-

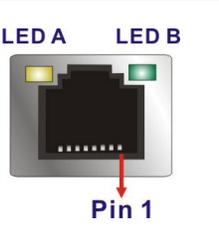


Table 3-3: IPMI RJ-45 Connector Pinouts

The IPMI RJ-45 connector has two status LEDs, one yellow and one green/orange. The yellow LED indicates activity on the port and the green/orange LED indicates the speed. See **Table 3-2**.

LED	Description	LED	Description
A	on: linked blinking: data is being sent/received	B	green: 10 Mb/s orange: 100 Mb/s

Table 3-4: IPMI Connector LEDs

3.4.3 Console Connection

The PUZZLE-1100 has one console connector (USB Type-C) on the rear panel. The console port provides direct, low-level access for configuration, troubleshooting, and system management using a serial connection. The pinouts of the console port are listed below.

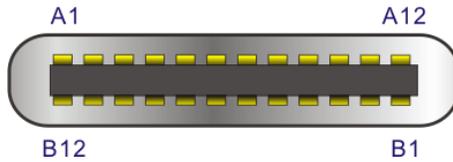


Figure 3-3: USB Type-C Pin Locations

Pin	Description	Pin	Description
A1	GND	B12	GND
A2	N/A	B11	N/C
A3	N/A	B10	N/C
A4	USB_C_5V	B9	USB_C_5V
A5	USB_CC1	B8	N/C
A6	USB_C_DP	B7	USB_C_DN
A7	USB_C_DN	B6	USB_C_DP
A8	N/C	B5	USB_CC2
A9	USB_C_5V	B4	USB_C_5V
A10	N/C	B3	N/C
A11	N/C	B2	N/C
A12	GND	B1	GND

Table 3-5: USB Type-C Port Pinouts

PUZZLE-1100

3.4.3.1 Enable Console Port When Booting

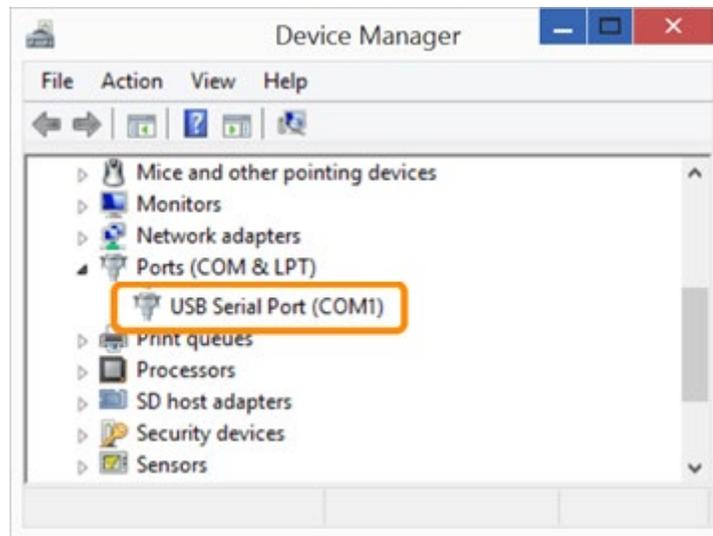
To configure the PUZZLE-1100 to make it auto enable the console port when booting, follow the steps below.



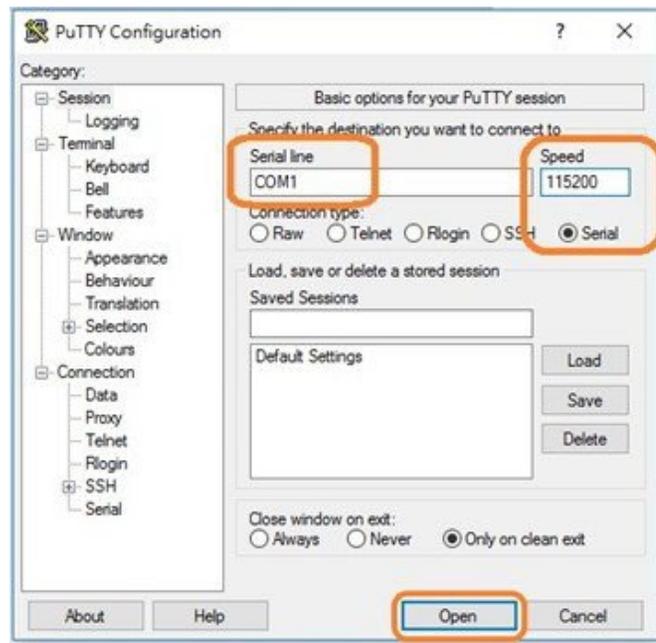
NOTE:

This method only works in Linux Ubuntu, the default operating system.

- Step 1:** Use a USB Type-C cable to connect the console port of the PUZZLE-1100 with your PC.
- Step 2:** In your PC, go to Windows **Device Manager** and check for the serial line of the connected USB serial port. In this case, it is COM1.



- Step 3:** Open a serial console application, PuTTY, as an example.
- Step 4:** Set the speed of the serial connection to “115200”, and choose “Serial” for Connection Type.
- Step 5:** Click “Open” on PuTTY.



Step 6: Enter the following command:

```
sudo vi /lib/systemd/system/ttyS0.service
```

Step 7: Ensure the information shown match the followings:

[Unit]

Description=Serial Console Service

[Service]

ExecStart=/sbin/getty -L 115200 ttyS0 vt102

Restart=always

[Install]

WantedBy=multi-user.target

Step 8: Run the following commands one by one:

```
sudo systemctl daemon-reload
```

```
sudo systemctl enable ttyS0
```

```
sudo systemctl start ttyS0
```

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3.5 Power-On Procedure

**WARNING:**

Make sure a power adapter with the correct input voltage is being fed into the system. Incorrect voltages applied to the system may cause damage to the internal electronic components and may also cause injury to the user.

To power-on the PUZZLE-1100 please follow the steps below:

- Step 1:** Connect the power source to power adapter, then plug the power adapter into the power input jack on the rear panel. **Ensure to connect the power cord to a socket-outlet with earthing connection.**
- Step 2:** Short press the power button on the rear panel to power up the system.
- Step 3:** The power LED on the power button switches from amber to blue to indicate that the system has powered on.



3.6 Maintenance



WARNING:

The following instructions should only be performed by an authorized and trained technician.

Before starting, please ensure that you turn off the PUZZLE-1100, disconnect the power cords, network cable(s), and also remove any other device/cable that is attached to the server.

Take Anti-Static precautions whenever maintenance is being carried out on the system components. Failure to take anti-static precautions can cause permanent system damage. For more details on anti-static precautions, please refer to **Section 2.1**.

3.6.1 Accessing the Jumpers

All jumpers require the PUZZLE-1100 to be powered off. Detailed access instructions for each jumper are provided in the following sections.

3.6.1.1 Accessing the Bottom Side Jumpers

To access the **AT/ATX mode switch** or the **clear CMOS button**, follow the steps below.

Step 1: Remove the four retention screws indicated in **Figure 3-4**.

Step 2: Remove the cover and gently lift it.

Step 3: Locate the switch/button on the embedded motherboard.

PUZZLE-1100



Figure 3-4: Jumper Cover Retention Screws

3.6.1.2 Accessing the Internal Jumper

To access the **flash descriptor security override jumper**, follow the steps below.

Step 1: Remove the two retention screws indicated in Figure 3-5.



Figure 3-5: Top Cover Retention Screws

Step 2: Slide the top cover towards the front side and gently lift the top cover.

Step 3: Locate the jumper on the embedded motherboard.

3.6.2 Jumper Settings

The following sections provide configuration information of each jumper.

3.6.2.1 AT/ATX Power Mode Setting

The AT and ATX power mode selection can be made through the AT/ATX power mode switch which is shown below.

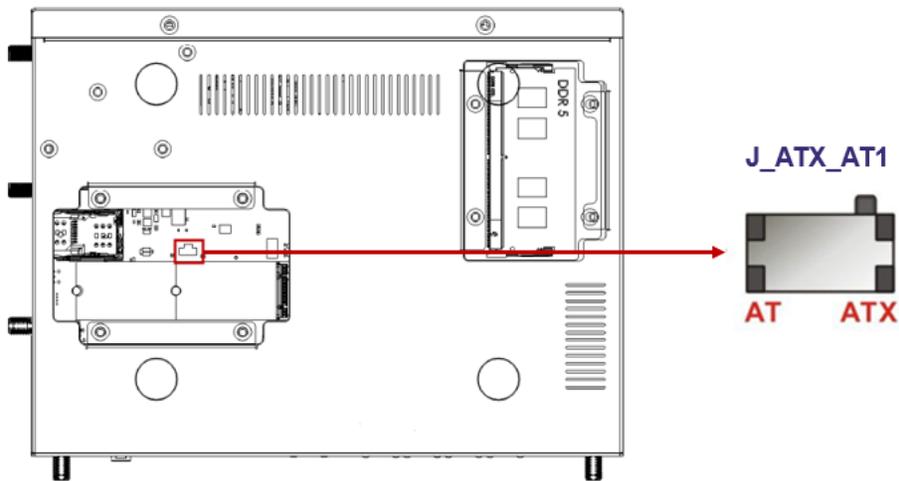


Figure 3-6: AT/ATX Power Mode Switch Location

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3.6.2.2 Clear CMOS

If the PUZZLE-1100 fails to boot due to improper BIOS settings, the clear CMOS button clears the CMOS data and resets the system BIOS information. To do this, short press the button for 3 seconds or more.

The clear CMOS jumper location is shown in **Figure 3-7** below.

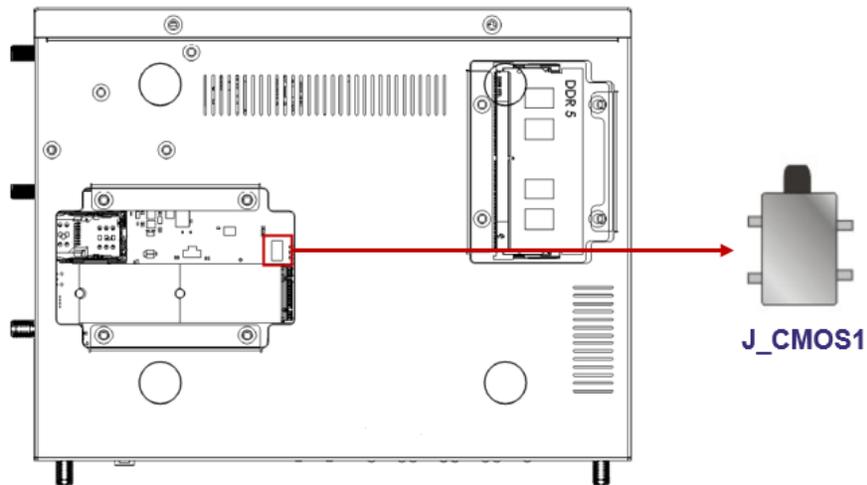


Figure 3-7: Clear CMOS Jumper Location

3.6.2.3 Flash Descriptor Security Override Jumper

The Flash Descriptor Security Override jumper (J_FLASH1) allows to enable or disable the ME firmware update.

Setting	Description
Short 1-2	Disabled (default)
Short 2-3	Enabled

Table 3-6: Flash Descriptor Security Override Jumper Settings

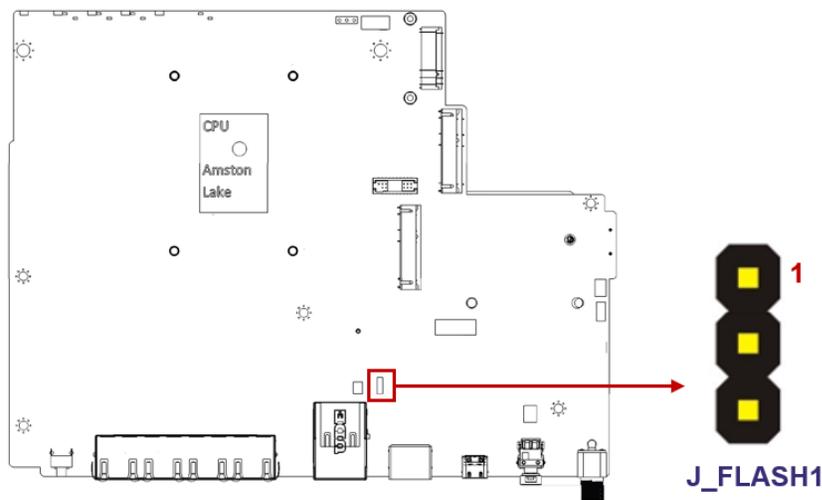


Figure 3-8: Flash Descriptor Security Override Jumper Location

To update the ME firmware, please follow the steps below.

- Step 1:** Before turning on the system power, short the Flash Descriptor Security Override jumper.
- Step 2:** Update the BIOS and ME firmware, and then turn off the system power.
- Step 3:** Remove the metal clip on the Flash Descriptor Security Override jumper.
- Step 4:** Restart the system. The system will reboot 2 ~ 3 times to complete the ME firmware update.

Chapter

4

BIOS

4.1 Introduction

The BIOS is programmed onto the BIOS chip. The BIOS setup program allows changes to certain system settings. This chapter outlines the options that can be changed.



NOTE:

Some of the BIOS options may vary throughout the life cycle of the product and are subject to change without prior notice.

4.1.1 Starting Setup

The UEFI BIOS is activated when the computer is turned on. The setup program can be activated in one of two ways.

1. Press the **DEL** key as soon as the system is turned on or
2. Press the **DEL** key when the “**Press DEL to enter SETUP**” message appears on the screen.

If the message disappears before the **DEL** key is pressed, restart the computer and try again.

4.1.2 Using Setup

Use the arrow keys to highlight items, press **ENTER** to select, use the PageUp and PageDown keys to change entries, press **F1** for help and press **ESC** to quit. Navigation keys are shown in **Table 4-1**.

Key	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left hand side
Right arrow	Move to the item on the right hand side
+	Increase the numeric value or make changes

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Key	Function
-	Decrease the numeric value or make changes
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2 key	Load previous values
F3 key	Load optimized defaults
F4 key	Save changes and exit BIOS

Table 4-1: BIOS Navigation Keys

4.1.3 Getting Help

When **F1** is pressed a small help window describing the appropriate keys to use and the possible selections for the highlighted item appears. To exit the Help Window press **Esc** or the **F1** key again.

4.1.4 Unable to Reboot after Configuration Changes

If the computer cannot boot after changes to the system configuration is made, CMOS defaults. Use the clear CMOS button described in **Chapter 3**.

4.1.5 BIOS Menu Bar

The **menu bar** on top of the BIOS screen has the following main items:

- Main – Changes the basic system configuration.
- Advanced – Changes the advanced system settings.
- Chipset – Changes the chipset settings.
- Security – Sets User and Supervisor Passwords.
- Boot – Changes the system boot configuration.
- Save & Exit – Selects exit options and loads default settings

The following sections completely describe the configuration options found in the menu items at the top of the BIOS screen and listed above.

4.2 Main

The **Main** BIOS menu (**BIOS Menu 1**) appears when the **BIOS Setup** program is entered.

The **Main** menu gives an overview of the basic system information.

Aptio Setup - AMI					
Main	Advanced	Chipset	Security	Boot	Save & Exit
BIOS Information					Set the Date. Use Tab to switch between Date elements. ----- →←: Select Screen ↑ ↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
BIOS Vendor			American Megatrends		
Core Version			5.27		
Compliance			UEFI 2.8; PI 1.7		
Project Version			Z0803AR13.BIN		
Build Date and Time			10/27/2025 15:47:33		
EC Version			Z0803CR11.bin		
EC firmware Tag			TAG-0		
IPMI Module			N/A		
BMC Version			N/A		
Access Level			Administrator		
Processor Information					
Name			AlderLake ULX		
Type			Intel(R) Atom(TM) x7433RE		
Speed			0xB06E0		
Stepping			A0		
Number of Efficient-cores			4Core(s)/4Thread(s)		
Microcode Revision			1C		
Total Memory			8192 MB		
Memory Frequency			4800 MHz		
PCH Information			PCH-N		
Name			N ASL NEX INDU SKU		
Stepping			A0		
ME FW Version			16.50.15.1515		
ME Firmware SKU			Consumer SKU		
PMC FW Version			160.50.0.1010		
System Date			[Thu 01/01/2021]		
System Time			[01:53:27]		

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BIOS Menu 1: Main

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The **Main** menu has two user configurable fields:

→ **System Date [xx/xx/xx]**

Use the **System Date** option to set the system date. Manually enter the day, month and year.

→ **System Time [xx:xx:xx]**

Use the **System Time** option to set the system time. Manually enter the hours, minutes and seconds.

4.3 Advanced

Use the **Advanced** menu (**BIOS Menu 2**) to configure the CPU and peripheral devices through the following sub-menus:



WARNING!

Setting the wrong values in the sections below may cause the system to malfunction. Make sure that the settings made are compatible with the hardware.

```

Aptio Setup - AMI
Main  Advanced  Chipset  Security  Boot  Save & Exit
-----
> CPU Configuration          CPU Configuration
> PCH-FW Configuration      Parameters
> Trusted Computing
> MEC152X Super IO Configuration
> MEC152X H/M Monitor
> IEI BMC LAN Configuration
> Serial Port Console Redirection
> PCI Subsystem Settings
> NVMe Configuration
> DTR Configuration

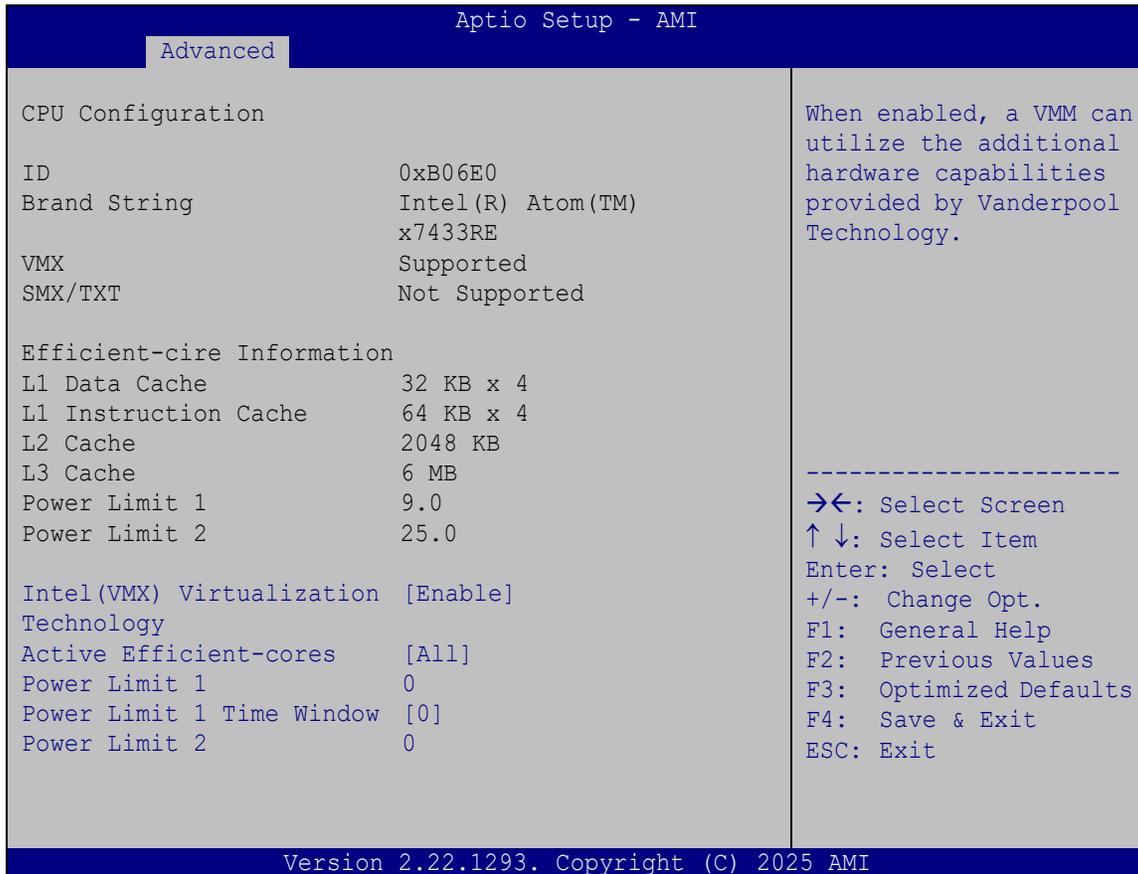
-----
→←: Select Screen
↑ ↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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```

BIOS Menu 2: Advanced

4.3.1 CPU Configuration

Use the **CPU Configuration** menu (**BIOS Menu 3**) to view detailed CPU specifications or enable the Intel Virtualization Technology.



BIOS Menu 3: Processor Configuration

→ Intel (VMX) Virtualization Technology [Enable]

Use the **Intel (VMX) Virtualization Technology** option to enable or disable virtualization on the system. When combined with third party software, Intel® Virtualization technology allows several OSs to run on the same system at the same time.

- **Disabled** Disables Intel® Virtualization Technology.
- **Enabled** **DEFAULT** Enables Intel® Virtualization Technology.

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→ Active Efficient-cores [All]

Use the **Active Efficient-cores** BIOS option to select the number of E-cores to enable.

- | | | | |
|---|-----|---------|---|
| → | All | DEFAULT | Enables all E-cores in the processor package. |
| → | 3 | | Enables 3 E-cores in the processor package. |
| → | 2 | | Enables 2 E-cores in the processor package. |
| → | 1 | | Enables 1 E-core in the processor package. |

→ Power Limit 1

Use the **Power Limit 1** BIOS option to set the power limit 1 in milliwatts. The BIOS rounds the value to the nearest 1/8 W when applied. A value of 0 disables the custom override. Example: To set a power limit of 12.50 W, enter 12500.

→ Power Limit 1 Time Window [0]

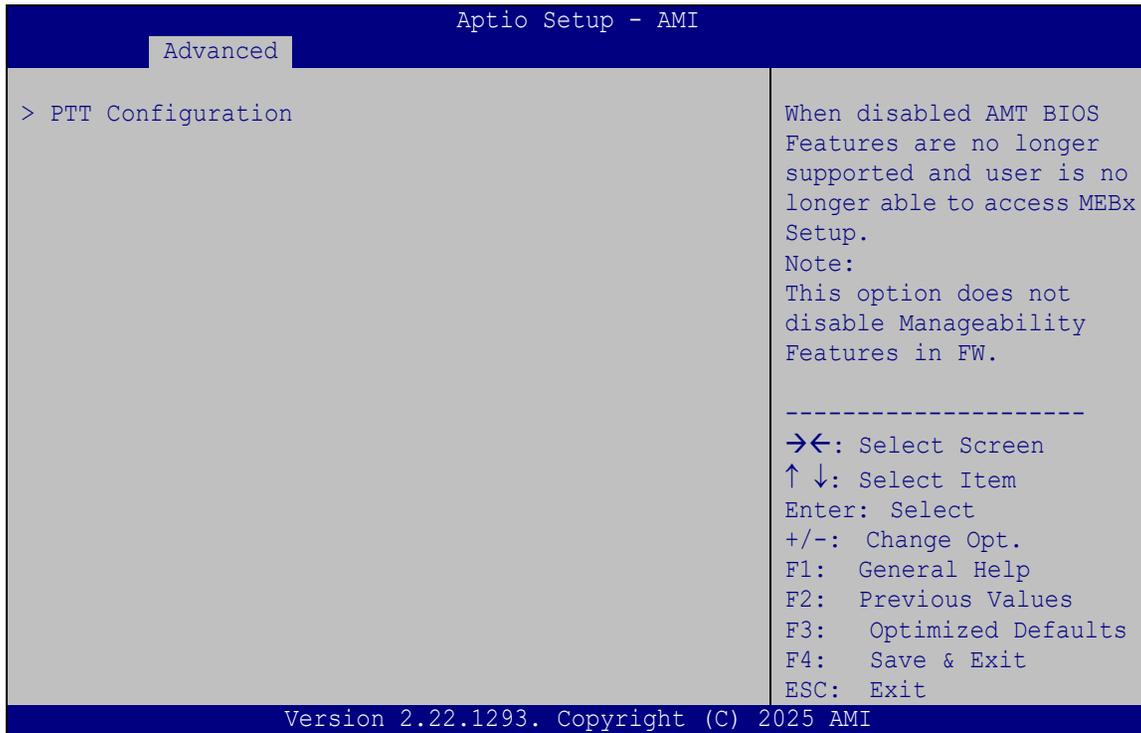
Use the **Power Limit 1 Time Window** BIOS option to select the time window value in seconds. The valid range is 0 to 128. A value of 0 uses the default setting (28 seconds for mobile platforms and 8 seconds for desktop platforms). This option defines the time period over which the processor's base power (TDP) value is maintained.

→ Power Limit 2

Use the **Power Limit 2** BIOS option to set the power limit 2 in milliwatts. The BIOS rounds the value to the nearest 1/8 W when applied. If the value is 0, BIOS will program this value as 1.25*processor TDP. Example: To set a power limit of 12.50 W, enter 12500.

4.3.2 PCH-FW Configuration

The **PCH-FW Configuration** menu (**BIOS Menu 4**) provides access to PTT Configuration submenu.

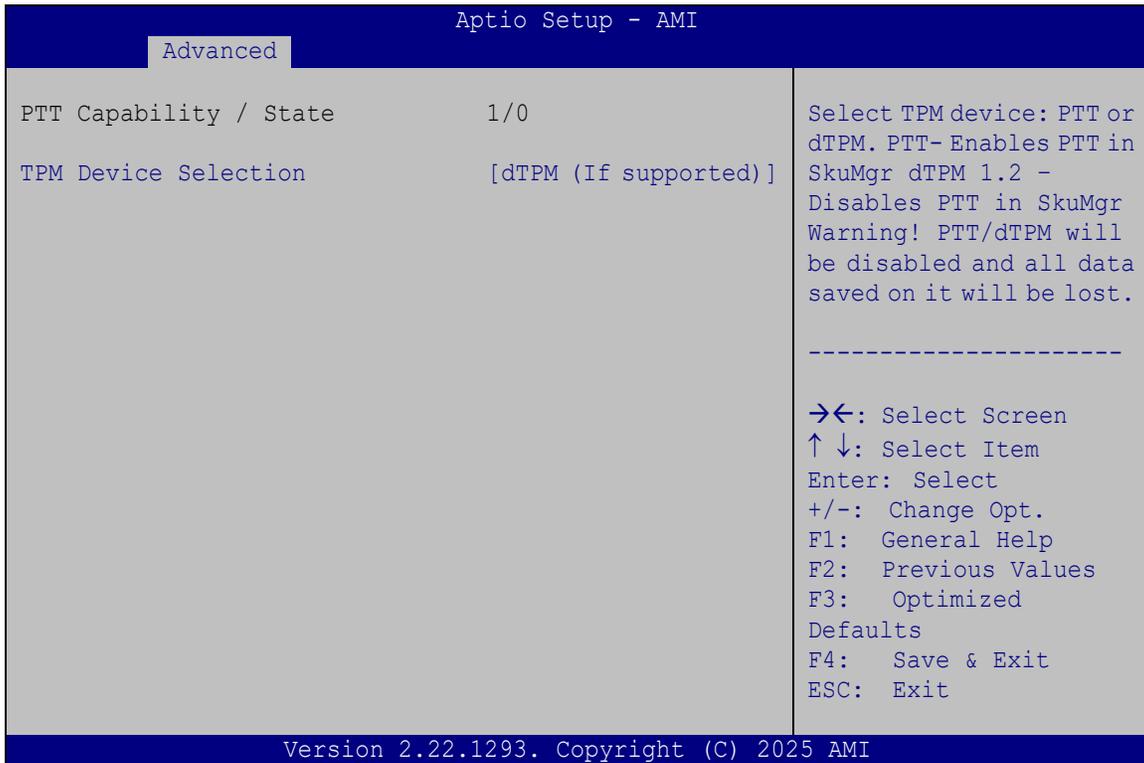


BIOS Menu 4: PCH-FW Configuration

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4.3.2.1 PTT Configuration

Use the **PTT Configuration** menu (**BIOS Menu 5**) to configure settings related to the Trusted Platform Module (TPM).



BIOS Menu 5: PTT Configuration

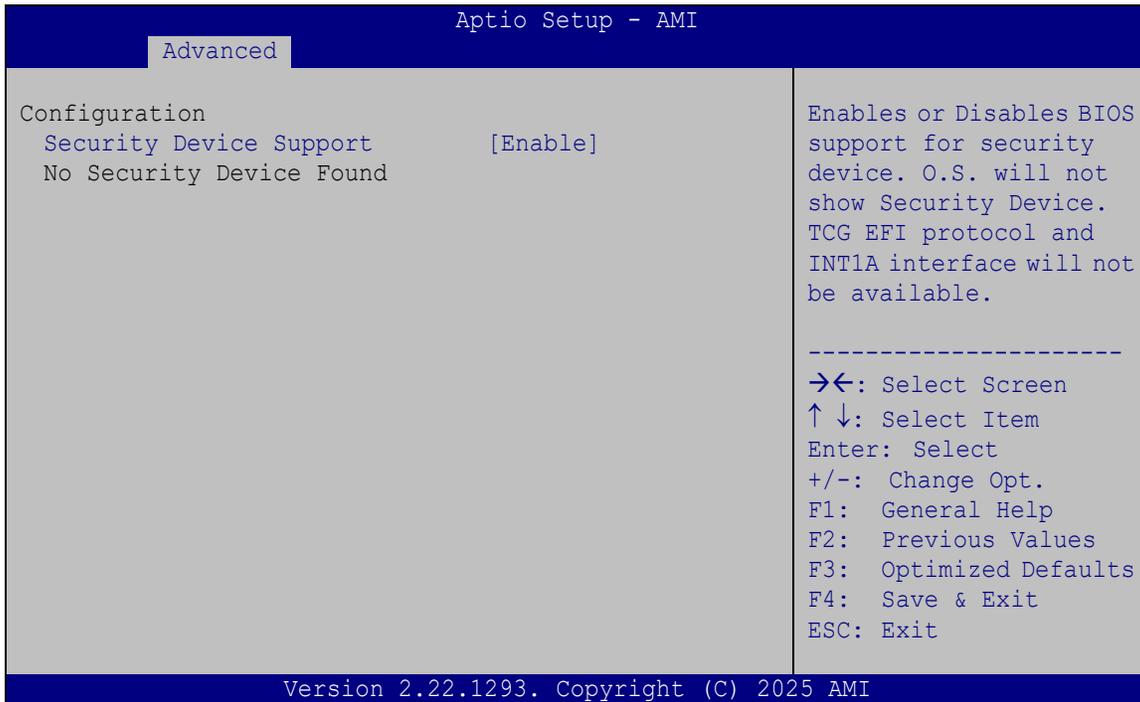
→ TPM Device Selection [dTPM (If supported)]

Use the **TPM Device Selection** option to configure support for the TPM.

- **dTPM** (If **DEFAULT** Disable PTT in SkuMgr. supported)
- **PTT** Enable PTT in SkuMgr

4.3.3 Trusted Computing

Use the **Trusted Computing** menu (**BIOS Menu 6**) to configure settings related to the Trusted Computing Group (TCG) Trusted Platform Module (TPM).



BIOS Menu 6: Trusted Computing

➔ Security Device Support [Enable]

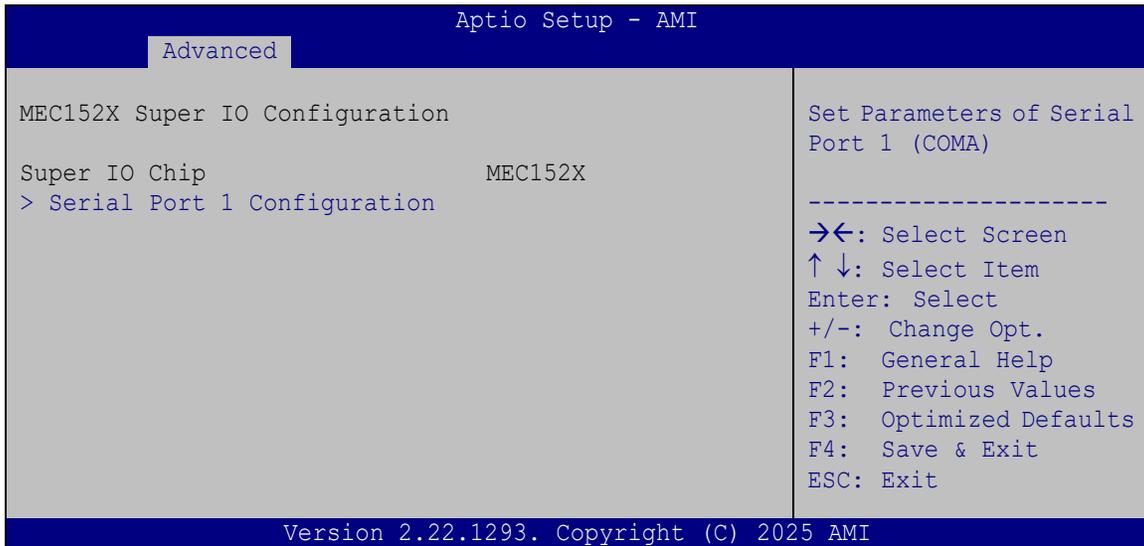
Use the **Security Device Support** option to configure support for the TPM.

- ➔ **Disable** TPM support is disabled.
- ➔ **Enable** **DEFAULT** TPM support is enabled.

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4.3.4 MEC152X Super IO Configuration

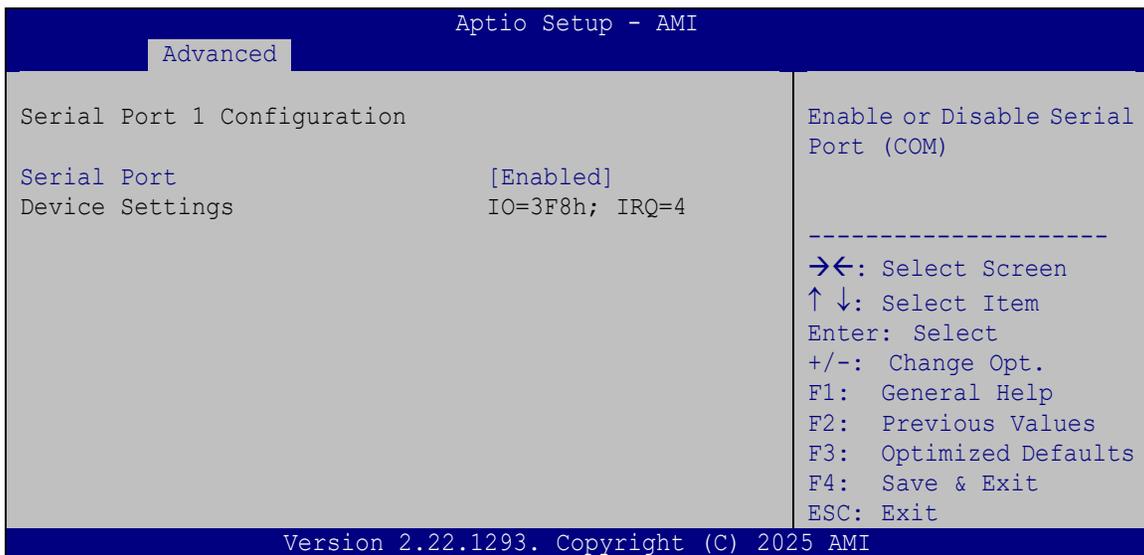
Use the **MEC152X Super IO Configuration** menu (**BIOS Menu 7**) to set or change the configurations for the parallel ports and serial ports.



BIOS Menu 7: MEC152X Super IO Configuration

4.3.4.1 Serial Port 1 Configuration

Use the **Serial Port 1 Configuration** menu (**BIOS Menu 8**) to configure the serial port 1.



BIOS Menu 8: Serial Port 1 Configuration Menu

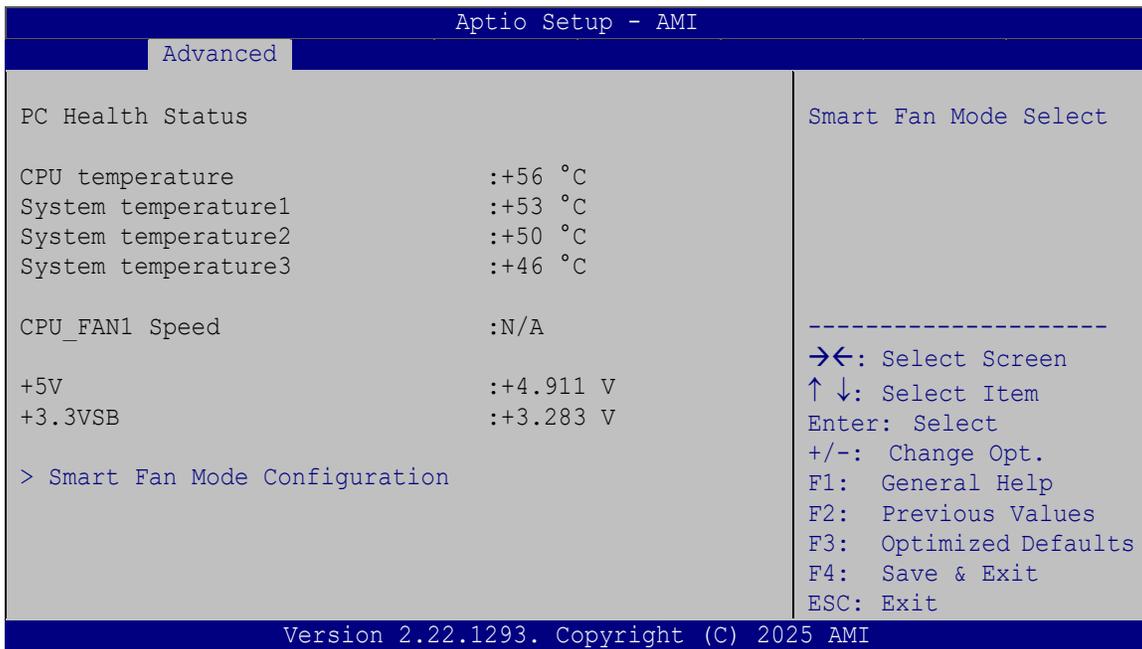
➔ **Serial Port [Enabled]**

Use the **Serial Port** option to enable or disable the serial port.

- ➔ **Disabled** Disable the serial port
- ➔ **Enabled** **DEFAULT** Enable the serial port

4.3.5 MEC152X H/W Monitor

The **MEC152X H/W Monitor** menu (**BIOS Menu 9**) contains the fan configuration submenu, and displays the system temperature and CPU fan speed.



BIOS Menu 9: MEC152X H/W Monitor

➔ **PC Health Status**

The following system parameters and values are shown. The system parameters that are monitored are:

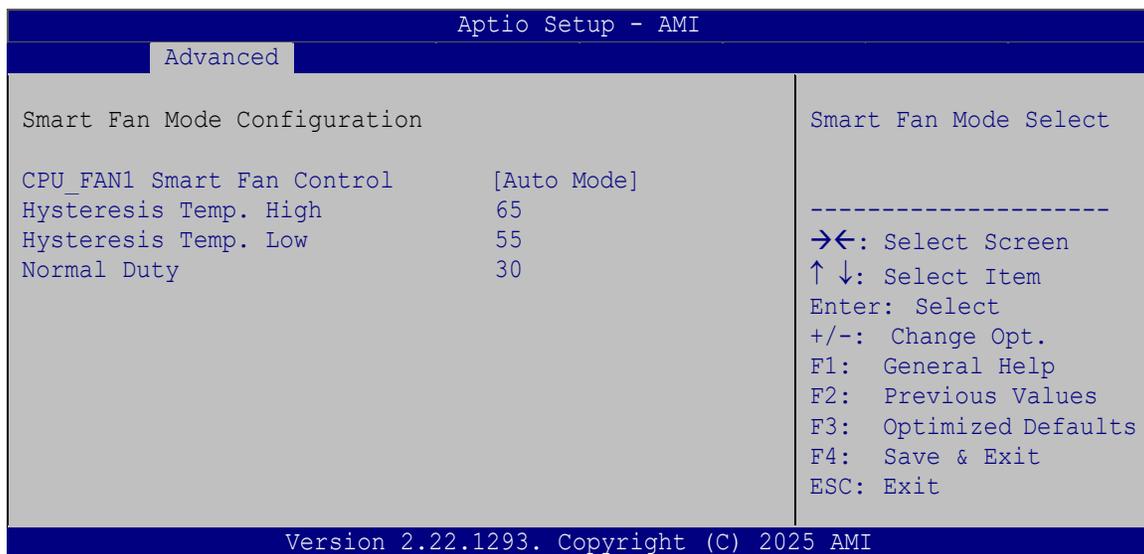
- Temperatures:
 - CPU temperature
 - System temperature

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- Fan Speeds:
 - CPU Fan Speed
- Voltages:
 - +5V
 - +3.3VSB

4.3.5.1 Smart Fan Mode Configuration

Use the **Smart Fan Mode Configuration** submenu (**BIOS Menu 10**) to configure the CPU/system fan temperature and speed settings.



BIOS Menu 10: Smart Fan Mode Configuration

→ CPU_FAN Smart Fan Control [Auto Mode]

Use the **CPU_FAN Smart Fan Control** options to configure the CPU Smart Fans.

- **Manual Mode** The fan spins at the speed set in Manual Mode settings.
- **Auto Mode** **DEFAULT** The fan adjusts its speed using Auto Mode settings.

The following options can only be set if the CPU Smart Fan Control option is set to Auto Mode.

→ **Hysteresis Temp. High**

If the current CPU temperature exceeds this setting, the fan speed increases. To set a value, Use the + or – key to change the value or enter a decimal number between 1 and 100.

→ **Hysteresis Temp. Low**

If the CPU temperature falls below this setting, the fan speed decreases; however, it will not drop below the **Normal Duty** setting. To set a value, Use the + or – key to change the value or enter a decimal number between 1 and 100.

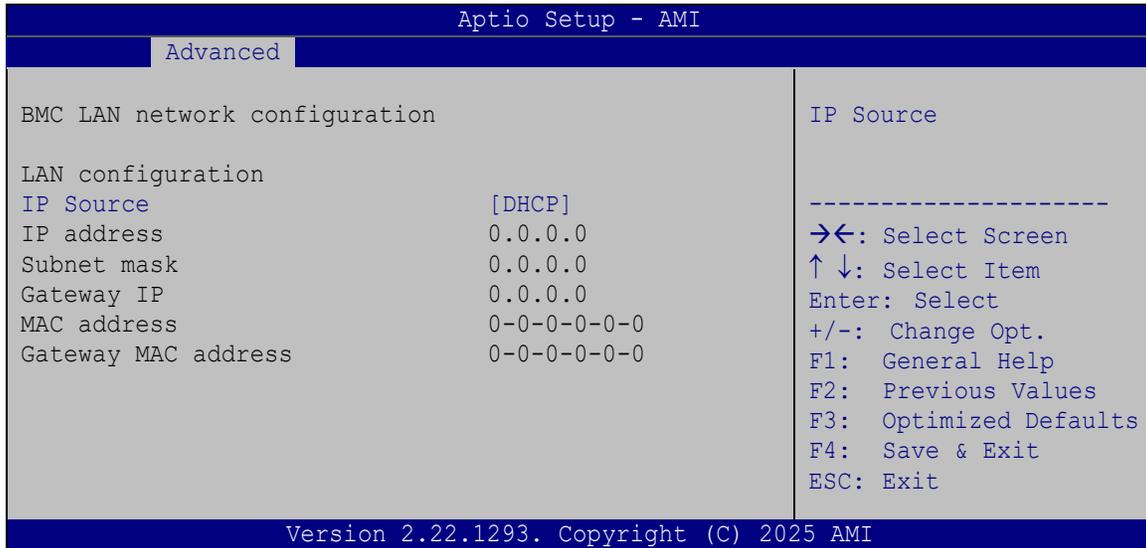
→ **Normal Duty**

Use the **Normal Duty** option to define the fan speed at system power-on and the minimum fan speed percentage. Use the + or – key to change the value or enter a decimal number between 1 and 100.

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4.3.6 IEI BMC LAN Configuration

Use the **IEI BMC LAN Configuration** menu (**BIOS Menu 11**) to configure the BMC network parameters.



BIOS Menu 11: IEI BMC LAN Configuration

→ IP Source [DHCP]

Use the **IP Source** option to select the BMC network address source.

→ Static

Manually sets the BMC network parameters.

If this option is selected, the following items will be configurable:

*IP address

*Subnet mask

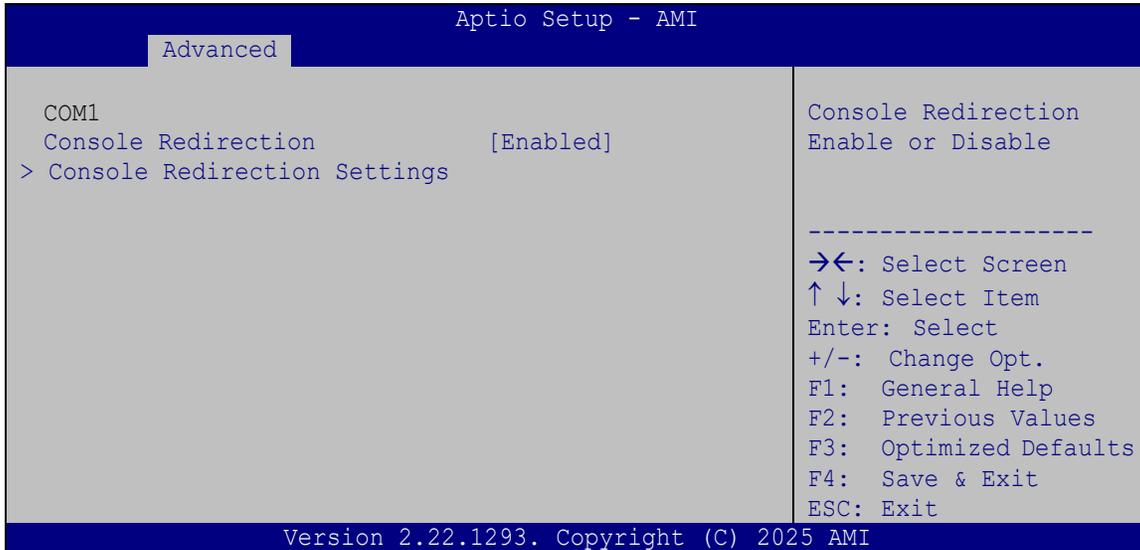
*Gateway IP

→ DHCP

Obtains BMC network parameters dynamically.

4.3.7 Serial Port Console Redirection

The **Serial Port Console Redirection** menu (**BIOS Menu 12**) allows the console redirection options to be configured. Console redirection allows users to maintain a system remotely by re-directing keyboard input and text output through the serial port.



BIOS Menu 12: Serial Port Console Redirection

→ Console Redirection [Enabled]

Use **Console Redirection** option to enable or disable the console redirection function.

- **Disabled** Disabled the console redirection function
- **Enabled** **DEFAULT** Enabled the console redirection function

The following options are available in the **Console Redirection Settings** submenu when the **Console Redirection** option is enabled.

→ Terminal Type [ANSI]

Use the **Terminal Type** option to specify the remote terminal type.

- **VT100** The target terminal type is VT100
- **VT100+** The target terminal type is VT100+

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- **VT-UTF8** The target terminal type is VT-UTF8
- **ANSI** **DEFAULT** The target terminal type is ANSI

→ Bits per second [115200]

Use the **Bits per second** option to specify the serial port transmission speed. The speed must match the other side. Long or noisy lines may require lower speeds.

- **9600** Sets the serial port transmission speed at 9600.
- **19200** Sets the serial port transmission speed at 19200.
- **57600** Sets the serial port transmission speed at 57600.
- **115200** **DEFAULT** Sets the serial port transmission speed at 115200.

→ Data Bits [8]

Use the **Data Bits** option to specify the number of data bits.

- **7** Sets the data bits at 7.
- **8** **DEFAULT** Sets the data bits at 8.

→ Parity [None]

Use the **Parity** option to specify the parity bit that can be sent with the data bits for detecting the transmission errors.

- **None** **DEFAULT** No parity bit is sent with the data bits.
- **Even** The parity bit is 0 if the number of ones in the data bits is even.
- **Odd** The parity bit is 0 if the number of ones in the data bits is odd.
- **Mark** The parity bit is always 1. This option does not provide error detection.
- **Space** The parity bit is always 0. This option does not provide error detection.

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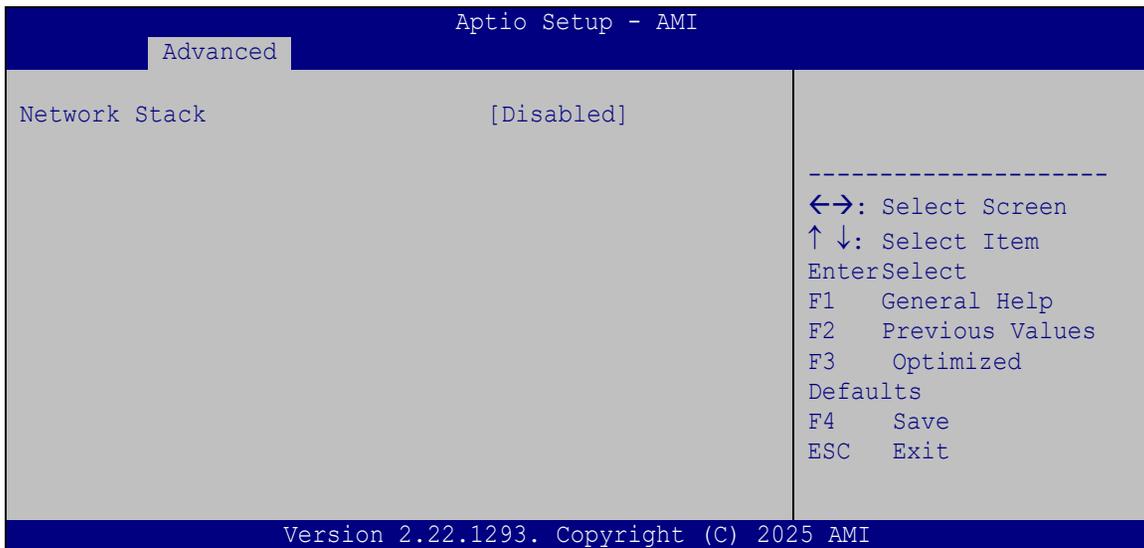
→ SR-IOV Support [Enabled]

Use **SR-IOV Support** option to enable or disable the Single Root I/O Virtualization (SR-IOV) support if the system has SR-IOV-capable PCIe devices.

- **Disabled** Disabled the SR-IOV support
- **Enabled** **DEFAULT** Enabled the SR-IOV support

4.3.9 Network Stack Configuration

Use the **Network Stack Configuration** menu (**BIOS Menu 14**) to configure network stack settings.



BIOS Menu 14: Network Stack Configuration

→ Network Stack [Disabled]

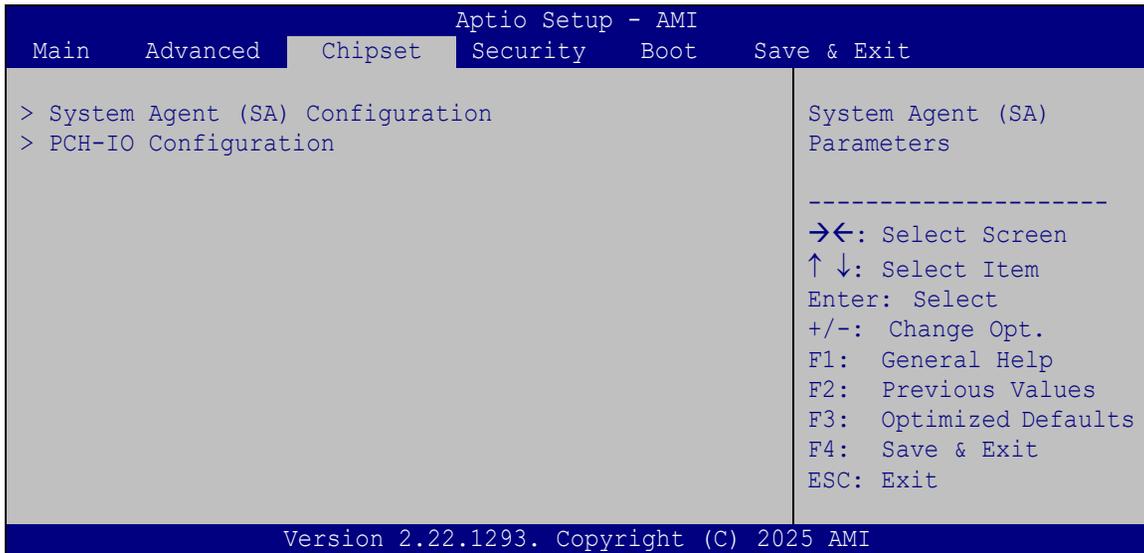
Use **Network Stack** option to enable or disable UEFI network stack.

- **Disabled** **DEFAULT** Disabled UEFI network stack
- **Enabled** Enabled UEFI network stack

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4.4 Chipset Configuration

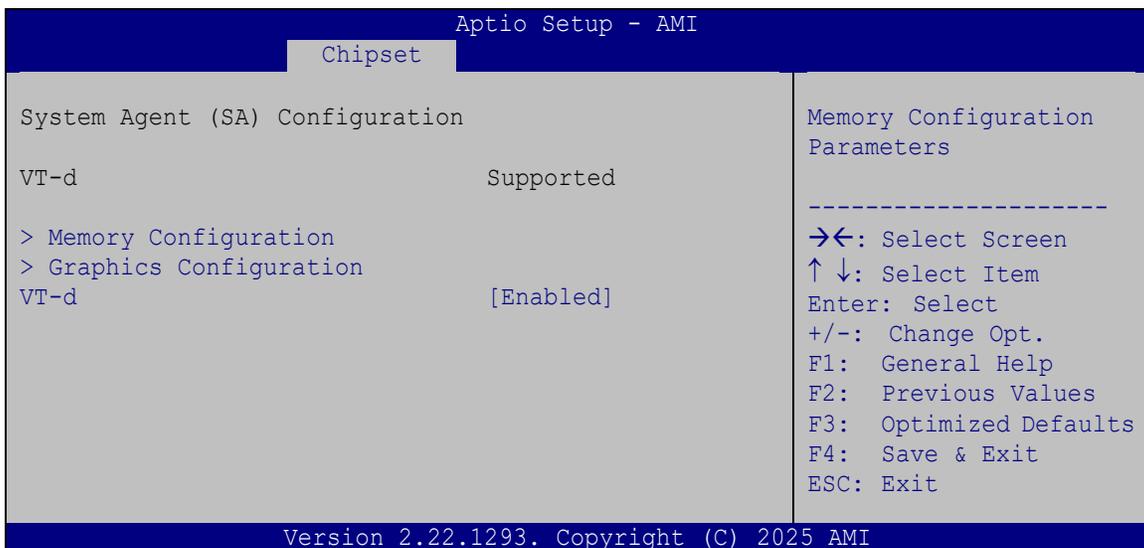
Use the **Chipset Configuration** menu (**BIOS Menu 16**) to configure the chipset parameters.



BIOS Menu 16: Chipset Configuration

4.4.1 System Agent (SA) Configuration

Use the **System Agent (SA) Configuration** menu (**BIOS Menu 17**) to configure the video device connected to the system.



BIOS Menu 17: System Agent (SA) Configuration

➔ **VT-d [Enabled]**

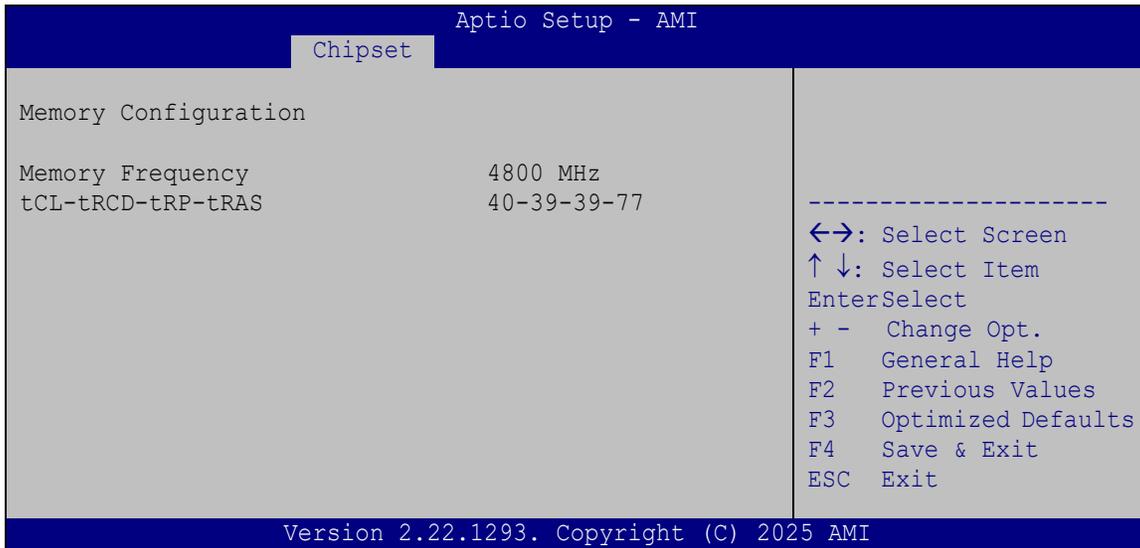
Use the **VT-d** option to enable or disable VT-d support.

➔ **Enabled** **DEFAULT** Enable VT-d support.

➔ **Disabled** Disable VT-d support.

4.4.1.1 Memory Configuration

Use the **Memory Configuration** submenu (**BIOS Menu 18**) to view the memory settings.

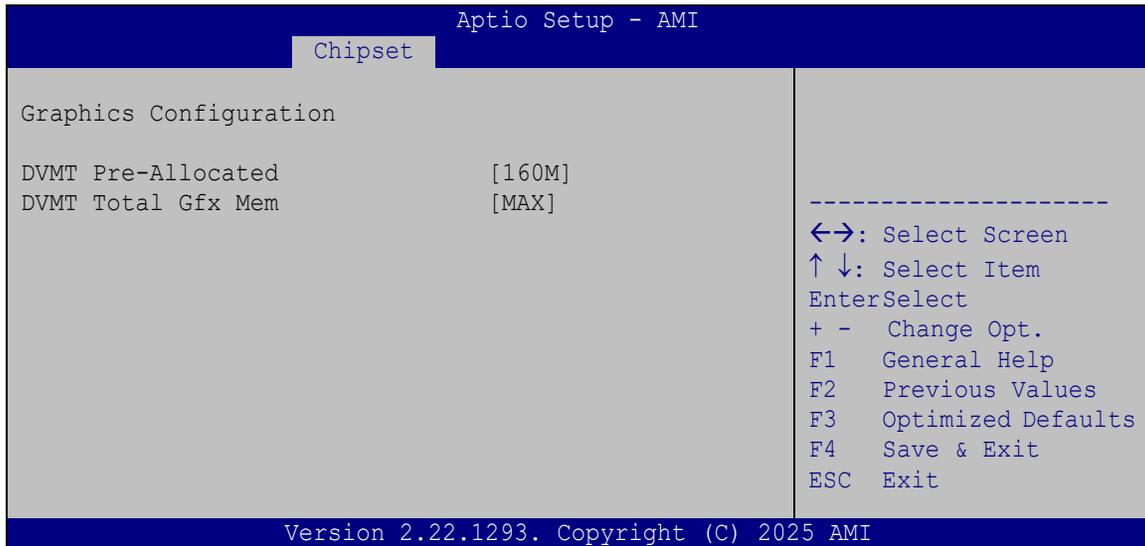


BIOS Menu 18: Memory Configuration

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4.4.1.2 Graphics Configuration

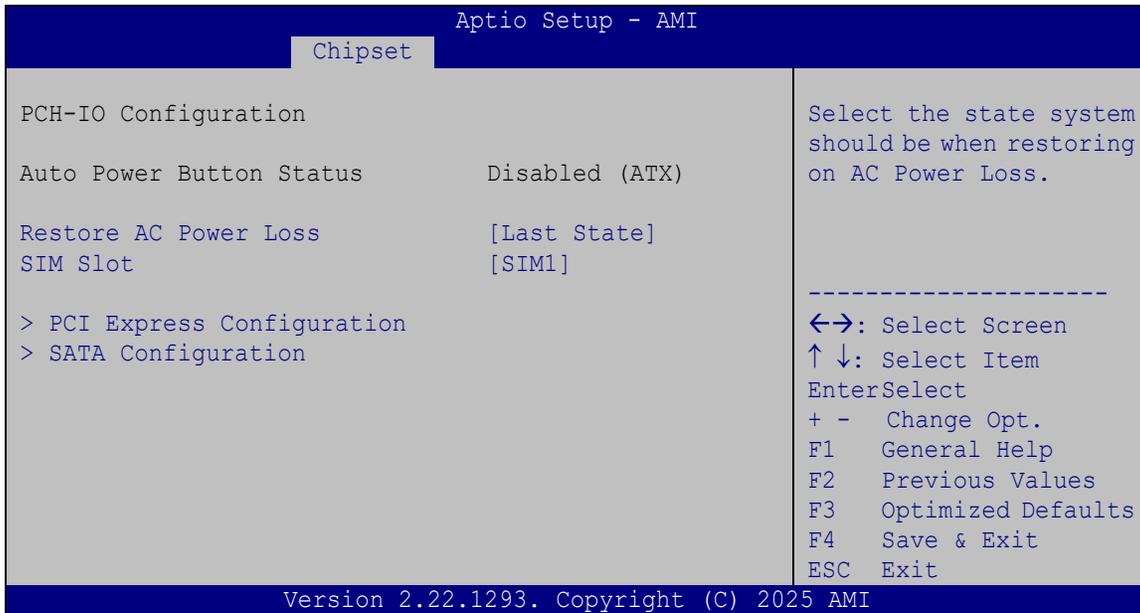
Use the **Graphics Configuration** submenu (**BIOS Menu 19**) to view the graphics settings.



BIOS Menu 19: Graphics Configuration

4.4.2 PCH-IO Configuration

Use the **PCH-IO Configuration** menu (**BIOS Menu 20**) to configure the PCH chipset.



BIOS Menu 20: PCH-IO Configuration

→ Restore on AC Power Loss [Last State]

Use the **Restore on AC Power Loss** BIOS option to specify what state the system returns to if there is a sudden loss of power to the system.

- **Power Off** The system remains turned off
- **Power On** The system turns on
- **Last State** **DEFAULT** The system returns to its previous state. If it was on, it turns itself on. If it was off, it remains off.

→ SIM Slot [SIM1]

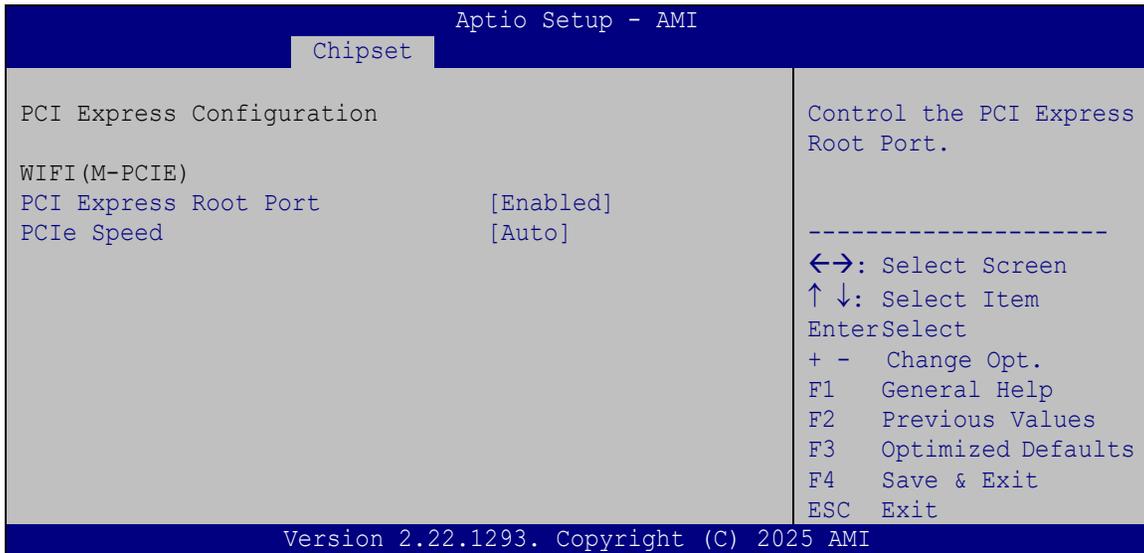
Use the **SIM Slot** BIOS option to select which SIM slot to use.

- **SIM1** **DEFAULT** Use SIM1 slot
- **SIM2** Use SIM2 slot

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4.4.2.1 PCI Express Configuration

Use the **PCI Express Configuration** submenu (**BIOS Menu 21**) to configure the PCI Express slots.



BIOS Menu 21: PCI Express Configuration

→ PCI Express Root Port [Enabled]

Use the **PCI Express Root Port** option to enable or disable the PCI Express controller.

- **Disabled** Disables the PCI Express controller.
- **Enabled** **DEFAULT** Enables the PCI Express controller.

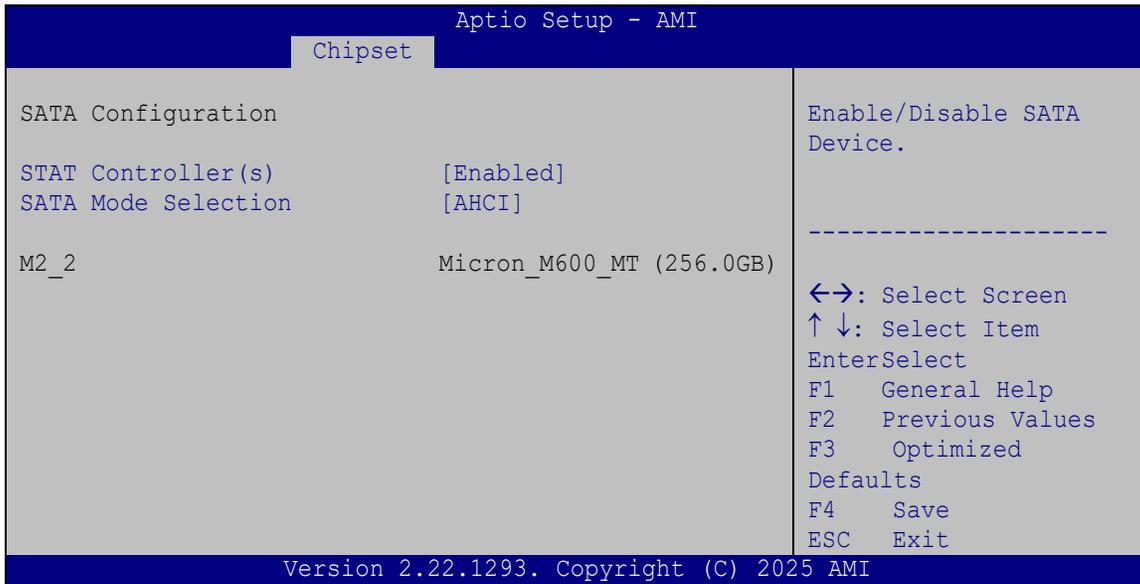
→ PCIe Speed [Auto]

Use the **PCIe Speed** option to specify the PCI Express port speed. Configuration options are listed below.

- Auto **DEFAULT**
- Gen 1
- Gen 2
- Gen3

4.4.2.2 SATA Configuration

Use the **SATA Configuration** menu (**BIOS Menu 22**) to change and/or set the configuration of the SATA devices installed in the system.



BIOS Menu 22: SATA Configuration

→ SATA Controller(s) [Enabled]

Use the **STAT Controller(s)** option to enable or disable the SATA device.

- **Enabled** **DEFAULT** Enables the SATA device.
- **Disabled** Disables the SATA device.

→ SATA Mode Selection [AHCI]

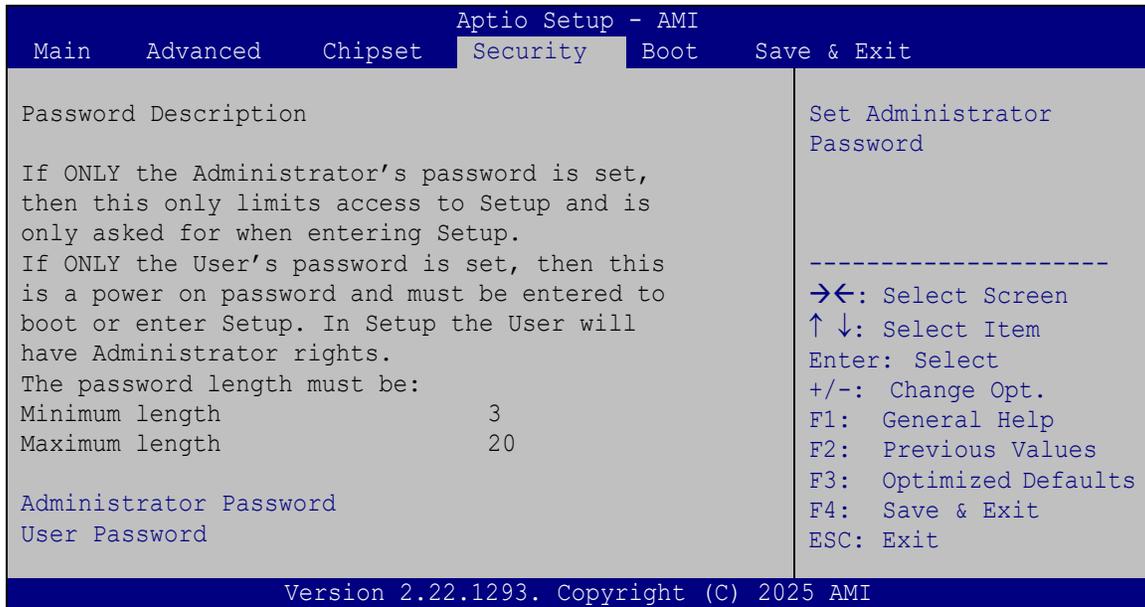
Use the **SATA Mode Selection** option to configure how the SATA controller(s) operate.

- **AHCI** **DEFAULT** Configures SATA devices as AHCI device.

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4.5 Security

Use the **Security** menu (**BIOS Menu 23**) to set system and user passwords.



BIOS Menu 23: Security

→ Administrator Password

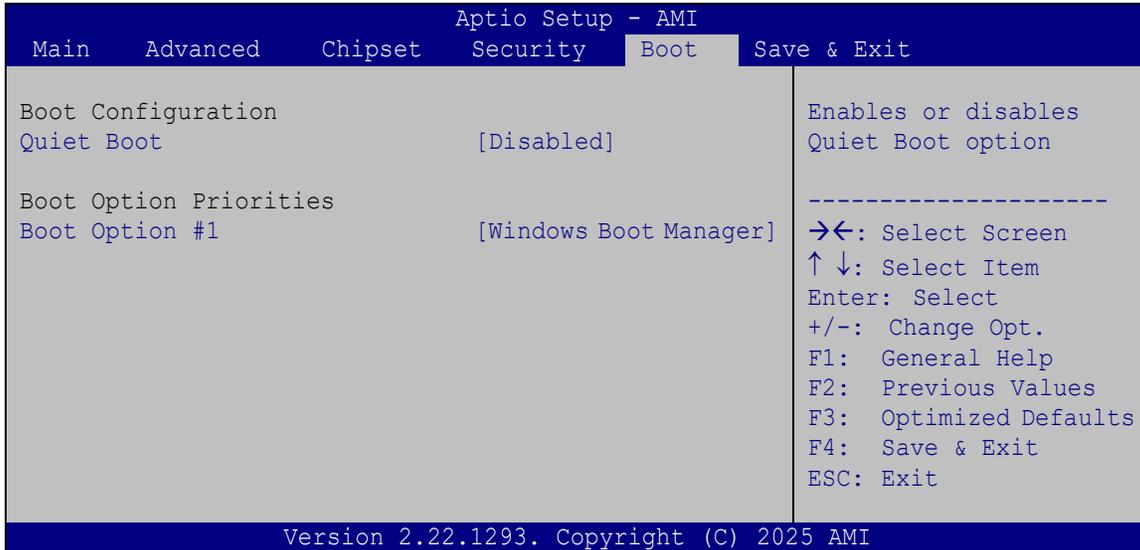
Use the **Administrator Password** to set or change a administrator password.

→ User Password

Use the **User Password** to set or change a user password.

4.6 Boot

Use the **Boot** menu (**BIOS Menu 24**) to configure system boot options.



BIOS Menu 24: Boot

→ Quiet Boot [Enabled]

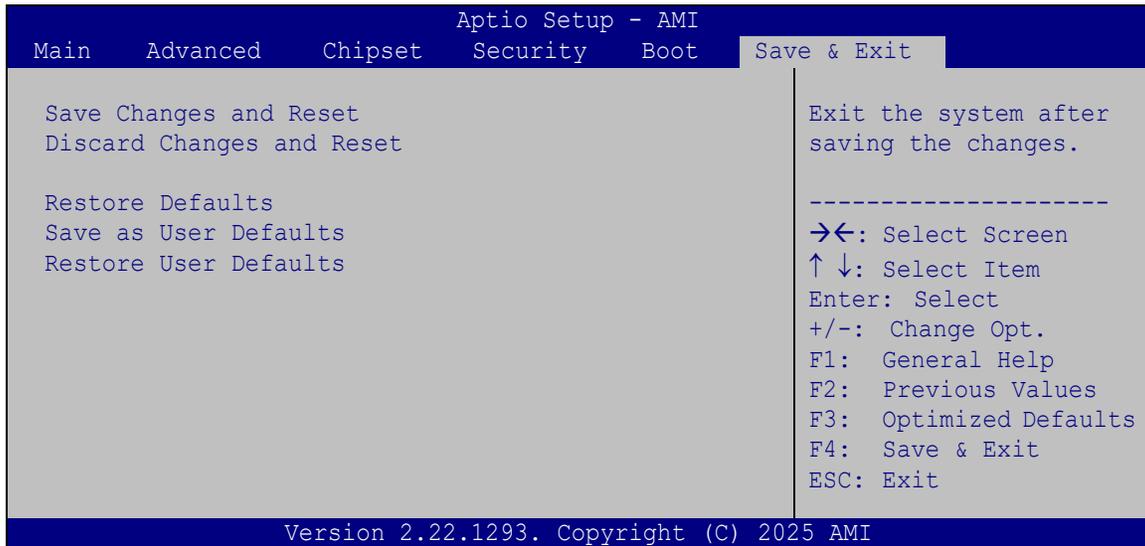
Use the **Quiet Boot** BIOS option to select the screen display when the system boots.

- **Disabled** Normal POST messages displayed
- **Enabled** **DEFAULT** OEM Logo displayed instead of POST messages

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4.7 Save & Exit

Use the **Safe & Exit** menu (**BIOS Menu 25**) to load default BIOS values, optimal failsafe values and to save configuration changes.

**BIOS Menu 25: Save & Exit**→ **Save Changes and Reset**

Use the **Save Changes and Reset** option to save the changes made to the BIOS options and reset the system.

→ **Discard Changes and Reset**

Use the **Discard Changes and Reset** option to exit the system without saving the changes made to the BIOS configuration setup program.

→ **Restore Defaults**

Use the **Restore Defaults** option to load the optimal default values for each of the parameters on the Setup menus. **F3 key can be used for this operation.**

→ **Save as User Defaults**

Use the **Save as User Defaults** option to save the changes done so far as user defaults.

→ **Restore User Defaults**

Use the **Restore User Defaults** option to restore the user defaults to all the setup options.

Chapter

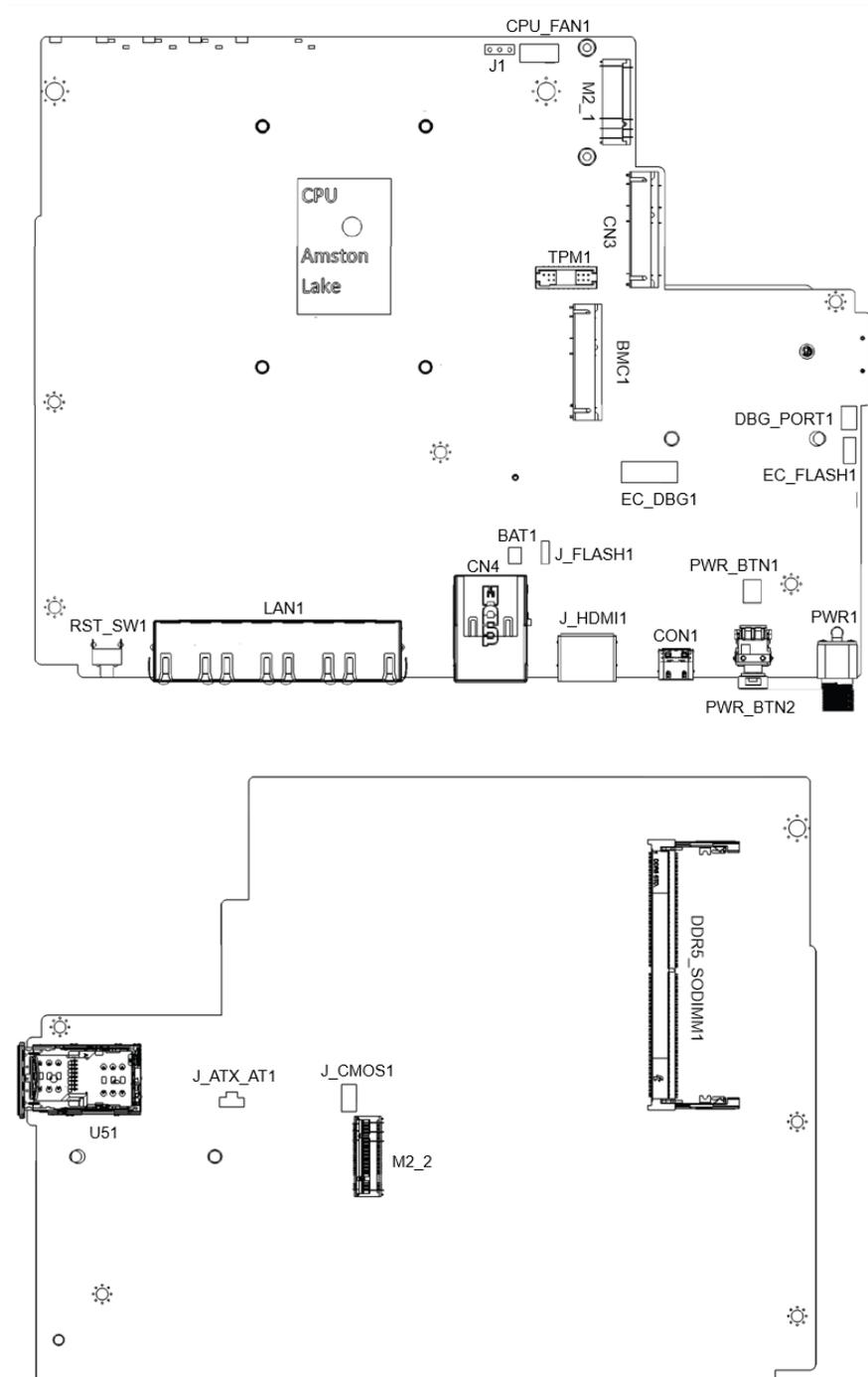
5

Interface Connectors

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5.1 Peripheral Interface Connectors

The connector locations of the PUZZLE-1100's motherboard are shown below. The connector pinouts for these connectors are listed in the following sections.



5.2 Internal Peripheral Connectors

Internal peripheral connectors on the motherboard and are only accessible when the motherboard is outside of the chassis. The table below shows a list of the connectors on the motherboard. Pinouts of these connectors can be found in the following sections.

Connector	Type	Label
Debug connector	5-pin header	DBG_PORT1
EC debug connector	20-pin connector	EC_DBG1
Fan connector	4-pin wafer	CPU_FAN1
IPMI module slot	75-pin slot	BMC1
M.2 B-key slot for 5G module	M.2 3042/3052 B-key	M2_1
M.2 B-key slot for SATA SSD	M.2 2240/2280 B-key	M2_2
Memory slot	DDR5 SO-DIMM slot	DDR5_SODIMM1
PCIe Mini slot	52-pin PCIe Mini slot	CN3
Power button connector	2-pin wafer	PWR_BTN1
RTC battery connector	2-pin wafer	BAT1
SPI flash connector (EC)	4-pin wafer	EC_FLASH1
TPM connector	20-pin connector	TPM1

5.2.1 Debug Port (DBG_PORT1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+V5A	2	SMCLK0_EC
3	N/A	4	SMDATA0_EC
5	GND	6	PLT_RST_N

Table 5-1: Debug Port (DBG_PORT1) Pinouts

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5.2.2 EC Debug Connector (EC_DBG1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	KSI0	11	KSO9
2	KSO0	12	KSO10
3	KSO1	13	KSO12
4	KSO2	14	KSI1
5	KSO3	15	KSO11
6	KSO4	16	KSI2
7	KSO5	17	KSI3
8	KSO6	18	GND
9	KSO7	19	GND
10	KSO8	20	GND

Table 5-2: EC Debug Connector (EC_DBG1) Pinouts

5.2.3 Fan Connector (CPU_FAN1)

PIN NO.	DESCRIPTION
1	GND
2	+12V
3	Rotation signal
4	PWM control signal

Table 5-3: Fan Connector (CPU_FAN1) Pinouts

5.2.4 Power Button Connector (PWR_BTN1)

PIN NO.	DESCRIPTION
1	PWR_BTN+
2	PWR_BTN-

Table 5-4: Power Button Connector (PWR_BTN1) Pinouts

5.2.5 RTC Battery Connector (BAT1)

PIN NO.	DESCRIPTION
1	VBATT
2	GND

Table 5-5: RTC Battery Connector (BAT1) Pinouts

5.2.6 EC SPI Flash Connector (EC_FLASH1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	3	EC_FLASH_CLK
2	EC_FLASH DAT	4	N/A

Table 5-6: SPI Flash Connector (EC_FLASH1) Pinouts

5.2.7 TPM Connector (TPM1)

Pin	Description	Pin	Description
1	N/A	2	N/A
3	N/A	4	N/A
5	GND	6	+V3.3A
7	TPM_SPI_CLK	8	N/A
9	N/A	10	TPM_SPI_MISO
11	N/A	12	TPM_SPI_MOSI
13	TPM_SPI_CS	14	GND
15	TPM_WP	16	N/A
17	SPI_TPM_INT_C	18	+V3.3A
19	TPM_RESET	20	+V3.3A

Table 5-7: TPM Connector (TPM1) Pinouts

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5.2.8 IPMI Module Slot (BMC1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	IRIS_CONFIG3	2	+3.3V
3	GND	4	+3.3V
5	GND	6	IPMI_LINK_LED_1G_N
7	USB_DATA+	8	IPMI_LED_ATC_N
9	USB_DATA-	10	N/A
11	GND	12	N/A
13	N/A	14	N/A
15	N/A	16	N/A
17	N/A	18	N/A
19	N/A	20	IPMI_MDI3_N
21	IRIS_CONFIG0	22	IPMI_MDI3_P
23	N/A	24	IPMI_MDI2_N
25	N/A	26	IPMI_MDI2_P
27	GND	28	IPMI_MDI1_N
29	N/A	30	IPMI_MDI1_P
31	N/A	32	IPMI_MDIO_N
33	GND	34	IPMI_MDIO_P
35	N/A	36	IPMI_LINK_LED_100M_N
37	N/A	38	N/A
39	GND	40	BMC2EC_P1V8_SCL
41	N/A	42	BMC2EC_P1V8_SDA
43	N/A	44	SPI_BMC_BIOS_CS0_N
45	GND	46	SPI_BMC_BIOS_CLK
47	N/A	48	SPI_BMC_BIOS_MOSI
49	N/A	50	BUF_PLT_RST
51	GND	52	N/A
53	N/A	54	IPMI_WAKE_N
55	N/A	56	SPI_BMC_BIOS_MISO
57	GND	58	N/A
59	N/A	60	N/A
61	N/A	62	N/A

63	N/A	64	N/A
65	N/A	66	LPC_eSPI_SEL
67	IPMI_RX	68	IPMI_TX
69	IRIS_CONFIG1	70	+3.3V
71	IPMI_DETECT_R	72	+3.3V
73	GND	74	+3.3V
75	IRIS_CONFIG2		

Table 5-8: IPMI Module Slot (BMC1) Pinouts

5.2.9 M.2 B-key Slot for 5G Module (M2_1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	N/A	2	+3.3V
3	GND	4	+3.3V
5	GND	6	FULL_PWR_OFF
7	USB_DATA+	8	WWAN_DISABLE_N
9	USB_DATA-	10	N/A
11	GND	12	N/A
13	N/A	14	N/A
15	N/A	16	N/A
17	N/A	18	N/A
19	N/A	20	PCIE_DIS
21	N/A	22	+3.3V
23	N/A	24	N/A
25	N/A	26	GNSS_DISABLE_N
27	GND	28	N/A
29	RX1N_R	30	WWAN_UIM_RST_N
31	RX1P_R	32	WWAN_UIM_CLK
33	GND	34	WWAN_UIM_DATA
35	TX1N_R	36	+V_UIM_PWR
37	TX1P_R	38	SSD_DEVSLP
39	GND	40	SML0_CLK_P1V8
41	N/A	42	SML0_DAT_P1V8

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43	N/A	44	N/A
45	GND	46	N/A
47	N/A	48	N/A
49	N/A	50	BUF_PLT_RST
51	GND	52	N/A
53	N/A	54	N/A
55	N/A	56	N/A
57	GND	58	N/A
59	N/A	60	N/A
61	N/A	62	N/A
63	N/A	64	N/A
65	N/A	66	N/A
67	WWAN_RST	68	N/A
69	NGFF_WWAN_CONFIG1	70	+3.3V
71	GND	72	+3.3V
73	GND	74	+3.3V
75	NGFF_WWAN_CONFIG2		

Table 5-9: M.2 B-key 5G Module Slot (M2_1) Pinouts

5.2.10 M.2 B-key Slot for SATA SSD (M2_2)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	WWAN_CONFIG3	2	+3.3V
3	GND	4	+3.3V
5	GND	6	N/A
7	USB_DATA+	8	N/A
9	USB_DATA-	10	N/A
11	GND	12	N/A
13	N/A	14	N/A
15	N/A	16	N/A
17	N/A	18	N/A
19	N/A	20	N/A
21	WWAN_CONFIG0	22	N/A

23	N/A	24	N/A
25	N/A	26	N/A
27	GND	28	N/A
29	N/A	30	N/A
31	N/A	32	N/A
33	GND	34	N/A
35	N/A	36	N/A
37	N/A	38	SSD_DEVSLP
39	GND	40	SML1_CLK_P1V8
41	SATA_RXP	42	SML1_DAT_P1V8
43	SATA_RXN	44	N/A
45	GND	46	N/A
47	SATA_TXN	48	N/A
49	SATA_TXP	50	BUF_PLT_RST
51	GND	52	N/A
53	N/A	54	N/A
55	N/A	56	N/A
57	GND	58	N/A
59	N/A	60	N/A
61	N/A	62	N/A
63	N/A	64	N/A
65	N/A	66	N/A
67	N/A	68	SUS_CLK
69	WWAN_CONFIG1	70	+3.3V
71	GND	72	+3.3V
73	GND	74	+3.3V
75	WWAN_CONFIG2		

Table 5-10: M.2 B-key SATA SSD Slot (M2_2) Pinouts

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5.2.11 PCIe Mini Slot (CN3)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	PCIE_WAKE#	2	+3.3V
3	N/A	4	GND
5	N/A	6	+1.5V
7	N/A	8	N/A
9	GND	10	N/A
11	PCIE_M.2A_N	12	N/A
13	PCIE_M.2A_P	14	N/A
15	GND	16	N/A
17	N/A	18	GND
19	N/A	20	WLAN_EN_EC
21	GND	22	BUF_PLT_RST
23	PCIE_RXN	24	+3.3V
25	PCIE_RXP	26	GND
27	GND	28	+1.5V
29	GND	30	N/A
31	PCIE_TXN	32	N/A
33	PCIE_TXP	34	GND
35	GND	36	USB_PN
37	N/A	38	USB_PP
39	+3.3V	40	GND
41	+3.3V	42	N/A
43	GND	44	N/A
45	N/A	46	N/A
47	N/A	48	+1.5V
49	N/A	50	GND
51	N/A	52	+3.3V

Table 5-11: PCIe Mini Slot (CN3) Pinouts

Appendix

A

Regulatory Compliance

DECLARATION OF CONFORMITY

This equipment is in conformity with the following EU directives:

- EMC Directive 2014/30/EU
- Low-Voltage Directive 2014/35/EU
- RoHS II Directive 2015/863/EU

If the user modifies and/or install other devices in the equipment, the CE conformity declaration may no longer apply.

If this equipment has telecommunications functionality, it also complies with the requirements of the R&TTE Directive 1999/5/EC.

English

IEI Integration Corp declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Български [Bulgarian]

IEI Integration Corp. декларира

че този оборудване е в съответствие със съществените изисквания и другите приложими правила на Директива 1999/5/EC.

Česky [Czech]

IEI Integration Corp tímto prohlašuje, že tento zařzení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Dansk [Danish]

IEI Integration Corp erklærer herved, at følgende udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Deutsch [German]

IEI

Integration Corp.

erklärt,

dass dieses Gerät entspricht

den

grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der

Richtlinie 1999/5/EU.

Eesti [Estonian]

IEI Integration Corp deklareerib seadme seadme vastavust direktiivi 1999/5/EÜ

põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Español [Spanish]

IEI Integration Corp declara que el equipo cumple con los requisitos esenciales y

cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική [Greek]

IEI Integration Corp ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ

ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ

1999/5/EK.

Français [French]

IEI Integration Corp déclare que l'appareil est conforme aux exigences essentielles et aux

autres dispositions pertinentes de la directive 1999/5/CE.

Italiano [Italian]

IEI Integration Corp dichiara che questo apparecchio è conforme ai requisiti essenziali ed

alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski [Latvian]

IEI Integration Corp deklarē, ka iekārta atbilst būtiskajām prasībām un citiem ar to

saistītajiem noteikumiem Direktīvas 1999/5/EK.

Lietuvių [Lithuanian]

IEI Integration Corp deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas

1999/5/EB Direktyvos nuostatas.

Nederlands [Dutch]

IEI Integration Corp dat het toestel in overeenstemming is met de essentiële eisen

en de andere relevante bepalingen van richtlijn 1999/5/EG.

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Malti [Maltese]

IEI Integration Corp jiddikjara li dan prodott jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

Magyar [Hungarian]

IEI Integration Corp nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski [Polish]

IEI Integration Corp oświadcza, że wyrobu jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.

Português [Portuguese]

IEI Integration Corp declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Româna [Romanian]

IEI Integration Corp declară că acest echipament este în conformitate cu cerințele esențiale și cu celelalte prevederi relevante ale Directivei 1999/5/CE.

Slovensko [Slovenian]

IEI Integration Corp izjavlja, da je ta opreme v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky [Slovak]

IEI Integration Corp týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi [Finnish]

IEI Integration Corp vakuuttaa täten että laitteen on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Svenska [Swedish]

IEI Integration Corp förklarar att denna utrustningstyp står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

FCC WARNING

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ROHS STATEMENT

The label on the product indicates this product conforms to European (EU) Restriction of Hazardous Substances (RoHS) that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

CHINA ROHS

The label on the product indicates the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Appendix

B

Safety Precautions

B.1 Safety Precautions



WARNING:

The precautions outlined in this appendix should be strictly followed. Failure to follow these precautions may result in permanent damage to the PUZZLE-1100.

Please follow the safety precautions outlined in the sections that follow:

B.1.1 General Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- ***Make sure the power is turned off and the power cord is disconnected*** when moving, installing or modifying the system.
- ***Do not apply voltage levels that exceed the specified voltage range.*** Doing so may cause fire and/or an electrical shock.
- ***Electric shocks can occur*** if opened while still powered on.
- ***Do not drop or insert any objects*** into the ventilation openings.
- ***If considerable amounts of dust, water, or fluids enter the system***, turn off the power supply immediately, unplug the power cord, and contact the system vendor.
- This equipment is not suitable for use in locations where children are likely to be present.
- **DO NOT:**
 - Drop the system against a hard surface.
 - In a site where the ambient temperature exceeds the rated temperature

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B.1.2 Anti-static Precautions



WARNING:

Failure to take ESD precautions during the installation of the PUZZLE-1100 may result in permanent damage to the PUZZLE-1100 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the PUZZLE-1100. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the PUZZLE-1100 is opened and any of the electrical components are handled, the following anti-static precautions are strictly adhered to.

- ***Wear an anti-static wristband:*** Wearing a simple anti-static wristband can help to prevent ESD from damaging any electrical component.
- ***Self-grounding:*** Before handling any electrical component, touch any grounded conducting material. During the time the electrical component is handled, frequently touch any conducting materials that are connected to the ground.
- ***Use an anti-static pad:*** When configuring or working with an electrical component, place it on an anti-static pad. This reduces the possibility of ESD damage.
- ***Only handle the edges of the electrical component:*** When handling the electrical component, hold the electrical component by its edges.

B.1.3 Product Disposal

**CAUTION:**

Risk of explosion if the battery is replaced by an incorrect type;

Replacement of a battery with an incorrect type that can defeat a safeguard (for example, in the case of some lithium battery types);

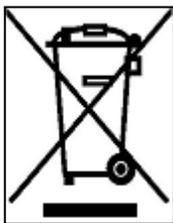
Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion;

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;

A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union:



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

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B.2 Maintenance and Cleaning Precautions

When maintaining or cleaning the PUZZLE-1100, please follow the guidelines below.

B.2.1 Maintenance and Cleaning

Prior to cleaning any part or component of the PUZZLE-1100, please read the details below.

- The interior of the PUZZLE-1100 does not require cleaning. Keep fluids away from the PUZZLE-1100 interior.
- Be cautious of all small removable components when vacuuming the PUZZLE-1100.
- Turn the PUZZLE-1100 off before cleaning the PUZZLE-1100.
- Never drop any objects or liquids through the openings of the PUZZLE-1100.
- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning the PUZZLE-1100.
- Avoid eating, drinking and smoking within vicinity of the PUZZLE-1100.

B.2.2 Cleaning Tools

Some components in the PUZZLE-1100 may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the PUZZLE-1100.

- **Cloth** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the PUZZLE-1100.
- **Water or rubbing alcohol** – A cloth moistened with water or rubbing alcohol can be used to clean the PUZZLE-1100.
- **Using solvents** – The use of solvents is not recommended when cleaning the PUZZLE-1100 as they may damage the plastic parts.
- **Vacuum cleaner** – Using a vacuum specifically designed for computers is one of the best methods of cleaning the PUZZLE-1100. Dust and dirt can restrict the airflow in the PUZZLE-1100 and cause its circuitry to corrode.
- **Swabs** - Swabs moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas. Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

C

Error Beep Code

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C.1 PEI Beep Codes

Number of Beeps	Description
1	Memory not Installed
1	Memory was installed twice (InstallPeiMemory routine in PEI Core called twice)
2	Recovery started
3	DXE IPL was not found
3	DXE Core Firmware Volume was not found
4	Recovery failed
4	S3 Resume failed
7	Reset PPI is not available

C.2 DXE Beep Codes

Number of Beeps	Description
1	Invalid password
4	Some of the Architectural Protocols are not available
5	No Console Output Devices are found
5	No Console Input Devices are found
6	Flash update is failed
7	Reset protocol is not available
8	Platform PCI resource requirements cannot be met



NOTE:

If you have any question, please contact IEI for further assistance.

Appendix

D

Hazardous Materials Disclosure

PUZZLE-1100

D.1 RoHS II Directive (2015/863/EU)

The details provided in this appendix are to ensure that the product is compliant with the RoHS II Directive (2015/863/EU). The table below acknowledges the presences of small quantities of certain substances in the product, and is applicable to RoHS II Directive (2015/863/EU).

Please refer to the following table.

Part Name	Toxic or Hazardous Substances and Elements									
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)	Bis(2-ethylhexyl) phthalate (DEHP)	Butyl benzyl phthalate (BBP)	Dibutyl phthalate (DBP)	Diisobutyl phthalate (DIBP)
Housing	O	O	O	O	O	O	O	O	O	O
Display	O	O	O	O	O	O	O	O	O	O
Printed Circuit Board	O	O	O	O	O	O	O	O	O	O
Metal Fasteners	O	O	O	O	O	O	O	O	O	O
Cable Assembly	O	O	O	O	O	O	O	O	O	O
Fan Assembly	O	O	O	O	O	O	O	O	O	O
Power Supply Assemblies	O	O	O	O	O	O	O	O	O	O
Battery	O	O	O	O	O	O	O	O	O	O

O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in Directive (EU) 2015/863.

X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in Directive (EU) 2015/863.

D.2 China RoHS

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有“环境友好使用期限”的标签，此期限是估算这些物质“不会有泄漏或突变”的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	○	○	○	○	○	○
显示	○	○	○	○	○	○
印刷电路板	○	○	○	○	○	○
金属螺帽	○	○	○	○	○	○
电缆组装	○	○	○	○	○	○
风扇组装	○	○	○	○	○	○
电力供应组装	○	○	○	○	○	○
电池	○	○	○	○	○	○
<p>○: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T11364-2014 與 GB/T26572-2011 标准规定的限量要求以下。</p> <p>X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11364-2014 與 GB/T26572-2011 标准规定的限量要求。</p>						