User Manual

Industrial Panel PC
PPC-CXX27 Series

ESTONE TECHNOLOGY

Empowering the world with smart solutions

Estone Panel PC User Manual PPC-CXX27 Series

Revision History

Revision History	Changes	Date
Ver 1.0	First Release	2025/01/01

Table of Contents

Safety Precautions

(1) Please read and follow the safety precautions before you are going to use it.

(2) Pay attention to the labels on the product.

(3) Make sure to use in an environment that meets the design specifications, otherwise, malfunction or partial damage caused by non-compliance with relevant regulations is not covered under the product quality guarantee.

(4) Please unplug the power cord and do not use liquids to clean the PC.

(5) Please keep the PC in a safe space to prevent it from falling and damaging its components.

(6) Please keep the power cord in a safe location to avoid causing personal injury.

(7) Please do not bundle control wires, communication cables and power wires together, it would be better to keep a distance of at least 100mm between them to avoid mutual interference.

(8) It is recommended to use wires with isolation, especially in environments with severe electromagnetic interference.

(9) Please disconnect it from the power socket if the PC is not used for a long time.

(10) Please make sure that no liquids enter the device to avoid the risk of fire or short circuit.

(11) Please disconnect the power cord before opening the computer case.

(12) Please clean the dust regularly.

(13) Please ask for technical support and return the PC to RMA:

The power cord or plug is damaged;

Liquid has entered the interior of the PC;

PC doesn't work;

PC is damaged;

Physical damage on the PC.

Chapter 1 System Overview

1.1 System Introduction

The Estone industrial panel PCs are paired with Intel® Alder Lake-U platform processors. Display sizes range from 12.1 inches to 21.5 inches to choose from.The display supports Anti-Glare and Anti-Fingerprint.The Panel PCs meets the front panel IP65 standard.The panel PCs supports the installation of WiFi cards and 5G modules.

1.2 Product Specifications

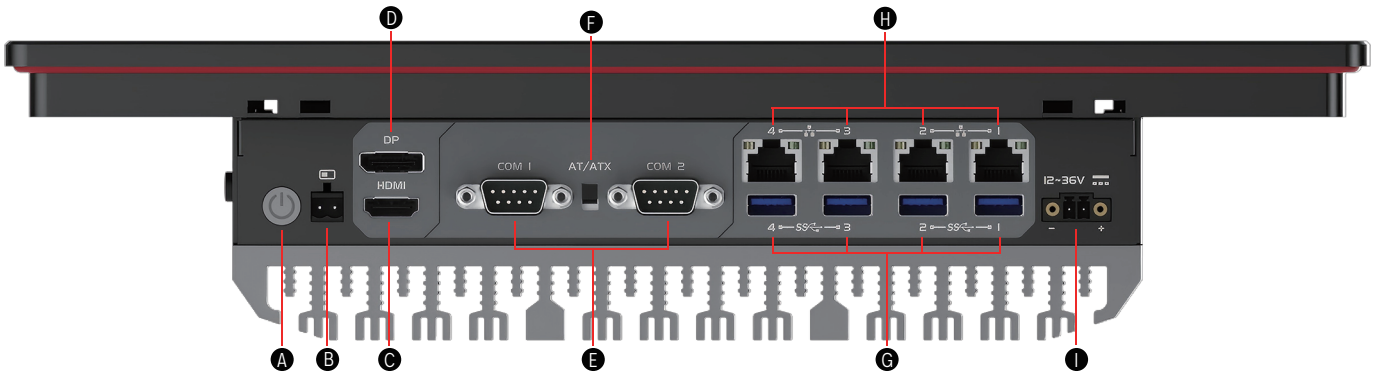
Model Name	PPC-C1227/PPC-C1527/PPC-C1627/PPC-C1727/PPC-C1827/PPC-C2127	
System	CPU	Intel® Alder Lake-U processor
	Memory	1xSO-DIMM,DDR5 4800MHz, Max.32GB
	Storage	1xM.2 M Key 2242/2280(NVMe), 1x2.5" SATA3.0
	Display	1xHDMI1.4b,1 x DP 1.2(Only for non-clip cables)
	USB	4xUSB3.2 Gen1 Type-A
	COM	2xRS-232/422/485(setting by BIOS)
	LAN	3x10/100/1000/2500Mbps RJ-45 Ethernet(Intel I226-V), 1x10/100/1000Mbps RJ-45 Ethernet(Intel I210-AT)
	Expansion	1xM.2 E Key 2230(for WIFI & Bluetooth), 1xM.2 B Key 3042/3052(for 4G/5G)
	TPM	TPM 2.0
	Watchdog	1~255 levels programmable
	12.1”	Aspect Ratio: 4:3 Resolution: 1024x768 Luminance: 500nits Contrast Ratio: 1200:1 Backlight Lifetime: 50000hours Viewing Angle: 88(left), 88(right), 88(top), 88(bottom)

LCD	15.0”	Aspect Ratio: 4:3 Resolution: 1024x768 Luminance: 350nits Contrast Ratio: 1000:1 Backlight Lifetime: 50000hours Viewing Angle: 89(left), 89(right), 89(top), 89(bottom)
	15.6”	Aspect Ratio: 16:9 Resolution: 1920x1080 Luminance: 300nits Contrast Ratio: 800:1 Backlight Lifetime: 15000hours Viewing Angle: 85(left), 85(right), 85(top), 85(bottom)
	17.0”	Aspect Ratio: 5:4 Resolution: 1280x1024 Luminance: 250nits Contrast Ratio: 1000:1 Backlight Lifetime: 50000hours Viewing Angle: 85(left), 85(right), 80(top), 80(bottom)
	18.5”	Aspect Ratio: 16:9 Resolution: 1920x1080 Luminance: 250nits Contrast Ratio: 1000:1 Backlight Lifetime: 50000hours Viewing Angle: 89(left), 89(right), 89(top), 89(bottom)
	21.5”	Aspect Ratio: 16:9 Resolution: 1920x1080 Luminance: 250nits Contrast Ratio: 1000:1 Backlight Lifetime: 50000hours Viewing Angle: 89(left), 89(right), 89(top), 89(bottom)
Touch Screen	Touch Type	Multi-touch Projected Capacitive
	Light Transmission	≥ 81%
OS	OS Support	Windows10, Windows11, Linux

Power	Input Voltage	DC 12~36V
Power Consumption	PPC-C1227	52.90W
	PPC-C1527	50.80W
	PPC-C1627	44.20W
	PPC-C1727	47.50W
	PPC-C1827	50.33W
	PPC-C2127	56.98W
Dimensions	PPC-C1227	298.5x237.5x79.0mm(11.8x9.4x3.1in)
	PPC-C1527	360.0x284.0x79.0mm(14.2x11.2x3.1in)
	PPC-C1627	398.4x250.8x79.0mm(15.7x9.9x3.1in)
	PPC-C1727	391.4x326.4x79.0mm(15.4x12.9x3.1in)
	PPC-C1827	470.0x290.0x79.0mm(18.5x11.4x3.1in)
	PPC-C2127	532.5x324.0x79.0mm(21.0x12.8x3.1in)
Cutout Dimensions	PPC-C1227	286.5x225.5mm(11.3x8.9in)
	PPC-C1527	348.0x272.0mm(13.7x10.7in)
	PPC-C1627	386.5x239.0mm(15.2x9.4in)
	PPC-C1727	379.5x314.5mm(14.9x12.4in)
	PPC-C1827	458.0x278.0mm(18.0x10.9in)
	PPC-C2127	520.5x312.0mm(20.5x12.3in)
Net Weight	PPC-C1227	4.15kg(9.1lb)
	PPC-C1527	5.40kg(11.9lb)
	PPC-C1627	4.78kg(10.5lb)
	PPC-C1727	5.77kg(12.7lb)
	PPC-C1827	6.06kg(13.4lb)
	PPC-C2127	7.57kg(16.7lb)

Environment	Operating Temperature	0~50℃(32~122℉)
	Storage Temperature	-20~60℃(-4~140℉)
	Relative Humidity	95% @ 40℃(non-condensing)
	IP Rating	Front panel IP65
	Vibration	Operating random vibration test 5~500Hz,1.5Grms @with SSD, follows IEC 60068-2-64
	Shock	Operating 15G peak acceleration (11ms duration), follows IEC 60068-2-27
	EMC	CE/FCC Class A

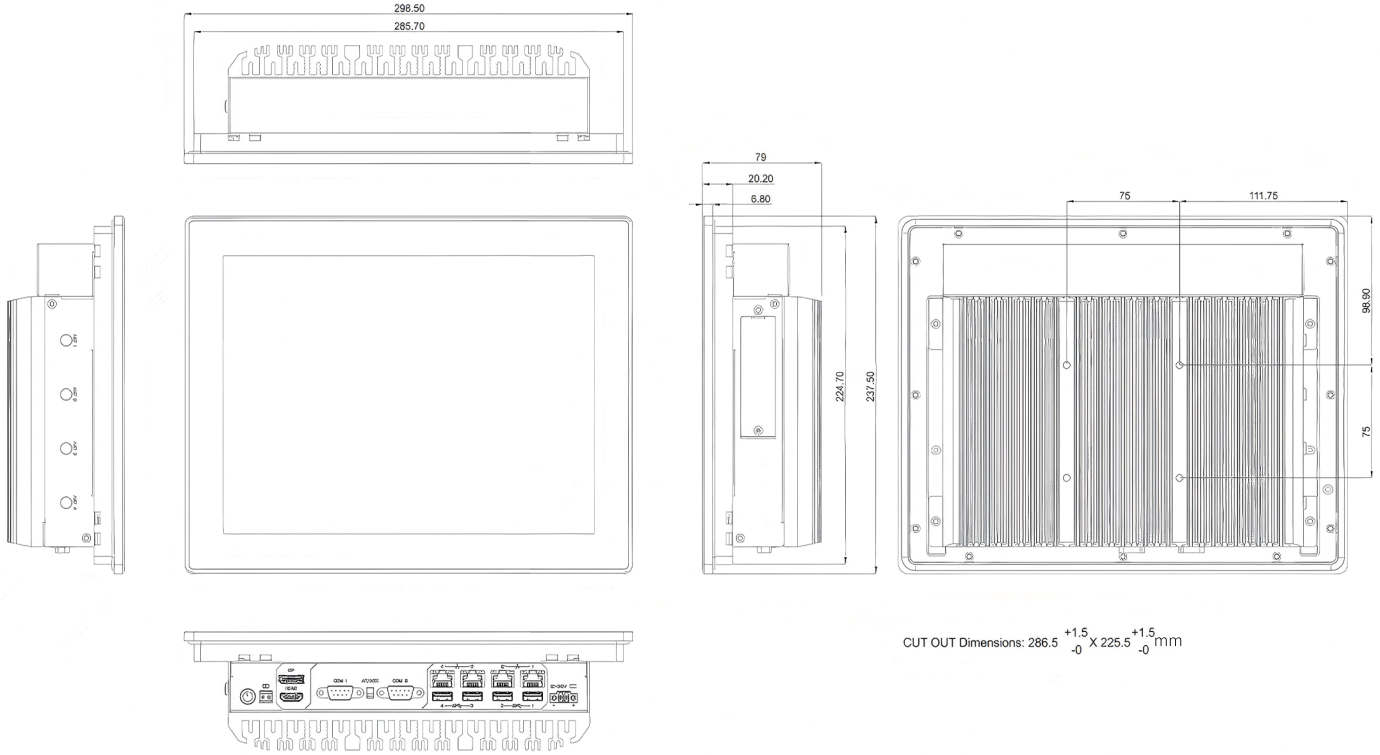
1.3 External I/O



A	1xPower Button
B	1xRemote Switch
C	1xDP 1.2
D	1xHDMI 1.4b
E	2xCOM RS232/422/485
F	1xAT/ATX Switch
G	4xUSB3.2 Gen1
H	3x2.5Gbe LAN，1x 1Gbe LAN
I	1xDC IN 12~36V

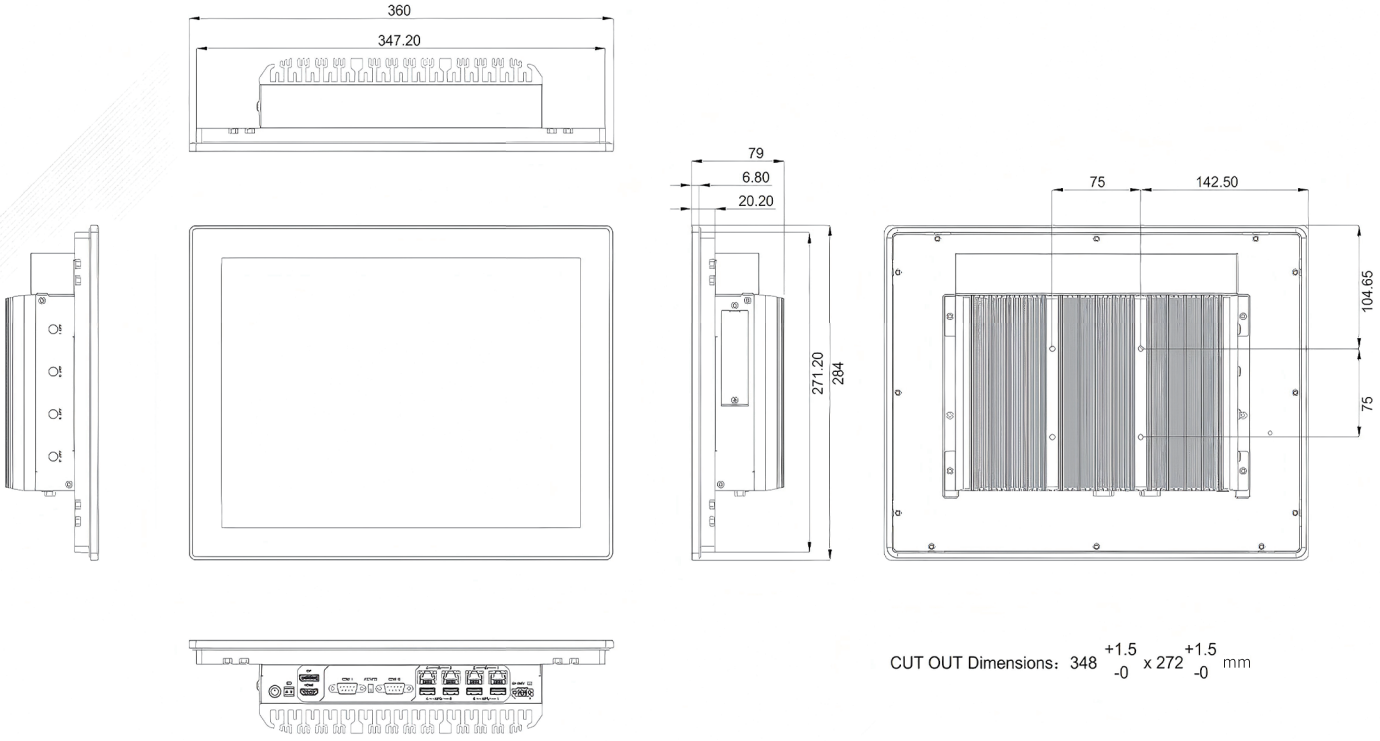
1.4 Dimensions

PPC-C1227



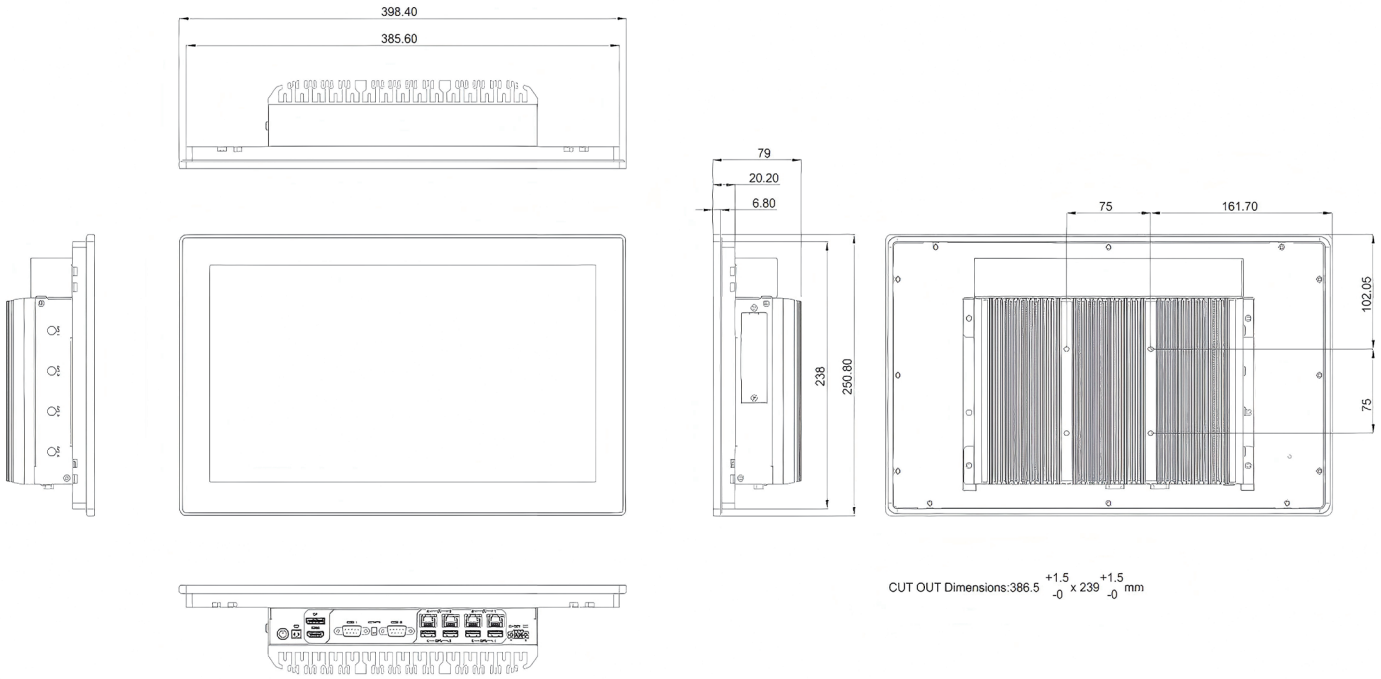
CUT OUT Dimensions: 286.5 $^{+1.5}_{-0}$ X 225.5 $^{+1.5}_{-0}$ mm

PPC-C1527



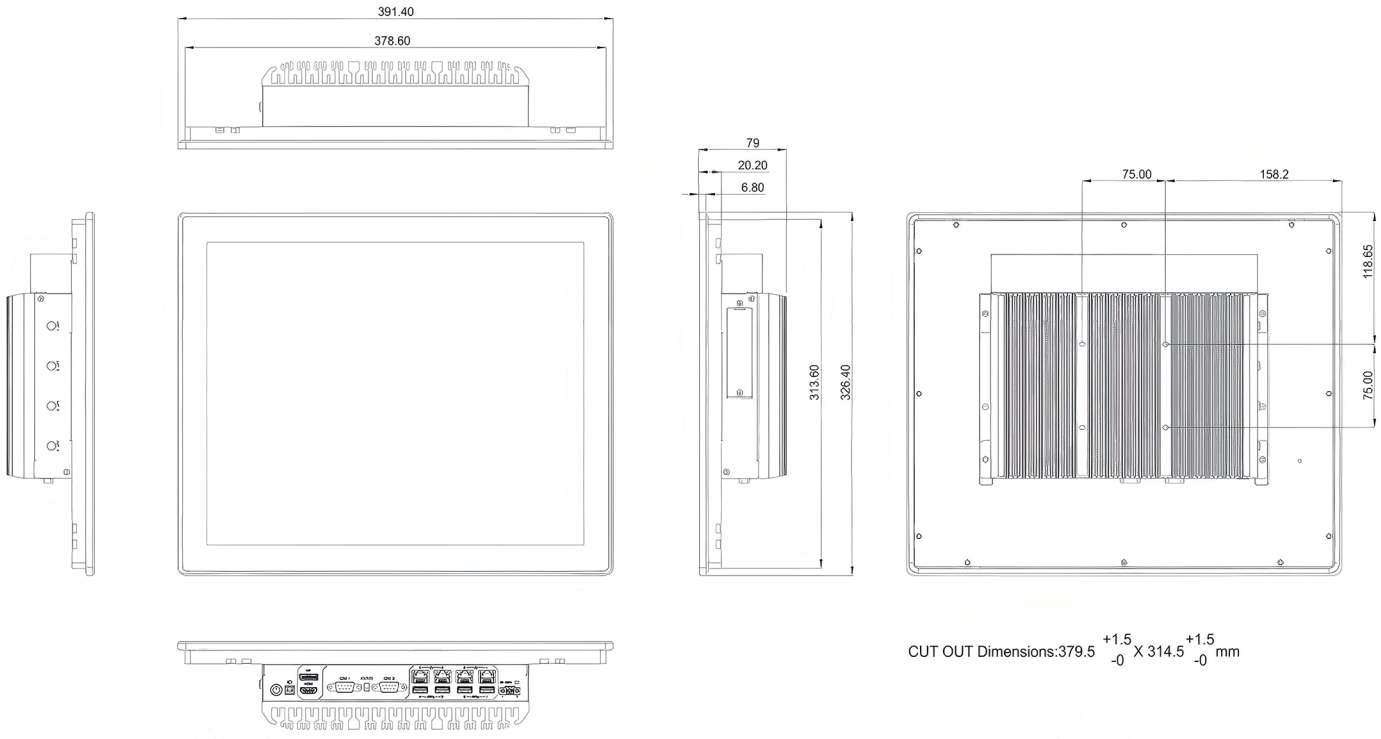
CUT OUT Dimensions：348 $^{+1.5}_{-0}$ x 272 $^{+1.5}_{-0}$ mm

PPC-C1627



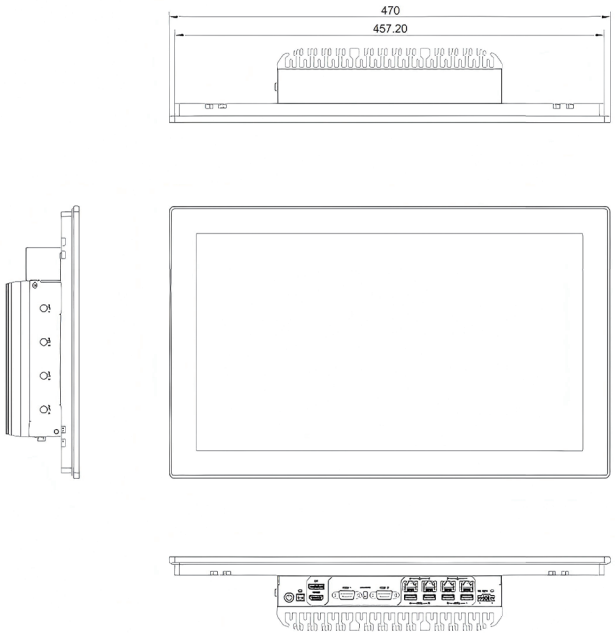
CUT OUT Dimensions:386.5 $^{+1.5}_{-0}$ x 239 $^{+1.5}_{-0}$ mm

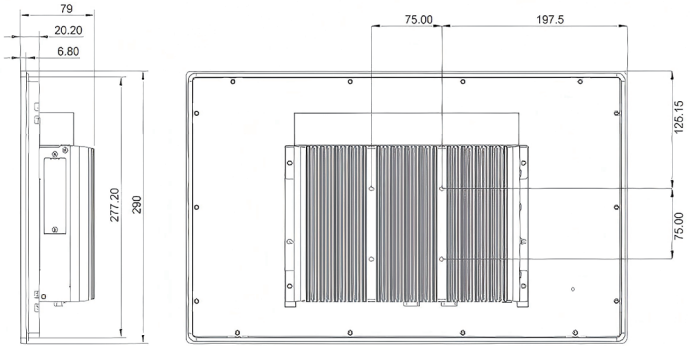
PPC-C1727



CUT OUT Dimensions:379.5 $^{+1.5}_{-0}$ X 314.5 $^{+1.5}_{-0}$ mm

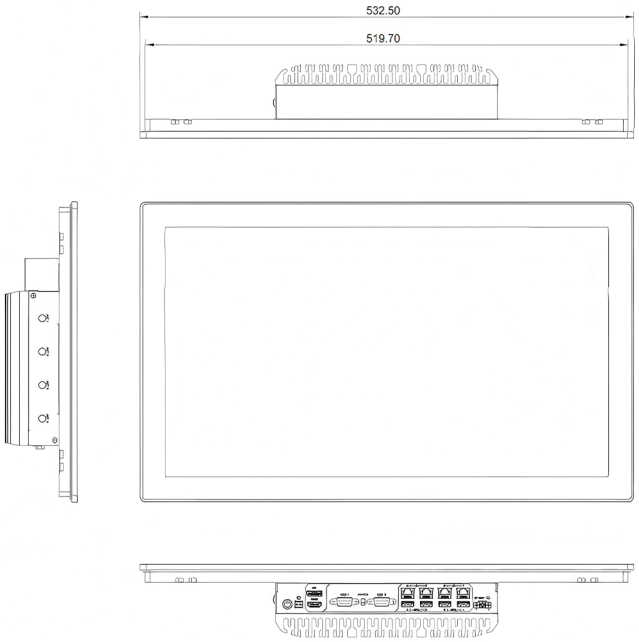
PPC-C1827

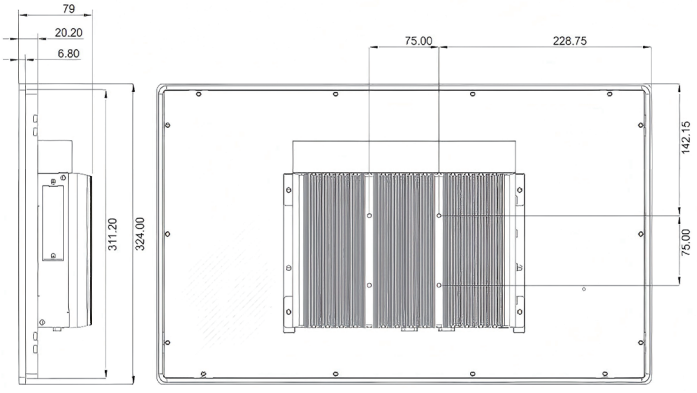




CUT OUT Dimensions: 458 $^{+1.5}_{-0}$ X 278 $^{+1.5}_{-0}$ mm

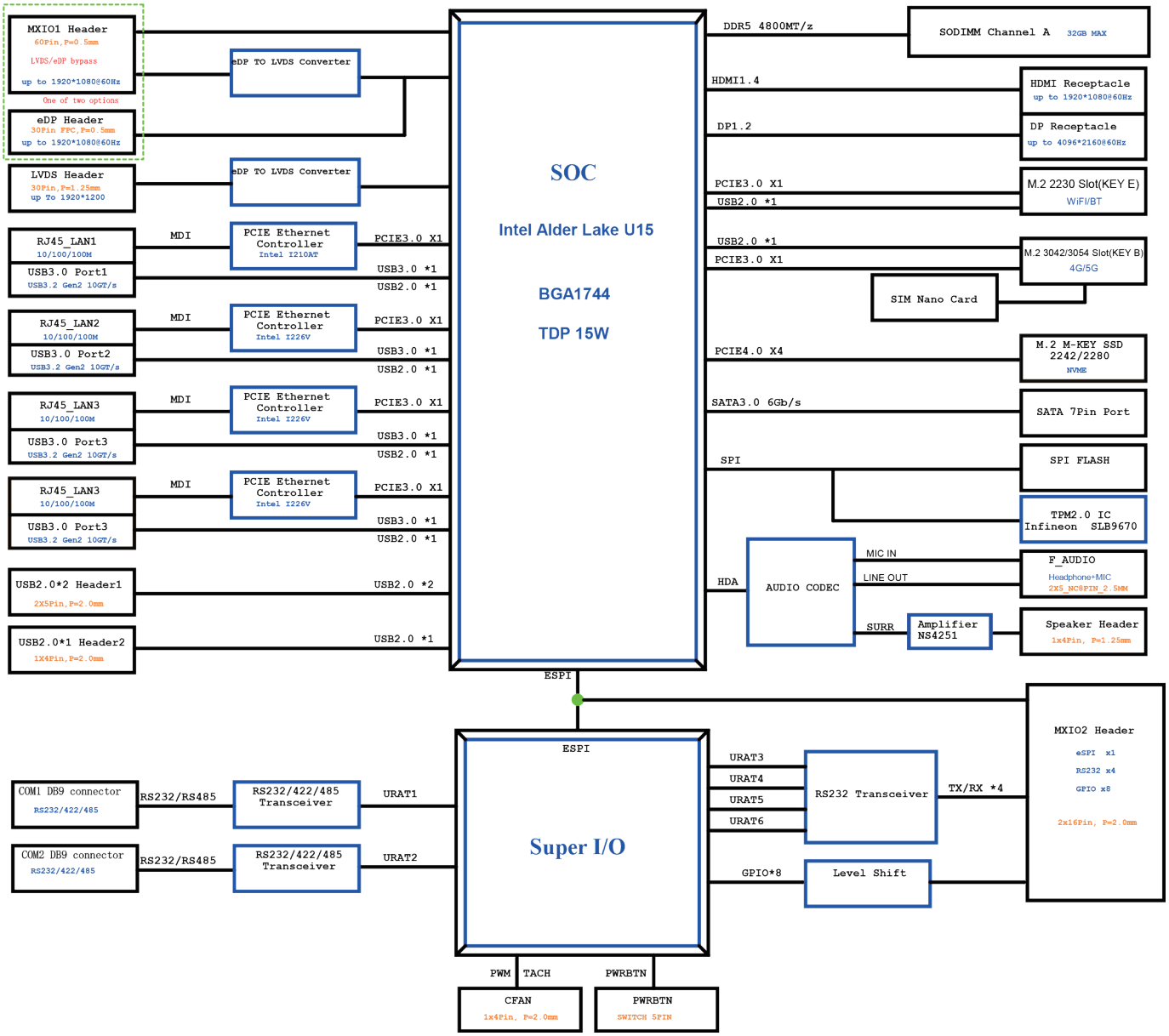
PPC-C2127





CUT OUT Dimensions: 520.5 $^{+1.5}_{-0}$ X 312 $^{+1.5}_{-0}$ mm

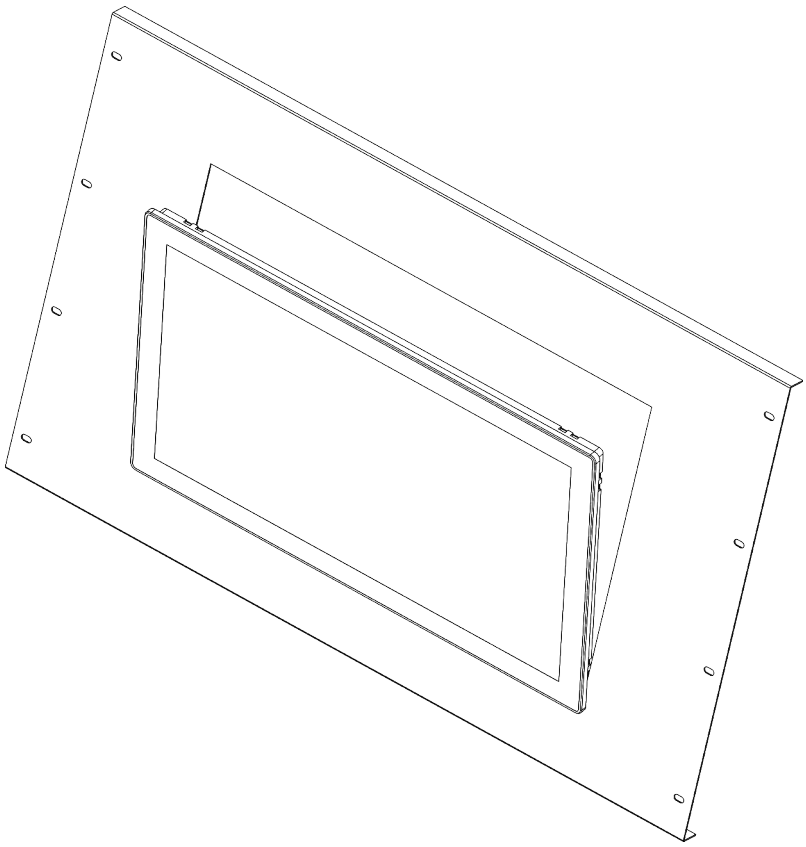
1.5 System Circuit Block Diagram



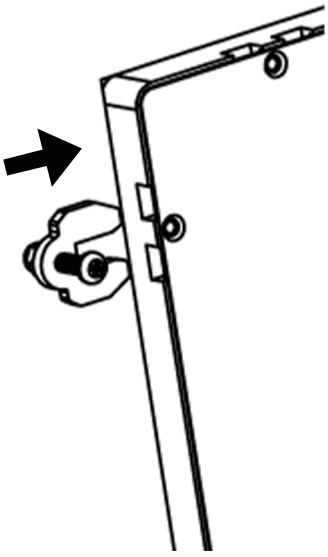
Chapter 2 Mounting Instructions

2.1 Panel Mount

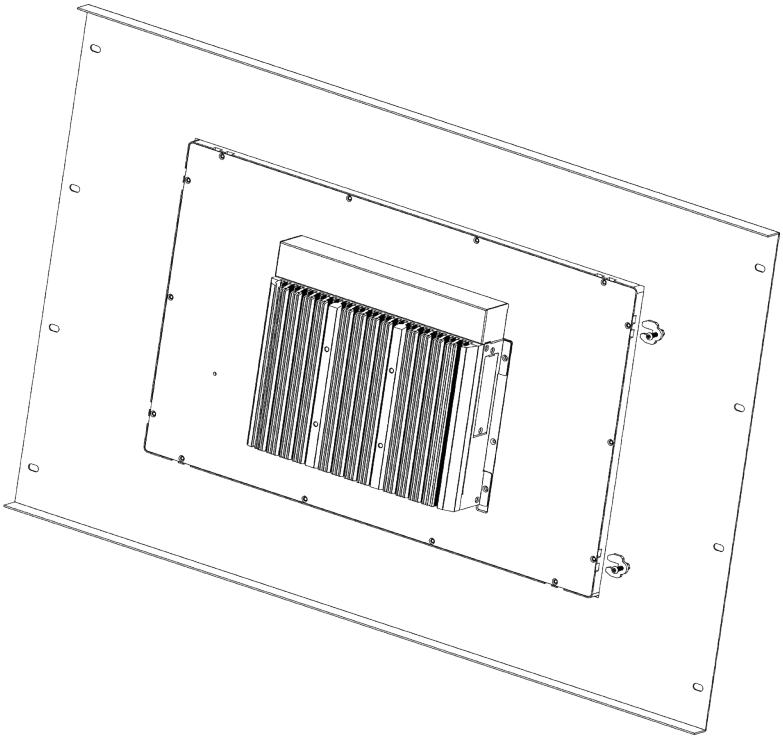
(1) Install the industrial all-in-one machine on the panel bracket as shown in the figure below;



(2) Install the snaps into the side snap holes of the industrial all-in-one machine and then tighten the screws as shown in the figure below;
Torque: 5 kgf-cm (0.5 Nm)

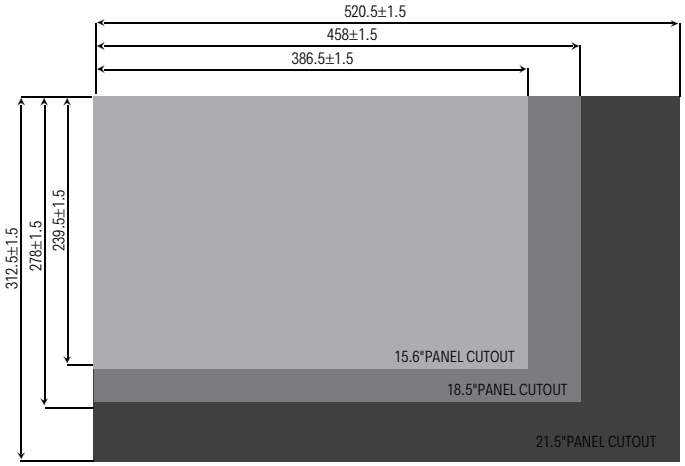


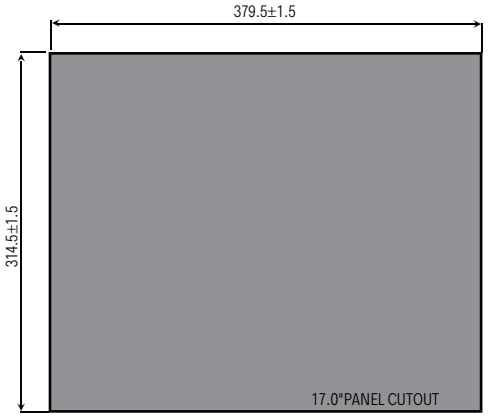
(3) The installed interface is shown in the figure below. The installation of the remaining snaps is similar to this operation.

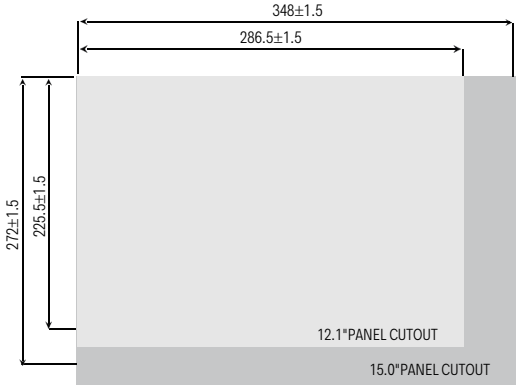


Note: The installation of snaps for PPC–C1227/C1527/C1627 requires 4 pieces.The installation of snaps for PPC–C1727/C1827/C2127 requires 8 pieces.

Cutout Dimensions



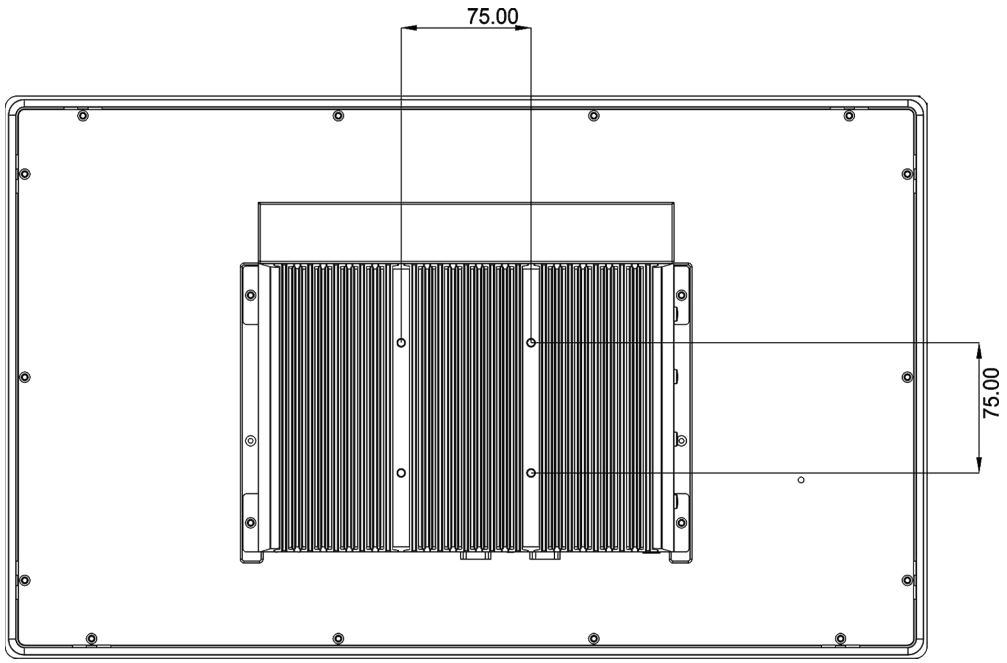




2.2 VESA Mount

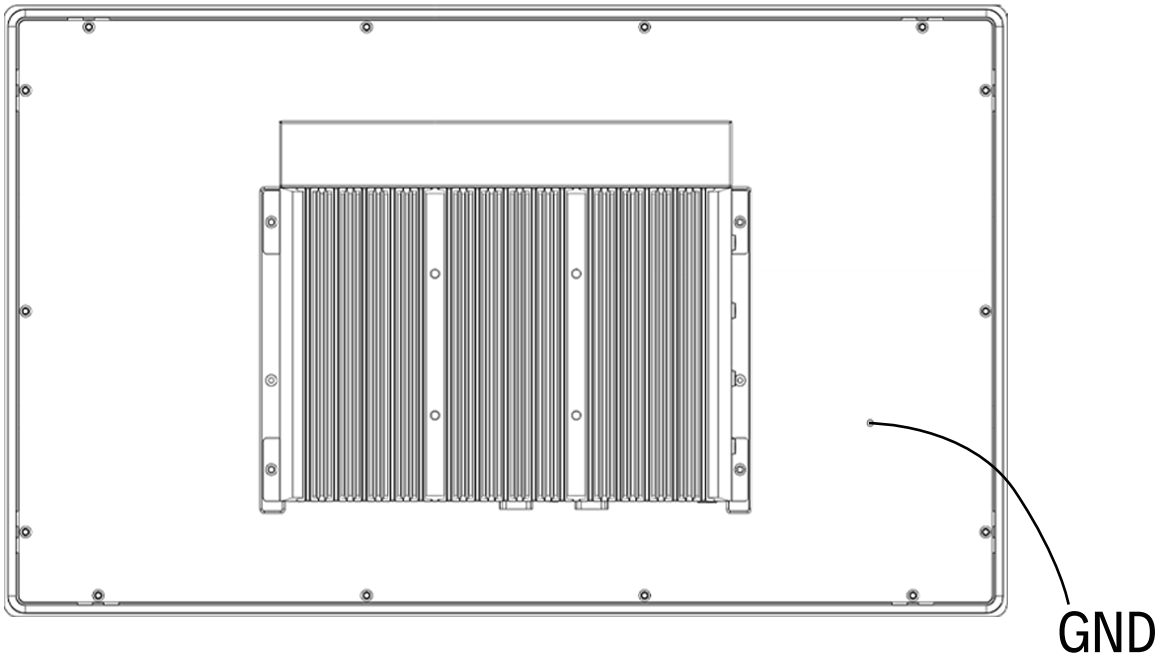
The PPC series support VESA installation.

VESA Size: 75mm x 75mm



2.3 Grounding

It is recommended to use thicker and shorter cable to connect to the ground nearby properly.

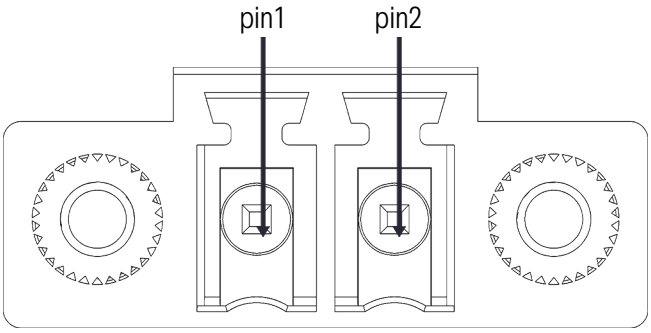


Chapter 3 Connectors and I/O Definitions

3.1 Bottom Panel I/O

3.1.1 Power Connector

The power interface is a 2Pin Phoenix Connector , the input voltage supports DC IN 12–36V, and supports reverse connection, short circuit, undervoltage, overvoltage and overcurrent protection



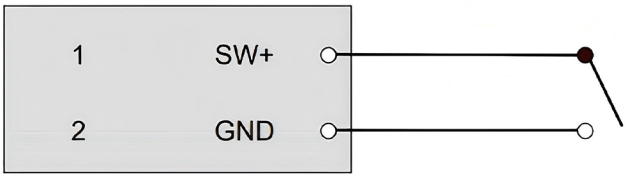
	Pin no.	Signal
Power Connector	1	GND
	2	DC 12–36V

3.1.2 Power button and Power LED

The power button can be used to turn on and off the system. The power button is a momentary contact button with a blue LED backlight used to display the status of the system. A single presswhile the system is on will initiate a graceful shutdown operation from the OS. Pressing and holding the button for 4 seconds while the system is running will cause a hard reset of the system. The system can be woken by a single press of the power button from any state.
The Power LED indicates the status of the system. A solid blue light indicates that the system is powered in the S0 state. The LED is off in S5 and deep sleep states.

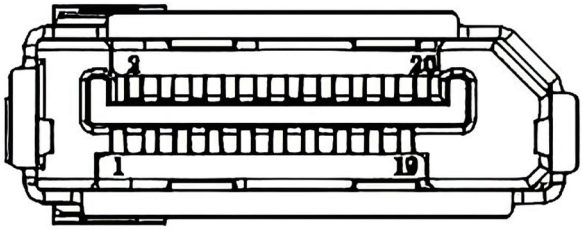
3.1.3 Remote Switch

When the panel PC is in S5 state, short the Remote Switch 2Pin to power on.



3.1.4 DP 1.2

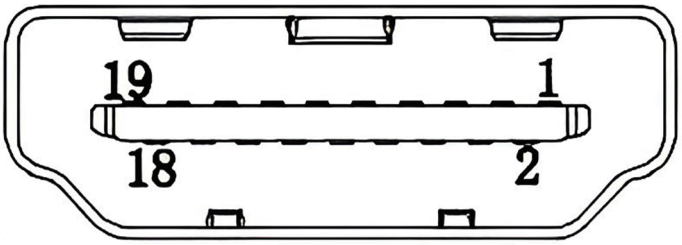
Used to connect the system with DP monitor.Support 4K@60Hz.



	Pin no.	Signal	Pin no.	Signal	Pin no.	Signal	Pin no.	Signal
DP	1	ML_Lane 0(p)	6	ML_Lane 1(n)	11	GND	16	GND
	2	GND	7	ML_Lane 2(p)	12	ML_Lane 3(n)	17	AUX CH(n)
	3	ML_Lane 0(n)	8	GND	13	GND	18	Hot Plug Detect
	4	ML_Lane 1(p)	9	ML_Lane 2(n)	14	GND	19	Return
	5	GND	10	ML_Lane 3(p)	15	AUX CH(p)	20	DP_PWR

3.1.5 HDMI 1.4b

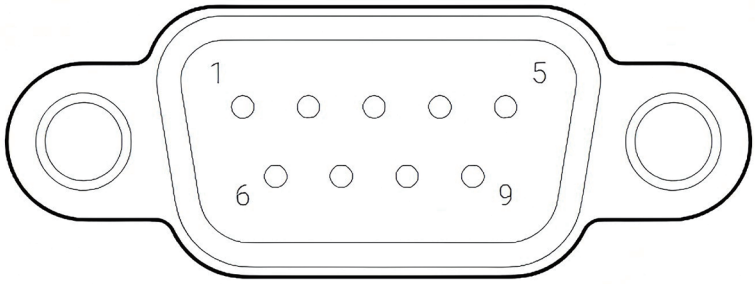
Used to connect the system with HDMI monitor.Support 4K@60Hz.



	Pin no.	Signal	Pin no.	Signal	Pin no.	Signal	Pin no.	Signal
HDMI Type A	1	TMDS DATA2+	6	TMDS DATA1−	11	TMDS DATA0 Shield	16	SDA
	2	TMDS DATA2 Shield	7	TMDS DATA0+	12	TMDS Clock−	17	DDC/CEC Ground
	3	TMDS DATA2−	8	TMDS DATA0 Shield	13	CEC	18	+5V Power
	4	TMDS DATA1+	9	TMDS DATA0−	14	Utility	19	Hot Plug Detect
	5	TMDS DATA1 Shield	10	TMDS Clock+	15	SCL		

3.1.6 COM

The panel PC has two COM interfaces, and the RS232/485/422 mode can be selected, which can be selected by BIOS.



	RS-232		RS-422		RS-485	
	Pin no.	Signal	Pin no.	Signal	Pin no.	Signal
COM	1	DCD	1	TX-	1	D-
	2	RXD	2	TX+	2	D+
	3	TXD	3	RX+	3	NC
	4	DTR	4	RX-	4	NC
	5	GND	5	GND	5	GND
	6	DSR	6	NC	6	NC
	7	RTS	7	NC	7	NC
	8	CTS	8	NC	8	NC
	9	RI	9	NC	9	NC

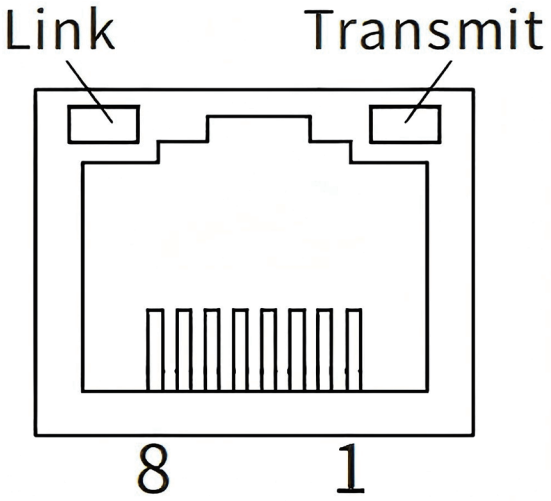
3.1.7 AT/ATX Switch

When the AT/ATX switch is set to the AT state, the machine will automatically power on when the power adapter is plugged in.

When the AT/ATX switch is set to ATX status, the machine does not automatically turn on when the power adapter is plugged in.

3.1.8 LAN

LAN1 support 1000Mbps, LAN2、LAN3 and LAN4 support 2500Mbps.

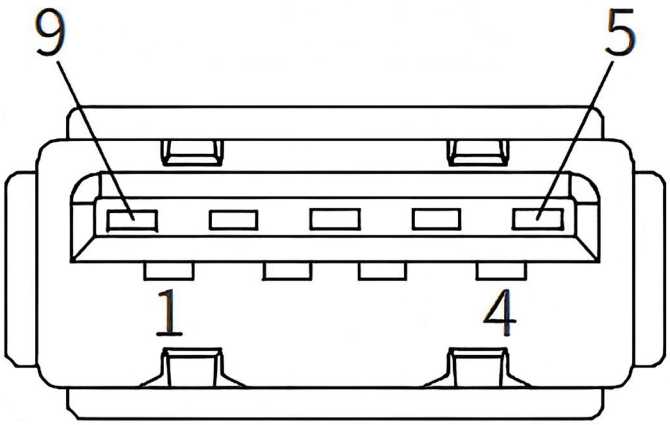


	Pin no.	Signal	Pin no.	Signal
LAN	1	TX_D1+	5	BI_D3−
	2	TX_D1−	6	RX−D2−
	3	RX_D2+	7	BI_D4+
	4	BI_D3+	8	BI_D4−

LAN LED	LED	Color	State	Function
	Link	–	Off	LAN link is not established
		Yellow	On	LAN link is established
			Blinking	LAN activity occurring
	transmit	–	Off	10Mb/s data rate
		Green	On	100Mb/s data rate
		Green	On	1Gb/s data rate
		Green	On	2.5Gb/s data rate

3.1.9 USB3.2 GEN1

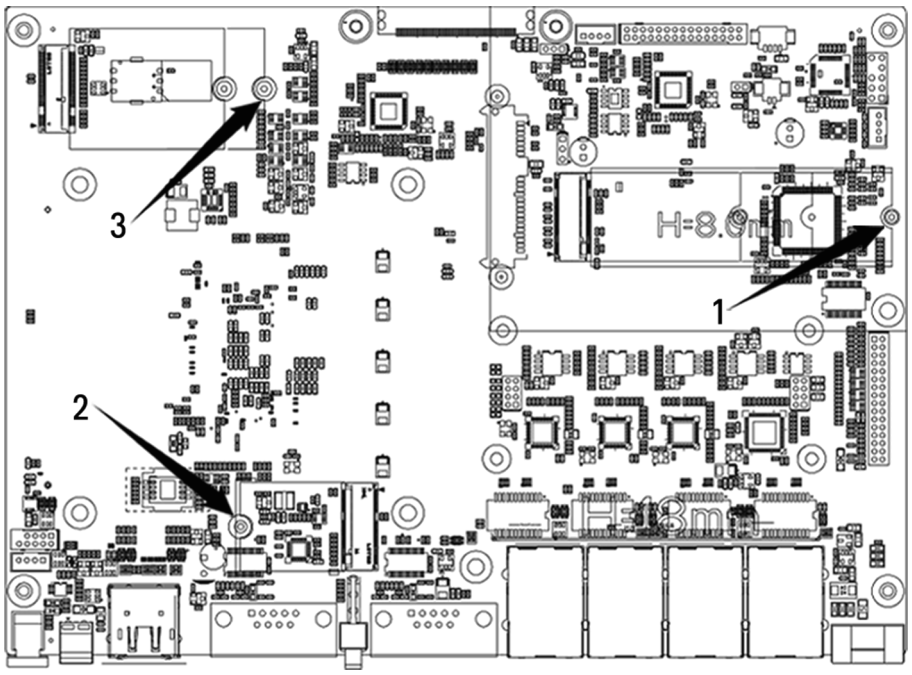
4 USB3.2 GEN1 ports with a speed of 5Gbps.



	Pin no.	Signal	Pin no.	Signal
USB3.2 Gen1	1	VCC5	6	SSRX+
	2	DATA−	7	GND
	3	DATA+	8	SSTX−
	4	GND	9	SSTX+
	5	SSRX−		

3.2 Motherboard Connectors

Remove the screw pointed by No. 1 arrow, and you can install an M.2 NVMe SSD.
Remove the screw pointed by No. 2 arrow, and you can install a WiFi card.
Remove the screw pointed by No. 3 arrow, and you can install a 5G module.



3.2.1 M.2 M-Key

There is an M.2 M-Key connector on the motherboard, which supports the NVMe protocol and can install SSDs in 2242 and 2280 form factors.

Pin	Function	Function	Pin
1	GND	3.3V	2
3	GND	3.3V	4
5	PERn3	N/C	6
7	PERp3	N/C	8
9	GND	DAS/DSS#(I/O)LED_1#(I)(0/3.3V)	10
11	PETn3	3.3V	12
13	PETp3	3.3V	14
15	GND	3.3V	16
17	PERn2	3.3V	18
19	PERp2	N/C	20
21	GND	N/C	22
23	PETn2	N/C	24
25	PETp2	N/C	26
27	GND	N/C	28
29	PERn1	N/C	30

31	PERp1	N/C	32
33	GND	N/C	34
35	PETn1	N/C	36
37	PETp1	DEVSLP(O)	38
39	GND	SMB_CLK(I/O)(0/1.8V)	40
41	PERn0/SATA-B+	SMB_DATA(I/O)(0/1.8V)	42
43	PERp0/SATA-B-	ALERT#(I)(0/1.8V)	44
45	GND	N/C	46
47	PETn0/SATA-A-	N/C	48
49	PETp0/SATA-A+	PERST#(O)(0/3.3V) or N/C	50
51	GND	CLKREQ#(I/O)(0/3.3V) or N/C	52
53	PEFCLKn	PEWAKE#(I/O)(0/3.3V) or N/C	54
55	PEFCLKp	N/C	56
57	GND	N/C	58
	CONNECTOR key M	CONNECTOR key M	
	CONNECTOR key M	CONNECTOR key M	
	CONNECTOR key M	CONNECTOR key M	
	CONNECTOR key M	CONNECTOR key M	
67	N/C	SUSCLK(32kHz)(O)(0/3.3V)	68
69	PEDET(NC-PCIe/GND-SATA)	3.3V	70
71	GND	3.3V	72
73	GND	3.3V	74
75	GND		

3.2.2 M.2 B-Key

There is an M.2 B-Key connector and a SIM slot on the motherboard. The M.2 B-Key port can be equipped with a 4G or 5G module, which needs to be used with a SIM card.

Pin	Function	Function	Pin
1	CONFIG_3	3.3V	2
3	GND	3.3V	4
5	GND	FULL_CARD_POWER_OFF#(O)(0/1.8V or 3.3V)	6
7	USB_D+	W_DISABLE1#(O)(0/3.3V)	8
9	USB_D-	GPIO_9/DAS/DSS# (I/O)/LED_1# (I)(0/3.3V)	10
11	GND	Connector KEY B	
	Connector KEY B	Connector KEY B	
	Connector KEY B	Connector KEY B	
	Connector KEY B	Connector KEY B	
	Connector KEY B	GPIO_5(I/O)(0/1.8V)	20
21	CONFIG_0	GPIO_6(I/O)(0/1.8V)	22
23	GPIO_11(I/O)(0/1.8V)	GPIO_7(I/O) (0/1.8V)	24

25	DPR(O)(0/1.8V)	GPIO_10(I/O) (0/1.2V)	26
27	GND	GPIO_8(I/O) (0/1.8V)	28
29	PERn1/USB3.0-Rx-/SSIC-RxN	UIM-RESET(I)	30
31	PERp1/USB3.0-Rx+/SSIC-RxP	UIM-CLK(I)	32
33	GND	UIM-DATA(I/O)	34
35	PETn1/USB3.0-Tx-/SSIC-TxN	UIM-PWR(I)	36
37	PETp1/USB3.0-Tx+/SSIC-TxP	DEVSLP(O)	38
39	GND	GPIO_0 (I/O)/SMB_CLK (I/O)/(0/1.8V)	40
41	PERn0/SATA-B+	GPIO_1 (I/O)/SMB_DATA (I/O)/(0/1.8V)	42
43	PERp0/SATA-B-	GPIO_2 (I/O)/ALERT# (I)/(0/1.8V)	44
45	GND	GPIO_3 (I/O)(0/1.8V)	46
47	PETn0/SATA-A-	GPIO_4 (I/O)(0/1.8V)	48
49	PETp0/SATA-A+	PERST# (O)(0/3.3V)	50
51	GND	CLKREQ# (I/O)(0/3.3V)	52
53	REFCLKn	PEWAKE# (I/O)(0/3.3V)	54
55	REFCLKp	N/C	56
57	GND	N/C	58
59	ANTCTL0(I)(0/1.8V)	COEX3(I/O)(0/1.8V)	60
61	ANTCTL1(I)(0/1.8V)	COEX_RXD(O)(0/1.8V)	62
63	ANTCTL2(I)(0/1.8V)	COEX_TXD(I)(0/1.8V)	64
65	ANTCTL3(I)(0/1.8V)	SIM DETECT(O)	66
67	RESET#(O)(0/1.8V)	SUSCLK(32kHz)(O)(0/3.3V)	68
69	CONFIG_1	3.3V	70
71	GND	3.3V	72
73	GND	3.3V	74
75	CONFIG_2		

3.2.3 M.2 E-Key

There is an M.2 E-Key port on the motherboard, which can be installed with a WiFi card and antenna, and after installation, WiFi and Bluetooth can be used.

Pin	Function	Function	Pin
1	GND	3.3V	2
3	USB_D+	3.3V	4
5	USB_D-	LED_1#(I)(OD)	6
7	GND	PCM_CLK/I2S SCK(I/O)(0/1.8V)	8
9	SDIO CLK/SYSCLK(O)(0/1.8V)	PCM_SYNC/I2S WS(I/O)(0/1.8V)	10
11	SDIO CMD(I/O)(0/1.8V)	PCM_IN/I2S SD_IN(I)(0/1.8V)	12
13	SDIO DAT0(I/O)(0/1.8V)	PCM_OUT/I2S SD_OUT(O)(0/1.8V)	14
15	SDIO DAT1(I/O)(0/1.8V)	LED_2#(I)(OD)	16
17	SDIO DAT2(I/O)(0/1.8V)	GND	18

19	SDIO DAT3(I/O)(0/1.8V)	UART WAKE#(I)(0/3.3V)	20
21	SDIO WAKE#(I)(0/1.8V)	UART RXD(I)(0/1.8V)	22
23	SDIO RESET#/TX_BLANKING(O)(0/1.8V)	Connector KEY E	
	Connector KEY E	Connector KEY E	
	Connector KEY E	Connector KEY E	
	Connector KEY E	Connector KEY E	
	Connector KEY E	UART TXD(O)(0/1.8V)	32
33	GND	UART CTS(I)(0/1.8V)	34
35	PETp0	UART RTS(O)(0/1.8V)	36
37	PETn0	VENDOR DEFINED	38
39	GND	VENDOR DEFINED	40
41	PERp0	VENDOR DEFINED	42
43	PERn0	COEX3(I/O)(0/1.8V)	44
45	GND	COEX_RXD(I)(0/1.8V)	46
47	PEFCLKp0	COEX_TXD(O)(0/1.8V)	48
49	PEFCLKn0	SUSCLK(32kHz)(O)(0/3.3V)	50
51	GND	PERST0#(O)(0/3.3V)	52
53	CLKREQ0#(I/O)(0/3.3V)	W_DISABLE2#(O)(0/3.3V)	54
55	PEWAKE0#(I/O)(0/3.3V)	W_DISABLE1#(O)(0/3.3V)	56
57	GND	I2C_DATA(I/O)(0/1.8V)	58
59	RESERVED/PETp1	I2C_CLK(O)(0/1.8V)	60
61	RESERVED/PETn1	ALERT#(I)(0/1.8V)	62
63	GND	RESERVED	64
65	RESERVED/PERp1	UIM_SWP/PERST1#	66
67	RESERVED/PERn1	UIM_Power_SNK/CLKREQ1#	68
69	GND	UIM_Power_SRC/GPIO1/PEWAKE1#	70
71	RESERVED/REFCLKp1	3.3V	72
73	RESERVED/REFCLKn1	3.3V	74
75	GND		

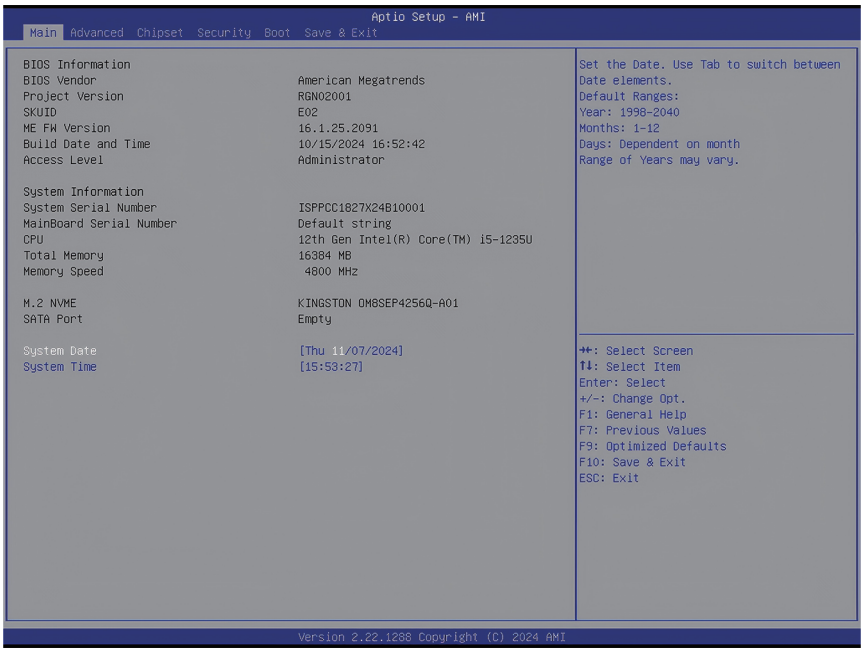
Chapter 4 BIOS Setup

Press the Del key during boot to enter the BIOS setup.

shortcut key	description
→←	→← key to toggle the BIOS page settings
↑ ↓	↑ ↓ key to switch between sub-items within a single BIOS settings page
Enter	<Enter> key to Displays or changes the parameter values for a specific option
＋－	＋－ key to Change the parameter value for a specific option
F1	<F1> key to Displays a list of General Help
F7	<F7> key to Load the settings before the most recent modification
F9	<F9> key to Restore factory optimized defaults
ESC	<ESC> key to Discard the current BIOS settings

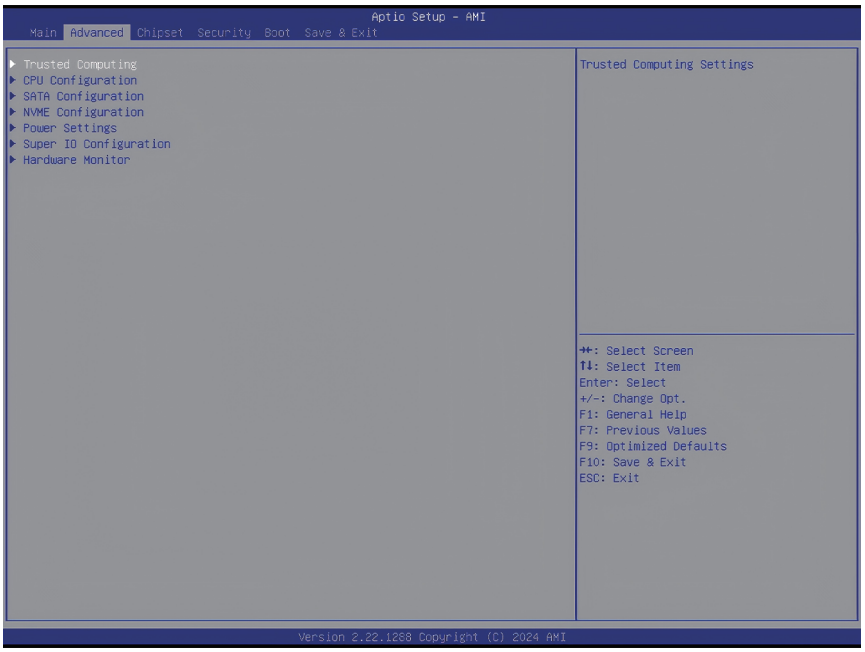
4.1 Main

The Main page shows the BIOS version information, basic information of the CPU, memory, hard disk, and date and time.



4.2 Advanced

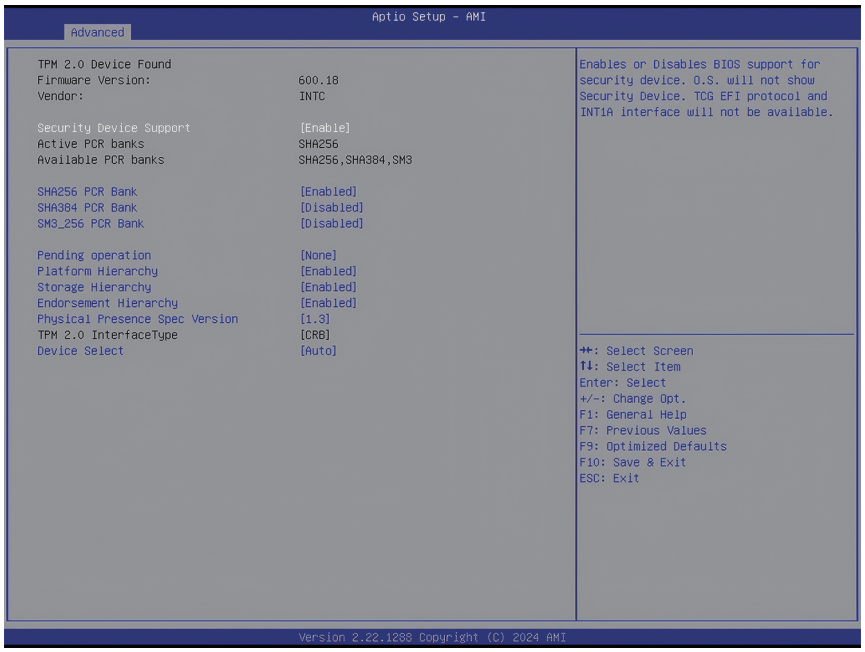
The Advanced page displays controls for TPM, CPU, SATA, NVME, Power, Super IO, and Hardware monitor.



4.2.1 Trusted Computing

Advanced –> Trusted Computing –> Security Device Support

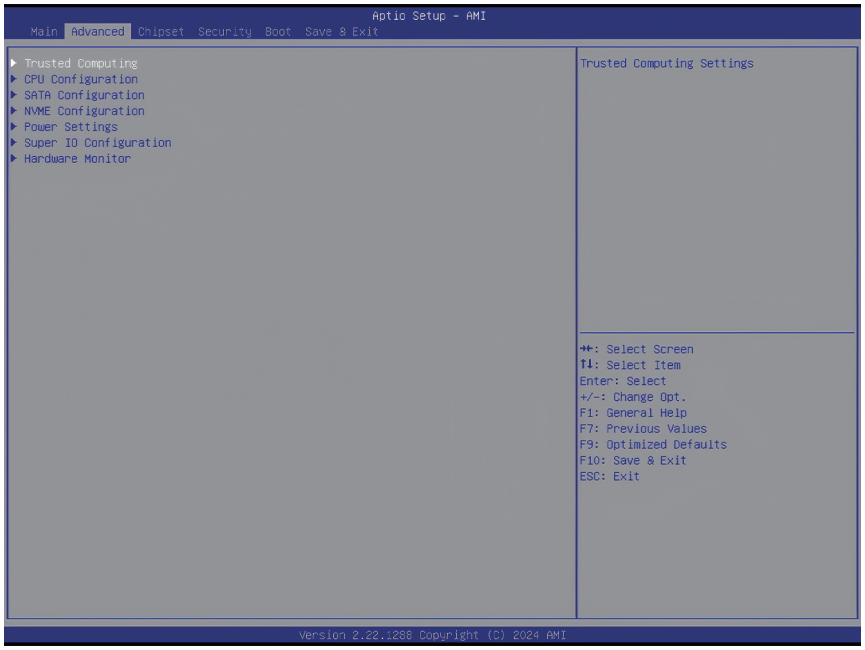
The Security Device Support is set to Enable by default, and TPM2.0 is turned on.
When Security Device Support is set to Disable, TPM2.0 is turned off.



4.2.2 CPU Configuration

Advanced –> CPU Configuration –> Turbo Mode

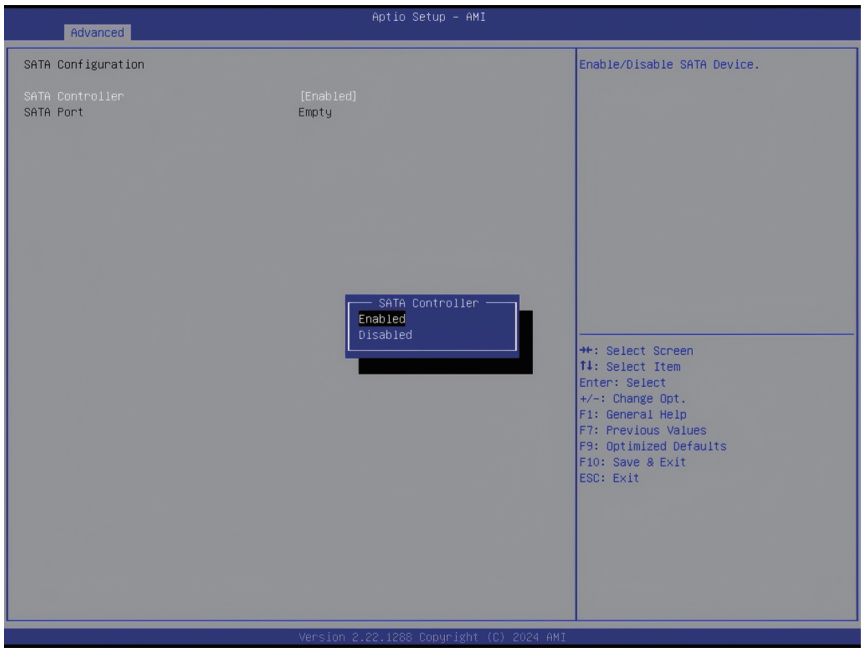
The Turbo Mode is set to Enabled by default, and Turbo is turned on;
When Turbo Mode is set to Disabled, Turbo is turned off and the CPU frequency is the main frequency.



4.2.3 SATA Configuration

Advanced –> SATA Configuration –> SATA controller

The SATA controller is set to Enabled by default, and the device can recognize the SATA hard disk after booting.
After setting SATA Controller to Disabled, the device cannot recognize the SATA hard disk after booting.

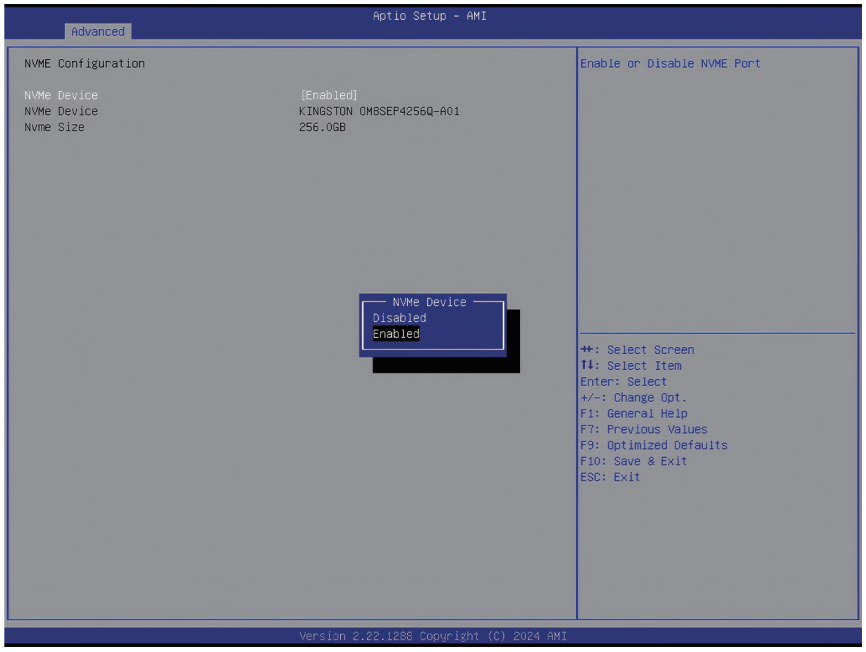


4.2.4 NVMe Configuration

Advanced –> NVME Configuration –> NVMe Device

The NVMe Device is set to Enabled by default, and the device can recognize the M.2 NVMe hard drive after booting;

After setting NVMe Device to Disabled, the device cannot recognize the M.2 NVMe hard drive after booting.



4.2.5 Power Settings

Advanced –> power settings

The power settings can control the opening and closing of USB wake–up, LAN wake–up and scheduled start.

Advanced –> power settings –> USB Wakeup

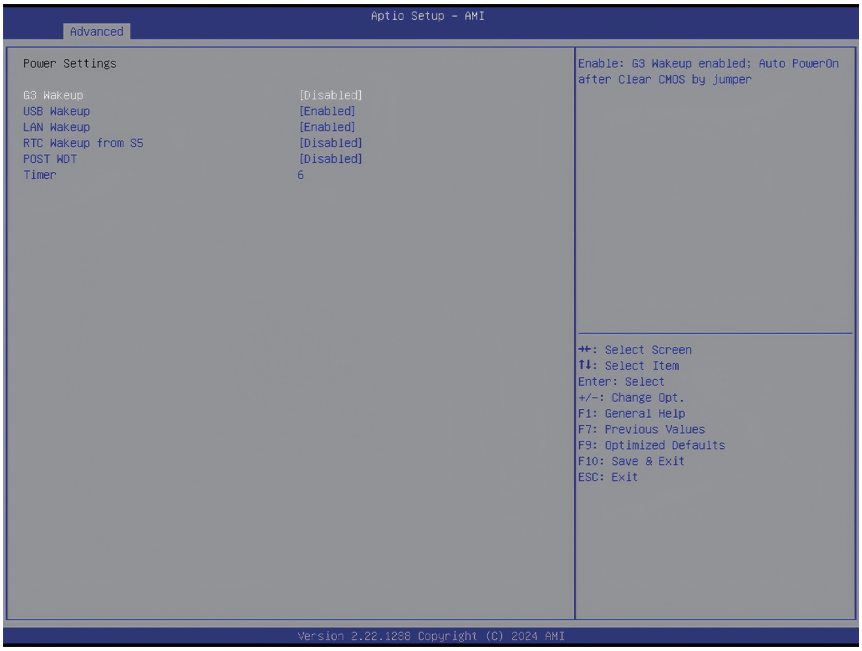
The default setting for USB Wakeup is Enabled, allowing the system to wake from hibernation states via USB in System.

When USB Wakeup is set to Disabled, the system cannot be woken from hibernation states via USB in System.

Advanced –> power settings –> LAN Wakeup

The default setting for LAN Wakeup is Enabled, allowing the system to wake from hibernation and shutdown states via the network in System.

When LAN Wakeup is set to Disabled, the system cannot be woken from hibernation or shutdown states via the network in System.



RTC Wakeup from S5

1.Default Behavior:

By default, RTC Wakeup from S5 is disabled, meaning the system will not automatically power on.

2.Settings for Fixed Time:

When RTC Wakeup from S5 is set to Fixed Time, additional configuration options become available:

- **Wake up Day:**

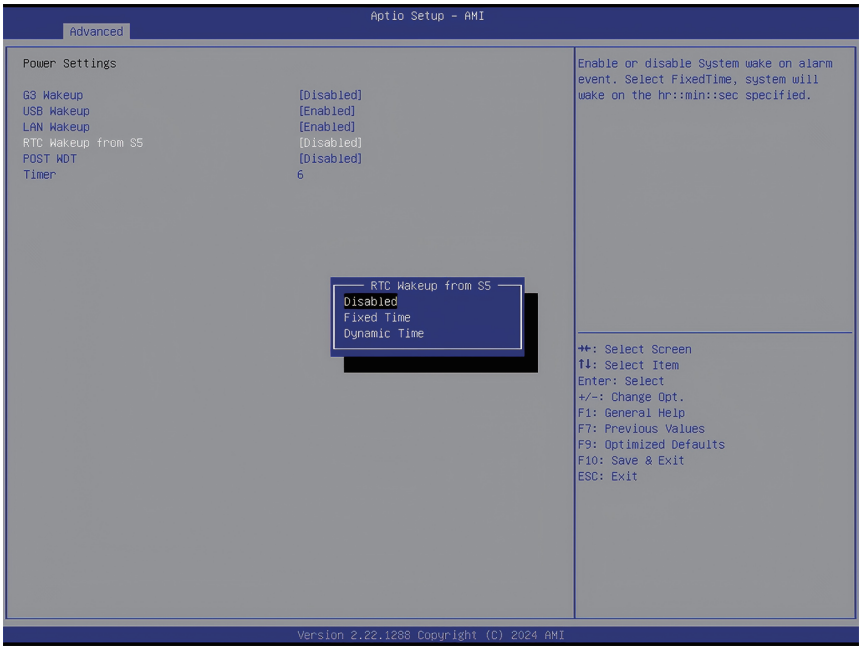
When set to 0, the system will automatically power on every day at the specified hour, minute, and second.

When set to a specific date, the system will power on only on that date and at the specified time.

- **Wake up hour**: Specifies the hour for the automatic power-on.
- **Wake up minute**: Specifies the minute for the automatic power-on.
- **Wake up second**: Specifies the second for the automatic power-on.

3.Dynamic Setting:

When RTC Wakeup from S5 is set to Dynamic, an additional configuration option, Wake up minute increase, becomes available with a range of 1 to 5.



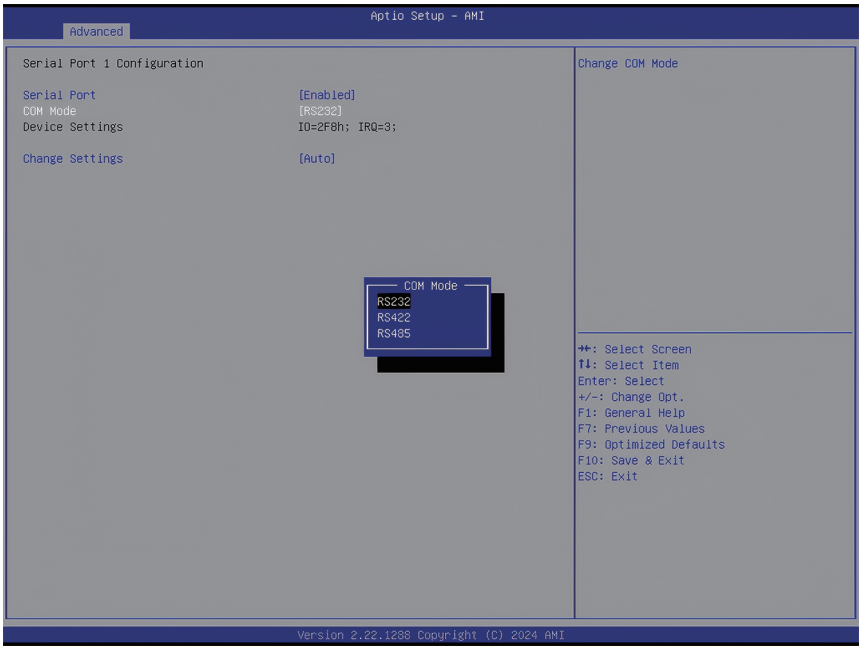
4.2.6 Super IO Configuration

Advanced −−> Super IO Configuration −−> Serial Port

The default setting for the Serial Port is Enabled. When the setting is changed to Disabled, the COM ports will become unavailable.

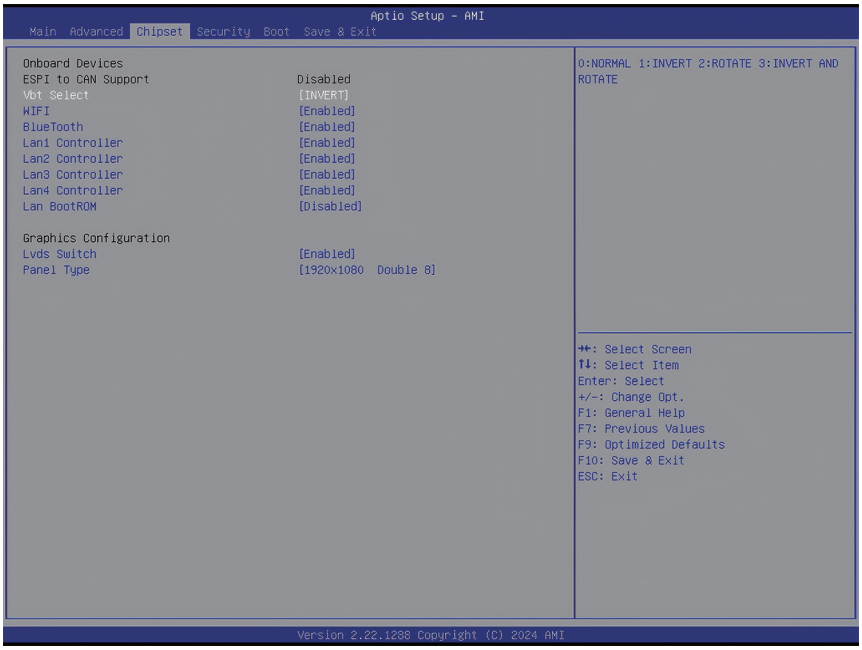
For COM1 and COM2, the COM Mode setting allows the COM ports to be configured to RS232, RS422, or RS485 modes.

The Change Settings option allows configuration of the IRQ address for the COM ports.



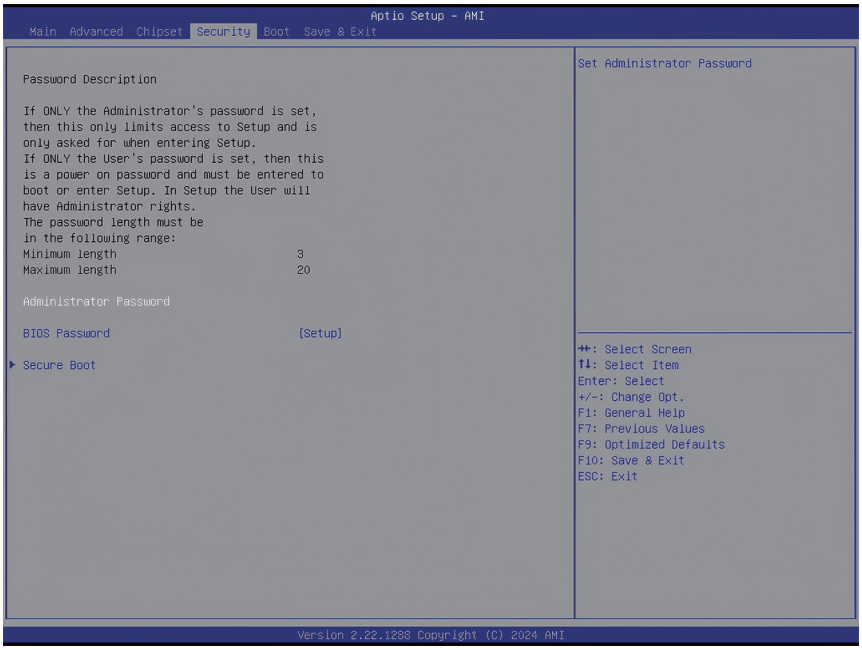
4.3 Chipset

The Chipset page allows you to control the enabling and disabling of WiFi, Bluetooth, LAN1~LAN4, and the LVDS screen.



4.4 Security

The "Administrator Password" option on the Security page allows you to set a BIOS password. When a BIOS password is set, the "BIOS Password" setting is defaulted to "Setup", requiring a password to access the BIOS at startup, but not to boot into the Windows system.
If the "BIOS Password" setting is changed to "Setup&Post", a password will be required both to access the BIOS and to boot into the Windows system at startup.



4.5 Boot

Boot Configuration

1.Setup Prompt Timeout:

2.Controls the duration the boot logo is displayed. The default setting is 1.

3.Bootup NumLock State:

- Default: On – The Num Lock light is on after boot, and the numeric keypad is enabled.
- When set to Off, the Num Lock light remains off after boot, and the numeric keypad is disabled.

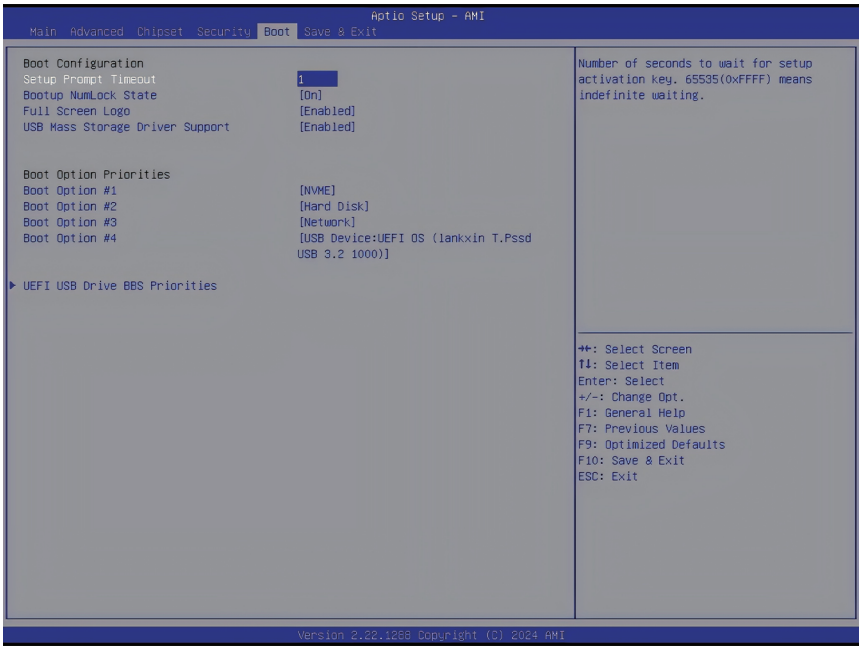
4.Full Screen Logo:

- Default: Enabled – The boot logo is displayed in full screen during startup.
- When set to Disabled, the logo is not displayed, and diagnostic information is shown instead.

5.USB Mass Storage Driver Support:

- Default: Enabled – USB storage devices are recognized during BIOS startup.
- When set to Disabled, USB storage devices are not detected during BIOS startup.

6.**Boot Option Priorities:** Controls the order of boot devices.



4.6 Save & Exit

Save & Exit –> Save Changes and Reset

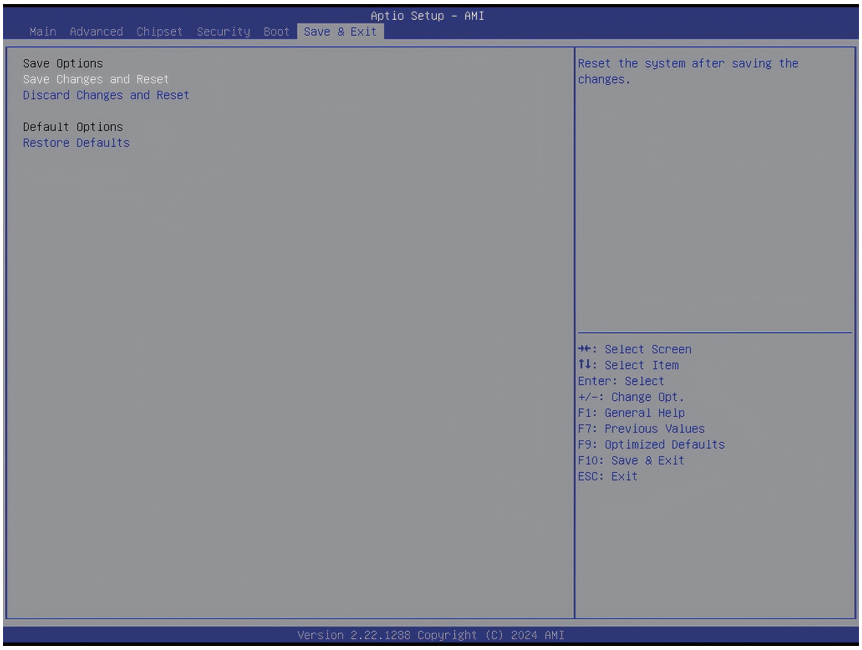
This item allows you to reset the system after saving the changes.

Save & Exit –> Discard Changes and Reset

This item allows you to reset system setup without saving any changes.

Save & Exit –> Restore Defaults

This item allows you to restore/load default values for all the options.



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Empowering the world with smart solutions

Baltesakker 17,5625TC
Eindhoven, Netherland
www.estonetech.eu
info@estonetech.eu