User's Manual

PPC-150P-TGL

Intel® Tiger Lake Processor

Compact Panel PC with 15" PCAP Touch Screen

PPC-150P-TGL-8G

PPC-150P-TGL-16G

PPC-150P-TGL-32G

PPC-150P-TGL-64G

(Revision 1.0A)

REVISION

DATE	VERSION	DESCRIPTION
2025/4/10	Version 1.0A	New Release

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This Manual is for the PPC-150P-TGL series.

SAFETY INFORMATION

- Read these Safety instructions carefully.
- Please carry the unit with both hands, handle carefully.
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Do not expose your Panel PC to rain or moisture in order to prevent shock and fire hazard.
- Input voltage +12~24VDC Power Adapter Only
- Operating temperature between 0~+60°C / -20~+60°C **(Option)**
- Keep PPC-150P-TGL away from humidity.
- When a M.2 SSD storage is the main operating system storage, please turn off power before inserting or removing. Do not open the cabinet to avoid electrical shock. Refer to your nearest dealer for qualified personnel servicing.
- Never touch un-insulated terminals or wire unless your power adaptor is disconnected.
- Locate your Panel PC as close as possible to the socket outline for easy access and to avoid force caused by entangling of your arms with surrounding cables from the Panel PC.
- USB connectors are not supplied with Limited Power Sources.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

WARNING!

DO NOT ATTEMPT TO OPEN OR TO DISASSEMBLE THE CHASSIS (ENCASING) OF THIS PRODUCT. PLEASE CONTACT YOUR DEALER FOR SERVICING FROM QUALIFIED TECHNICIAN.

Content

Ch. 1

General Information

1.1 Product Description

ICOP Technology Inc. is proudly going to release a brand new Panel PC, which offers fanless design, low power consumption, and IP65 front panel. The PPC-150P-TGL is powered by Intel® Tiger Lake i5-1135G7 processors, and up to 64GB of SO-DIMM DDR4 module that handles processing more efficiently and provides faster performance. The project capacity touch panel with LED backlight TFT LCD increases operation convenience and visibility in outdoor environments. The ultra-compact and thin exterior design is perfect for the present demanding embedded and productive applications.

The new PPC-150P-TGL inherited PPC series' smooth appearance and ultra-texture aluminum exterior design to make your industrial applications look more stylish. The versatile I/O ports, IP65 front panel, 2.5GIGA high-speed Ethernet etc. can fulfill fundamental functions. Our consistent advantages feature stable performance, extended working temperature support, low power consumption and fanless design. The expandable customize I/O ports can be accommodated connectivity requirements to industrial machine platforms and industrial automation equipment's needs.

The PPC-150P-TGL supports Windows 10, Windows 10 IoT, Windows 11, Windows 11 IoT and Linux to meet ready-to-market demand and provide competitive advantages for customers.

1.2 Product Specifications

CPU BOARD SPECIFICATIONS

CPU	Intel® Tiger Lake i5-1135G7 (Quad core 2.4GHz)
Cache	L3: 8MB Cache
BIOS	AMI BIOS
Memory	8GB / 16GB / 32GB / 64GB DDR4
Display	Intel® HD Graphics, HDMI2.0 x 2, DP 1.4 x 2
LAN	Intel® i226-V 2.5GbE & i219-LM 1.0GbE
Audio	HD Audio-Realtek ALC888S
Internal Drives	M.2 M-key (2242/2280) PCIe Gen. 4 Support NVME **(Doesn't support SATA interface)**
Expansion I/O	M.2 E-key (2230) USB2.0/PCIe *1 interface (CNVi Supported)
I/O	HDMI x 2 DP x 2 RS232/422/485 (COM1 & COM2) x 2 RS232 (COM3 & COM4) x 2 USB3.2 (Gen. 2) x 4 USB2.0 x 2 RJ45 x 2 Phone Jack (Line-Out & Mic-In) x 1

MECHANICAL & ENVIRONMENT

Power Requirement	+12~24 VDC Power Adapter Only (DC JACK 5.5x2.5mm plug support)
Power Adapter	+12VDC@ 7.5A (90W)
Operating Temperature	0~+60°C / -20~+60°C **(Option)**

Storage Temperature	-30~+70°C
Operating Humidity	0% ~ 90% Relative Humidity, Non-Condensing
Dimensions	359.63x282.98x90.10mm (14.16"x11.14"x3.55")
Weight	5.64 Kg
Protection	IP65 Front Panel
Certification	**Coming Soon**

LCD SPECIFICATIONS

Display Type	15” XGA TFT LCD
Backlight Unit	LED
Display Resolution	1024(W) x 768(H)
Brightness (cd/m^2)	400 nits
Contrast Ratio	800 : 1
Display Color	262,144
Pixel Pitch (mm)	0.297 (H) x 0.297 (V)
Viewing Angle	Vertical 160^o, Horizontal 160^o
Backlight Lifetime	30,000 hrs

TOUCHSCREEN

Type	Capacitive
Hardness	≧6H
Transmittance	≧85%
Controller	USB interface
Software Driver	Linux, Win10, Win10 IoT, Win11, Win11 IoT
Durability	100 million

1.3 Inspection standard for TFT-LCD Panel

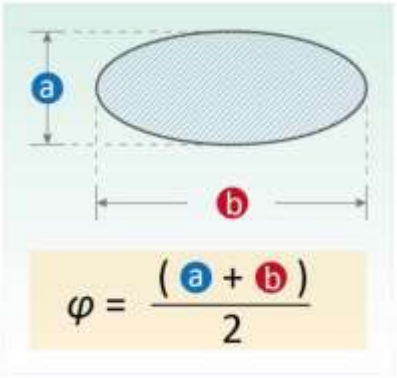
<table>
<tr><th colspan="3">DEFECT TYPE</th><th colspan="6">LIMIT</th><th>Note</th></tr>
<tr><td rowspan="10">VISUAL DEFECT</td><td rowspan="10">INTERNAL</td><td rowspan="3">SPOT</td><td colspan="3">φ＜0.15mm</td><td colspan="3">Ignore</td><td rowspan="3">Note1</td></tr>
<tr><td colspan="3">0.15mm≦φ≦0.5mm</td><td colspan="3">N≦4</td></tr>
<tr><td colspan="3">0.5mm＜φ</td><td colspan="3">N=0</td></tr>
<tr><td rowspan="2">FIBER</td><td colspan="3">0.03mm<W≦0.1mm, L≦5mm</td><td colspan="3">N≦3</td><td rowspan="2">Note1</td></tr>
<tr><td colspan="3">1.0mm＜W, 1.5mm＜L</td><td colspan="3">N=0</td></tr>
<tr><td rowspan="3">POLARIZER BUBBLE</td><td colspan="3">φ＜0.15mm</td><td colspan="3">Ignore</td><td rowspan="3">Note1</td></tr>
<tr><td colspan="3">0.15mm≦φ≦0.5mm</td><td colspan="3">N≦2</td></tr>
<tr><td colspan="3">0.5mm＜φ</td><td colspan="3">N=0</td></tr>
<tr><td>Mura</td><td colspan="6">It’ OK if mura is slight visible through 6%ND filter</td><td></td></tr>
<tr><td rowspan="7">ELECTRICAL DEFECT</td><td colspan="2" rowspan="3">BRIGHT DOT</td><td colspan="3">A Grade</td><td colspan="3">B Grade</td><td></td></tr>
<tr><td>C Area</td><td>O Area</td><td>Total</td><td>C Area</td><td>O Area</td><td>Total</td><td>Note3</td></tr>
<tr><td>N≦0</td><td>N≦2</td><td>N≦2</td><td>N≦2</td><td>N≦3</td><td>N≦5</td><td>Note2</td></tr>
<tr><td colspan="2">DARK DOT</td><td>N≦2</td><td>N≦3</td><td>N≦3</td><td>N≦3</td><td>N≦5</td><td>N≦8</td><td></td></tr>
<tr><td colspan="2">TOTAL DOT</td><td colspan="3">N≦4</td><td>N≦5</td><td>N≦6</td><td>N≦8</td><td>Note2</td></tr>
<tr><td colspan="2">TWO ADJACENT DOT</td><td>N≦0</td><td>N≦1 pair</td><td>N≦1 pair</td><td>N≦1 pair</td><td>N≦1 pair</td><td>N≦1 pair</td><td>Note4</td></tr>
<tr><td colspan="2">THREE OR MORE ADJACENT DOT</td><td colspan="6">NOT ALLOWED</td><td></td></tr>
<tr><td colspan="2">LINE DEFECT</td><td colspan="6">NOT ALLOWED</td><td></td></tr>
</table>

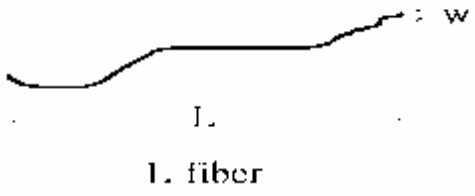
(1) One pixel consists of 3 sub-pixels, including R, G, and B dot. (Sub-pixel = Dot)

(2) Little bright Dot acceptitable under 6% ND-Filter.

(3) If require G0 grand (Total dot N≦0), please contact region sales.

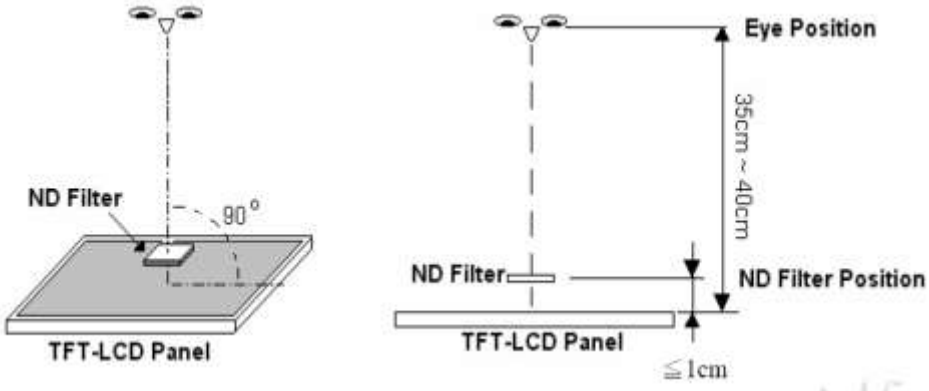
[Note 1] W: Width[mm]; L: Length[mm]; N: Number; φ: Average Diameter.



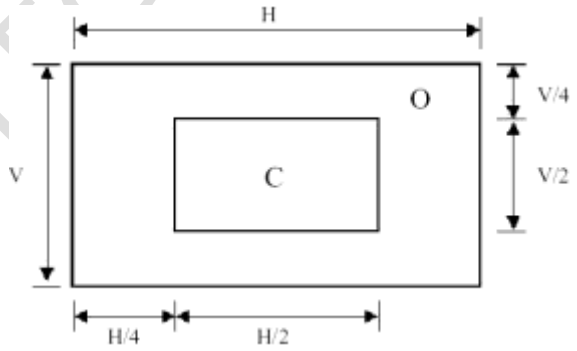


(a) White / Black Spot (b) Polarizer Bubble

[Note 2] Bright dot is defined through 6% transmission ND Filter as following.

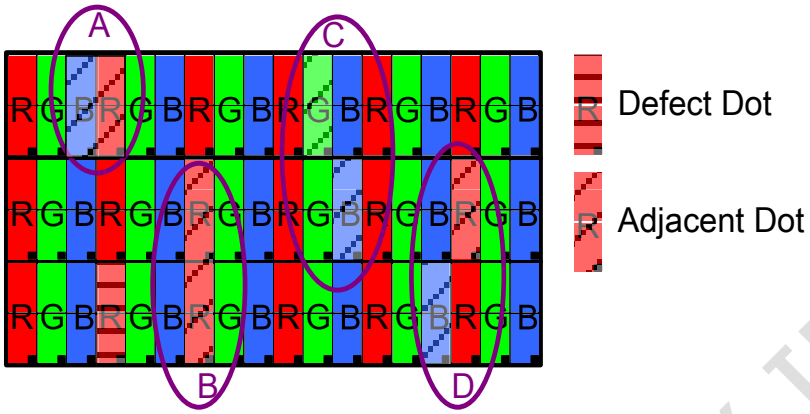


[Note 3] Display area



C Area: Center of display area **O Area**: Outer of display area

[Note 4] Judge the defect dot and the adjacent dot as following. Allow below (as A, B, C and D status) adjacent defect dots, including bright and dark adjacent dot. And they will be counted 2 defect dots in total quantity.



The defects that are not defined above and considered to be problem shall be reviewed and discussed by both parties.

Defects on the Black Matrix, out of Display area, are not considered as a defect or counted.

[Note 5]

According to the technical information from LCD manufacturer, the image retention may happen on LCD display if the static image is kept for a period of time without any change. ICOP will suggest customers not to have static image on LCD for over 4 hours without any image movement and also enable screensaver to avoid image sticking issue if LCD displays need to be kept on for a long time.

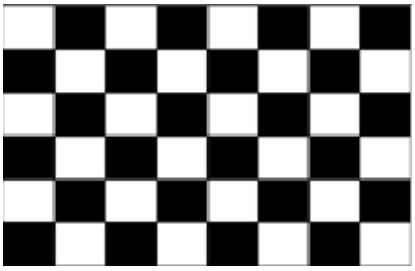
Some Image retention issue will disappear when LCD display is turned off for a period of time, but some image retention may be not reversible when LCD encounters screen burn.

The following is LCD manufacturer's test result for customers' reference.

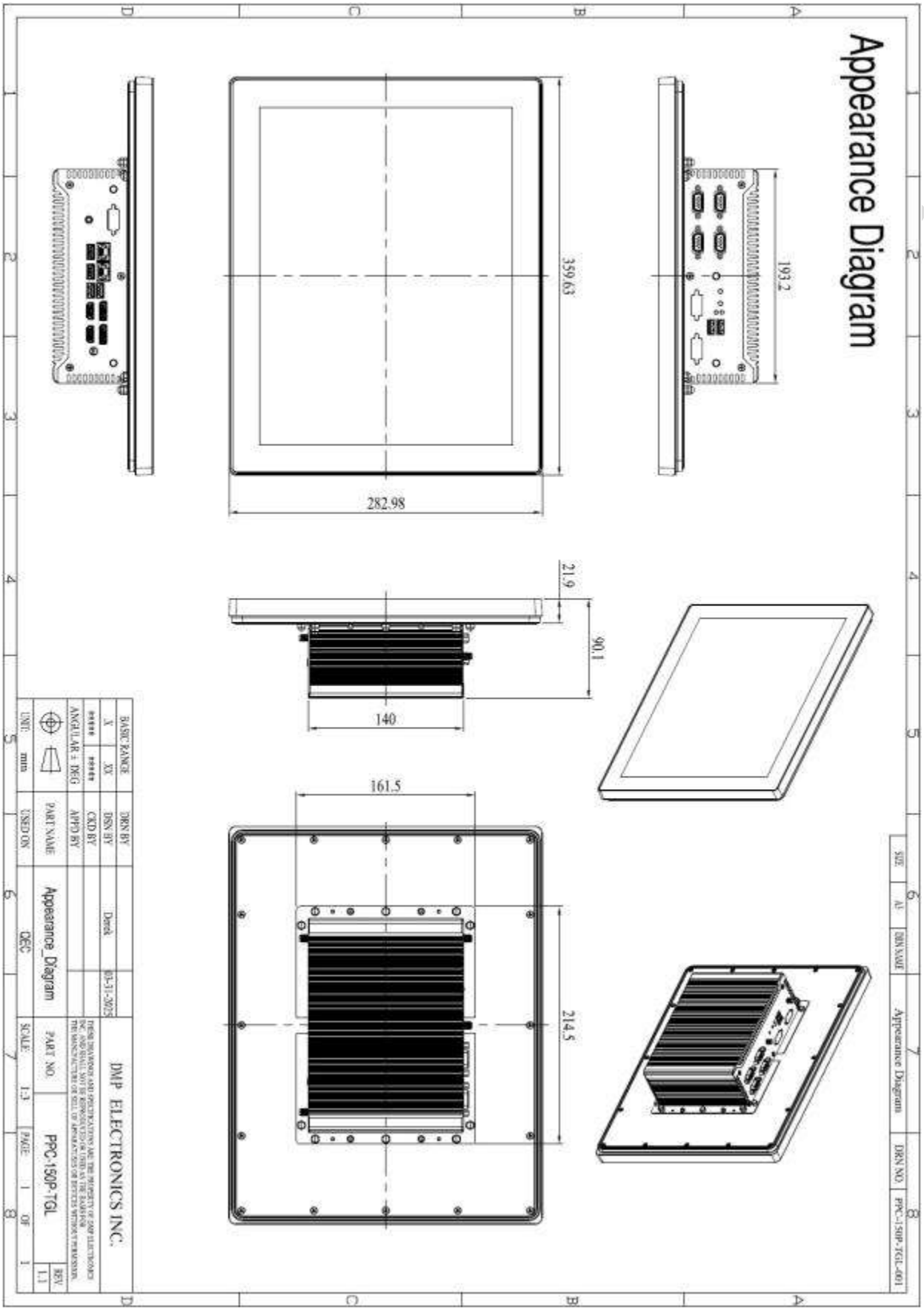
TEST ITEMS	CONDITIONS	NOTE
High Temperature Operation	70℃ ;240hrs	
High Temperature Storage	80℃ ; 240hrs	
High Temperature High Humidity Operation	60℃ ; 90%RH ;240hrs	No condensation
Low Temperature Operation	-20℃ ; 240hrs	Backlight unit always turn on
Low Temperature Storage	-30℃ ; 240hrs	
Thermal Shock	–30℃(0.5hr) ~ 80℃(0.5hr) ; 200 Cycles	
Image Sticking	25℃ ; 4hrs	**Note 5-1**
MTBF	20,000Hrs	

Note 5-1

1. Condition of Image Sticking test：25 ℃± 2 ℃.
2. Operation with test pattern sustained for 4 hrs, then change to gray pattern immediately.
3. After 5 mins, the mura must be disappeared completely.



1.4 Product Dimensions

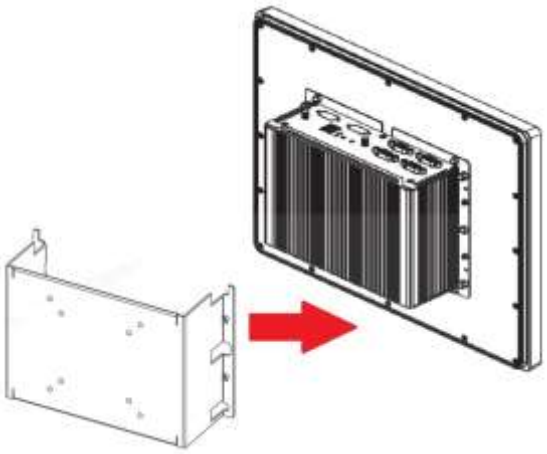


1.5 Mounting Instruction

• 1.5.1 VESA Mounting

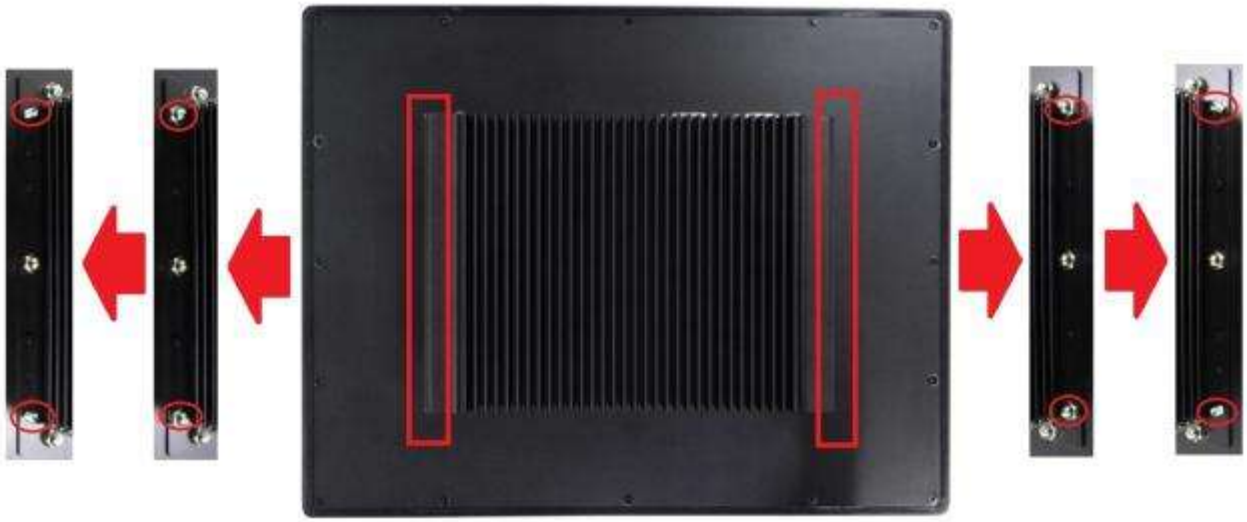
PPC-150P-TGL series support VESA Mount (75x75mm & 100x100mm) that is an optional for ordering. Please contact your region sales for ordering.

Ordering part number: VESA-MT-PPC-TGL-SET

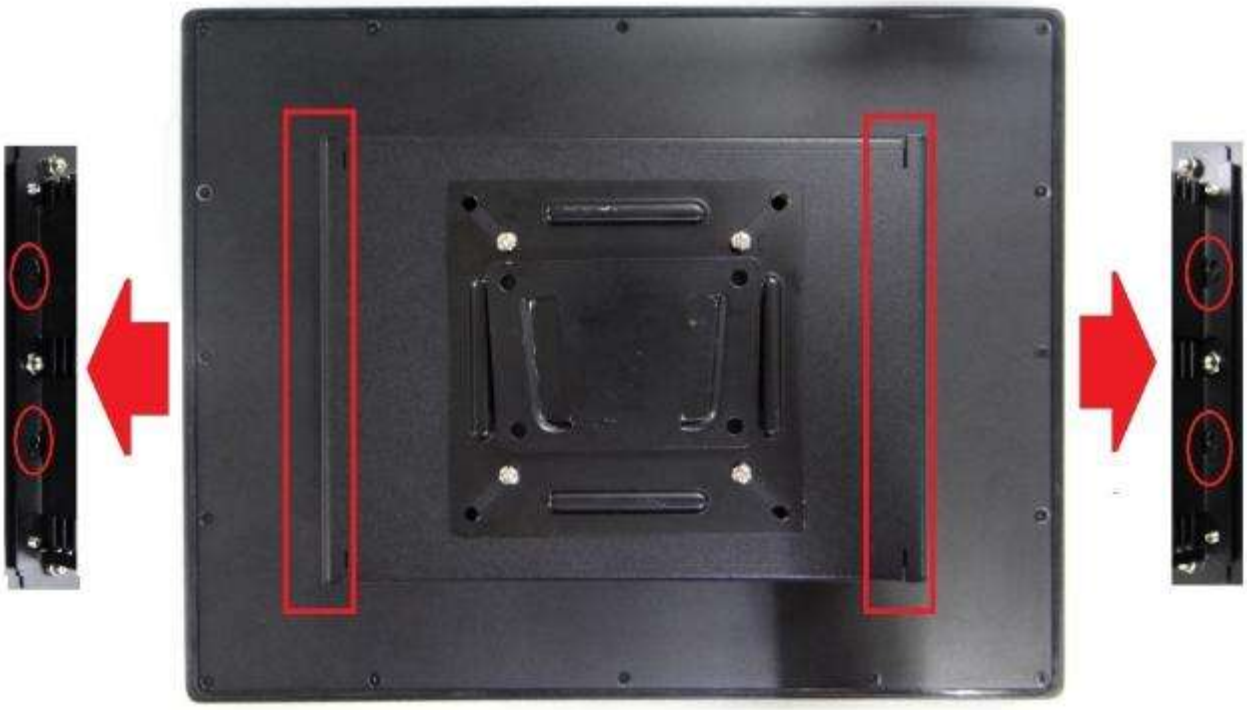


1. Place VESA bracket and VESA-MT-PPC-TGL-SET together.
2. Lock 4 screws and nuts on both of VESA bracket and VESA-MT-PPC-TGL-SET.

3. Remove 4 hexagonal nuts by an 8mm of hexagonal or movable wrench.

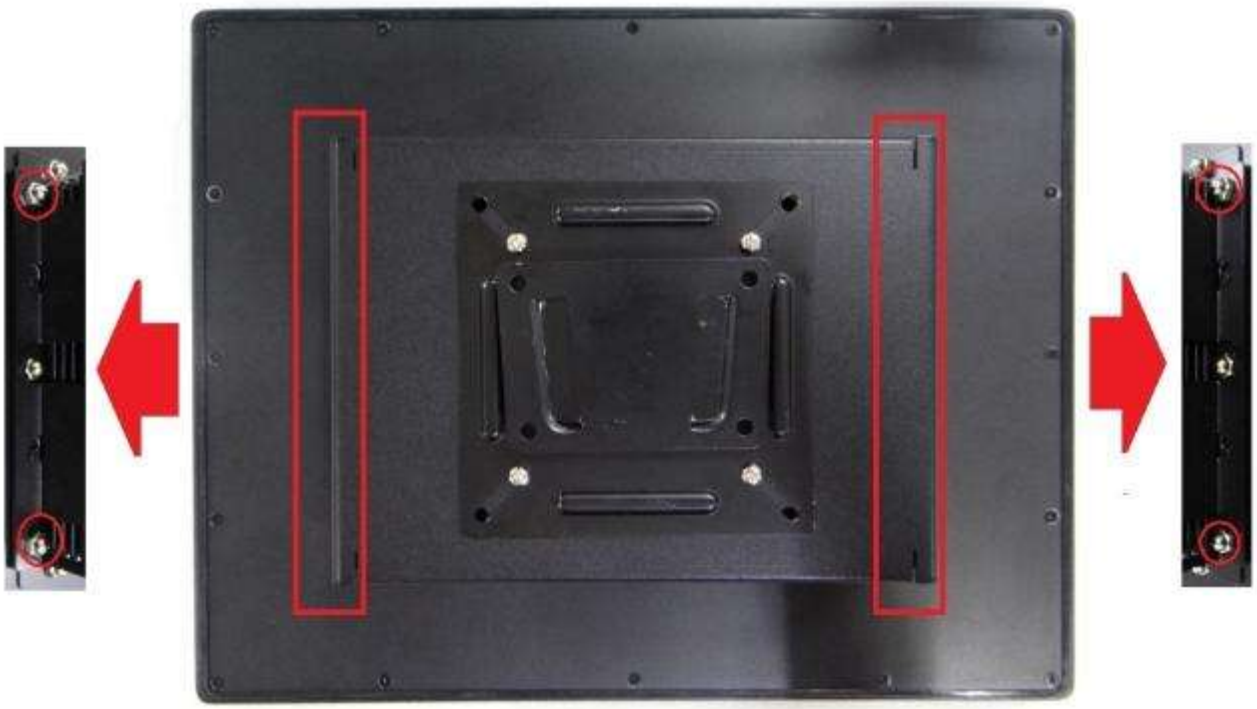


4. Plug the VESA-MT-PPC-TGL-SET in the PPC.



Please be careful to make sure the metal pillar on the bottom of small hole.

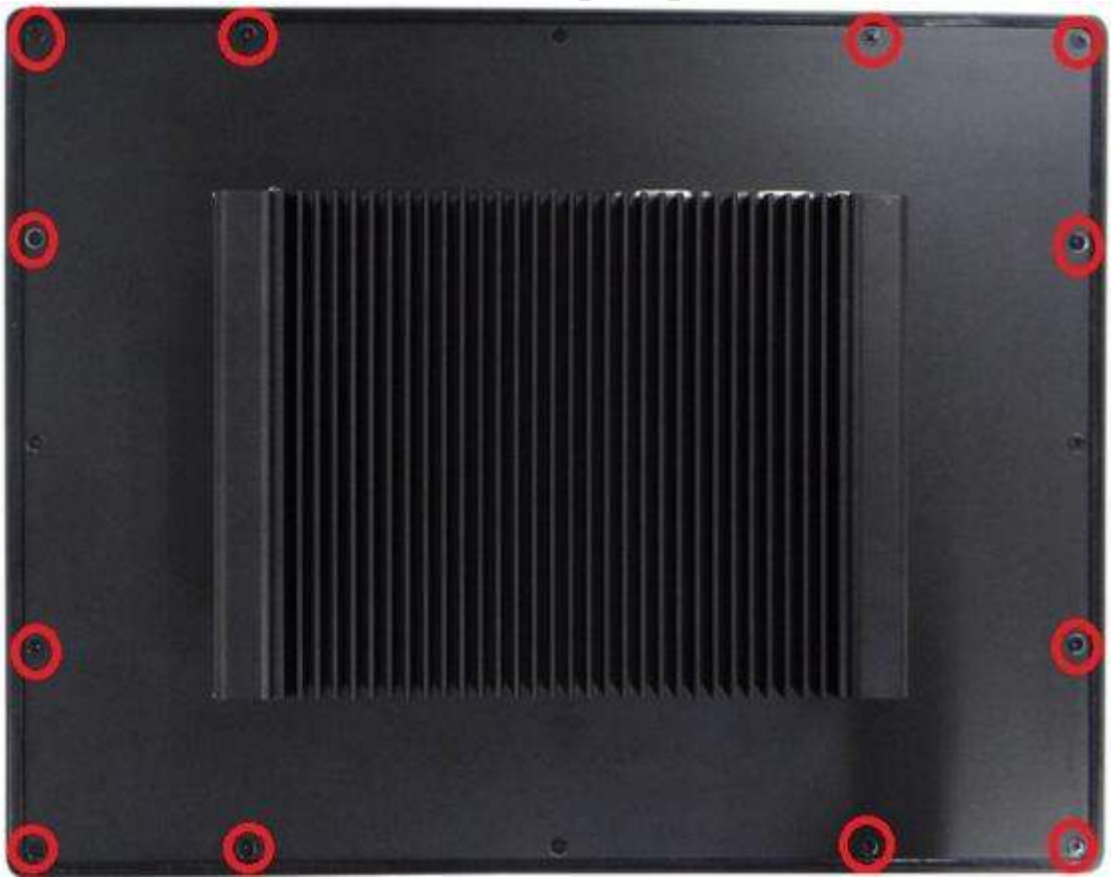
5. Lock 4 hexagonal nuts back by an 8mm of hexagonal or movable wrench, and make sure each hexagonal nut is tightened.



6. Hang the PPC on the VESA bracket.

1.5.2 Panel Mounting

- Cut a mounting hole in the panel. (Refer to PPC-150P-TGL Dimensions on page the section 1.4. (See the image as below)
- Check and remove the twelve M3 screws in a diagonal pattern as image below if necessary.
- Place PPC-150P-TGL face-down on a clean, flat surface.
- Slide the panel cutout around the back of PPC-150P, until the panel rests directly on the gasket. Make sure the screw holes align with the screw holes on PPC-150P.
- The screw size is M3*L (L=wall thickness + 6.0mm)
- Insert all twelve M3 screws into the screw holes.
- Finger-tighten the M3 screws. Finish tightening the M3 screws in a diagonal pattern using an M3 screw driver (see the image as below); maximum torque 0.44Nm (4.5 kgf-cm).



1.6 Ordering Information

Product Code	LCD Size	CPU Series	RAM
PPC	150**P**	TGL	**8G** **16G** **32G** **64G**

1. Product Code：Code 1~3.

PPC：Panel PC Series.

2. LCD Size：Code 4~7。

150**P**：15” LCD with **PCAP** touch screen.

3. CPU Serial：Code 8~10。

TGL: Intel® Tiger Lake Series.

3. RAM：Code 11~13。

8G：8GB.　16：16GB.　32：32GB　64：64GB

PS: Power adapter and cord must be showed separate because different county has different power cord. The part numbers of power adapter and cord are as below.

(Please contact ICOP sales person or distributor to get the unit price of power adapter and cord. Thank you.)

POWER-12V7.5A-CWT

POWERCABLE(A) / POWERCABLE(G) / POWERCABLE(AU) / POWERCABLE(EN)

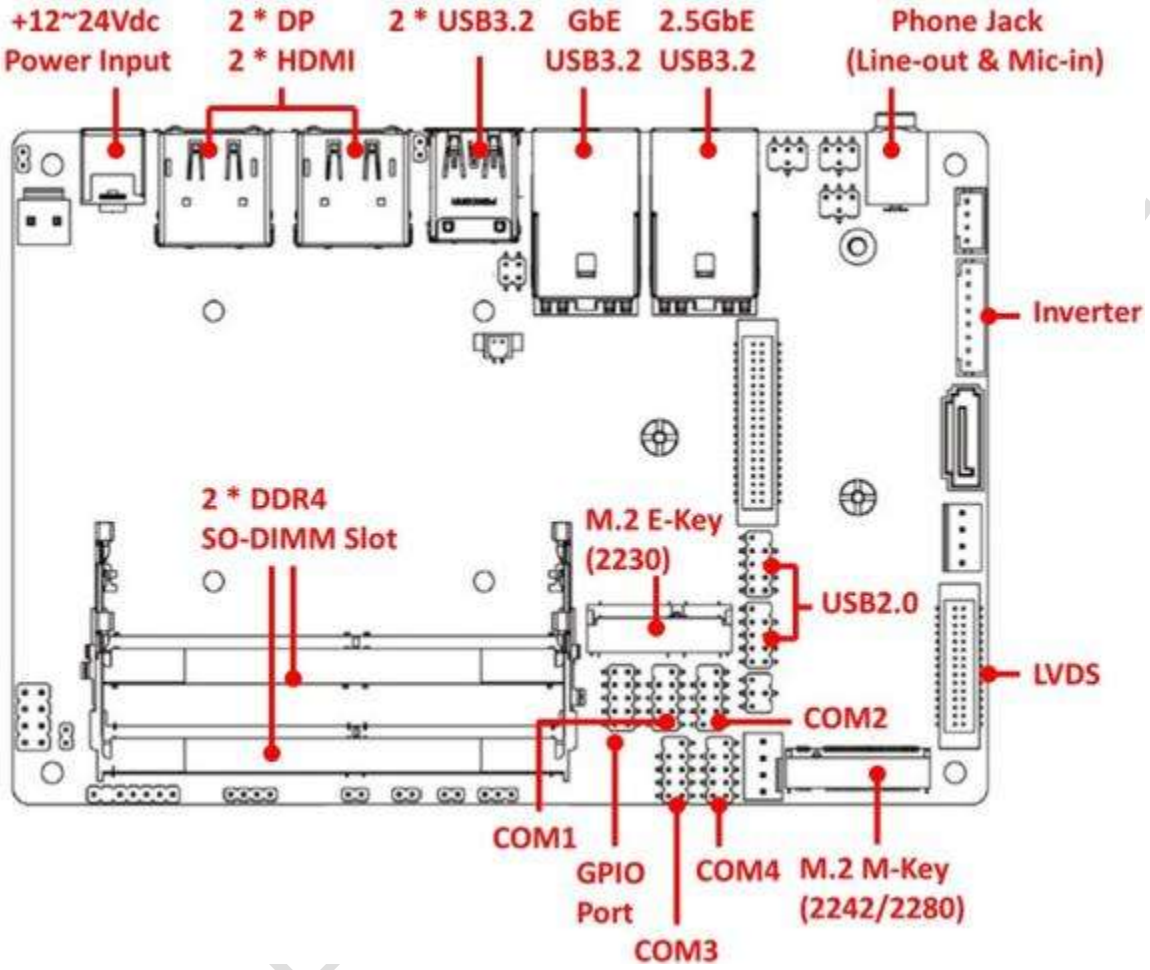
(A = American; **G** = Euro; **AU** = Australia; **EN** = England/UK**)**

PART NUMBER	DESCRIPTION
PPC-150P-TGL-8G	15" Panel PC w/Intel Tiger Lake i5-1135G7 /8GB DRAM/6U/2.5GbE LAN/4S/PCAP Touch
PPC-150P-TGL-16G	15" Panel PC w/Intel Tiger Lake i5-1135G7 /16GB DRAM/6U/2.5GbE LAN/4S/PCAP Touch
PPC-150P-TGL-32G	15" Panel PC w/Intel Tiger Lake i5-1135G7 /32GB DRAM/6U/2.5GbE LAN/4S/PCAP Touch
PPC-150P-TGL-64G	15" Panel PC w/Intel Tiger Lake i5-1135G7 /64GB DRAM/6U/2.5GbE LAN/4S/PCAP Touch
POWER-12V7.5A-CWT	AC – DC power adapter / DC12V @ 7.5A (AC 100 ~ 240V Input)
POWERCABLE(A) / POWERCABLE(G) / POWERCABLE(AU) / POWERCABLE(EN)	US / Euro / Australia / England & UK power cord for POWER-12V7.5A-CWT
VESA-MT-PPC-TGL-SET	VESA mount bracket set

Ch. 2

System Installation

2.1 CPU Board Outline



PPC TGL CPU Board

2.2 Connector Summary

Connector	Type of Connections	Pin #
DDR4 SO-DIMM Slot	External SO-DIMM Slot	260-pin
Power DC Jack	External Power DC Jack Connector	2-pin
2 * USB3.2	External Dual USB3.1 Connector	18-pin
2 * DP	External Dual DP Connector	20-pin
2 * HDMI	External Dual HDMI Connector	38-pin
GbE	External Dual RJ45 Connector	16-pin
2.5GbE	External Dual RJ45 Connector	16-pin
M.2 M-Key	External M.2 M-Key (2242/2280) PCIe Gen. 3 *2 / SATA interface support NVME	75-pin
M.2 E-Key	External M.2 E-Key	75-pin
COM1 & COM2 (RS232/422/485)	2.0mm 9-pin pin header	9-pin
COM3 & COM4 (RS232)	2.0mm 9-pin pin header	9-pin
GPIO	2.0mm 10-pin pin header	10-pin
USB2.0 x 2	2.0mm 9-pin pin header	9-pin
LVDS	1.25mm 30-pin box header	30-pin
INVERTER	2.0mm 8-pin box header	8-pin

2.3 Connector Pin Assignments

Power DC Jack

Pin #	Signal Name
1	+12~24V Power Input
2	GND

COM1 & COM2 (RS232/422/485)

Pin #	Signal Name	Pin #	Signal Name
1	DCD1 /422TX- /RS485-	2	DSR1
3	RXD1 /422TX+ /RS485+	4	RTS1
5	TXD1/422RX+	6	CTS1
7	DTR1/422RX-	8	RI1
9	GND		

COM3 & COM4 (RS232)

Pin #	Signal Name	Pin #	Signal Name
1	DCD2	2	DSR2
3	RXD2	4	RTS2
5	TXD2	6	CTS2
7	DTR2	8	RI2
9	GND		

USB2.0 x 2

Pin #	Signal Name	Pin #	Signal Name
1	VCC	2	VCC
3	USB2_D1-	4	USB2_D2-
5	USB2_D1+	6	USB2_D2+
7	GND	8	GND
		10	NC

LVDS

Pin #	Signal Name	Pin #	Signal Name
1	LVDSB_D3-	2	LVDSB_D3+
3	LVDSB_CLK-	4	LVDSB_CLK+
5	LVDSB_D2-	6	LVDSB_D2+
7	LVDSB_D1-	8	LVDSB_D1+
9	LVDSB_D0-	10	LVDSB_D0+
11	NC/DDC_DAT	12	NC/DDC_CLK
13	GND	14	GND/LVDS Detect
15	GND	16	GND
17	LVDSA_D3+	18	LVDSA_D3-
19	LVDSA_CLK+	20	LVDSA_CLK-
21	LVDSA_D2+	22	LVDSA_D2-
23	LVDSA_D1+	24	LVDSA_D1-
25	LVDSA_D0+	26	LVDSA_D0-
27	LCD_VDD	28	LCD_VDD
29	LCD_VDD	30	LCD_VDD

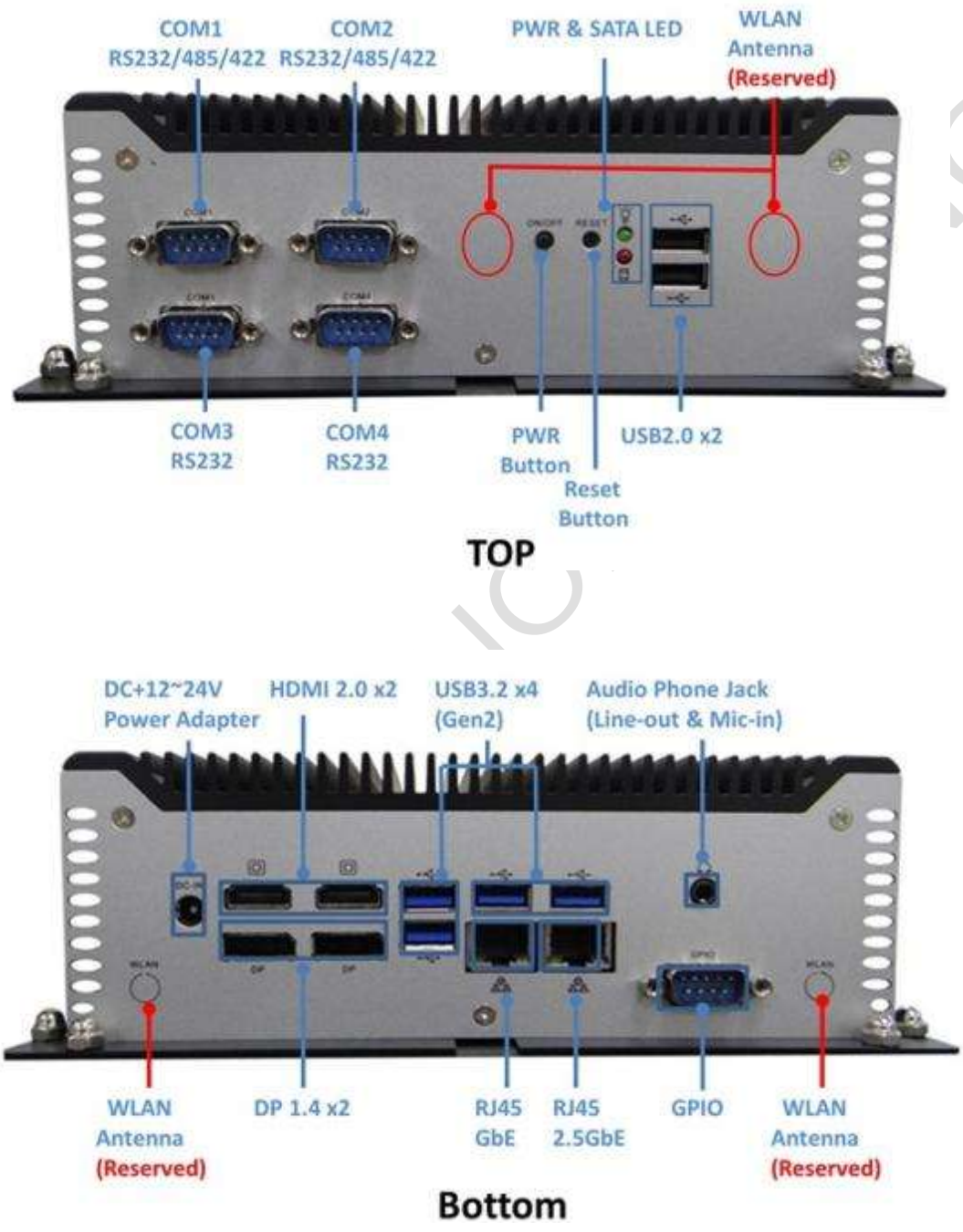
Inverter

Pin #	Signal Name
1	Backlight_Enable
2	Backlight_PWM
3	Backlight LED VCC
4	Backlight LED VCC
5	GND
6	GND
7	Backlight UP SW
8	Backlight DN SW

GPIO

Pin #	Signal Name	Pin #	Signal Name
1	GPIO80	2	GPIO81
3	GPIO82	4	GPIO83
5	GPIO84	6	GPIO85
7	GPIO86	8	GPIO87
9	GND	10	VCC

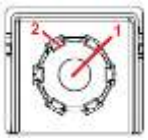
2.4 External I/O Overview



NOTE: The RS232/422/485 function of COM1 & COM2 is selected by BIOS setting. Please refer the section, 4.3 to set the function in the BIOS setup.

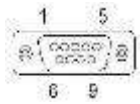
2.5 External I/O Pin Assignment

Power DC Jack (+12~24Vdc Power Adapter)



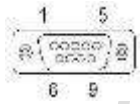
Pin #	Signal Name
1	+12~24Vdc
2	GND

COM1 & COM2 (RS232/422/485)
(Change mode by BIOS Setup)



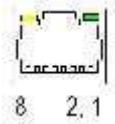
Pin #	Signal Name	Pin #	Signal Name
1	DCD1 /422TX- /RS485-	**2**	RXD1 /422TX+ /RS485+
3	TXD1 /422RX+	**4**	DTR1 /422RX-
5	GND	**6**	DSR1
7	RTS1	**8**	CTS1
9	RI1		

COM3 & COM4 (RS232)



Pin #	Signal Name	Pin #	Signal Name
1	DCD2	**2**	RXD2
3	TXD2	**4**	DTR2
5	GND	**6**	DSR2
7	RTS2	**8**	CTS2
9	RI2		

GbE & 2.5 GbE

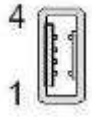


Pin #	Signal Name	Pin #	Signal Name
1	TP0+	2	TP0-
3	TP1+	4	TP2+
5	TP2-	6	TP1-
7	TP3+	8	TP3-

HDMI

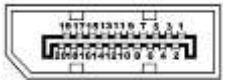
Pin #	Signal Name
1	TMDS_Data2+
2	TMDS_Data2_Shield
3	TMDS_Data2-
4	TMDS_Data1+
5	TMDS_Data1_Shield
6	TMDS_Data1-
7	TMDS_Data0+
8	TMDS_Data0_Shield
9	TMDS_Data0-
10	TMDS_CLK+
11	TMDS_CLK_Shield
12	TMDS_CLK-
13	CEC
14	Reserved
15	SCL
16	SDA
17	DDC/CEC_GND
18	+5V Power
19	Hop_Plug_Detect

USB2.0



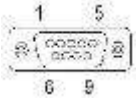
Pin #	Signal Name
1	VCC
2	USB0-
3	USB0+
4	GND

DP



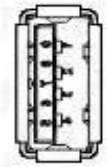
Pin #	Signal Name
1	ML_Lane 0（p）
2	GND
3	ML_Lane 0（n）
4	ML_Lane 1（p）
5	GND
6	ML_Lane 1（n）
7	ML_Lane 2（p）
8	GND
9	ML_Lane 2（n）
10	ML_Lane 3（p）
11	GND
12	ML_Lane 3（n）
13	CONFIG1
14	CONFIG2
15	AUX_CH (p)
16	GND
17	AUX_CH (n)
18	Hot Plug
19	DP_PWR Return
20	DP_PWR

GPIO



Pin #	Signal Name	Pin #	Signal Name
1	GPIO80	**2**	GPIO81
3	GPIO82	**4**	GPIO83
5	GPIO84	**6**	GPIO85
7	GPIO86	**8**	GPIO87
9	GND		

USB 3.1



Pin #	Signal Name
1	VCC
2	D-
3	D+
4	GND
5	SSRX-
6	SSRX+
7	GND
8	SSTX-
9	SSTX+

Ch. 3

Hardware Installation

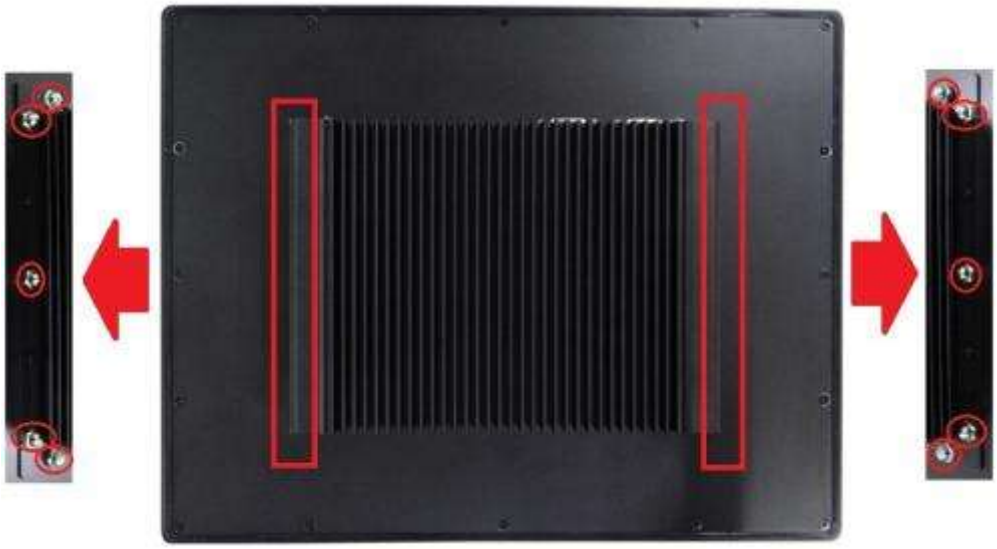
PPC-150P-TGL supports various kinds of storages for industrial application, divided into M.2 2242/2280 PCIe (M-Key).

3.1 Installing the M.2 M-key (2242/2280) PCIe Storage

PPC-150P-TGL series support M.2 M-key (2242/2280) PCIe Gen. 4 Support NVME, **but doesn't support SATA interface**. Please refer the below instructions.

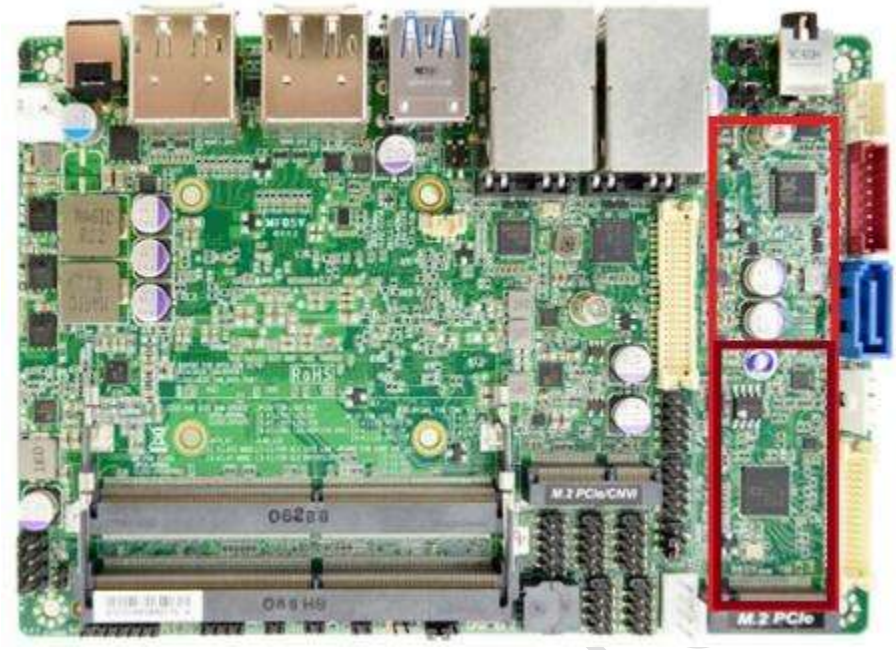
[STEP]

1. Remove 10 hexagonal nuts by an 8mm of hexagonal or movable wrench.



2. Pull up rear cover carefully, which LCD, Backlight and Touch cables inside the rear cover and please be careful to open it.

3. Support M.2 M-Key 2240/2280 PCIe storage, which the brown area is for 2242 and red area is for 2280.



4. For 2242 or 2280 storage, please use a M2 screw driver to remove the top screw in advance, and then use M4 screw driver to move the bottom screw to the correct position.
5. Plug the M.2 storage in the slot and lock it up.

6. Take the rear cover back and lock 10 hexagonal nuts by an 8mm of hexagonal or movable wrench.

ICOP offers the standard M2. 2280 PCIe Gen. 4x4 storage as below.

[SPEC]

Standard M.2 2280 form factor
80 x 22 x 3.8 mm

[M.2 2280 PCIE GEN. 4X4 LIST]

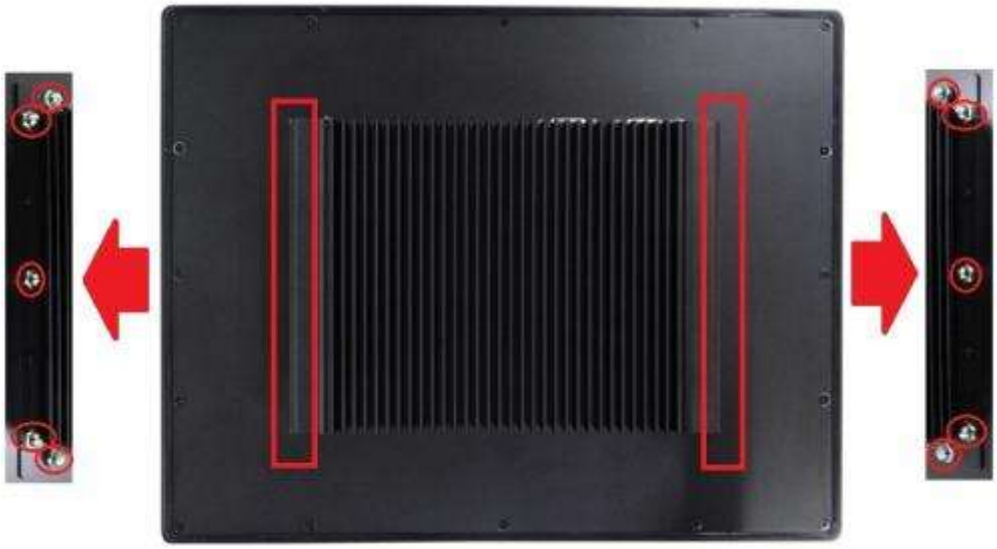
P/N	Flash Type	Capacity	Operating Temperature
M280P4-512G-TG	**TLC**	512GB	0℃ ~ +70℃
M280P4-1T-TG	**TLC**	1TB	0℃ ~ +70℃
M280P4-2T-TG	**TLC**	2TB	0℃ ~ +70℃
M280P4-512G-TG-**X**	**TLC**	512GB	**-40℃ ~ +85℃**
M280P4-1T-TG-**X**	**TLC**	1TB	**-40℃ ~ +85℃**
M280P4-2T-TG-**X**	**TLC**	2TB	**-40℃ ~ +85℃**

3.2 Installing the M.2 E-Key (2230) Modules

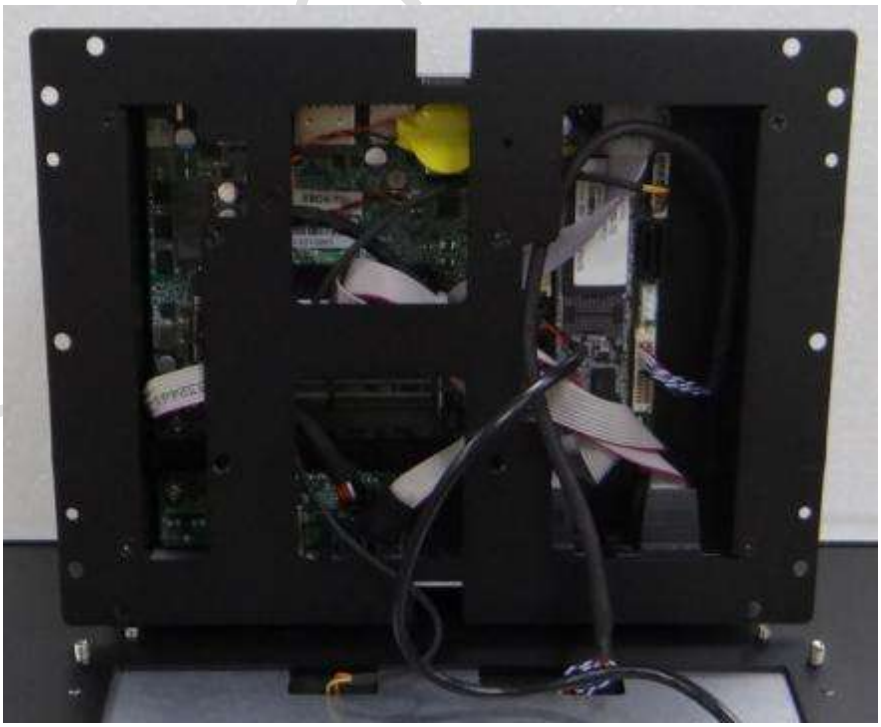
PPC-150P-TGL series support M.2 E-key (2230) USB2.0/PCIe *1 interface. Please refer the below instructions.

[STEP]

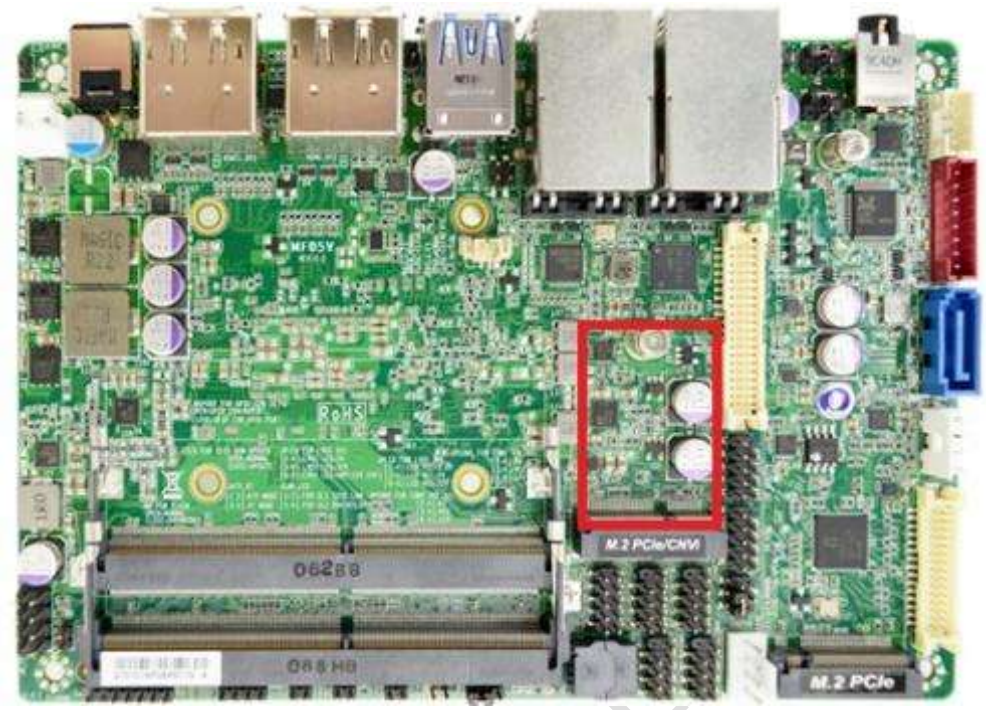
1. Remove 10 hexagonal nuts by an 8mm of hexagonal or movable wrench.



2. Pull up rear cover carefully, which LCD, Backlight and Touch cables inside the rear cover and please be careful to open it.



3. Remove the screw and plug the M.2 E-Key (2230) module on the slots, and then lock it up.



4. Take the rear cover back and lock 10 hexagonal nuts by an 8mm of hexagonal or movable wrench.

Ch. 4

Drivers and BIOS Instruction

4.1 Operating System Support and Drivers

The PPC-150P-TGL provides the Win10 and Win11 drivers.

Please get the drivers from ICOP technical support URL:

https://www.icop.com.tw/resource_entrance

For Linux, most Linux distributions support Intel® Tiger Lake Processor and user can install Linux upon PPC-150P-TGL directly. Please contact your region sales for technical support if you have any question.

4.2 BIOS Hot Key

After power on, it supports BIOS hot key as below.

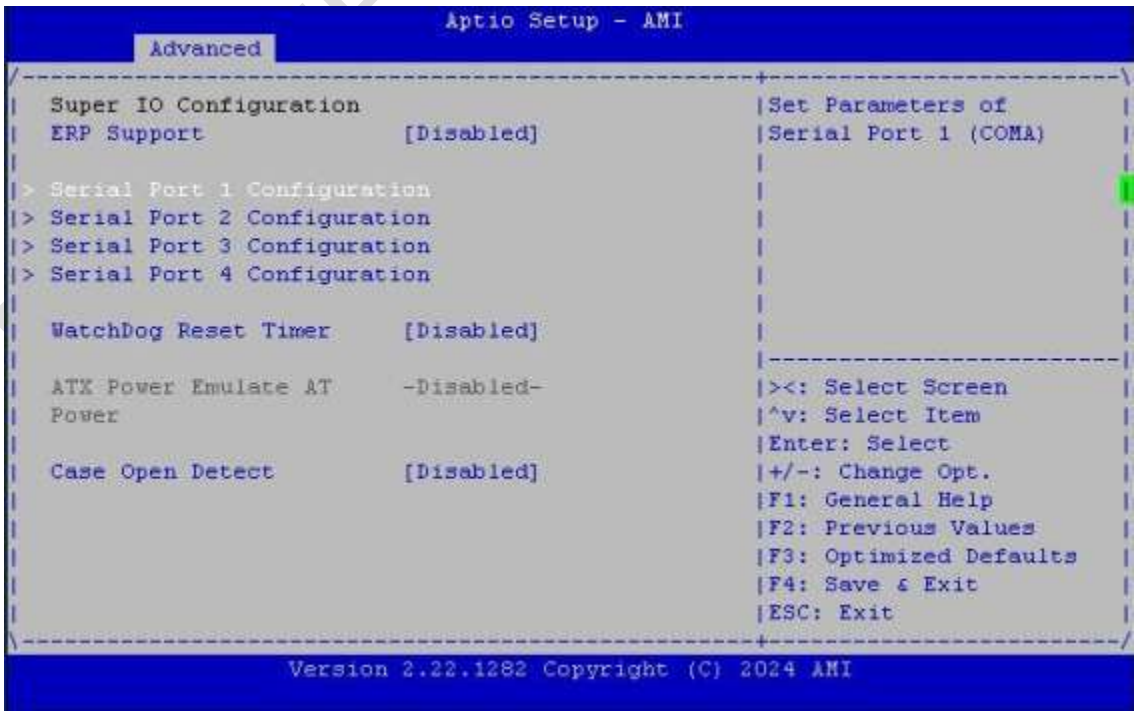
	Press < **Del** > to enter the AMI BIOS setup
	Press < **F7** > to enter Popup Menu

4.3 BIOS COM1 & COM2 Setting (RS232/422/485)

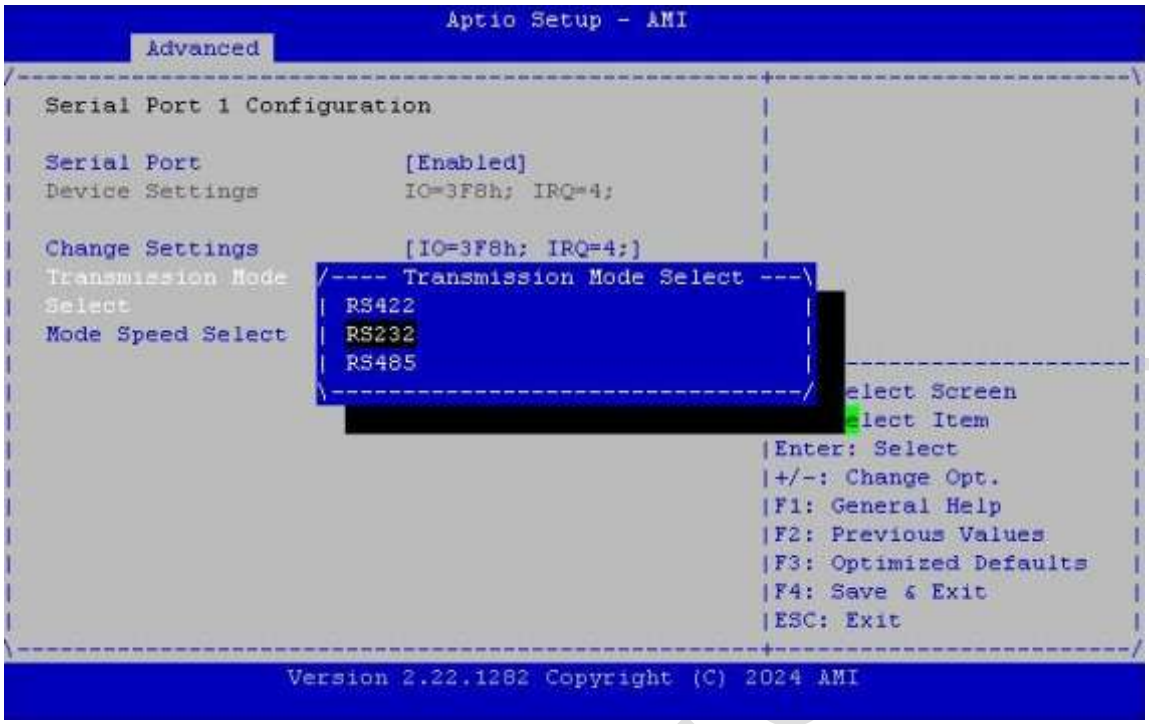
COM1 and COM2 can be set to be RS232/422/485 function. Please refer the instruction as below.

(1) In the BIOS Setup, please go to “Advanced” and “Super IO Configuration”.

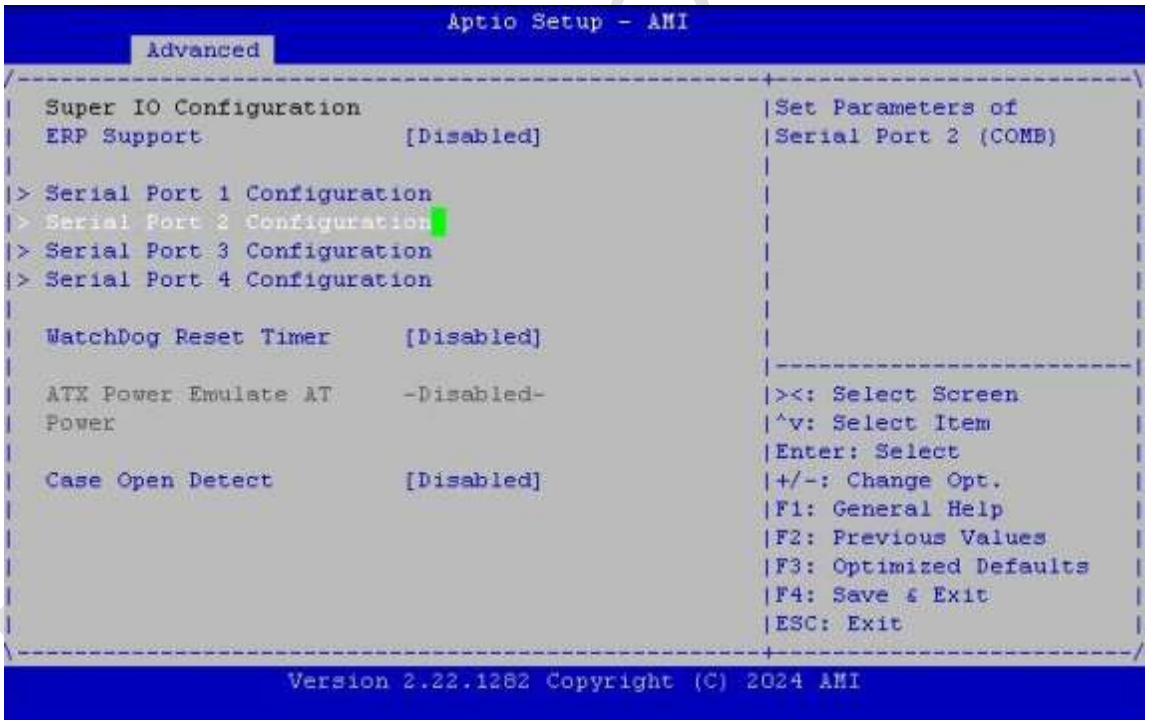
(2) Go to “Serial Port 1 Configuration”.



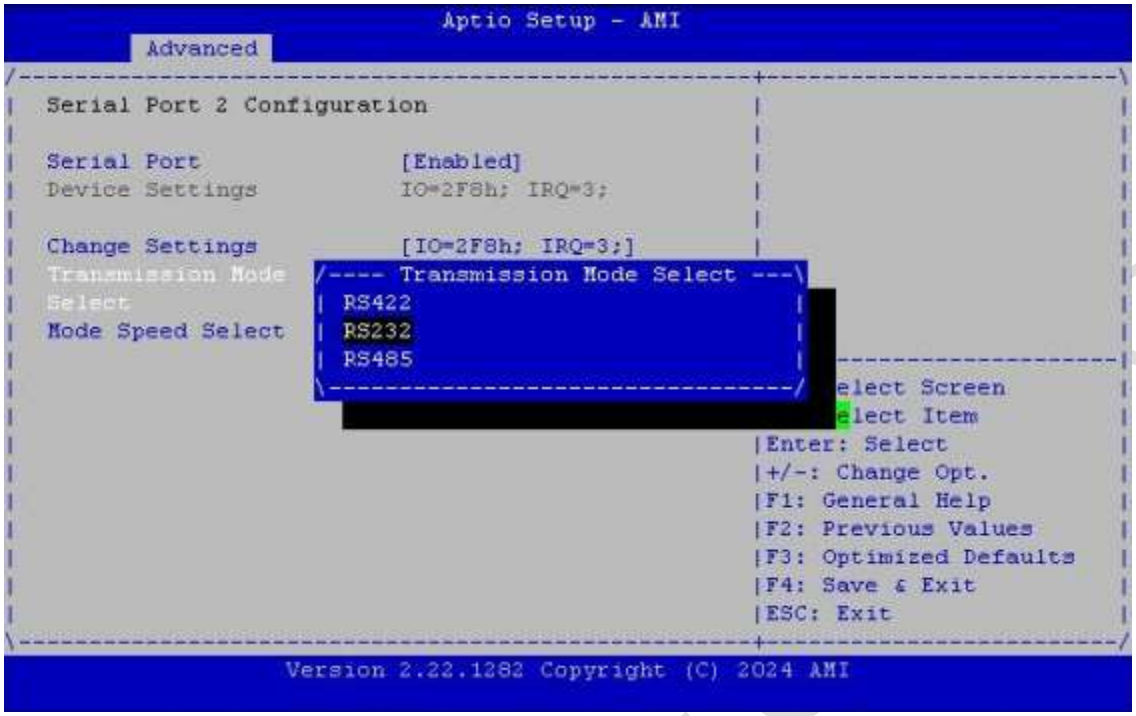
(3) Go to “Transmission Mode Select” and set RS232/422/485 function.



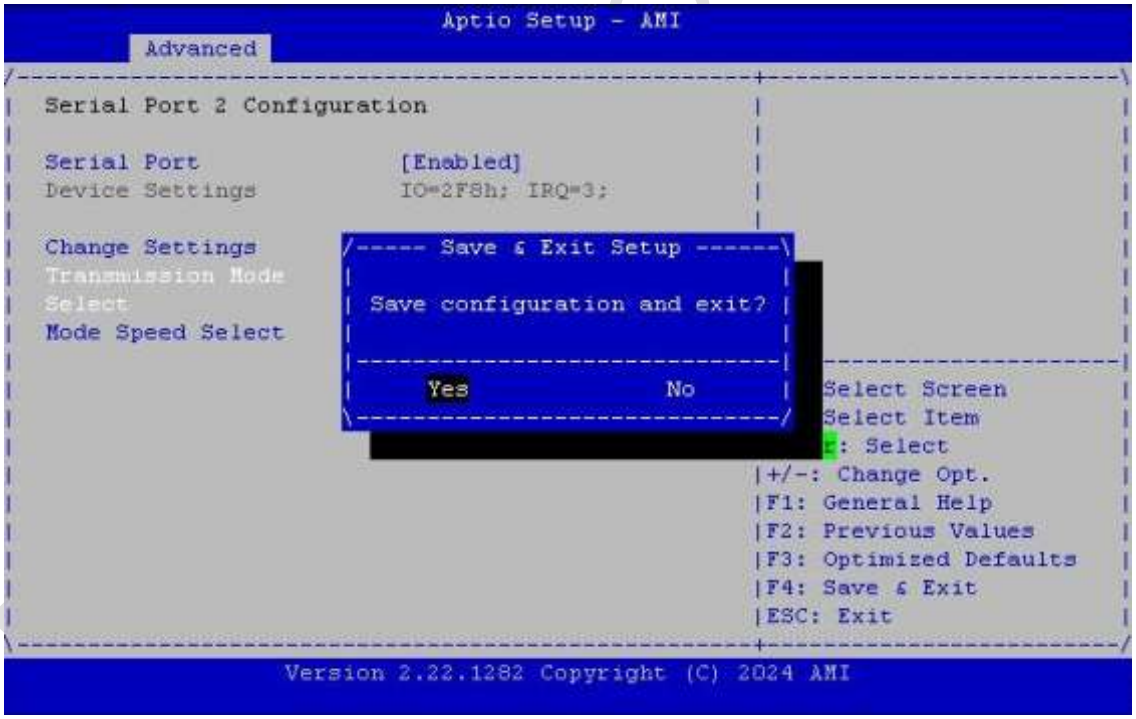
(4) Press “Esc” key to back and choose “Serial Port 2 Configuration”.



(5) Go to “Transmission Mode Select” and set RS232/422/485 function.



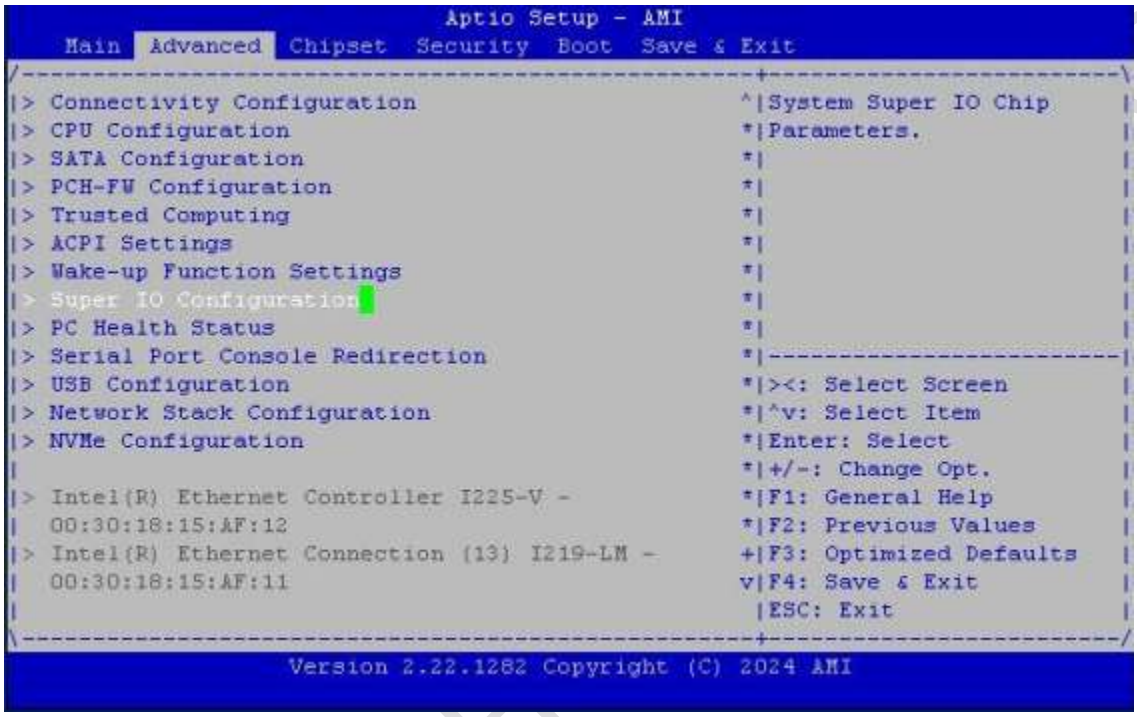
(6) After setting, please press “F4” key to save & exit.



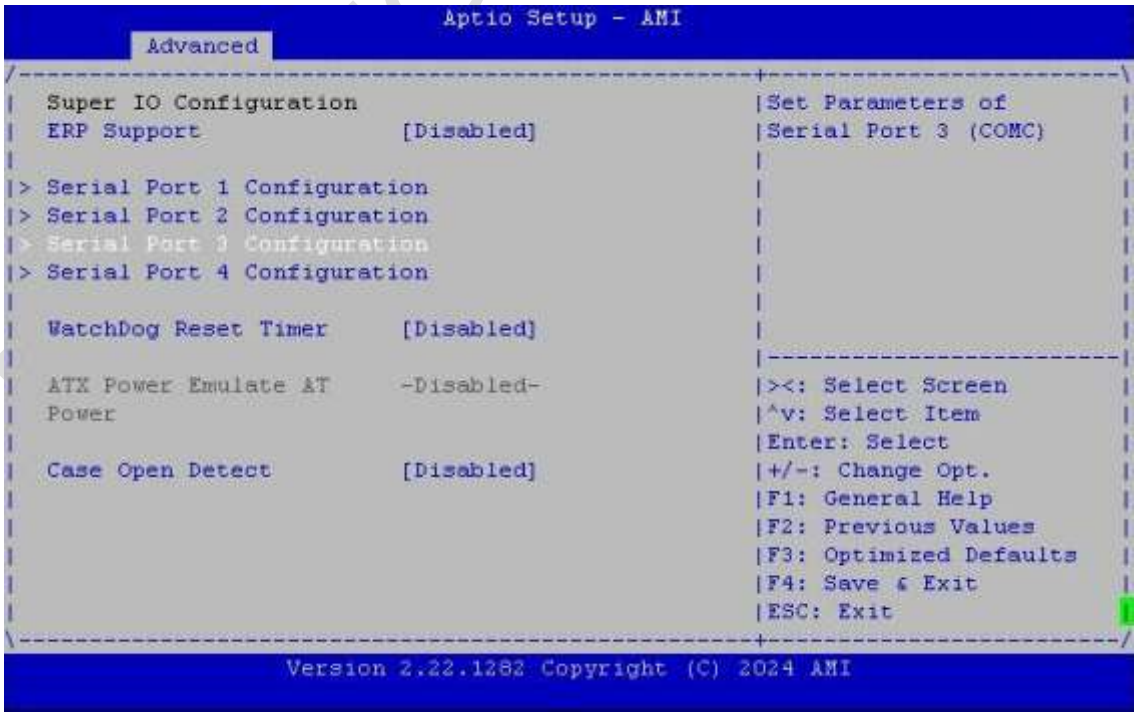
4.4 BIOS COM3 & COM4 Setting (Change Settings)

COM3 and COM4 can be changed settings as below.

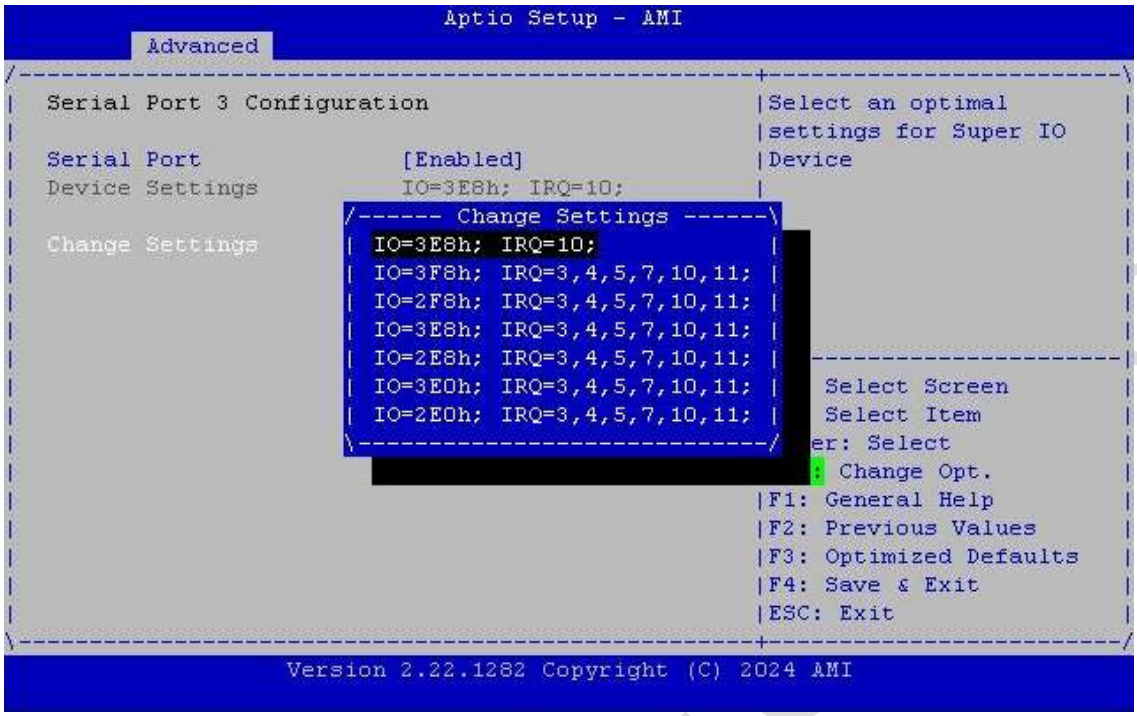
(1) In the BIOS Setup, please go to “Advanced” and “Super IO Configuration”.



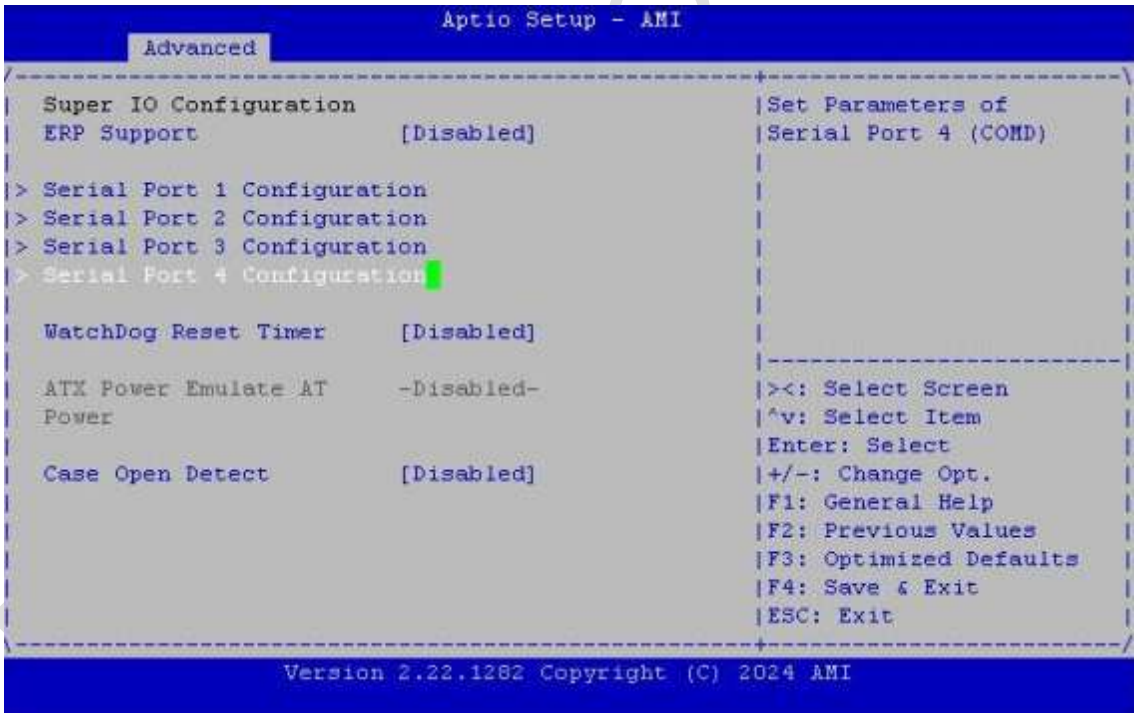
(2) Go to “Serial Port 3 Configuration”.



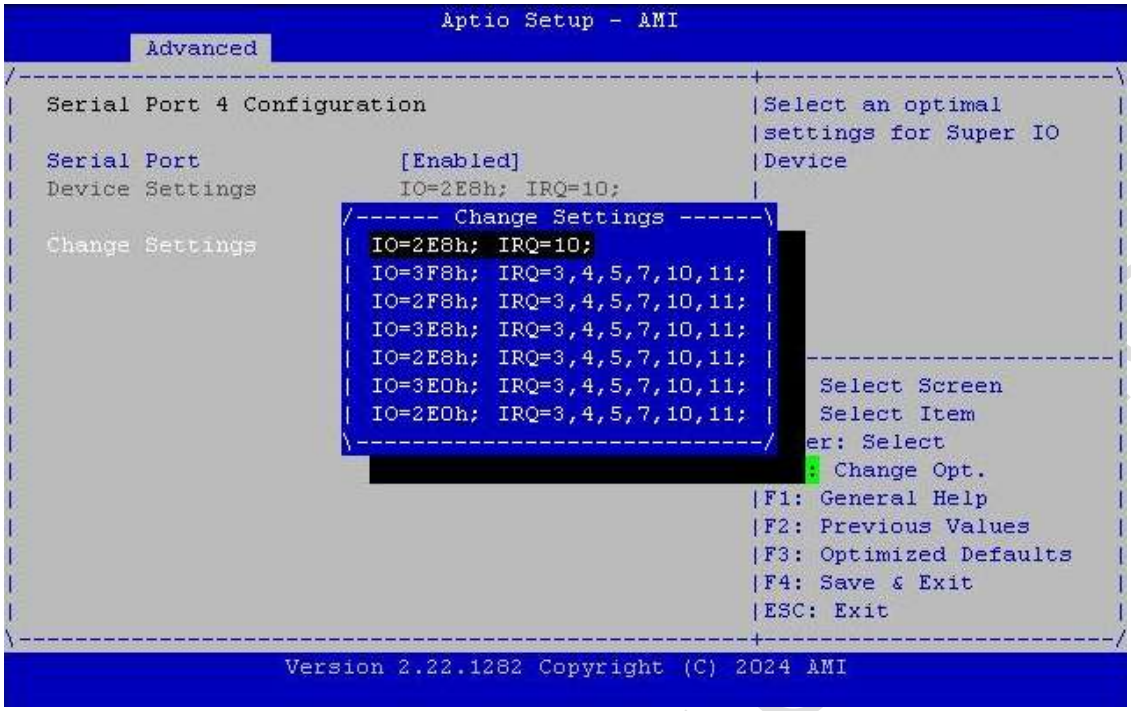
(3) Go to “Change Settings” and set IO address and IRQ if you want.



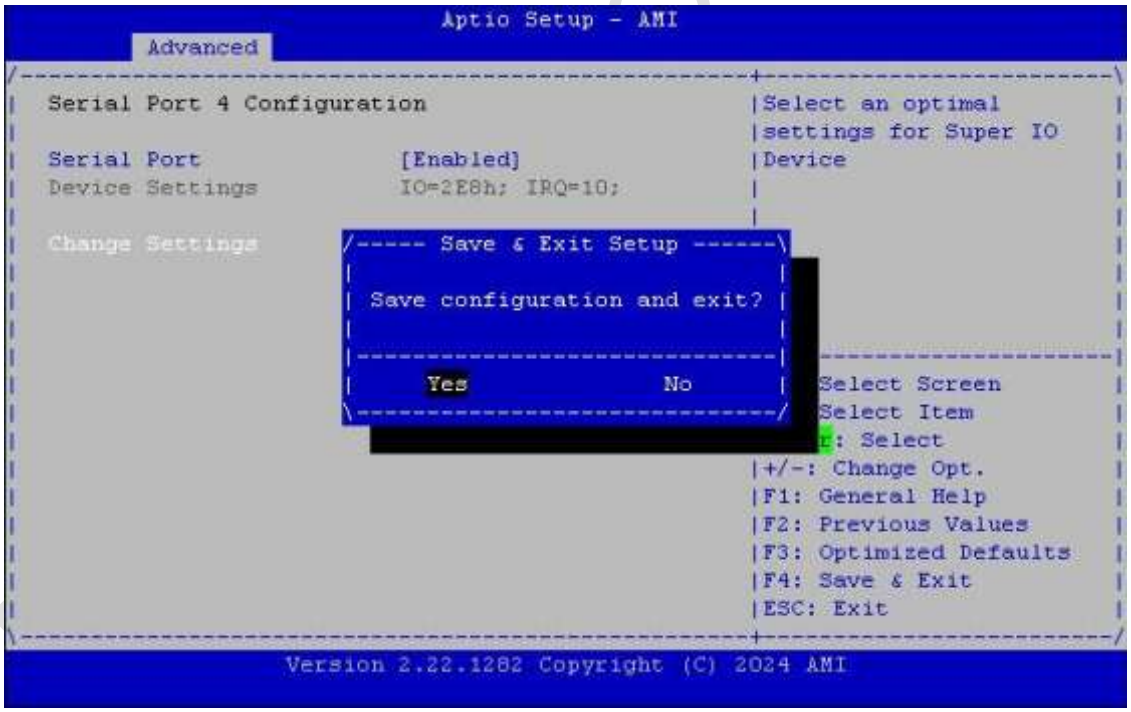
(4) Press “Esc” key to back and choose “Serial Port 4 Configuration”.



(5) Go to “Change Settings” and set IO address and IRQ if you want.



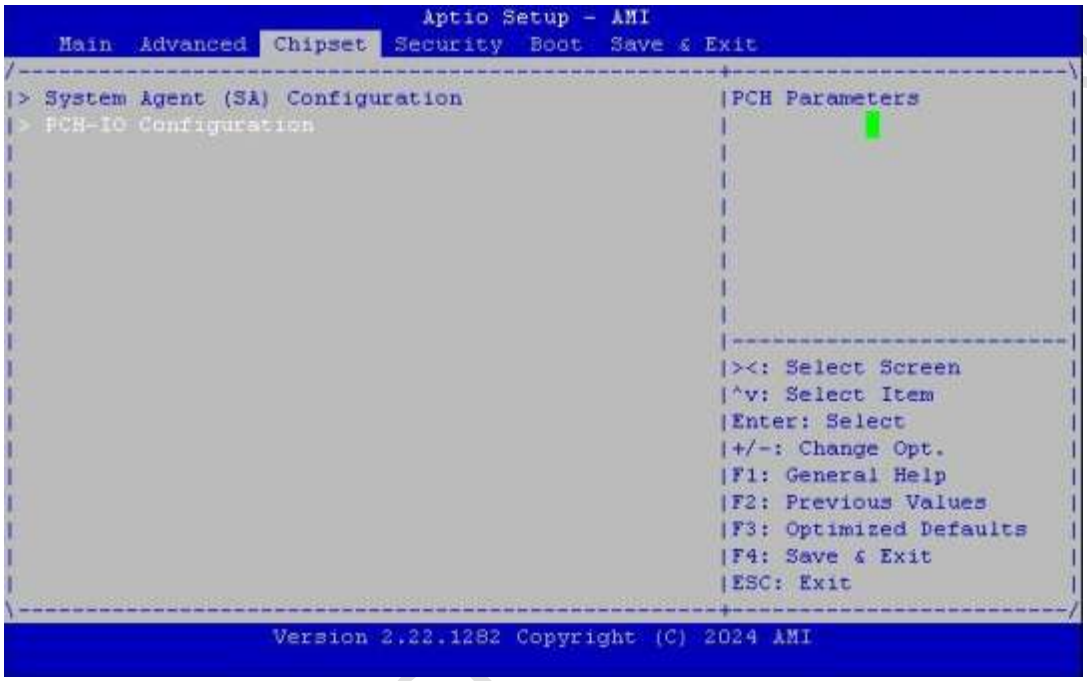
(6) After setting, please press “F4” key to save & exit.



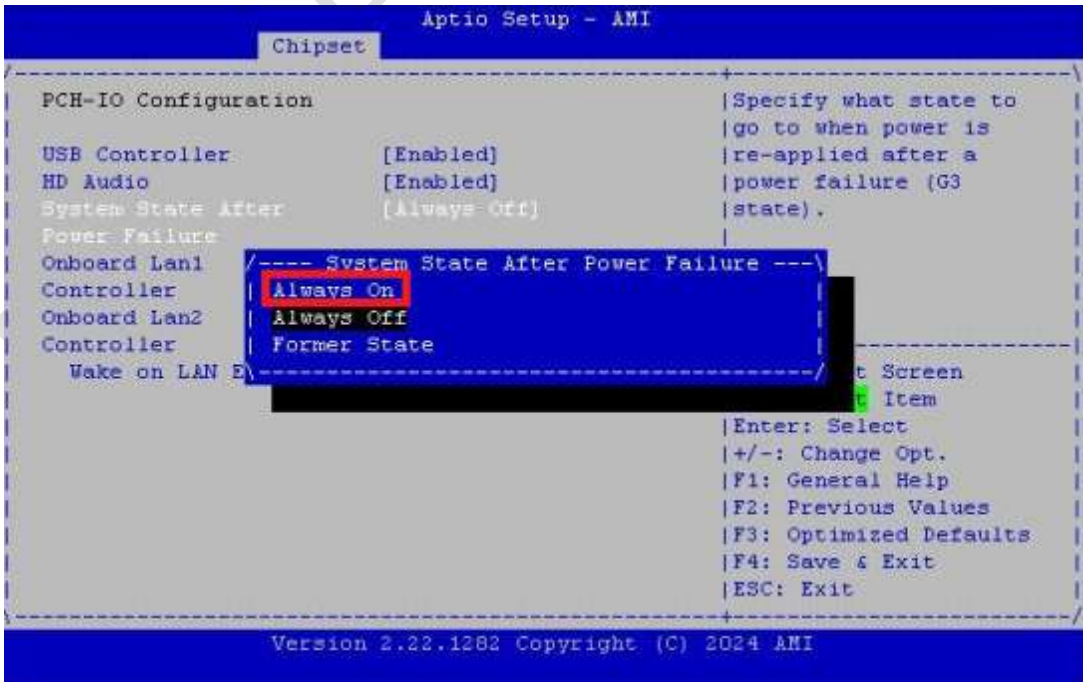
4.5 BIOS AT Mode Setting (Support Auto-Power On Function)

PPC-150P-TGL supports “Auto-Power On function”, user doesn’t need to press “power button” for system power on and just needs to plug power source input and system will be power on automatically.

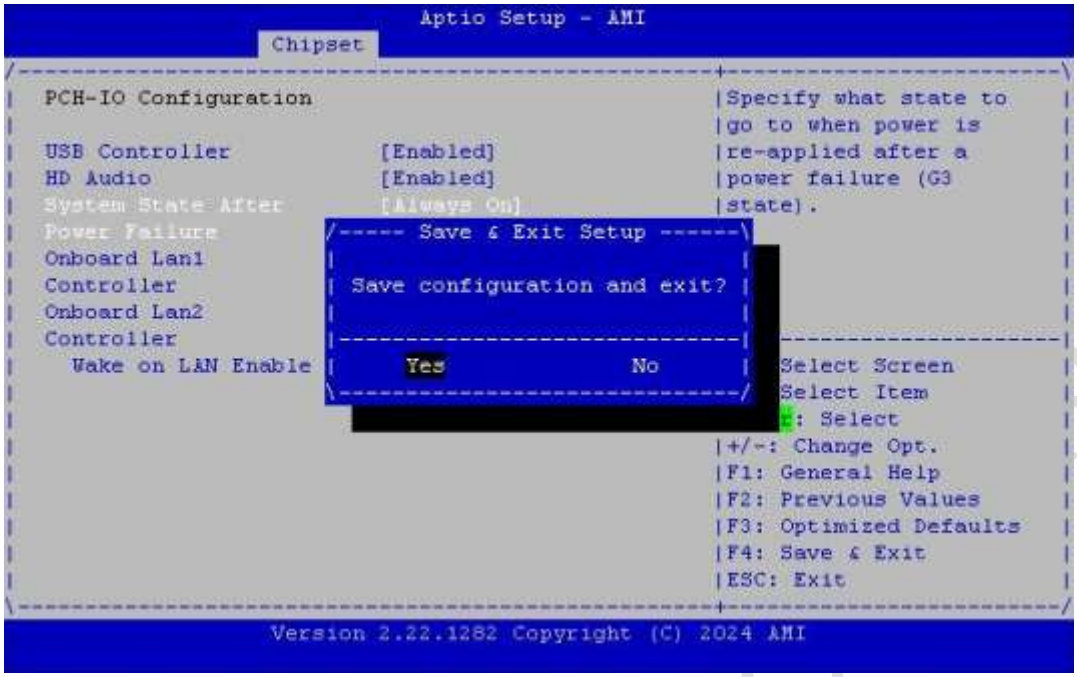
(1) In the BIOS Setup, please go to “Chipset” and “PCH-IO Configuration”.



(2) Set “System State After Power Failure” to be “Always On”.



(3) After setting, please press “F4” key to save & exit.



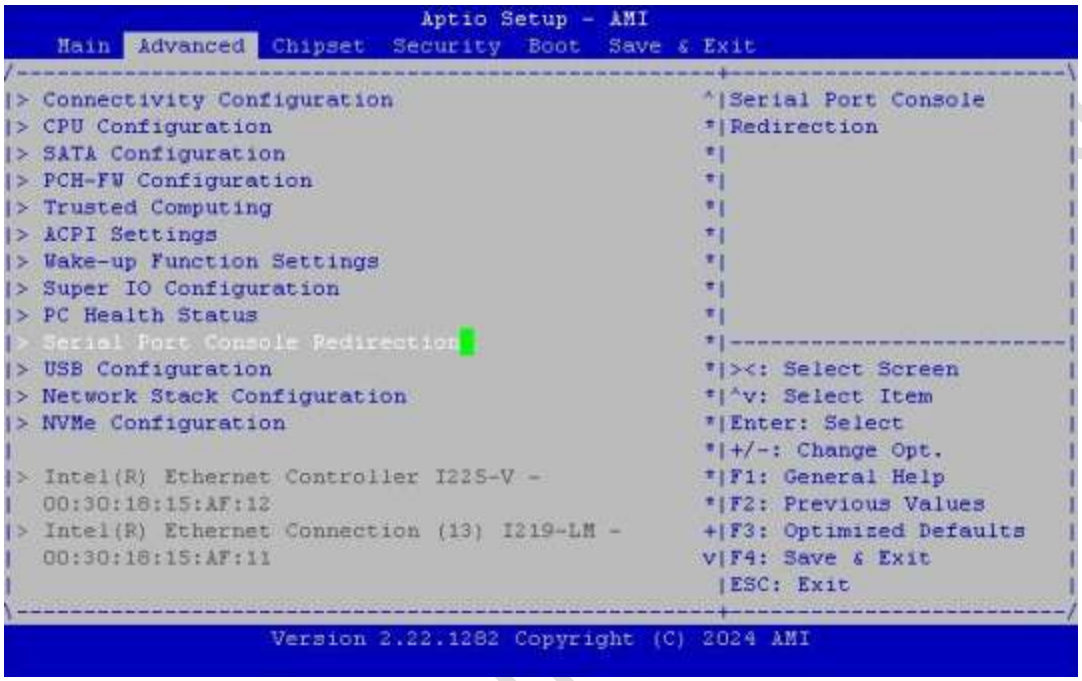
Note:

After system shut down by operating system, PPC-150P-TGL will be power-off. For next booting up, user just needs to re-plug power adapter or power reset again, while system will be boot-up automatically.

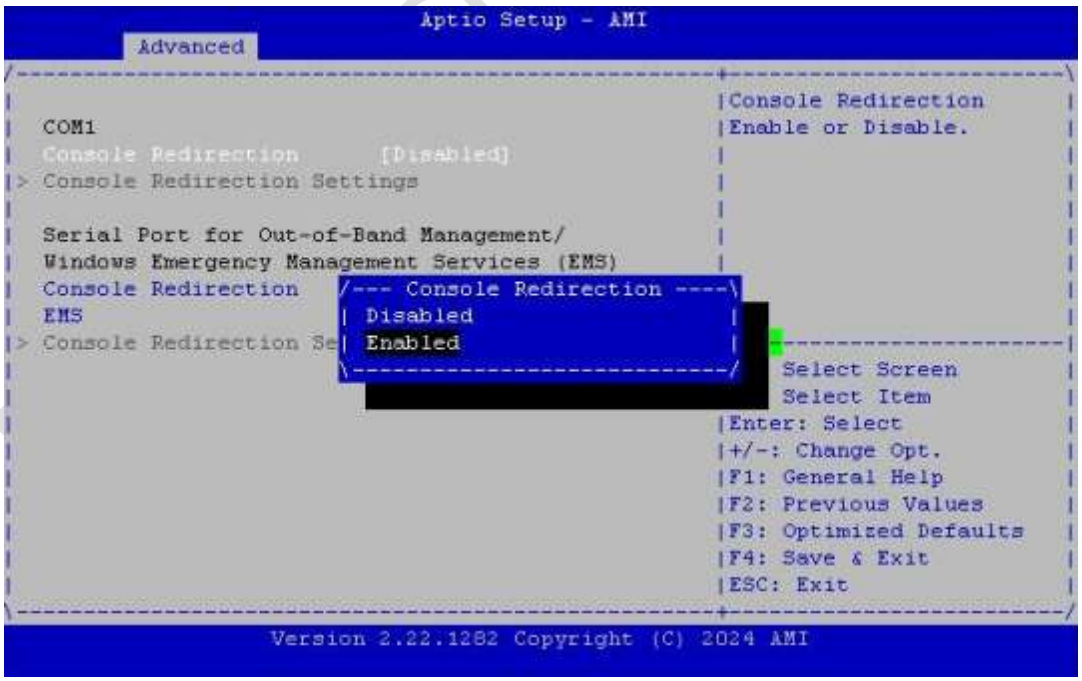
4.6 BIOS Serial Port Console Redirection

PPC-150P-TGL supports Serial Port Console Redirection as below.

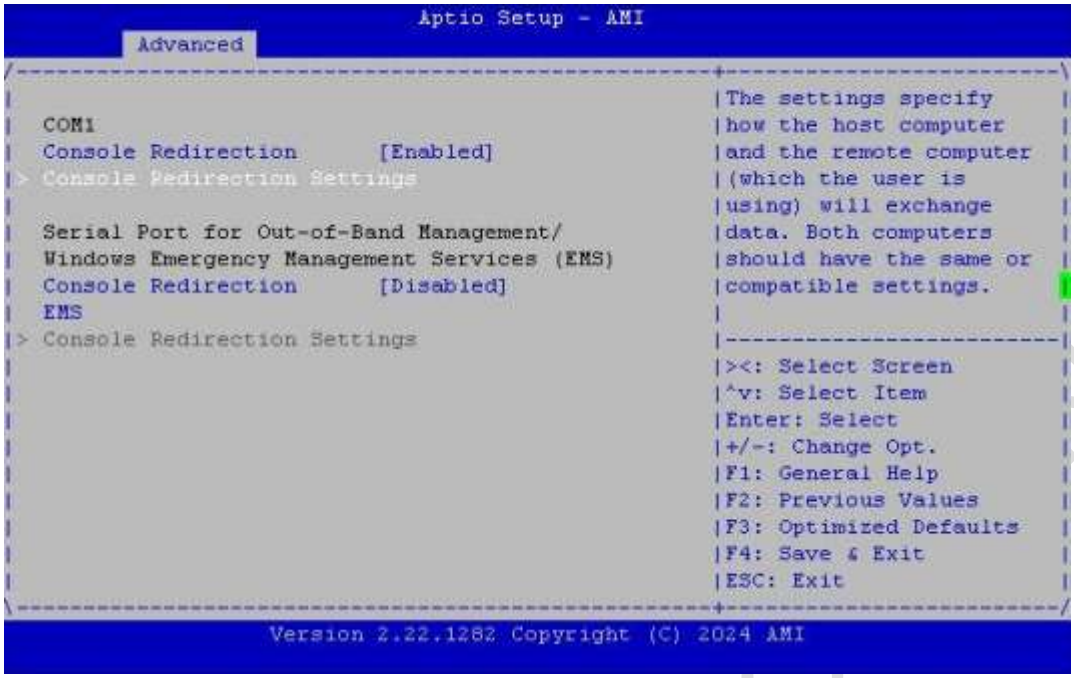
(1) Go to “Advanced” and “Serial Port Console Redirection”.



(2) Set “Console Redirection” to be “Enabled”.



(3) Go to “Console Redirection Settings”.



(4) Set “Terminal Type” to “VT100+”.

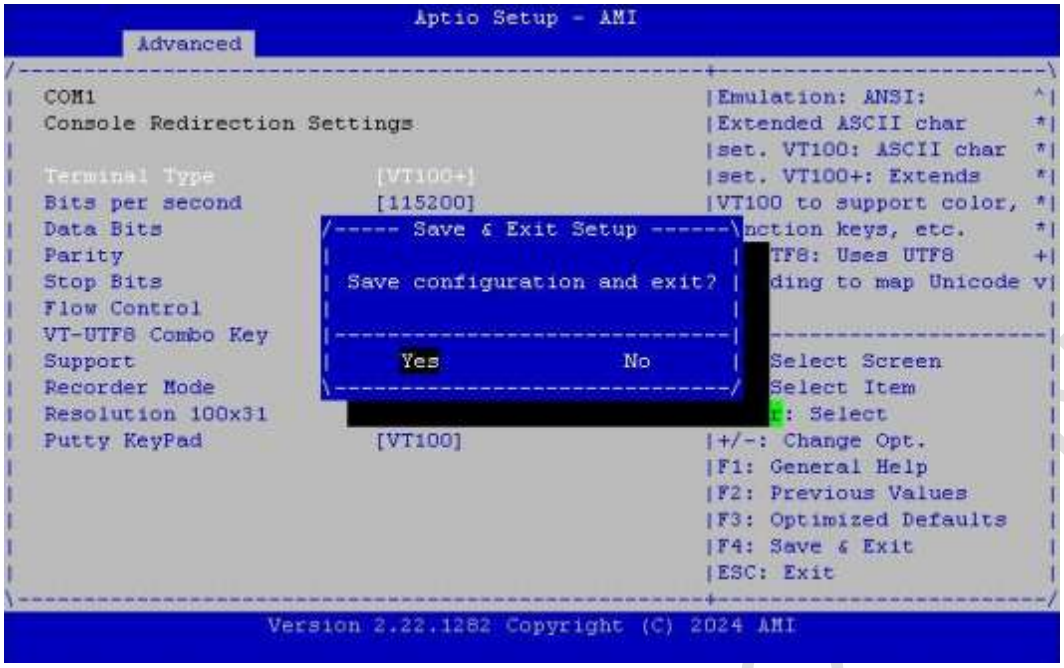
Emulation: [VT100]: ASCII char set.

[VT100+]: Extended VT100 to support color, function keys, etc.

[VT-UTF8]: Uses UTF8 encoding to map Unicode chars onto 1 or more Bytes.

[ANSI]: Extended ASCII char set.

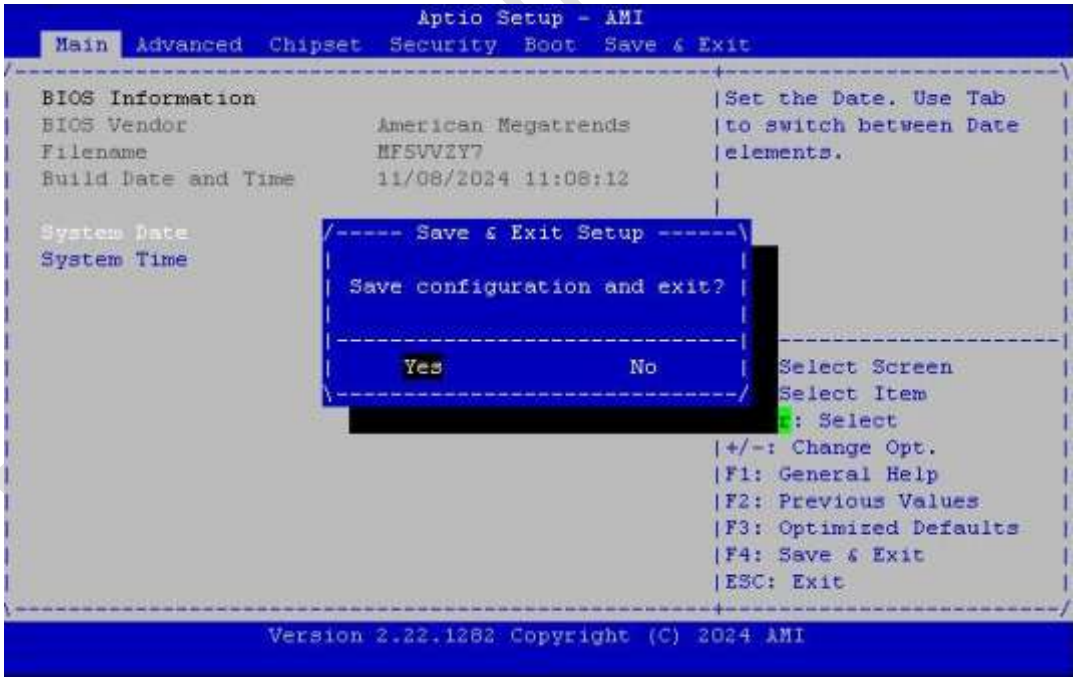
(4) After setting, please press “F4” key to save & exit.



4.7 BIOS Load Default Setting

(1) Press “F3” key to load optimized defaults.

(2) After setting, please press “F4” key to save & exit.



Warranty

This product is warranted to be in good working order for a period of one year from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster. Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, originality to use this product. Vendor will not be liable for any claim made by any other related party. Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.