

**Rev.01**

**USER GUIDE**

**PP SERIES**

**mod. PP-9745W**

**FEC**  
ITALIA

## **PP SERIES | PP-9745W**

User Guide

Version 01

Date May 2025

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## CE Conformity Declaration

This appliance complies with the following directives and regulations:

<b>2014/35/UE</b>	LVD “Low Voltage” Directive
<b>2014/30/UE</b>	EMC Directive “Electromagnetic Compatibility”
<b>2011/65/UE</b>	Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS II) and subsequent amendments according to Directive 2015/863/EU (RoHS III) and Directive 2017/2102
<b>2009/125/CE</b>	Directive on the establishment of a framework for the development of ecodesign specifications for energy-related products
<b>(UE) N. 617/2013</b>	Regulation laying down implementing measures for Directive 2009/125/EC of the European Parliament and of the Council on ecodesign requirements for computers and computer servers
<b>(CE) N. 1907/2006</b>	Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)



## Summary

Summary .....	4
Chapter 1 General .....	6
Package material list .....	7
Before installation .....	7
Warranty Notes .....	7
Safety .....	7
Chapter 2 System Presentation .....	9
I/O Ports .....	11
Chapter 3 Installation and Settings .....	14
Terminology and Tools .....	15
Stand – double hinge .....	16
Wall Mount Bracket - optional .....	18
Color .....	19
Cable Management .....	19
Adjustable Angle .....	20
Dimensions .....	20
Add-On Devices .....	21
Customer display installation (XP-2025) .....	23
Integrated Secondary Display .....	23
Peripheral installation .....	24
Remove/Install cable cover .....	25
Chapter 4 Driver & Utility installation and configuration .....	26
1. Chipset .....	27
2. Audio .....	28
3. Graphics .....	29
4. INTEL® ME .....	30
5. Serial IO .....	31
6. LAN .....	32
7. Sensors .....	33
8. Cash Drawer .....	33
9. BIOS Introduction .....	33
Enable/Disable ambient light and proximity sensor on the BIOS .....	34
Chapter 5 Software Installation .....	36
Device code example .....	37
Cash Drawer .....	37
COM Ports .....	37
Chapter 6 .....	40
Hardware .....	40

---

RAM Access.....	41
Add M.2 from the tray.....	43
POWER SETTING (COM) .....	46
LED Backlight Brightness.....	47
Cash Drawer .....	48
Chapter 7 Operating System Recovery.....	49
Bootable key creation with Aomei Backupper 6.7.0 .....	50
Starting Operating System Recovery.....	50
Chapter 8 Technical features .....	55

# **Chapter 1**

## **General**

### **Package material list**

Here's below packaging material list:

<b>Supplied Material</b>	
<b>1</b>	15.6" PP-9745W
<b>2</b>	Base to assemble
<b>3</b>	AC Cable
<b>4</b>	x1 RJ-45 to D-sub9 Cable
<b>5</b>	20V 130W Power Supply

### **Before installation**

Once the content's packaging is checked, it's advisable to keep it to allow any computer's transport viable and safer.

After the unpackage, arrange all the materials on a work surface. Then, carefully follow the instructions in the following chapters.

### **Warranty Notes**

We recommend that you read the warranty certificate and make sure that it has been filled in with the date of purchase, the dealer's stamp, and the data relating to the model and serial number.

The latter can be found on the label glued to the back of the basic module.

### **Safety**

Carefully read these safety directions:

- 1) Unplug from the power outlet before cleaning, disassembling, or transporting. Do not use liquid cleaners or sprays for cleaning. Use only a damp cloth and avoid any prolonged contact with moisture.
- 2) Lay the machine on a stable surface before maintenance or use, to avoid accidental falls.
- 3) The panel's back grilles are ventings. **DO NOT COVER.**

- 4) Make sure the voltage and load are correct before connecting the machine to the power outlet.
- 5) Safely place the power cord to avoid accidental trips. Do not twist, pinch, or knot it.
- 6) Follow all precautions and warnings printed on the machine.
- 7) If the machine isn't long-time used, unplug it from the power source.
- 8) Do not pour any liquid into the openings. It could cause fire or electric shock.
- 9) Only qualified service personnel should open and repair the equipment.
- 10) If one of the following situations occurs, have the machine checked by our technical service:
  - a. The power cord, plug, or adapter is visibly damaged.
  - b. Liquid has entered the machine.
  - c. The machine has been exposed to moisture.
  - d. The machine fell and was damaged.
  - e. The machine has obvious signs of breakage.
- 11) DO NOT LEAVE THE MACHINE IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20°C (-4°F) OR HIGHER THAN 60°C (140°F)



## **Chapter 2**

# **System Presentation**



Based on 12th generation Intel® Core processors, it offers high performance with low power consumption. It can mount high-speed SSD drives.

Based on back-panel electronics, which allows the use of the Panel PC both by exploiting the robust and sturdy base and wall/arm placement thanks to the standard VESA attachment located on the back of the PC.

Designed to reduce bulk with a decidedly compact chassis, through a careful design study, it offers a rich I/O section with optional integrated Wi-Fi connectivity.

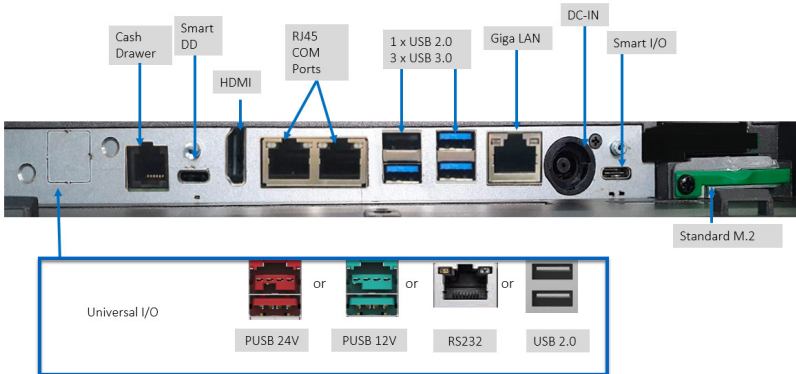
The new PP-9745W combines robustness and performance thanks to the aluminum chassis and the motherboard based on Intel® i5-12400 processors with low dissipation and reduced consumption.

The system ensures high performance in process speed and graphics functionality, maintaining low power consumption and silent operation thanks to the integrated active cooling system.

It has standard 8GB DDR4 RAM, expandable up to 32GB. It has the possibility to mount easily replaceable M.2 PCIe SSD devices.

### I/O Ports

I/O ports are placed in a protected position. A practical cable cover is supplied with the machine, which prevents unwanted access. The system is also equipped with a removable M.2 SSD.



I/O Port	Connector Type	Usage
Video Ports	1x USB DP 1x HDMI	For 2 <sup>nd</sup> monitor
12V in	20V DC in ( 130W )	
Cash Drawer	1x RJ11 (12V/24V) Cash Drawer port BIOS-managed	
USB	3x USB 3.0 1x USB 2.0	
LAN	1x RJ45 GigaLAN	

Serials	2x RJ45	
	PUSB 24V / PUSB 12V / RS232 / USB 2.0	Optional Additional I/O on Request





## **Chapter 3**

# **Installation and Settings**

## Terminology and Tools

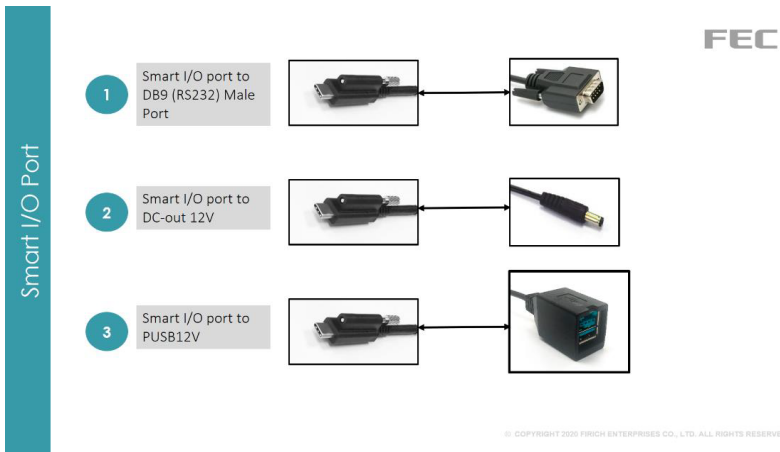
**Smart DD:** It's a proprietary port that can support two side-by-side Smart DD monitors. It uses a USB-C connector but is NOT backward-compatible with previous-generation USB-C (USB DP) ports. Contact your agent for more information.

**Smart DP:** is a proprietary port for exclusive use by Display Smart DP. Previous generation displays, called FEC DP, can be used on this port; However, there will be an error in the control panel that cannot be fixed. It won't affect its use.

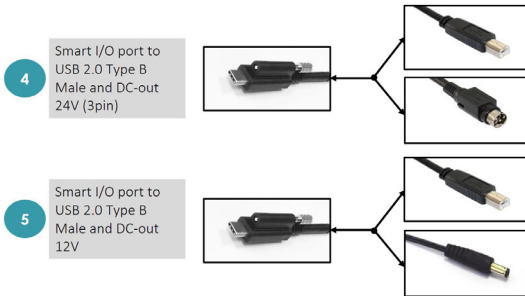
**Smart I/O:** It's a proprietary port that supports multiple I/O cable expansions. The relative power supply can be set in the BIOS at Advanced > Product Settings. By default, it is set to minimum. For example, the default power of RJ45 at DB9 is set to RI.

**Universal I/O (UIO):** it's an optional port. The customer can request it. The available ports are (1 per system):

- ① PUSB24V,
- ② PUSB12V,
- ③ RJ45 (RS232) RI/5V/12V,
- ④ USB 2.0 Tipo A (Doppia)
- ⑤ Da Smart I/O a USB 2.0 tipo B maschio e DC-OUT 12V



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For assembly, you may need these tools:



## Stand – double hinge

Note: This is a general reference assembly guide, the actual display back cover may not match your product. It will not matter to the assembly.

Tools Needed: You will need to prepare a screwdriver in order to assemble the stand.

Items Included:

Panel PC with Part A of the stand attached.

Part B of the stand

Screw x 4pcs in the accessory box.

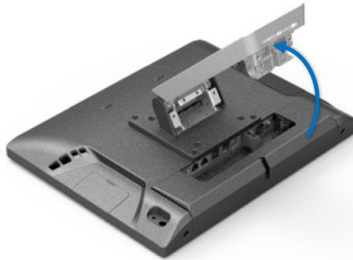
STEP 1: Lay items on a flat surface.

STEP 2: Remove the stand cable cover by sliding it down (left image) then lift it away (right image).

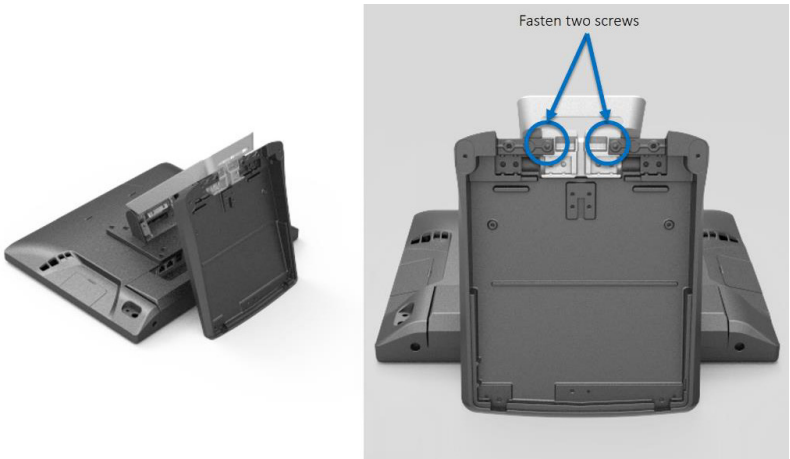




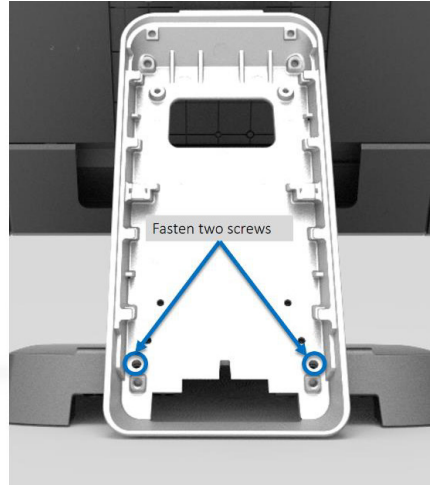
STEP 3: Lift up the angle of Part A of the stand .



STEP 4: Align Part B of the base with Part A of the base as shown. While holding the base together with one hand. Use your hand to slightly fasten the screws . Then use the screwdriver to tightly fasten it.



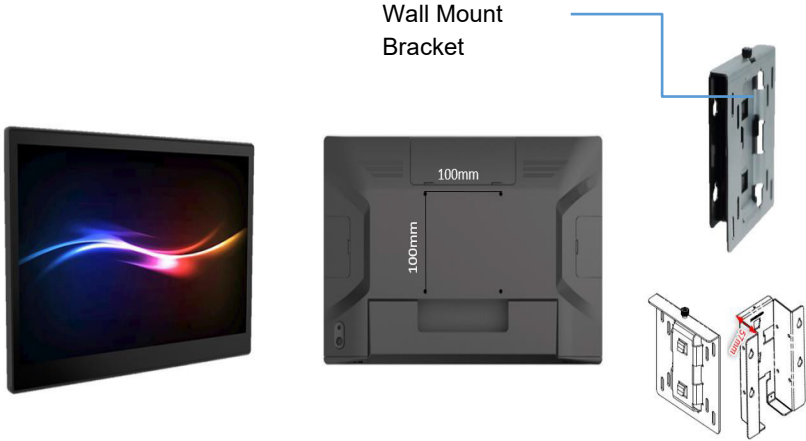
STEP 5: Place the stand in the upright position (left image) then use the screwdriver to fasten the two screws (right image).



STEP 6: Place the stand cable cover back on the stand. Then assembly is complete .



### Wall Mount Bracket - optional



Thickness of wall mount bracket (no space for power adapter)= 21mm

Thickness of Wall Mount bracket (space for power adapter)= 57mm

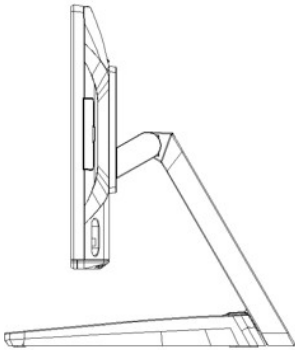
## Color



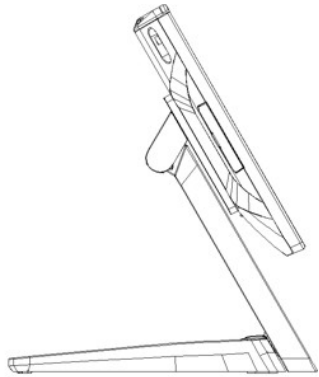
## Cable Management



### Adjustable Angle



0°



120°

### Dimensions



## Add-On Devices

Note: This is a general reference assembly guide, the actual display back cover may not match your product. It will not matter to the assembly.

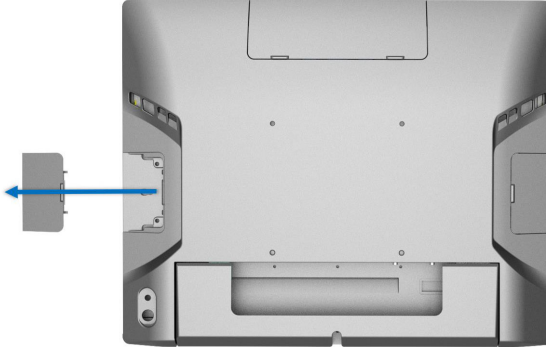
Tools Needed: You will need to prepare a screwdriver in order to assemble the add-on device.

Items Included:

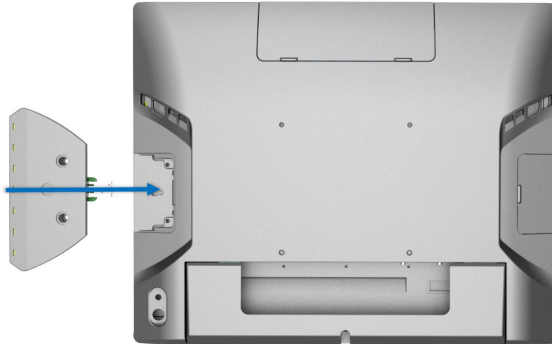
Panel PC with Part A of the stand attached.

Part B of the stand  
Screw x 4pcs in the accessory box.

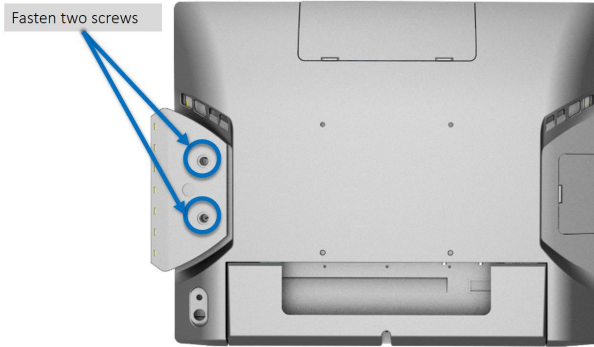
STEP 1: Remove the side cover.



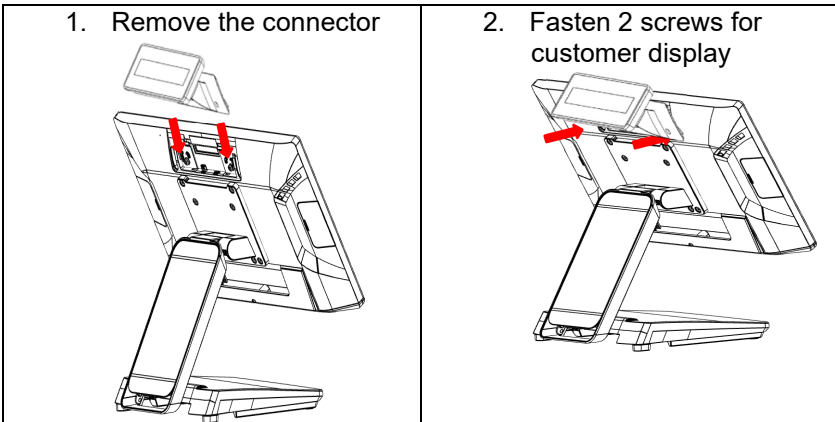
STEP 2: Connect the add-on device to the system.



STEP 3: Fasten the two screws. Complete.



**Customer display installation (XP-2025)**



**Integrated Secondary Display**

- Loosen the screw indicated in the figure and remove the cover



Connect the customer display and secure it to the display. (Make sure the COM6 port power supply is correct before connecting the VFD.)



- Don't exceed the maximum tilt angle, otherwise, the internal cable may disconnect.

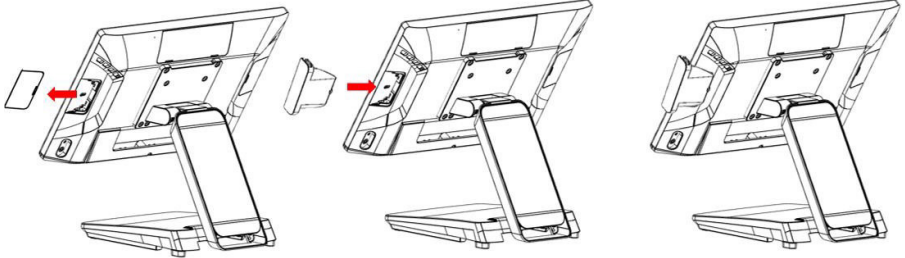


### ***Peripheral installation***

1. Remove plastic lid

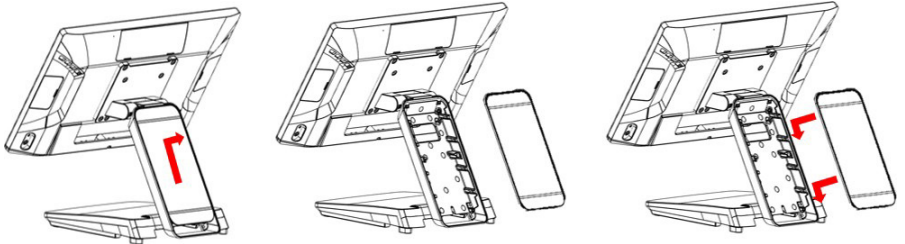


2. Attach ID (USB) device and fix it with 1 x M3 screw



### Remove/Install cable cover

1. Cable cover removal
2. Cable cover installation



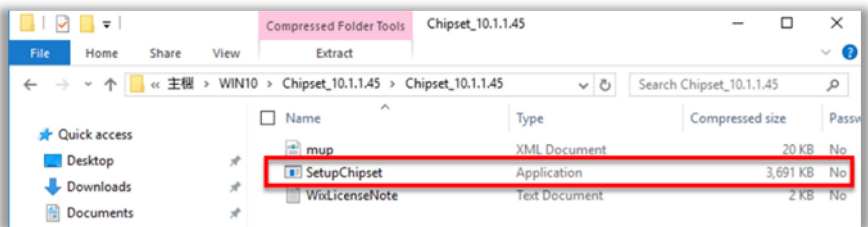
## **Chapter 4 Driver & Utility installation and configuration**

For the most recent drivers go to:  
<https://www.fecpos.com/download/download.html>  
 For the installation, follow this order:

- ① Chipset
- ② Audio
- ③ Graphics
- ④ Intel® ME
- ⑤ Serial IO
- ⑥ LAN
- ⑦ Sensors

## 1. Chipset

1. Locate the chipset folder and double-click on [ **SetupChipset** ]



2. •Click on [ **Next** ]

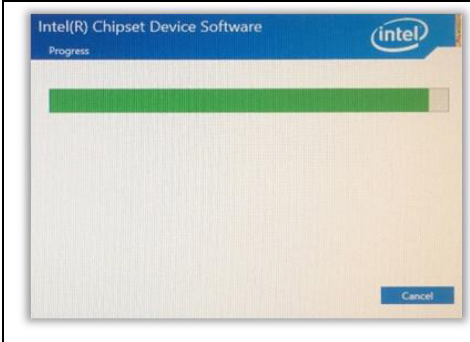
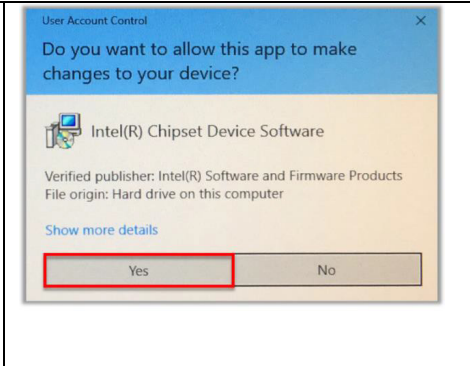
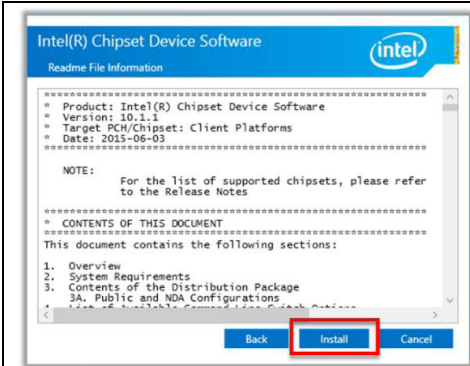


3. • Click on [ **Accept** ]



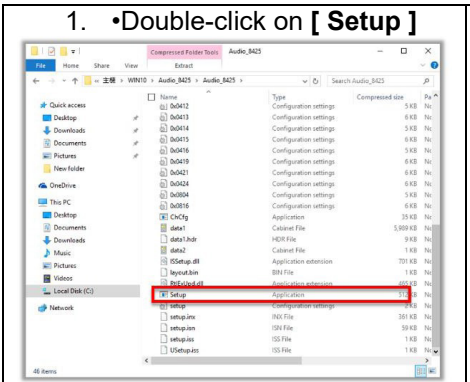
4. •Click on [ **Install** ]

5. •Click on [ **Yes** ]

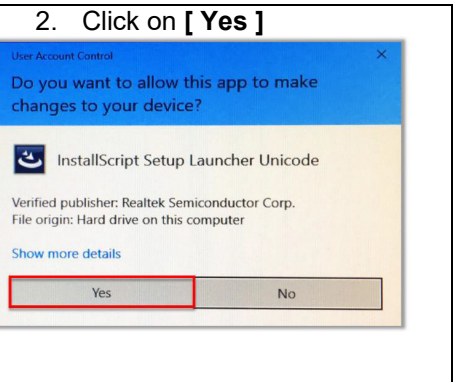


6. •Click on [ Restart Now ]

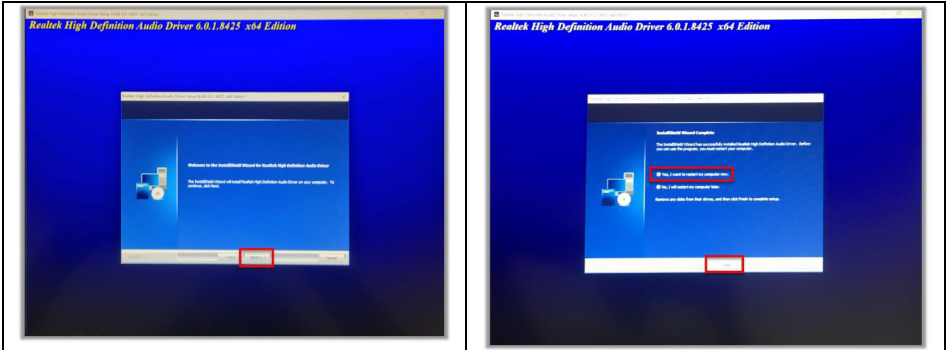
## 2. Audio



3. Click [ Next ]



4. Click [ Yes, I want to restart now, [ Finish ]

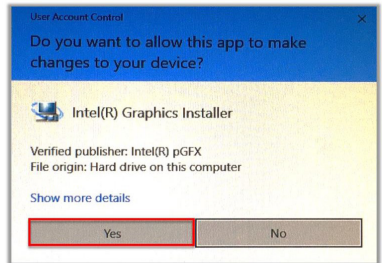


### 3. Graphics.

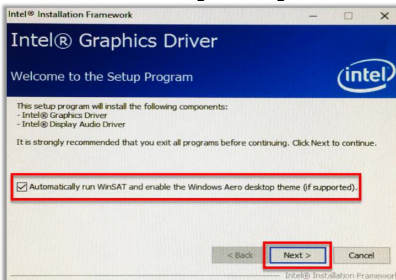
#### 1. Double-click on [ installer.exe ]

名称	修改日期	类型	大小
Graphics	10/5/2022 6:15 PM	文件夹	
installation_readme.txt	2/9/2022 12:47 AM	Text Document	11 KB
<b>installer.exe</b>	2/4/2022 3:56 PM	应用程序	88,614 KB
license.txt	2/4/2022 3:56 PM	Text Document	37 KB
readme.txt	2/9/2022 12:47 AM	Text Document	569 KB

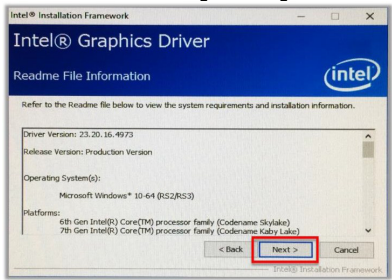
#### 2. Click on [ Yes ]



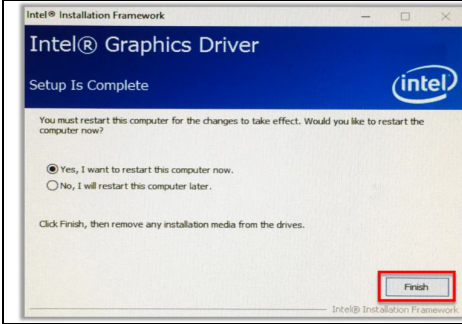
#### 3. Click on [ Next ]



#### 4. Click on [ Next ]

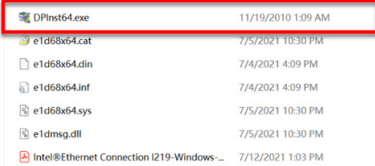


#### 5. Click on [ Finish ]

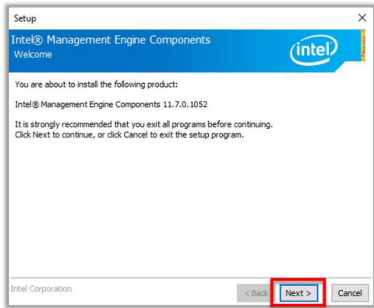


#### 4. INTEL® ME

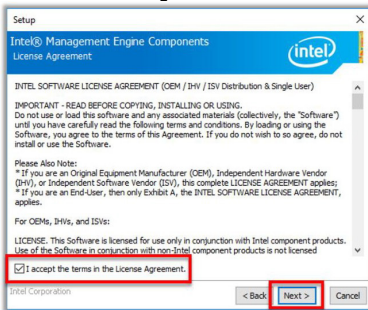
##### 1. Double-click on [ Dpinst64 ]



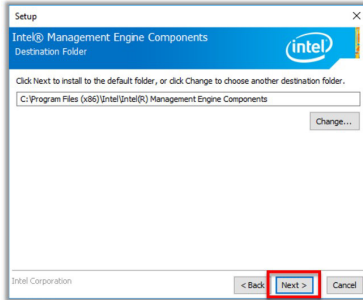
##### 2. Click on [ Next ]



##### 3. Accept terms and conditions, then click on [ Next ]

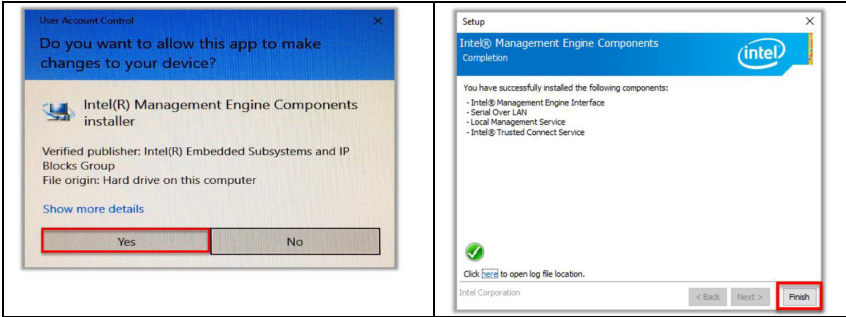


##### 4. Click on [ Next ]



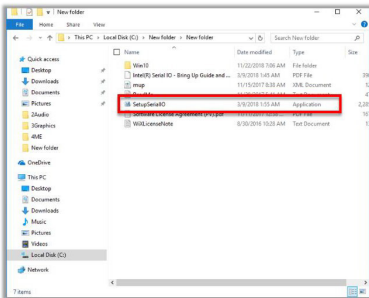
##### 5. Click on [ Yes ]

##### 6. Click on [ Finish ]

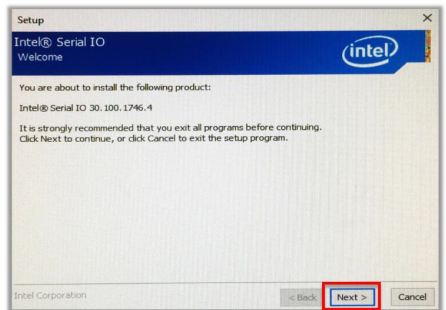


## 5. Serial IO

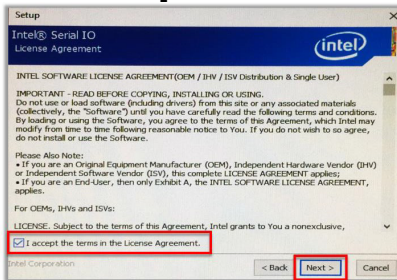
1. Double-click on [ **SetupSerialIO** ]



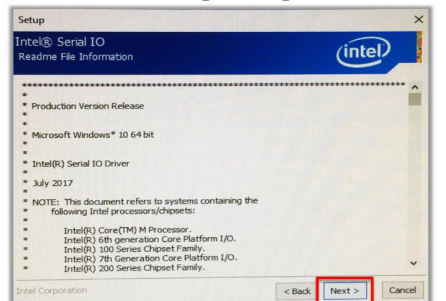
2. Click on [ **Next** ]



3. Accept terms and conditions, then click on [ **Next** ]

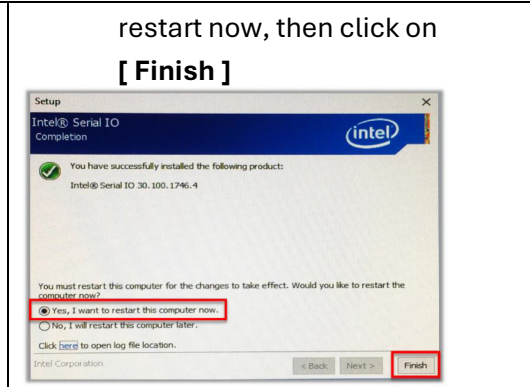
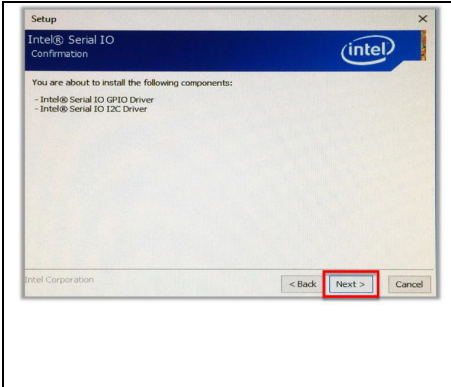


4. Click on [ **Next** ]



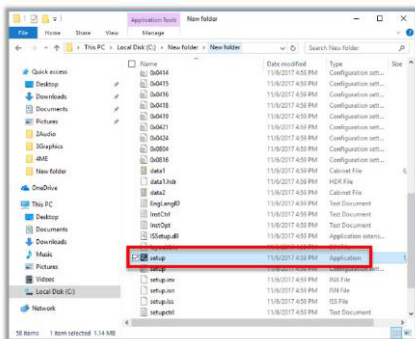
5. Click on [ **Next** ]

6. Select Yes, I want to

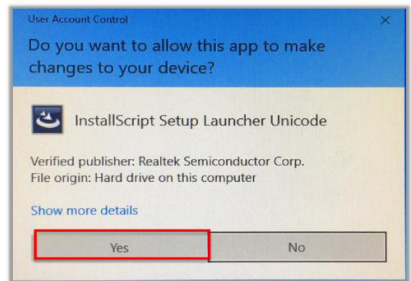


## 6. LAN

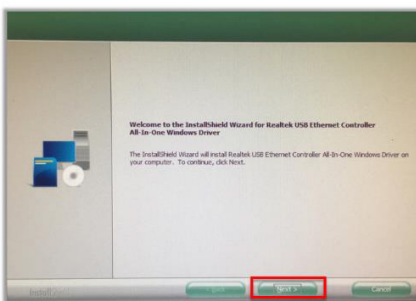
### 1. Fai doppio click su [ Setup ]



### 2. Clicca [ Sì ]



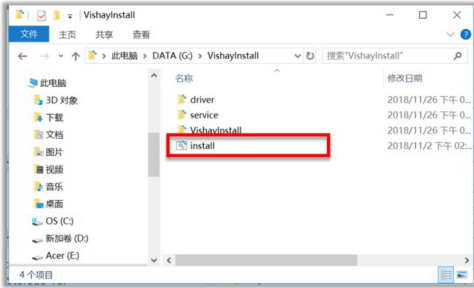
### 3.



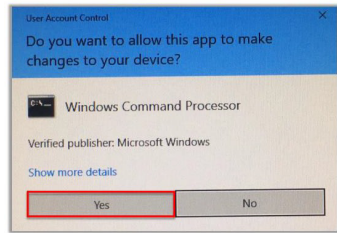


## 7. Sensors

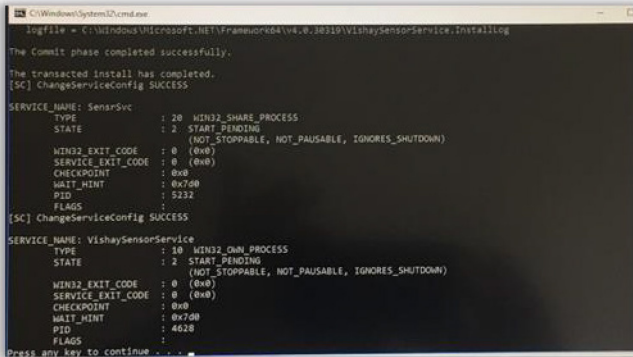
### 1. Double-click on [ install ]



### 2. Click on [ Yes ]



### 3.



## 8. Cash Drawer

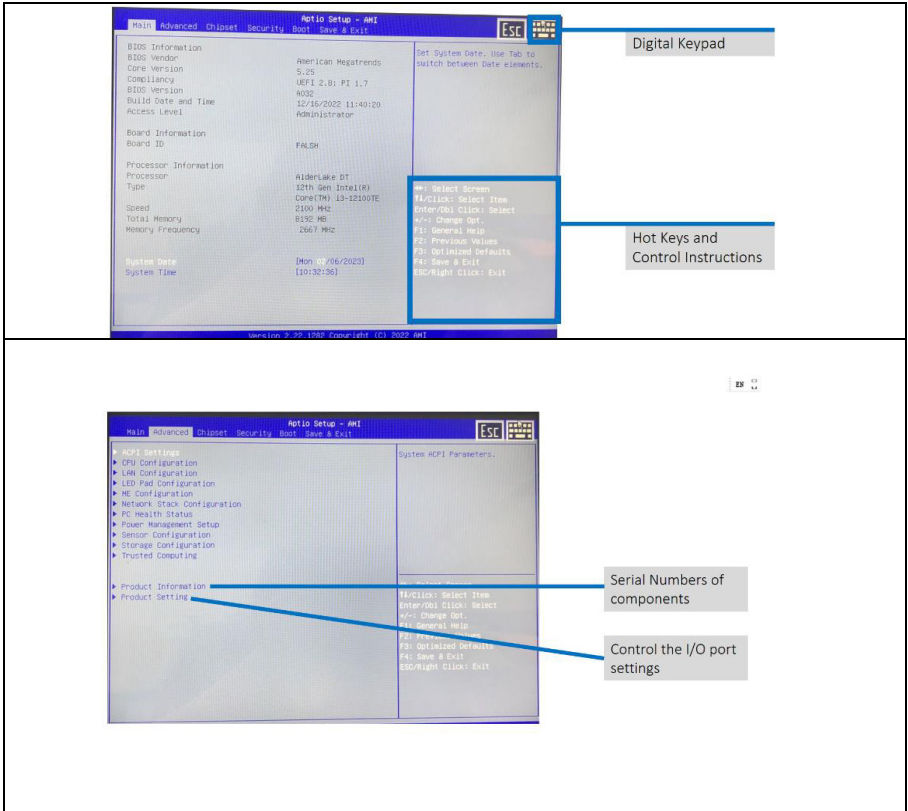
Contact the support staff and request the **“FEC Guide for SDK Integration with the Cash Drawer”**.

## 9. BIOS Introduction

To access the BIOS, press the <DEL> key when the device is rebooting.

## Enable/Disable ambient light and proximity sensor on the BIOS

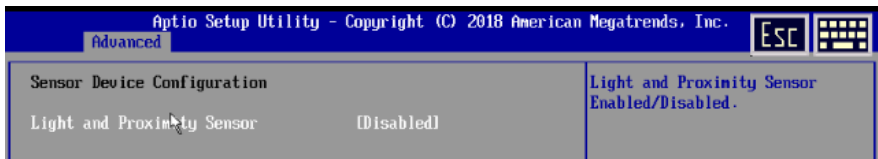
To use the BIOS, you can use the touch panel.



Step 1: Boot the system

Step 2: Press the <DEL> key during boot element to enter the BIOS

Step 3: On Advanced > Sensor Configuration click Disabled to turn it off, Sensor 1 to activate the proximity and ambient light sensor.



Note: Factory setting is set on “Enabled”.

## **Chapter 5**

# **Software Installation**

## Device code example

### Cash Drawer

-----

```
public void CashDrawer_1_Open_click(View view) {
    try {
        Intent intent = new Intent("
X.intent.action.SET_BOX_OUTPUT1_HIGH");
        mContext.sendBroadcast(intent);
        Thread.sleep(200);
        Intent intent1 = new Intent("
X.intent.action.SET_BOX_OUTPUT1_LOW");
        mContext.sendBroadcast(intent1);
    } catch (Exception e) {
        Log.d(TAG, "Failed to send broadcast.");
    }
}
```

```
public void CashDrawer_2_Open_click(View view) {
    try {
        Intent intent = new Intent("
X.intent.action.SET_BOX_OUTPUT2_HIGH");
        mContext.sendBroadcast(intent);
        Thread.sleep(200);
        Intent intent1 = new Intent("
X.intent.action.SET_BOX_OUTPUT2_LOW");
        mContext.sendBroadcast(intent1);
    } catch (Exception e) {
        Log.d(TAG, "Failed to send broadcast.");
    }
}
```

-----

### COM Ports

```
COM1 = /dev/ttyUSB0
COM2 = /dev/ttyUSB1
COM3 = /dev/ttyUSB2
COM4 = /dev/ttyUSB3
COM5 (LCM/VFD) = /dev/ttyS1
```

-----

```
int intSerialPortHandle = -1; int intReturnCode = -
1;
private int intBaudRate=9600;
private String
strTestString="testStringtestString";
String strttyUSBPath;
```

```
SerialPort sp;
```

```
private void SleepMiniSecond(SerialPort spThread,
int minSecond)
{
try {
spThread.sleep(minSecond);
dump_trace("SLEEP_MSEC="+ minSecond);
} catch (InterruptedException e) {
e.printStackTrace();
}
}
```

```
private boolean RS232_Test
{
int intDataReceivedLength=0; sp = new SerialPort();

strttyUSBPath = "/dev/ttyUSB0"
intSerialPortHandle =
sp.open(strttyUSBPath,intBaudRate);
```

```
byte[] btyVersion_msg_received = new byte[256];
Arrays.fill( btyVersion_msg_received, (byte) 0 );
intReturnCode =
sp.write(intSerialPortHandle,strTestString.getBytes
());
```

```
sp.setListener(splistener);
intDataReceivedLength = sp.getDataReceivedLength();
int nRetry=0;
while (intDataReceivedLength == 0)
{
SleepMiniSecond(sp, 1000);
intDataReceivedLength = sp.getDataReceivedLength();
nRetry++;
if (nRetry == 2) break;
}

if ( intDataReceivedLength>= 0) {
btyVersion_msg_received =
Arrays.copyOf(sp.getBytDataReceived(),intDataReceiv
edLength);
}

sp.close(intSerialPortHandle);
sp = null;
boolean testResult = false;
testResult = (intDataReceivedLength > 0 )? true:
false; return testResult;
}
```

-----

## **Chapter 6 Hardware**



## RAM Access

Note: This is a reference assembly guide, actual display dimensions may vary; however, they won't affect assembly. Make sure the product is turned off.

Tools Needed: Prepare a screwdriver.

STEP 1: Place the Panel PC face down on a flat surface. Using a precision screwdriver, unscrew the screw.



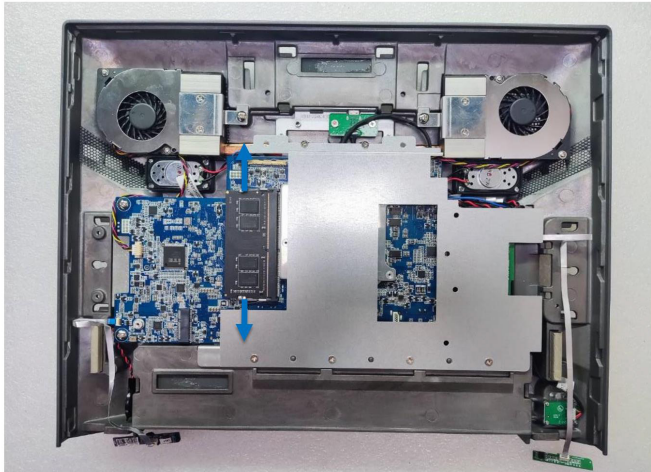
STEP 2: Remove back cover



**STEP 3:** Lift the panel, which will automatically release the FFC sensor cable.



**STEP 4:** Release the RAM by pressing on the metal hooks. It will rise, then you can disconnect it by pulling it out at a 45-degree angle.



### Add M.2 from the tray

Note: This is a general reference assembly guide, the actual display back cover may not match your product. It will not matter to the assembly. Make sure the system is off before removing or installing the M.2 tray from the system. This system does not support hot plug of the storage device.

Tools Needed: You will need to prepare a precision screwdriver in order to assemble the M.2.

Items Included:

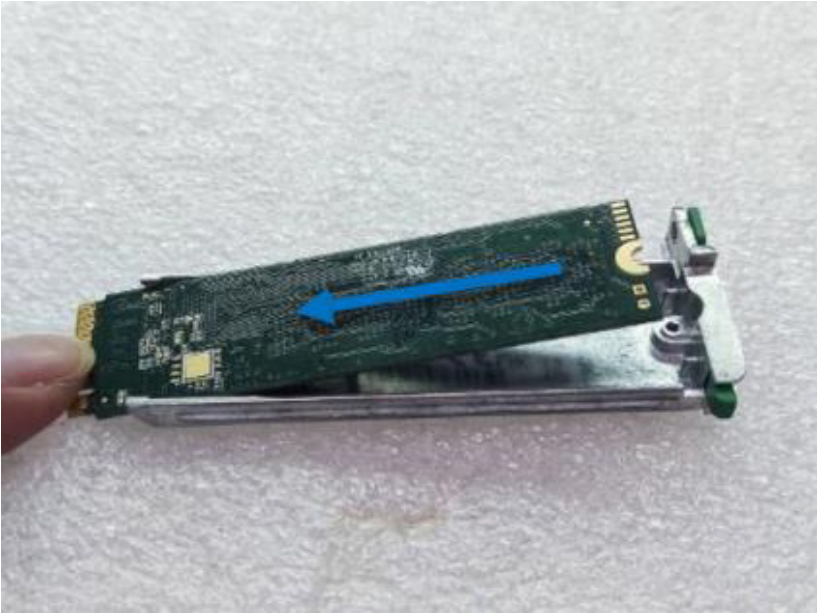
Thermal pad in the accessory box.

M.2 Tray with Screw x 1

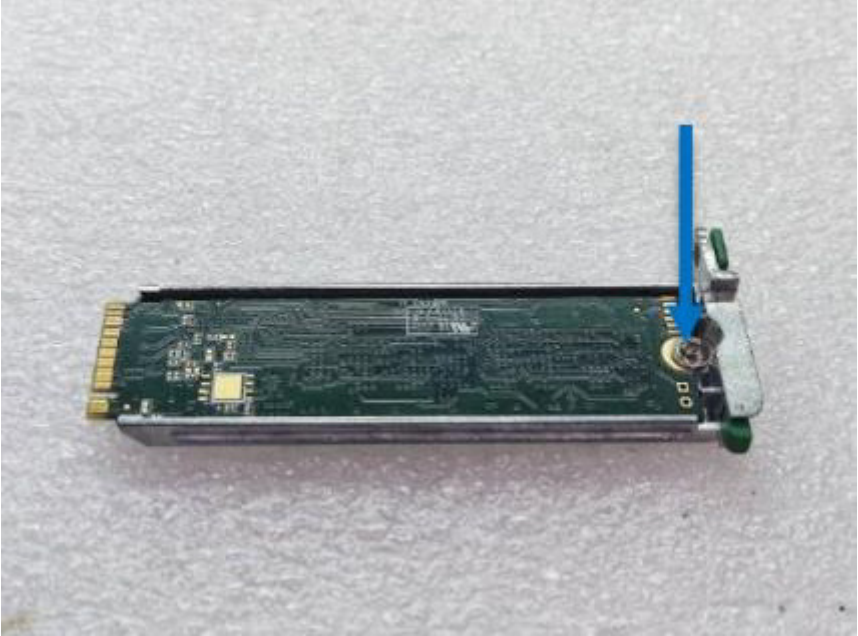
M.2 (PCIe Gen III) x 1 (This can be purchased from FEC or otherwise)

STEP 1: Get thermal pad from the accessory box. Remove the plastic and place the thermal pad on to the controller.

STEP 2: Slide the M.2 into the tray.

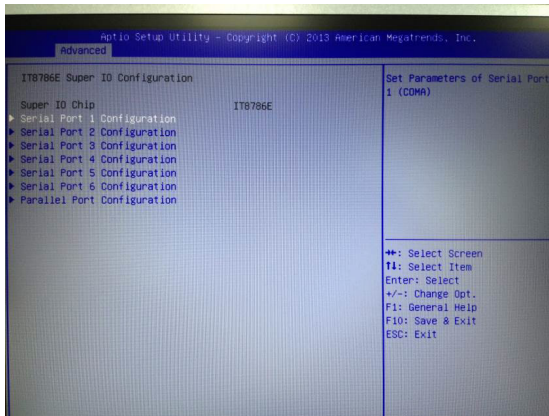
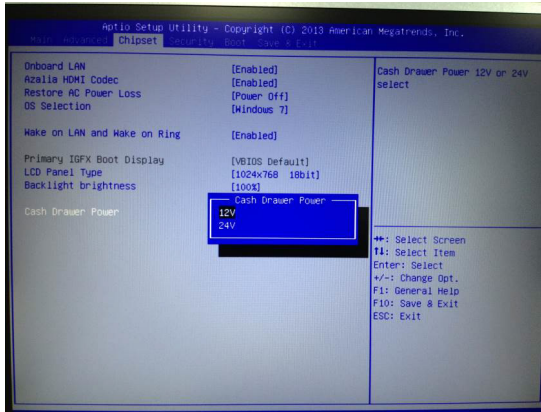


STEP 3: Fasten the screw. Complete. Note: Make sure the system is off when inserting the M.2 tray into the socket.



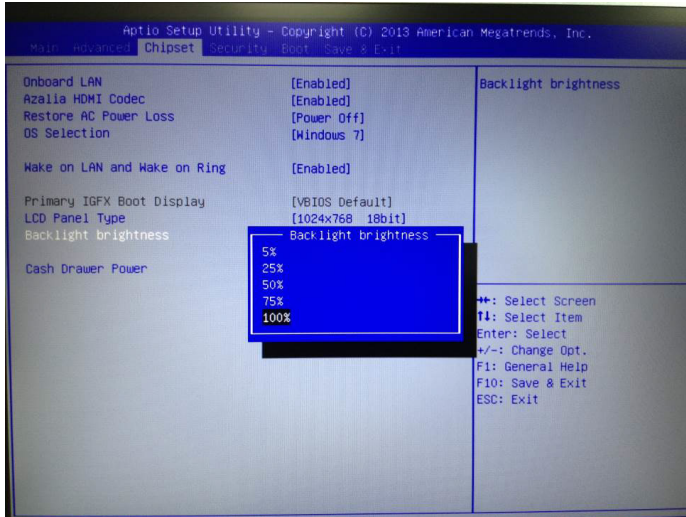
## POWER SETTING (COM)

You may select the power (5v / 12v) of COM in BIOS



Make sure the device voltage matches the power setting before connection

## LED Backlight Brightness



- 5 backlight brightness levels (5, 25, 50, 75, 100%) can be selected through the BIOS.

## Cash Drawer

Only on PP Series

- Please make sure the voltage and cable pin assignment of your cash drawer matches the cash drawer port on PP-9735W.
- You may find the jumper setting and pin definition in M/B J1900 user manual.
- Please refer to trouble shooting if the cash drawer cannot be detected by PP-9745W



### Open drawer 1 (default):

```
port[openaddr] <= open1
wait(sleep(ms))
port[openaddr] <= close
```

### Open drawer 2

```
port[openaddr] <= open2
wait(sleep(ms))
port[openaddr] <= close
```

### Stato:

StatusValue <= port[status] and statusmask

### Parameters inside cashdrawer.ini file

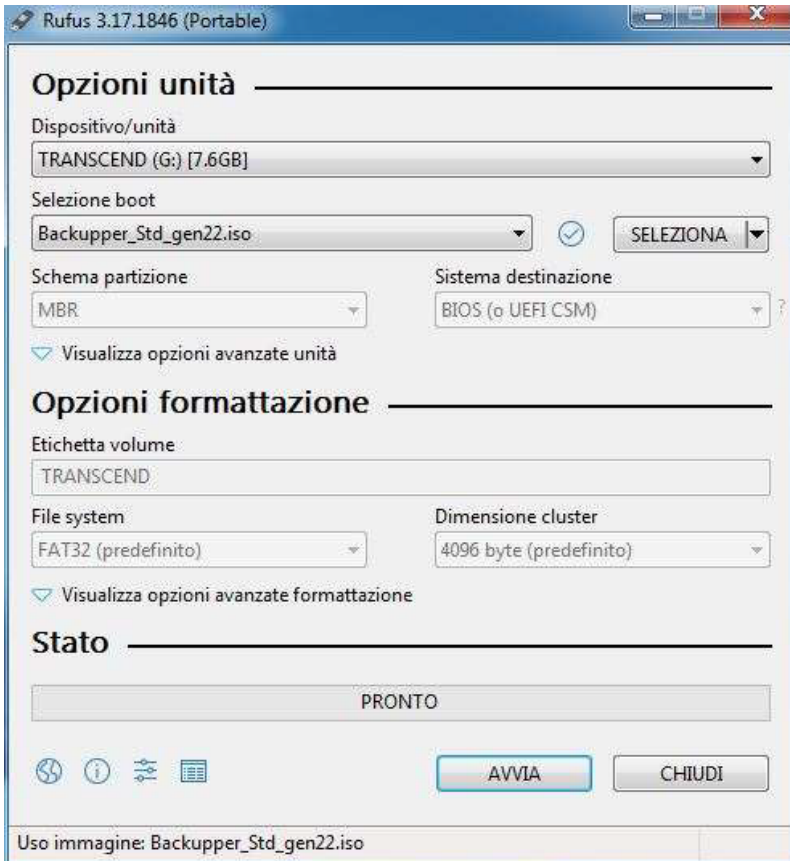
```
openaddr=a04
status=a05
sleep=200
open1=40
open2=80
close=00
statusmask=01
```



## **Chapter 7 Operating System Recovery**

## Bootable key creation with Aomei Backupper 6.7.0

Create a boot key using the Rufus utility, available at <https://rufus.ie/it/>, and download the portable version. Launch Rufus with the USB stick to be formatted already inserted, select the Backupper\_Std\_gen22.iso file



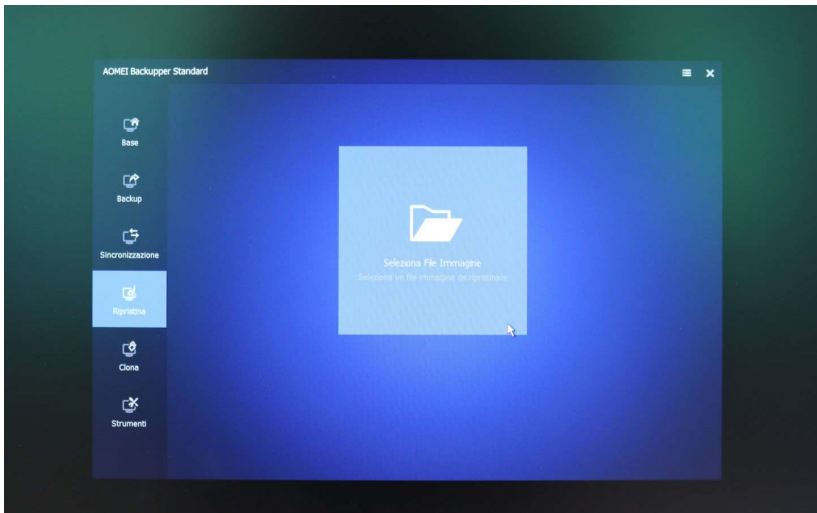
Confirm operation with **Start/Launch**.

## Starting Operating System Recovery

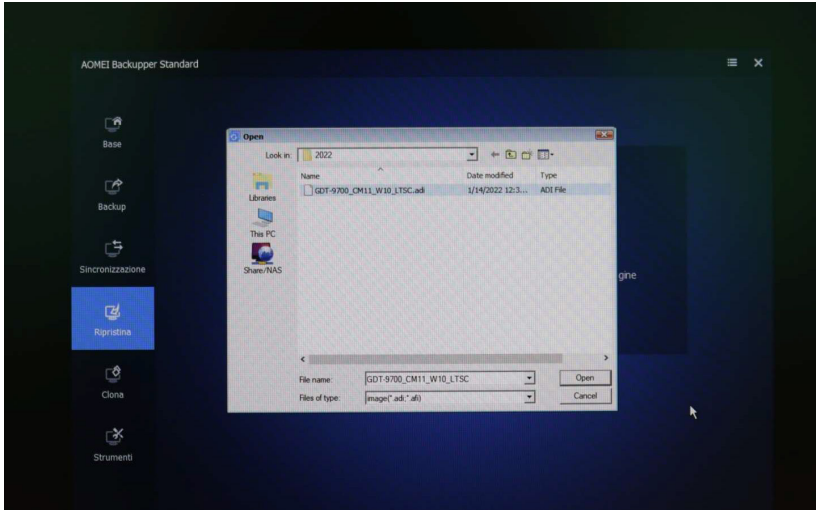
Insert the USB stick into the system to be restored, when turning it on press **F7** for the Boot device and select:

- **UEFI: USB name**

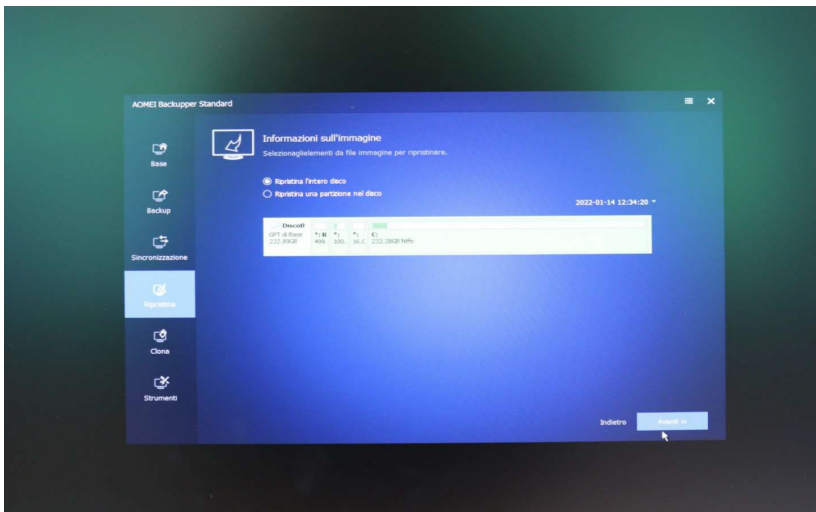
Once the AOMEI\_Backupper graphical interface has started, close the screen with the offer, select the **Restore and Image File Selection** task.



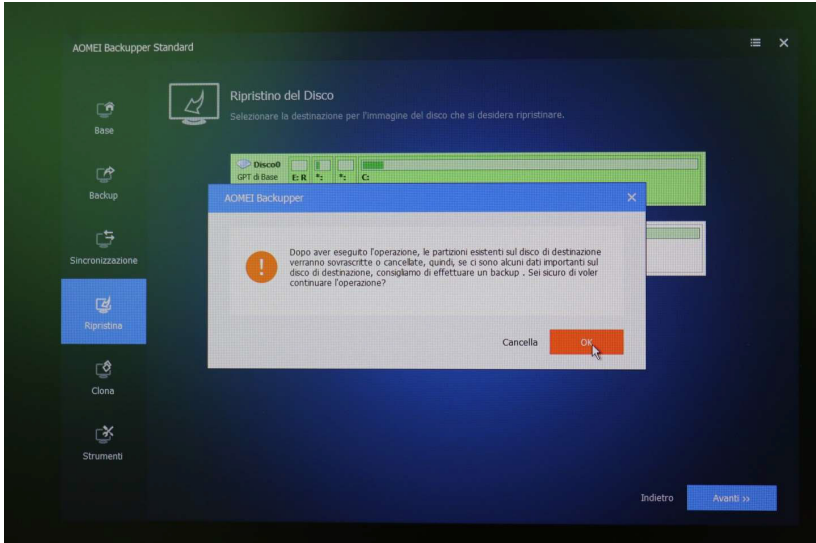
Browse external disk and select the  
“WTC6E\_W10\_Pro\_21H1\_Ita/Eng” file, confirm with **Open**.



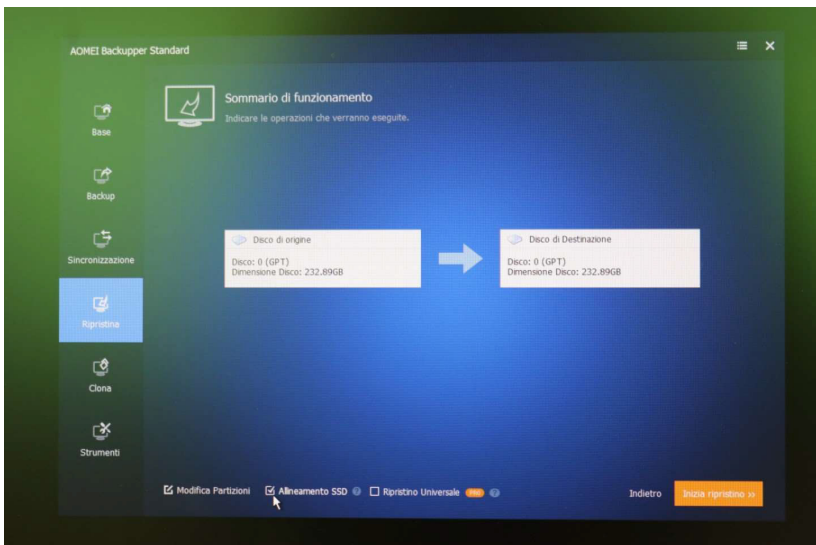
Check that "Restore entire disk" is checked, click on the Disk 0 box, it turns green, and confirm with **Next**.



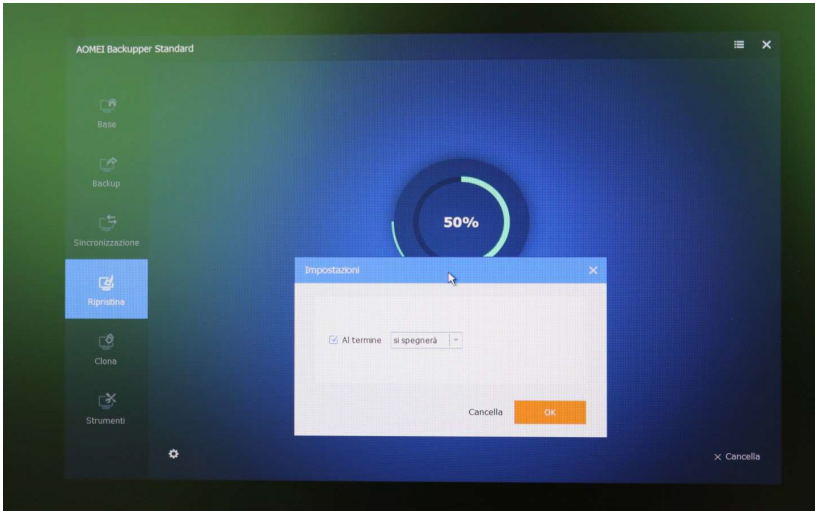
Check that Disk0 is highlighted (green), continue with **Next**, and confirm the overwriting with **OK**.



On the final screen, check **SSD Alignment** and start the operation with **Start recovery** >>



With the restore operation in progress, click on the cogwheel and check **When finished** (it will go out), confirm with **OK**.



Once the activity is finished, the PC will turn off. (disconnect external USB drives)

End of Procedure

When you turn it back on, the system will start with the initial Windows configuration, with the request to select country - language, etc...

## **Chapter 8**

### **Technical features**

<b>General</b>	
<b>Processor</b>	Intel® Core i5-12400
<b>RAM</b>	8GB / 32GB (Factory) / 1 RAM Slot
<b>Power Supply</b>	External 20V / 130W
<b>Integrated Storage</b>	SSD NVMe from 128 Gb to 1 Tb
<b>Speaker</b>	2 x 2 W Integrated
<b>Mounting</b>	VESA 100 ready Optionally available wall brackets also with power supply support
<b>Chassis</b>	Die-cast aluminum chassis
<b>Audio</b>	Realtek ALC233
<b>Network</b>	GigaLAN
<b>WiFi</b>	Wi-Fi 5 (802.11 AC) with Optional BT
<b>TPM</b>	TPM 2.0
<b>Fanless</b>	Passive heat dissipation
<b>Video</b>	
<b>Graphical Chipset</b>	Intel® UHD graphics 730
<b>Display</b>	15,6" (16:9), 1920x1080 TFT FHD
<b>Secondary Display</b>	Optional 10"/15"/15,6"
<b>Optional Accessories</b>	Double-hinge table base, add-ons that can be integrated on the display side
<b>Brightness</b>	300 Nits
<b>Contrast Ratio</b>	-
<b>Backlighting-MBTf</b>	-
<b>Touch</b>	Capacitive 10 contemporary touches
<b>I/O Ports</b>	
<b>Video</b>	1x USB DP 1x HDMI
<b>Ethernet</b>	1x RJ45 GigaLAN
<b>USB</b>	1x USB 3.0 3x USB 2.0
<b>COM</b>	2x RJ45 1x RJ11 12/24 VDC
<b>Audio</b>	-
<b>Power Supply</b>	12 VDC Power Supply
<b>Other</b>	-
<b>Optional Additional I/O (scheduled orders only) (1 of 4 options)</b>	
<b>USB</b>	1x PUSB 24V 1x PUSB 12V



	2x USB 2.0 (2x Slots)
<b>RS232</b>	1x RJ45 (COM) RS232
<b>Dimensions and Weight</b>	
<b>Dimensions (L x P x A)</b>	Panel PC 15,6": 365 x 34 x 234 mm With base: 365 x 250 x 290 mm
<b>Weight</b>	Approx. 4 Kg with Base
<b>Quality</b>	
<b>Temperature</b>	Operation: 0°C ~ 40°C (32°F ~ 104°F) Storage: -20°C ~ 60°C (-4°F ~ 140°F)
<b>Relative Humidity</b>	-
<b>Vibration Range</b>	-
<b>IP</b>	IP65 on front panel
<b>Certifications</b>	ISO 9001:2015 DESIGN AND PRODUCTION OF PERSONAL COMPUTERS, TOUCH DEVICES, AND ACCESSORIES FOR INDUSTRY AND COMMERCE (IAF 19) EMC: EN 55022 EN 55032:2015+A11:2020 EN 61000-3-2:2019 EN 61000-3-3:2013+A2:2021 EN 55035:2018/A11 IEC 61000-4-2:2008 IEC 61000-4-3:2020 IEC 61000-4-4:2012 IEC 61000-4-5:2014+A1:2017
<b>Warranty</b>	12 months FEC SWAP24 included in the price
<b>Compatible Operating Systems</b>	Windows IoT, Windows 11, Linux Ubuntu
<b>Optional Warranty</b>	Optional SWAP 24 or on-site warranty up to 36 months





User Guide printed by

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