G-WIN Slim IP65 Panel PC Series

Intel® Celeron® N6211 (up to 3.0 GHz)

P-CAP Touch

Models: W10IE3S-GSH2
R10IE3S-GST2
R12IE3S-GSM2 (HB)
R15IE3S-GSC3(HB)

User Manual

Document Version 1.0
Document Part No. 91521117100O

Contents

Preface

Copyright Notice

Trademark Acknowledgement

Disclaimer

We reserve the right to make changes, without notice, to any product, including circuits and/or software described or contained in this manual in order to improve design and/or performance. We assume no responsibility or liability for the use of the described product(s) conveys no license or title under any patent, copyright, or masks work rights to these products, and make no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. We make no representation or guarantee that such application will be suitable for the specified use without further testing or modification.

Warranty

Our warranty guarantees that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at his/her option, repair or replace the defective product at no charge to the customer, provide it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service. If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W14Axxxxxxxx means October of year 2014.

Customer Service

We provide a service guide for any problem by the following steps: First, visit the website of our distributor to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance.

You may need the following information ready before you call:

- Product serial number
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.

NOTE:
A note is used to emphasize helpful information

IMPORTANT:
An important note indicates information that is important for you to know.

CAUTION/ ATTENTION
A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.

Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.

WARNING!/ AVERTISSEMENT!
An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.

Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

ALTERNATING CURRENT / MISE À LE TERRE!
The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.

Le symbole de Mise à Terre indique le risqué potential de choc électrique grave à la terre incorrecte.

Safety Information

WARNING! / AVERTISSEMENT!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Toujours débrancher le cordon d'alimentation du chassis lorsque vous travaillez sur celui-ci. Ne pas brancher de connections lorsque l'alimentation est présente. Des composantes électroniques sensibles peuvent être endommagées par des sauts d'alimentation. Seulement du personnel expérimenté devrait ouvrir ces chassis.

CAUTION/ATTENTION

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Toujours verifier votre mise à la terre afin d'éliminer toute charge statique avant de toucher la carte CPU. Les équipements électroniques moderns sont très sensibles aux décharges d'électricité statique. Toujours utiliser un bracelet de mise à la terre comme précaution. Placer toutes les composantes électroniques sur une surface conçue pour dissiper les charge, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

Safety Precautions

For your safety carefully read all the safety instructions before using the device. Keep this user manual for future reference.

- Always disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
- For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
- Keep this equipment away from humidity.
- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The openings on the enclosure are for air convection and to protect the equipment from overheating.

CAUTION/ATTENTION
Do not cover the openings!
Ne pas couvrir les ouvertures!

- Before connecting the equipment to the power outlet make sure the voltage of the power source is correct.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
- Never pour any liquid into an opening. This could cause fire or electrical shock.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
- All cautions and warnings on the equipment should be noted.

*__Let service personnel to check the equipment in case any of the following problems appear:__

  - The power cord or plug is damaged.
  - Liquid has penetrated into the equipment.
  - The equipment does not work well or you cannot get it to work according to the user manual.
  - The equipment has been dropped and damaged.
  - The equipment has obvious signs of breakage.

- Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20°C (-4°F) or above 60°C (140°F). It may damage the equipment.

CAUTION/ATTENTION
Use the recommended mounting apparatus to avoid risk of injury.
Utiliser l’appareil de fixation recommandé pour éliminer le risque de blessure.

WARNING!/ AVERTISSEMENT!
Only use the connection cords that come with the product. When in doubt, please contact the manufacturer.
Utiliser seulement les cordons d'alimentation fournis avec le produit. Si vous doutez de leur provenance, contactez le manufacturier.

WARNING!/ AVERTISSEMENT!
Always ground yourself against electrostatic damage to the device.
Toujours vérifier votre mise à la terre afin que l'équipement ne se décharge pas sur vous.

- Cover workstations with approved anti-static material. Use a wrist strap connected to a work surface and properly grounded tools and equipment.
- Use anti-static mats, heel straps, or air ionizer for added protection.
- Handle electrostatic-sensitive components, PCB's and assemblies by the case or the edge of the board.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting and removing connectors or test equipment.
- Keep the work area free of non-conductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Use filed service tools, such as cutters, screwdrivers, and vacuum cleaners that are conductive.
- Always put drivers and PCB's component side on anti-static foam.

Important Information

Countries/ Area	Symbol	This equipment complies with essential requirements of:
 European Union	CE	Electromagnetic Compatibility Directive(2014/30/EU) Low Voltage Directive (2014/35/EU) Restrictions of the use of certain hazardous substances (RoHS) Directive (2011/65/EU)
 USA	FC	FCC Part 15 Subpart B Regulations Class B

Federal Communications Commission Radio Frequency Interface Statement

FC

This device complies with part 15 FCC rules.
Operation is subject to the following two conditions:

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

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

European Union

CE

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010/ A1: 2015
  - IEC61000-4-2: 2009
  - IEC61000-4-3: 2006+A1: 2007+A2: 2010

  - IEC61000-4-4: 2012
  - IEC61000-4-5: 2014
  - IEC61000-4-6: 2014
  - IEC61000-4-8: 2010
  - IEC61000-4-11: 2004
- EN55032: 2012/AC:2013
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

ABOUT THIS USER MANUAL

This User Manual provides information about using the Winmate® G-WIN Slim IP65 Panel PC (P-CAP) with Intel® Celeron® N6211 (up to 3.0 GHz) processor. This User Manual applies to the G-WIN Slim IP65 Panel PC (P-CAP) – W10IE3S-GSH2, R10IE3S-GST2, R12IE3S-GSM2 (HB), R15IE3S-GSC3(HB).

The documentation set for the G-WIN Slim IP65 Panel PC (P-CAP) provides information for specific user needs, and includes:

- **G-WIN Slim IP65 Panel PC (P-CAP) User Manual** – contains detailed description on how to use the Panel PC, its components and features.

NOTE:

Some pictures in this guide are samples and can differ from actual product.

Document Revision History

Version	Date	Note
1.0	3-Jul-2024	New Document Release

Chapter 1: General Information

Congratulations on purchasing Winmate® G-WIN Slim IP65 with P-CAP Panel PC. The elegantly designed, yet rugged, industrial grade G-WIN S65 series is designed for usability with brilliant true-flat screens, which offer superior readability and Projected Capacitive Multi-Touch (P-CAP) technology, available in 10.1”, 10.4”, 12.1” and 15” options.

G-WIN Slim IP65 Panel PC operates on Intel® Celeron® N6211 (up to 3.0 GHz) processor and supports Windows operating system. The Panel PC features Projected Capacitive Multi-Touch (P-CAP). These models are full IP 65 dustproof and waterproof and have M12 connectors.

This chapter includes product overview, describes features and hardware specification.

1.1 Product Features

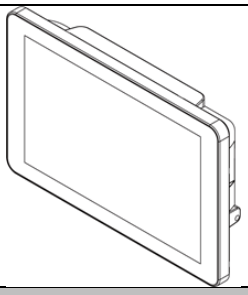
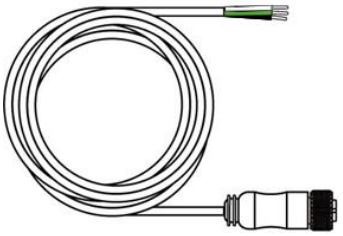
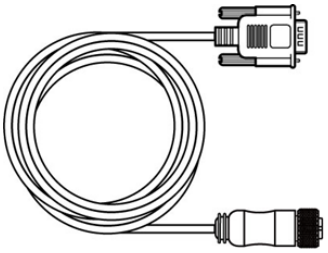
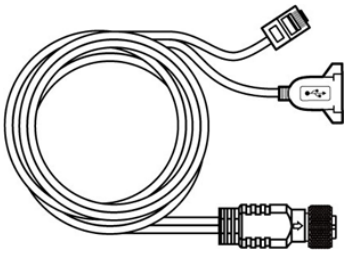
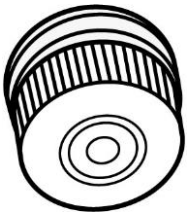
Winmate® G-WIN Slim IP65 with P-CAP Panel PC features:

- Intel® Celeron® N6211 (up to 3.0 GHz)
- Fanless cooling system and Ultra-low power consumption
- Flat design
- M12 Waterproof connectors
- Full IP65
- 1 x LAN, 1 x RS232, 1 x USB 2.0

1.2 Package Contents

Carefully remove the box and unpack your Panel PC device. Please check if all the items listed below are inside your package. If any of these items are missing or damaged contact us immediately.

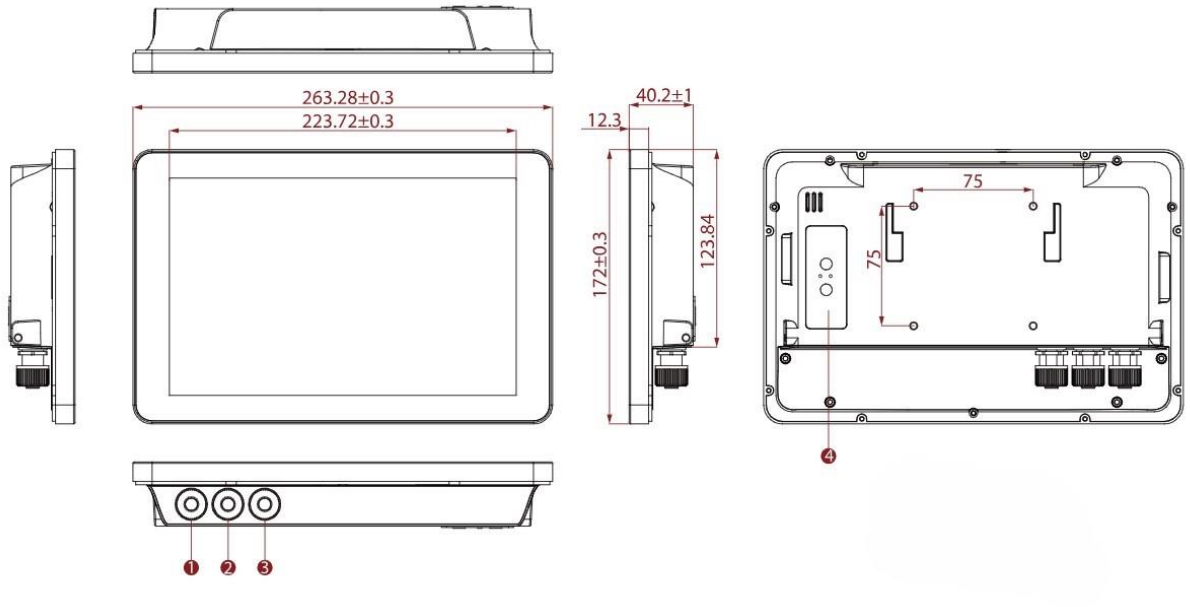
Standard factory shipment list:

		
Panel PC	**User Manual (Hardcopy)**	**M12 Power Cable**
Varies by product specifications	91521117100O	94J003L030K2
		
M12 Serial Interface Cable	**M12 USB/ LAN Cable**	**I/O Protective Cap x 3**
94G0123090Q0	94E0128040K0	60Y031131000

1.3 Product Dimensions

W10IE3S-GSH2

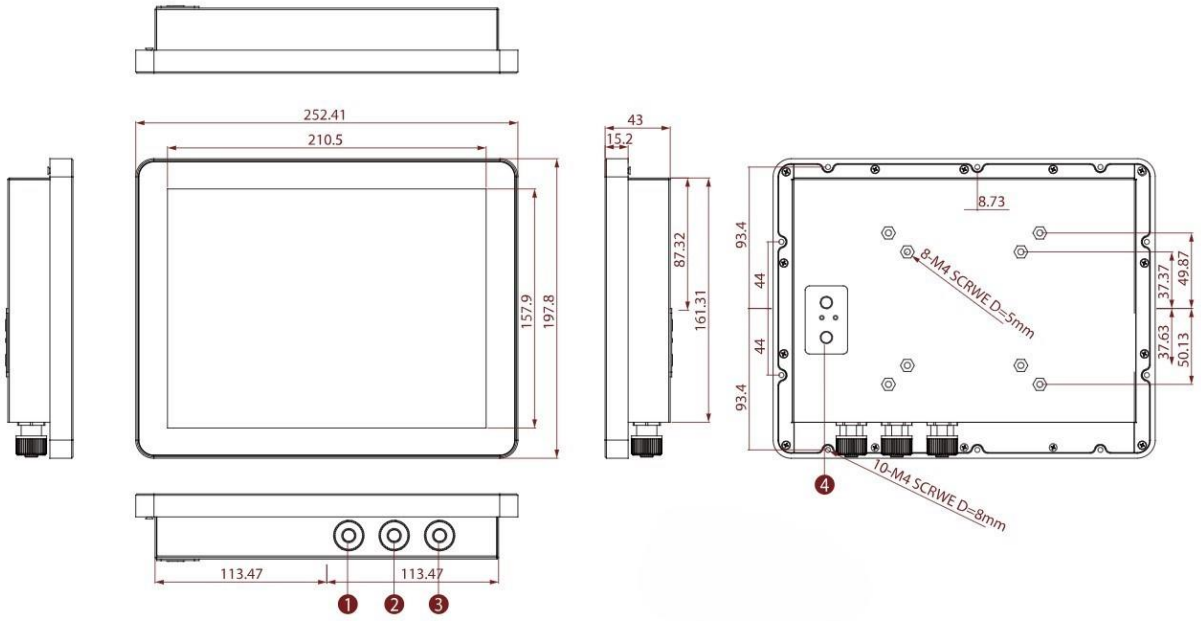
Unit: mm
Dimensions: 263.28 x 172 x 40.2



№	Description	№	Description
1	Power Input (M12 Type)	**3**	RS232 (M12 Type)
2	LAN / USB (M12 Type)	**4**	OSD Control Panel

R10IE3S-GST2

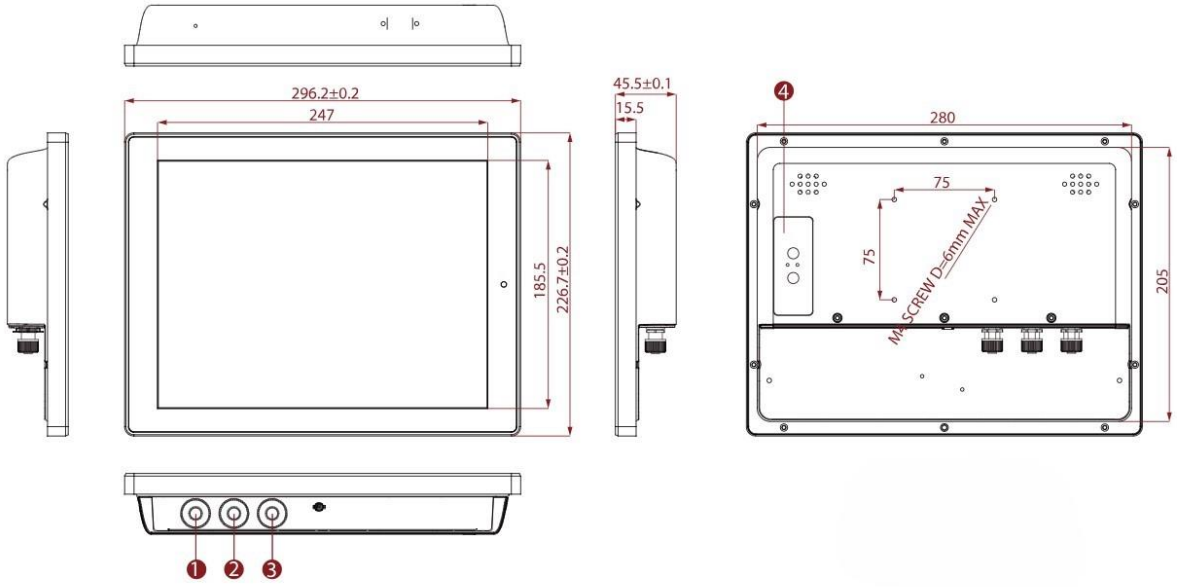
Unit: mm
Dimensions: 252.41 x 197.8 x 43



№	Description	№	Description
1	Power Input (M12 Type)	**3**	RS232 (M12 Type)
2	LAN / USB (M12 Type)	**4**	OSD Control Panel

R12IE3S-GSM2(HB)

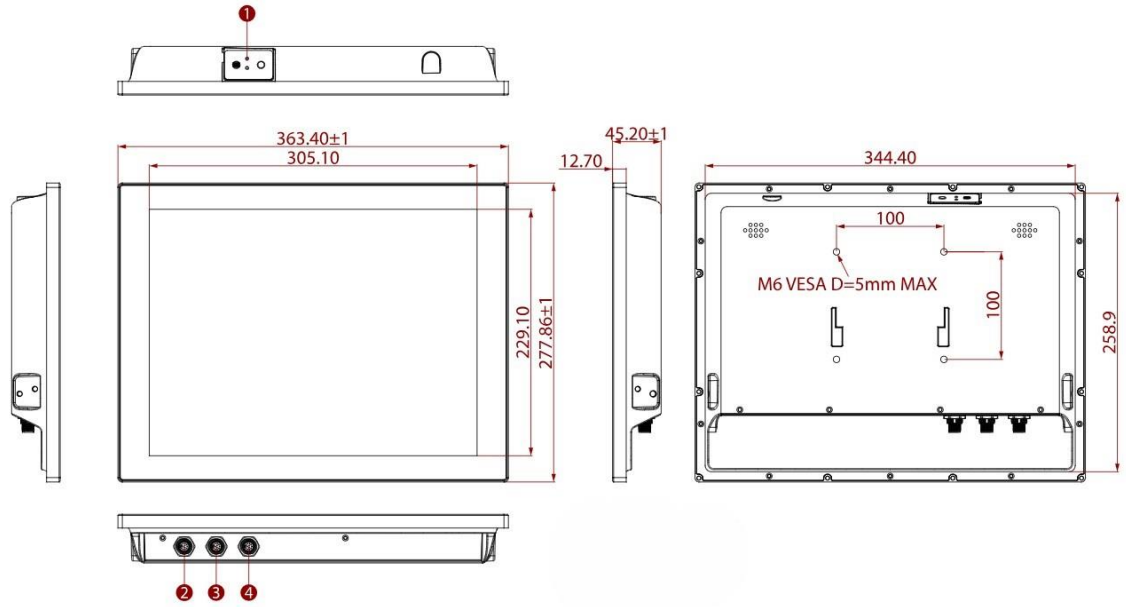
Unit: mm
Dimensions: 296.2 x 226.7 x 45.5



№	Description	№	Description
1	Power Input (M12 Type)	**3**	RS232 (M12 Type)
2	LAN / USB (M12 Type)	**4**	OSD Control Panel

R15IE3S-GSC3(HB)

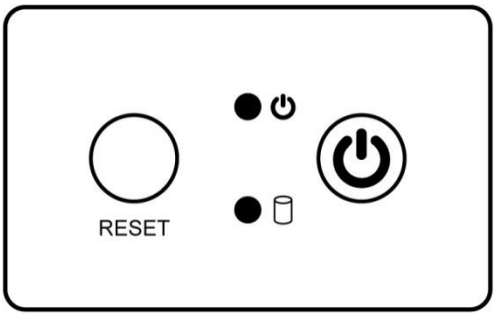
Unit: mm
Dimensions: 363.4 x 277.86 x 45.2



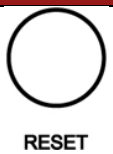
№	Description	№	Description
1	OSD Control Panel	**3**	RS232 (M12 Type)
2	Power Input (M12 Type)	**4**	LAN / USB (M12 Type)

1.4 Physical Buttons and LED Indicators

Physical buttons and LED indicators (OSD Control Panel) located on the rear side of the Panel PC.



Physical Buttons

Icon	Button	Description
	Reset	Press to reset the system
	Power On/ Off	Press to power on or power off the device

LED Indicators

LED Type	Status	Description
	On	Power is on
	Off	Power is off
	Blinking	Storage activity (Data is being read or written)
	Off	System is idle

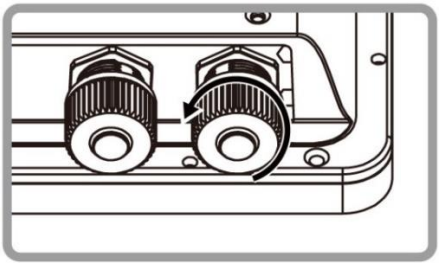
Chapter 2: Getting Started

This chapter provides information on how to connect the Panel PC device to the source of power, connector pinouts and the guidelines to turn on/off the Panel PC.

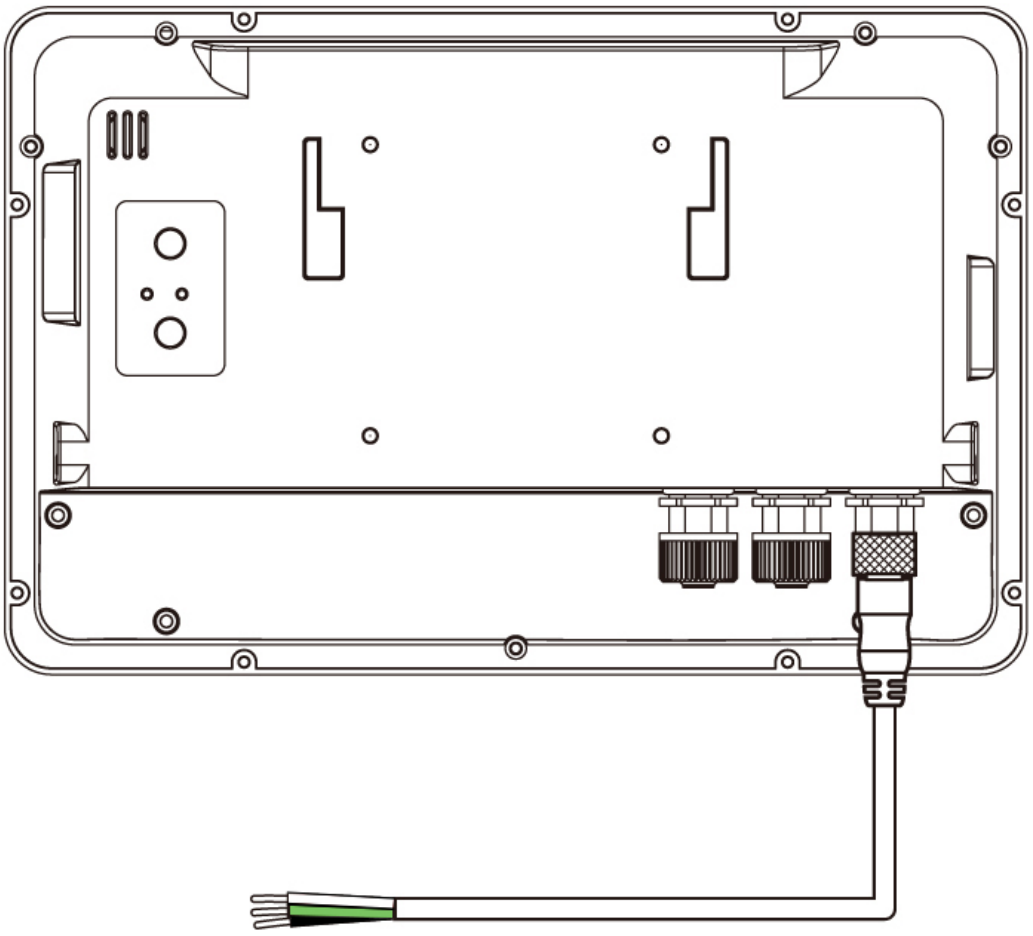
2.1 Turning On and Off

2.1.1 Turning on Your Device

1. Remove the protective cap of the power connector.



2. Connect power cable to the connector of your device. Make sure the cable fits to the connector, then tighten the O-ring (by turning clockwise) to secure the connection.



3. The device will boot automatically when powered on.

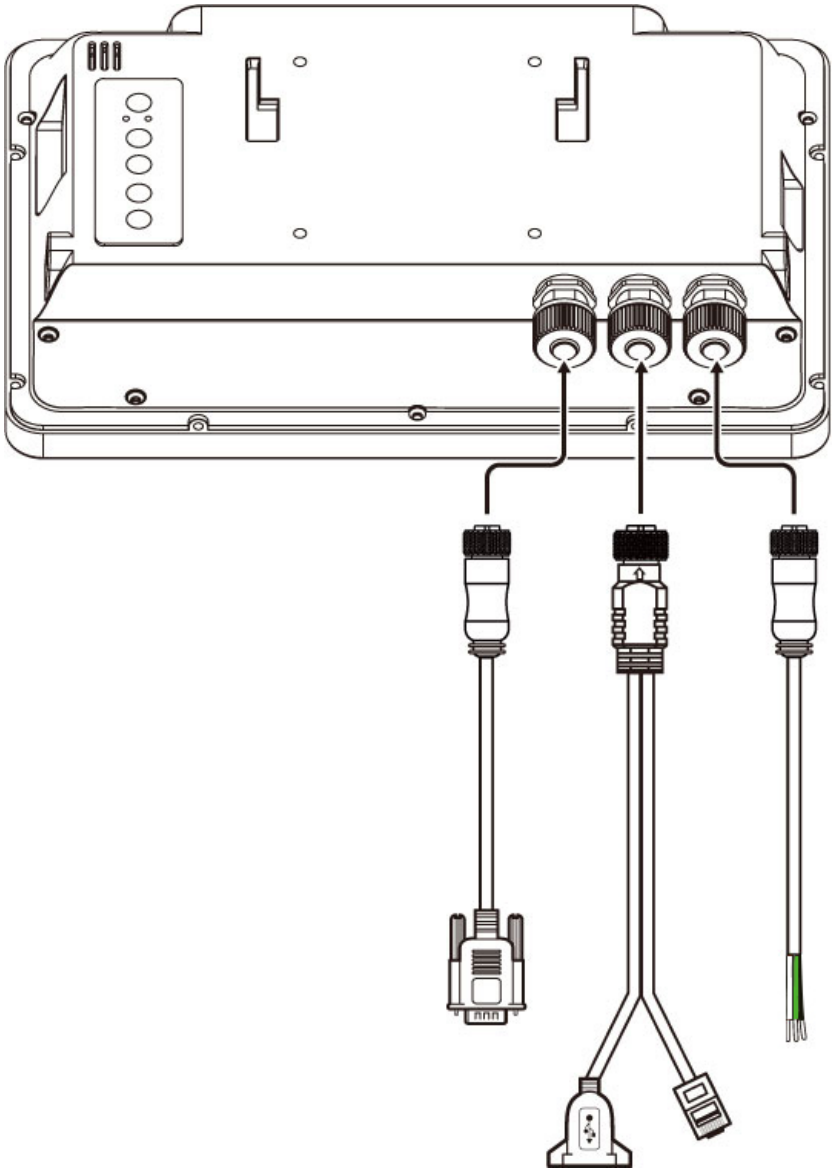
2.1.2 Turning off Your Device

Disconnect the power cord from the Panel PC to completely turn off the device.

2.2 Connecting to Other Devices

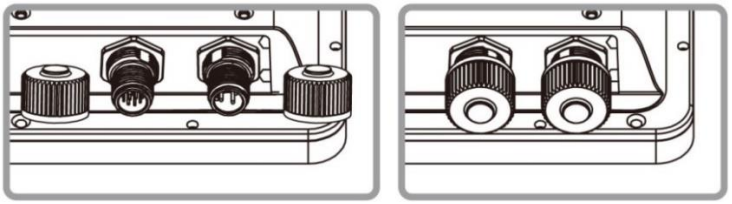
2.2.1 Diagram

The Panel PC features M12 type connectors with protective cap and has full IP65 rating.
This Panel PC comes with various interfaces located on the bottom panel. All of these connectors have been shipped with protective caps. To ensure the waterproof function can work properly, make sure that the protective caps and have been securely tightened whenever the connectors are not used.



IMPORTANT

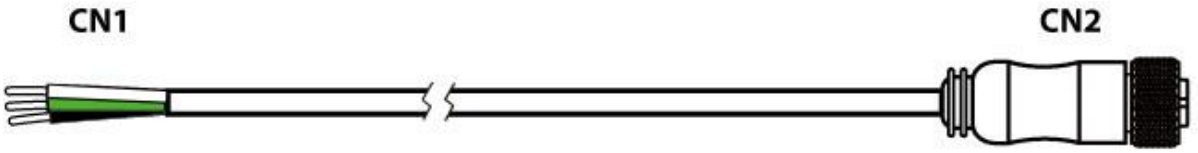
Please note that when reinstalling the protective cap, it must be fully tightened to ensure the unit is properly sealed to meet the IP65 enclosure rating.

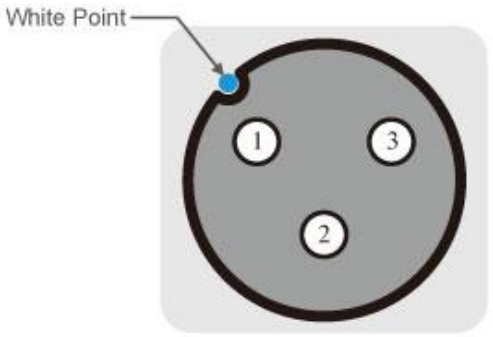


2.2.2 Connector Description

2.2.2.1 Power Input Connector

Panel PC has M12 type 3 pin male power input connector which accepts 12V DC power input. Use IP65 power cable to connect the Panel PC to the source of power.





Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN 1-1	VCC+	White	⟷	CN 2-1	VCC+	White
CN 1-2	GND	Green	⟷	CN 2-2	GND	Green
CN 1-3	VCC-	Black	⟷	CN 2-3	VCC-	Black

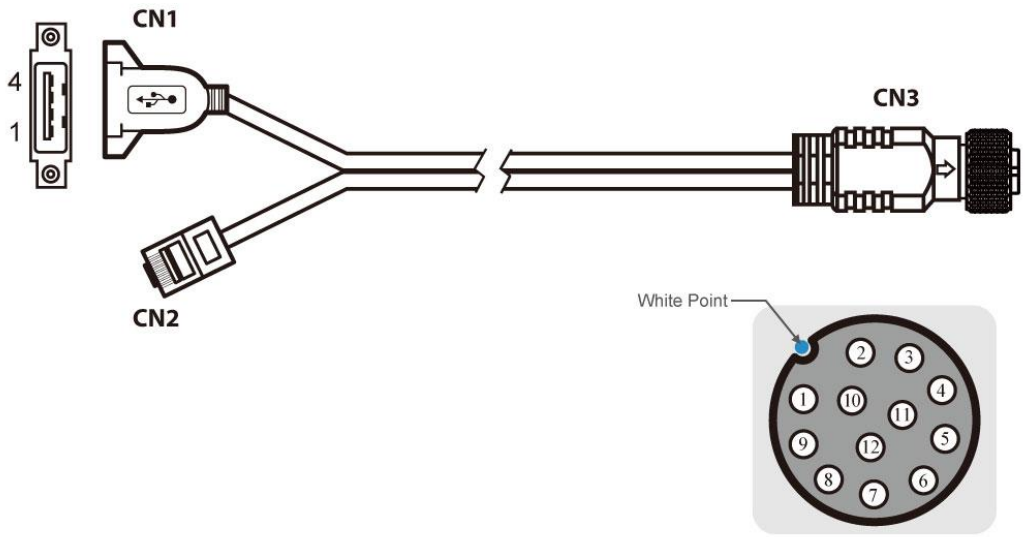
2.2.2.2 Serial Interface Connector

Panel PC has M12 type 10 pin male RS-232 connector. Use IP65 serial cable to connect the Panel PC to external devices.

Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	DCD	Green	⟷	CN2-1	DCD	Green
CN1-6	DSR	Brown	⟷	CN2-2	DSR	Brown
CN1-2	RXD	Red	⟷	CN2-3	RXD	Red
CN1-7	RTS	Orange	⟷	CN2-4	RTS	Orange
CN1-3	TXD	Blue	⟷	CN2-5	TXD	Blue
CN1-8	CTS	White	⟷	CN2-6	CTS	White
CN1-4	DTR	Purple	⟷	CN2-7	DTR	Purple
CN1-9	RI	Yellow	⟷	CN2-8	RI	Yellow
CN1-5	GND	Black	⟷	CN2-9	GND	Black

2.2.2.3 Giga LAN + USB 2.0 Connector

Panel PC has M12 type 12 pin male Giga LAN and USB connector that supports two LAN and one USB 2.0.



Pin No.	Symbols	Color		Pin No.	Symbols	Color	
CN3-1	VCC	RED	⟷	CN1-1	VCC	RED	
CN3-2	D-	WHITE	⟷	CN1-2	D-	WHITE	Twisted pairs
CN3-3	D+	GREEN	⟷	CN1-3	D+	GREEN	
CN3-4	GND	BLACK	⟷	CN1-4	GND	BLACK	
CN3-5	White/Orange		⟷	CN2-1	White/Orange		Twisted pairs
CN3-6	Orange		⟷	CN2-2	Orange		
CN3-7	White/Green		⟷	CN2-3	White/Green		Twisted pairs
CN3-8	Blue		⟷	CN2-4	Blue		
CN3-9	White/Blue		⟷	CN2-5	White/Blue		Twisted pairs
CN3-10	Green		⟷	CN2-6	Green		
CN3-11	White/Brown		⟷	CN2-7	White/Brown		Twisted pairs
CN3-12	Brown		⟷	CN2-8	Brown		

Chapter 3: Operating the Device

In this chapter you will find the instructions on how to operate the Panel PC.

3.1 Operating System

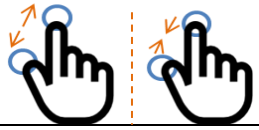
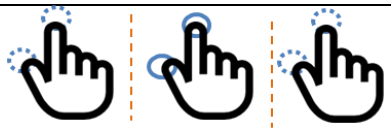
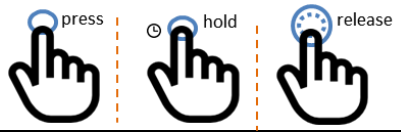
G-WIN Slim IP65 (P-CAP) Panel PC supports:

- Windows 11 IoT Enterprise (64 bit) (Optional)
- Windows 11 Pro (64 bit) (Optional)
- Windows 10 IoT Enterprise (64 bit) (Optional)
- Linux Ubuntu 22.04 (Optional)

IMPORTANT:
The device is shipped with the OS System according to your order.
Contact us if you have any questions regarding OS settings.

3.2 Multi-Touch

The touchpad supports the core gestures for Windows.

Gesture	Windows Usage	Gesture Action	Action
Tap/ Double-tap	Click / Double-click	Click or double-click	
Panning with Inertia	Scrolling	Drag one or two fingers up and down	
Selection/ Drag (left to right with one finger)	Mouse-drag/ Selection	Drag one finger left/right	
Zoom	Zoom (default to CTRL key + scroll wheel)	Move two fingers apart/ toward each other	
Rotate	No system default unless handled by Application (using WM_Gesture API)	Move two fingers in opposite directions *or* Use one finger to pivot around another	
Two-Finger tap	N/A - Exposed through Gesture API, used by Application discretion	Tap two fingers at the same time (where the target is the midpoint between fingers)	
Press and Hold	Right-click	Press, wait for blue-ring animation to complete, then release	
Flicks	Default: Pan Up/ Down/ Back, and Forward	Make quick drag gestures in the described direction	

** Reference from Microsoft®*

Chapter 4: Insyde H20 BIOS Setup

This chapter describes the different settings available in the INSYDE BIOS that comes with the board. This chapter offers information on the Award BIOS installation utility.

4.1 Main Menu

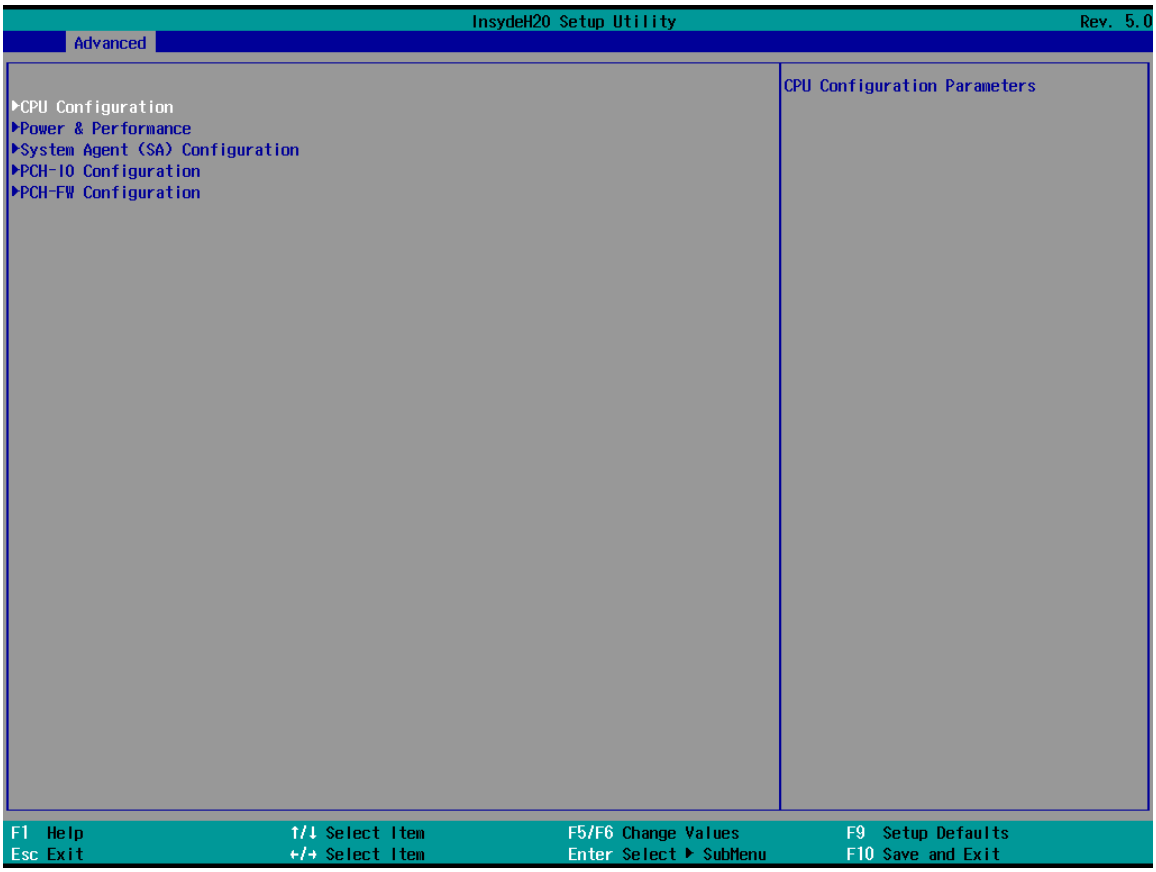
When you enter BIOS setup, the first menu that appears on the screen is the main menu. The Main menu displays the basic information about yoursystem including BIOS version, processor RC version, system language, time, and date. It contains the system information including BIOS version, processor RC version, system language, time, and date.

BIOS Setting	Description	Setting Option	Effect
Language	Displays the system language. [English] is set up by default.	Adjustment of the language	Set the language in other language. The language in this device is English.
System Time	This is current time setting. The time is maintained by the battery when the device is turned off.	Date and time changes.	Set the time in the format: [hh/mm/ss]
System Date	This is current date setting.	Date and time changes.	Set the date in the format [mm/dd/yyyy];

4.2 Advanced

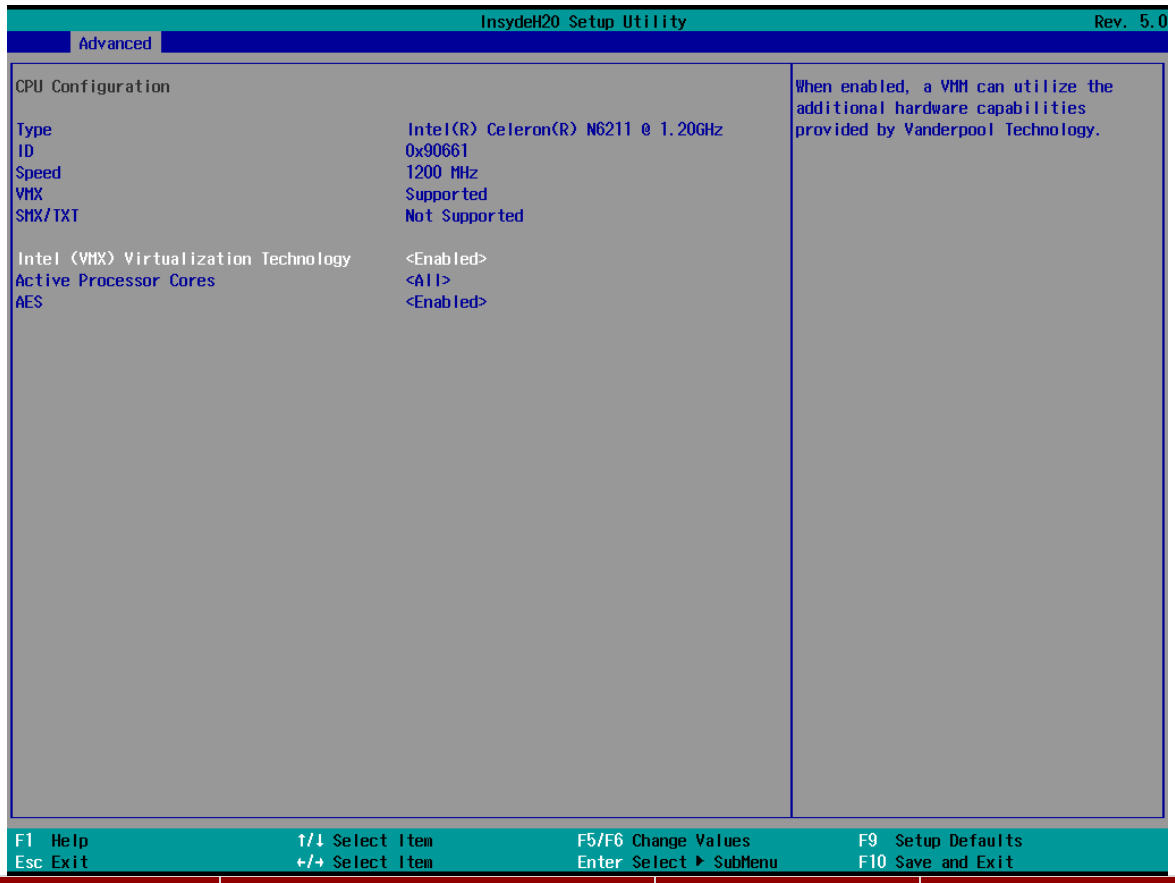
Select the Advanced Tab from the setup menu to enter the advanced BIOS setup screen. You can select any of the items on the left frame of the screen to go to the sub menu for the item, such as CPU Configuration. You can use the <Arrow> keys enter all advanced BIOS setup options. The advanced BIOS setup menu is shown below. The submenus described on the following pages.

CAUTION
Handle advanced BIOS settings page with caution. Any changes can affect the operation of your computer.



BIOS Setting	Description	Setting Option	Effect
CPU Configuration	Configures Trusted Computing parameters	Enter	Opens submenu
Power & Performance	Configures Power & Performance parameters	Enter	Opens submenu
System Agent Configuration	Configures System Agent Configuration parameters	Enter	Opens submenu
PCH-OI Configuration	Configures PCH-OI parameters	Enter	Opens submenu
PCH-FM Configuration	Configures PCH-FM parameters	Enter	Opens submenu
SIO F81968	Configures SIO F81968 parameters	Enter	Opens submenu

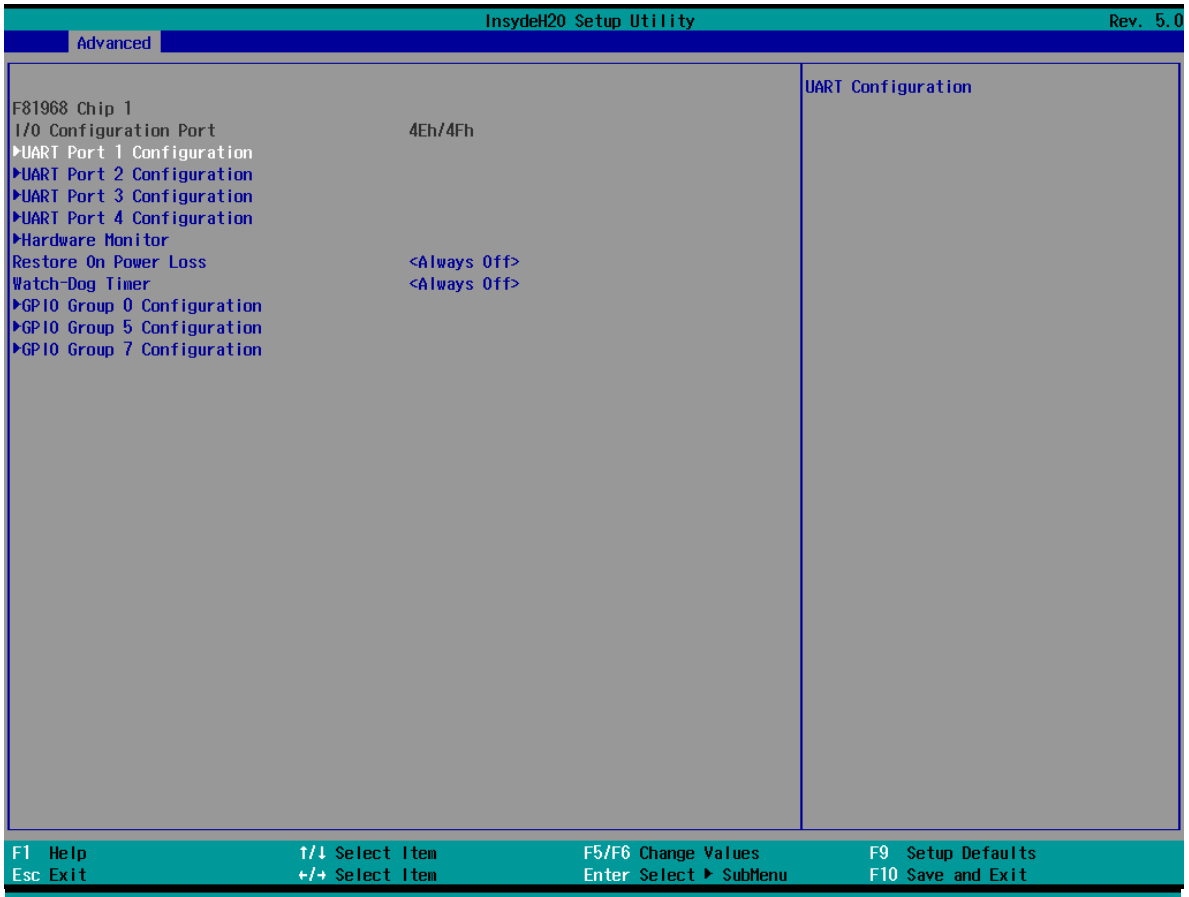
4.2.1 CPU Configuration

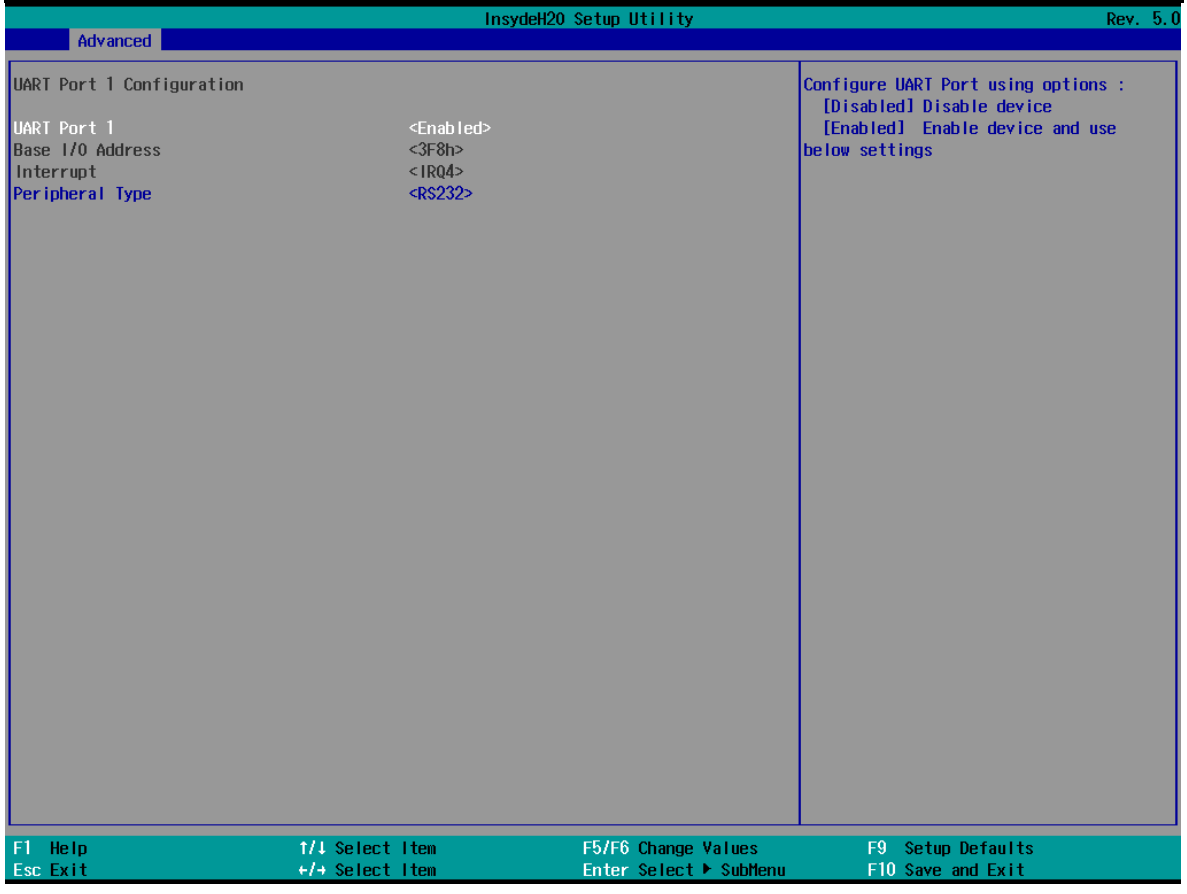


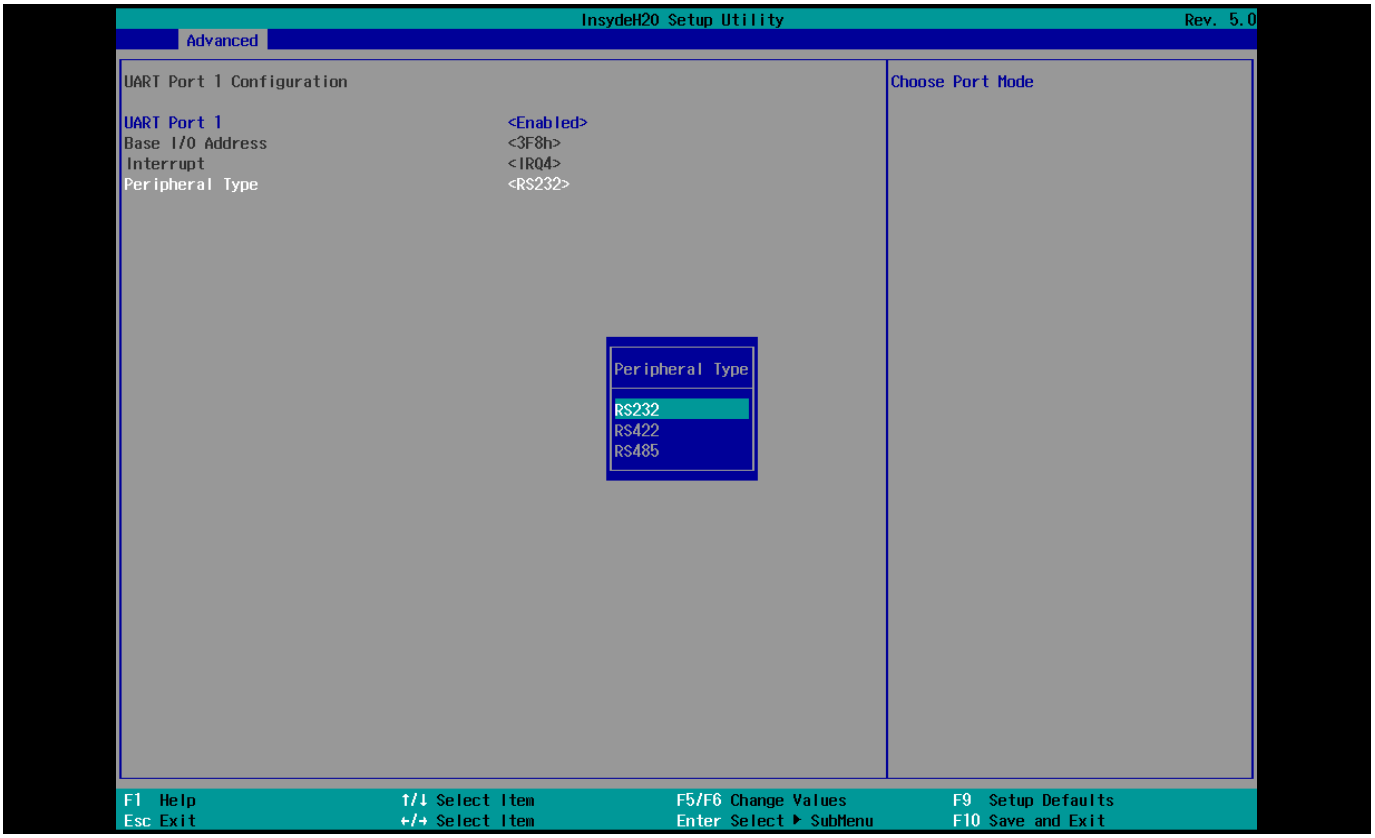
BIOS Setting	Description	Setting Option	Effect
Intel (VMX) Virtualization Technology	Enable or disable Intel Virtualization Technology.	Enable/Disable	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.
Active Processor Cores	Number of core to enable in each processor package	All / 1 / 2/ 3	Select number of core to enable in each processor package
Hyper Threading	Intel Hyper-Threading Technology allows a single processor to execute two or more separate threads concurrently.	Enable / Disable	Enable or disable Hyper Threading
AES	Enable or disable AES (Advanced Encyption Standard)	Enable/Disable	Enable or disable AES

4.2.2 F81968 Configuration

If you want to adjust the UART port type, follow below step. First, enter the UART Port1 Configuration and in Peripheral Type, you can choose between RS232/RS422/RS485.

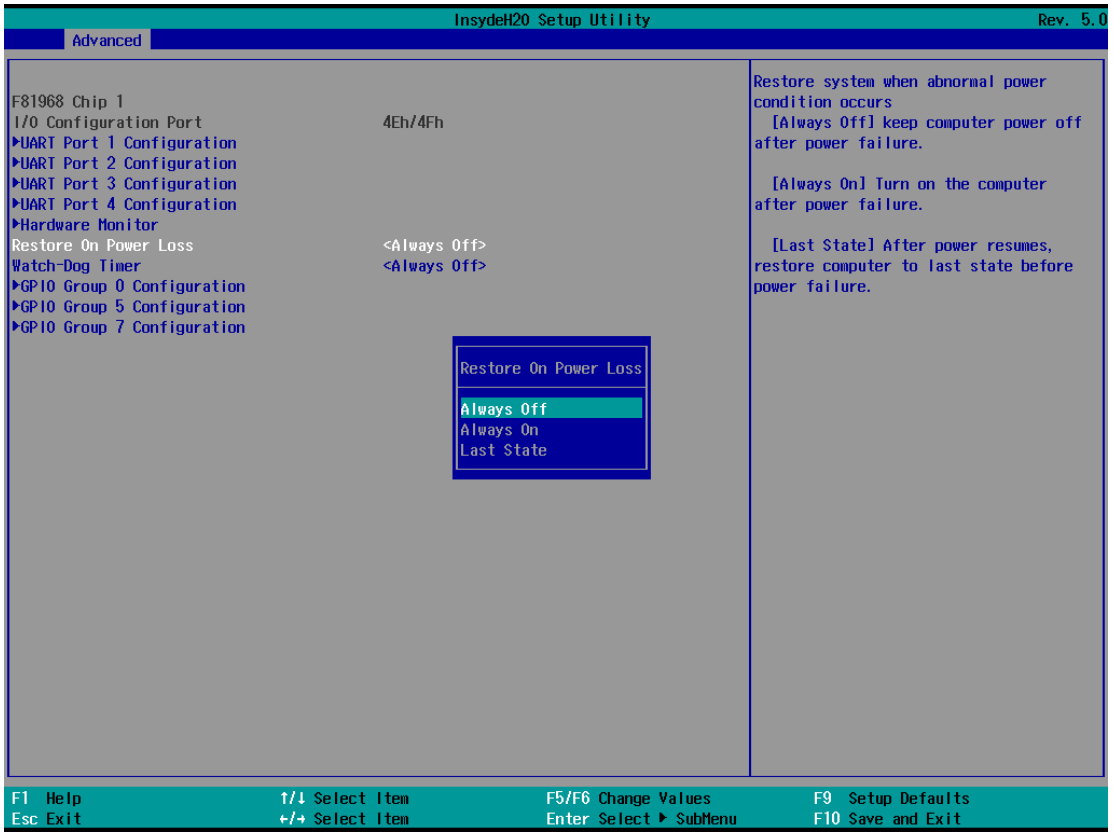




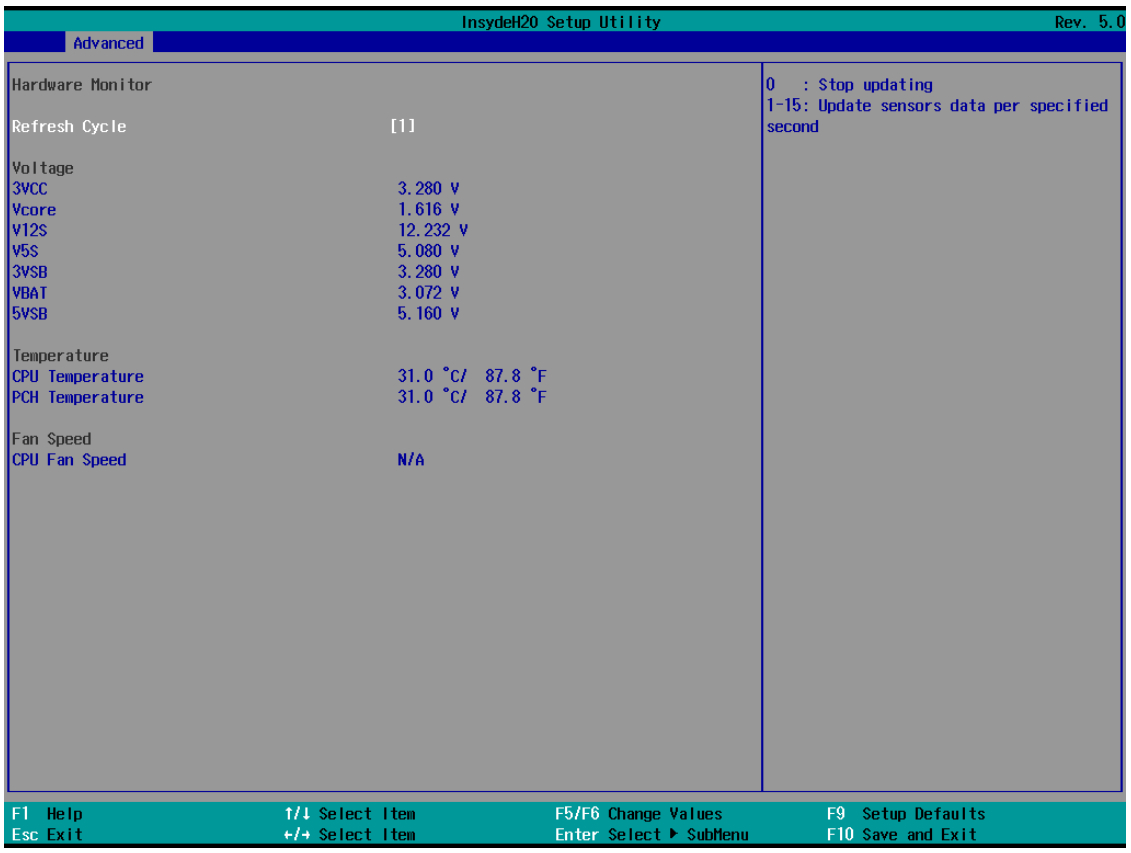


4.2.2.1 Restore On Power Loss

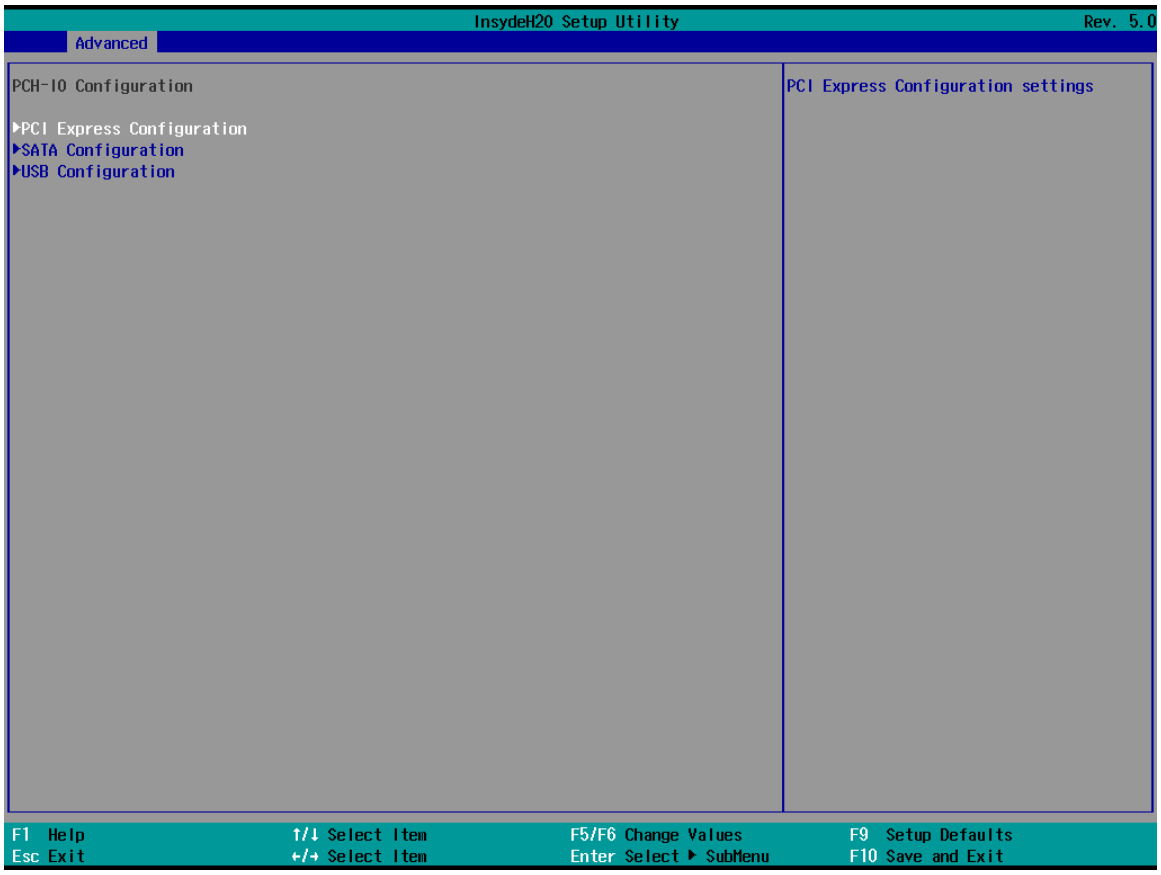
In Restore On Power Loss, you can setup whether to restore the product automatically when the Power loss.



4.2.3 Hardware Monitor

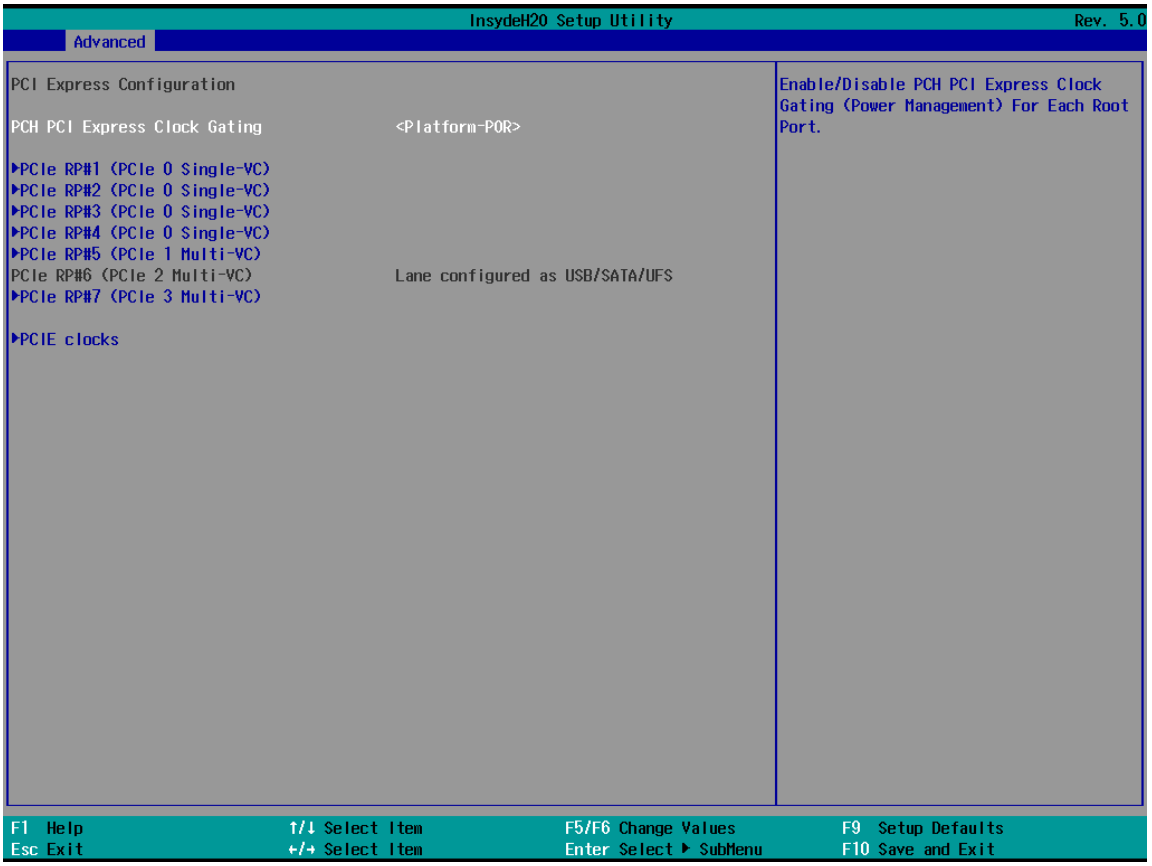


4.2.4 PCH-IO Configuration

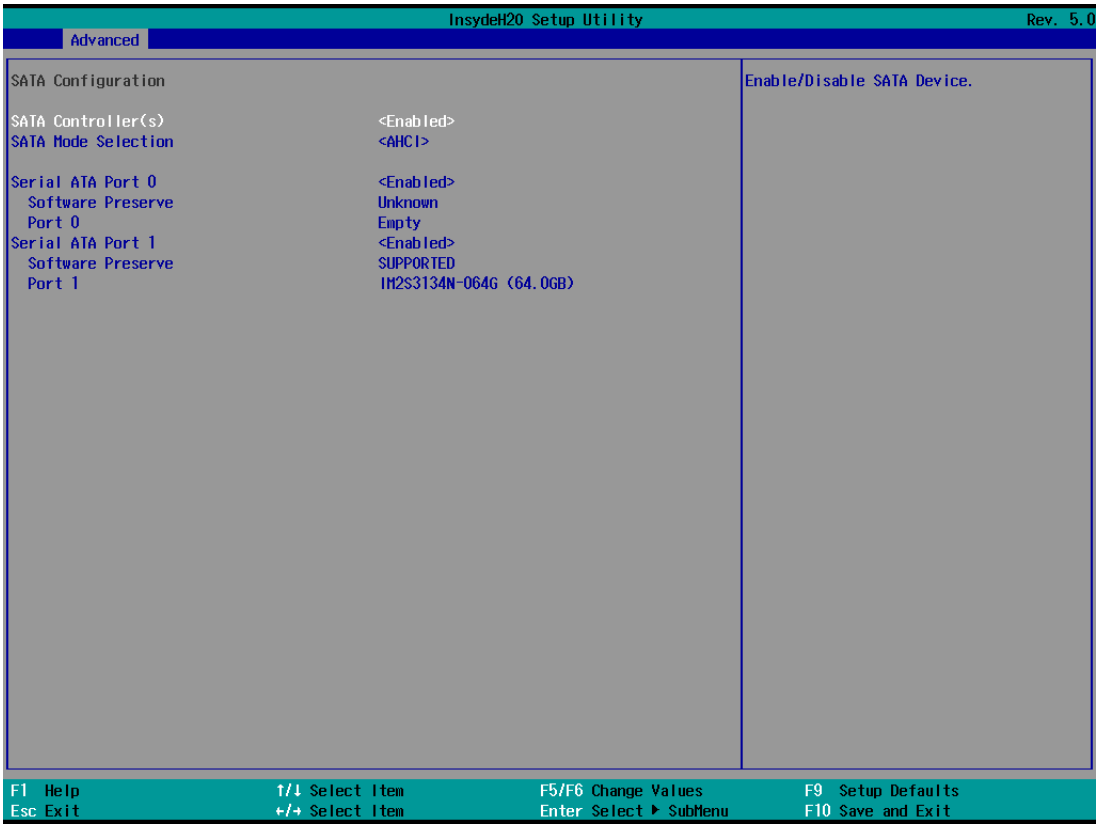


BIOS Setting	Description	Setting Option	Effect
PCI Express Configuration	PCI Express clock gating enable/disable for each root port.	Enter	Opens sub-menu
SATA And RST Configuratuion	Enable/ Disable SATA device	Enter	Opens sub-menu
USB Configuration	Selectively enable/ disable the corresponding USB port from reporting a Device Connection to the controller.	Enter	Opens sub-menu

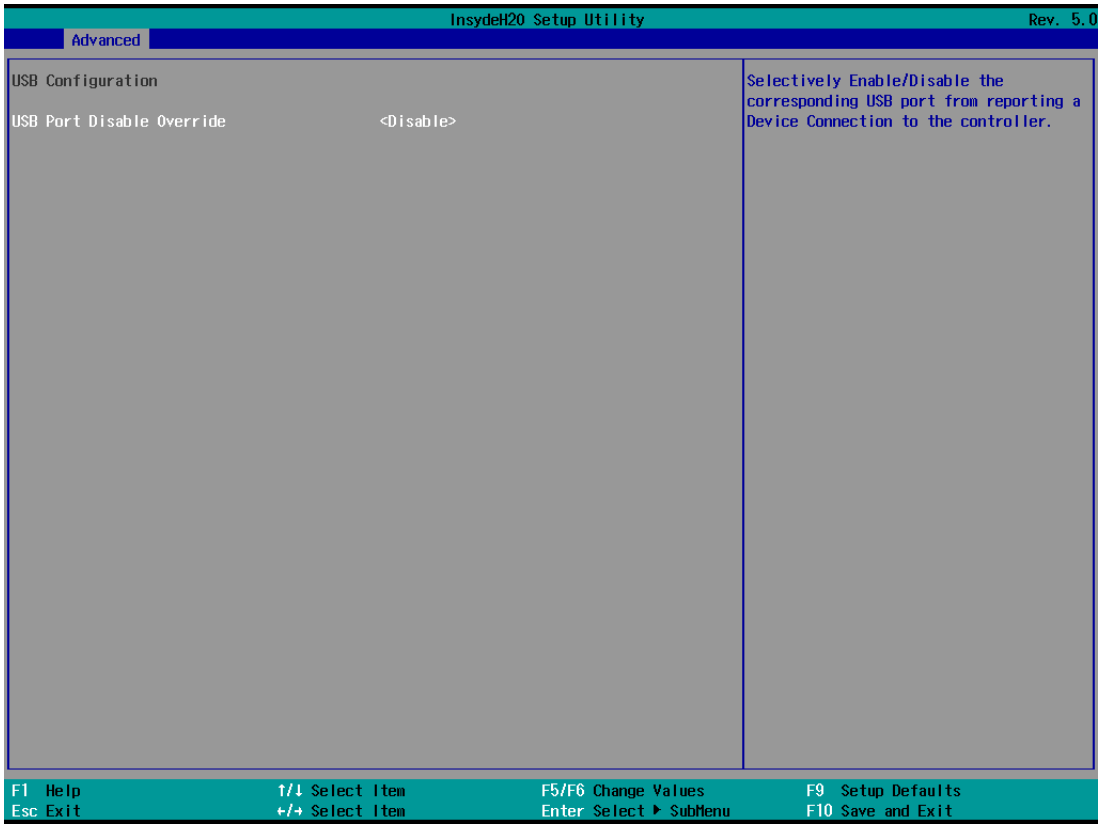
4.2.5 PCI Express Configuration



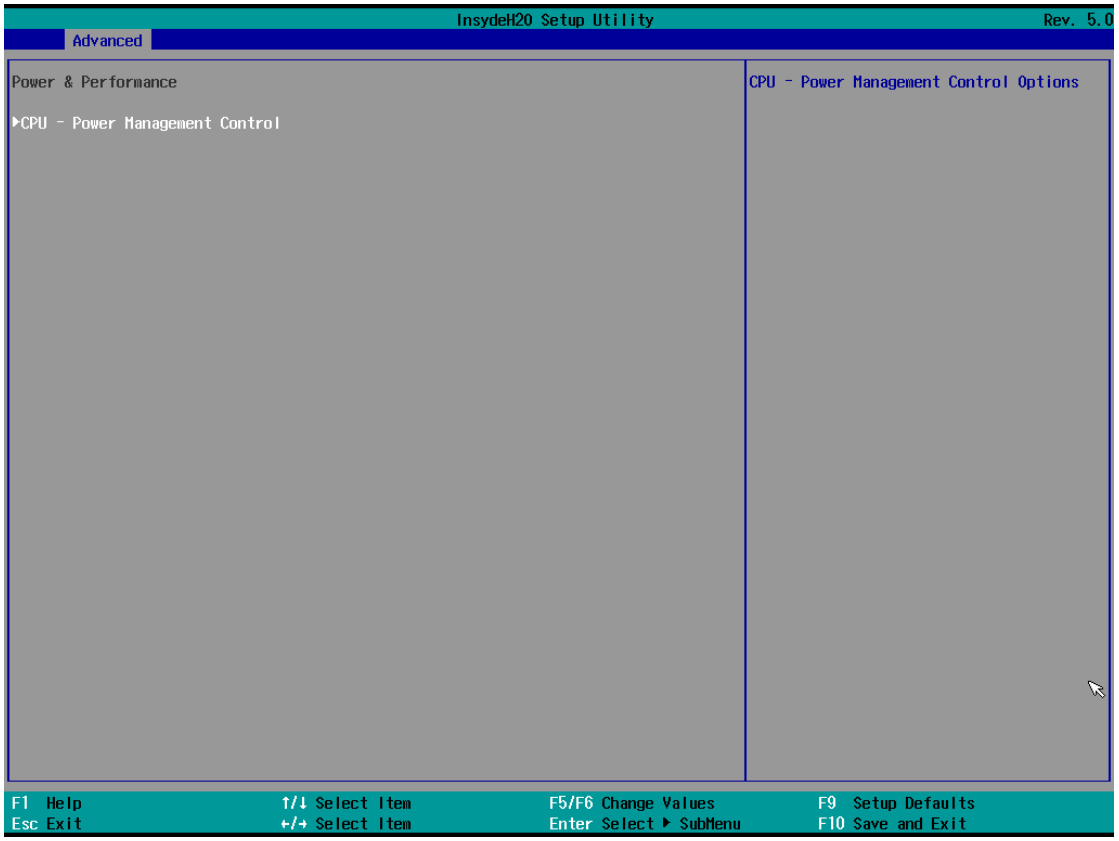
4.2.6 SATA and RST Configuration



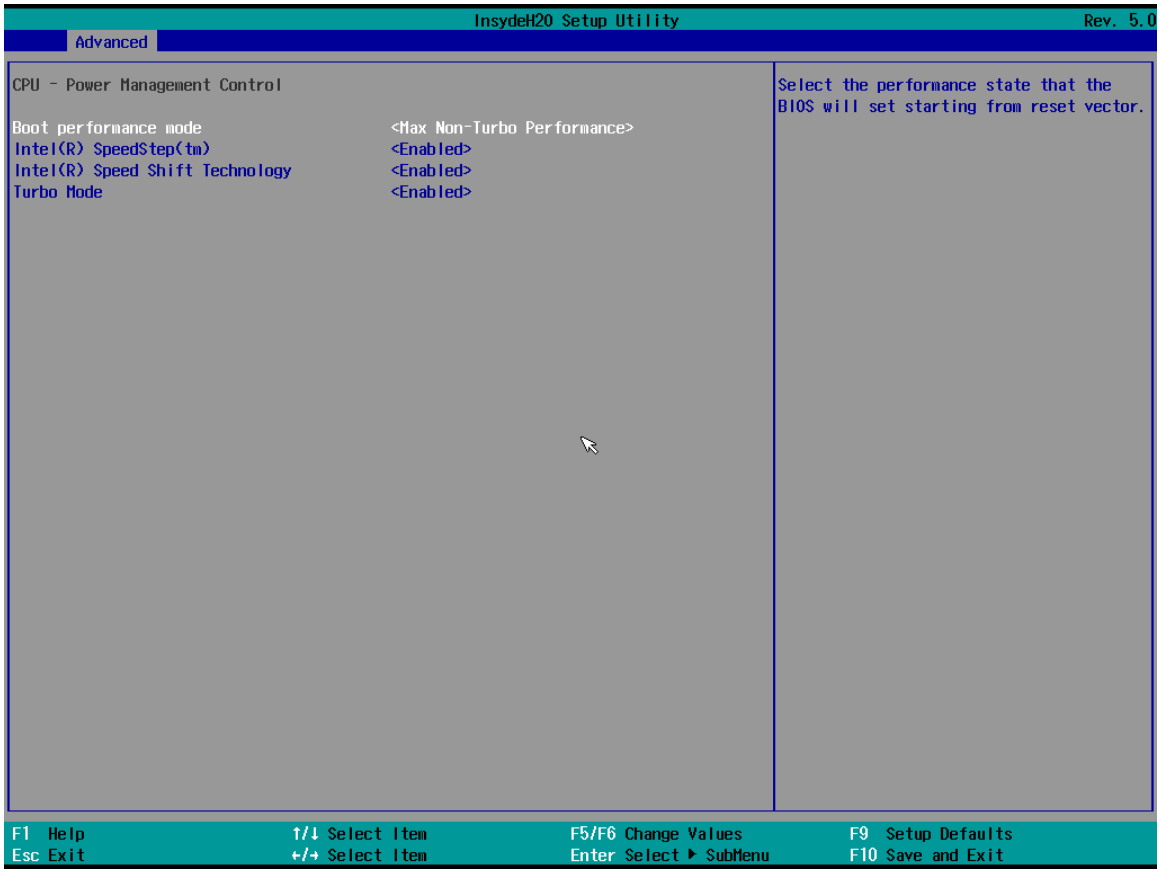
4.2.7 USB Configuration



4.2.8 Power & Performance



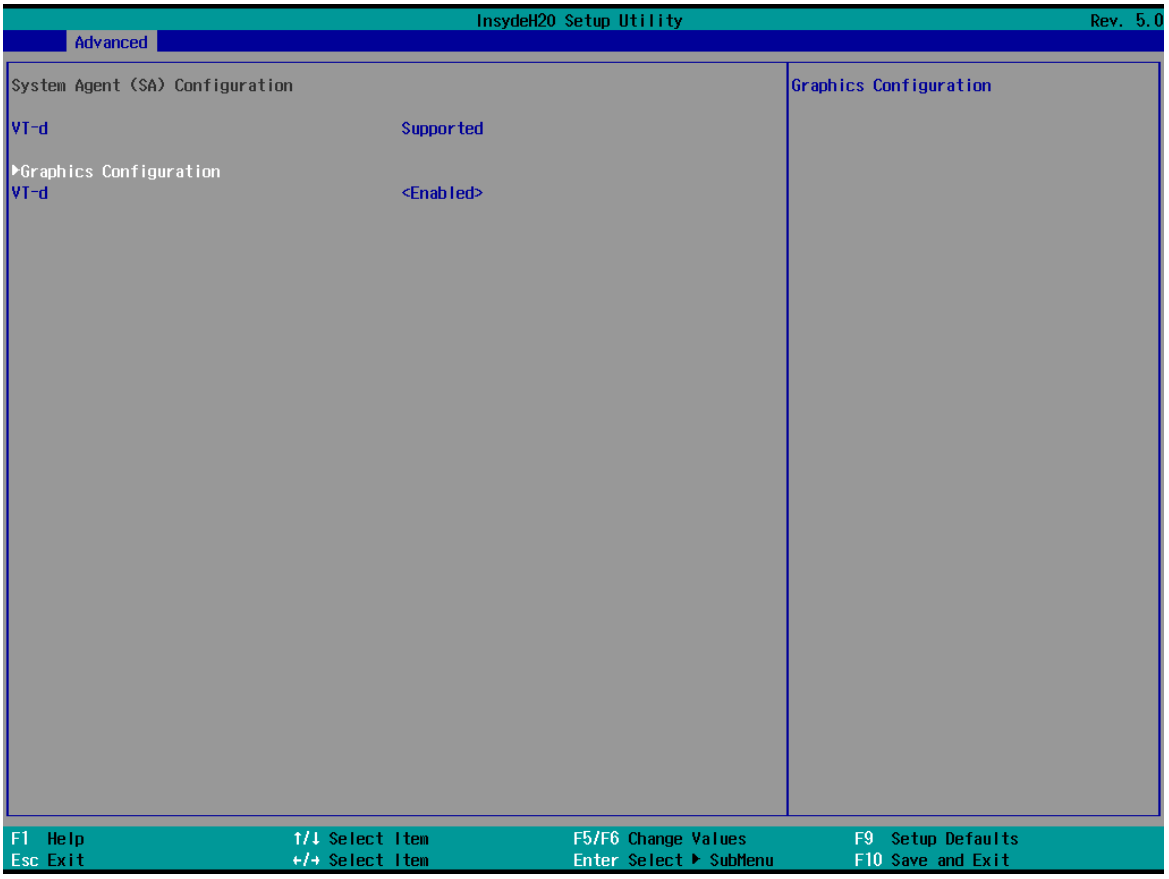
BIOS Setting	Description	Setting Option	Effect
CPU – Power Management Control	Configure CPU – Power Management parameters	Enter	Opens sub-menu



BIOS Setting	Description	Setting Option	Effect
Boot Performance Mode	Configure Boot Performance Mode parameters	-Max non-turbo performance -Max battery -Turbo Performance	Select the performance state that the BIOS will set starting from reset vector
Intel SpeedStep (ta)	Configure Intel SpeedStep (ta) parameters	Enabled/ Disabled	Allows more than two frequency ranges to be supported
Intel Speed Shift Technology	Configure Intel Speed Shift Technology parameters	Enabled/ Disabled	Enable/ Disable Intel Speed Shift Technology support. Enabling will expose the CPP v2 interface to allow for hardware controlled P-states

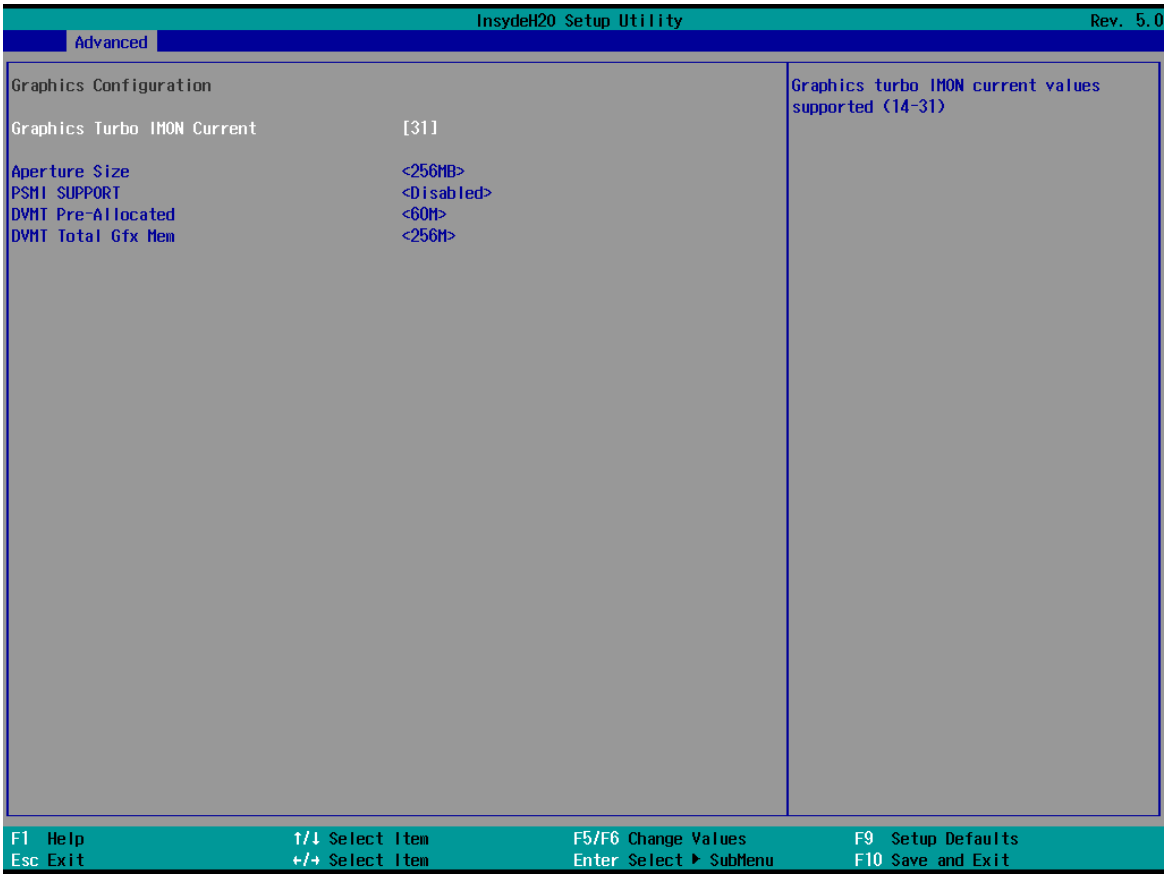
BIOS Setting	Description	Setting Option	Effect
-Turbo Mode	Enable or disable Turbo Mode	Enabled/ Disabled	Enable/ Disable processor Turbo Mode (requires EMTTM enabled too). Auto means enabled, unless max turbo ratio is bigger than 16 – SKL AO W/A
C states	Enable or disable C states	Enabled/ Disabled	Enable/ Disable CPU Power Management. Allows COU to go to C states when it is not 100% utilized
Custom P-state Table	Configure Custom P-state Table parameters	Enter	Enters sub-menu
-Number of P-states	Select the number of custom P-states.	[Number]	Set the number of custom P-states. At least 2 states must be present

4.2.9 System Agent (SA) Configuration



BIOS Setting	Description	Setting Option	Effect
Graphics Configuration	Configure Graphics Configuration parameters	Enter	Opens sub-menu
Vt-d	Intel® Virtualization Technology for Directed I/O	Enabled Disabled	Vt-d capability

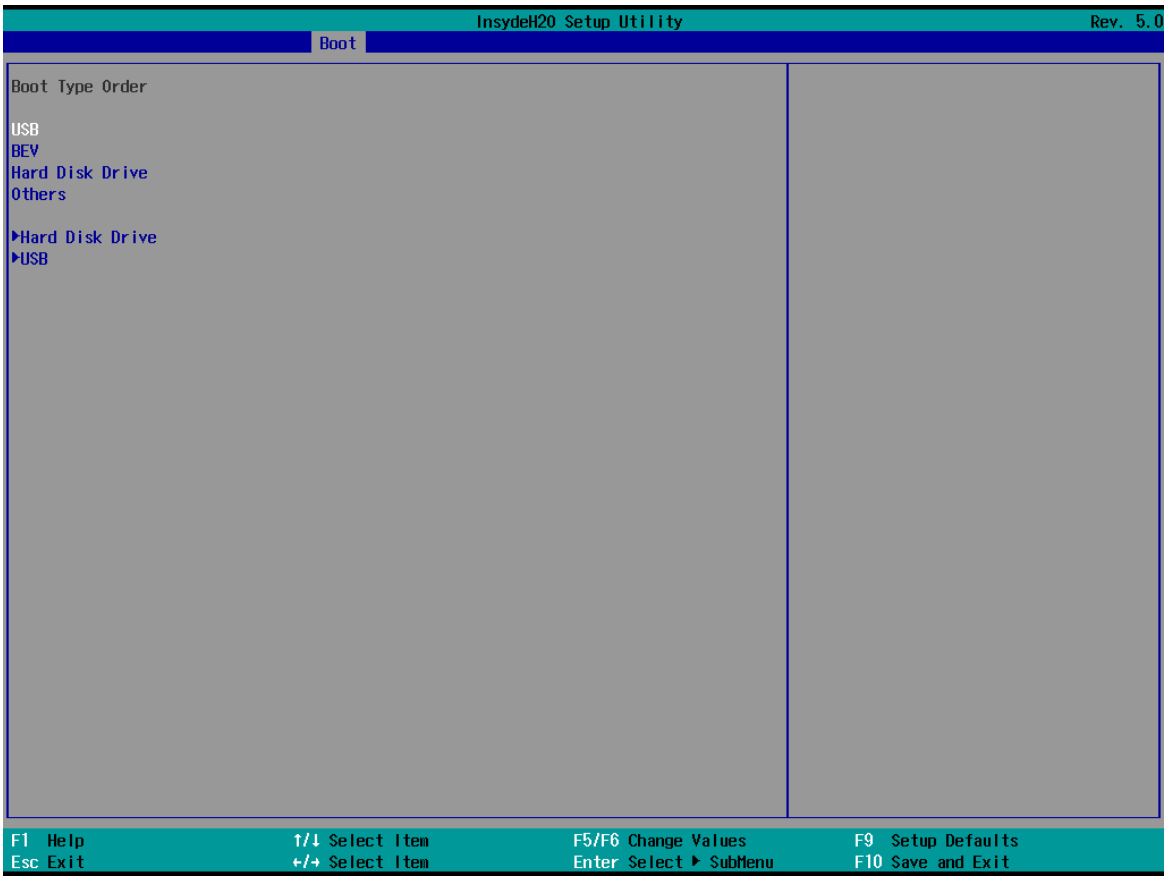
4.2.10 Graphics Configuration



BIOS Setting	Description	Setting Option	Effect
Internal Graphics	Internal Graphics settings	Auto Enabled Disabled	Keep IGFX enabled based on the setup options
Aperture Size	Select the aperture size	128MB 256MB 512MB 1024MB 2048 MB	Select the aperture size *Note: Above 4MB MMIO BIOS assignment is automatically enabled when selecting 2048MB aperture. To use this feature please disable CSM port*

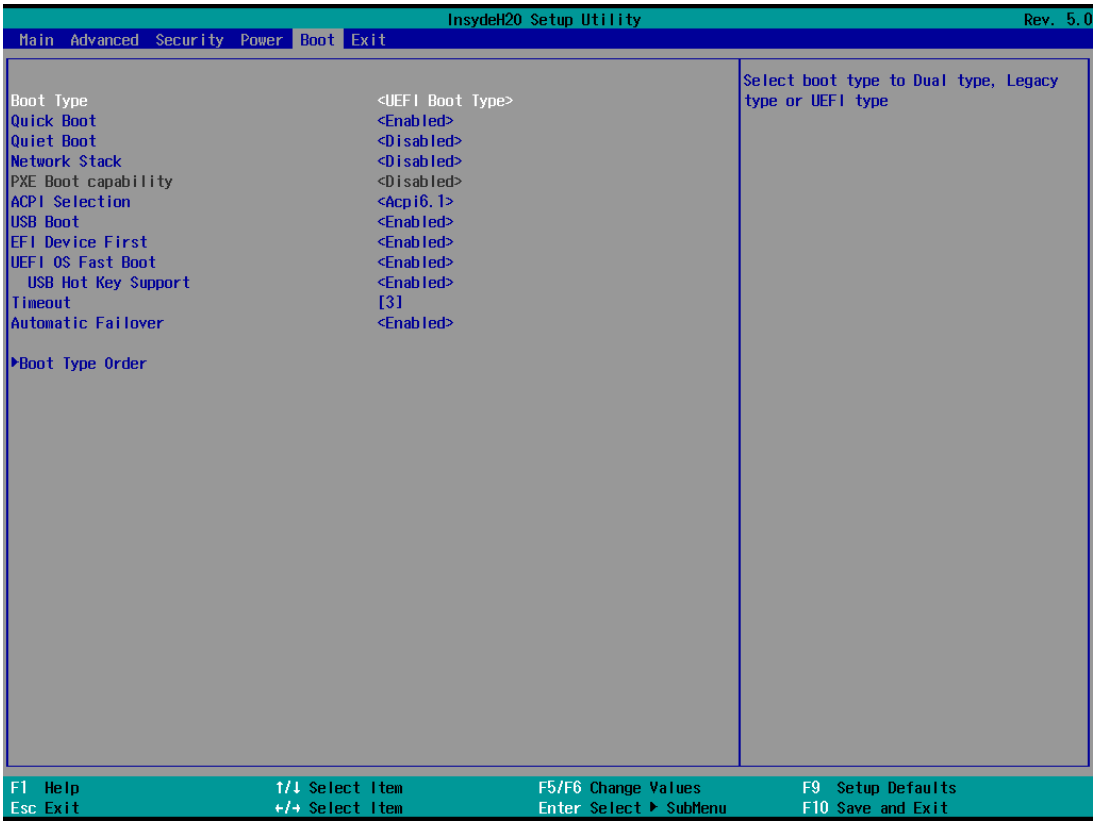
BIOS Setting	Description	Setting Option	Effect
DVMT Pre-Allocated	Select DVMT Pre-Allocated	0M~60M	Select DVMT 5.0 Pre-Allocated (Fixed) Graphic Memory size used by Internal Graphic Device
DVMT Total Gfx Mem	Select DVMT Total Gfx Mem	256M 128M MAX	Select DVMT 5.0 Total Graphic Memory size used by the Internal Graphic Device
Gfx Low Power Mode	Select Gfx Low Power Mode	Enabled/ Disabled	This option is applicable for SFF only

4.2.11 Boot



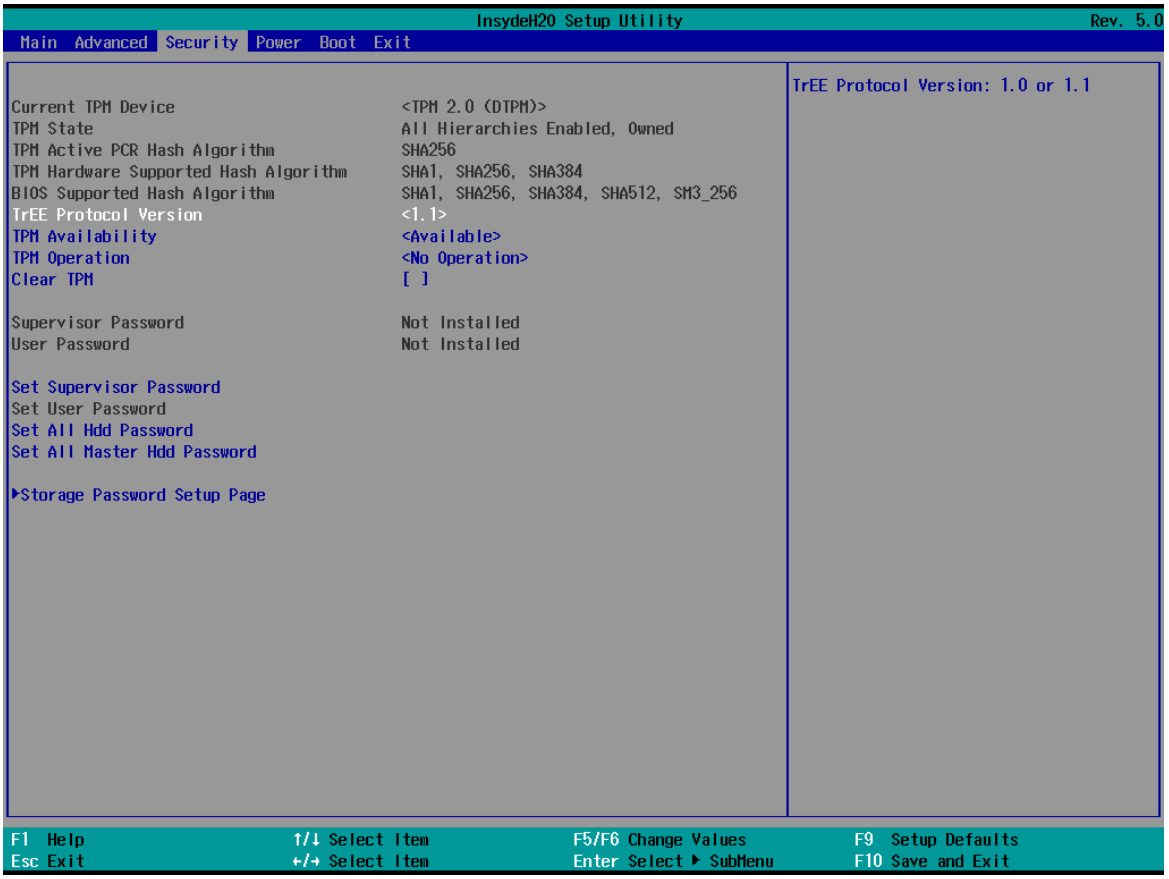
BIOS Setting	Description	Setting Option	Effect
Boot Type	Boot Type configuration	UEFI Boot Type	Select boot type to Dual type, Legacy type or UEFI type
Quick Boot	Quick Boot configuration	Enabled Disabled	Allows InsydeH20 to skip certain tests while booting. This will decrease the time needed to boot the system
Quiet Boot	Quiet Boot configuration	Enabled Disabled	Disable or enable booting in text Mode.
Timeout	Timeout	[Value]	Timeout settings
Automatic Failover		Enable	If boot to default device fail, it will directly try to boot next device
		Disable	If boot to default device fail, it will pop warning message then go to firmware UI
Boot Type Order	Boot Type Order	Enter	Opens sub-menu

4.2.12 Boot Type Order



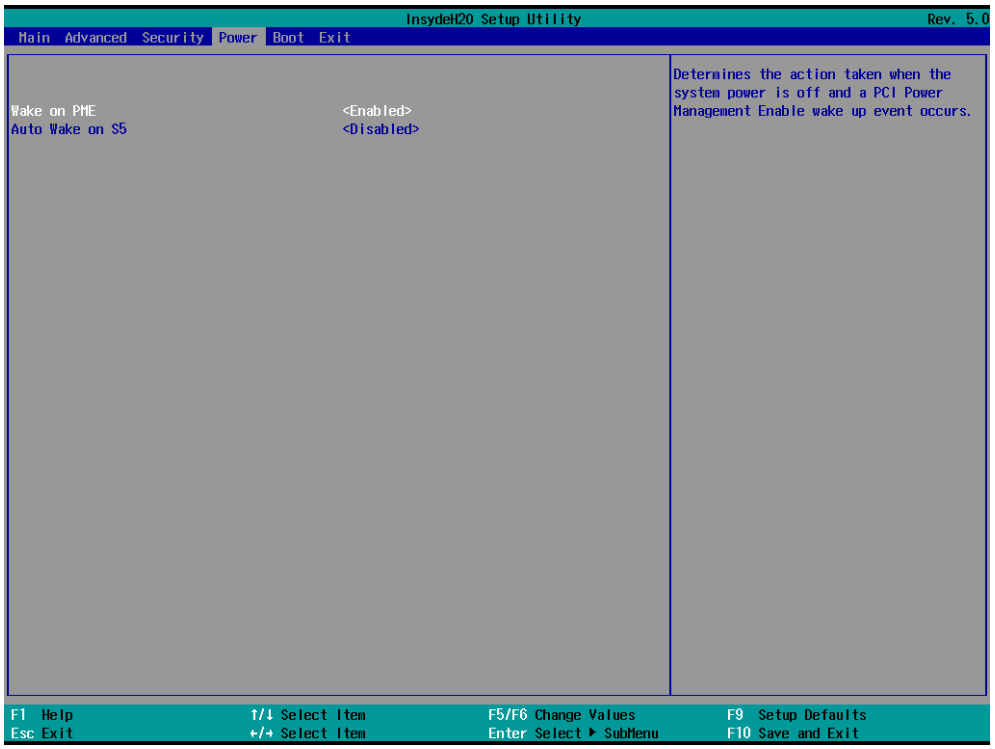
BIOS Setting	Description	Setting Option	Effect
Hard Disk Type	Hard Disk Type configuration	Enter	Opens Sub-menu
Others	Other configuration	Enter	Opens Sub-menu

4.2.13 Security



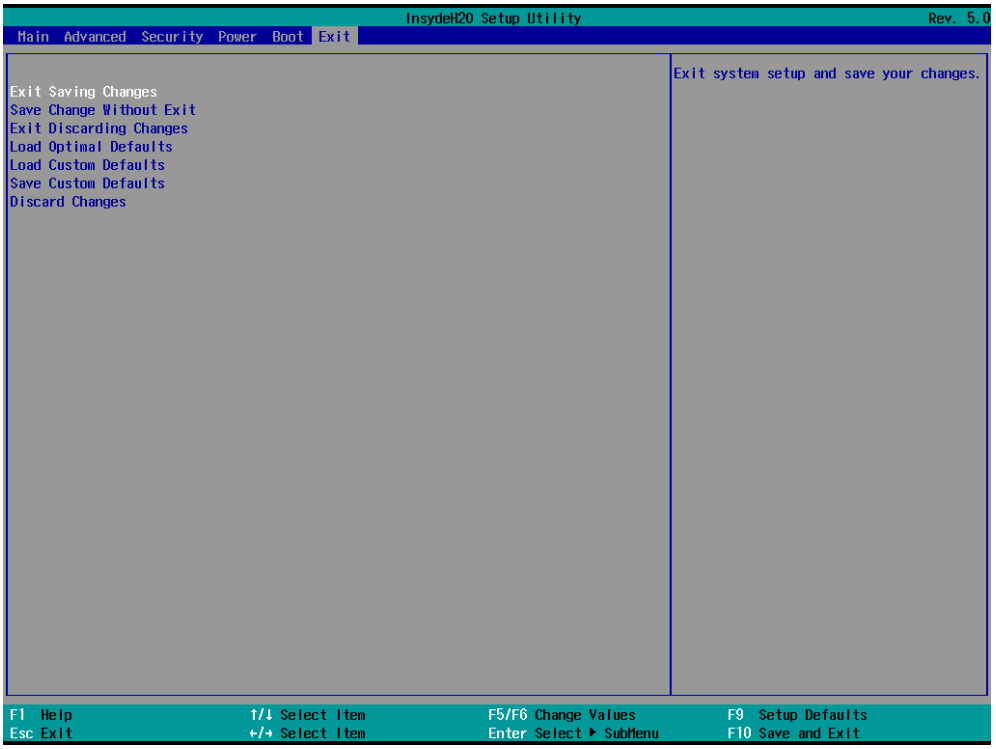
BIOS Setting	Description	Setting Option	Effect
TrEE Protocol Version	Choose TrEE Protocol Version	1.0 1.1	TrEE Protovol Version: 1.0 or 1.1
TPM Availability	TPM Availability configuration	Available Hidden	When hidden don't exposes TPM to 0
TPM Operation	TPM Operation configuration	[ ]	Select one of the supported operation to change TPM2state
Clear TPM	Clear TPM configuration	[ ]	Select to Clear TPM
Set Supervisor Password	Set Supervisor Password	Enter New password	Install or Change the password and the length of password must be greater than one character

4.2.14 Power



BIOS Setting	Description	Setting Option	Effect
ACPI S3	ACPI S3 configuration	Disabled Enabled	Enable/ Disable ACPI S1/S3 Sleep state
Auto Wake on S5	Auto Wake on S5 configuration	Disabled By Every Day By Every Month	Auto Wake on S5, by Day or Month or fixed time of every day

4.2.15 Exit



4.3 Using Recovery Wizard to Restore Computer

Note:
Before starting the recovery process, make sure to backup all user data. The data will be lost after the recovery process.

Important:
Before starting the recovery process, remove any expansion card.

To enable quick one-key recovery procedure:

1. Connect the computer to the power source. Make sure the computer stays plugged in to power source during the recovery process.
2. Turn on the computer, and when the boot screen shows up, press **F6** on the external USB keyboard to initiate the Recovery Wizard.
3. The following screen shows the Recovery Wizard. Click **Recovery** button to continue.

4. A warning message about data loss will show up. Make sure the data is backed up before recovery, and click Yes to continue.
5. During the recovery process, a command prompt will show up to indicate the percent of recovery process complete.
6. After the recovery process to complete, please restart your computer manually.

Chapter 5: Driver Installation

This chapter contains driver installation guide. Follow the instructions below to complete the installation. You will quickly complete the installation. This chapter provides instructions on how to install drivers on the IE32 3.5" SBC.

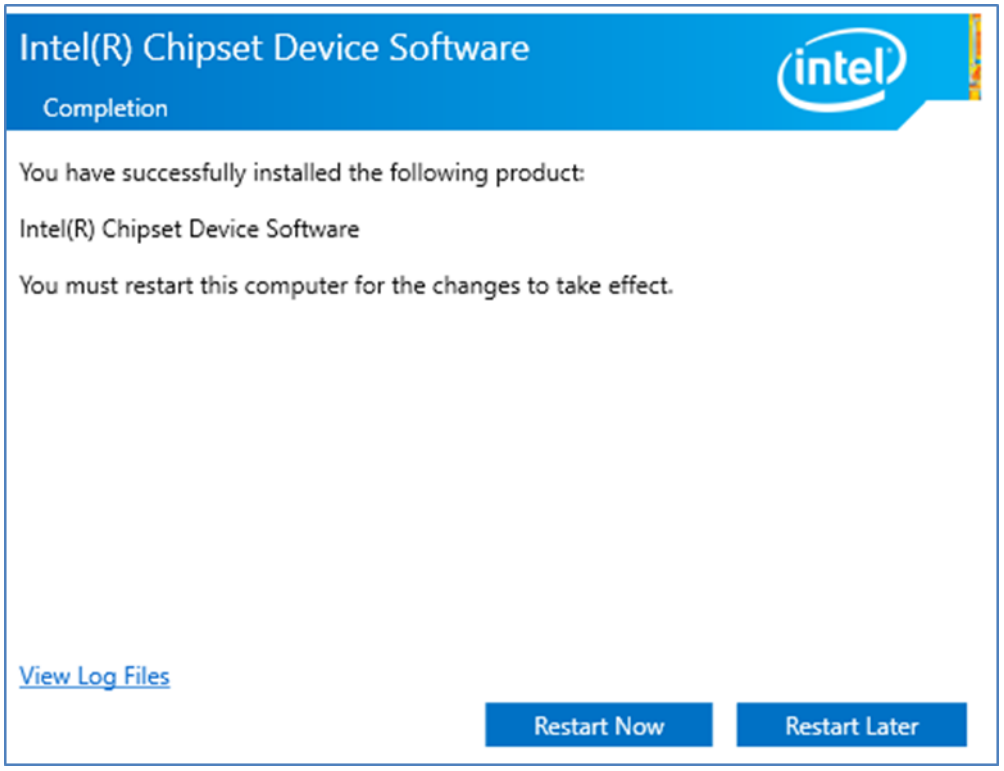
5.1 Chipset Driver

Follow instructions below to install Chipset driver.

1. Open the Driver (Download from Winmate Download Center) and select **Chipset** driver. When installation window will pop up, select **Next**.

2. Select **Accept** to agree with the terms of license agreement.

3. Check the ReadMe file information, select **Install** to continue.

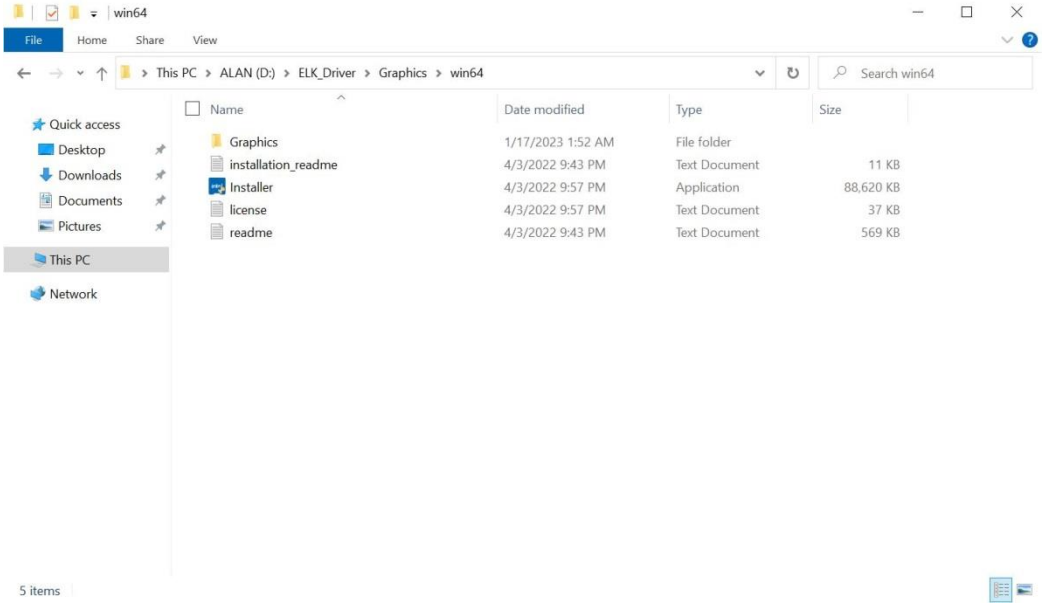


4. Wait for the driver to be installed. When installation completed, select **Restart Now** to restart your computer.

5.2 Graphic Driver

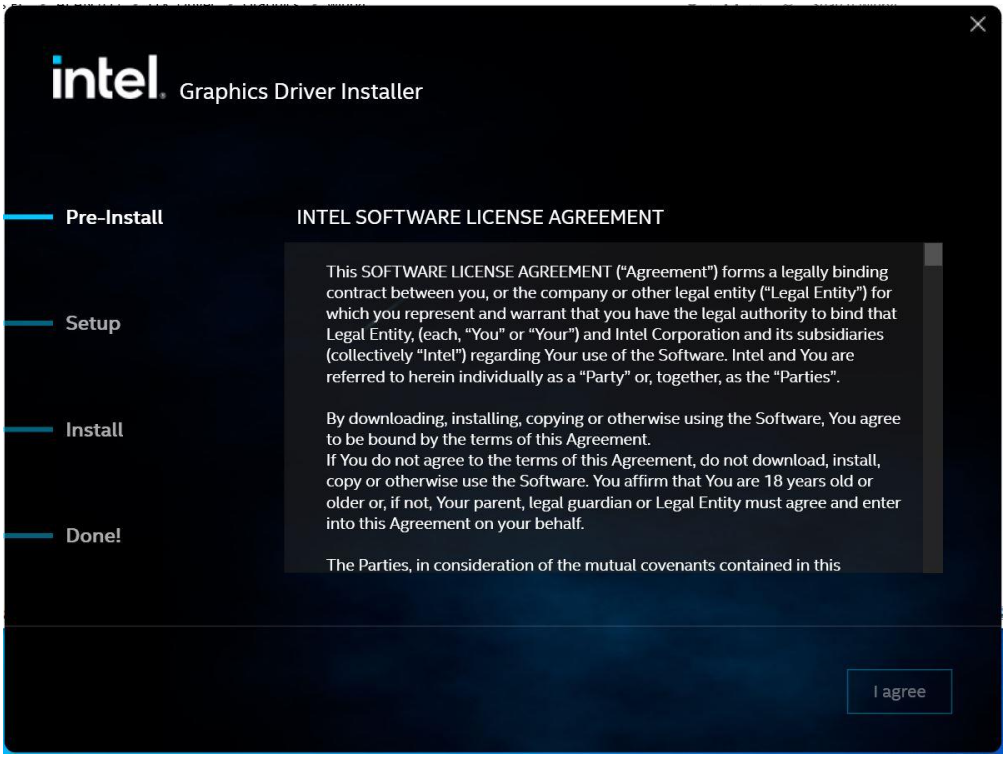
Follow instructions below to install Graphic driver.

1. Open the Driver (Download from Winmate Download Center) and select **Graphic** driver.

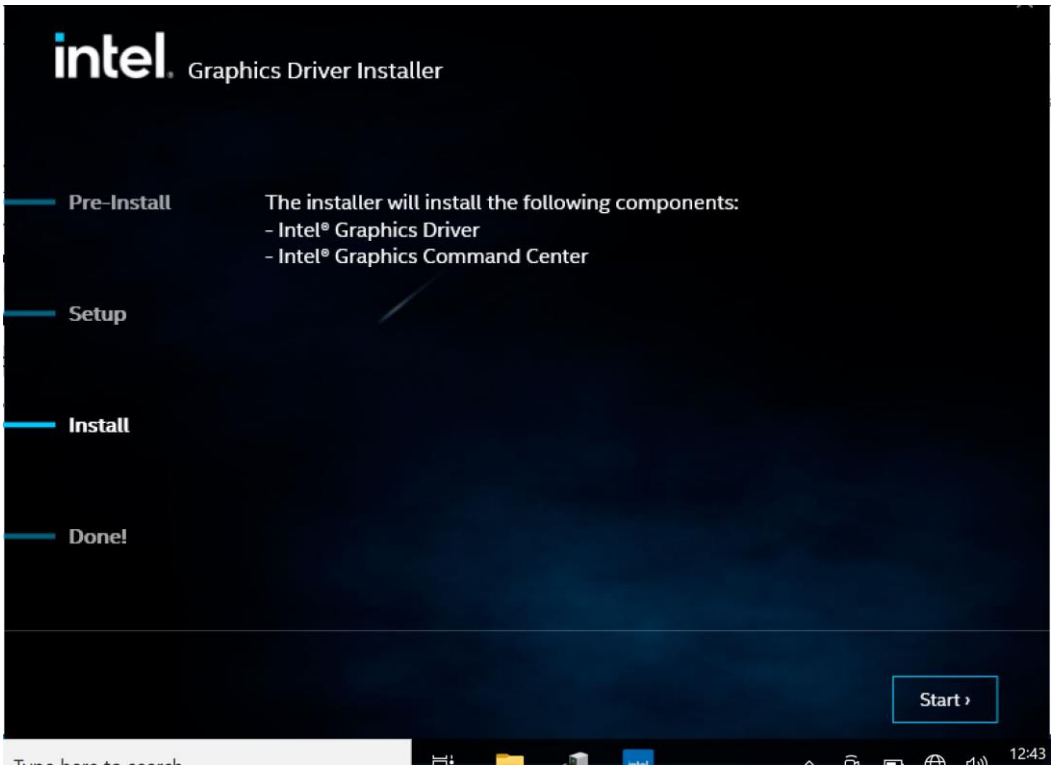


2. Installation window will pop up, select **Begin installation.**

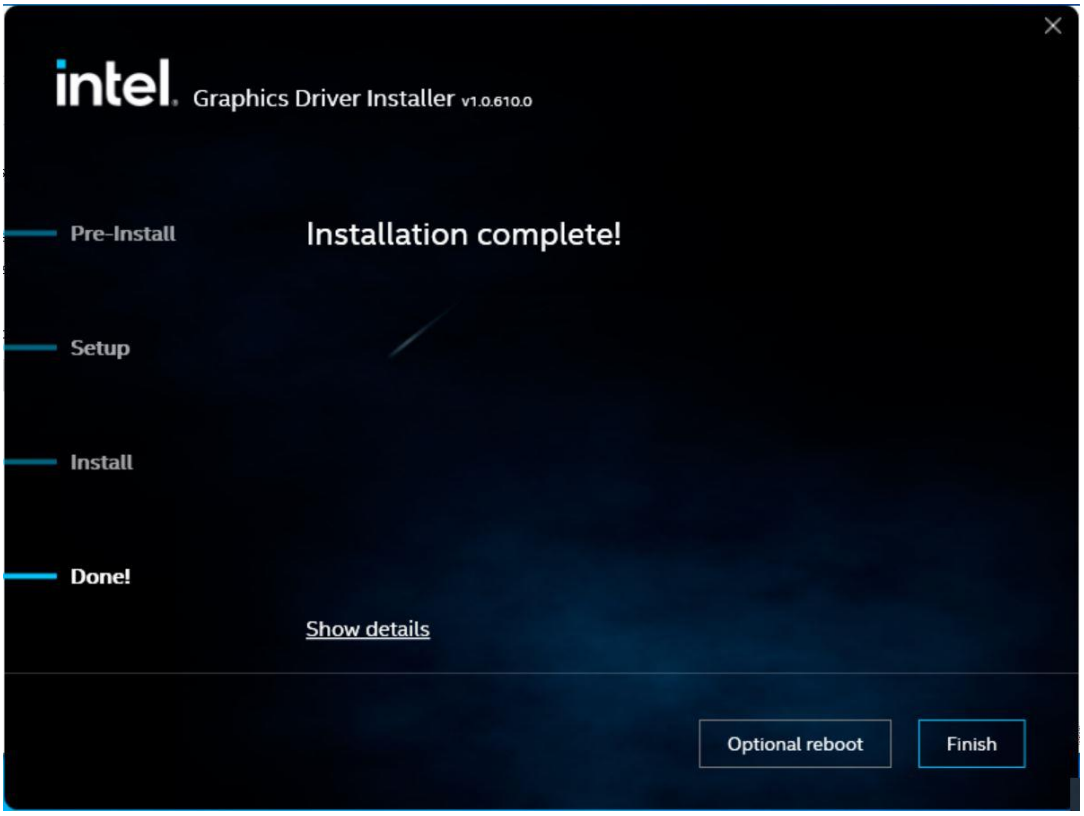
3. Select I agree.



4. Select **Start** to install the Driver.



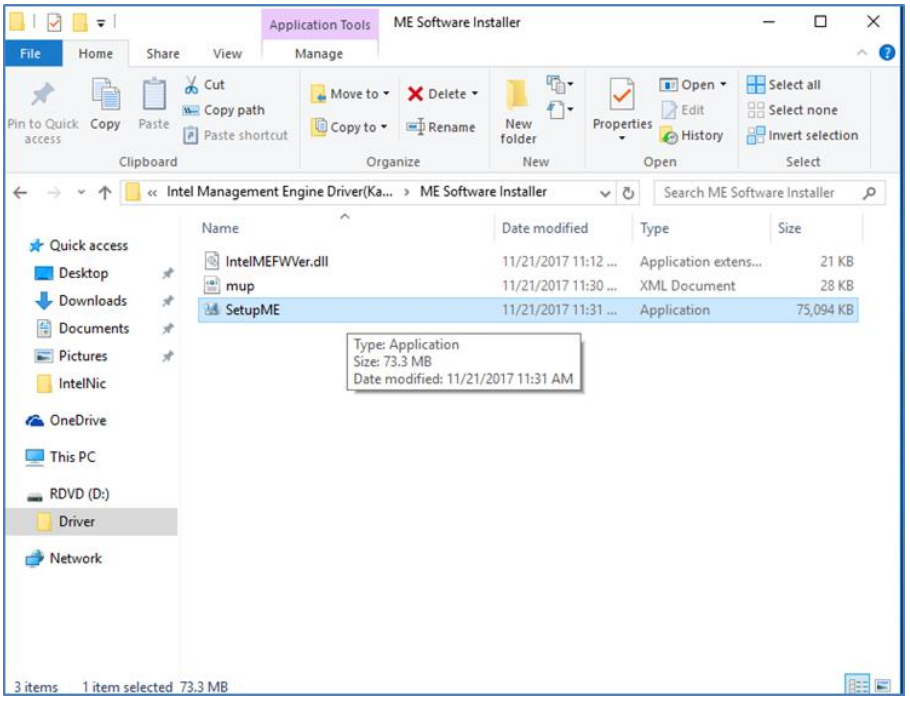
5. After installation is completed, click **Finish**.


intel. Graphics Driver Installer v1.0.610.0
Pre-Install
Setup
Install
Done!
Installation complete!
Show details
Optional reboot
Finish

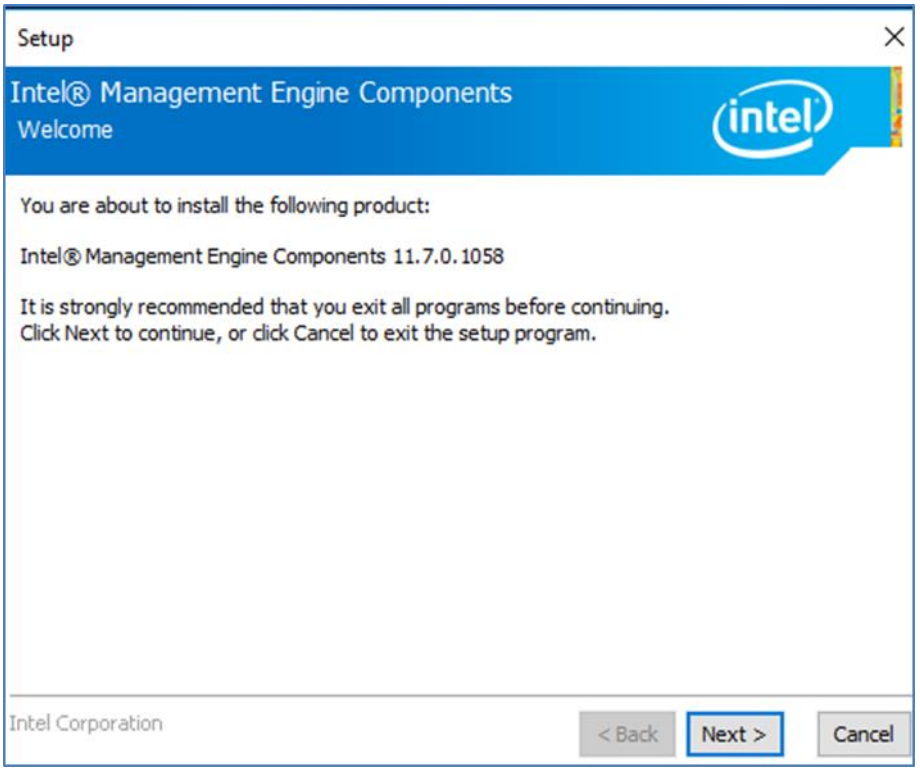
5.3 Management Engine (ME)

Follow instructions below to install Management Engine (ME) .

1. Open the Driver (Download from Winmate Download Center) and select **ME** driver.

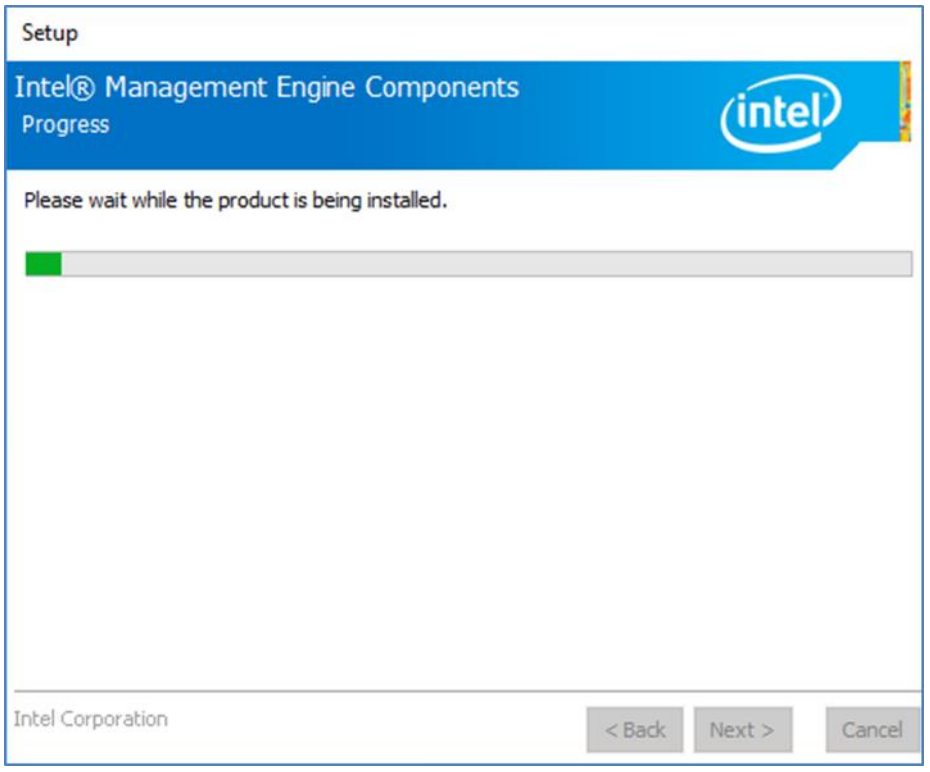


2. Select **Next** to start the installation.

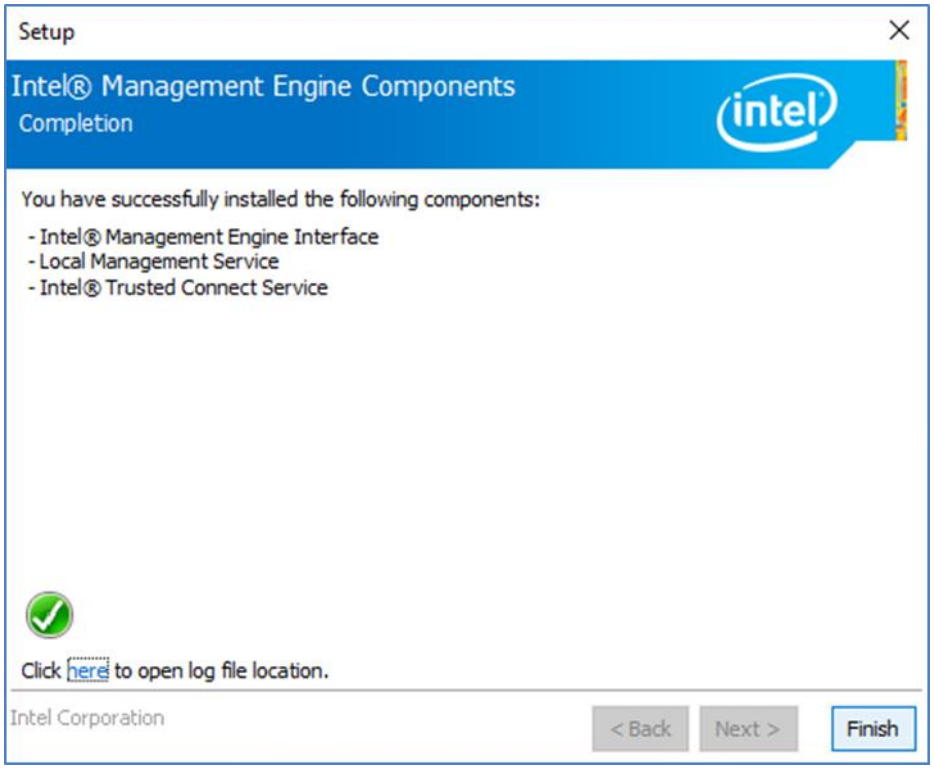


3. Select **Next** to agree with the terms of license agreement.

4. Wait for the driver to be installed.



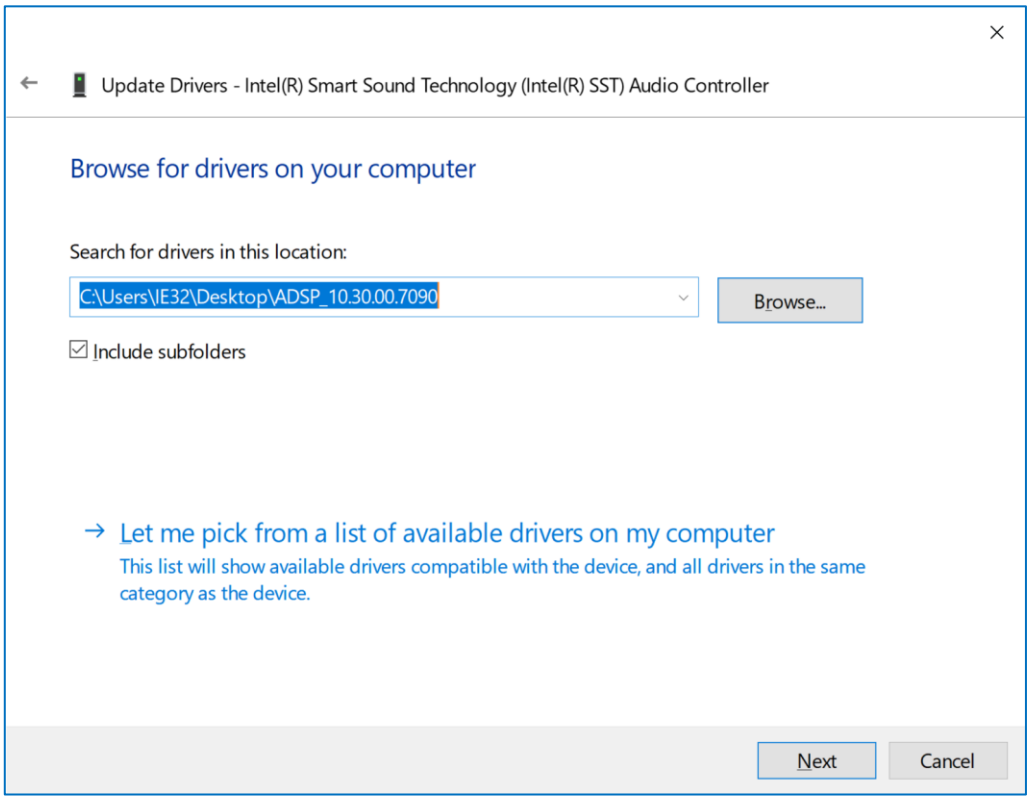
5. When installation completed, select **Finish** complete installation.



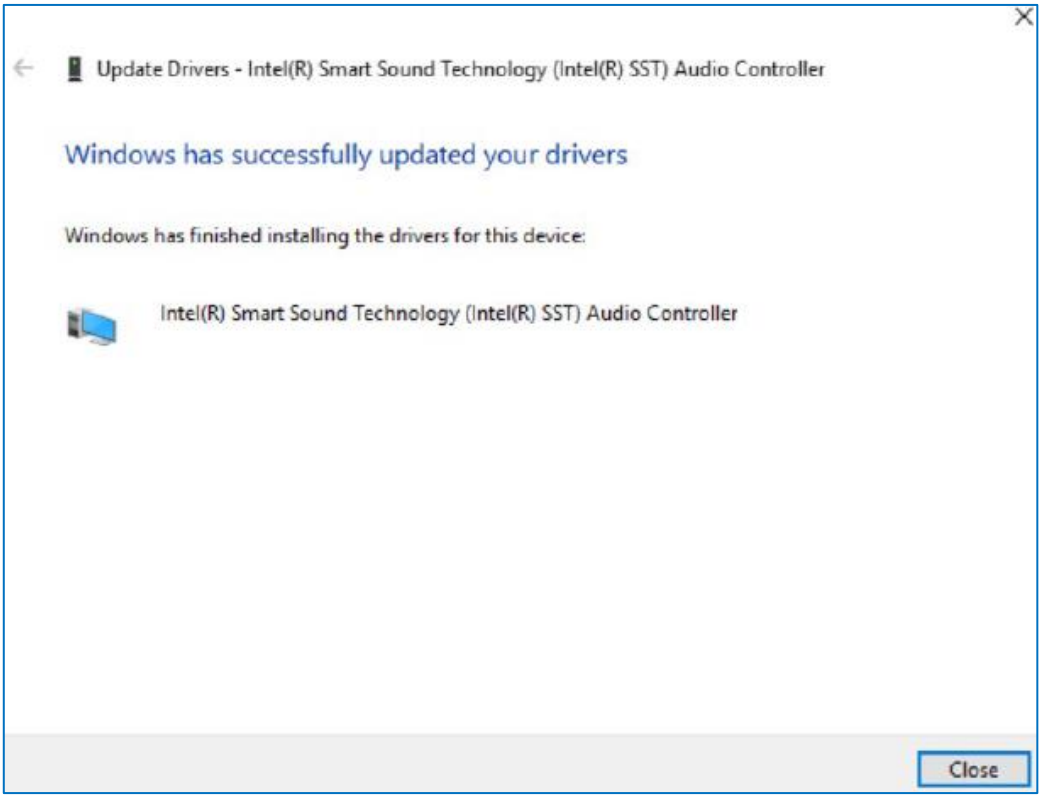
5.4 SST Driver

Follow instructions below to install SST driver.

1. Update Drivers > Browse “My computer” for driver software > Next



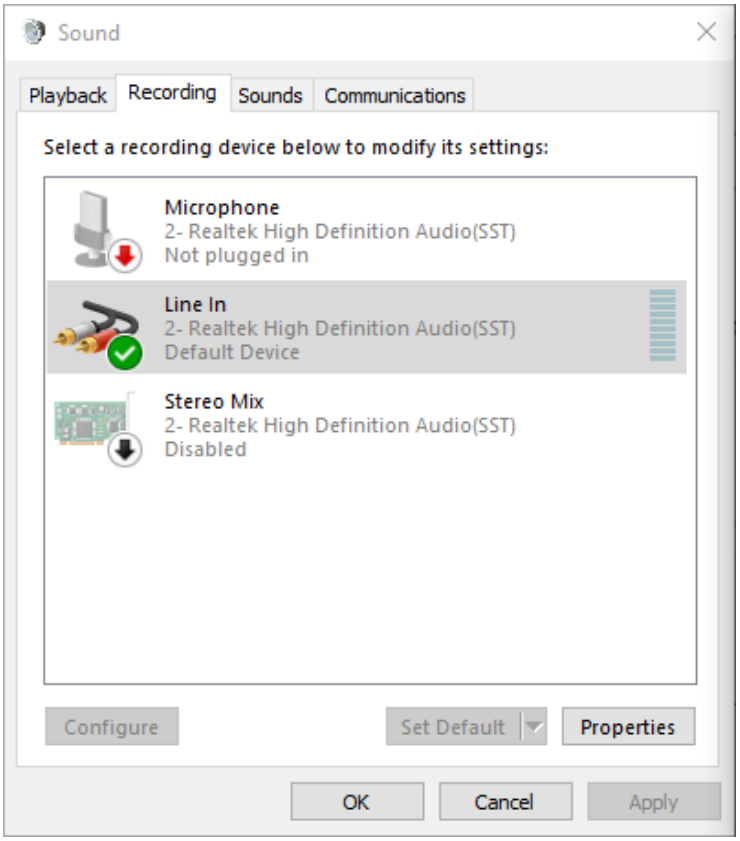
2. Wait for driver installation to complete.



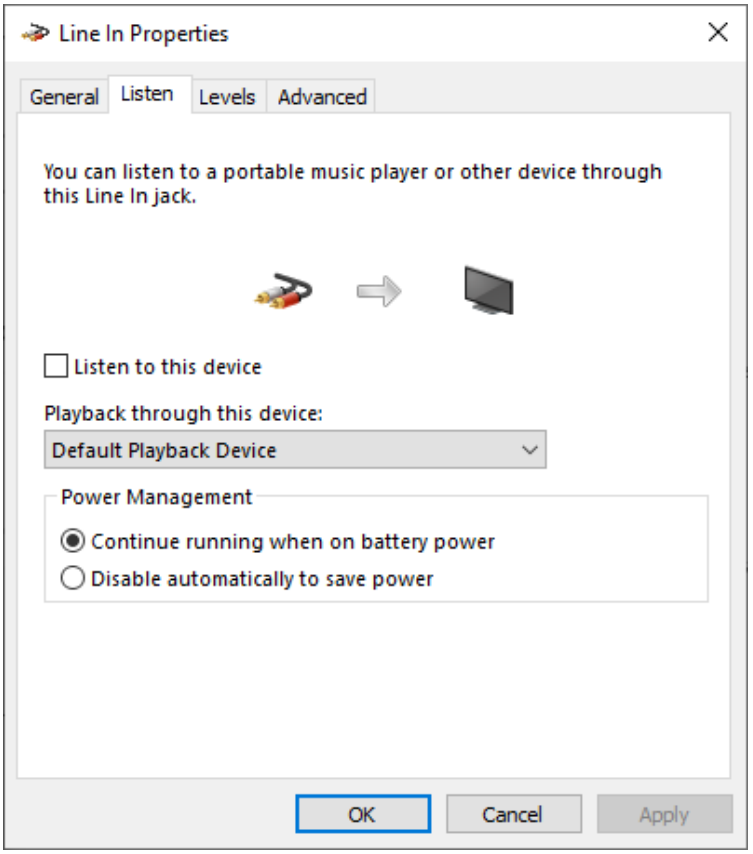
Note:
This product is equipped with SST Driver, when the line-in function of Audio is used, the product will automatically enter D3 sleep mode. To solve this problem, you must enter the line in setting and turn on the sync output. When the sync output setting is turned on, the line-out will output the sound synchronously.

Therefore, if you only need to use the line-in function, please turn off the volume of the line-out device. When the line-out volume is turned off, HDMI will also have no audio output. If you will not use the line-in function, please keep the Winmate default setting. When you need to use the line-in function, please follow the steps below to turn on the sync output.

Step 1:


Sound
Playback
Recording
Sounds
Communications
Select a recording device below to modify its settings:
Microphone
2- Realtek High Definition Audio(SST)
Not plugged in
Line In
2- Realtek High Definition Audio(SST)
Default Device
Stereo Mix
2- Realtek High Definition Audio(SST)
Disabled
Configure
Set Default
Properties
OK
Cancel
Apply

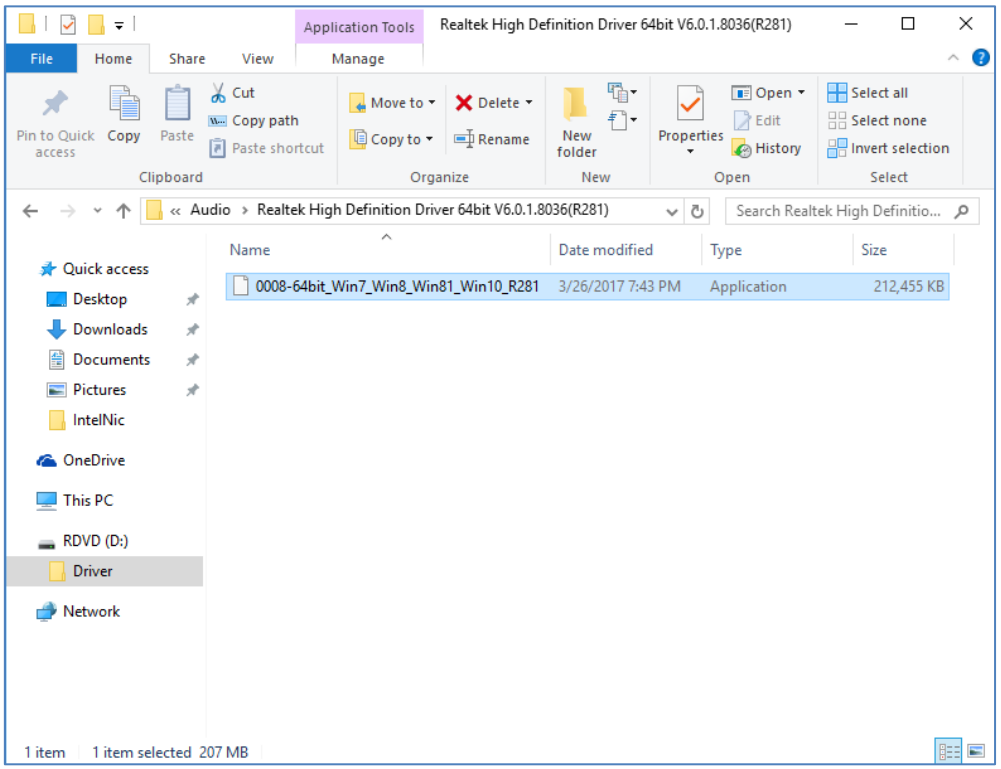
Step 2:


Line In Properties
General
Listen
Levels
Advanced
You can listen to a portable music player or other device through this Line In jack.
Listen to this device
Playback through this device:
Default Playback Device
Power Management
Continue running when on battery power
Disable automatically to save power
OK
Cancel
Apply

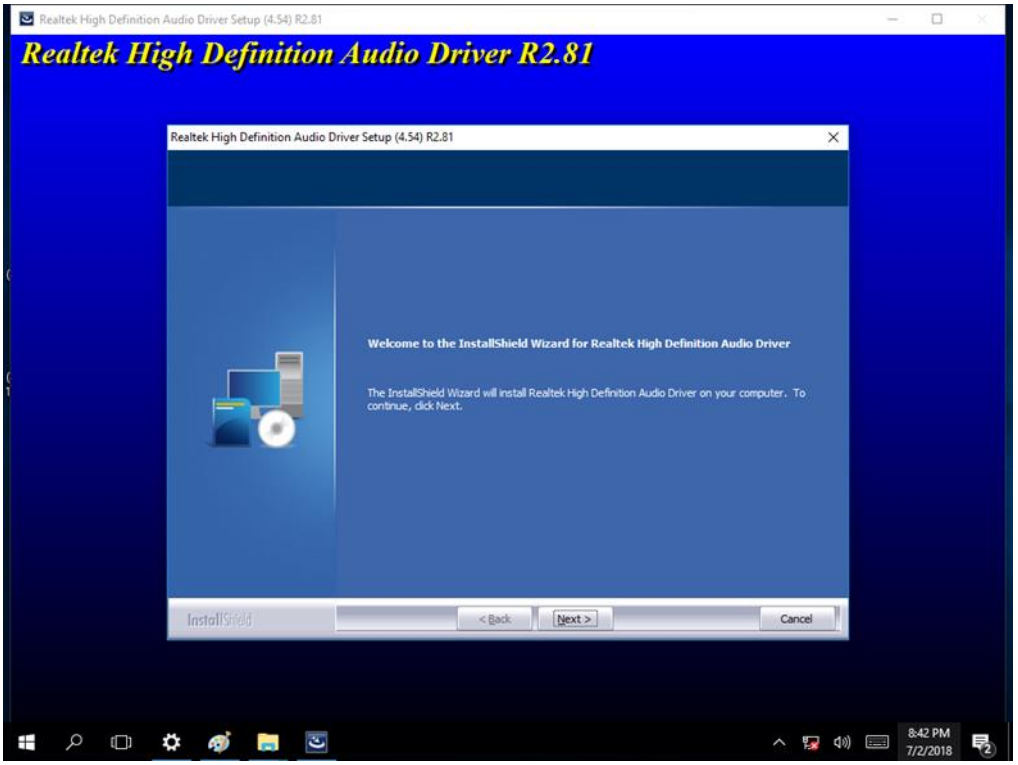
5.5 Audio Driver

Follow instructions below to install Audio driver.

1. Open the Driver (Download from Winmate Download Center) and select **Audio** driver.



2. Select **Next** to continue.

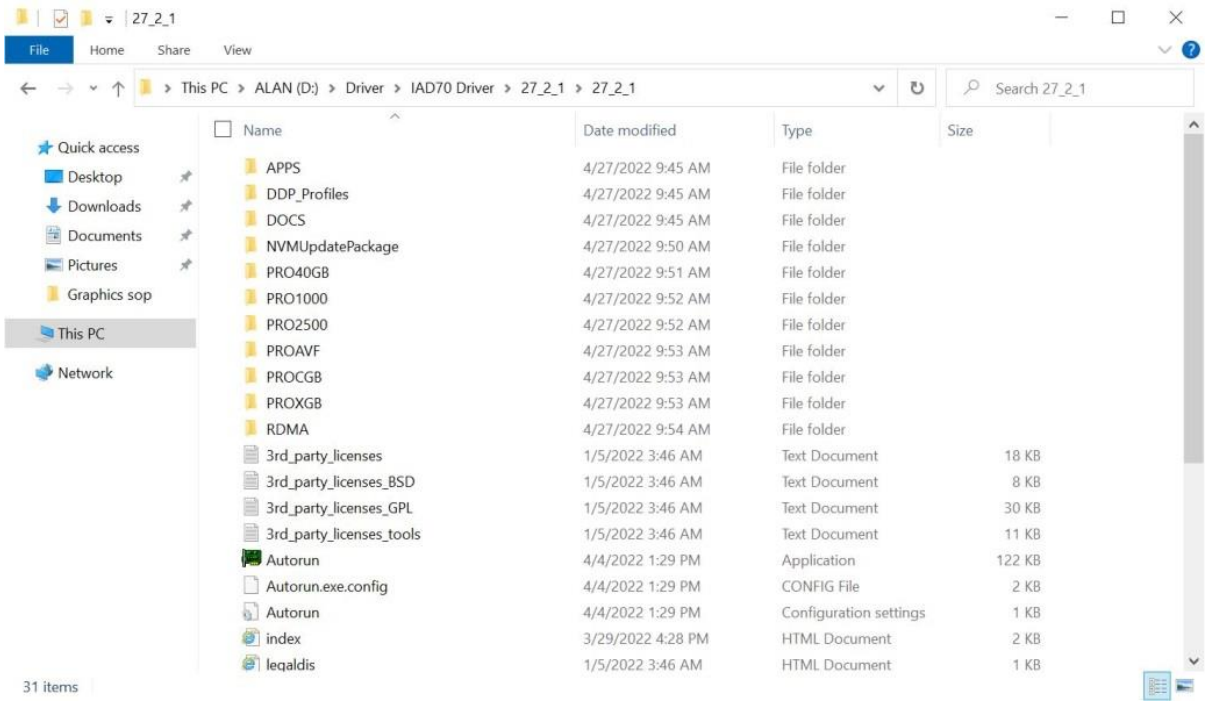


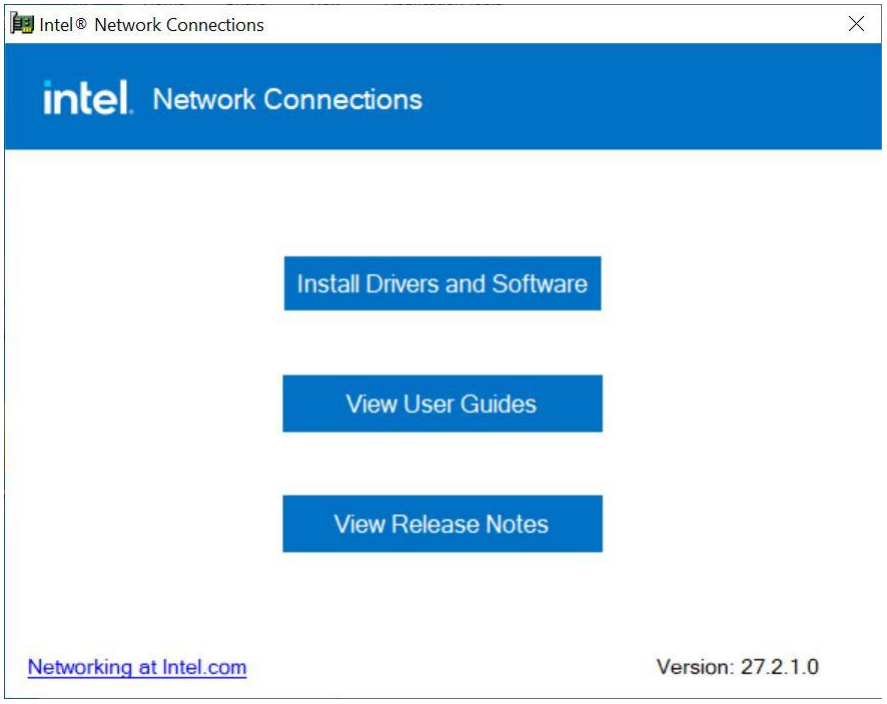
3. When installation completed, select **Finish** complete installation.

5.6 Ethernet Driver

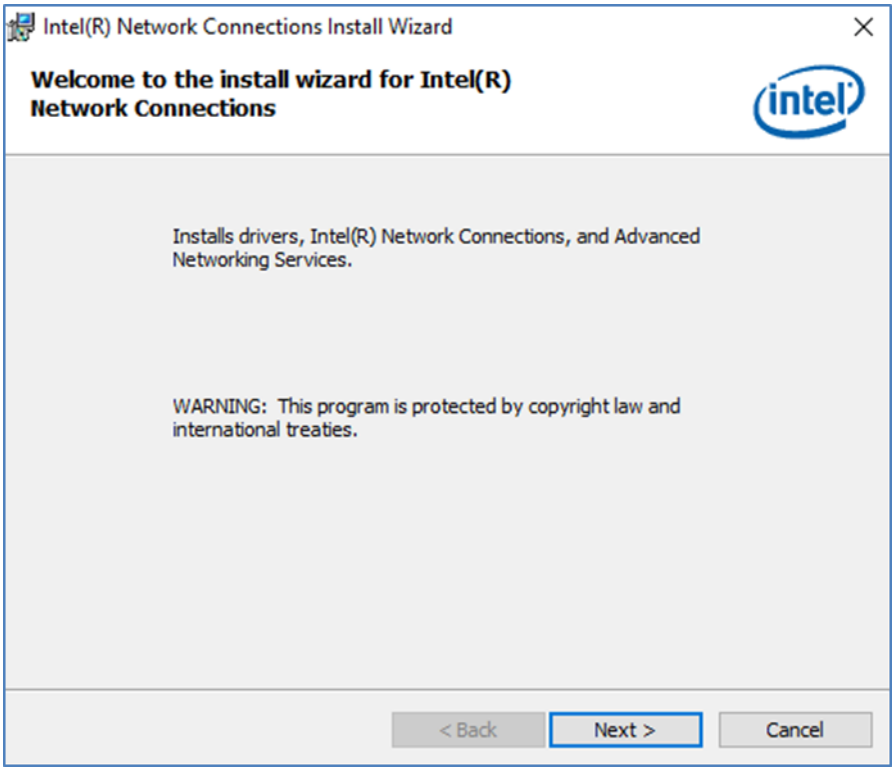
Follow instructions below to install LAN driver.

1. Open the Driver (Download from Winmate Download Center) and select **LAN** driver.

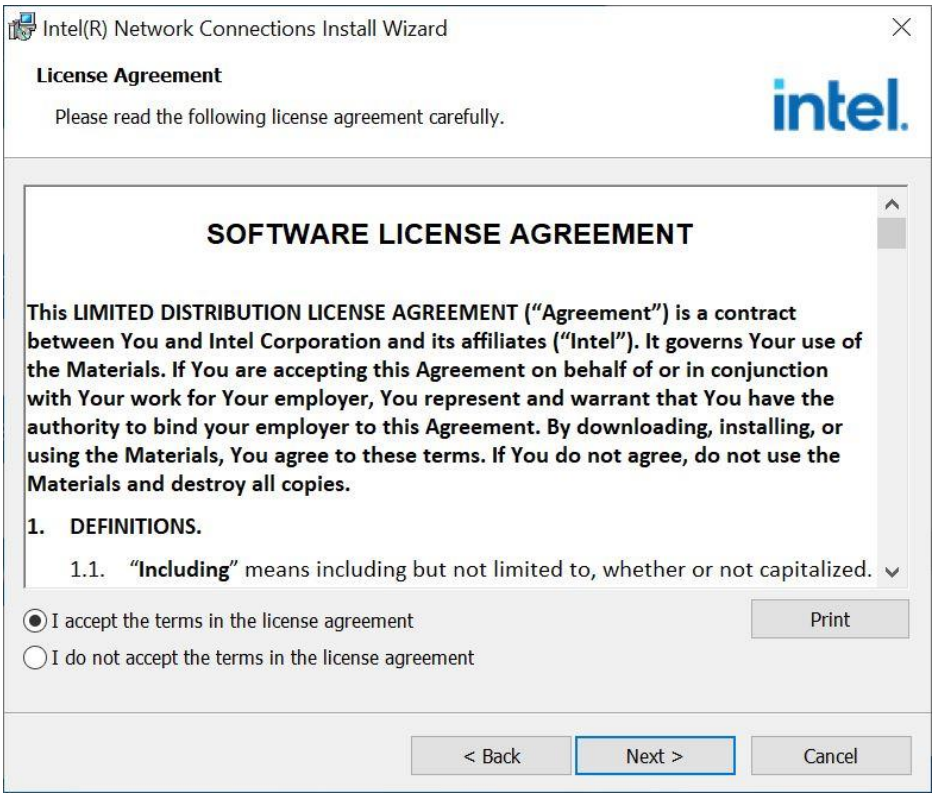




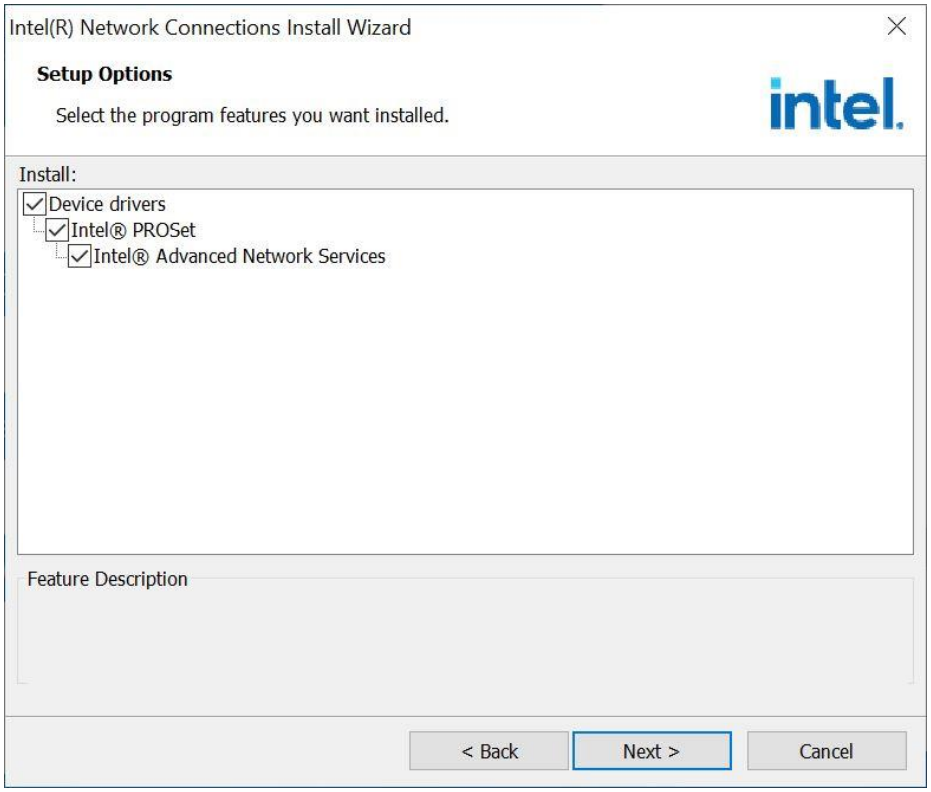
2. When compression is complete, select **Next**.



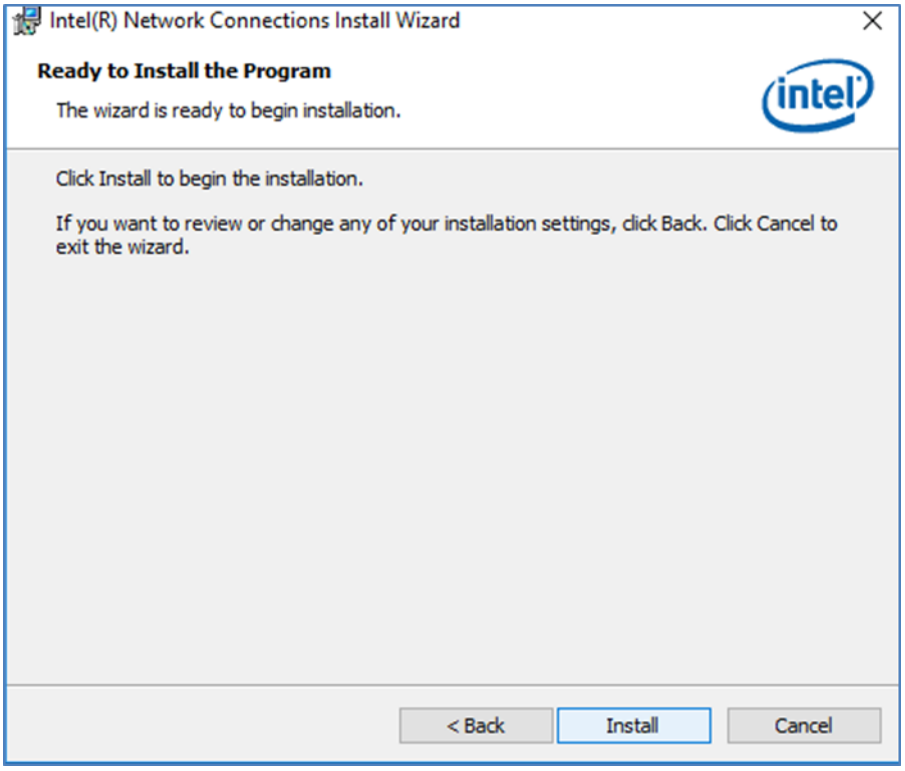
3. Read the license agreement, and then select **Next**.



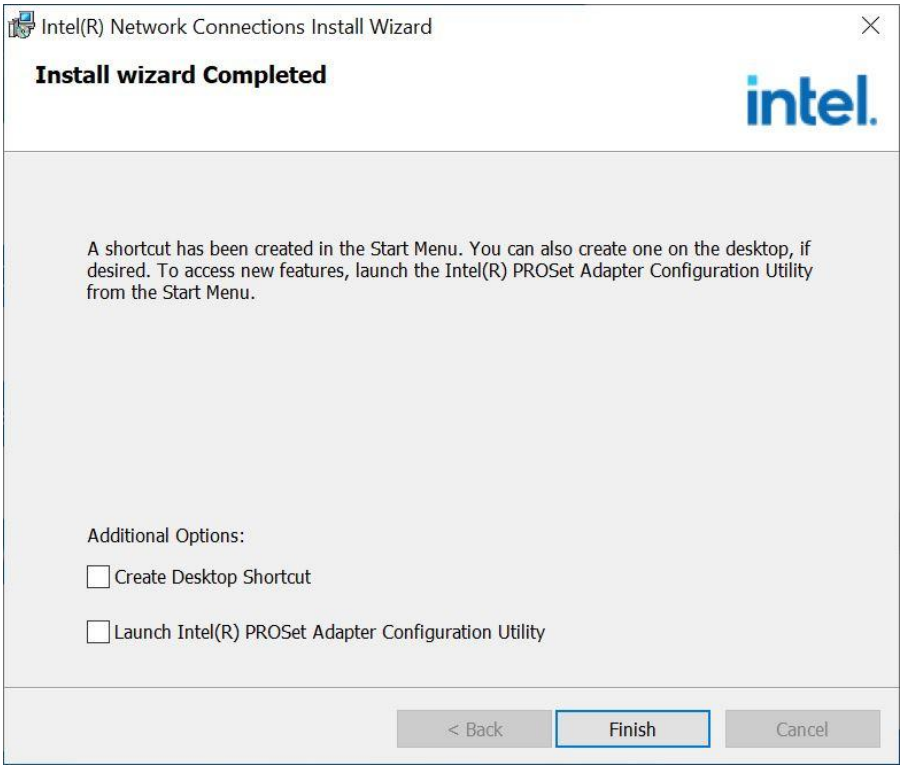
4. Select the program you want to install and select **Next**.



5. Confirm the installation, select **Install** to start the installation.



6. When installation is completed, select **Finish** to close the window.

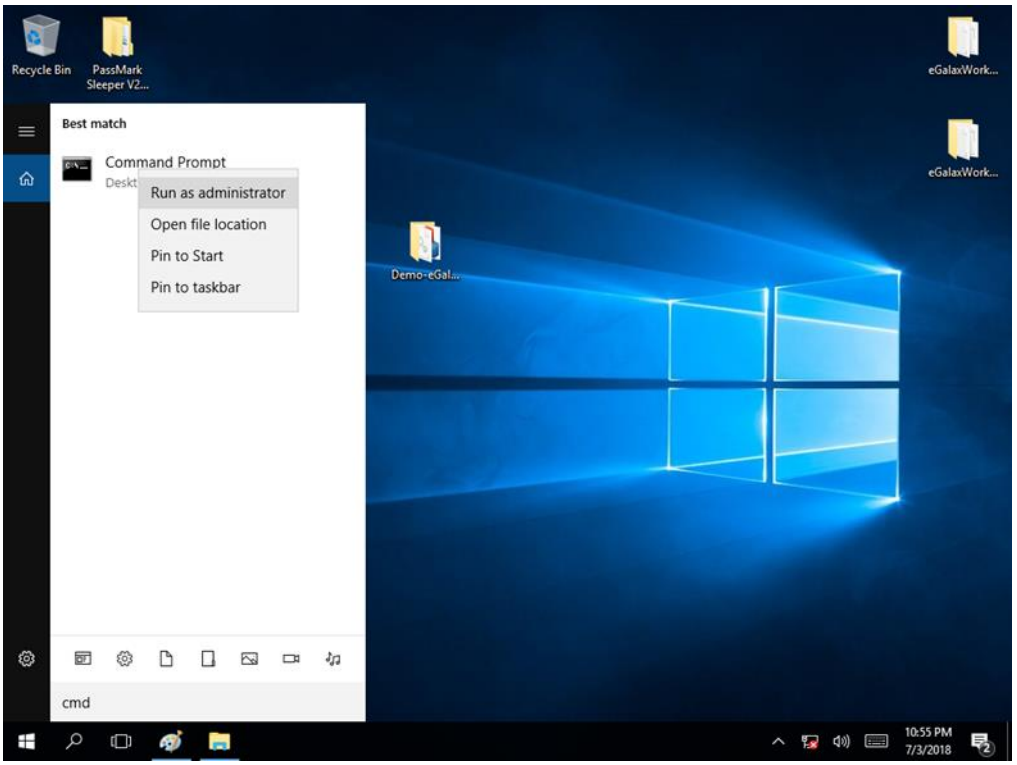


5.7 Watchdog Driver

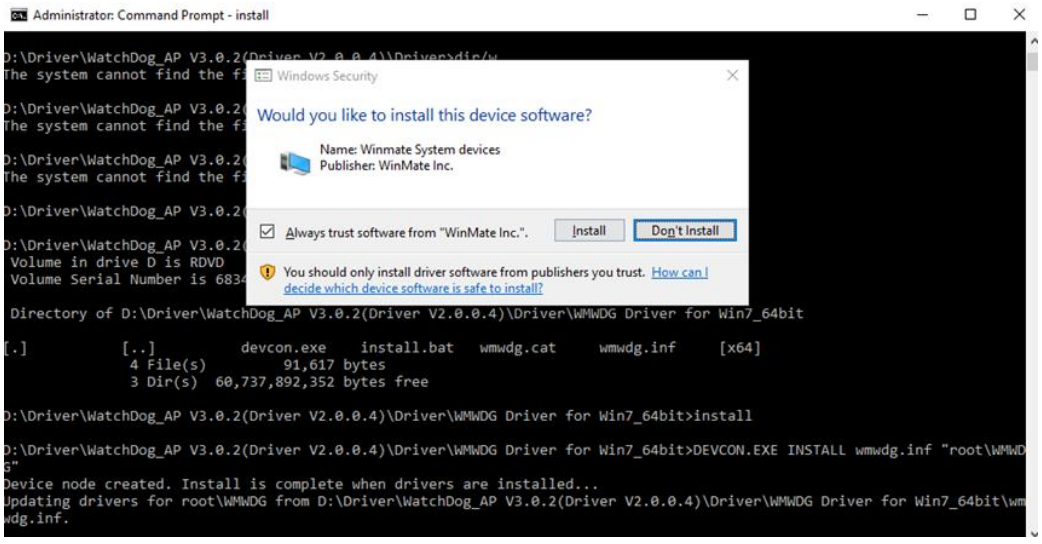
For more details about Winmate Watchdog, please download Watchdog Guide from Winmate Downloads Center:

Follow instructions below to install **Watchdog** driver.

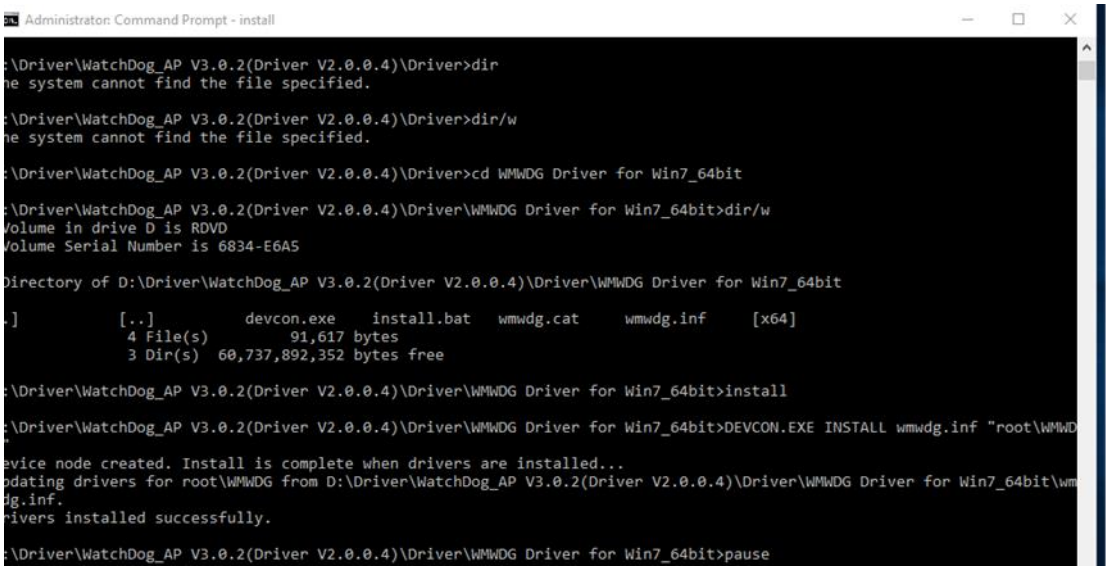
1. Type “cmd” in the run box then the cmd.exe will appear in programs.
2. Right click on the cmd.exe and click on “Run as administrator” to start
   Open the Driver (Download from Winmate Download Center) and select Watchdog driver.



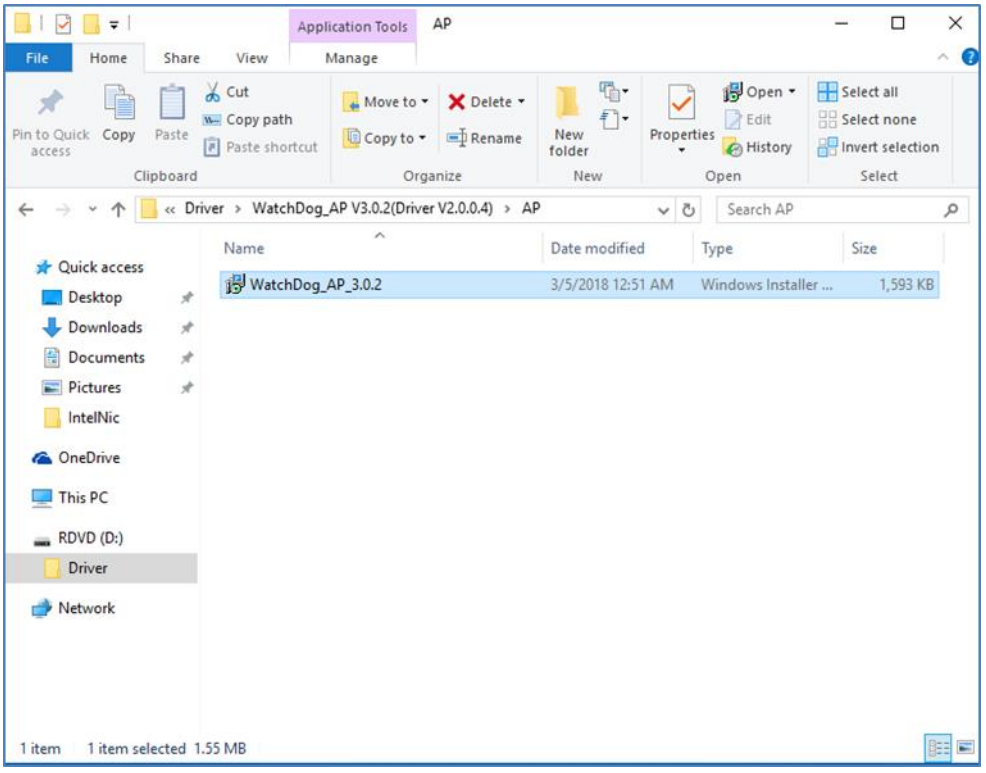
3. When Windows Security dialog appear, select install to continue the Installation.



4. Wait for installation to complete. When installation is complete, press any key to close.

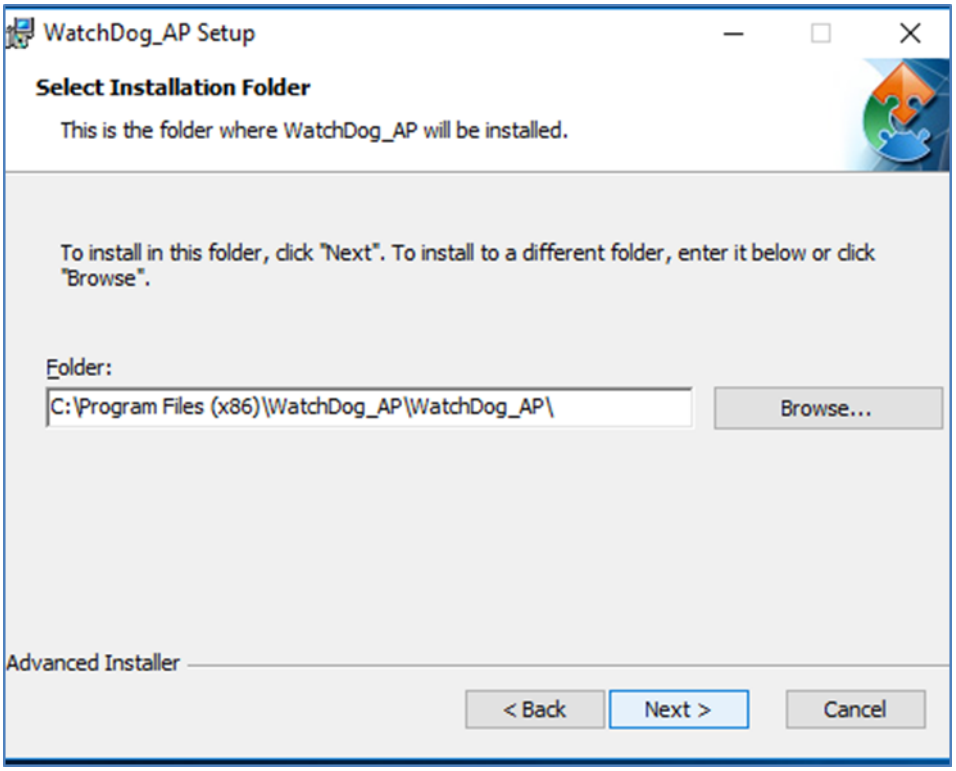


5. Open the Driver and select **Watchdog AP**.

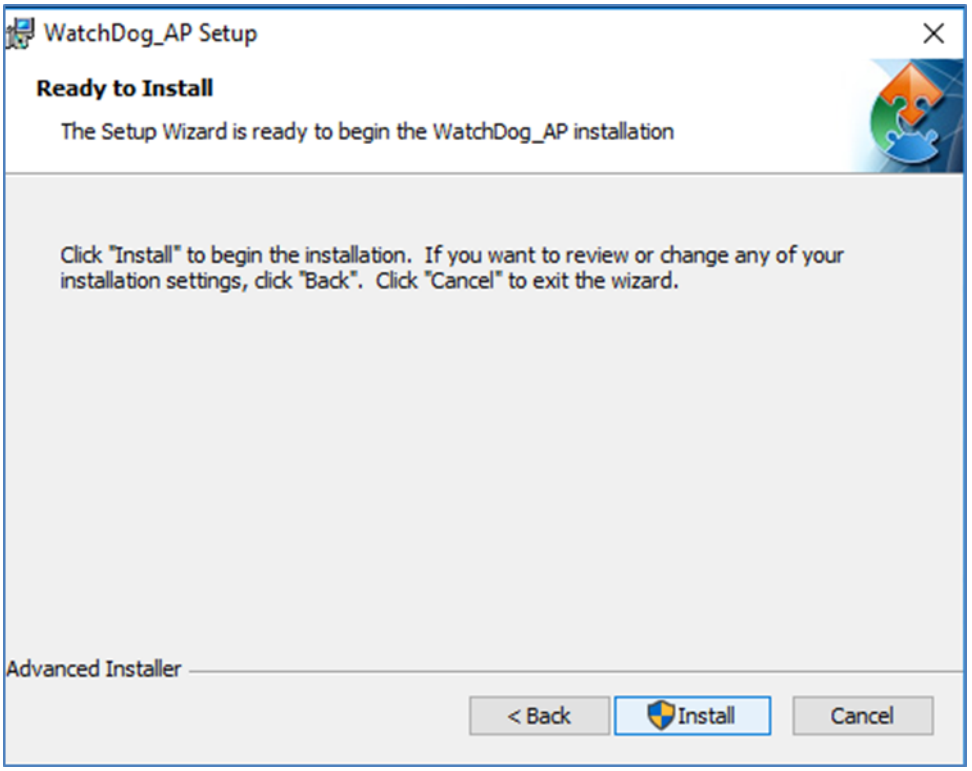


6. Select **Next**.

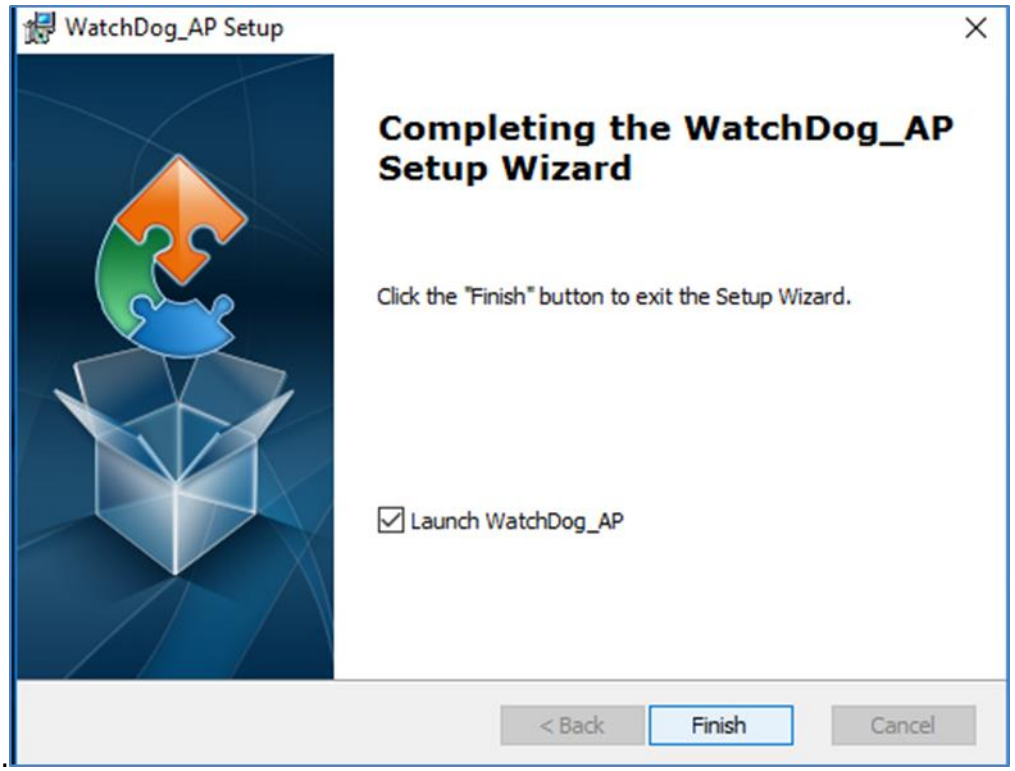
7. The installed storage location is displayed, select **Next** to continue.



8. Select **Next** to start the installation.



9. When installation is completed, select **Finish** to close the window.

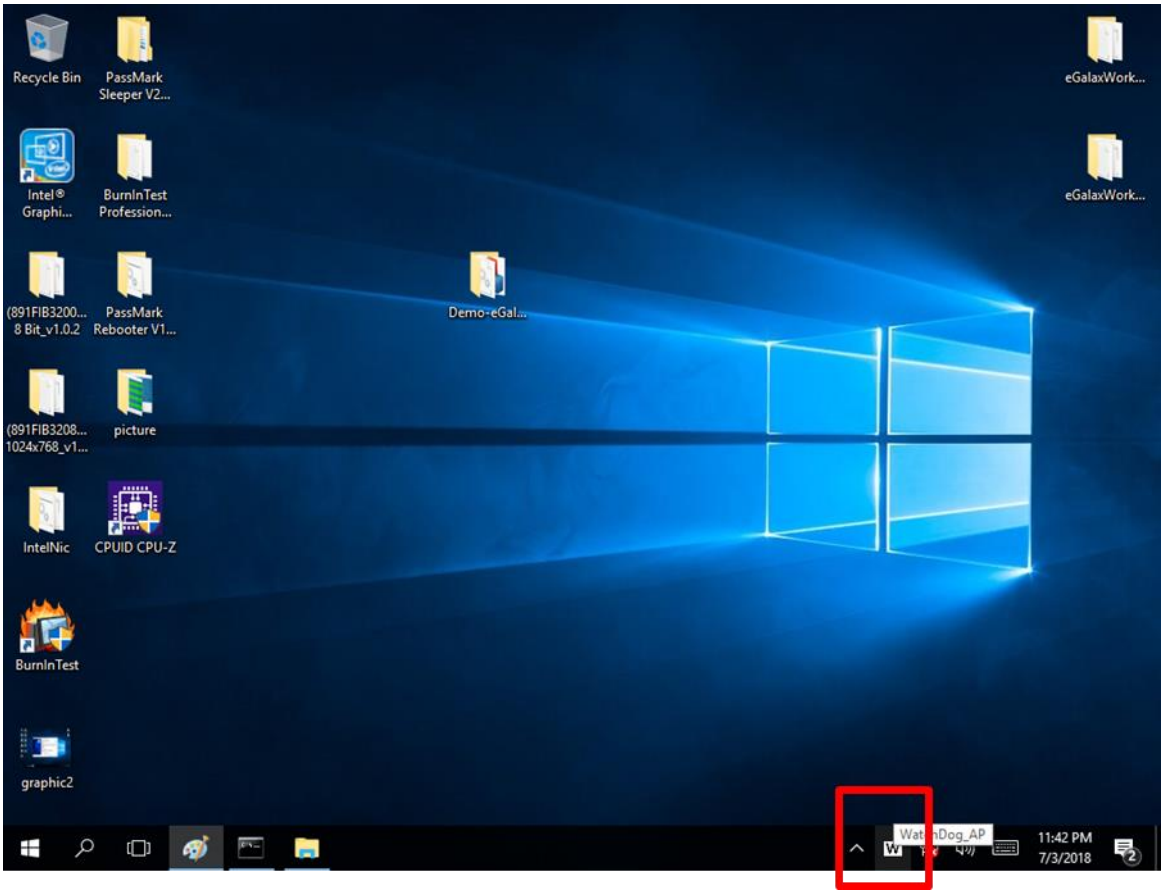


5.8 How to Enable Watchdog

To enable Watchdog, you need to download Winmate Watchdog utility. Find more information on Watchdog in “Watchdog Guide” that you can download from Winmate Download Center or File Share. Refer to the User Manual for more details.

To enable watchdog in Watchdog AP follow the instructions below:

1. On the right bottom side of the desktop screen, click **triangle button** to show hidden icons.
2. lick W icon to open Watchdog utility.



3. In Watchdog utility window set countdown time and periodically feed time, or disable watchdog.

Setting	Description
Watchdog Countdown Time	The system automaticity restarts when this countdown time reaches zero. *Default: 10 min*
Periodically Feed Time	To set a cycle time to automatically reset watchdog timer. *Default: 9 min*
Enable / Disable	Enable or disable watchdog. *Default: Enable*

Example:

Every 10 min watchdog will monitor the system, in case any error occurs the system will restart automatically when the countdown time reaches 0.

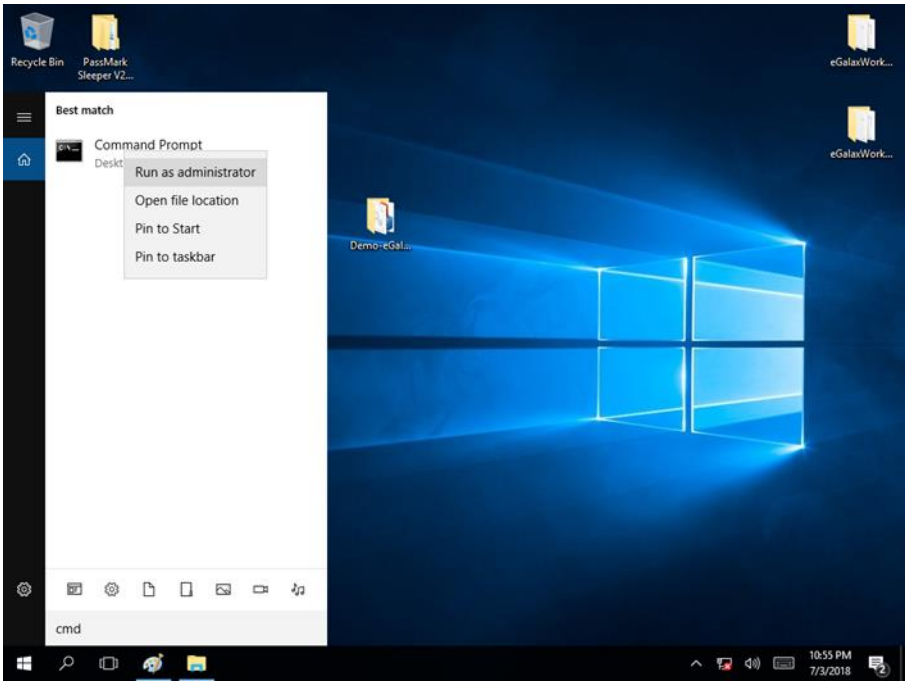
Every 9 min watchdog timer will be reset to 10

5.9 Digital IO Driver

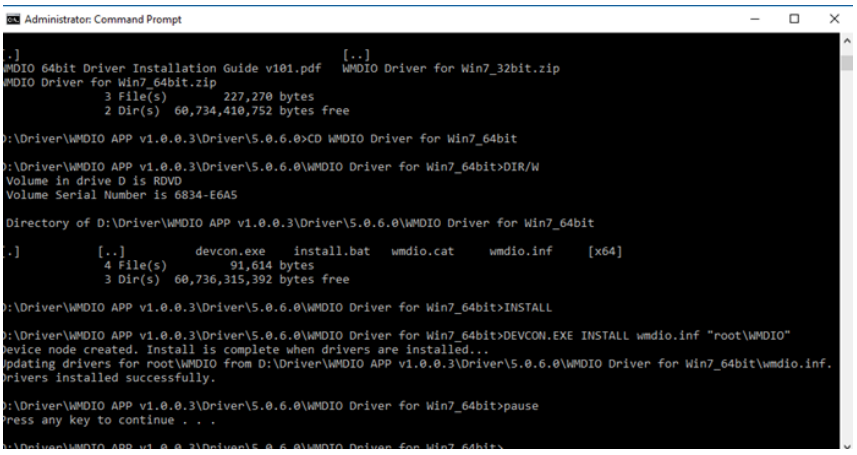
For more details about Winmate Watchdog, please download Digital IO Guide from Winmate Downloads Center:

Follow instructions below to install **Digital IO** driver.

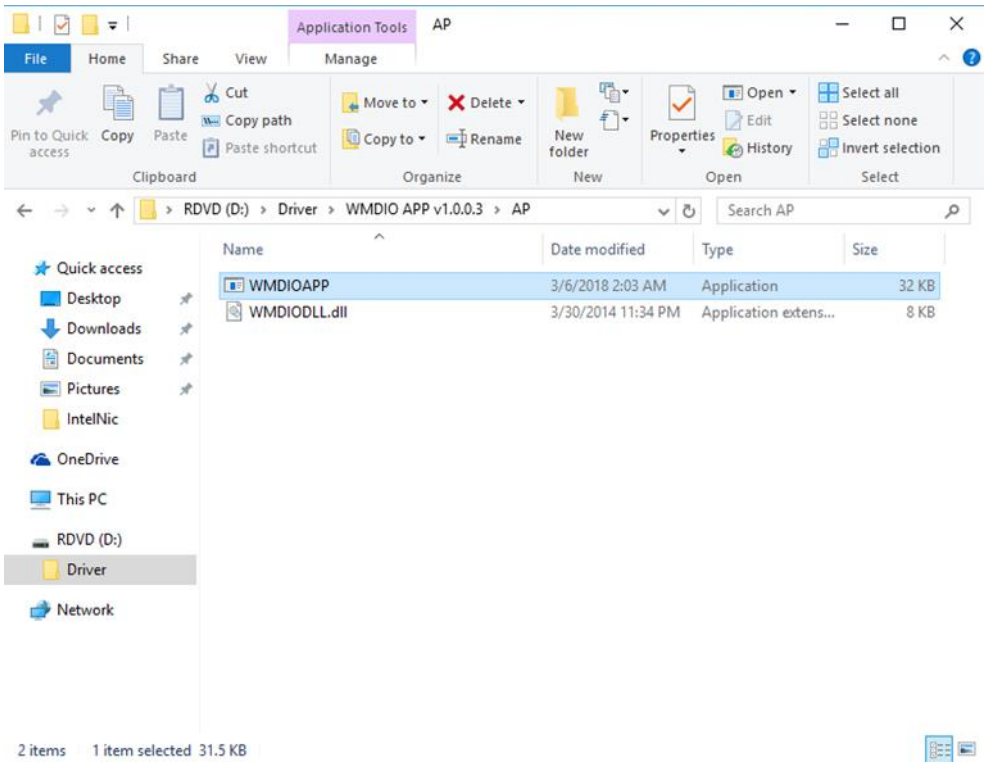
1. Type “cmd” in the run box then the cmd.exe will appear in programs.
2. Right click on the cmd.exe and click on “Run as administrator” to start.

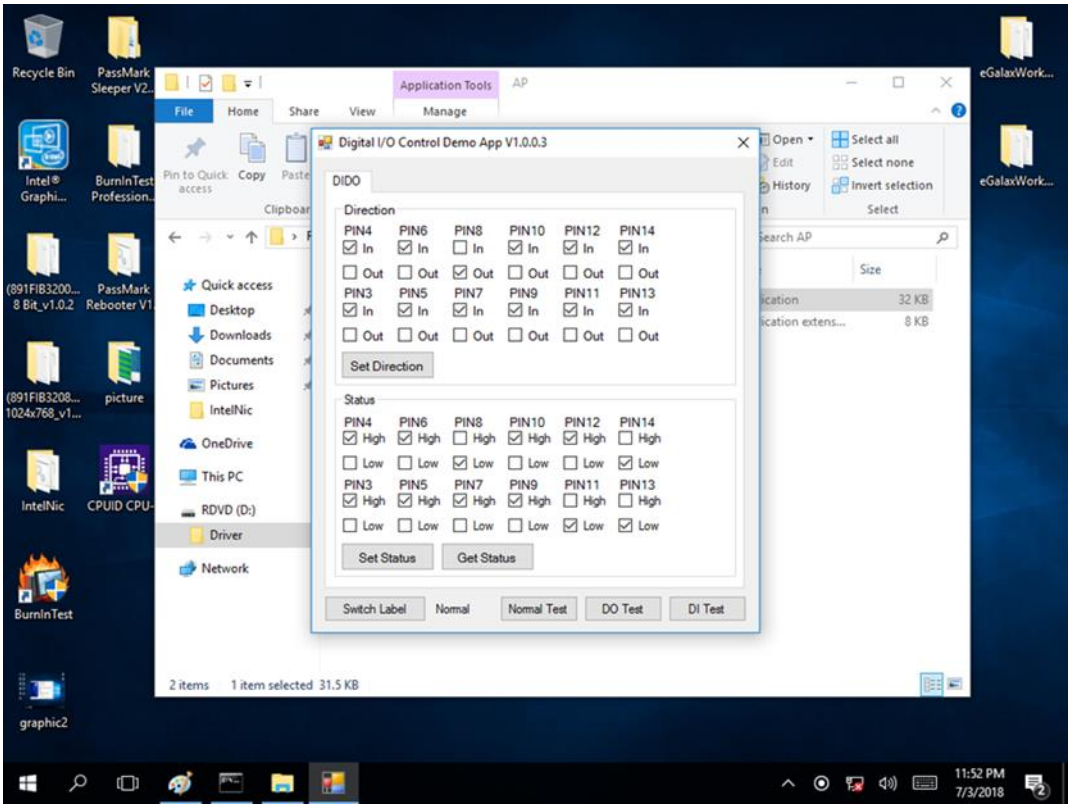


3. Open the Driver and select Digital IO driver.
4. When Windows Security dialog appear, select install to continue the Installation.
5. Wait for installation to complete. When installation is complete, press any key to close.



6. Open the Driver and select **Digital IO AP**.

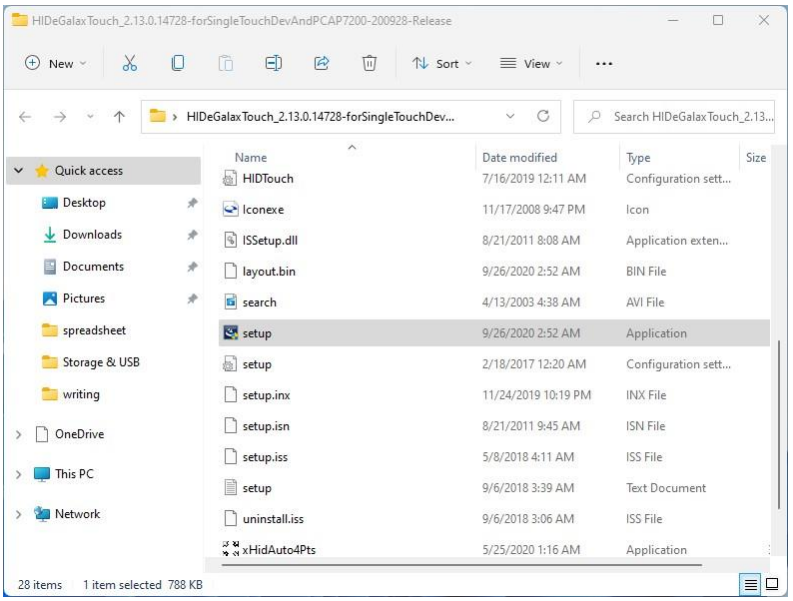




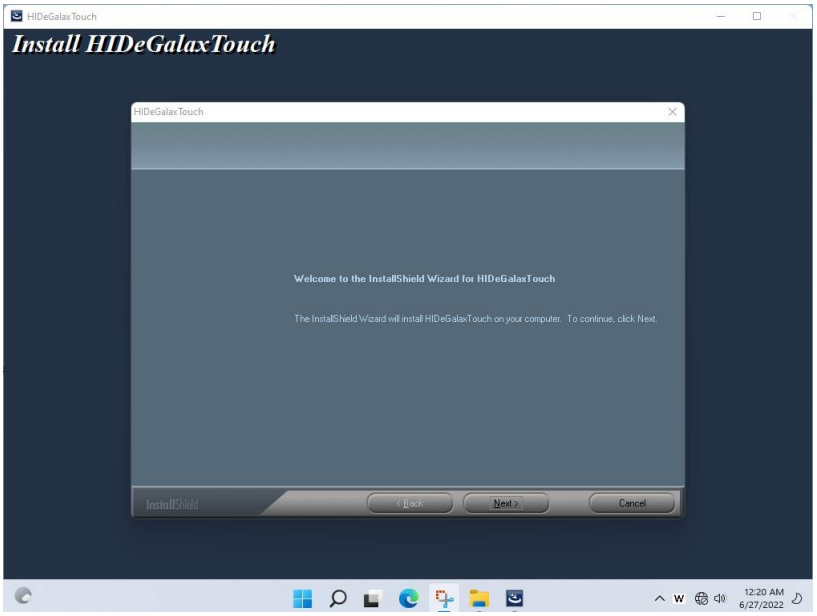
5.10 Resistive Touch Driver for Windows 11 System

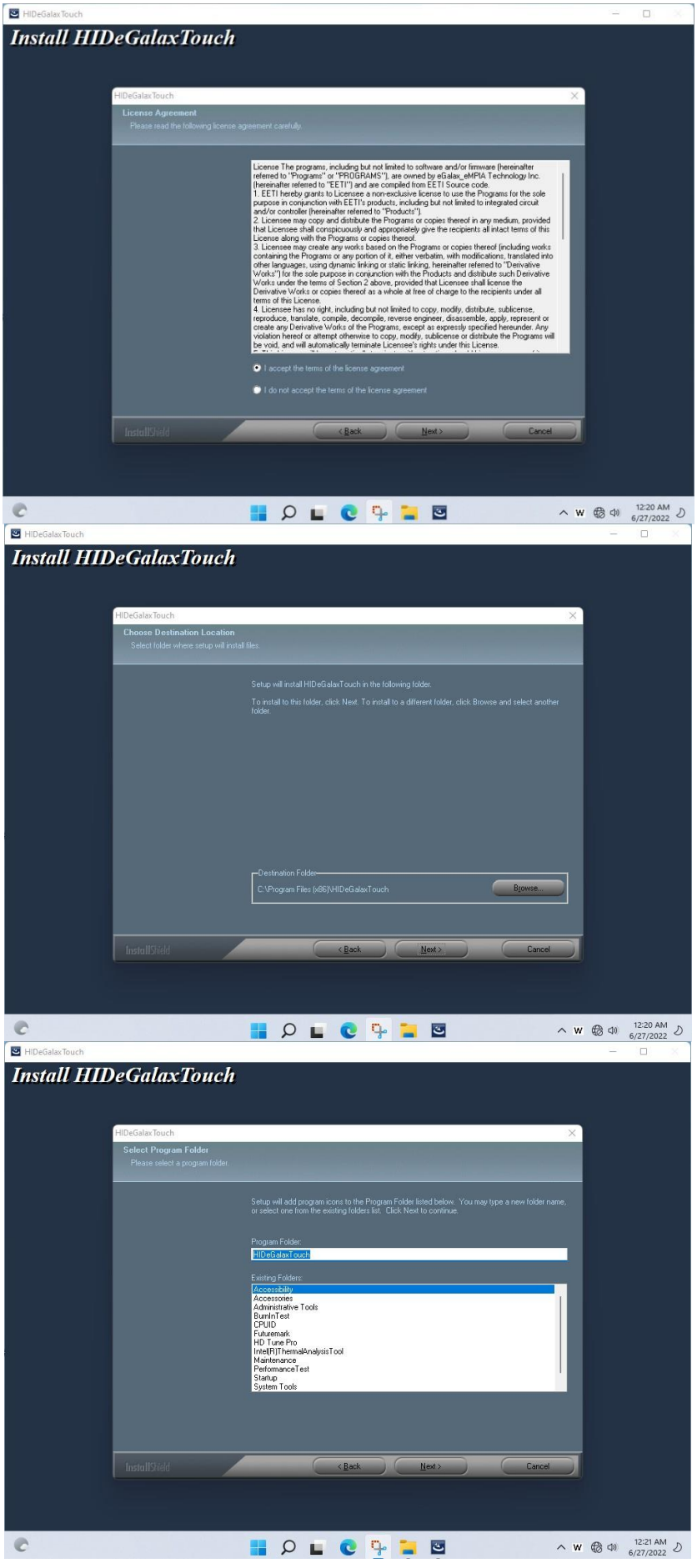
Follow the instructions below to install the touch driver.

1. Click setup



2. Click Next to continue




HIDeGalaxTouch
Install HIDeGalaxTouch
HIDeGalaxTouch
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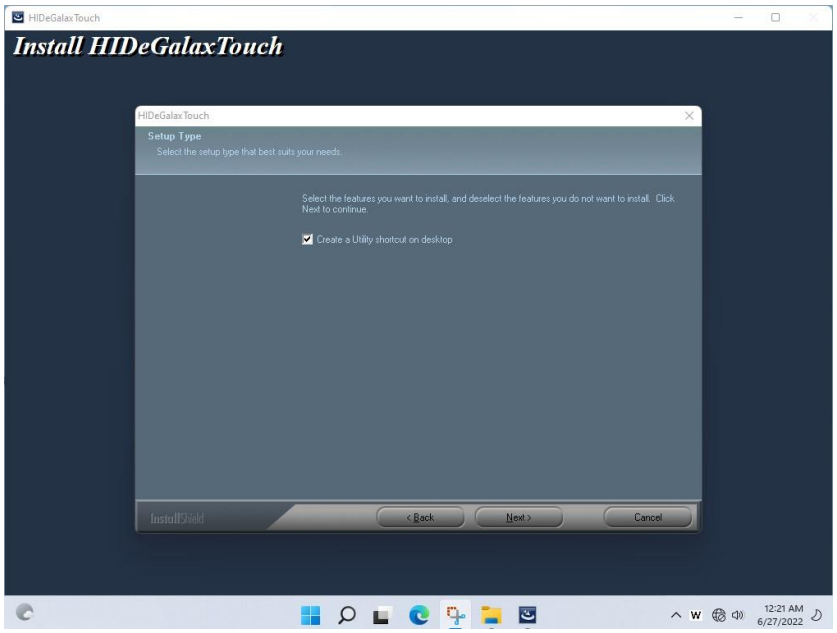
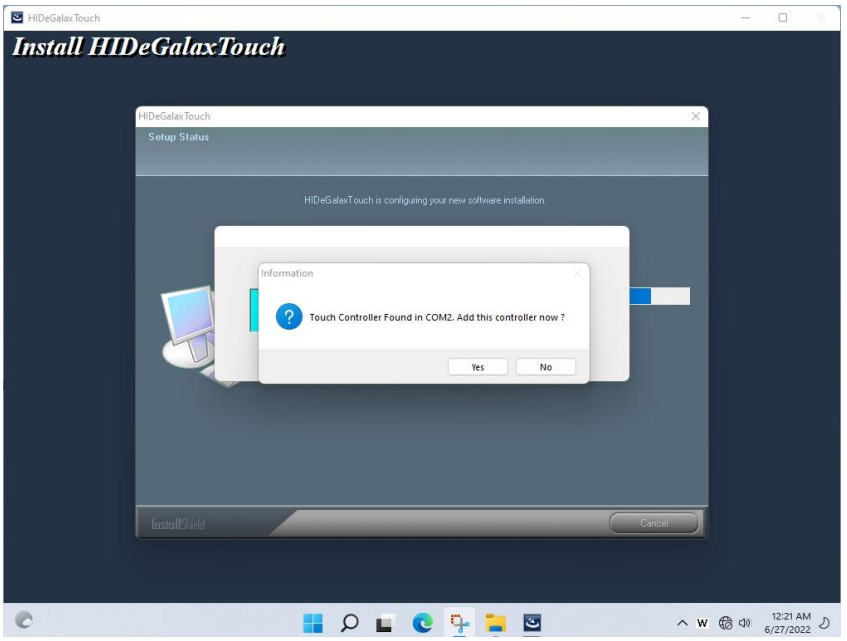
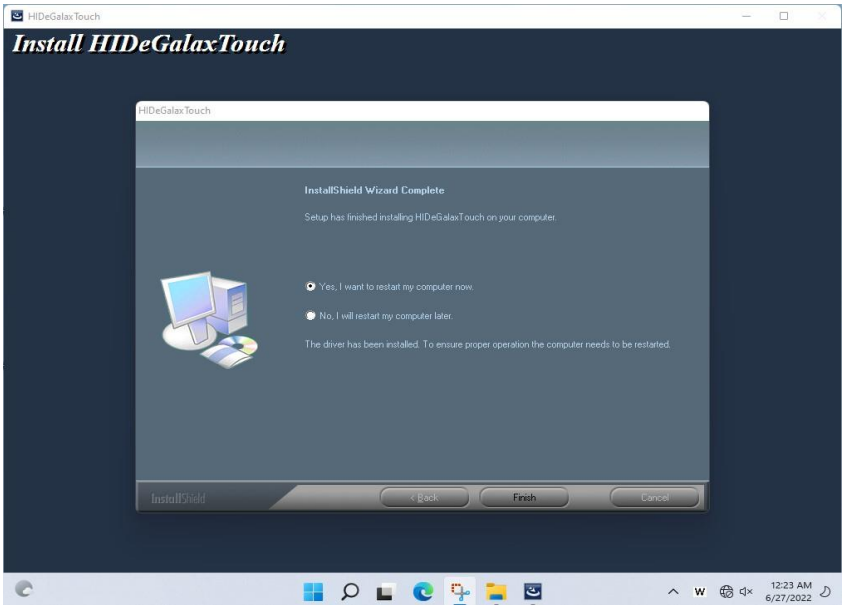
I accept the terms of the license agreement
I do not accept the terms of the license agreement
InstallShield
< Back
Next >
Cancel
12:20 AM
6/27/2022
HIDeGalaxTouch
Install HIDeGalaxTouch
HIDeGalaxTouch
Choose Destination Location
Select folder where setup will install files.
Setup will install HIDeGalaxTouch in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files (x86)\HIDeGalaxTouch
Browse...
InstallShield
< Back
Next >
Cancel
12:20 AM
6/27/2022
HIDeGalaxTouch
Install HIDeGalaxTouch
HIDeGalaxTouch
Select Program Folder
Please select a program folder.
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folder:
HIDeGalaxTouch
Existing Folders:
Accessibility
Accessories
Administrative Tools
BurnInTest
CPUID
Futuremark
HD Tune Pro
Intel(R) Thermal Analysis Tool
Maintenance
PerformanceTest
Startup
System Tools
InstallShield
< Back
Next >
Cancel
12:21 AM
6/27/2022



3. Click Yes to add this controller



4. Restart the computer now and finish the setup.



Chapter 6: Mounting

This chapter provides mounting guide for all available mounting options. Pay attention to cautions and warning to avoid any damages.

WARNING! / AVERTISSEMENT!
Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.
Suivez les instructions de montage et d'utilisation recommandé le matériel de montage pour éviter le risque de blessure.

6.1 Cable Mounting Considerations

For a nice look and safe installation, make sure cables are neatly hidden behind the Panel PC device. Refer to Chapter 2, section 2.2 for the Cable Installation instruction.

WARNING! / AVERTISSEMENT!
Observe all local installation requirements for connection cable type and protection level.
Suivre tous les règlements locaux d'installations, de câblage et niveaux de protection.

WARNING! / AVERTISSEMENT!
Turn off the device and disconnect other peripherals before installation.
Éteindre l'appareil et débrancher tous les périphériques avant l'installation.

ALTERNATING CURRENT / MISE À LE TERRE!
To prevent electrical shock, the Safety Ground location on the rear must be bonded to the local earth ground through a minimum 12 AWG wire as short as possible
Pour éviter les chocs électriques, l'emplacement de la prise terre à l'arrière doit être lié à terre locale, à travers un 12 AWG minimum et aussi court que possible.

6.2 Safety Precautions

Observe the following common safety precautions before installing any electronic device:

- Use separate, non-intersecting paths to route power and networking wires. If power wiring and device wiring paths must be crossed make sure the wires are perpendicular at the intersection point.
- Keep the wires separated according to the interface. Wires that share similar electrical characteristics must be bundled together.
- Do not bundle input wiring with output wiring. Keep them separate.

When necessary, it is strongly advised that you label wiring to all devices in the system.

6.3 Mounting Guide

G-WIN Slim IP65 (P-CAP) devices come with different mounting options suitable for most of the industrial and commercial applications, including heavy duty and agricultural vehicles, forklifts. The main mounting approach is VESA mounting - very user-friendly in terms of installation. Refer to sub-sections below for more details.

CAUTION/ ATTENTION
Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.
Suivez les instructions de montage et d'utilisation recommandé le matériel de montage pour éviter le risque de blessure.

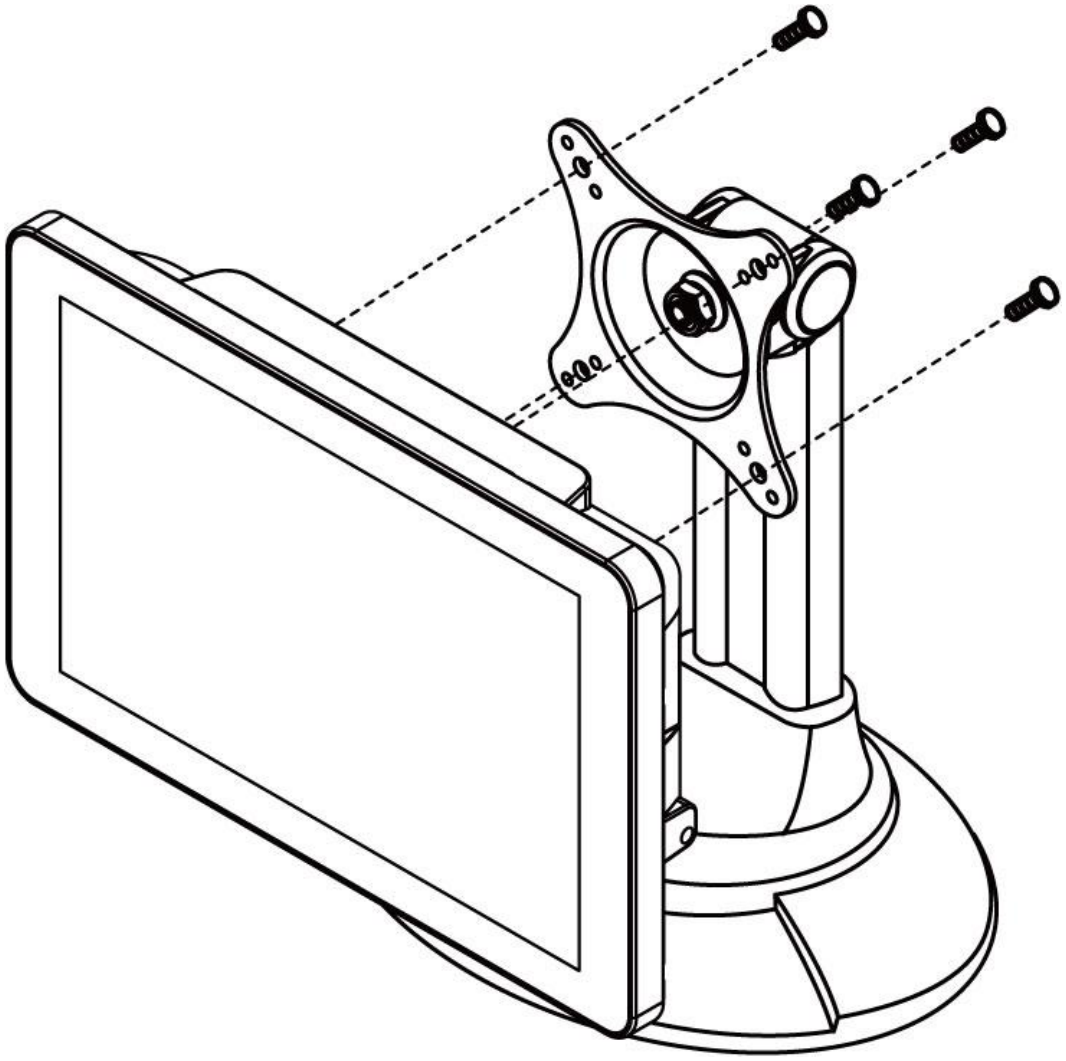
6.3.1 VESA Mounting

This device supports VESA Mounting and provides various types of mounting options to fit any industrial use or vehicle.

Size	VESA Plate
10.1”, 10.4”, 12.1”	75x75 mm
10.4”, 15”	100x100 mm

Mounting Instruction

Use Philips M4x5 screws to fix the desk stand to VESA holes on the back cover of the device.

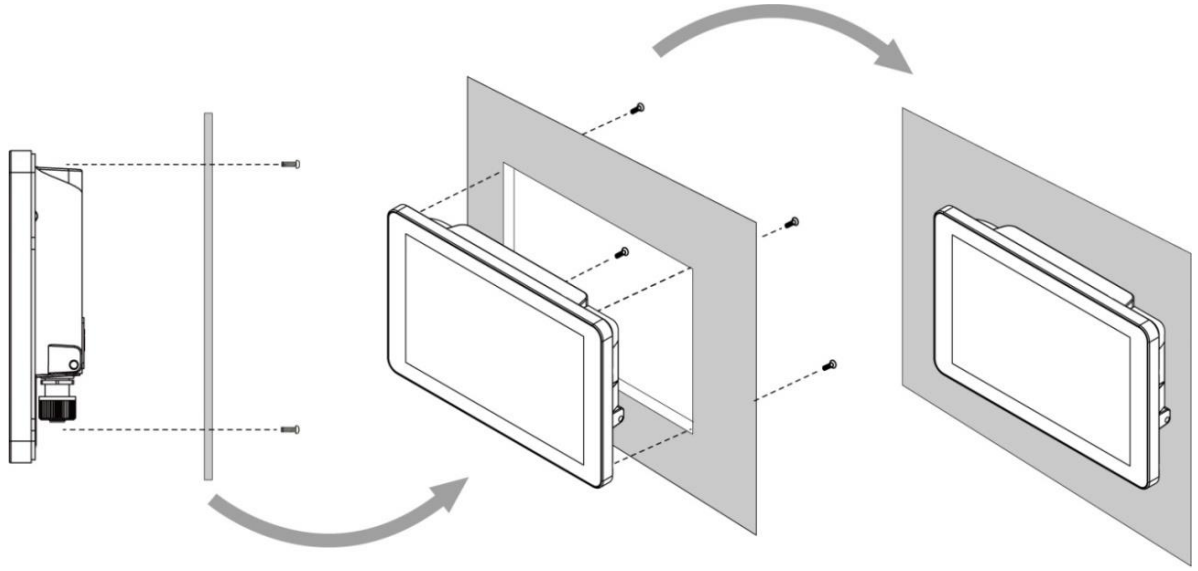


**The picture is for demonstration purposes only. VESA Mounting accessories are not supplied by Winmate.*

6.3.2 Panel Mounting

Panel Mount mounting solutions is suitable for many applications where Panel PC should be embedded. With this mounting solution flat surface leave no bezel in the front.

Size	Wall Cutout, mm	Screw Hole Diameter, mm
10.1”	250 x 159	M4x4
10.4”	230 x 178	M4x4
12.1”	282 x 207	M4x4
15”	346.5 x 261	M6x4



Mounting Instructions:

1. Prepare a fixture for the specific dimensions of the device.
2. Cut a hole on a sub frame or panel according to the cutout dimensions.
3. Install the device properly onto the cutout area of the sub frame or panel with the sides of the front bezel.
4. Fix the device to fixture with eight Phillips M3x4 screws.

Chapter 7: Technical Support

Winmate® provides Software Development Kit (SDK). The table below lists SDK provided by Winmate for Winmate® G-WIN Slim IP65 with P-CAP Panel PC with Intel® Celeron® N6211 processor:

7.1 Drivers

The list of drivers available for the G-WIN IP65 Panel PC IE32 SBC:

Item	Driver
1	Chipset Driver
2	Graphic Driver
3	ME Driver
4	SST Driver
5	Audio Driver
6	Ethernet Driver
7	Watchdog Driver/AP
8	Digital IO Driver/AP
9	Windows 11 Resistive Touch Driver

To find the Drivers, please download them from the Download Center in our website or contact us.

7.2 Software Development Kit (SDK)

The list of SDK available for G-WIN IP65 Panel PC IE32 SBC:

Item	File Type	Description
1	SDK	Watchdog SDK
2	SDK	Digital IO SDK

To find the SDK, please download them from the Download Center in our website or contact us.

Appendix A: Product Specifications

Hardware Specifications

	Model Name			
	W10IE3S-GSH2	**R10IE3S-GST2**	**R12IE3S-GSM2(HB)**	**R15IE3S-GSC3(HB)**
Display				
Size/Type	10.1” TFT (Widescreen)	10.4”	12.1” TFT	15” TFT
Resolution	1280 x 800	1024 x 768	1024 x 768	1024 x 768
Brightness	350 nits (Optional 1000 nits)	350 nits (Optional 1000 nits)	500 nits (Optional 1000 nits)	300 nits (Optional 1000 nits)
Contrast Ratio	800:1 (typ.)	1200:1 (typ.)	700:1 (typ.)	2000:1 (typ.)
Viewing Angle	-75~80(H); -80~80(V)	-80~88(H); -80~88(V)	-85~89(H); -85~89(V)	-88~88(H); -88~88(V)
Max. Colors	16.7M	16.2M	16.7M	16.2M (8-bit)
Touch	Projected Capacitive	Projected Capacitive	Projected Capacitive	Projected Capacitive, Protection Glass (Optional)
System				
Processor	Intel ® Celeron® Elkhart Lake N6211 (up to 3.0 HZ) Intel ® Celeron® Elkhart Lake N6210 (up to 2.6 GHZ)			
System Memory	SO-DIMM,DDR4 3200MHZ 4GB, 8GB(Optional), 16GB(Optional)			
Storage	M.2 2242 B-Key SSD 128GB M.2 2242 B-Key SSD up to 512GB(Optional) SATA lll for 2.5” SSD up to 1TB(Optional)			
LAN	1 x LAN-10/ -100/ -1000 (M12 type)			
Operating System	Windows 11 IoT Enterprise (64bit) (Optional) Windows 11 pro 64 bit (Optional) Windows 10 IoT Enterprise (64bit)(Optional) Linux Ubuntu 22.04 (Optional)			
Input/Output				
COM Port	1 x RS232/422/485 (Default RS232) (M12 type)			
USB Port	1 x USB 2.0 (M12 type)			
Ethernet	2 x Intel® Ethernet Controlelr			
Speakers	2 x 2W speakers			

	Model Name			
	W10IE3S-GSH2	**R10IE3S-GST2**	**R12IE3S-GSM2(HB)**	**R15IE3S-GSC3(HB)**
Power Specifications				
Power Input	9-36V DC(M12 type)	12V DC(M12 type)	9-36V DC(M12 type)	9-36V DC(M12 type)
Mechanical Specifications				
Cooling System	Fanless Design			
Mounting	VESA Mount, Panel Mount			
Environment Considerations				
IP Rating	Full IP65			
Shock Operation	40g for 11 ms			
Vibration Operation	1.48/1.98/2.24g rms for XYZ/5-500 Hz	1.48/1.98/2.24g rms for XYZ/5-500 Hz	1.48/1.98/2.24g rms for XYZ/5-500 Hz	1.48/1.98/2.24g rms for XYZ/5-500 Hz

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