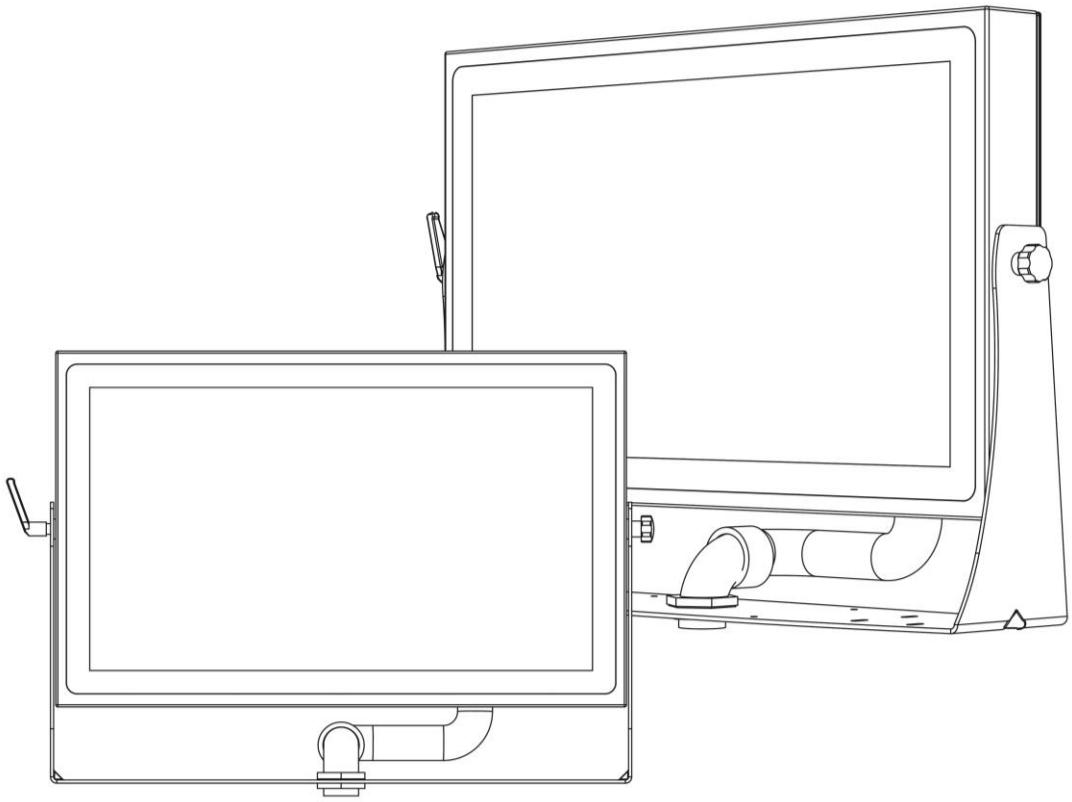
IP69K Stainless P Series Panel PC with Conduit Pipe

Intel® Core™ i5 -8265U (6M Cache, 1.6 GHz up to 3.9 GHz)

15”/ 19”/ 21.5”/ 23.8”



Model No. R15IW3S-SPC369-P1
R19IW3S-SPM169-P1
W22IW3S-SPA369-P1
W24IW3S-SPA269-P1

User Manual

Document Version 1.4
Document Part No. 91521110107O

Please read this instructions before operating the device and retain them for future reference.

Contents

Preface

FCC Statement

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

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

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

Copyright Notice

Trademark Acknowledgement

Disclaimer

Winmate Inc. 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

Winmate Inc. 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 1W17Axxxxxxxx means October of year 2017.

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 A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.
Attention Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.

Warning! An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.
Avertissement! Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

Alternating Current !The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.
Mise à le terre ! Le symbole de Mise à Terre indique le risqué potential de choc électrique grave à la terre incorrecte.

Safety Information

Warning! 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.
Avertissement ! 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 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.
Attention Toujours verifier votre mise à la terre afin d'éliminer toute charge statique avant de toucher la carte CPU. Les équipements électroniques modernes 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.

About This User Manual

This User Manual provides information about using the Winmate® IP69K Stainless P Series with Conduit Pipe with Intel® Core™ i5 -8265U (6M Cache, 1.6 GHz up to 3.9 GHz) processor. This User Manual applies to the IP69K Stainless P Series with Conduit Pipe – R15IW3S-SPC369-P1, R19IW3S-SPM169-P1, W22IW3S-SPA369-P1, and W24IW3S-SPA269-P1.

The documentation set for the IP69K Stainless P Series with Conduit Pipe provides information for specific user needs, and includes:

- **User Manual** – contains detailed description on how to use the Panel PC, its components, features and detailed procedure how to set up the device.
- **Quick Start Guide** – contains simple guide on how to use the Panel PC, its main components and features.

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

Chapter 1: Introduction

1.1 Overview

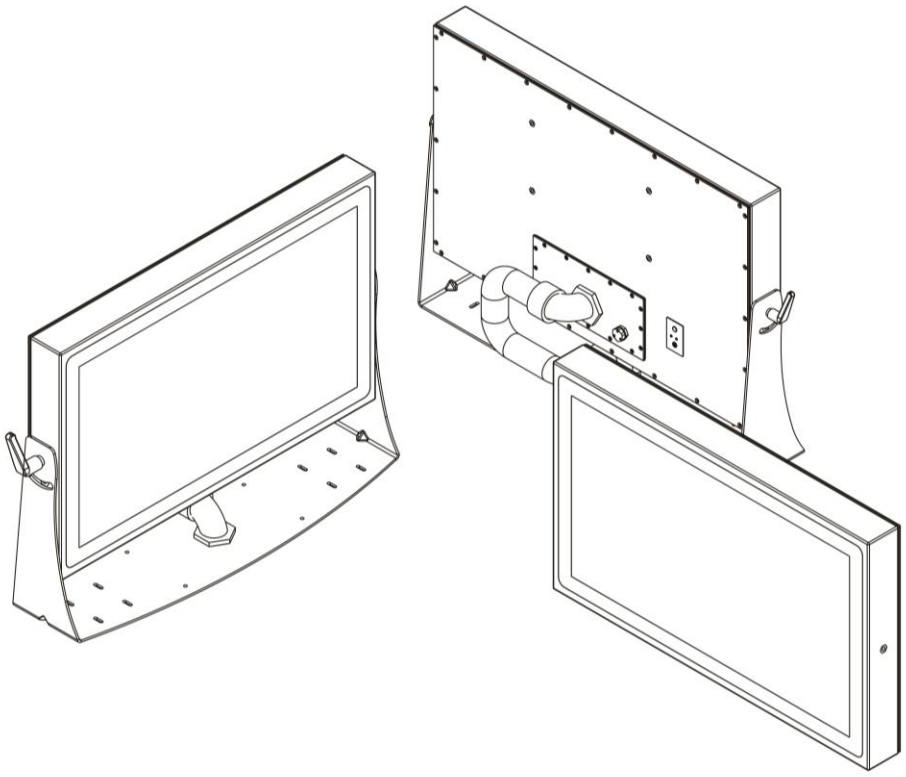
Congratulations on purchasing Winmate® IP69K Stainless P Series Panel PC.

Winmate P Series Panel PC features with a waterproof conduit pipe for added cable protection. The IP69K series is built to withstand extensive wash downs with corrosion resistance against cleaning agents, especially against close-range high-pressure, high temperature wash downs. The level of protection allows for easy cleaning and sterilization using water with temperatures of up to 80°C and pressure of up to 30 Bar. A custom-built waterproof conduit pipe was also provided for the customer with a cover plate, allowing for an additional layer of protection for the cables.

1.2 Features

The IP69K Stainless P Series Panel PC features:

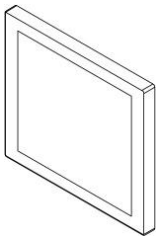
- 15”/ 19”/ 21.5”/ 23.8” LCD screen with projected capacitive multi-touch
- Intel® Core™ i5 -8265U (6M Cache, 1.6 GHz up to 3.9 GHz)
- Fanless cooling system
- SUS 316 / AISI 316 stainless steel for food and chemical industries
- Full IP69K waterproof enclosure, good corrosion resistance
- A true flat, easy-to-clean front surface with edge-to-edge design
- Waterproof sealed conduit pipe for cable protection
- Supports VESA mount, and optional Yoke mount stand



1.3 Package Content

Carefully remove the box and unpack your 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.

Factory shipment list:

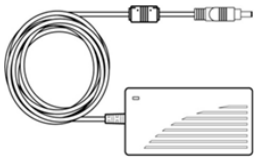


- **Panel PC**

Varies by product specifications

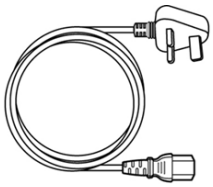
- **Quick Start Guide (Hardcopy)**

Part No. 91521110107P



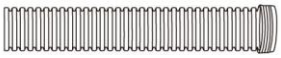
- **AC Adapter**

Part No. 922D084W12V1



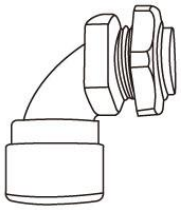
- **Power Cord**

Varies by country



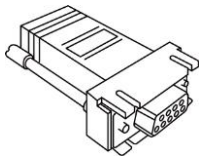
- **Waterproof Conduit 1.5m**

Part No. 9B000000011I



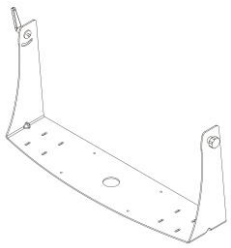
- **2 x Elbow for Connect the Conduit**

Part No. 9B000000011J



- **D-sub to RJ45 Adaptor for COM Port**

D-sub 9pin(M) to RJ45
Part No. 601100090000
D-sub 9pin(F) to RJ45
Part No. 601200090001

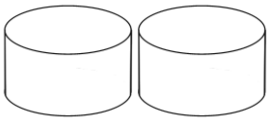


- **Yoke Mount Stand Kit**

Part No. 98K015A0000K(15”)
Part No. 98K019A00006(19”)
Part No. 98K021A00004(21.5”)
Part No. 98K023A00002(23.8”)

- **Driver CD & User Manual**

Part No. 91711110101P



- **2 x EVA Foam**

Part No.91171110910H

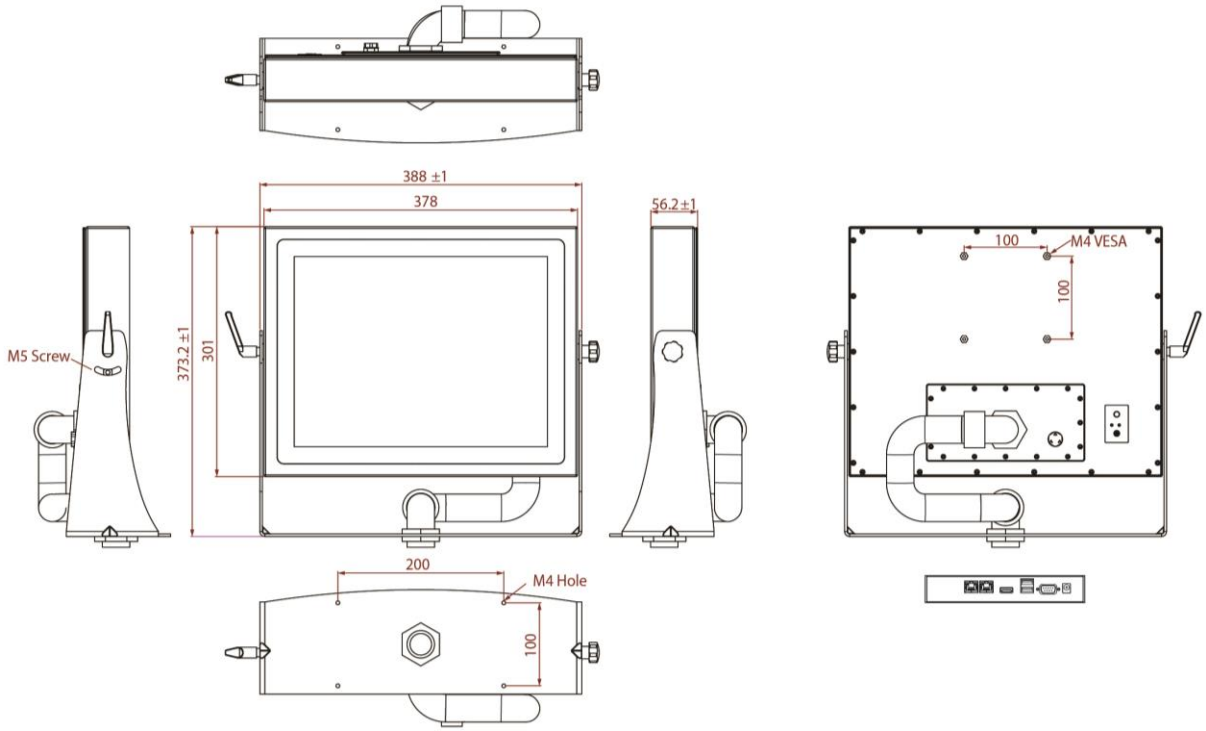
1.4 Product Overview

This section contains mechanical drawing of the IP69K Stainless P Series Panel PC. Notice that this is a simplified drawing and some components are not marked in detail.

Note: Yoke mount stand kit is an optional accessory.

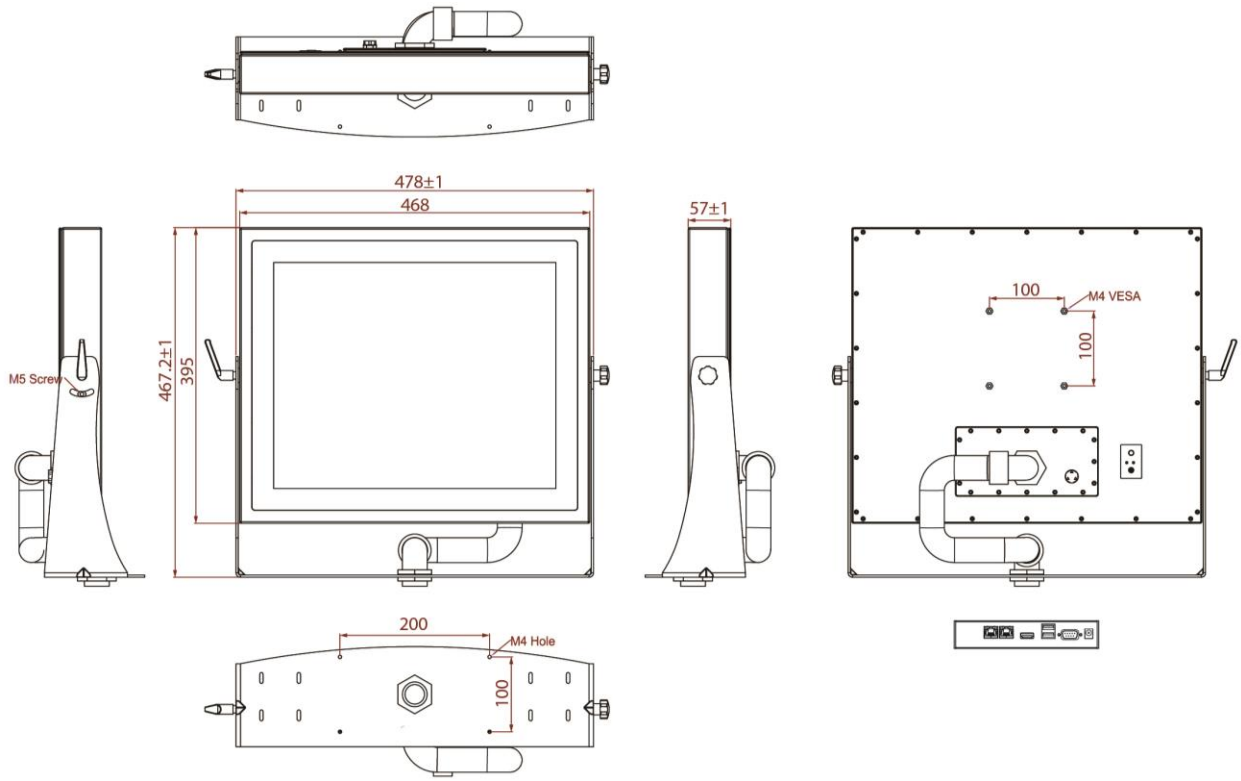
15”, R15IW3S-SPC369-P1

Unit: mm



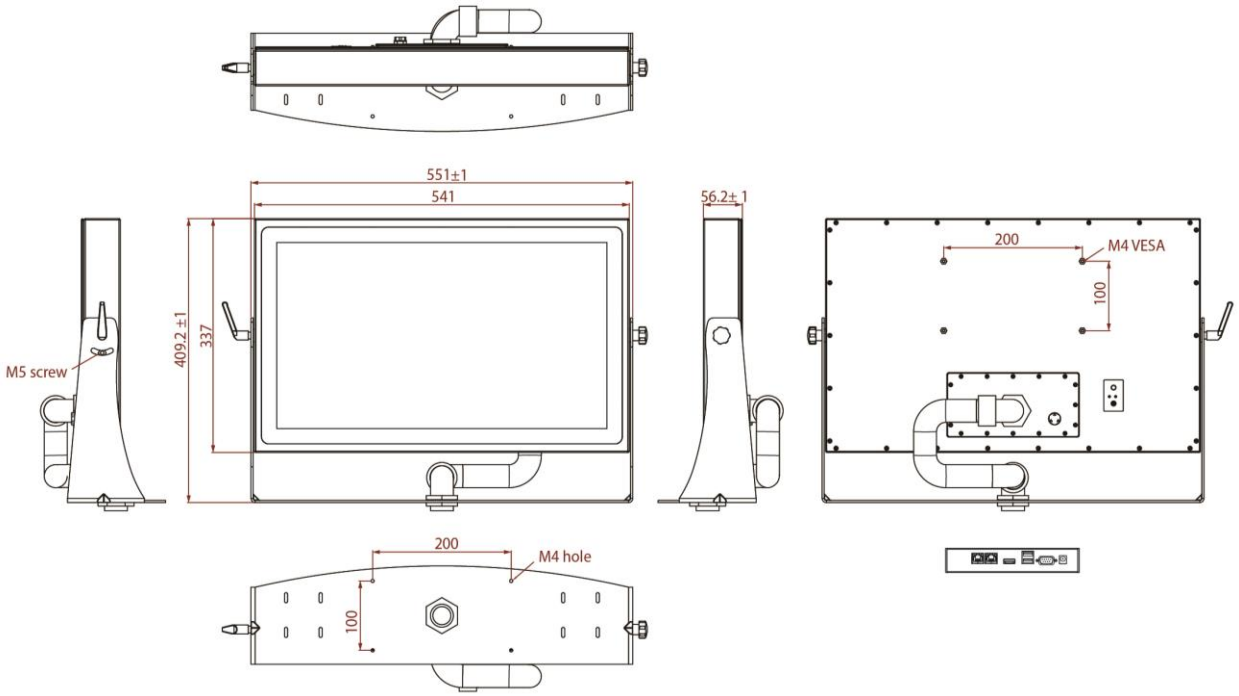
19”, R19IW3S-SPM169-P1

Unit: mm



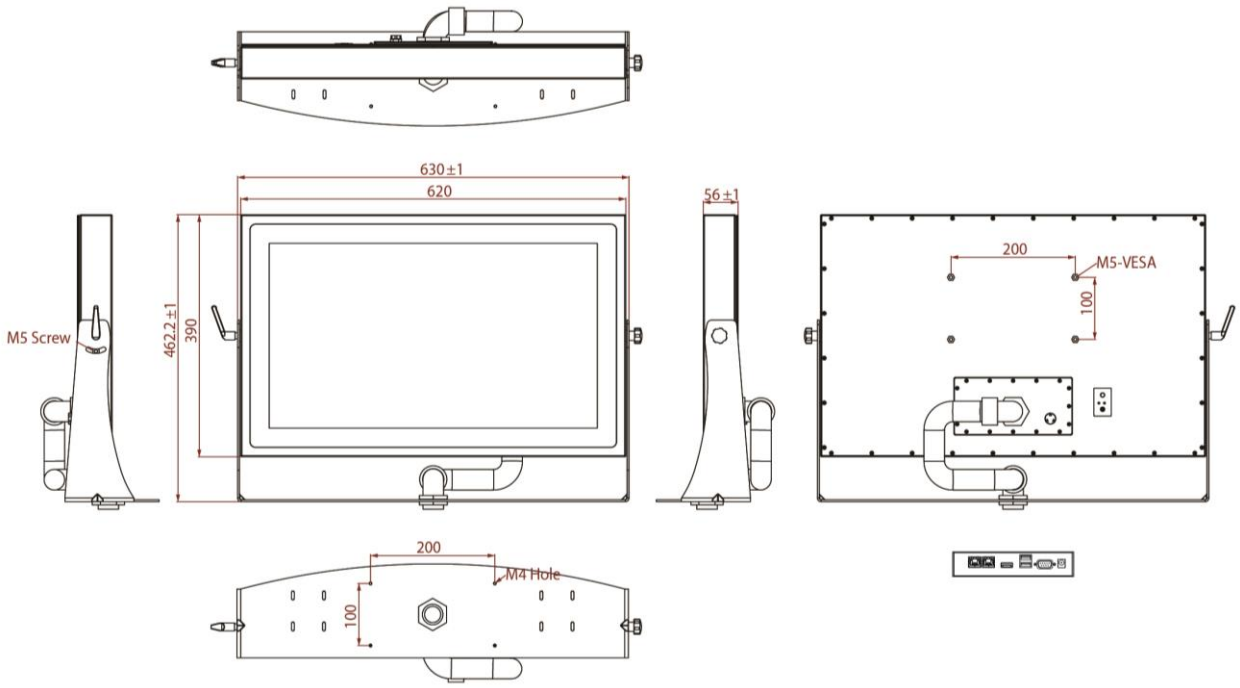
21.5”, W22IW3S-SPA369-P1

Unit: mm



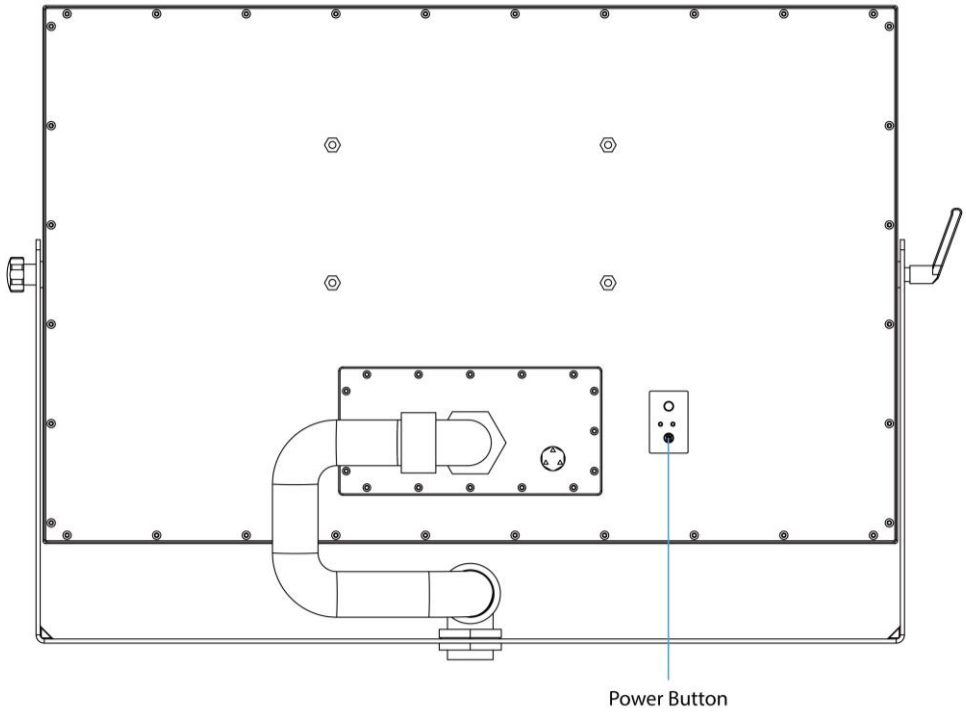
23.8”, W24IW3S-SPA269-P1

Unit: mm



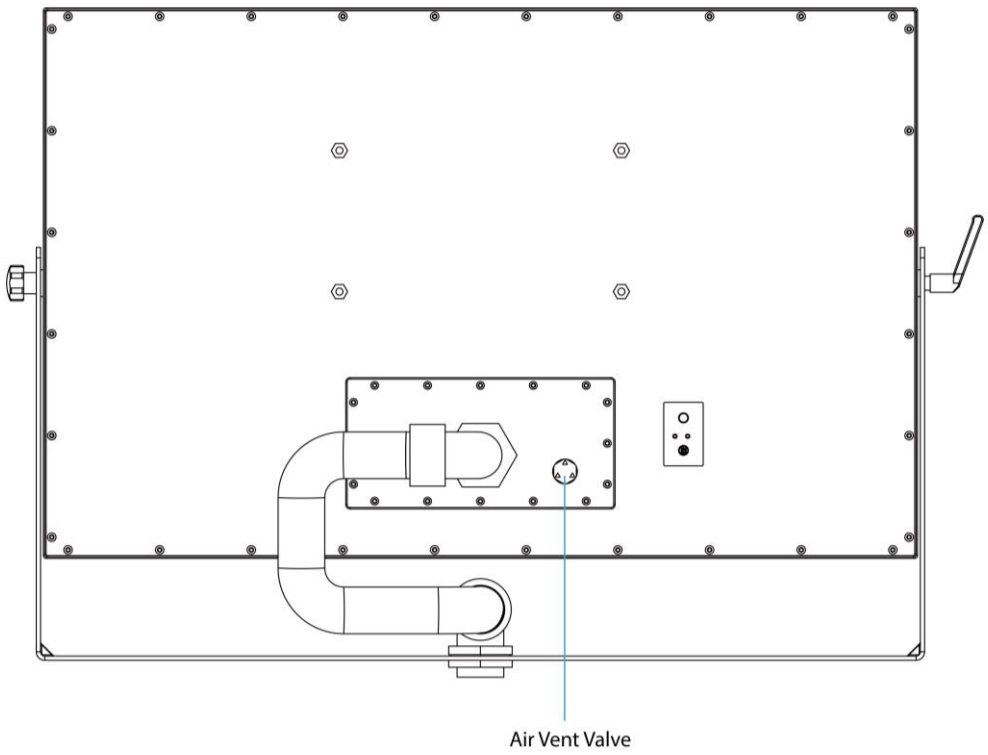
1.5 Physical Buttons

The P Series Panel PC has one Power physical button located on the rear side. Press the Power button to power on or power off the device.



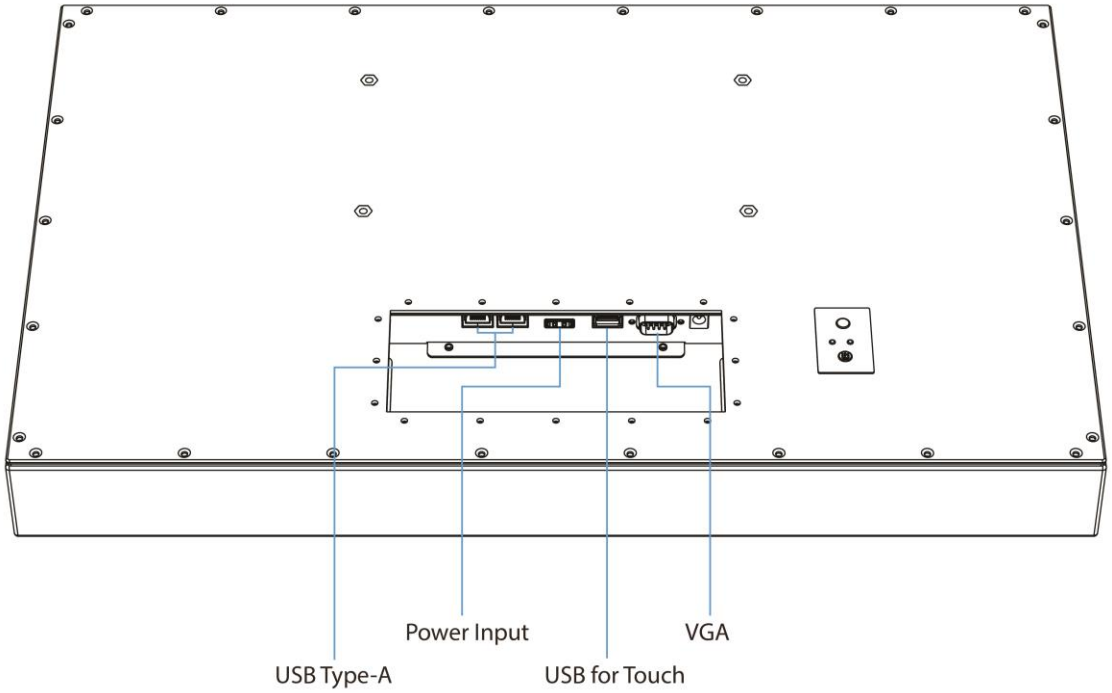
1.6 Air Vent Valve

The P Series Panel PC has an air vent valve that has an automatic mechanical system that controls and maintains pressure without the assistance of an operator. The air vent valve is a safety device that discharges air in order to avoid air related problems.



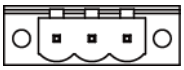
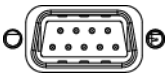
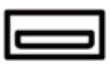
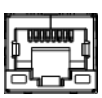
1.7 Connector Description

Terminal interfaces are located under the protection cover on rear side of the panel PC. To access the I/O connectors, please open the protection cover first.



Note: Notice that input and output connectors vary by product size and specifications.

Connector description:

Item	Description
	**Power Jack** – Provides power to the display, accepts 12 V DC power input.
	**Terminal Block 3 Pin** – Provides power to the display, accepts 12 V DC or 9 V DC to 36 V DC power input based on your order.
	**HDMI** – Transmits and protects copyrighted digital video and audio. Example: An HD tuner to an HD ready TV.
	**RS-232/422/485 (Default RS232)** – Serial interface connector controls/monitors devices and offers in addition digital inputs/outputs. *Example: A printer or scanner to panel PC.*
	**USB for Touch** – Connects USB for touch capabilities. *Example: Touch to Display.*
	**RJ45** – Connects the panel PC device to Ethernet network.

Notice that power jack and terminal block connectors are mutually exclusive options.

Chapter 2: Installation

Follow this quick installation procedure:

1. Mount your panel PC according to your application requirements (VESA mount, Yoke mount).
2. Connect all the cables to the panel PC.
3. Install I/O protection cover.
4. Route cables through waterproof conduit pipe. And then fix the conduit pipe to the panel PC.
5. To ensure enclosure rating protection make sure the conduit pipe is firmly fixed and tightened.

2.1 Mounting

The IP69K Stainless P Series Panel PC devices come with different mounting options suitable for most of the industrial and commercial applications.

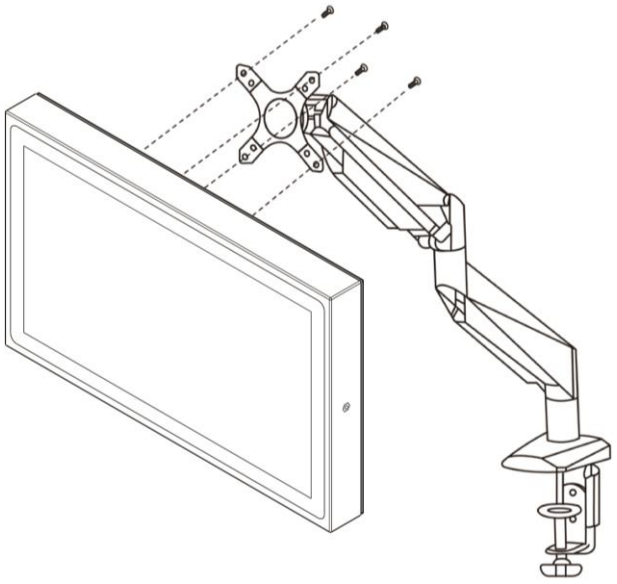
2.1.1 VESA Mount

The panel PC has VESA mount holes on the rear side. Follow instructions below to mount the unit with VESA Mount bracket (not supplied by Winmate).

Size	VESA Plate Dimensions	Screw Hole Diameter
15”, 19”	100 x 100 mm	VESA M4x5 mm
21.5”	100 x 100 mm	VESA M4x6 mm
23.8”	100 x 100 mm	VESA M4x6 mm

Installation Instruction

1. Screw VESA bracket to the fixture (ex. swing arm) with four VESA screws.
2. Place the device on VESA bracket.

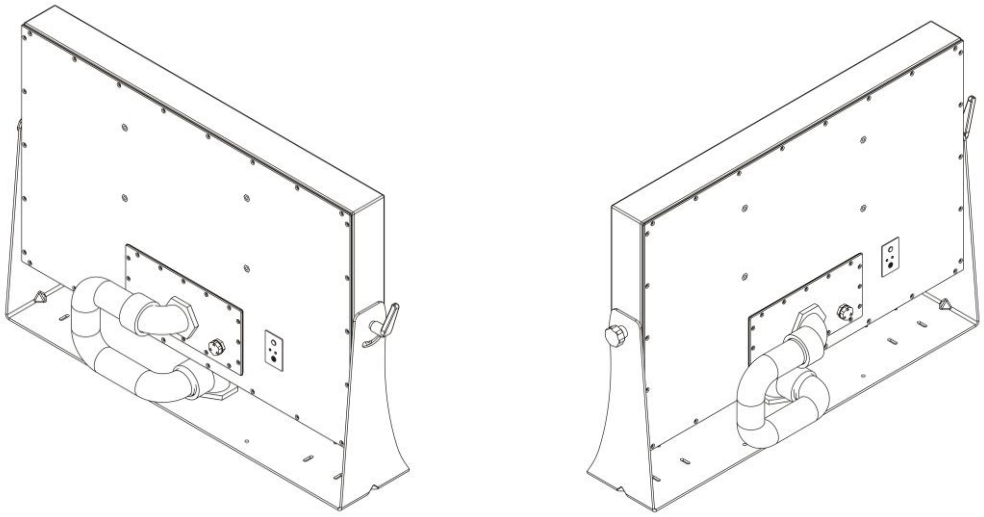


2.1.2 Yoke Mount

Yoke Mount solution allows installing the panel PC on the bracket. Notice that Yoke Mount Stand is an optional accessory available for order from Winmate.

Installation instruction

1. Place the panel PC on the bracket stand, aiming screw holes for each other.
2. Secure screws to fix the panel PC upon the bracket stand.
3. Firmly secure the locking handle to the panel PC.



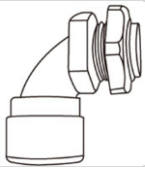
2.2 I/O Cover and Conduit Pipe Installation

The unit is available with I/O cover and waterproof conduit pipe for connectors and cable protection (required to maintain enclosure protection rating). Conduit pipe is a part of a complete assembly. The conduit pipe protects cables and gives users flexibility in selection of data, video, and power cables, depending on customer needs.

Caution The I/O cover and waterproof conduit pipe required to maintain enclosure protection rating.
Attention Le couvercle et le tuyau de conduit imperméable requis pour maintenir le degré de protection du boîtier.

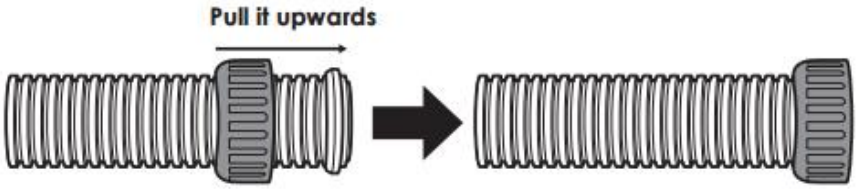
Conduit Pipe Components

Before you start installing the pipe, be sure that you have the following components:

Item	Description
	**Slip Nut** To secure “L” fitting adaptors.
	**O-Ring Rubber / Gasket** To maintain the IP Rating between equipment and cable.
	**Conversion reducers** To convert thread forms and size between equipment and cable entry devices.
	**Locknuts** To secure adaptors / reducers, and stopper plugs into equipment.
	**Conduit Elbow** To protect cables when installed in confined spaces where the cable may be bending. This threaded 90-degree bends are available with male connection threads.

Installing the Conduit Pipe

1. Insert the slip nut followed by the O-ring rubber/ gasket into the tube.
2. Adjust the location of O-ring rubber and pull the slip nut into the O-ring rubber and tighten up to ensure the waterproof seal.



3. Install the conversion reducers.

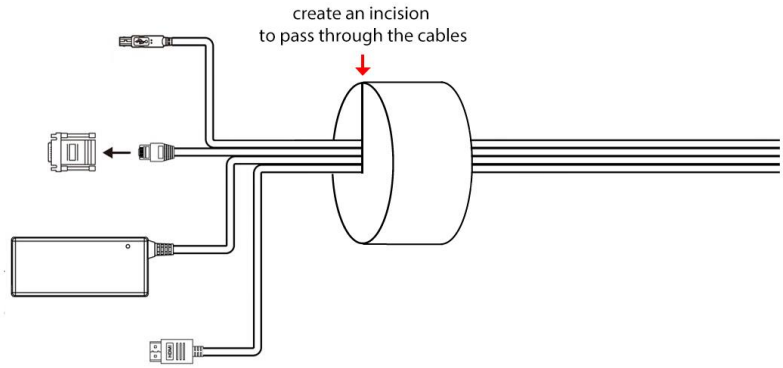
4. Place the threaded 90-degree bends into the slip nut and then fasten it.

To install I/O cover and Conduit Pipe

1. Connect cables to connectors. Conduit assembly may include all possible cables that might be needed. If not all cables are needed, they may be cut and removed from the conduit before installation.
2. Position the I/O cover on the rear of the panel PC with the Conduit Elbow pointing towards the center of the panel PC.
3. Install the provided ten sealing screws and tighten evenly.
4. Install other conduit pipe end in an equipment enclosure suitably rated for application environment.

The EVA Foam usage

Create an incision lengthwise on the EVA foam to pass through the cables.



2.3 Conduit Pipe Removal

Removal Instructions

1. Firmly hold the elbow twist grip with one hand.
2. Twist the elbow counterclockwise.
3. Pull the conduit out from the elbow.

2.4 Wiring Requirements

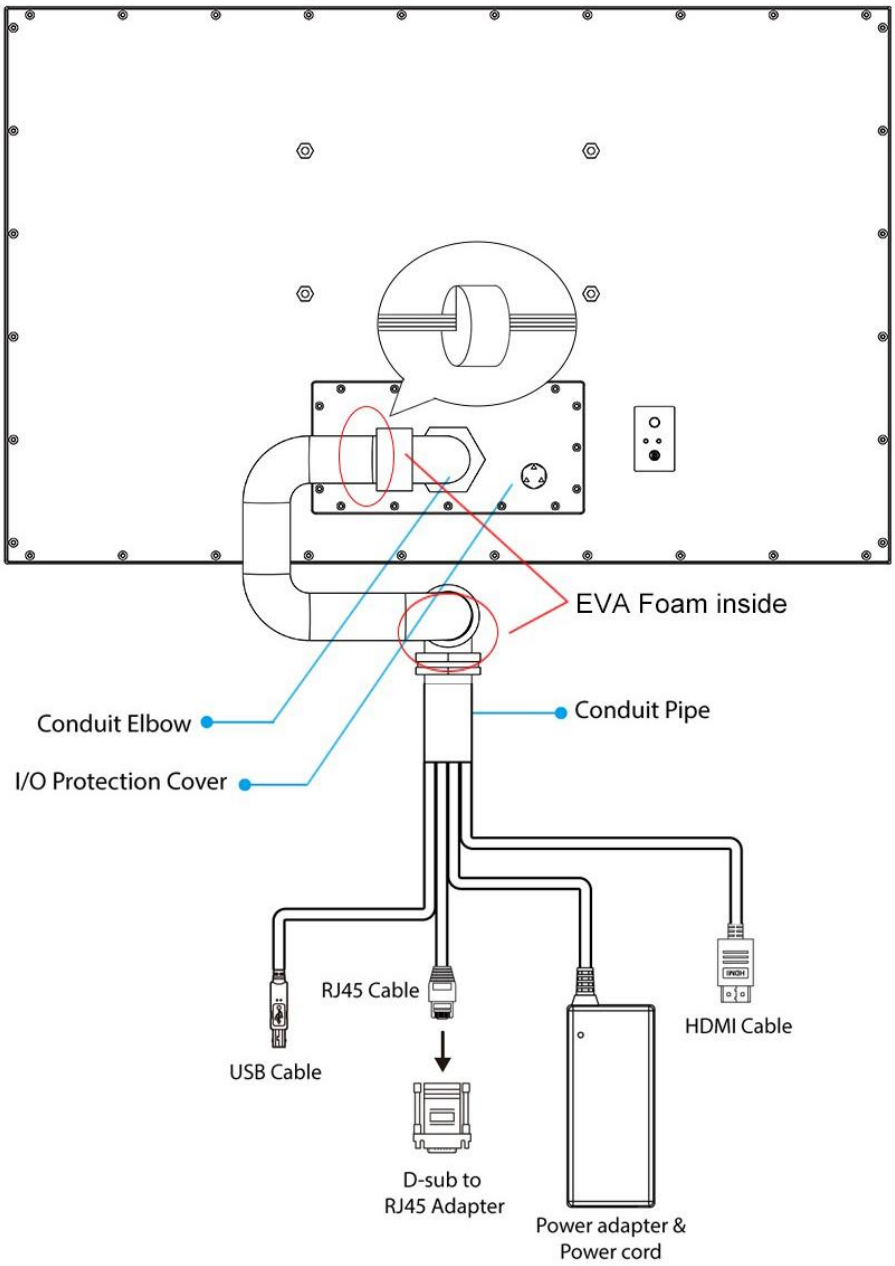
The following common safety precautions should be observed before installing any electronic device:

- Strive to use separate, non-intersecting paths to route power and networking wires. If power wiring and device wiring paths must cross make sure the wires are perpendicular at the intersection point.
- Keep the wires separated according to interface. The rule of thumb is that wiring that shares similar electrical characteristics may 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.
- Do not run signal or communication wiring and power wiring in the same conduit. To avoid interference, wires with different signal characteristics (i.e., different interfaces) should be routed separately.
- Be sure to disconnect the power cord before installing and/or wiring your device.
- Verify the maximum possible current for each wire gauge, especially for the power cords. Observe all electrical codes dictating the maximum current allowable for each wire gauge.
- If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.
- Be careful when handling the unit. When the unit is plugged in, the internal components generate a lot of heat which may leave the outer casing too hot to touch.

2.5 Wiring Diagram

This P Series Panel PC has waterproof conduit pipe and I/O cover to ensure protection rating. Please connect cables first, and then install I/O cover and conduit pipe.

Wiring Diagram



Note: Please use RJ45 to D-Sub9 Adapter to connect Serial Interfaces cable to P Series Panel PC.

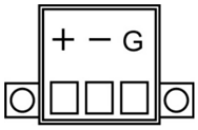
2.6 Connector Pin Assignments

This P Series Panel PC is equipped with power connector, HDMI connector and USB connector for touch. The pin assignments of the connectors are described in this section.

2.6.1 Power Connector

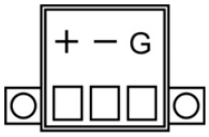
The P Series Panel PC has either one 3-pin terminal block connector (phoenix type) power connector that accepts 12 V DC or 9 V DC to 36 V DC based on your order, or one power jack connector that accepts 12 V DC power input power based on your order.

Pin assignment and signal name of the 3-pin terminal block connector (phoenix type)



Voltage

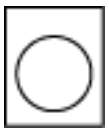
Minimum Voltage 11.4V
Maximum Voltage 12.6V
Maximum Current 4.2A



Voltage

Minimum Voltage 9V
Maximum Voltage 36V
Maximum Current 6.6A

Pin assignment and signal name of the DC power jack connector



Voltage

Minimum Voltage 11.4V
Maximum Voltage 12.6V
Maximum Current 4.2A

2.6.2 HDMI Connector

The P Series Panel PC has one HDMI1.4a connector for video and audio. Plug HDMI signal cable to the HDMI connector on the rear side of PC system, and plug the other end to the monitor.

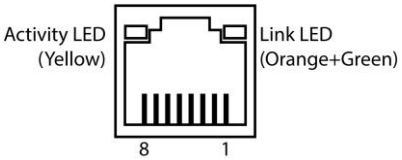
Pin assignment and signal names for HDMI1.4a connector

Pin №	Signal Name	Pin №	Signal Name
1	HDMI_RX2+	2	GND
3	HDMI_RX2-	4	HDMI_RX1+
5	GND	6	HDMI_RX1-
7	HDMI_RX0+	8	GND
9	HDMI_RX0-	10	HDMI_RXC+
11	GND	12	HDMI_RXC-
13	HDMI_CON_CEC	14	NC
15	HDMI_CON_SCL	16	HDMI_CON_SDA
17	GND	18	+5V_HDMI
19	HDMI_CON_HP		

2.6.3 LAN Connector

The panel PC has two RJ45 connectors that support 10/100/1000 Mbps Ethernet interface for connecting to the internet.

Pin assignment and signal names of LAN connector

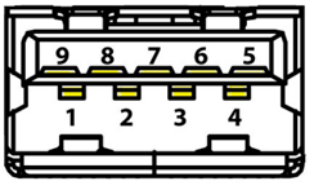


Pin №	Signal Name	Pin №	Signal Name
1	TX1+	2	TX1-
3	TX2+	4	TX2-
5	TX3+	6	TX3-
7	TX4+	8	TX4-

2.6.4 USB Connector

The panel PC has two USB 3.0 connectors. Use USB cable to connect mouse, printer or other external devices to your Panel PC.

Pin assignment and signal names of USB 3.0 connector

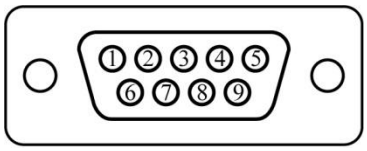


Pin №	Signal Name	Pin №	Signal Name
1	+5V	2	USB_D-
3	USB_D+	4	GND
5	STDA_SSRX-	6	STDA_SSRX+
7	GND_DRAIN	8	STDA_SSTX-
9	STDA_SSTX+		

2.6.5 Serial Port Connector

Use COM1 serial port connector to connect your Panel PC to external devices such as mouse, modem or printer. You can configure serial port settings via jumpers located on the motherboard.

Pin assignment and signal names of serial port connector



Pin №	RS-232	RS-422	RS-485
1	DCD	TxD-	D-
2	RXD	TxD+	D+
3	TXD	RxD+	NC
4	DTR	RxD-	NC
5	GND	GND	GND
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI	NC	NC

Chapter 3: Getting Started

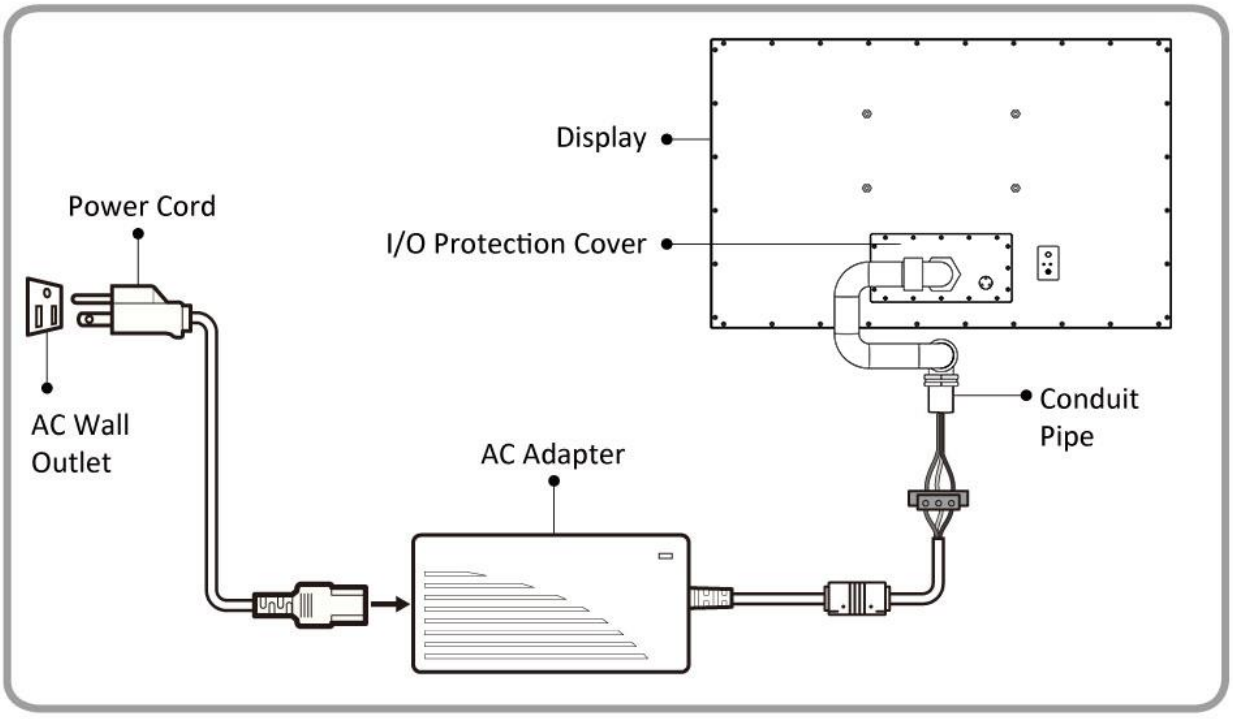
3.1 Connecting to Power Source

The P Series Panel PC has either one 3-pin terminal block connector (phoenix type) power connector that accepts 12 V DC or 9~36 V DC or one power jack connector that accepts 12 V DC power input power based on your order.

3.1.1 Connecting to AC Power Source

Follow the following steps to power on your device (with terminal block connector):

1. Install conduit pipe and I/O cover following the procedure described in the previous sections.
2. Connect open wires of the AC Adapter included in the package to the terminal block connector on the display.
3. Connect power cord to the other side of the AC Adapter.
4. Plug the power cord to the AC outlet.



Follow the following steps to power on your device (with terminal block connector):

5. Install conduit pipe and I/O cover following the procedure described in the previous sections.
6. Connect open wires of the AC Adapter included in the package to the terminal block connector on the display.
7. Connect power cord to the other side of the AC Adapter.
8. Plug the power cord to the AC outlet.

AC Adapter specifications and panel PC power consumption vary by LCD panel size.

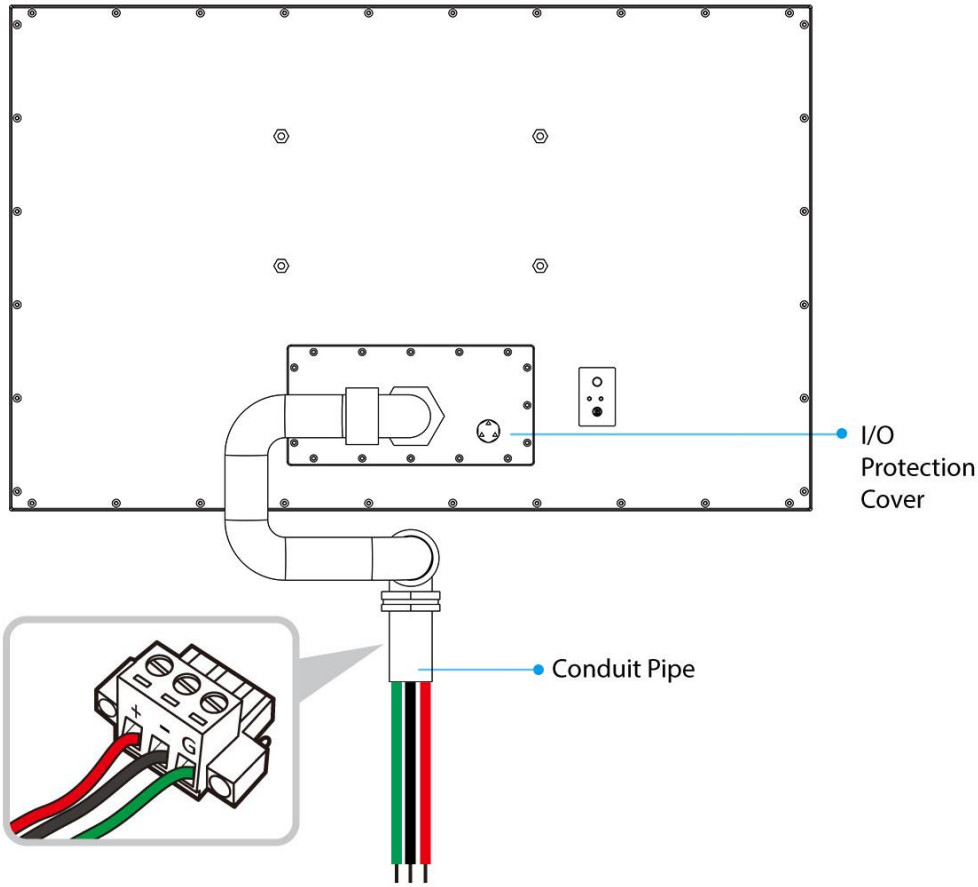
Size	15”	19”	21.5”	23.8”
AC Adapter	12V/ 84W	12V/ 84W	12V/ 84W	12V/ 84W
Power Consumption*	53W (typ.)	59W (typ.)	66W (typ.)	61W (typ.)

(Power consumption was measured at max. backlight and high CPU load)

3.1.2 Connecting to DC Power Source (Optional)

Follow the following steps to power on your device:

1. Connect the 3-pin terminal block.
2. Screw the Terminal block to fix the cable.
3. Connect terminal block to the display.
   + Connect to power supply until 0V
   -Connect to power supply until it get +9~36V DC
4. The device is ready to work once is connected to the source of power.



3.2 Turning On/ Off the Device

After connecting your devices to the source of power, press power button located on the OSD panel at the rear side of the panel PC.

Important: When powering on the device for the first time, please make sure there's no interruption during the Windows setting up process, for example, accidentally powering off. If it happened, please access the recovery menu by pressing **Fn6** button on the external keyboard to initiate recovery process.

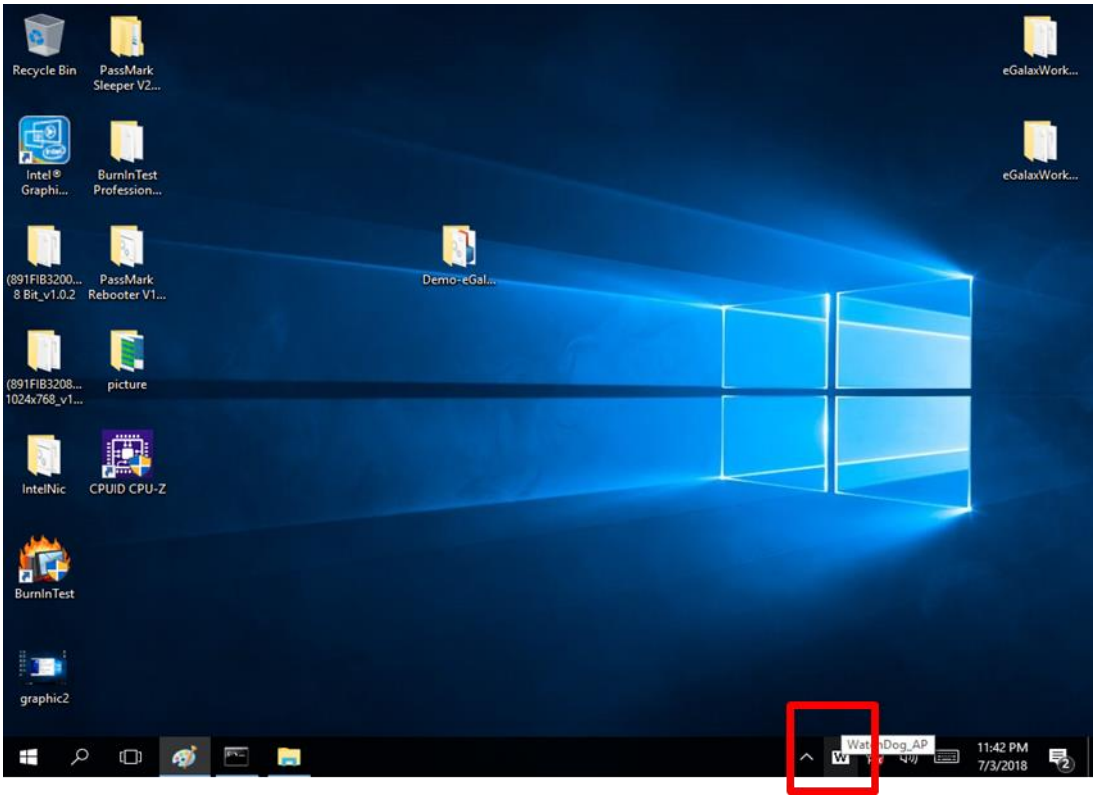
To shut down your device, disconnect the power cord and the device will automatically turn off.

3.3 How to Enable Watchdog

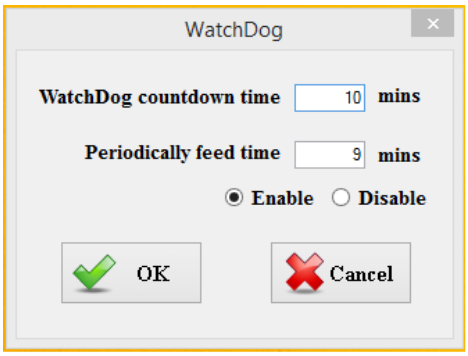
To enable Watchdog, you need to download Winmate Watchdog utility. Find more information on Watchdog in “Watchdog Guide” that you can download from Winmate Download Center or File Share. Refer to the User Manual for more details.

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. Click icon to open Watchdog utility.



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



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 min.

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*

Chapter 4: Insyde BIOS Setup

BIOS Setup Utility is a program for configuration basic Input / Output system settings of the computer for optimum use. This chapter provides information on how to use BIOS setup, its functions and menu.

4.1 How and When to Use BIOS Setup

To enter the BIOS setup, you need to connect an external USB keyboard, external monitor and press Del key when the prompt appears on the screen during start up. The prompt screen shows only few seconds so need press Del key quickly.

Important: Updated BIOS version may be published after the manual released. Check the latest version of BIOS on the website.

You may need to run BIOS setup utility for reasons listed below:

1. Error message on screen indicates to check BIOS setup
2. Restoring the factory default settings.
3. Modifying the specific hardware specifications
4. Necessity to optimize specifications

BIOS Navigation Keys

The following keys are enabled during POST:

Key	Function
Del	Enters the BIOS setup menu.
F7	Display the boot menu. Lists all bootable devices that are connected to the system. With cursor ↑and cursor ↓and by pressing <ENTER>, select the device used for the boot.
Pause	Pressing the [Pause] key stops the POST. Press any other key to resume the POST.

The following Keys can be used after entering the BIOS Setup.

Key	Function
F1	Help
F5/ F6	Change Values
F9	Setup Defaults
F10	Save & Exit
Esc	Exit
Enter	Select SubMenu
↑/ ↓	Select Item
← / →	Select Item

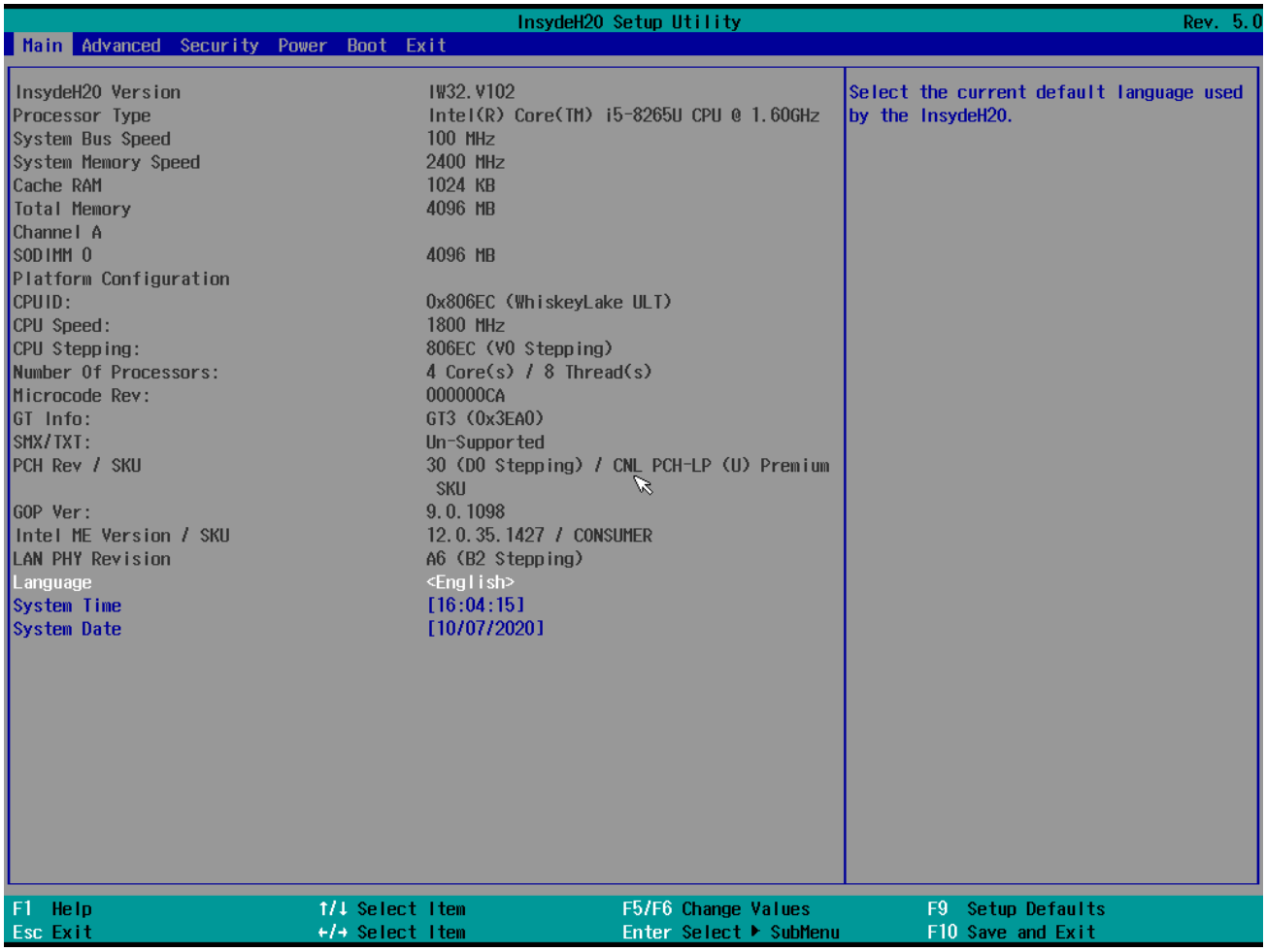
Note: You can press the F1, F2, F3, F4, –/+, and Esc keys by connecting a USB keyboard to your computer.

For items marked ► press **<Enter>** for more options.

4.2 BIOS Functions

4.2.1 Main Menu

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

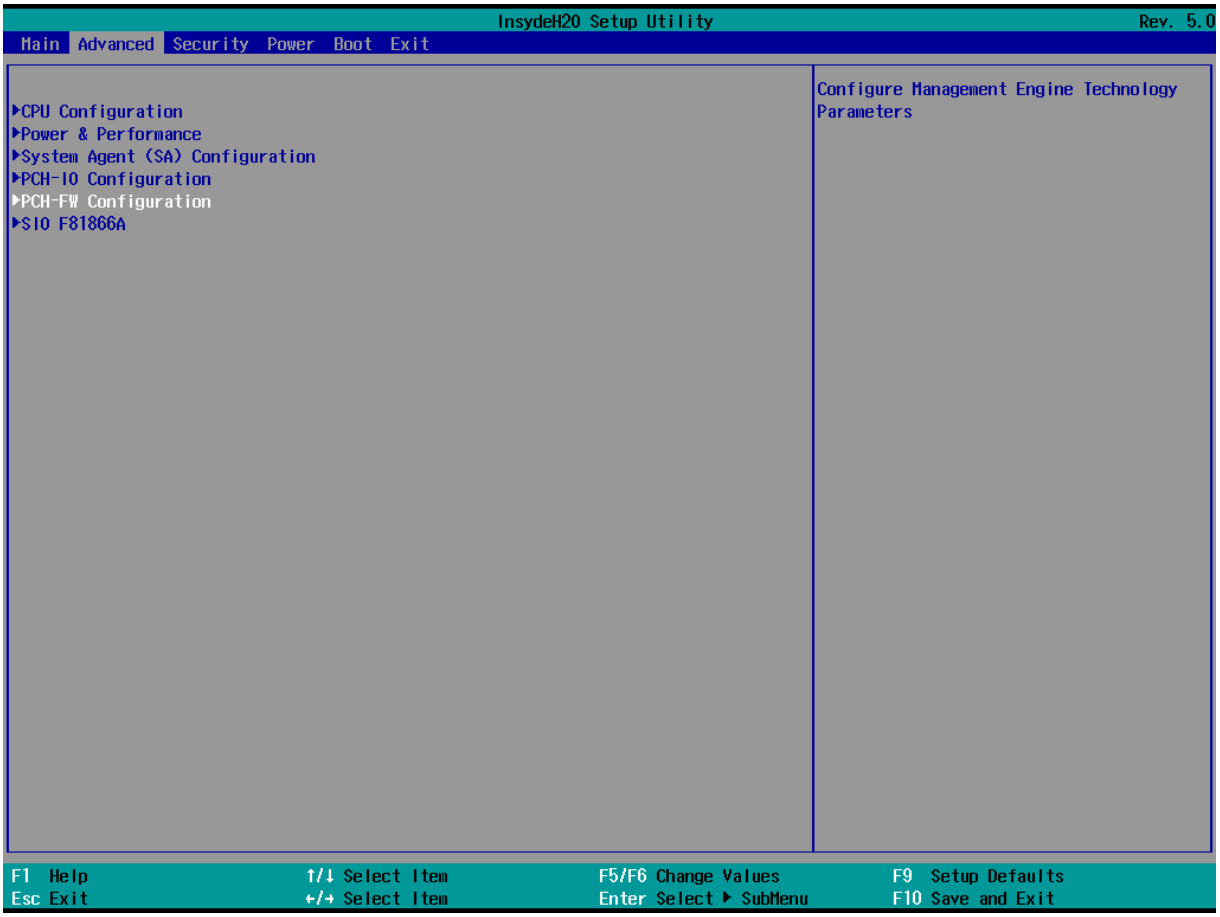


BIOS Setting	Description	Setting Option	Effect
Language	Displays the system language. [English] is set up by default.	Adjustment of the language	Set the language in other language. The language in this device is English.
System Time	This is current time setting. The time is maintained by the battery 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];

4.2.2 Advanced

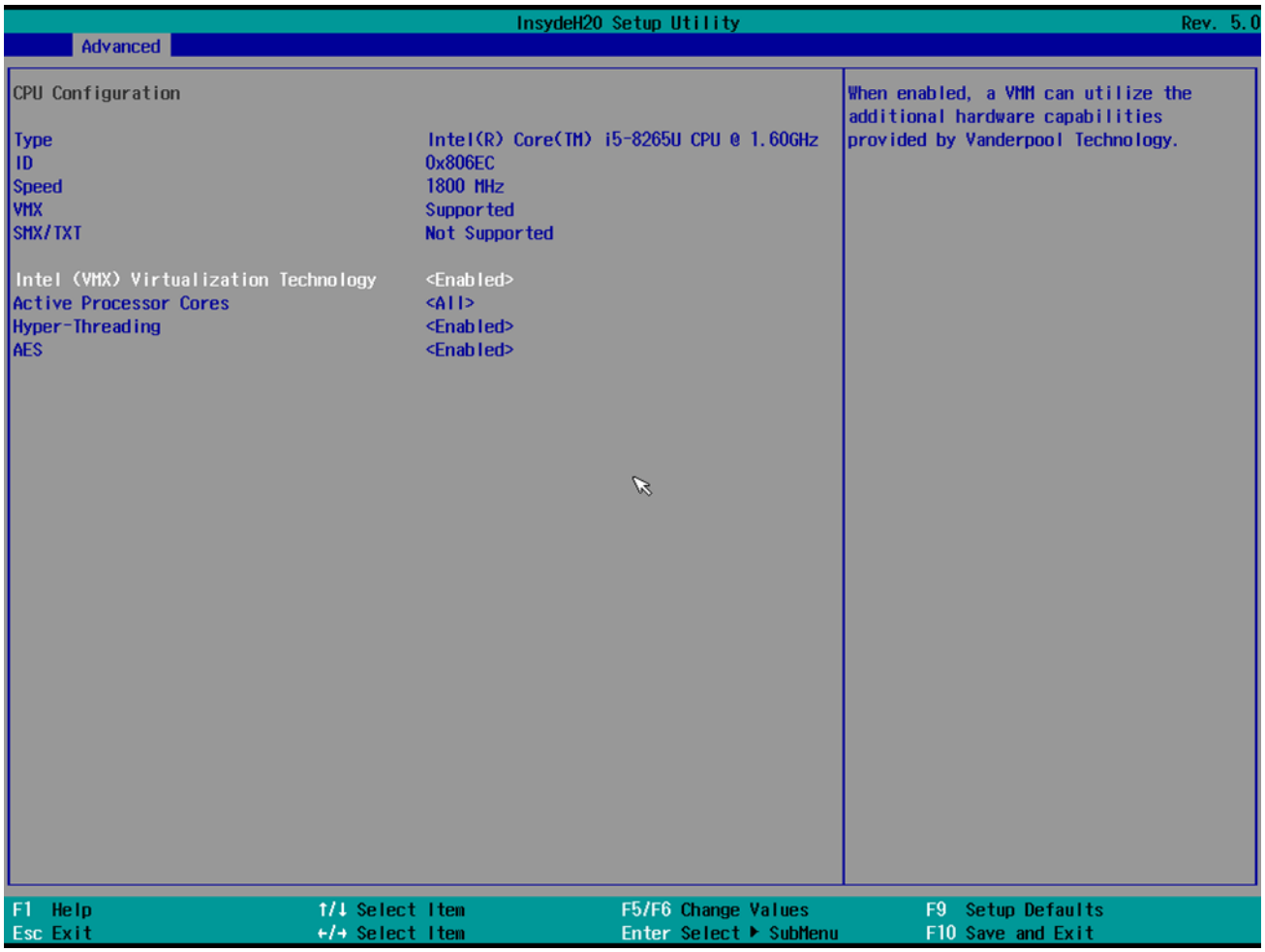
Select the Advanced Tab from the setup menu to enter the advanced BIOS setup screen. You can select any of the items on the left frame of the screen to go to the sub menu for the item, such as CPU Configuration. You can use the <Arrow> keys enter all advanced BIOS setup options. The advanced BIOS setup 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.
Avertissement Gérez la page des paramètres avancés du BIOS avec prudence. Toute modification peut affecter le fonctionnement de votre ordinateur.



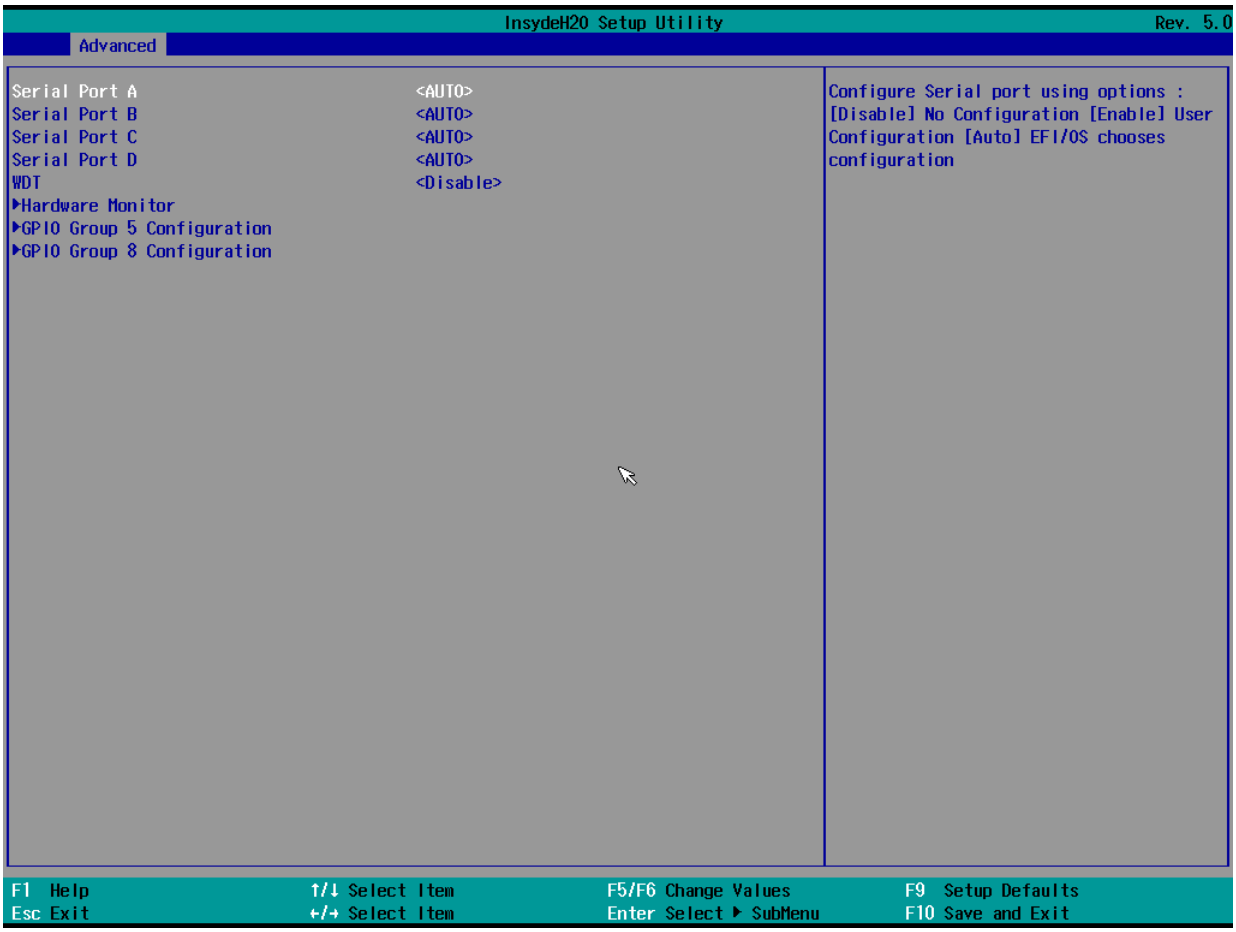
BIOS Setting	Description	Setting Option	Effect
CPU Configuration	Configures Trusted Computing parameters	Enter	Opens submenu
Power & Performance	Configures Power & Performance parameters	Enter	Opens submenu
System Agent Configuration	Configures System Agent Configuration parameters	Enter	Opens submenu
PCH-OI Configuration	Configures PCH-OI parameters	Enter	Opens submenu
PCH-FM Configuration	Configures PCH-FM parameters	Enter	Opens submenu
SIO F81866A	Configures SIO F81866A parameters	Enter	Opens submenu

4.2.2.1 CPU Configuration

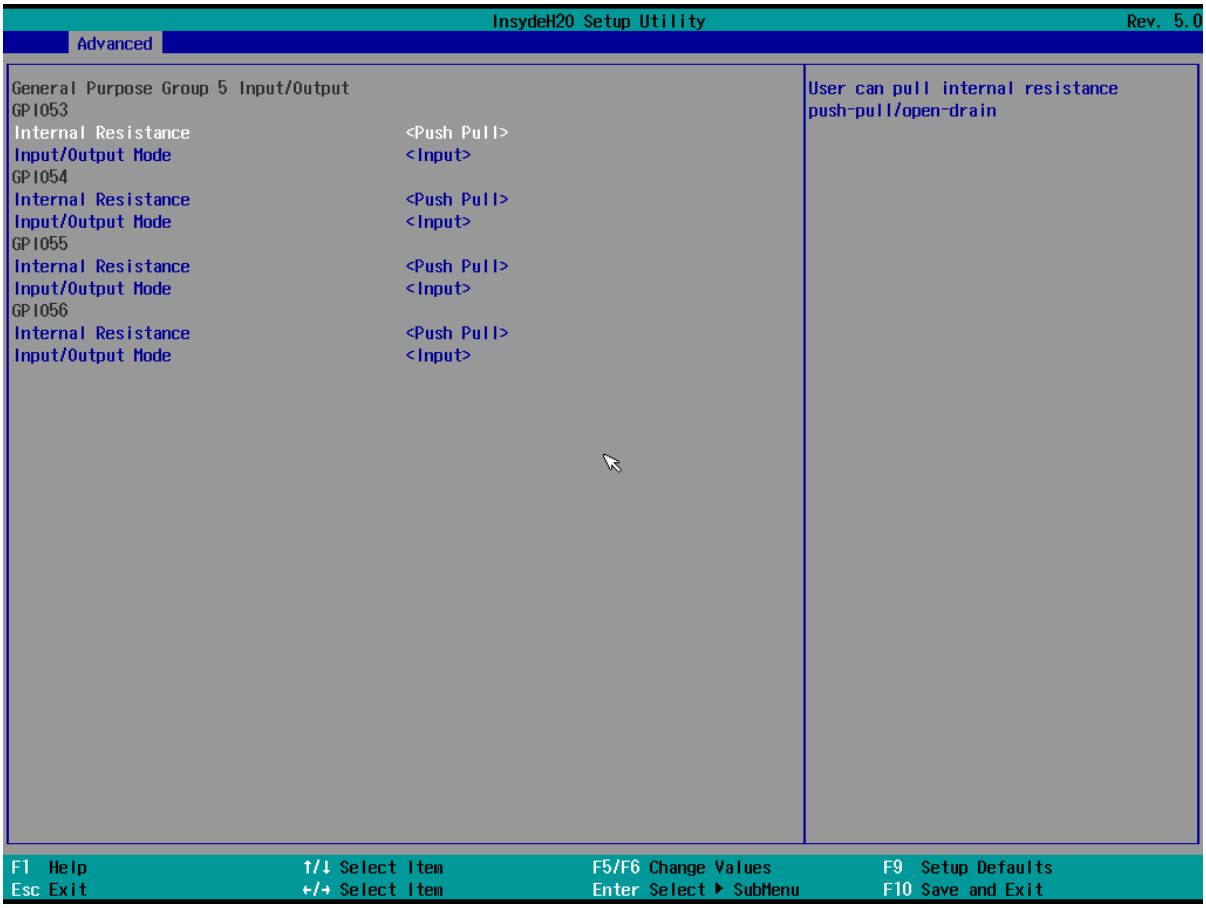


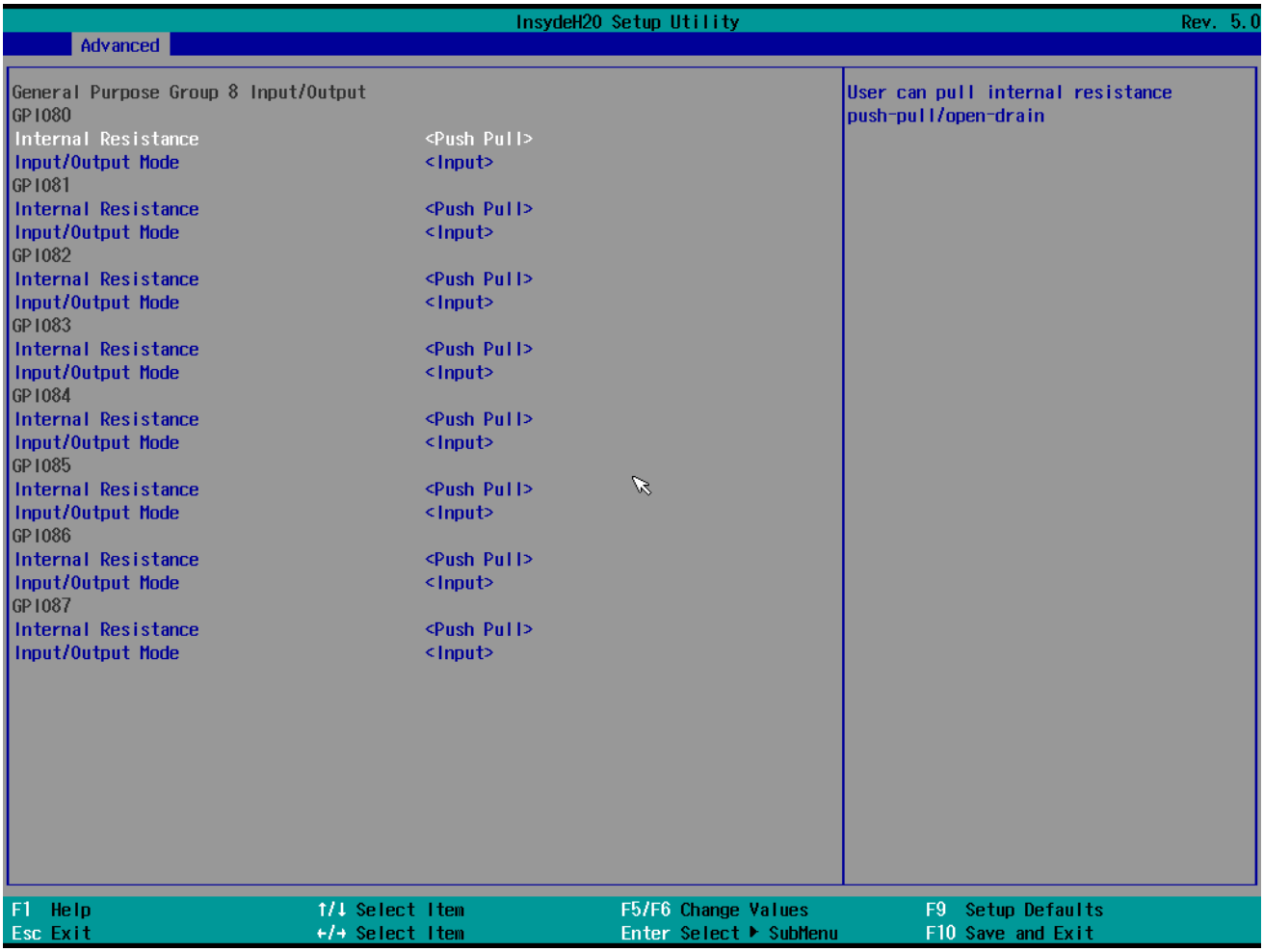
BIOS Setting	Description	Setting Option	Effect
Intel (VMX) Virtualization Technology	Enable or disable Intel Virtualization Technology.	Enable/Disable	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.
Active Processor Cores	Number of core to enable 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

4.2.2.2 F81886A Configuration

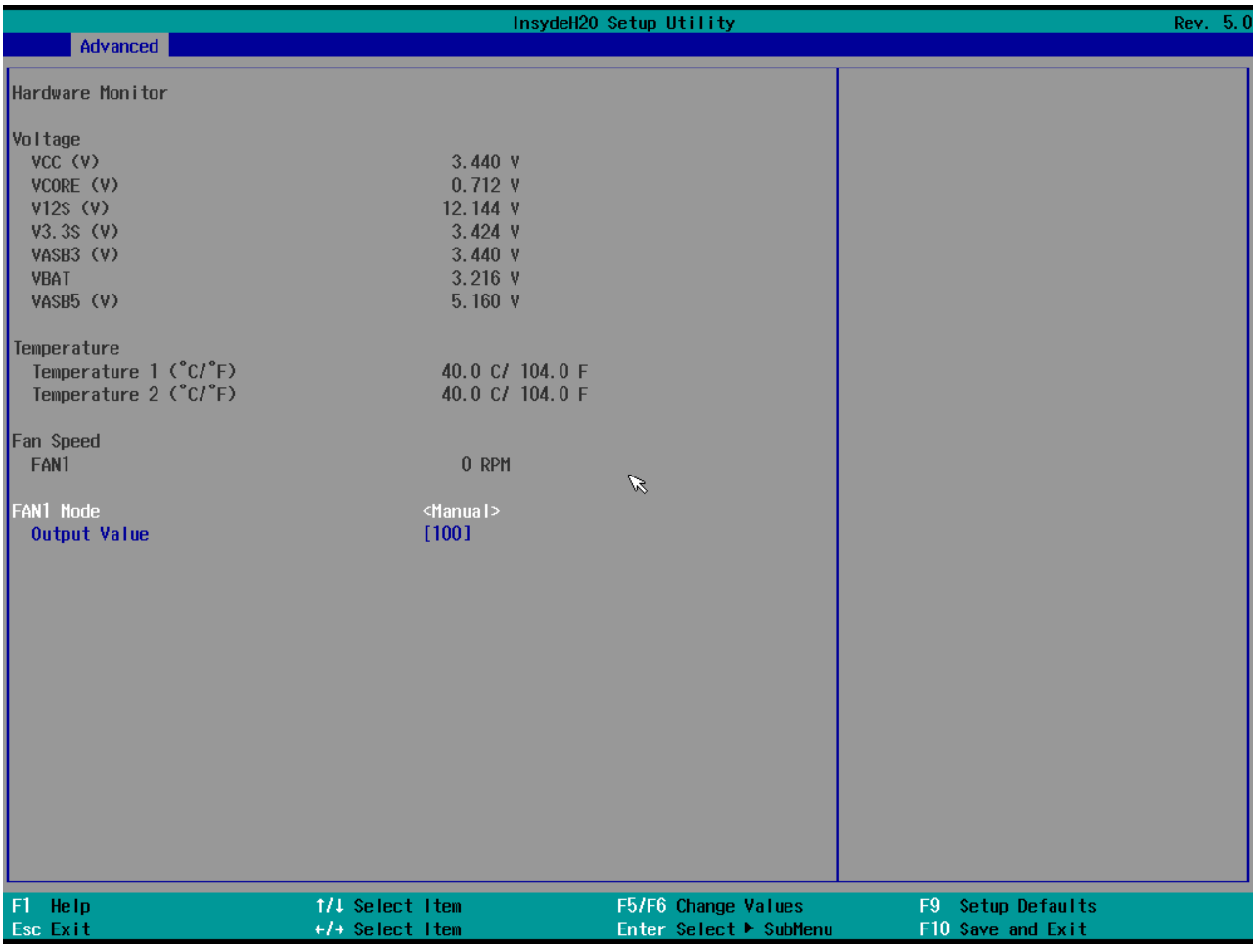


4.2.2.3 GPIO Configuration

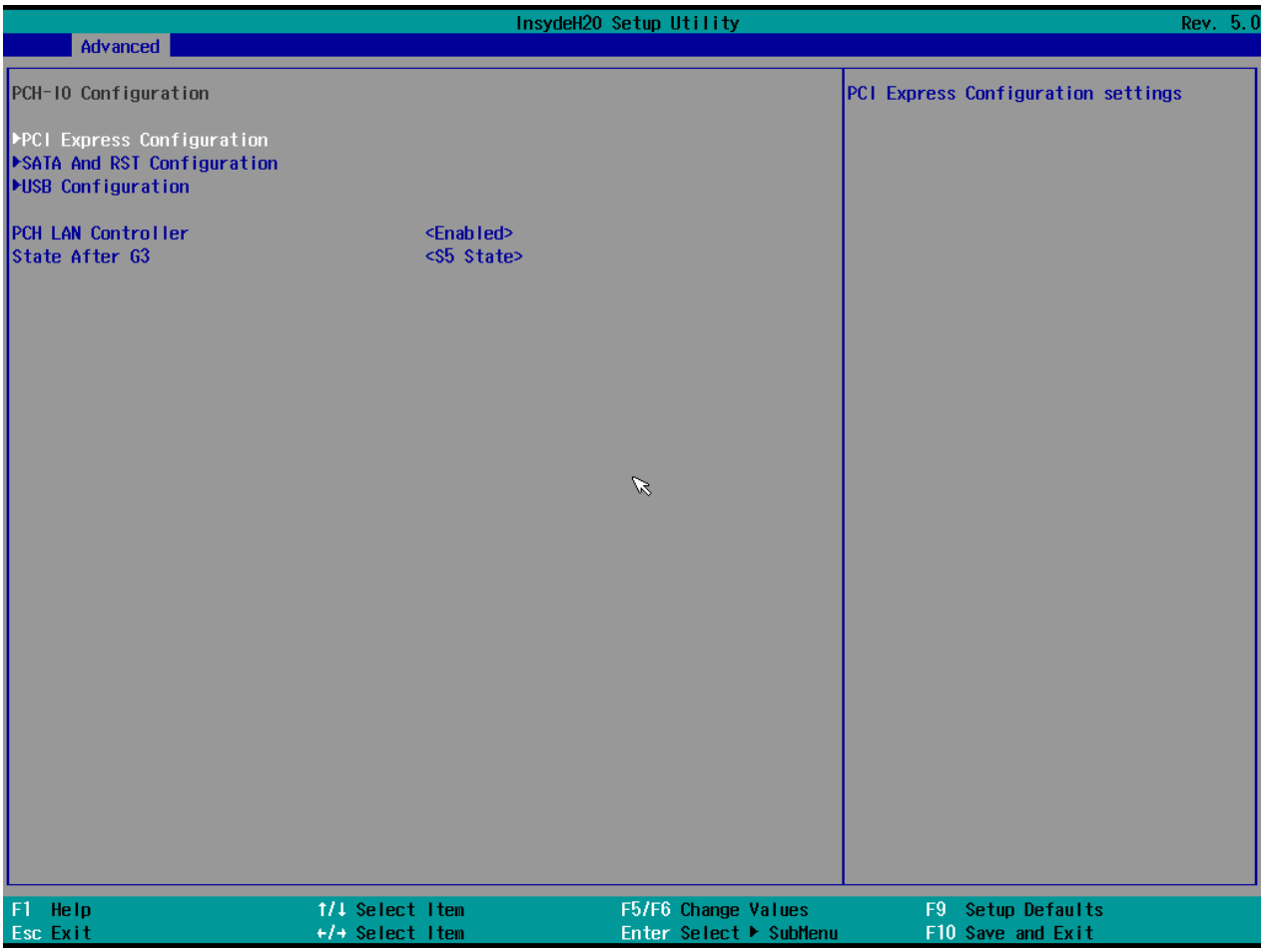




4.2.2.4 Hardware Monitor

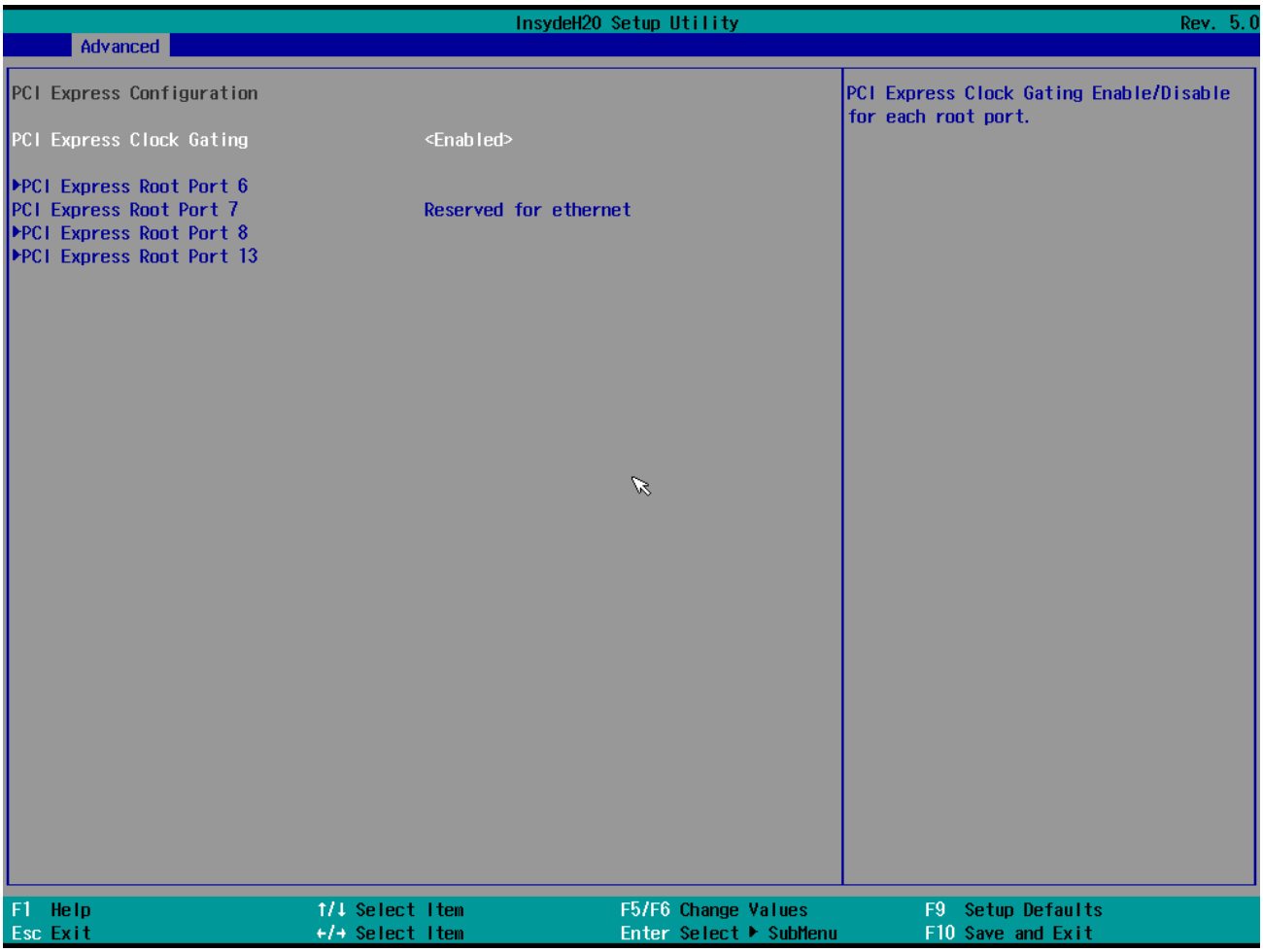


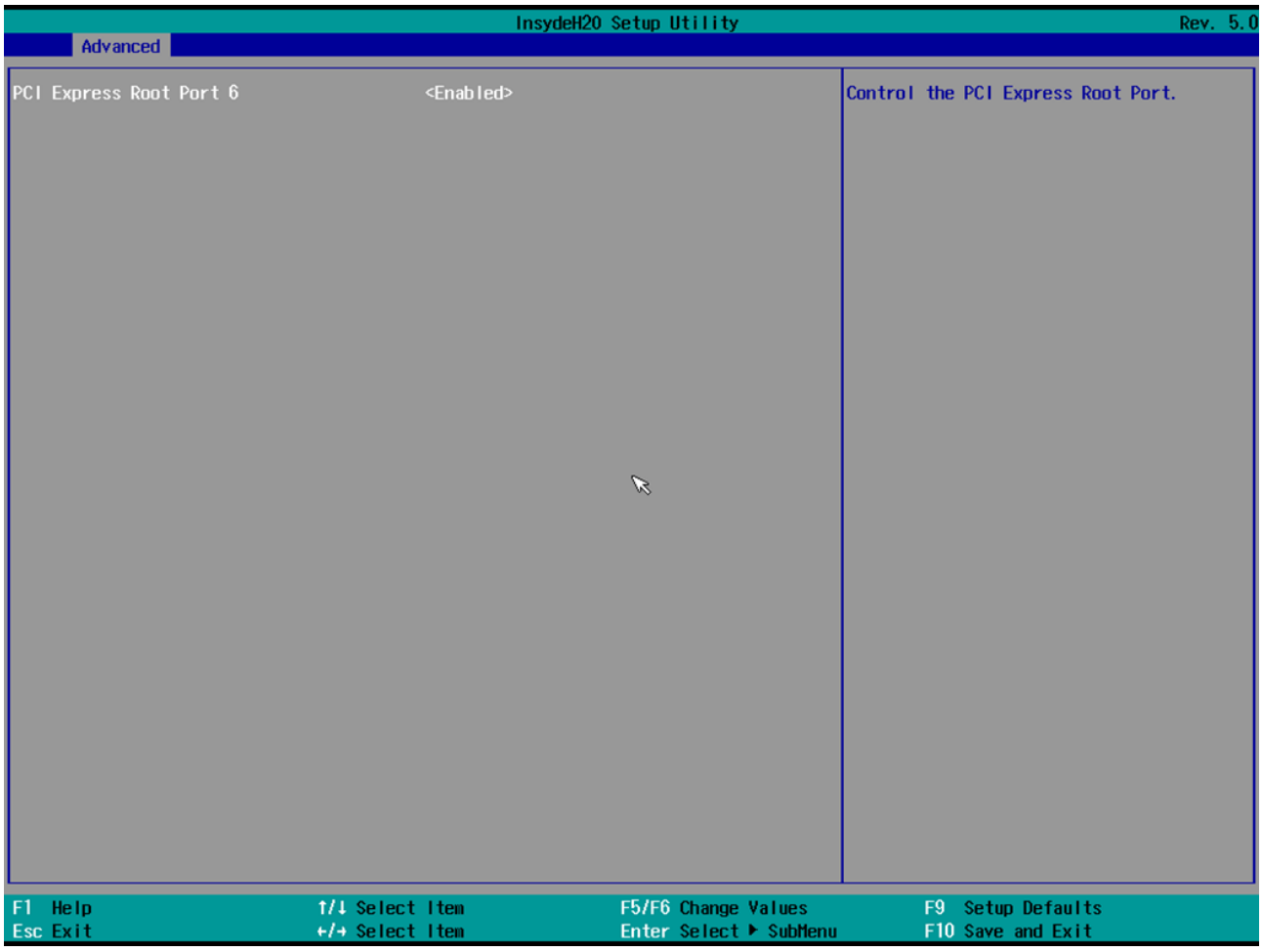
4.2.2.5 PCH-IO Configuration



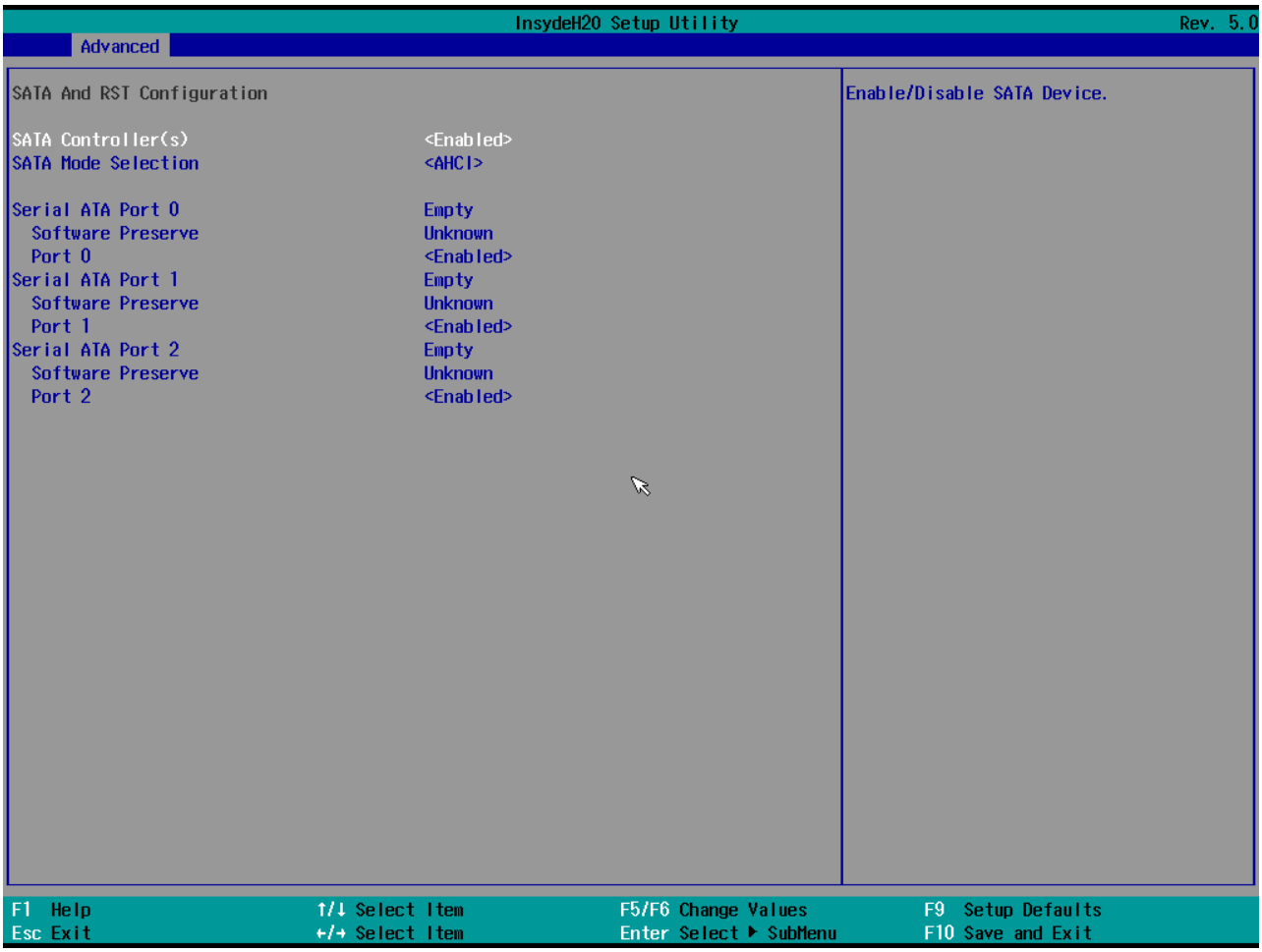
BIOS Setting	Description	Setting Option	Effect
PCI Express Configuration	PCI Express clock gating enable/disable for each root port.	Enter	Opens sub-menu
SATA And RST Configuratuion	Enable/ Disable SATA device	Enter	Opens sub-menu
USB Configuration	Selectively enable/ disable the corresponding USB port from reporting a Device Connection to the controller.	Enter	Opens sub-menu
State After G3	System power state setting	S0 State S5 State	

4.2.2.6 PCI Express Configuration

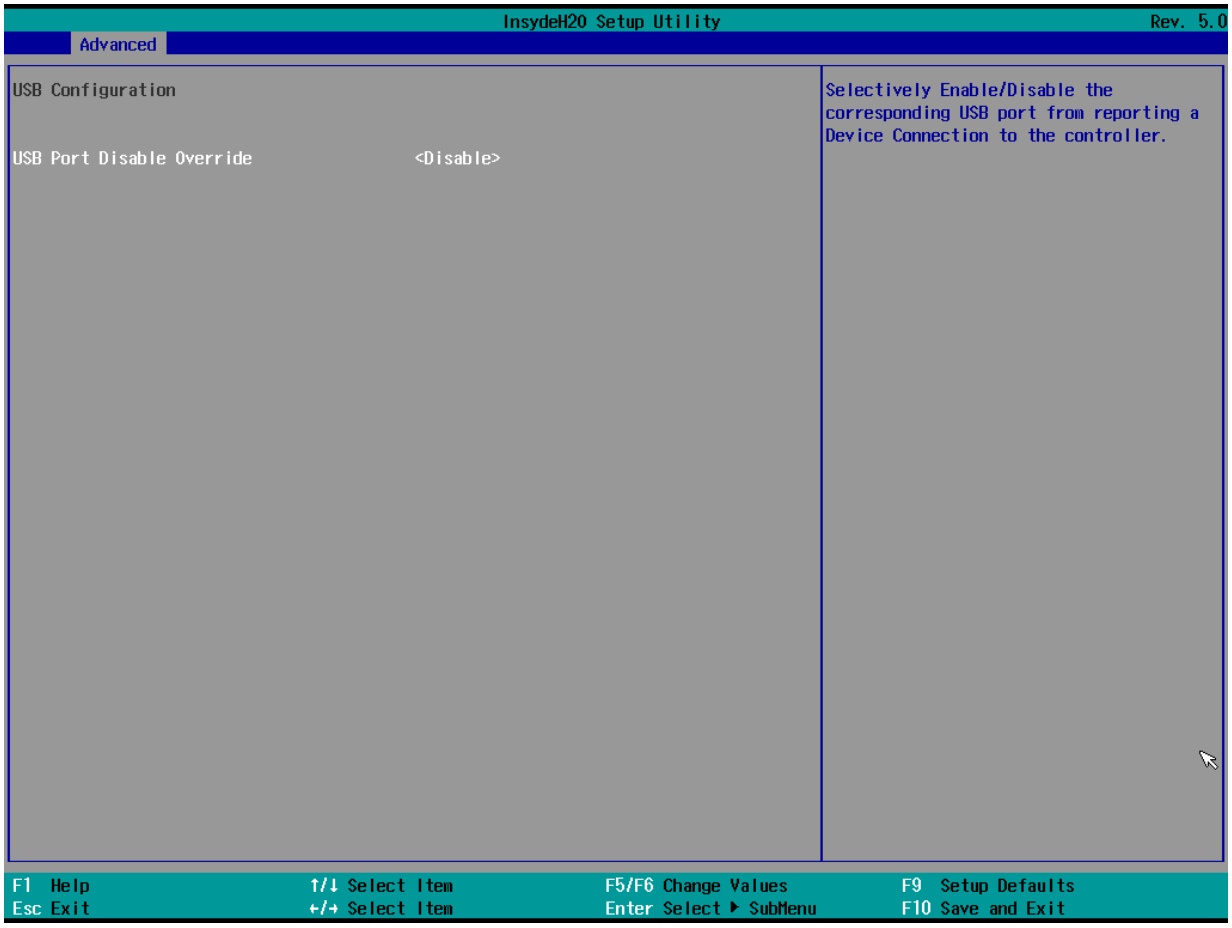




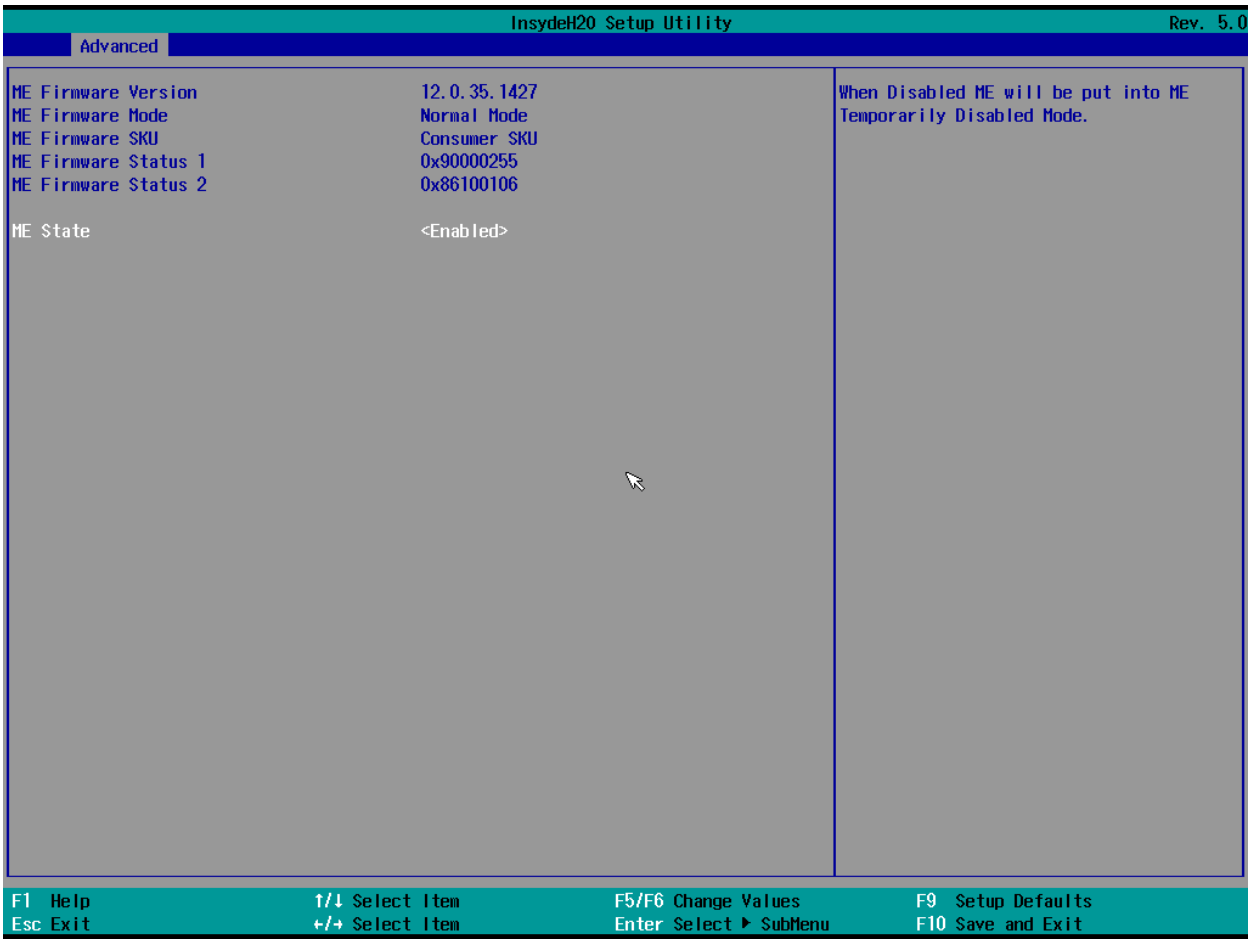
4.2.2.7 SATA and RST Configuration



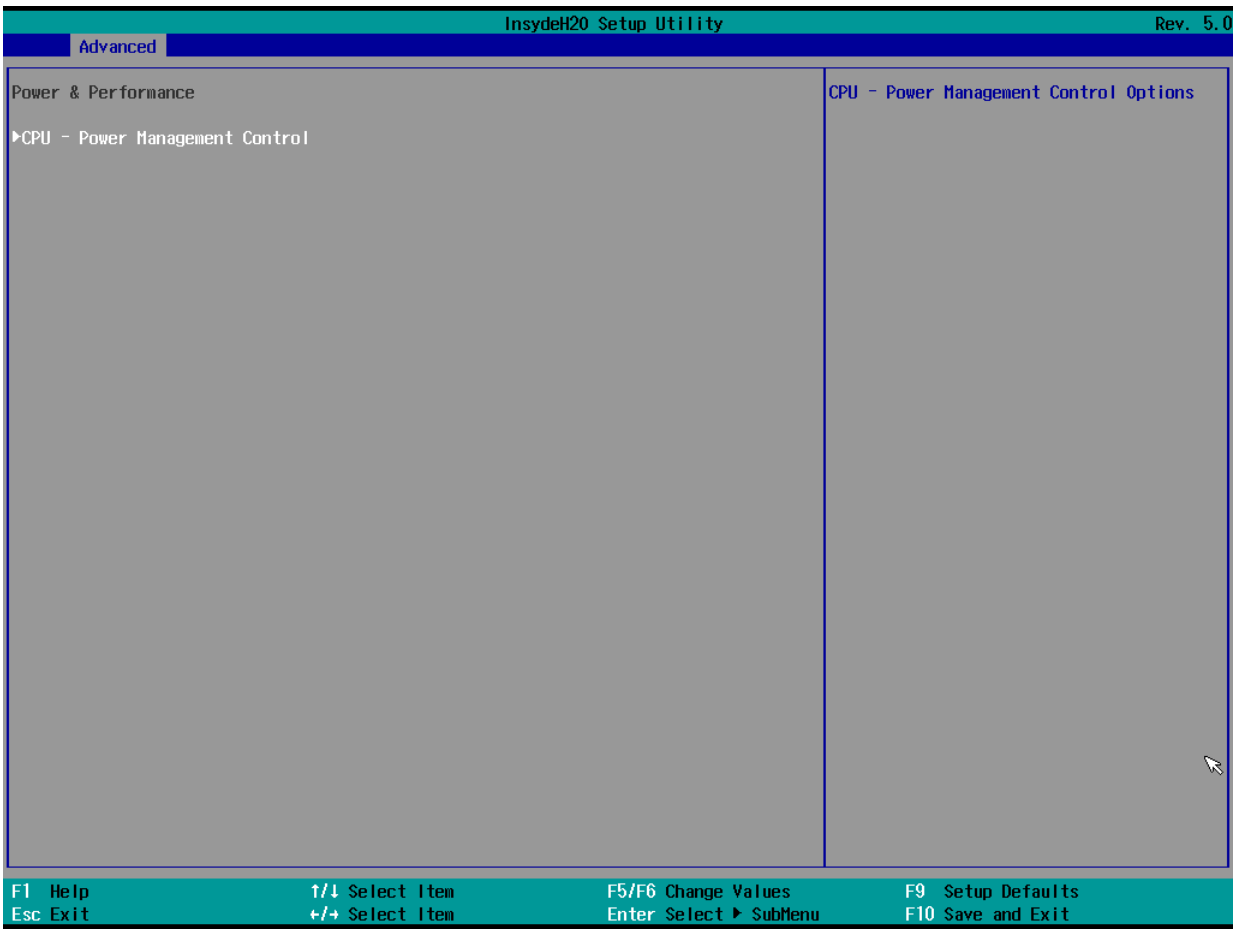
4.2.2.8 USB Configuration



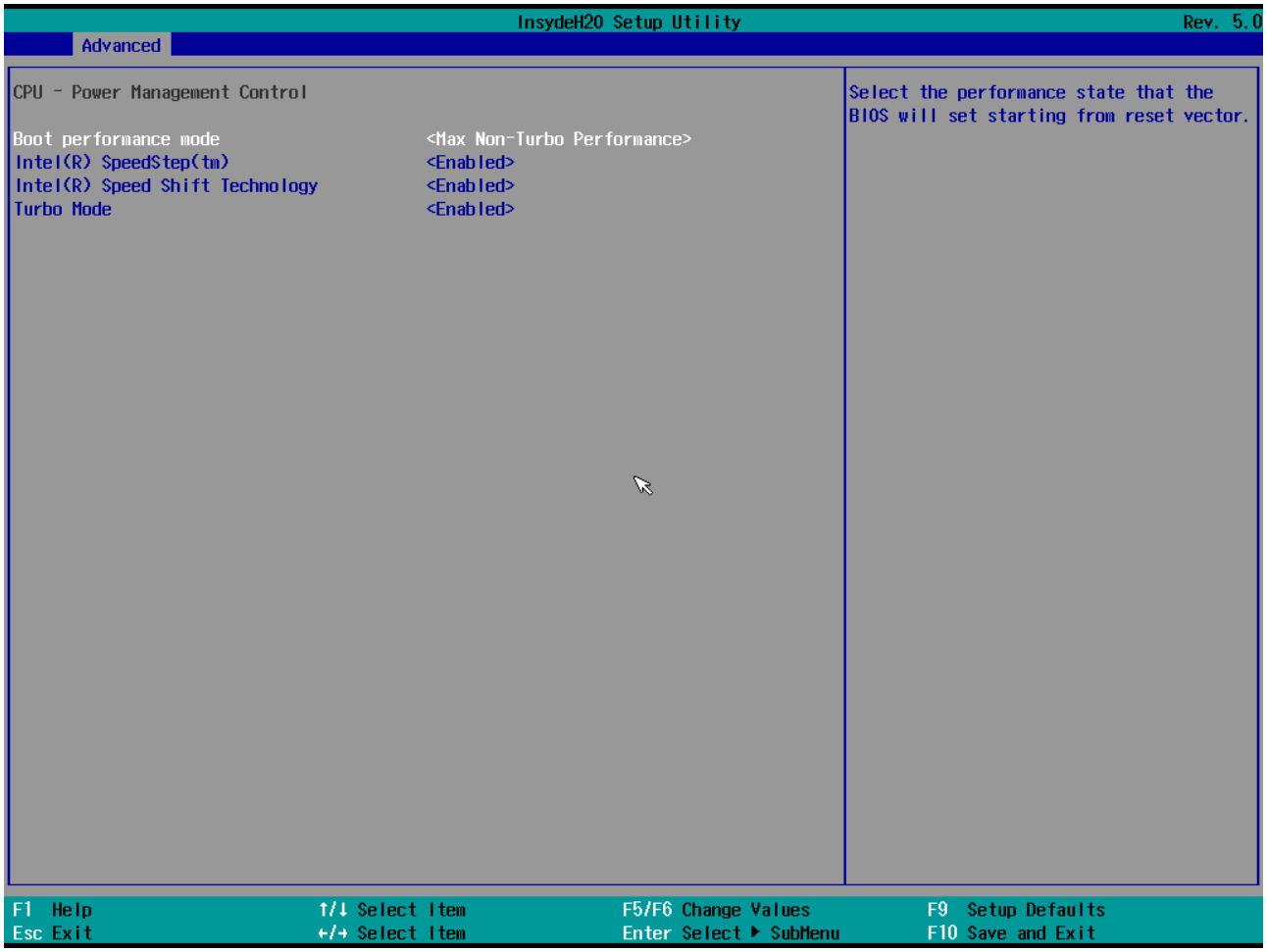
4.2.2.9 ME Firmware Configuration



4.2.2.10 Power & Performance

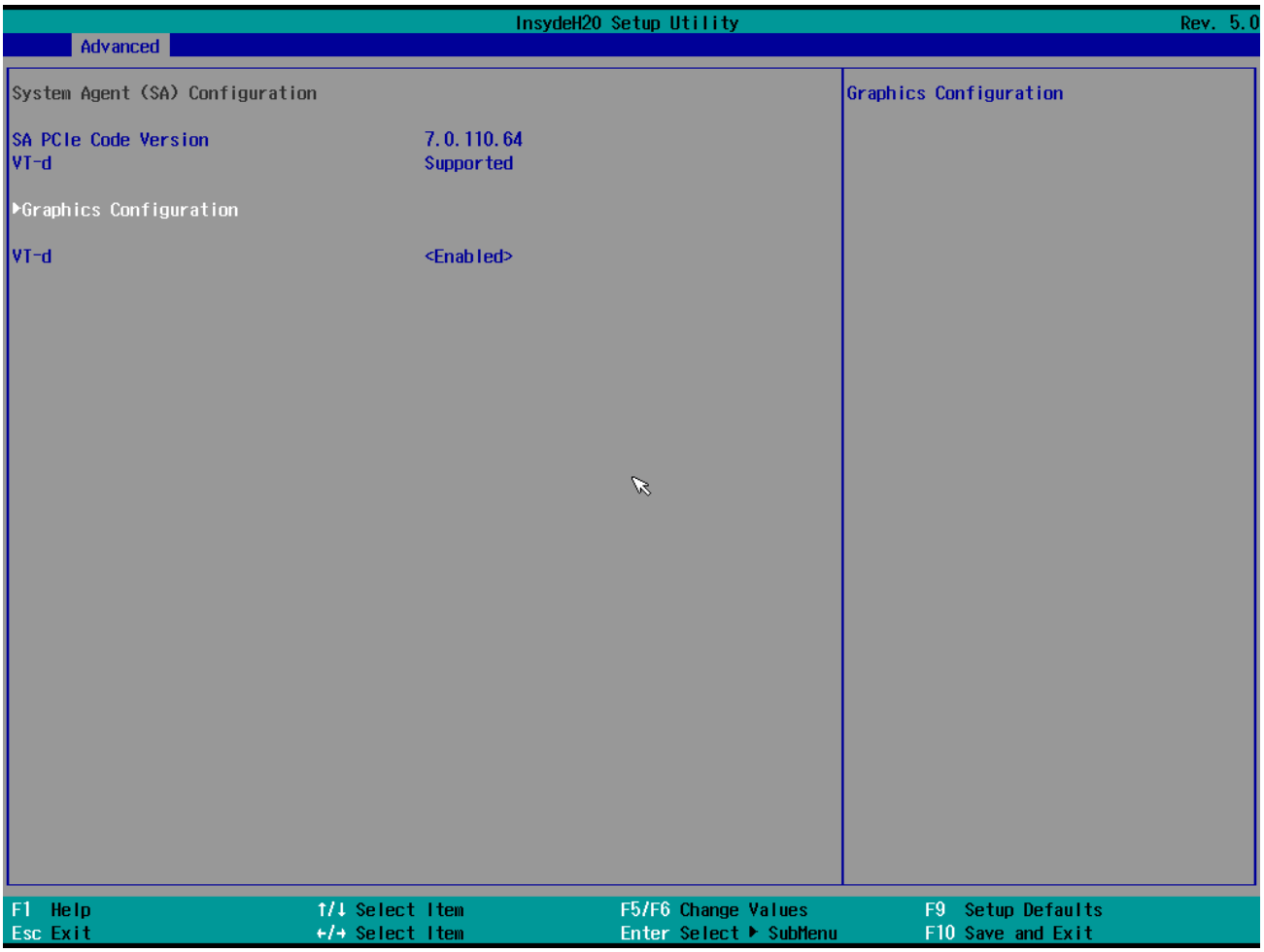


BIOS Setting	Description	Setting Option	Effect
CPU – Power Management Control	Configure CPU – Power Management parameters	Enter	Opens sub-menu



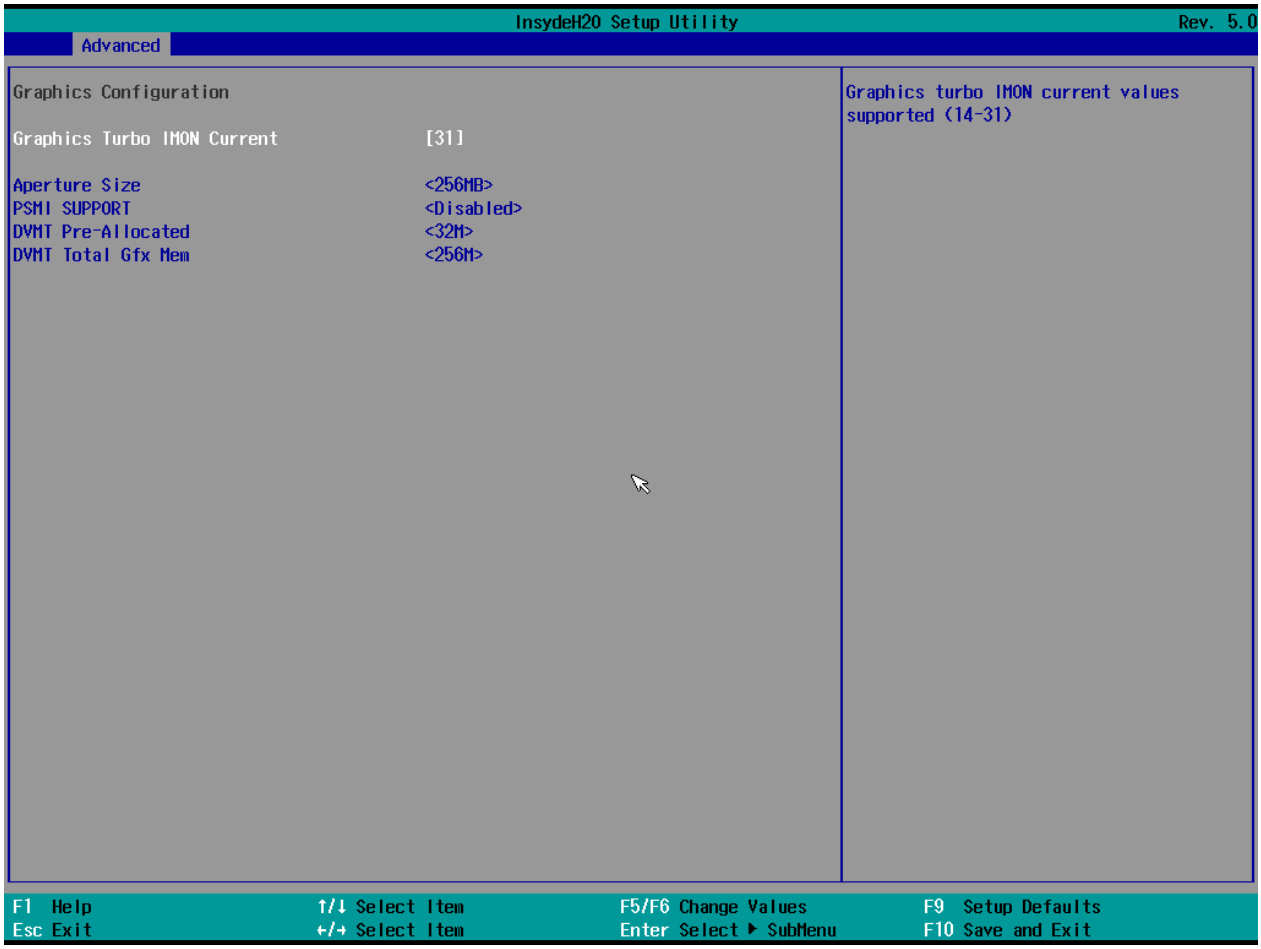
BIOS Setting	Description	Setting Option	Effect
Boot Performance Mode	Configure Boot Performance Mode parameters	-Max non-turbo performance -Max battery -Turbo Performance	Select the performance state that the BIOS will set starting from reset vector
Intel SpeedStep (ta)	Configure Intel SpeedStep (ta) 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
-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*

4.2.2.11 System Agent (SA) Configuration



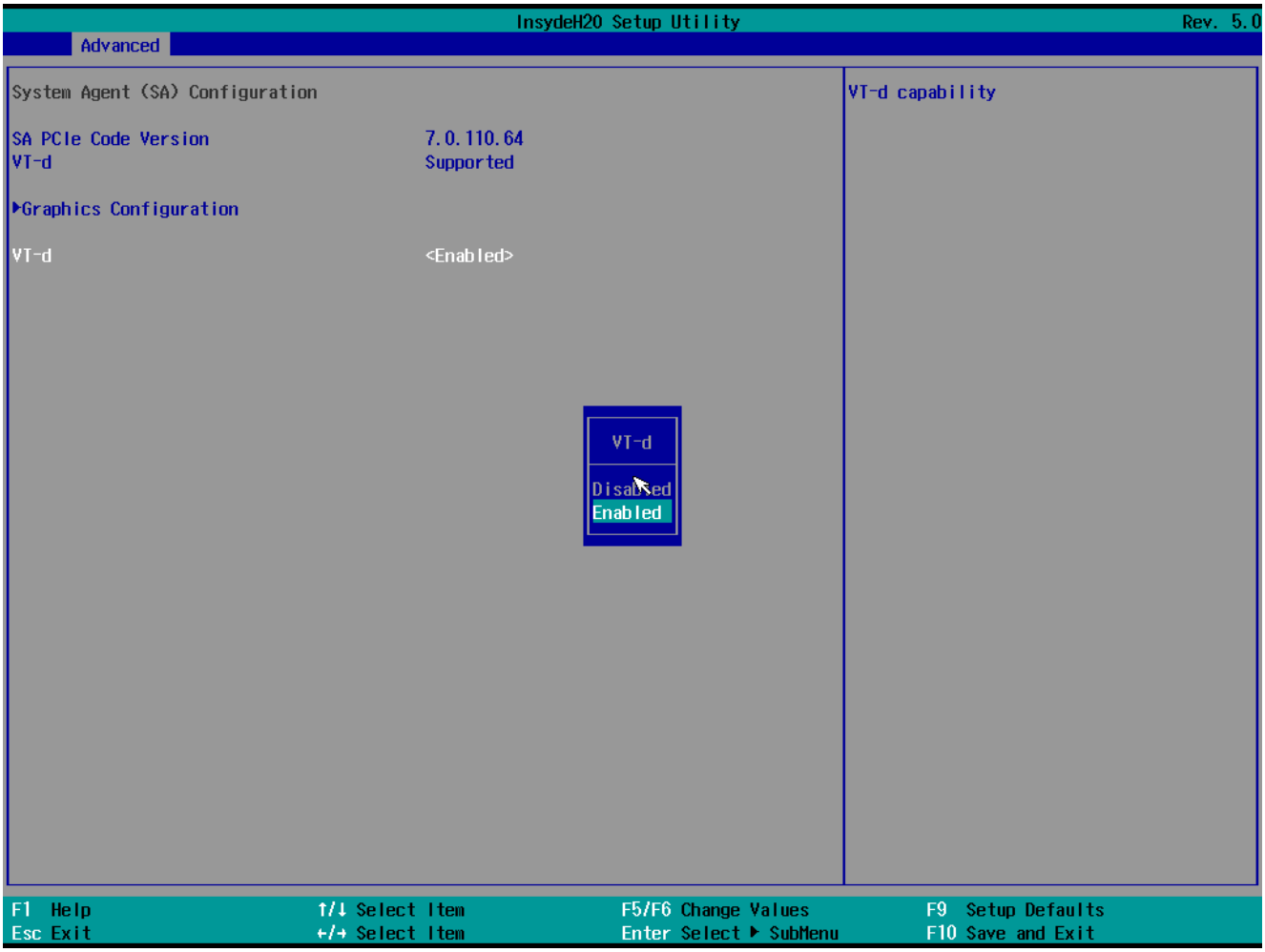
BIOS Setting	Description	Setting Option	Effect
Graphics Configuration	Configure Graphics Configuration parameters	Enter	Opens sub-menu
Vt-d	Intel® Virtualization Technology for Directed I/O	Enabled Disabled	Vt-d capability

4.2.2.11.1 Graphics Configuration



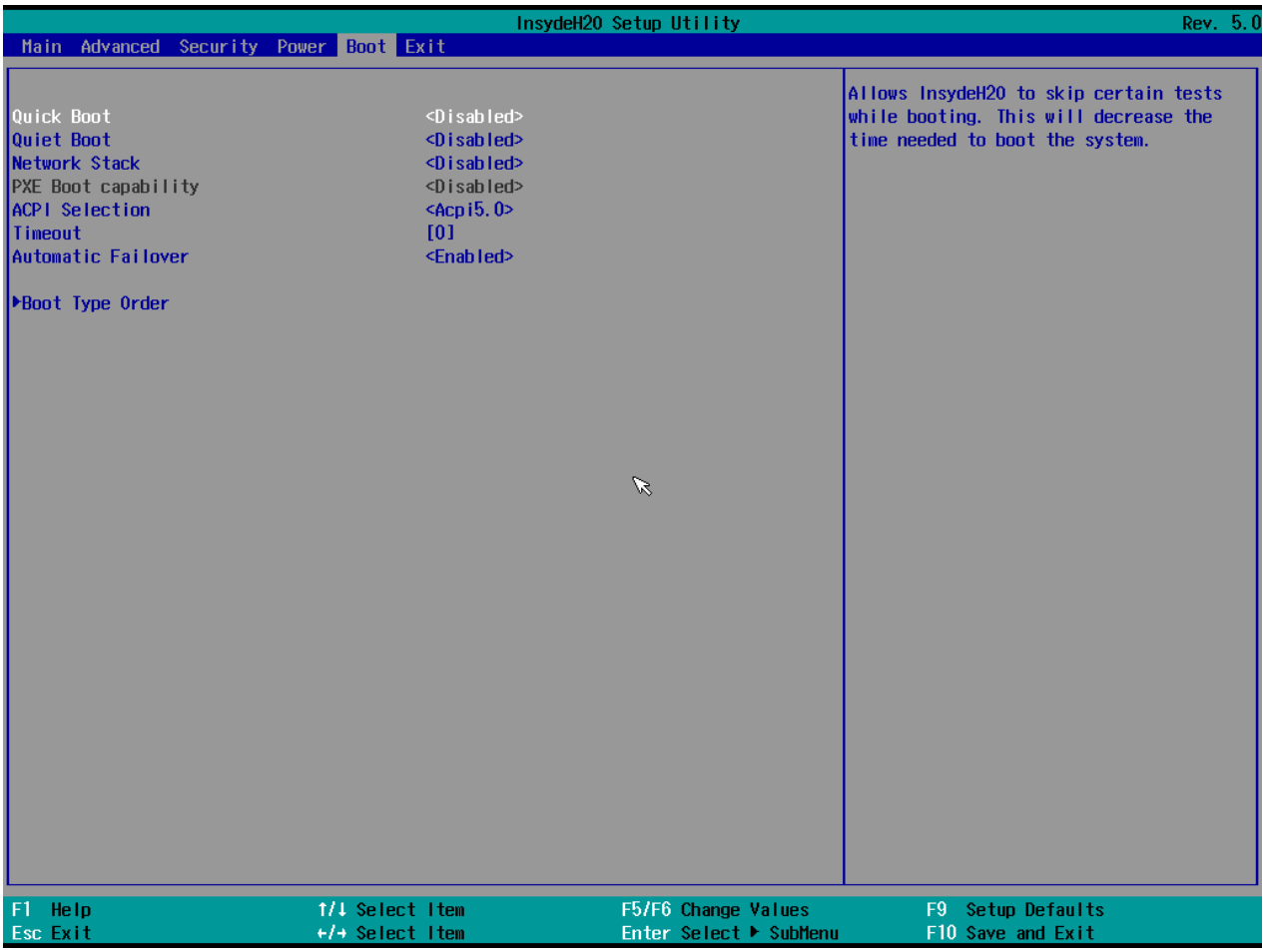
BIOS Setting	Description	Setting Option	Effect
Internal Graphics	Internal Graphics settings	Auto Enabled Disabled	Keep IGFX enabled based on the setup options
Aperture Size	Select the aperture size	128MB 256MB 512MB 1024MB 2048 MB	Select the aperture size *Note: Above 4MB MMIO BIOS assignment is automatically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

4.2.2.11.2 Vt-d

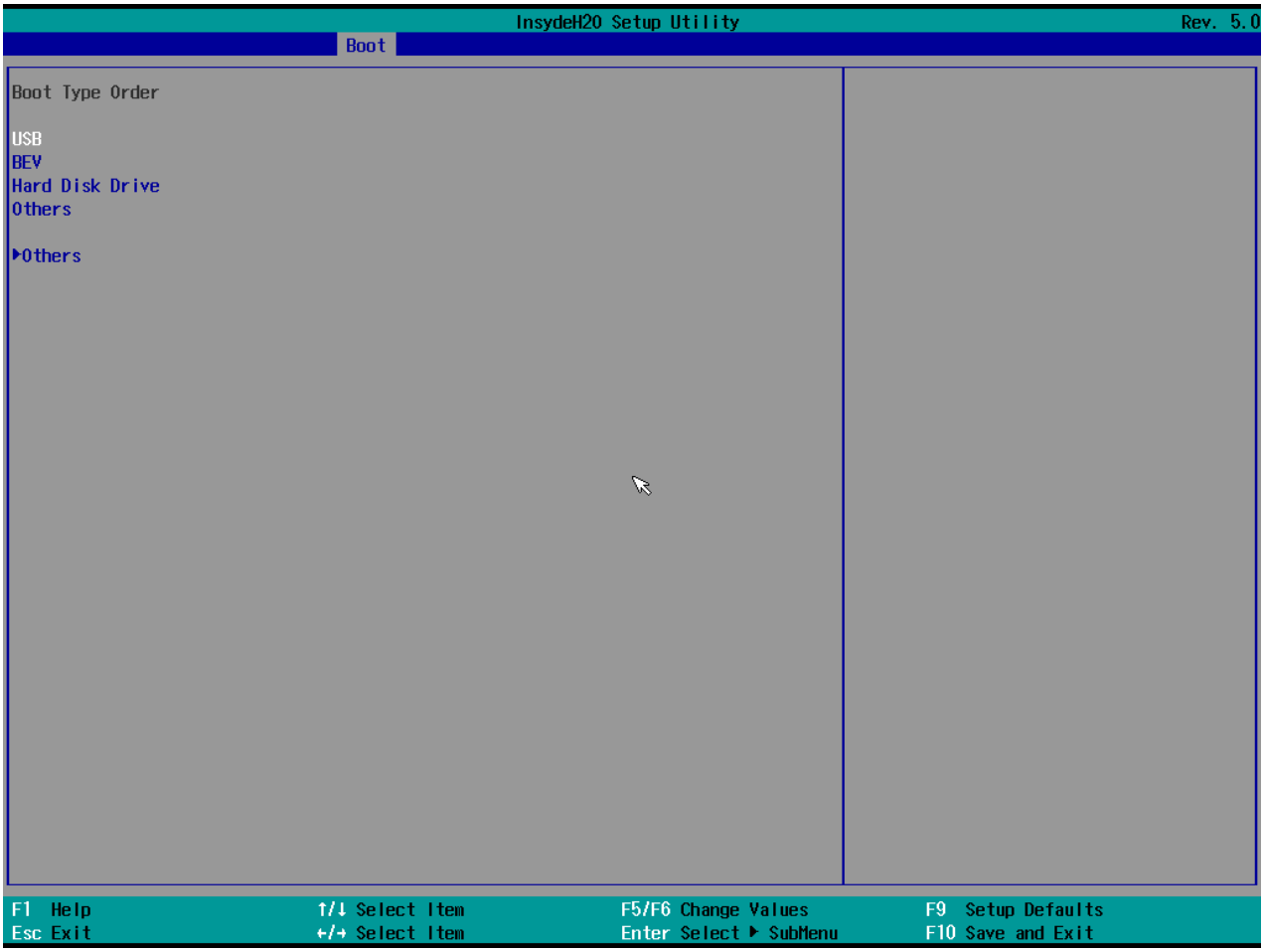


BIOS Setting	Description	Setting Option	Effect
Vt-d	Intel® Virtualization Technology for Directed I/O	Enabled Disabled	Vt-d capability

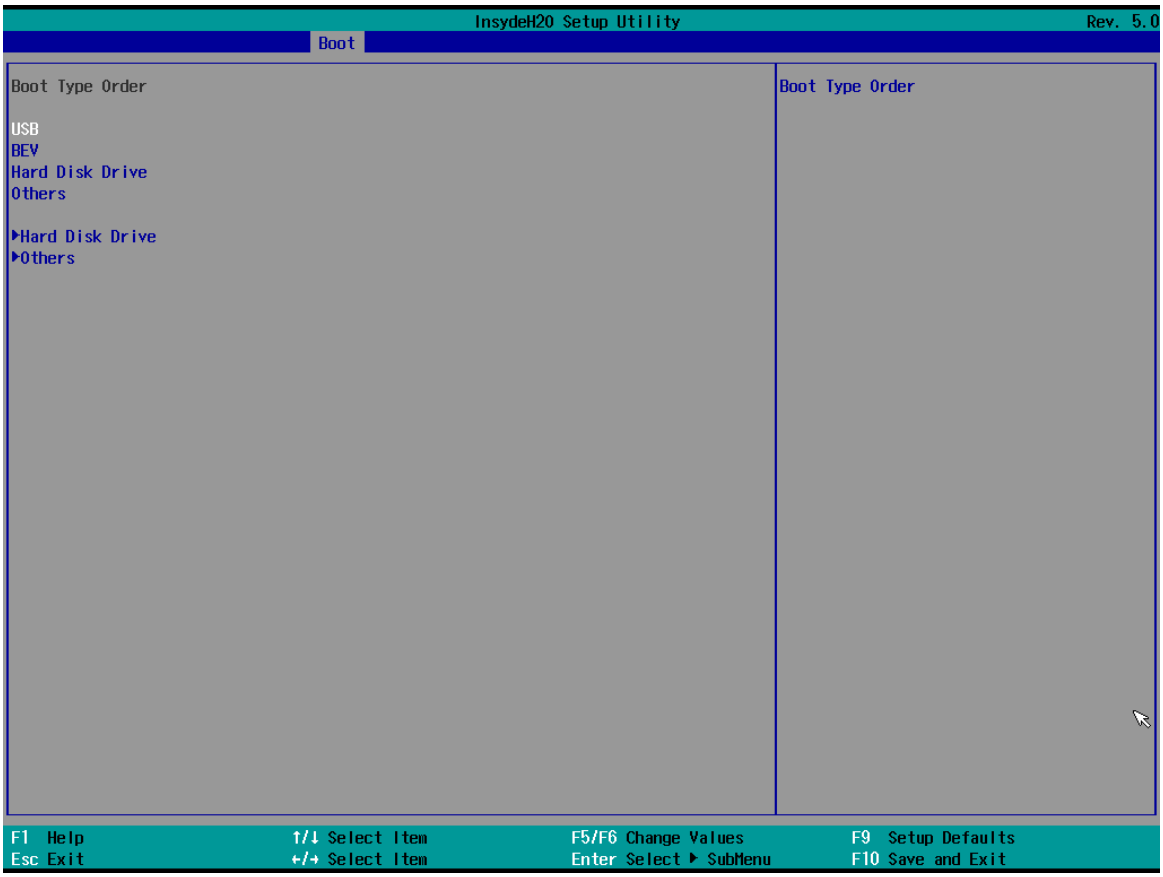
4.2.3 Boot



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

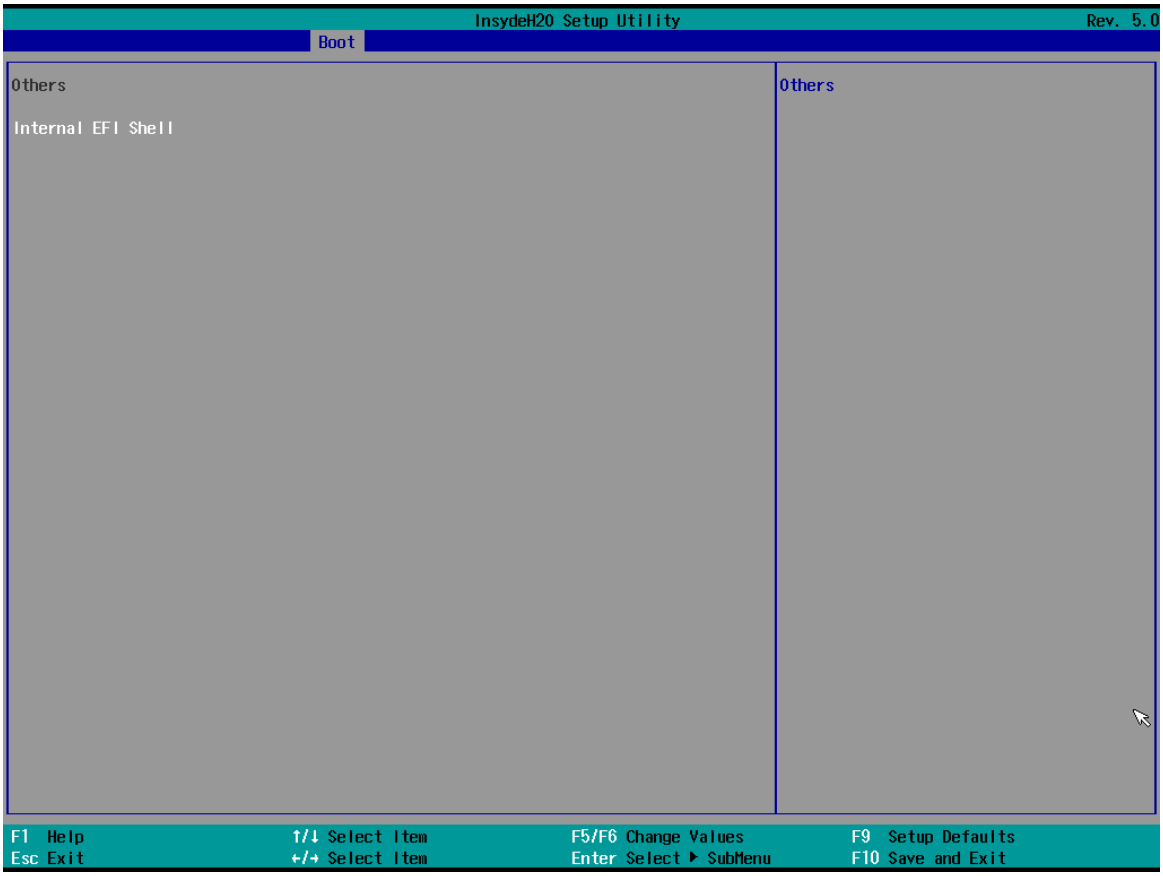

InsydeH20 Setup Utility
Rev. 5.0
Boot
Boot Type Order
USB
BEV
Hard Disk Drive
Others
▶Others
F1 Help
Esc Exit
↑/↓ Select Item
←/→ Select Item
F5/F6 Change Values
Enter Select ▶ SubMenu
F9 Setup Defaults
F10 Save and Exit

4.2.3.1 Boot Type Order

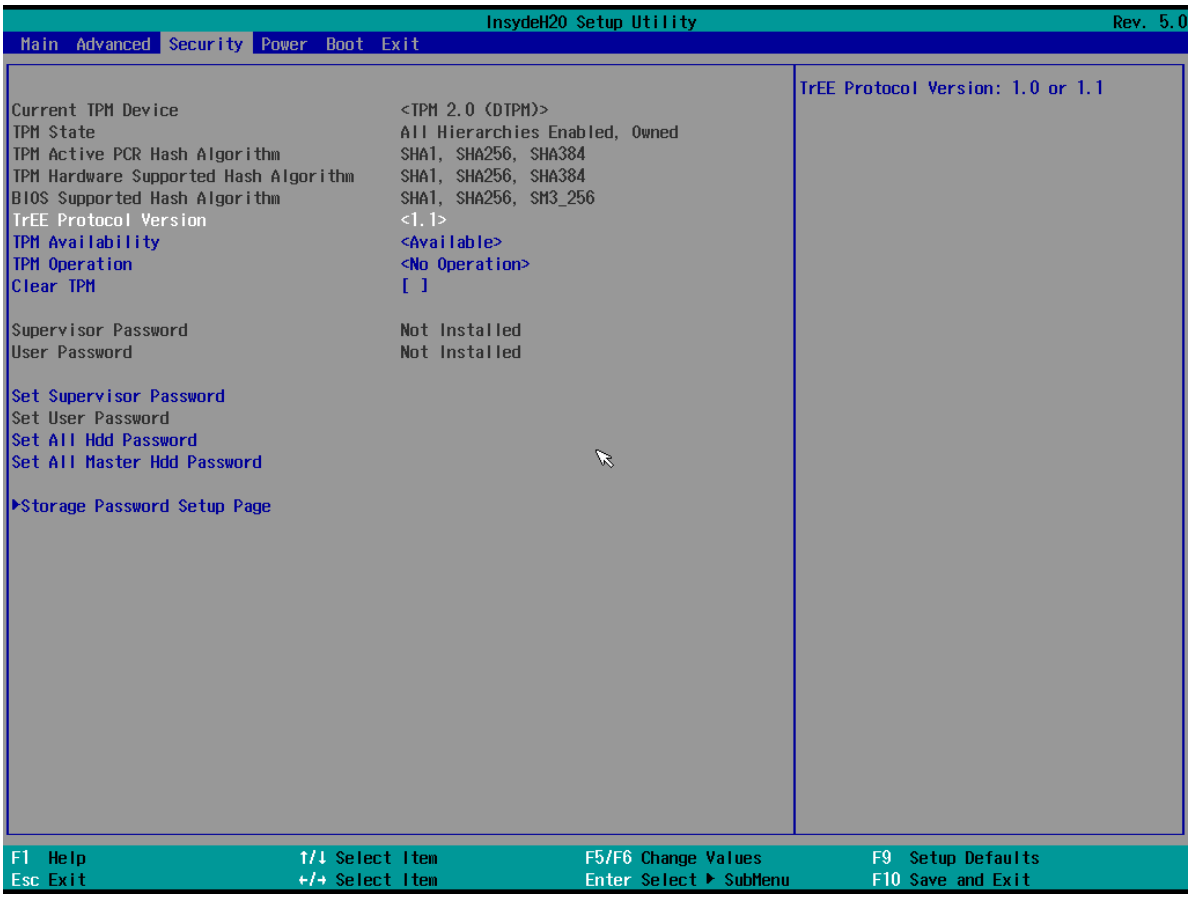


BIOS Setting	Description	Setting Option	Effect
Hard Disk Type	Hard Disk Type configuration	Enter	Opens Sub-menu
Others	Other configuration	Enter	Opens Sub-menu

4.2.3.1.1 Others

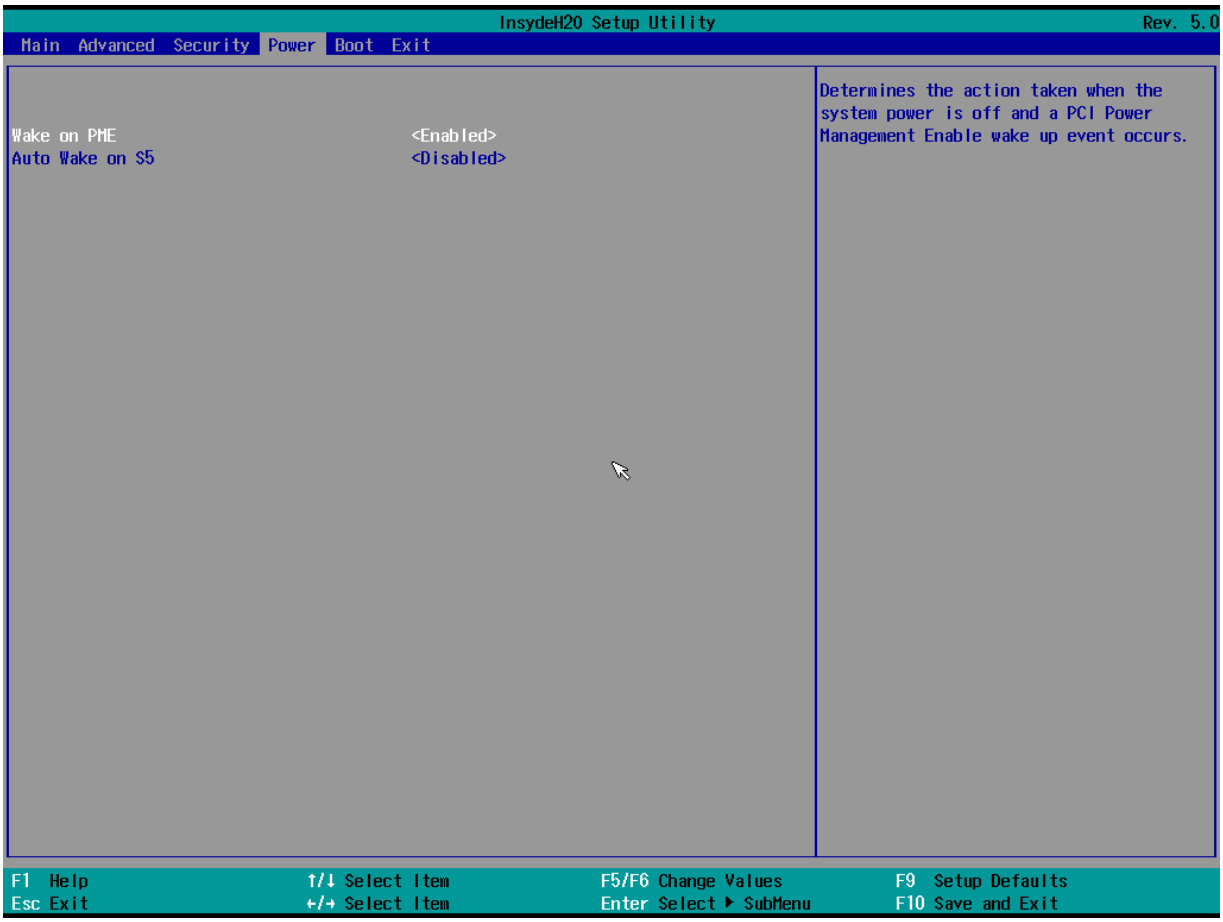


4.2.4 Security



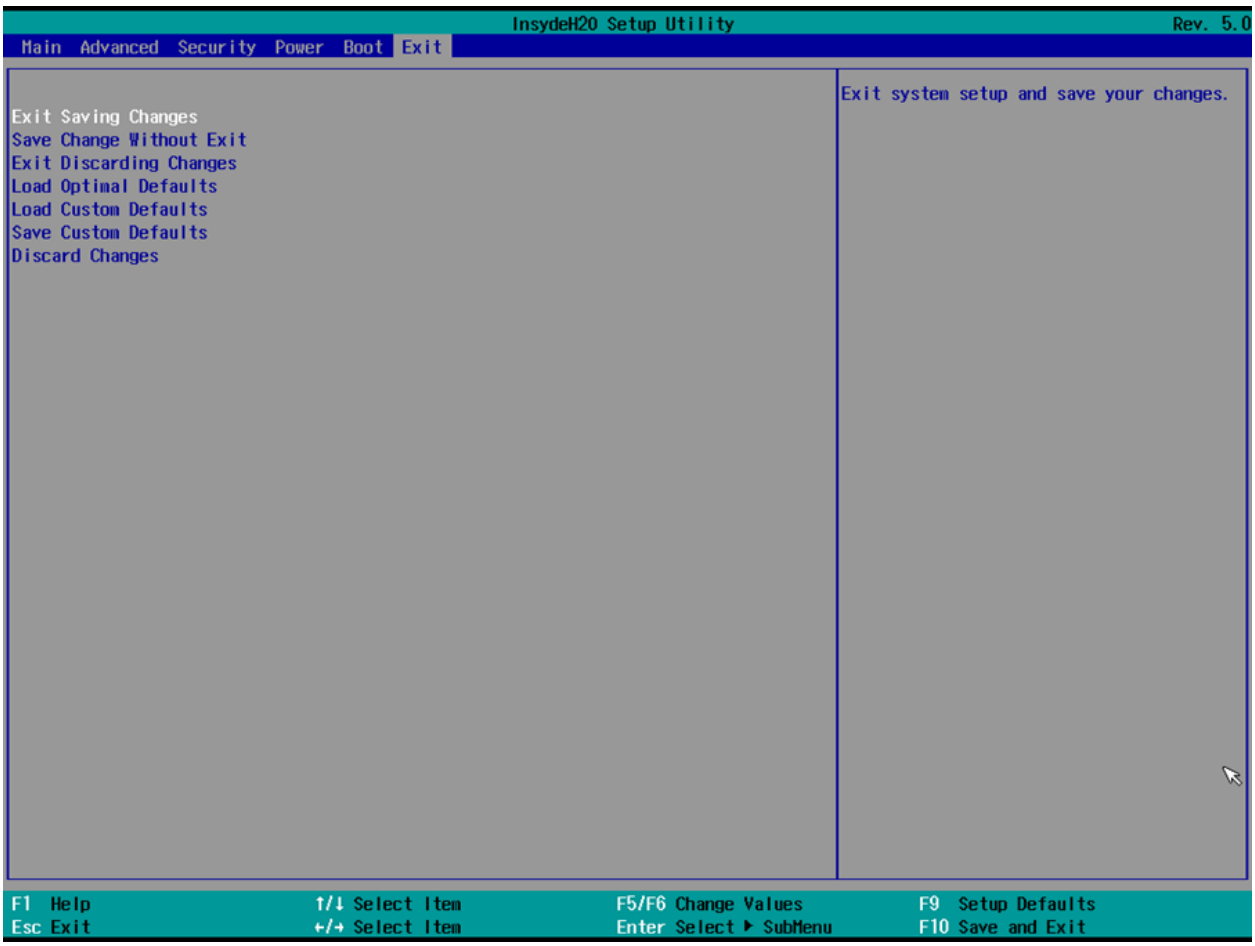
BIOS Setting	Description	Setting Option	Effect
TrEE Protocol Version	Choose TrEE Protocol Version	1.0 1.1	TrEE Protovol Version: 1.0 or 1.1
TPM Availability	TPM Availability configuration	Available Hidden	When hidden don't exposes TPM to 0
TPM Operation	TPM Operation configuration	[ ]	Select one of the 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

4.2.5 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

4.2.6 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 the PCI/ PCIe card and CFast 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 **Tab+ F6** 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.

Wait the recovery process to complete. During the recovery process, a command prompt will show up to indicate the percent of recovery process complete. The system will restart automatically after recovery completed.

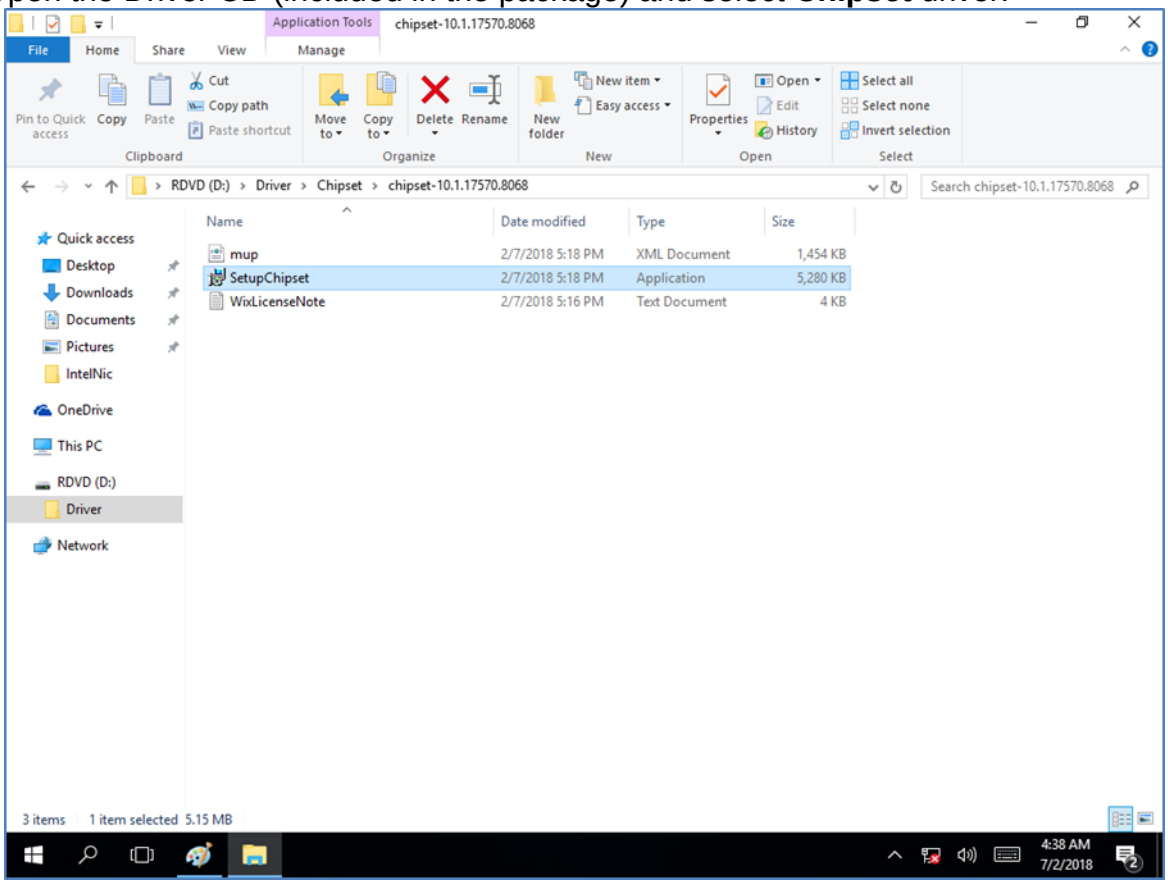
Chapter 5: Driver Installation

This chapter provides guideline to driver installation.

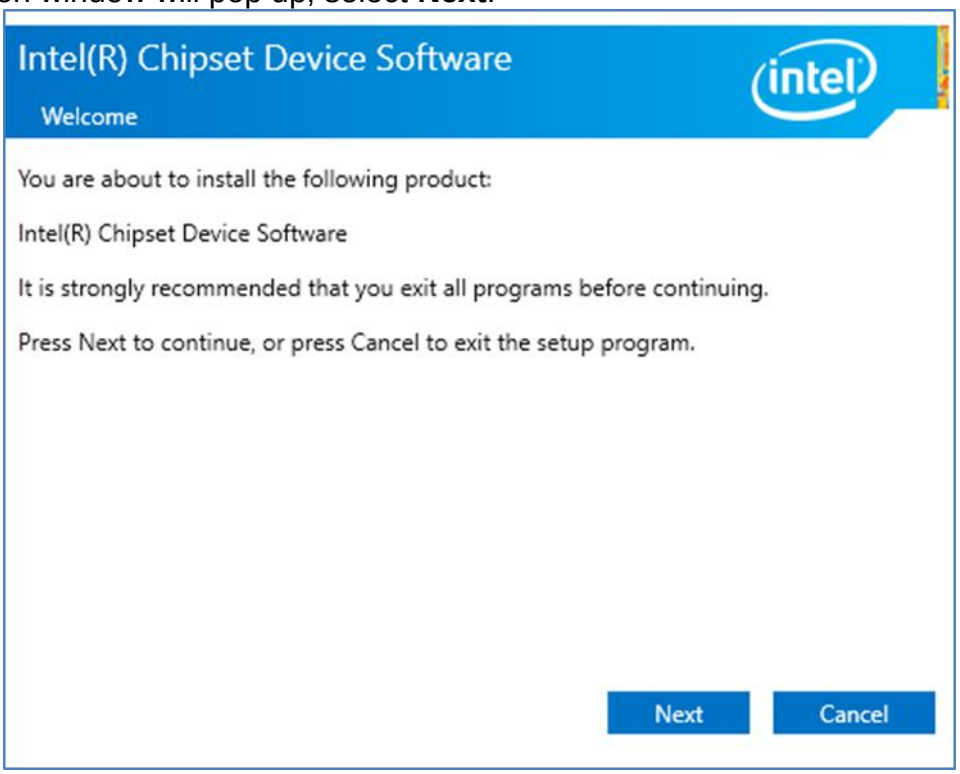
5.1 Chipset Driver

Follow instructions below to install Chipset driver.

1. Open the Driver CD (included in the package) and select **Chipset** driver.

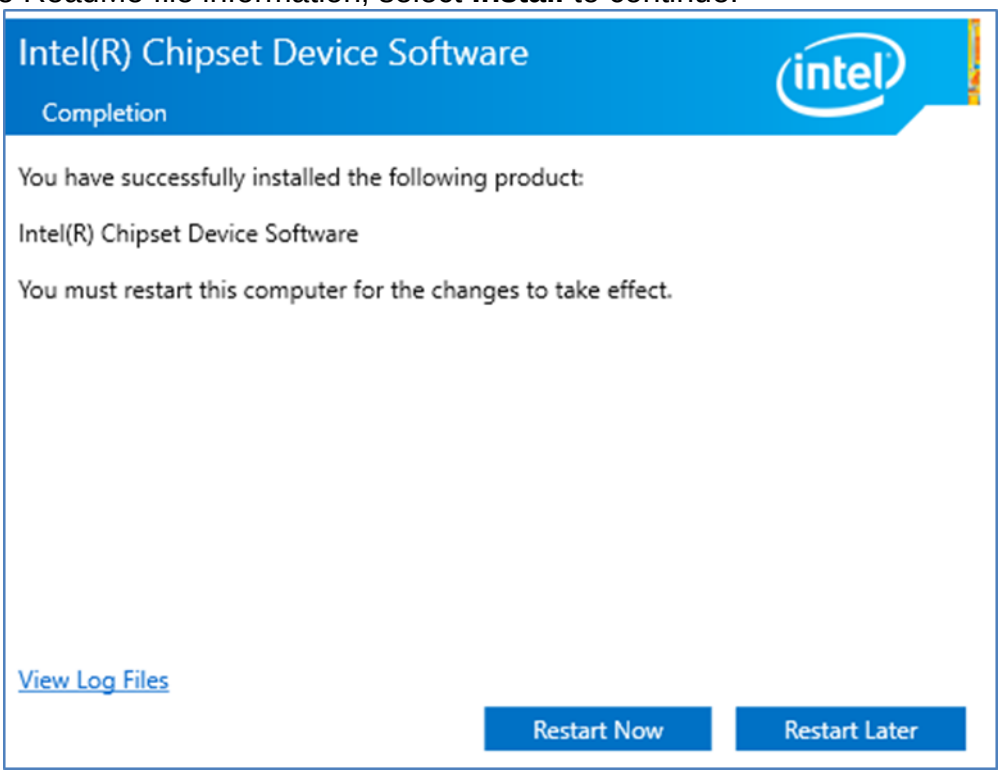


2. Installation window will pop up, select **Next**.

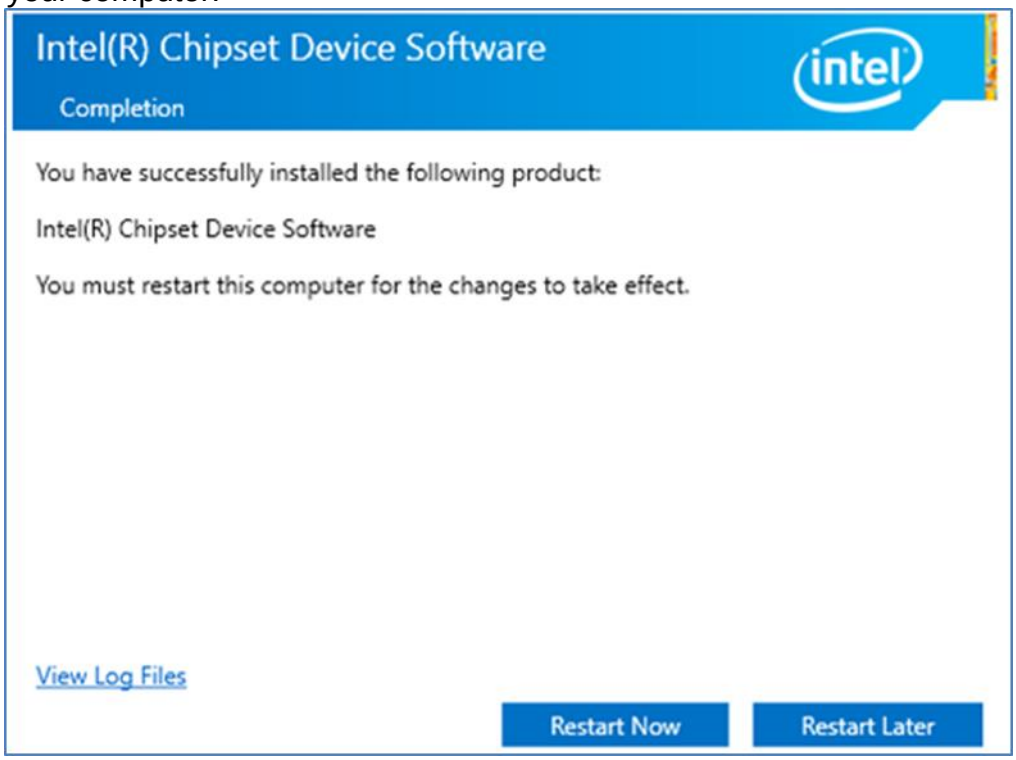


3. Select **Accept** to agree with the terms of license agreement.

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



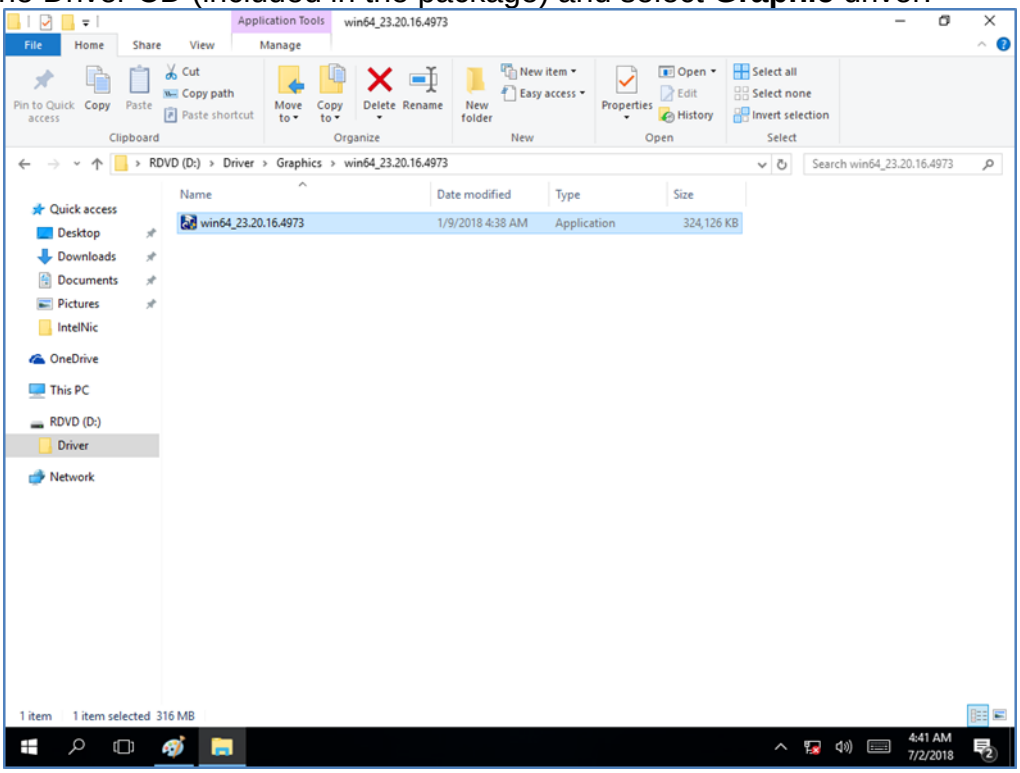
5. Wait for the driver to be installed. When installation completed, select **Restart Now** to restart your computer.



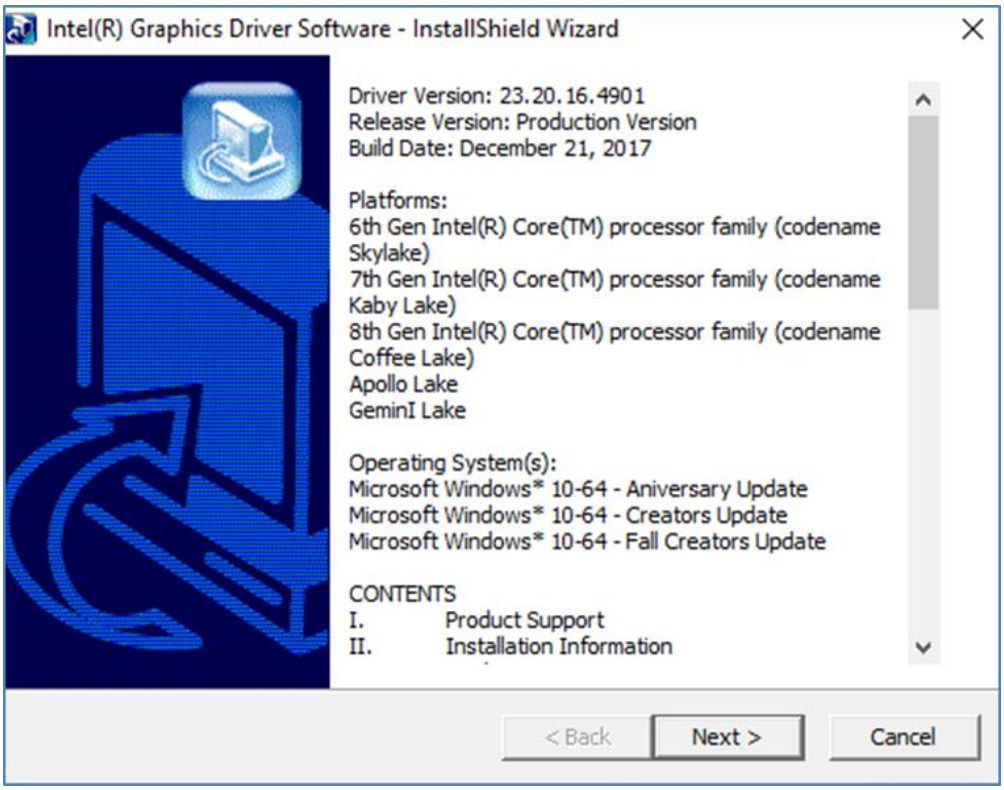
5.2 Graphic Driver

Follow instructions below to install Graphic driver.

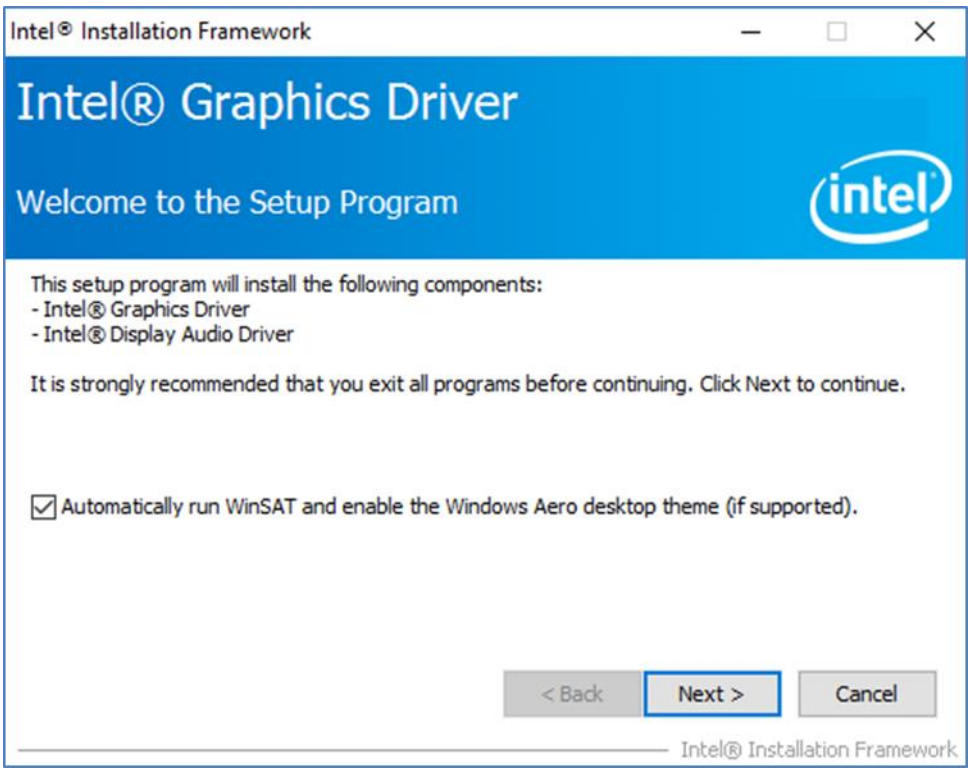
1. Open the Driver CD (included in the package) and select **Graphic** driver.

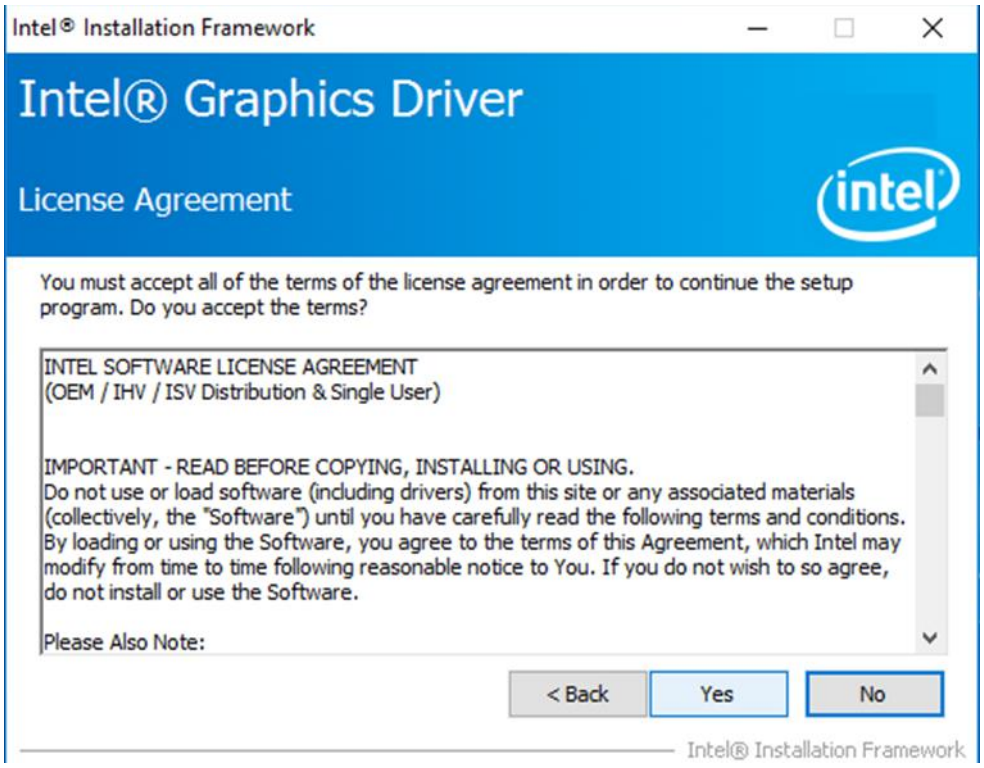


2. Installation window will pop up, select **Next**.

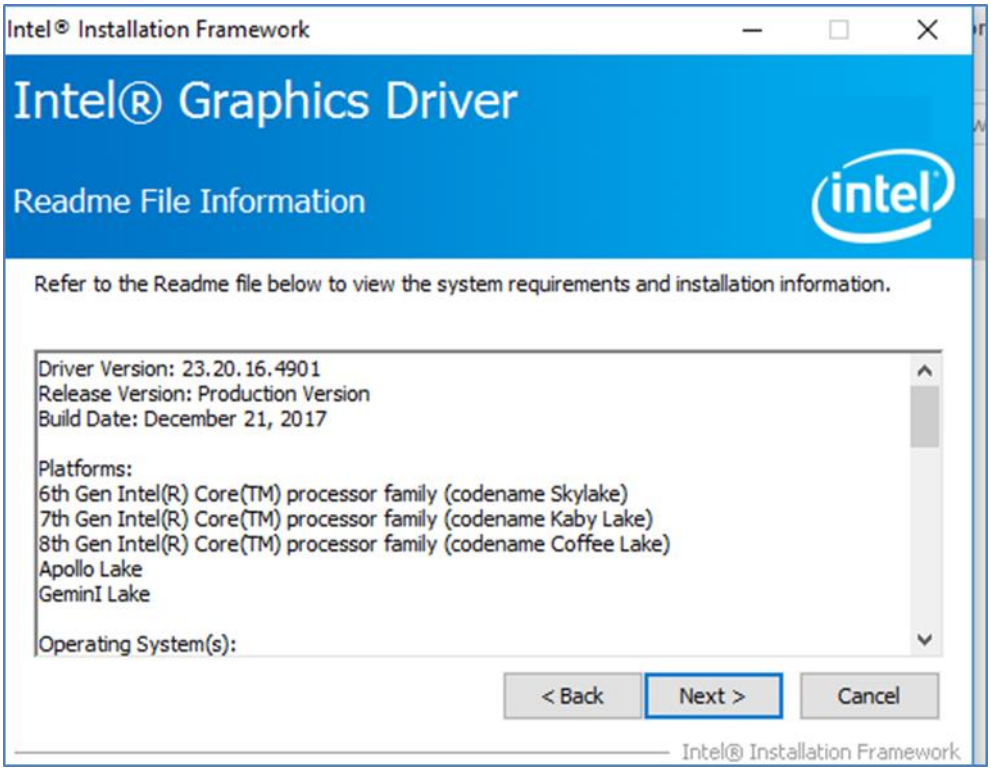


3. Select Accept to agree with the terms of license agreement.

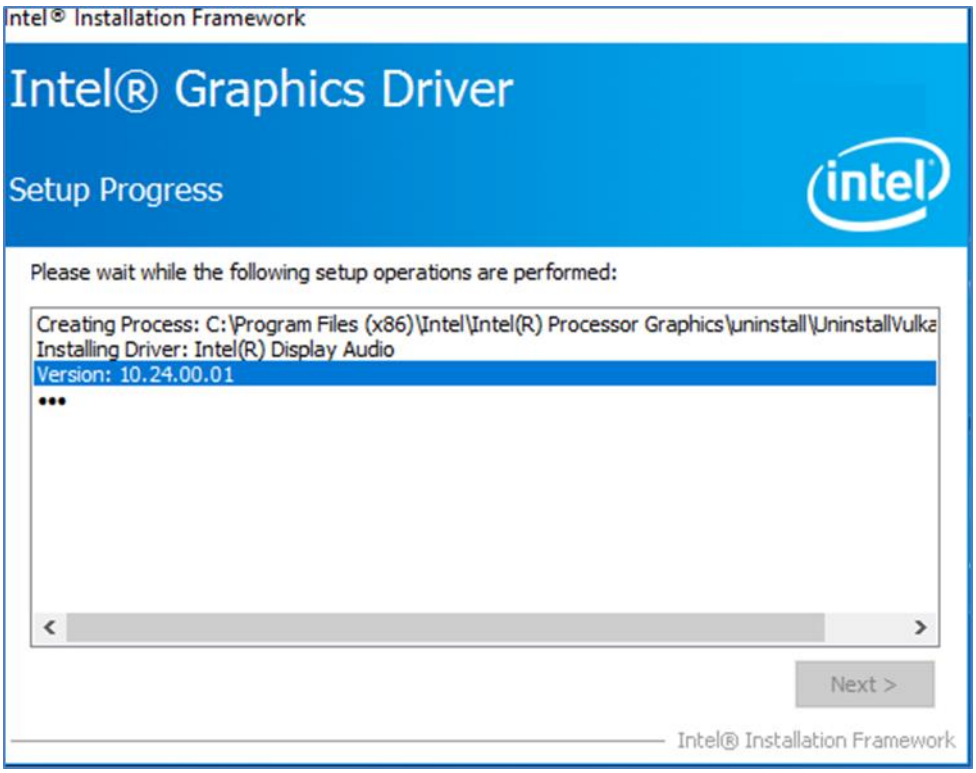




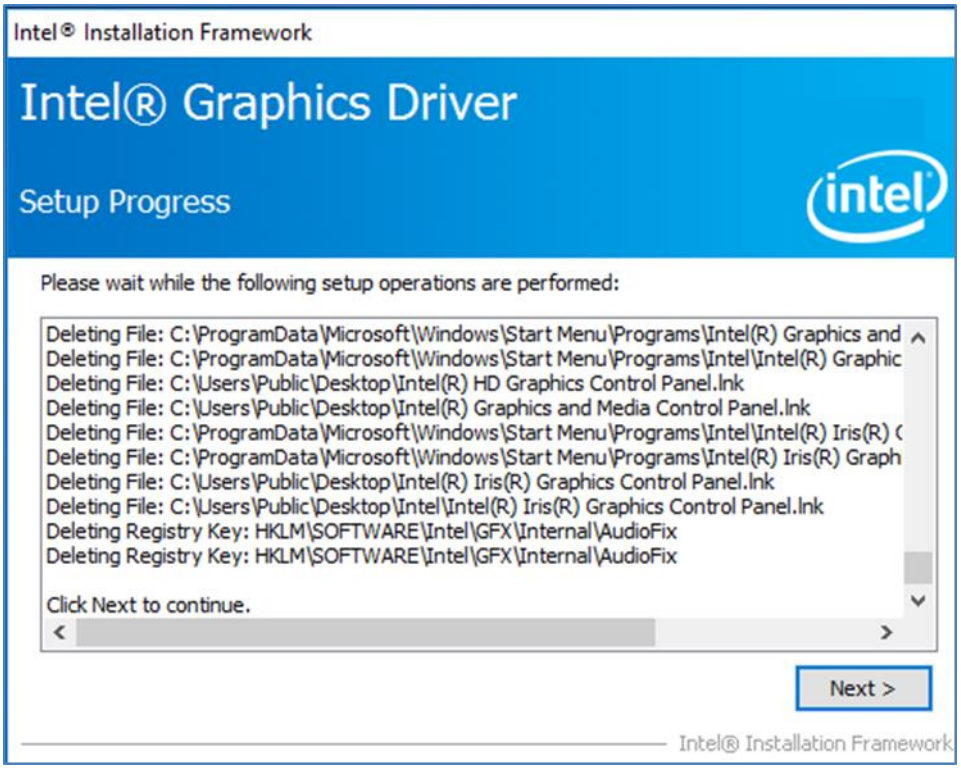
4. Check the ReadMe file information, select **Next** to continue.



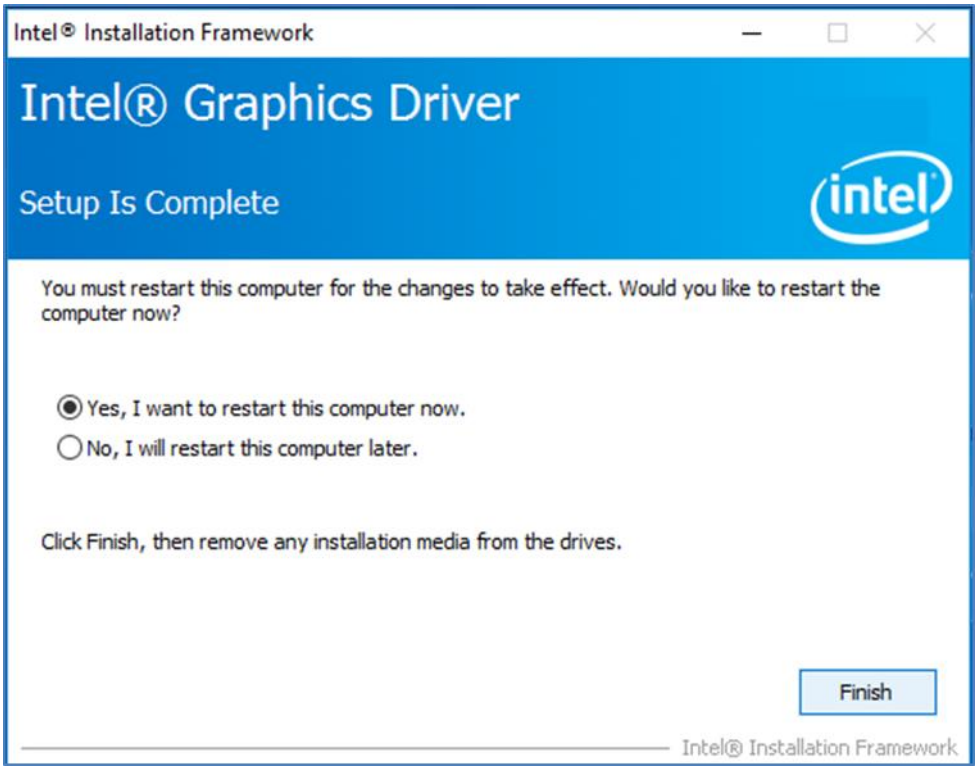
5. Wait for the driver to be installed.



6. Select **Next** to continue.



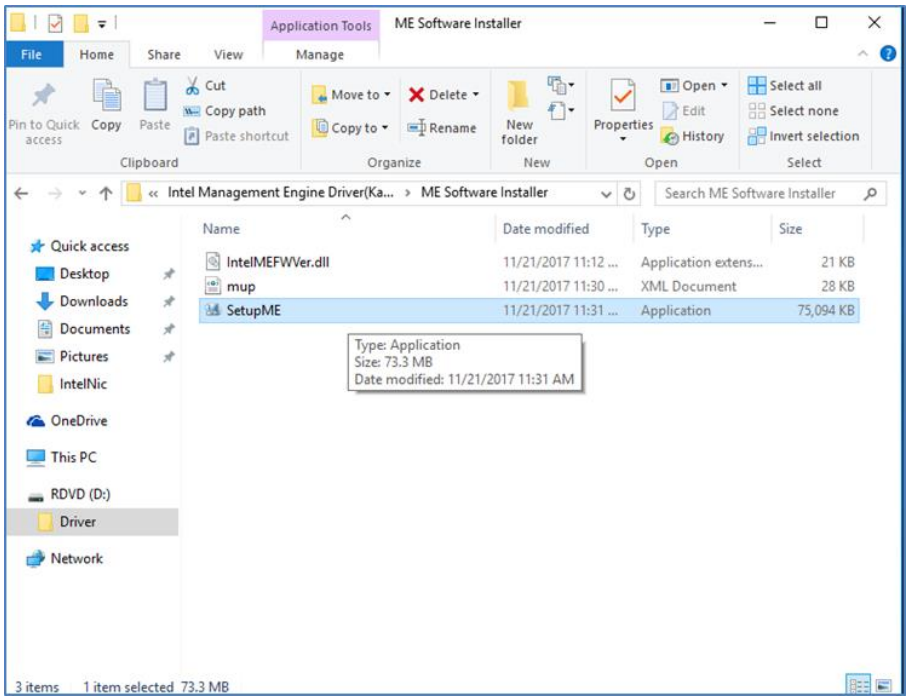
7. After installation is completed, select "**Yes, I want to restart this computer now**", and click **Finish**.



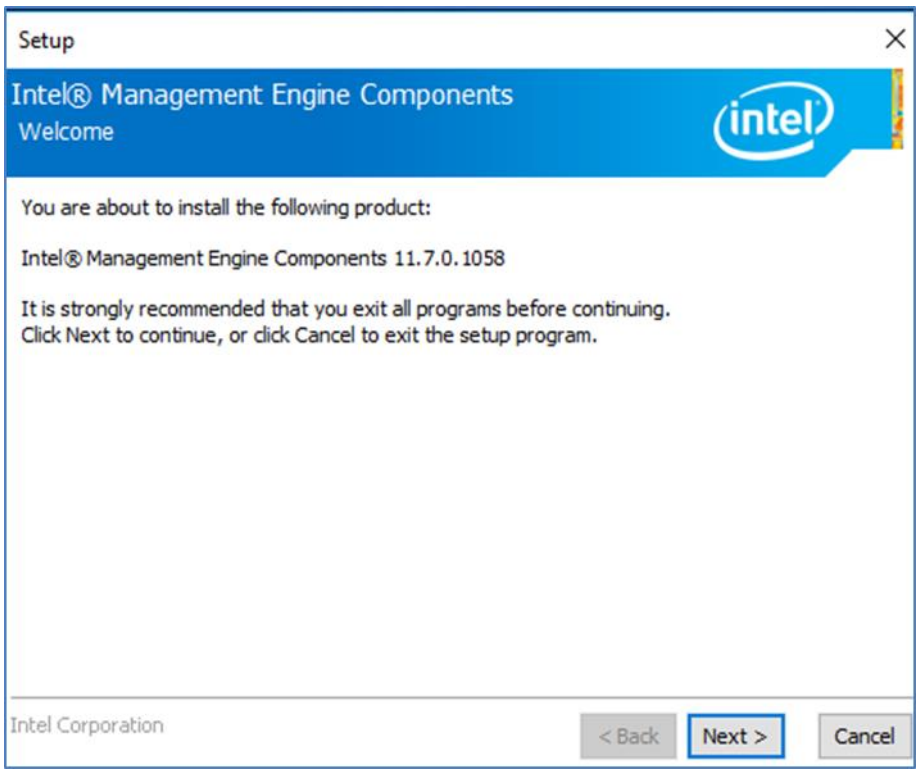
5.3 Management Engine (ME)

Follow instructions below to install Management Engine (ME) .

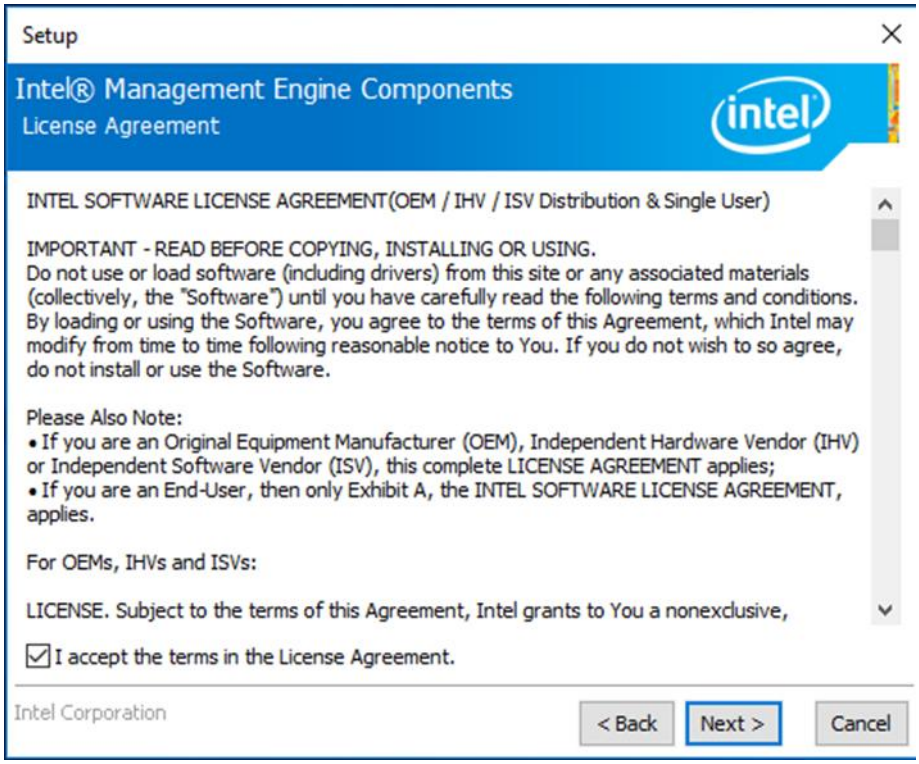
1. Open the Driver CD (included in the package) and select **ME** driver.



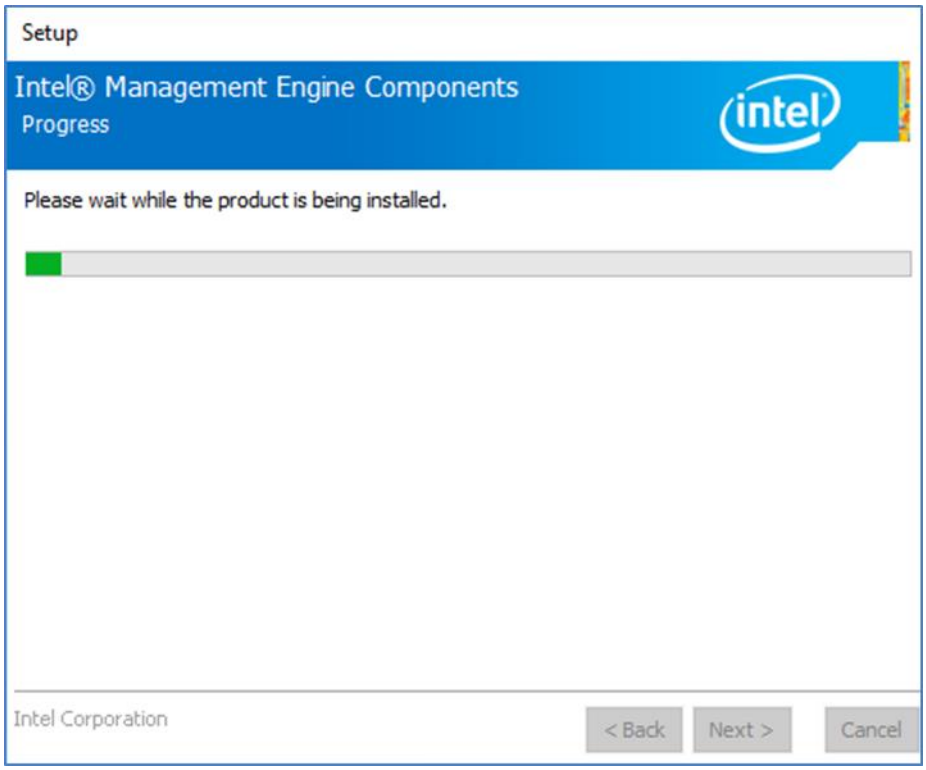
2. Select **Next** to start the installation.



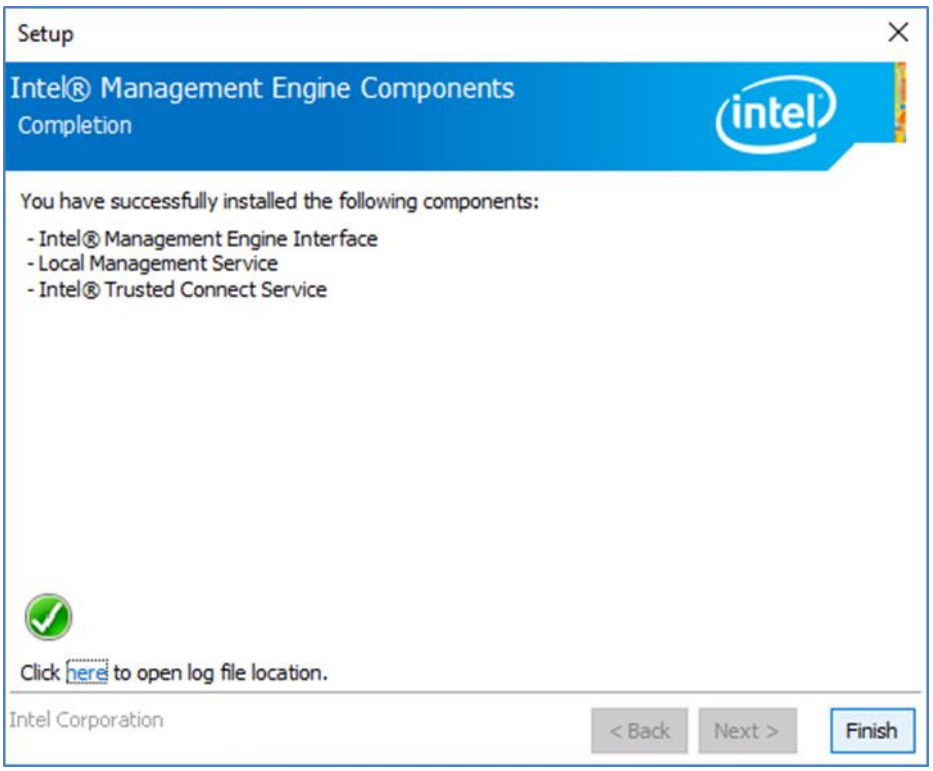
3. Select **Next** to agree with the terms of license agreement.



4. Wait for the driver to be installed.



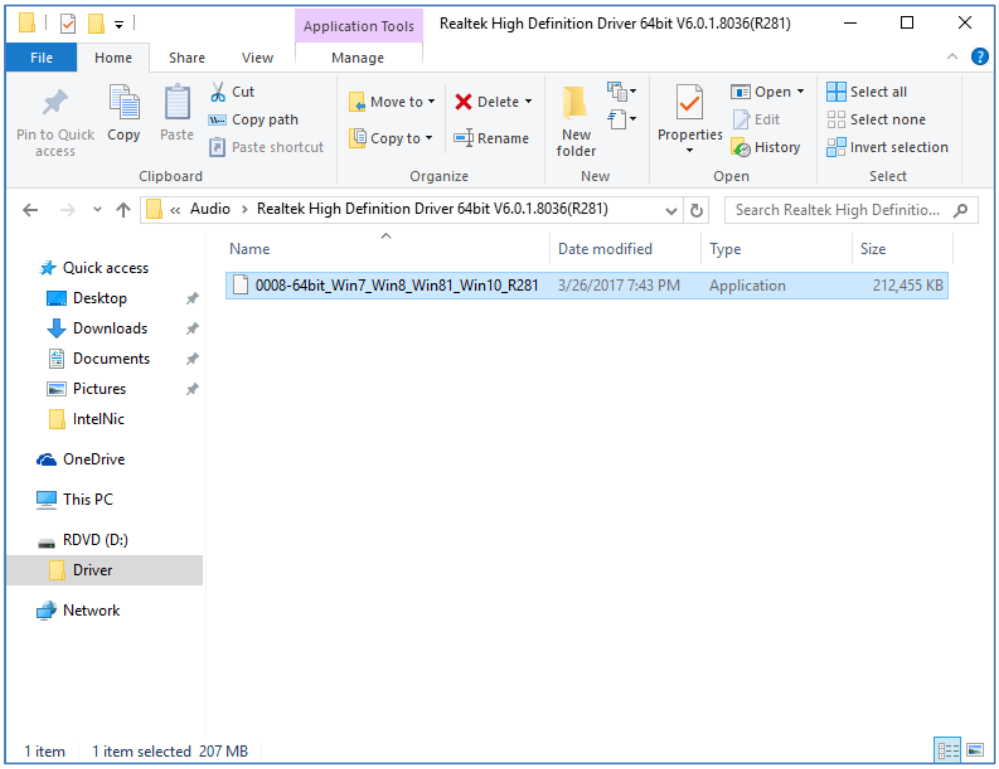
5. When installation completed, select **Finish** complete installation.



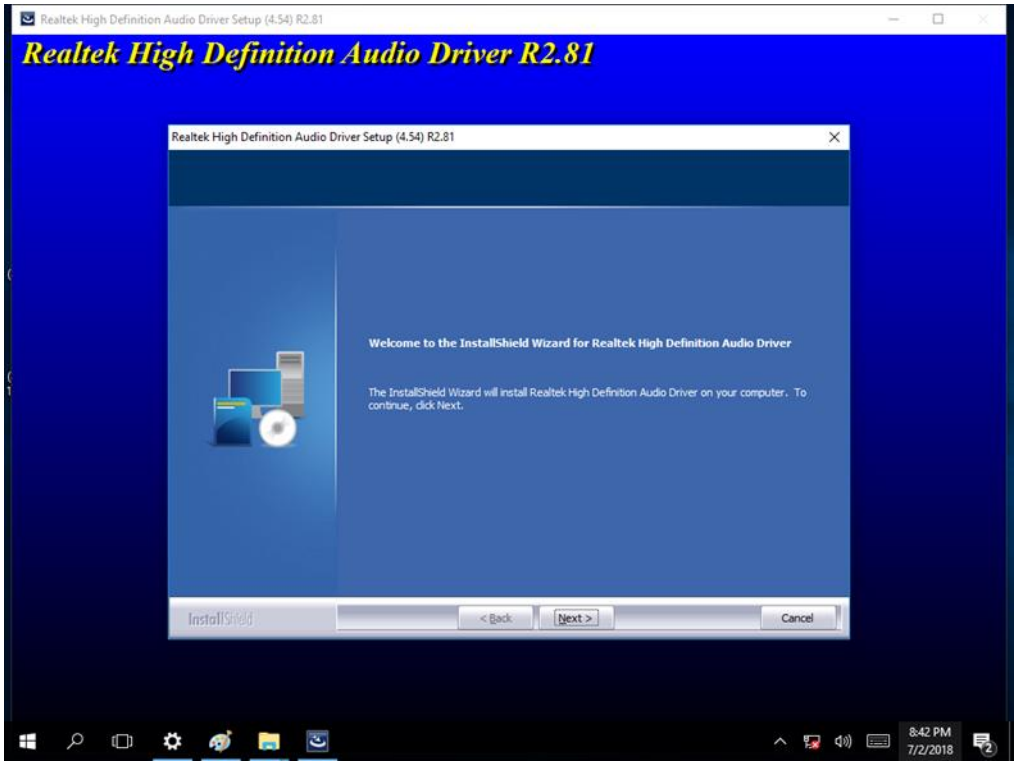
5.4 Audio Driver

Follow instructions below to install Audio driver.

1. Open the Driver CD (included in the package) and select **Audio** driver.



2. Select **Next** to continue.

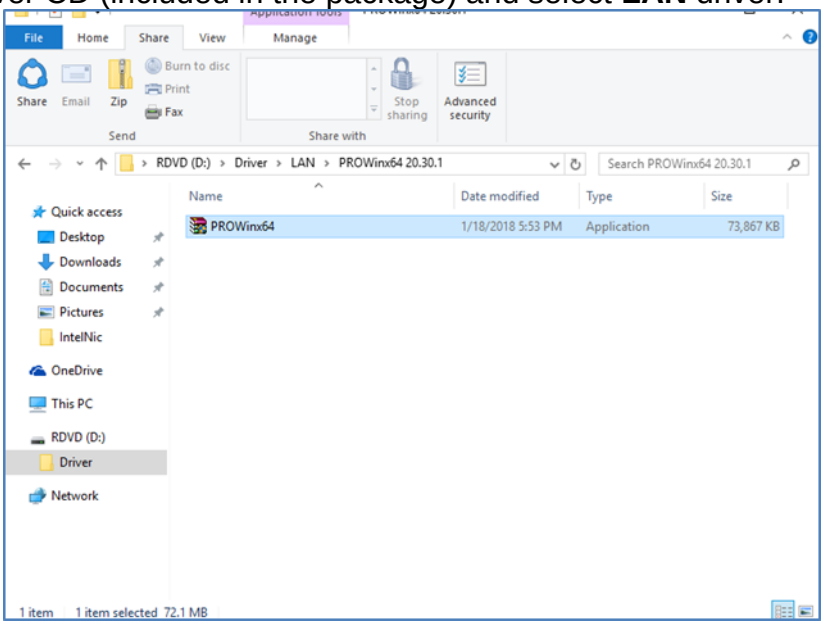


3. When installation completed, select **Finish** complete installation.

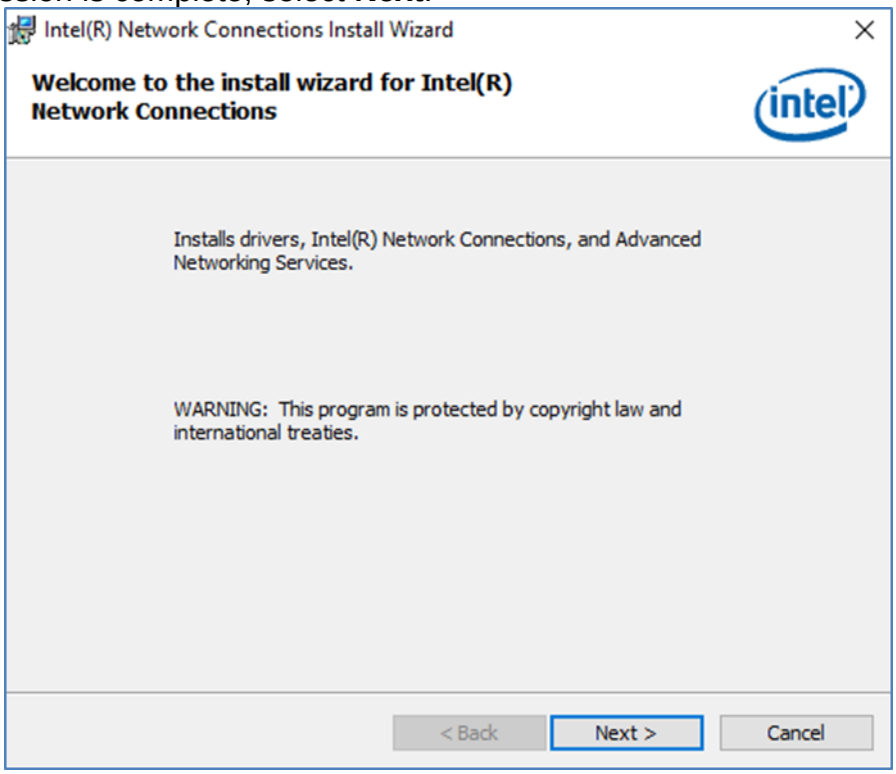
5.5 Ethernet Driver

Follow instructions below to install LAN driver.

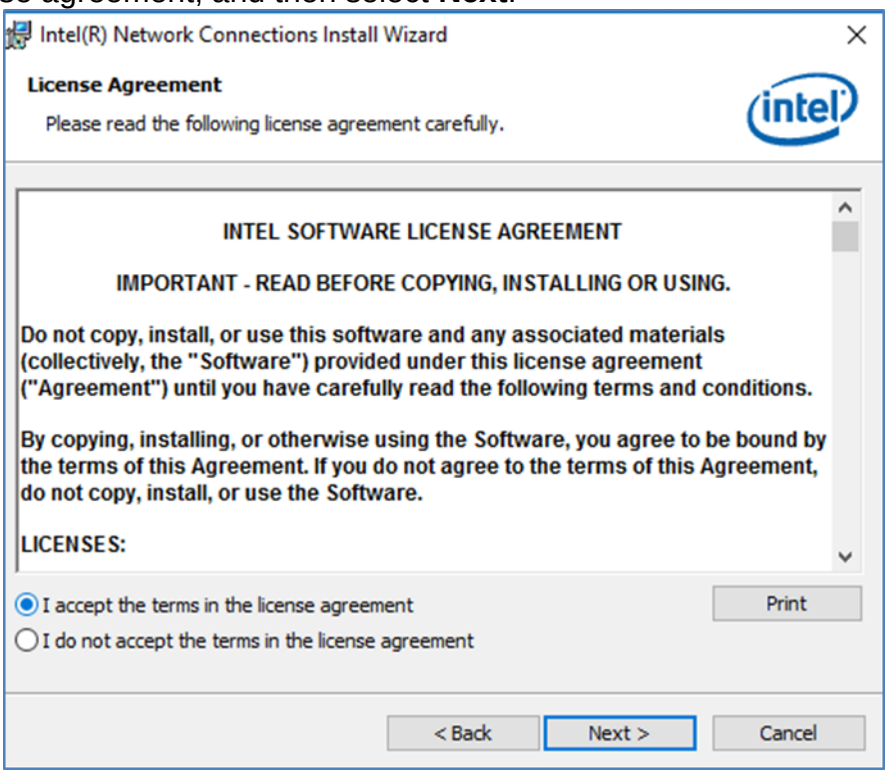
1. Open the Driver CD (included in the package) and select **LAN** driver.



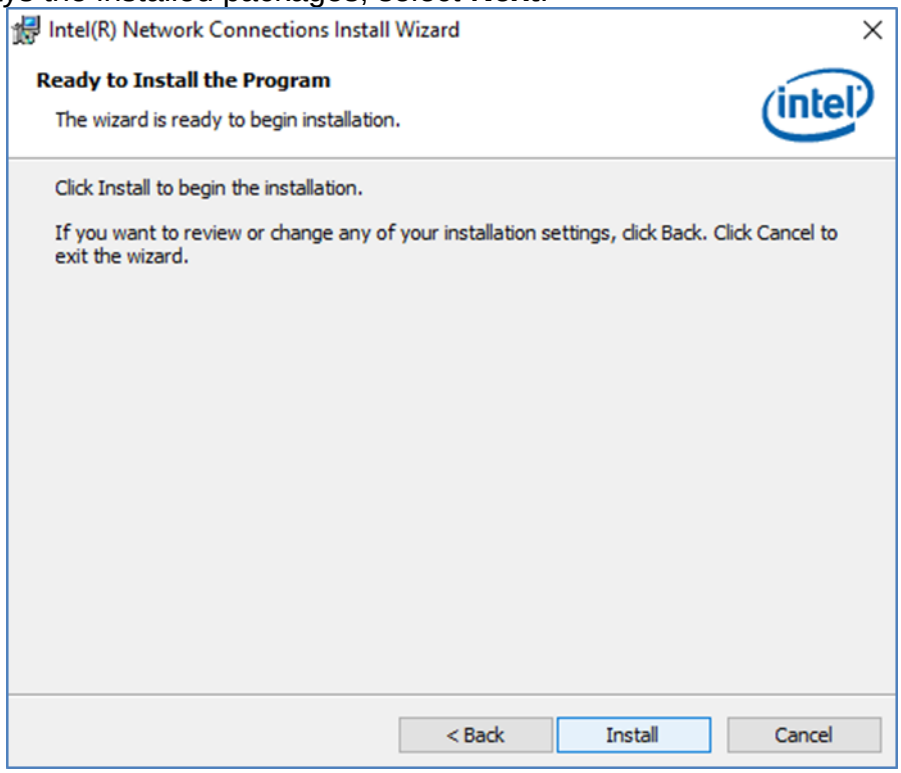
2. When compression is complete, select **Next**.



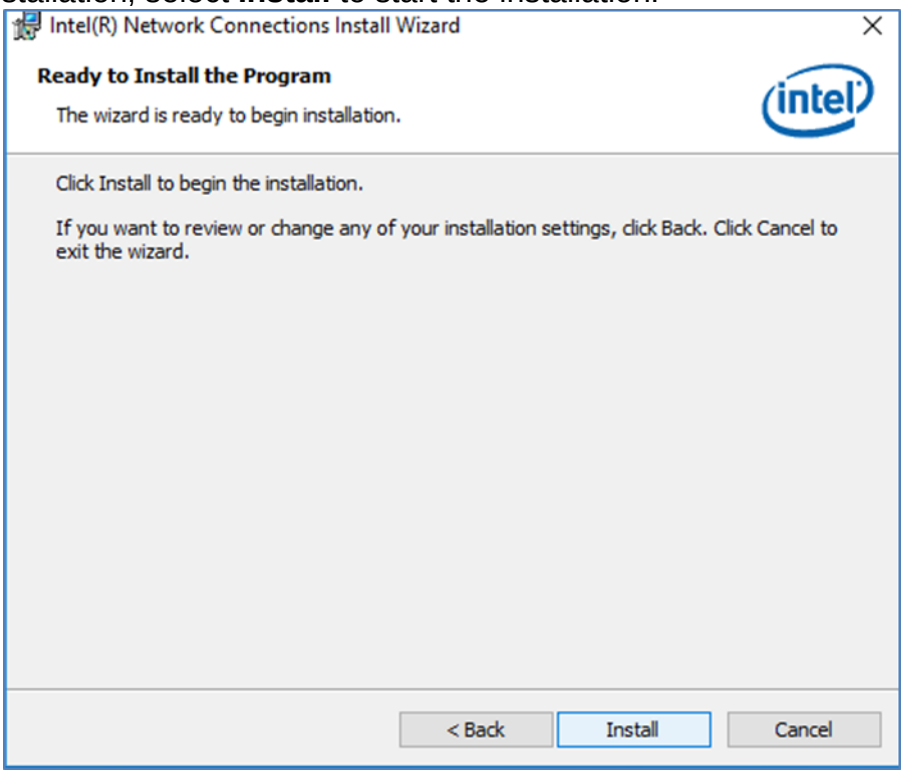
3. Read the license agreement, and then select **Next**.



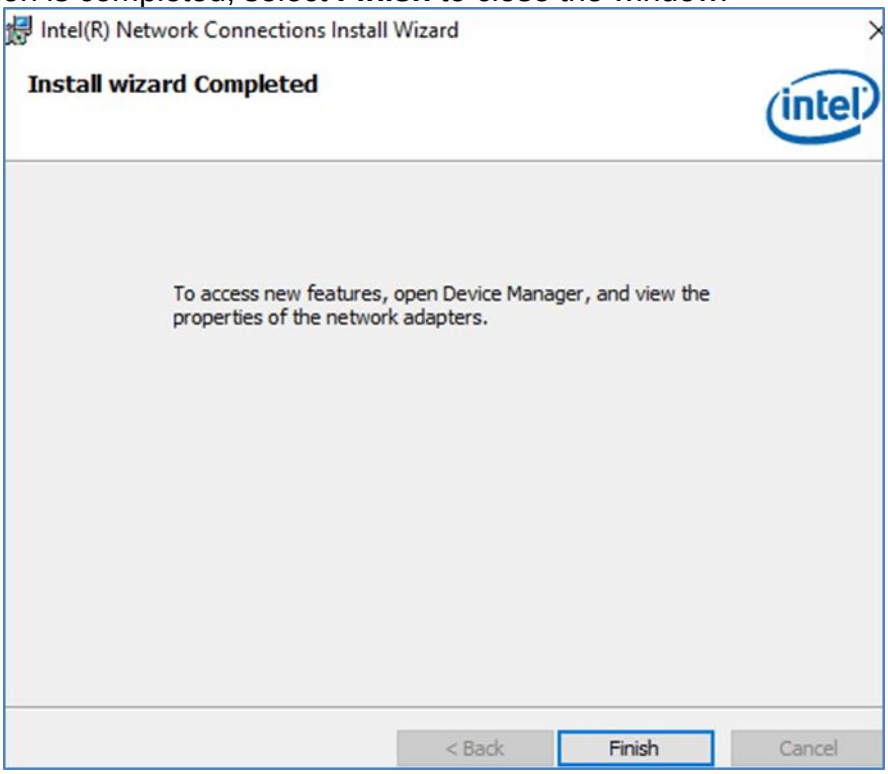
4. System displays the installed packages, select **Next**.



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



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

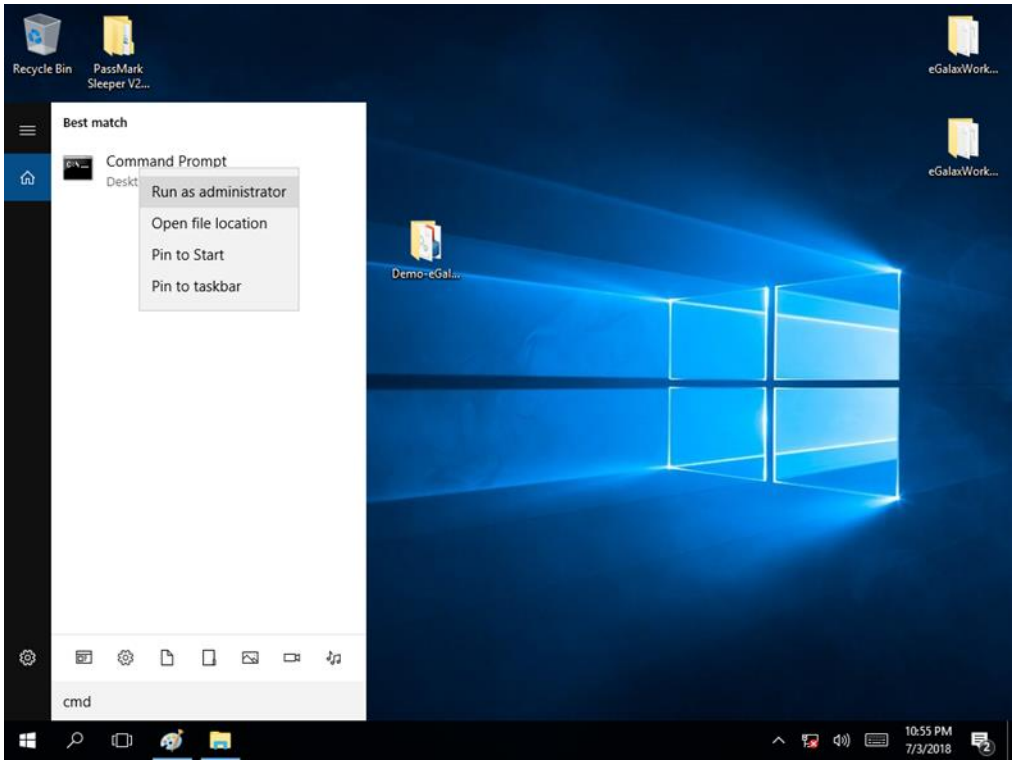


5.6 Watchdog Driver

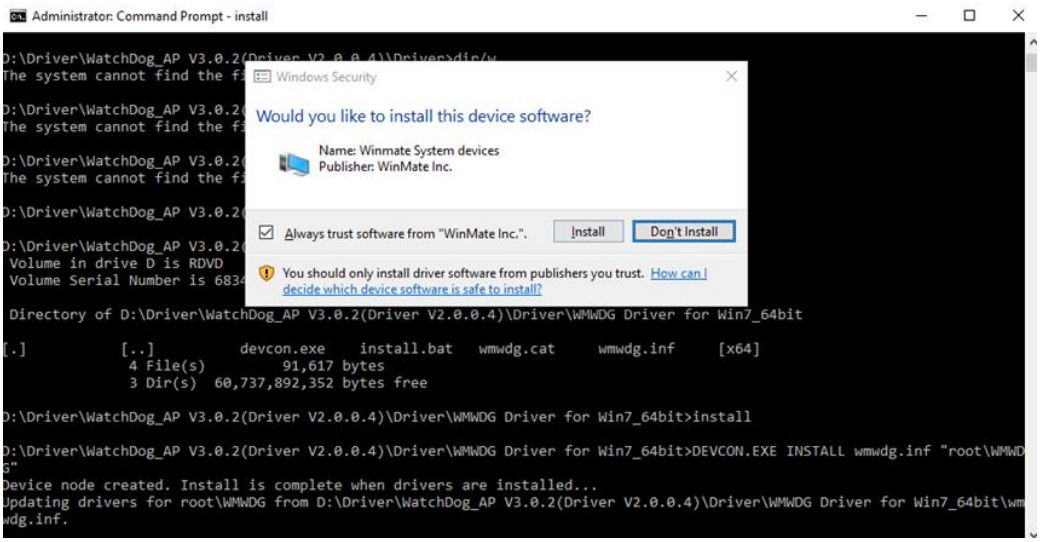
For more details about Winmate Watchdog, please download Watchdog Guide from Winmate Downloads Center or contact our sales representative.

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

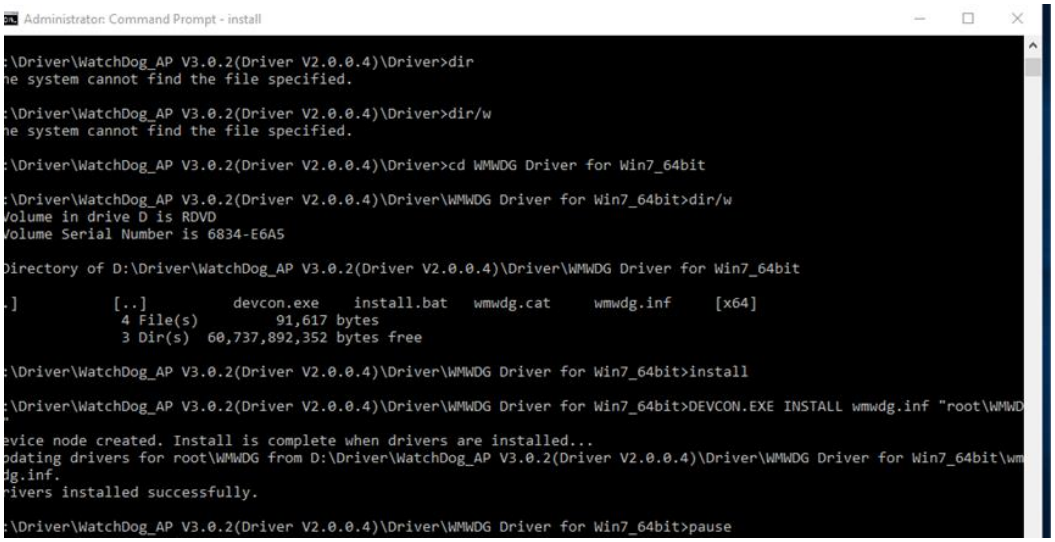
1. Type “cmd” in the run box then the cmd.exe will appear in programs.
2. Right click on the cmd.exe and click on “Run as administrator” to start Open the Driver CD (included in the package) and select Watchdog driver.



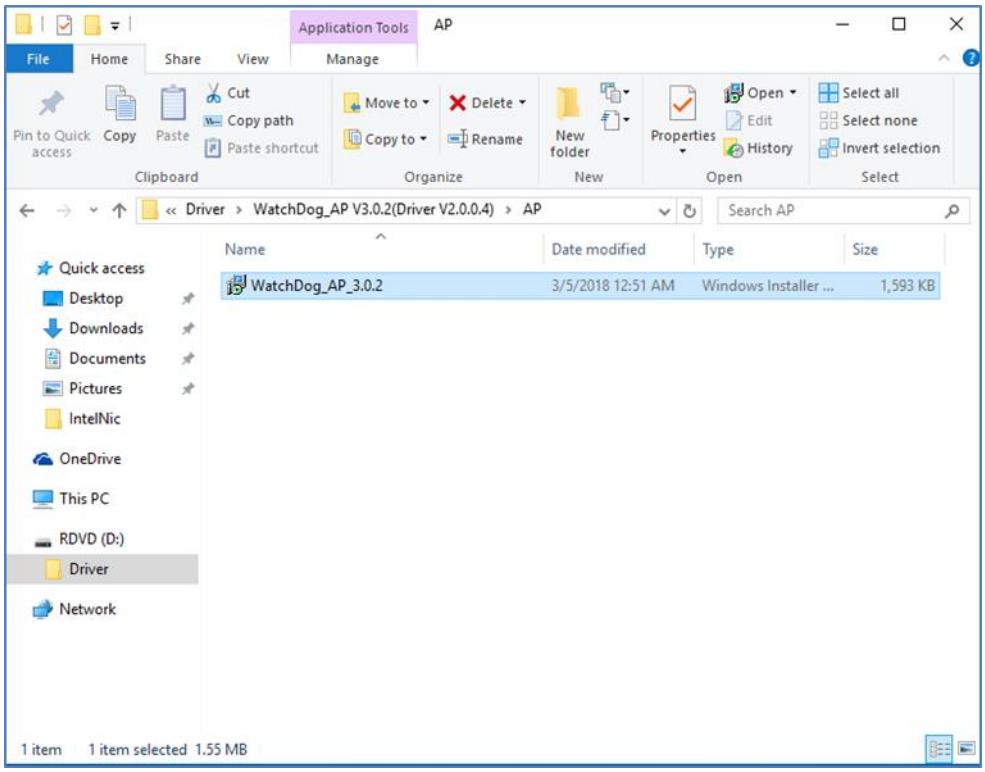
3. When Windows Security dialog appear, select **install** to continue the Installation.



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

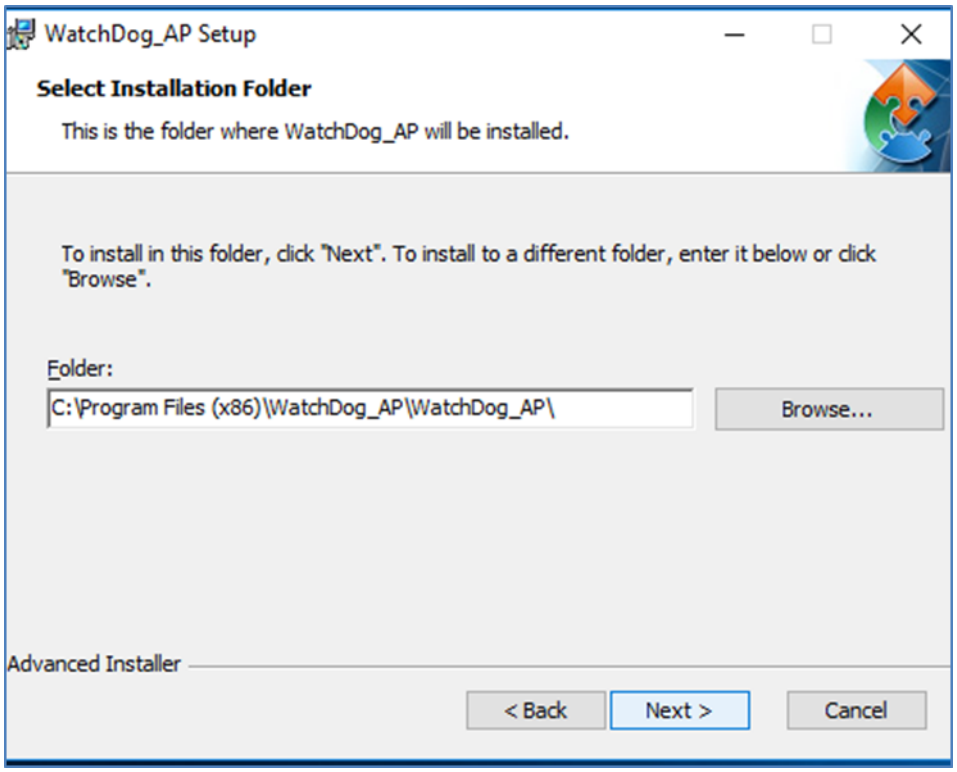


5. Open the Driver CD (included in the package) and select **Watchdog AP**.

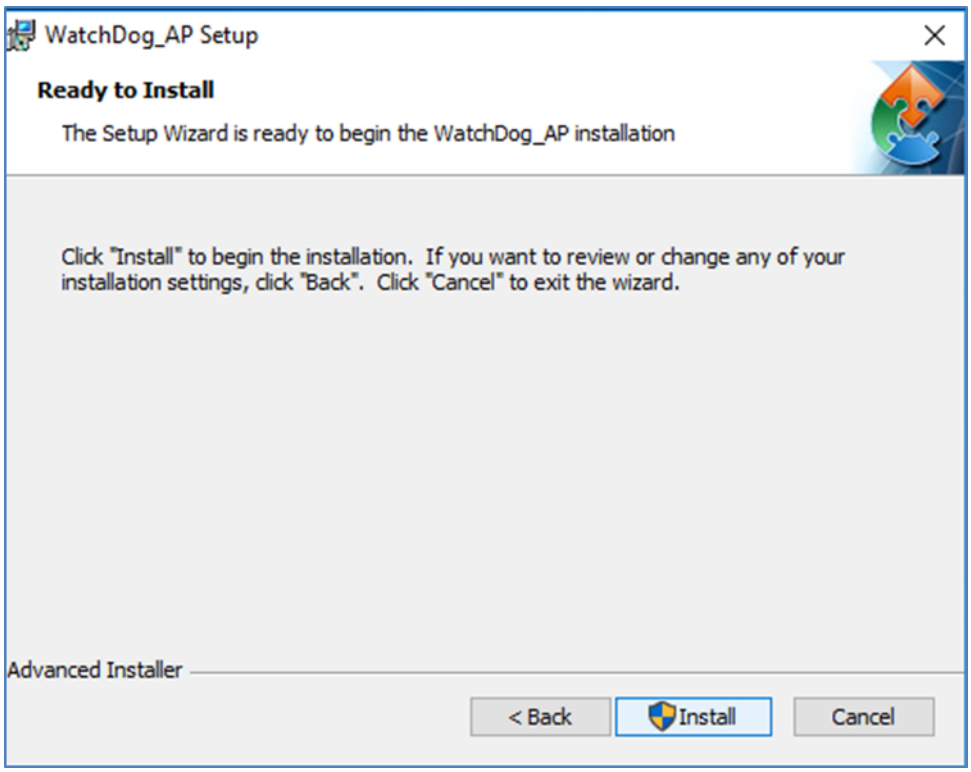


6. Select **Next**.

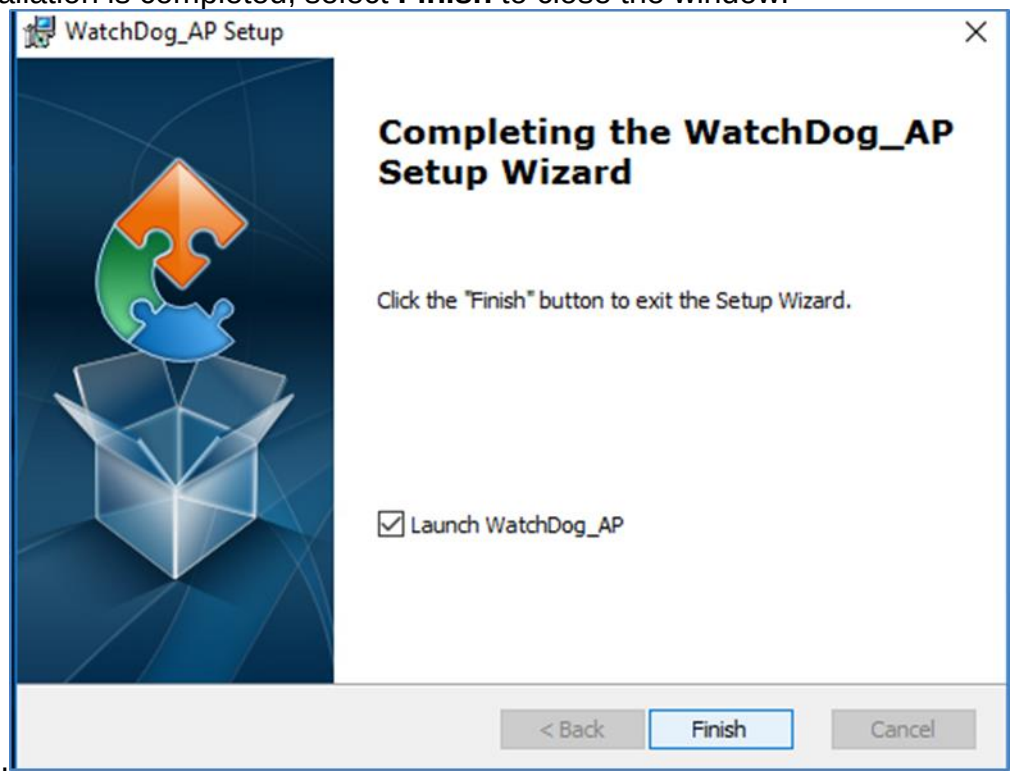
7. The installed storage location is displayed, select **Next** to continue.



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



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



Chapter 6: Maintenance and Troubleshooting

6.1 Cleaning the Monitor

Note: The IP69K Stainless Panel PC withstands regular intense cleaning and could hold up against steam and high-pressure water. The devices are able to sustain water temperatures up to 80°C and a water jets.

Before cleaning:

- Make sure the device is turned off.
- Disconnect the power cable from any AC outlet.

When cleaning:

- Use water up to 80°C to clean the housing.
- Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles.
- The display area is highly prone to scratching. Do not use ketene type material (ex. Acetone), Ethyl alcohol, toluene, ethyl acid or Methyl chloride to clear the panel. It may permanently damage the panel and void the warranty.
- If it is still not clean enough, apply a small amount of non-ammonia, non-alcohol based glass cleaner onto a clean, soft, lint-free cloth, and wipe the screen.
- Don not use oil directly on the display screen. If droplets are allowed to drop on the screen, permanent staining or discoloration may occur.

6.2 Basic Troubleshooting

Problem	Solution
There is a black dot or dead pixel dot on the screen	A missing pixel does not constitute an out of spec. defective product
Cannot turn power on	Turn off the power supply, and check that the AC cord or DC cord are securely inserted. After checking, turn on the power supply again.
There are spots on the screen	There may be electrical distortion from vehicles, trains, high voltage lines or fluorescent lamps.
Bad color	Color density or tint control may not be adjusted properly (Check the adjusted value of image.)
Image appears and disappears	Input may not be connected properly.
When changing the screen size, the top and bottom part of the screen does not show images	When using a video software program (such as a cinema size program) with a screen wider than one in the 16:9 mode, blank areas separate from the images are formed at the top and bottom of the screen.
Image contour flickers	Due to the characteristics of the display control, contour of animated parts of images may seem to flicker, but that is not a breakdown.

Appendix

Appendix A: Hardware Specifications

	Model Name			
	R15IW3S-SPC369-P1	R19IW3S-SPM169-P1	W22IW3S-SPA369-P1	W24IW3S-SPA269-P1
Display				
Size	15”	19”	21.5”	23.8”
Resolution	1024 x 768	1280 x 1024	1920 x 1080	1920 x 1080
Brightness	300 nits (typ.)	250 nits	250 nits (typ.)	250 nits (typ.)
Contrast Ratio	2000:1 (typ.)	1000:1 (typ.)	3000:1(typ.)	3000:1(typ.)
Viewing Angle	-88~88(H);-88~88(V)	85~85 (H); -80~80(V)	-89~89 (H); -89~89(V)	-89~89 (H); -89~89(V)
Touch	Projected Capacitive Multi-Touch (PCAP)	Projected Capacitive Multi-Touch (PCAP)	Projected Capacitive Multi-Touch (PCAP)	Projected Capacitive Multi-Touch (PCAP)
System Specification				
CPU	Intel® Core™ i5 - 8265U (6M Cache, 1.6GHz up to 3.9 GHz)	Intel® Core™ i5 - 8265U (6M Cache, 1.6GHz up to 3.9 GHz)	Intel® Core™ i5 - 8265U (6M Cache, 1.6GHz up to 3.9 GHz)	Intel® Core™ i5 - 8265U (6M Cache, 1.6GHz up to 3.9 GHz)
System Memory	1 x SO-DIMM, DDR4 2400 MHz, 4GB 8GB(Optional) 16GB(Optional) 32GB(Optional)	1 x SO-DIMM, DDR4 2400 MHz, 4GB 8GB(Optional) 16GB(Optional) 32GB(Optional)	1 x SO-DIMM, DDR4 2400 MHz, 4GB 8GB(Optional) 16GB(Optional) 32GB(Optional)	1 x SO-DIMM, DDR4 2400 MHz, 4GB 8GB(Optional) 16GB(Optional) 32GB(Optional)
Storage	1 x M.2 2242 B-key SSD Slot 64GB (Optional up to 512GB) M.2 2280 NVME SSD, up to 4TB (Optional) 2 x SATA III support RAID 0,1 (Optional)	1 x M.2 2242 B-key SSD Slot 64GB (Optional up to 512GB) M.2 2280 NVME SSD, up to 4TB (Optional) 2 x SATA III support RAID 0,1 (Optional)	1 x M.2 2242 B-key SSD Slot 64GB (Optional up to 512GB) M.2 2280 NVME SSD, up to 4TB (Optional) 2 x SATA III support RAID 0,1 (Optional)	1 x M.2 2242 B-key SSD Slot 64GB (Optional up to 512GB) M.2 2280 NVME SSD, up to 4TB (Optional) 2 x SATA III support RAID 0,1 (Optional)
Expansion	1 x M.2 2232 E-KeySlot (for half size Wifi Module) 1 x M.2 2242/2280 Slot (for NVME SSD or SATA III SSD)	1 x M.2 2232 E-KeySlot (for half size Wifi Module) 1 x M.2 2242/2280 Slot (for NVME SSD or SATA III SSD)	1 x M.2 2232 E-KeySlot (for half size Wifi Module) 1 x M.2 2242/2280 Slot (for NVME SSD or SATA III SSD)	1 x M.2 2232 E-KeySlot (for half size Wifi Module) 1 x M.2 2242/2280 Slot (for NVME SSD or SATA III SSD)
Ethernet Controller	Intel® Ethernet Controller I210-AT + Intel® Ethernet Connection I219-LM	Intel® Ethernet Controller I210-AT + Intel® Ethernet Connection I219-LM	Intel® Ethernet Controller I210-AT + Intel® Ethernet Connection I219-LM	Intel® Ethernet Controller I210-AT + Intel® Ethernet Connection I219-LM
Security	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
Operating System	Windows 10 IoT Enterprise(Optional) Linux Ubuntu 18.04 (Optional)	Windows 10 IoT Enterprise(Optional) Linux Ubuntu 18.04 (Optional)	Windows 10 IoT Enterprise(Optional) Linux Ubuntu 18.04 (Optional)	Windows 10 IoT Enterprise(Optional) Linux Ubuntu 18.04 (Optional)
Input/ Output Connectors				
LAN	2 x Giga LAN RJ45 Connector	2 x Giga LAN RJ45 Connector	2 x Giga LAN RJ45 Connector	2 x Giga LAN RJ45 Connector
Serial Port	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)
USB Port	2 x USB3.0 (Type-A)	2 x USB3.0 (Type-A)	2 x USB3.0 (Type-A)	2 x USB3.0 (Type-A)
HDMI	1 x HDMI 1.4 (Optional)	1 x HDMI 1.4 (Optional)	1 x HDMI 1.4 (Optional)	1 x HDMI 1.4 (Optional)
Expansion Port	2 x M.2 slot(1 for WiFi, 1 for SSD)	2 x M.2 slot(1 for WiFi, 1 for SSD)	2 x M.2 slot(1 for WiFi, 1 for SSD)	2 x M.2 slot(1 for WiFi, 1 for SSD)
Indicator	1 x LED Indicator on power button	1 x LED Indicator on power button	1 x LED Indicator on power button	1 x LED Indicator on power button
Control				
Button	1 x Power Button	1 x Power Button	1 x Power Button	1 x Power Button

	Model Name			
	R15IW3S-SPC369-P1	R19IW3S-SPM169-P1	W22IW3S-SPA369-P1	W24IW3S-SPA269-P1
Mechanical Specification				
Dimensions	388 x 301 x 56.2 mm	478 x 395 x 57 mm	551 x 337 x 56.2 mm	630 x 390 x 56 mm
Housing	Stainless steel SUS 316/ AISI 316	Stainless steel SUS 316/ AISI 316	Stainless steel SUS 316/ AISI 316	Stainless steel SUS 316/ AISI 316
Mounting	VESA Mount, Yoke Mount	VESA Mount, Yoke Mount	VESA Mount, Yoke Mount	VESA Mount, Yoke Mount
Cooling System	Fanless design	Fanless design	Fanless design	Fanless design
Environmental Consideration				
Operating Temperature	0 ºC to 45 ºC	0 ºC to 45 ºC	0 ºC to 45 ºC	0 ºC to 45 ºC
Storage Temperature	-20 ºC to 60 ºC	-20 ºC to 60 ºC	-20 ºC to 60 ºC	-20 ºC to 60 ºC
Operating Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
IP Rating	Full IP69K	Full IP69K	Full IP69K	Full IP69K
Power Specifications				
Power Rating	12 V DC in 9-36 V DC in (Optional)	12 V DC in 9-36 V DC in (Optional)	12 V DC in 9-36 V DC in (Optional)	12 V DC in 9-36 V DC in (Optional)
Standards and Certification				
Certification	CE, FCC	CE, FCC	CE, FCC	CE, FCC

Appendix B: Winmate Software Development Kit

Winmate provides the following SDK and Utilities for the IP69K Stainless P Series Panel PC.

Item	File Type	Description
1	SDK	Watchdog SDK
2	Utility	Watchdog Utility

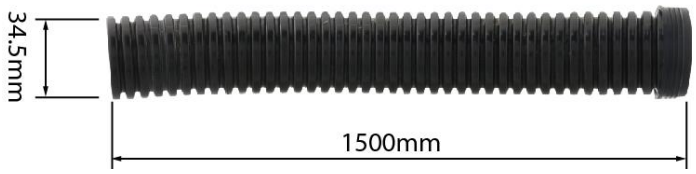
To find the Drivers and SDK, please refer to the Driver CD that comes in the package or contact us. Also, you can download drivers from Winmate Download Center.

Appendix C: Accessories

Waterproof Conduit

Dimensions

Unit: mm

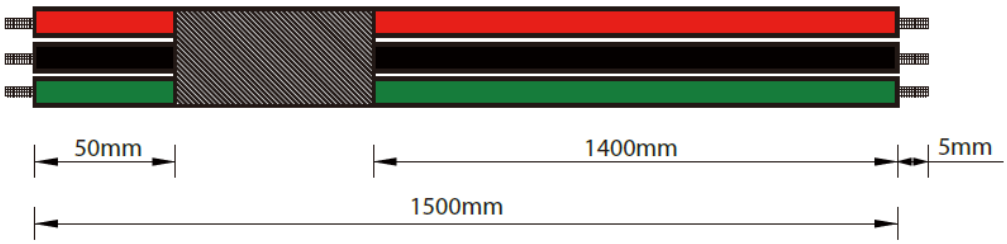


Elbow for Connect to Conduit

Dimensions

Unit: mm

Open wire cable for phoenix connector (Default for 9~36V DC input SKU)



Pin No.	Symbols	Color		Pin No.	Symbols	Color
Open wire 5mm		Red	⟷	Open wire 5mm		Red
Open wire 5mm		Black	⟷	Open wire 5mm		Black
Open wire 5mm		Green	⟷	Open wire 5mm		Green

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