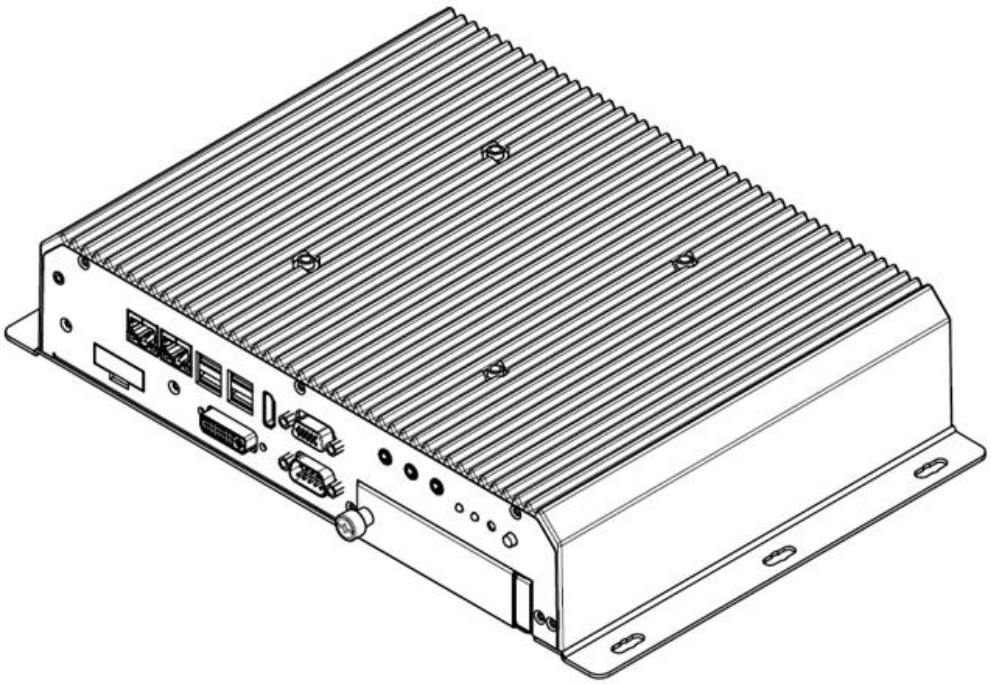
Embedded Computer

Intel® Tiger Lake Core™ i5-1135G7, 2.4 GHz(turbo up to 4.2GHz)



MPC-E10-1300

User Manual

Document Version 1.3
Document Part No. 91521110107Y

Please read these instructions carefully before using this product, and save this manual for future use.

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Preface

Copyright Notice

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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 1W22Axxxxxxxx means October of year 2022.

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 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.

Important Information

Federal Communications Commission Radio Frequency Interface 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.

EC Declaration of Conformity

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 EN 55022: 2010 Class B
  - IEC61000-4-2: 2009
  - IEC61000-4-3: 2006+A1: 2007+A2: 2010
  - IEC61000-4-4: 2012
  - IEC61000-4-5: 2014
  - IEC61000-4-6: 2013
  - IEC61000-4-8: 2010
  - IEC61000-4-11: 2004
- EN55022: 2010/AC:2011
- 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

Chapter 1: Introduction

Congratulations on purchasing Seatronx MPC-E10 series Embedded Computer. MPC-E10 with Intel® Tiger Lake Core™ i5-1135G7 offers high performance computing power and outstanding video processing. MPC-E10 suitable for Factory Automation, Machine Vision, Surveillance, Machine Automation and other high-performance applications.

1.1 Features

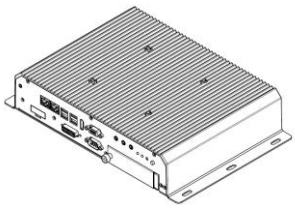
Seatronx® MPC-E10-1300 Embedded Computer offers the following features:

- Intel® Tiger Lake Core™ i5-1135G7
- RAM 4G DDR4L (Up to 32G)
- Removable 2.5" SSD drive bay
- Multi Video Output, DVI/HDMI/ Display Port
- Isolation Power Protection 1.5KV
- 4 x Digital Input / 4 x Digital Output
- 8 x NMEA Port 0183

1.2 Package Contents

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.

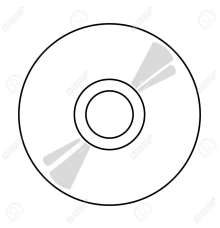
Standard factory shipment list:



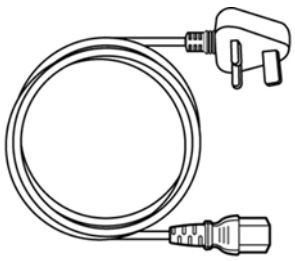
- **MPC-E10-1300 Computer**



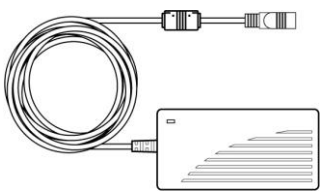
- **Quick Start Guide (Hardcopy)**



- **Driver CD & User Manual**



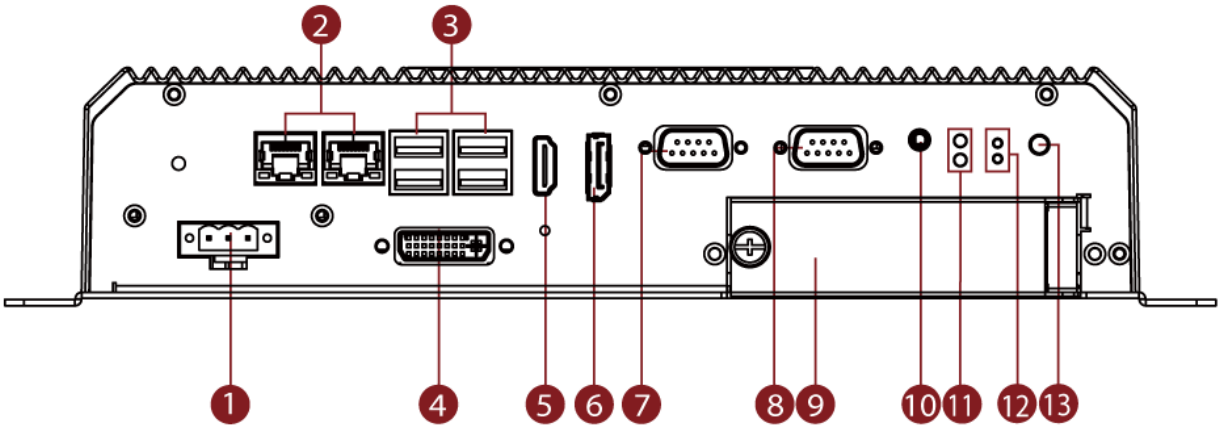
- **Power Cord**



- **AC Adapter 12V/ 84W**

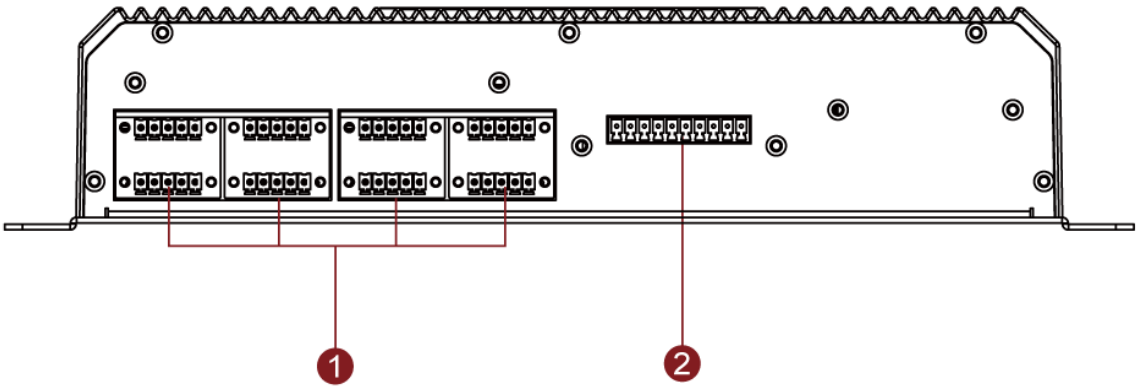
1.3 Product Overview

Front Side I/O Connectors



№	Description	№	Description
❶	DC Input	❽	RS232/422/485
❷	Giga LAN x2	❾	2.5” SSD Slot x2
❸	USB 3.0 x4	❿	Audio in, Audio out
❹	DVI	⓫	HDD LED indicator
❺	HDMI	⓬	Reset / Clear CMOS button
❻	DP	⓭	Power Button
❼	RS232/422/485		

Rear Side I/O Connectors



№	Description	№	Description
❶	8 x NMEA 0183 (Optional)	❷	8 x Isolated DIDO (Optional)

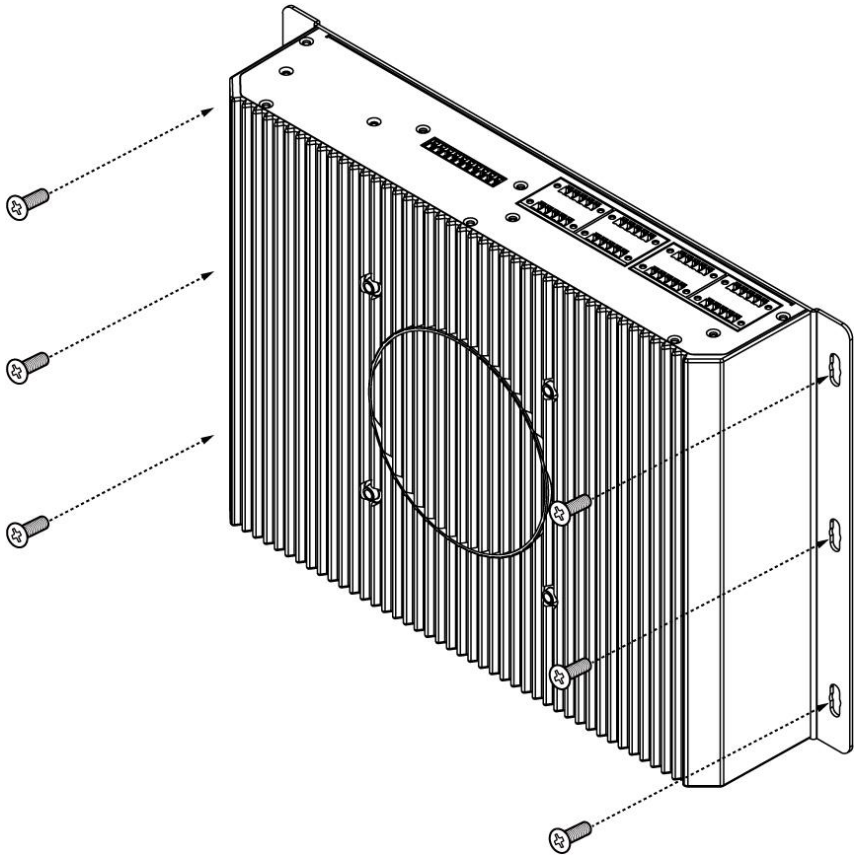
Chapter 2: Hardware Installation

2.1 Mounting

MPC-E10-1300 Embedded Computer supports table

mounting. **Mounting Instruction:**

1. Fasten screws to secure L-shape mounting brackets to the MPC-E10-1300 .
2. Insert the MPC-E10-1300 into the fixture (ex. rack) and fasten screws to secure the unit.



2.2 Connecting the Power

The DC power supply connector of the MPC-E10-1300 Embedded Computer is on the front panel.

Warning!

Ensure voltage and polarity is compliant with the DC input. Improper input voltage or polarity can cause system damage.

Avertissement! Assurez-vous que la tension et la polarité sont conformes à l'entrée CC. Une tension d'entrée ou une polarité incorrecte peut endommager le système.

Warning!

Connect the MPC-E10-1300 either to AC power or DC power. Do not perform both connections at the same time.

Avertissement! Connectez l'I330EAC-ITW à une alimentation CA ou CC. N'effectuez pas les deux connexions en même temps.

Connecting to DC Power

Connect open wire cable (not supplied by Seatronx) to 9-36V DC, maximum power source 220W.

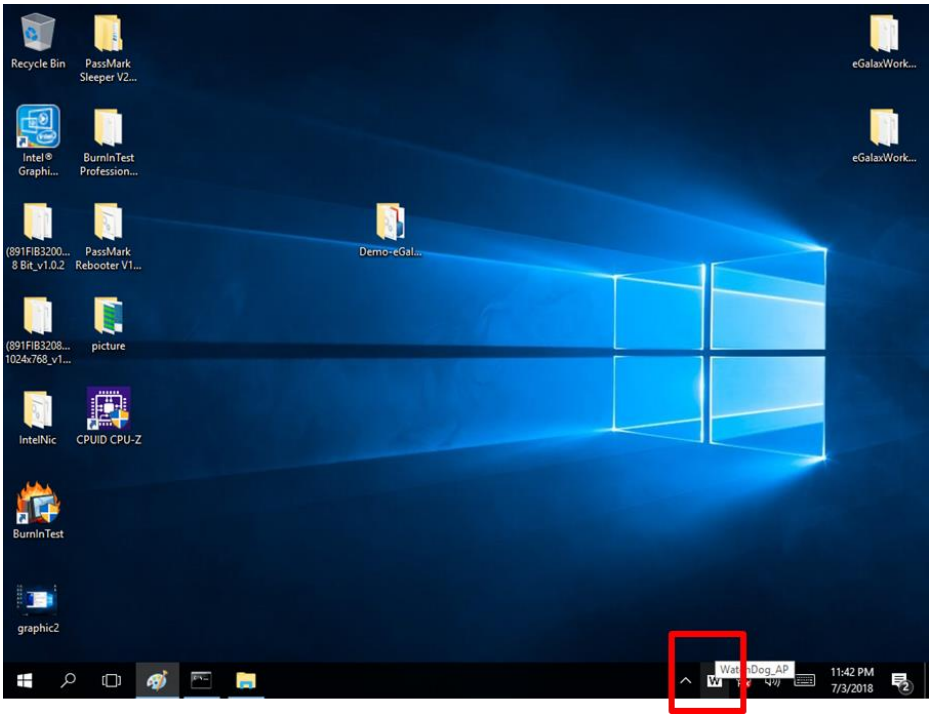
Chapter 3: Operating the Device

3.1 How to Enable Watchdog

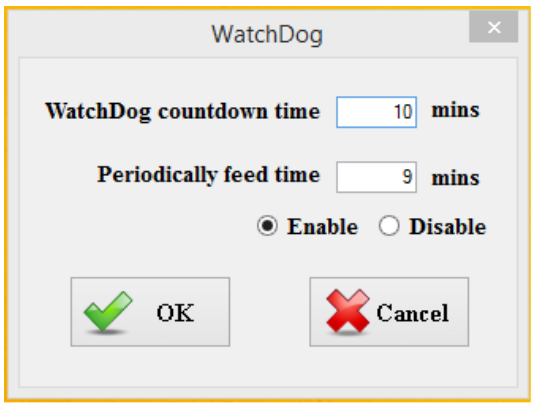
Download Seatronx Watchdog utility to enable Watchdog. Find more information in "Watchdog Guide" that you can download from Download Center.

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 W icon to open Watchdog utility.



3. 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.

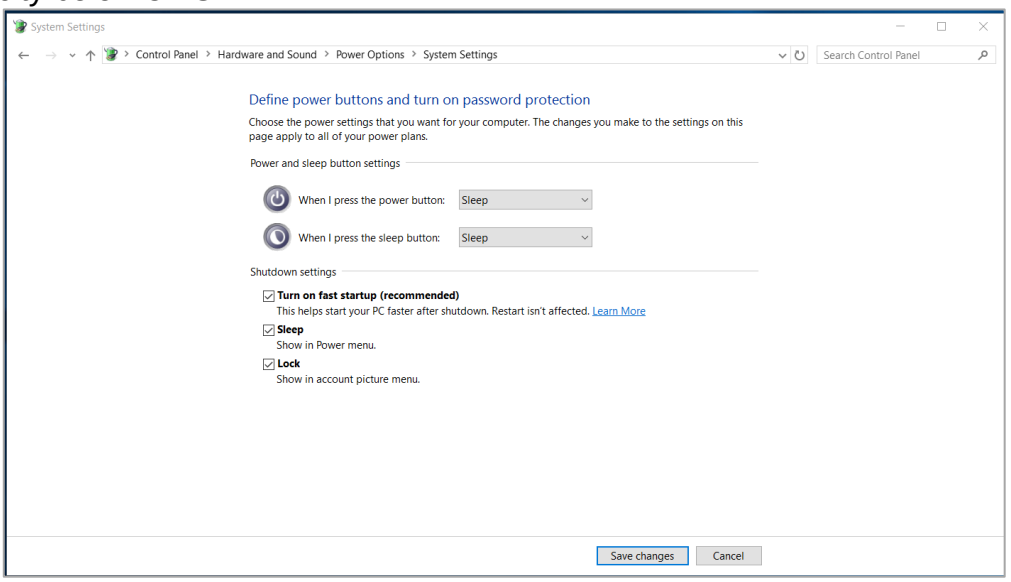
Setting	Description
Watchdog Countdown Time	The system automaticity restarts when this countdown time reaches zero. *Default: 10 min*
Periodically Feed Time	To set a cycle time to automatically reset watchdog timer. *Default: 9 min*
Enable / Disable	Enable or disable watchdog. *Default: Enable*

3.2 S4 Wake on LAN

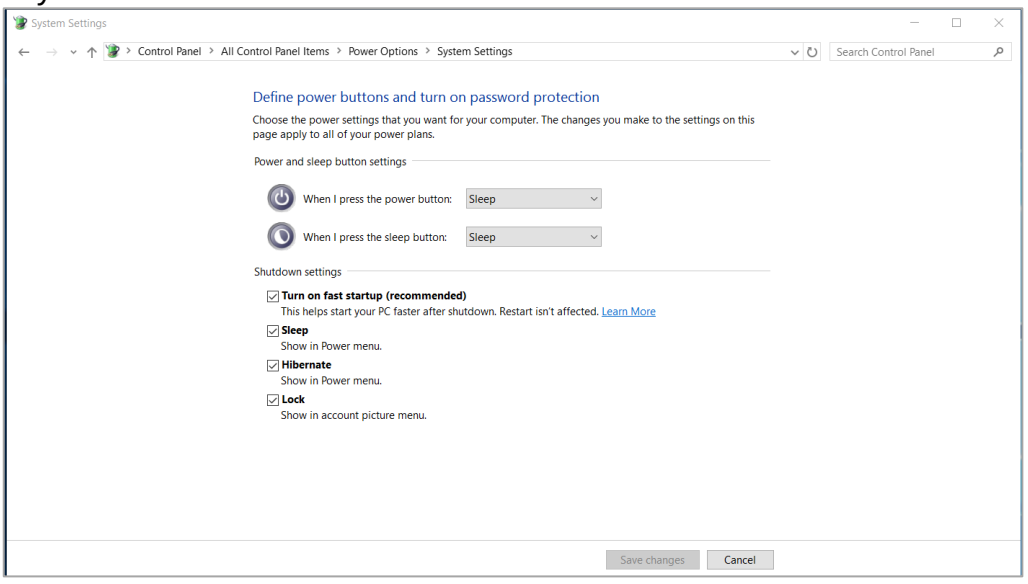
In Windows 10 OS shutdown settings will not have Hibernate mode if your storage capacity is below 32 GB.

Caution Check if your system storage capacity is 32 GB before entering Hibernation mode.
Attention Vérifiez si la capacité de stockage de votre système est de 32 Go avant de passer en mode Veille prolongée.

Storage capacity below 32 GB:



Storage capacity above 32 GB

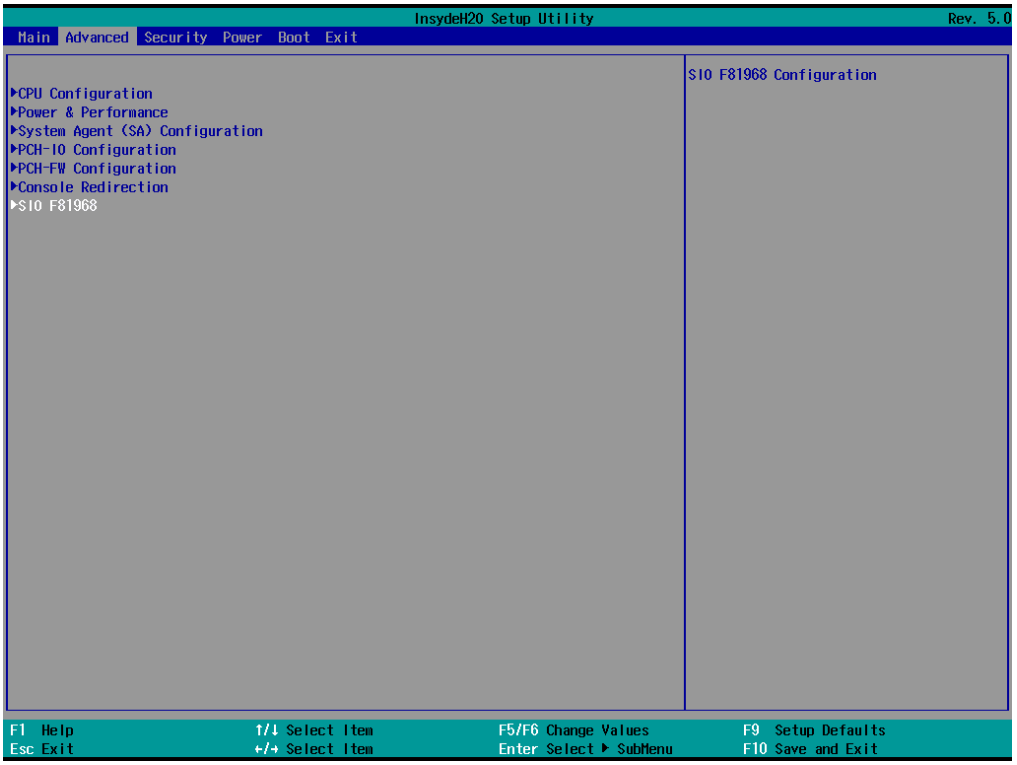


3.3 Changing Serial Port Settings

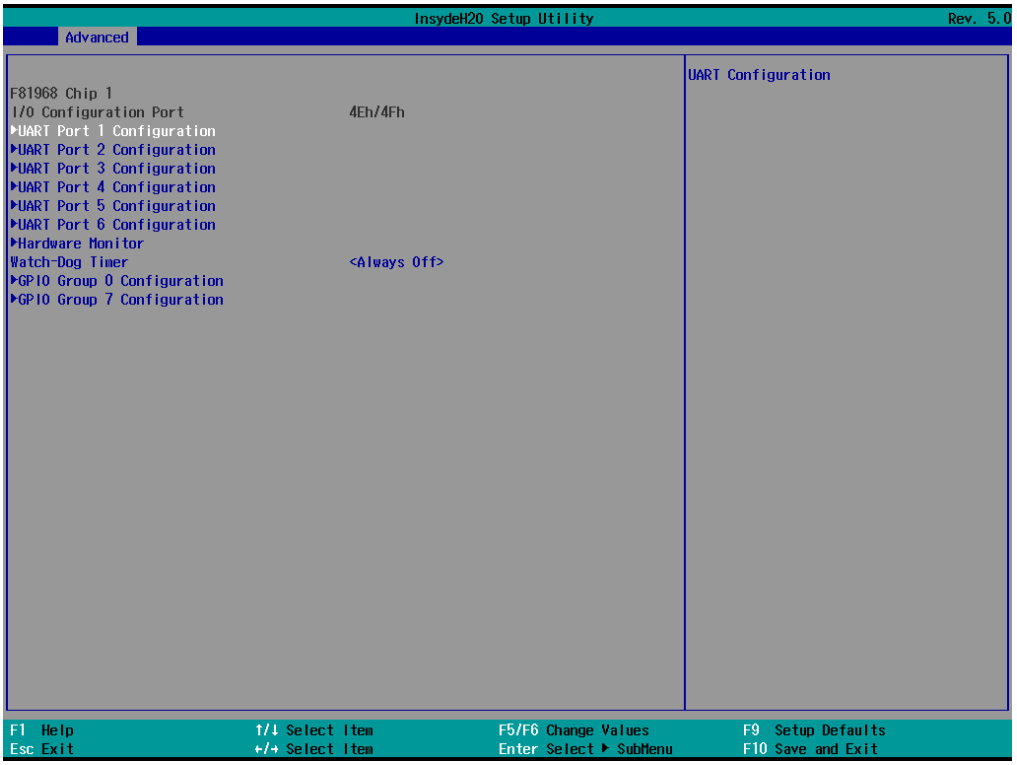
You can change serial port settings in BIOS.

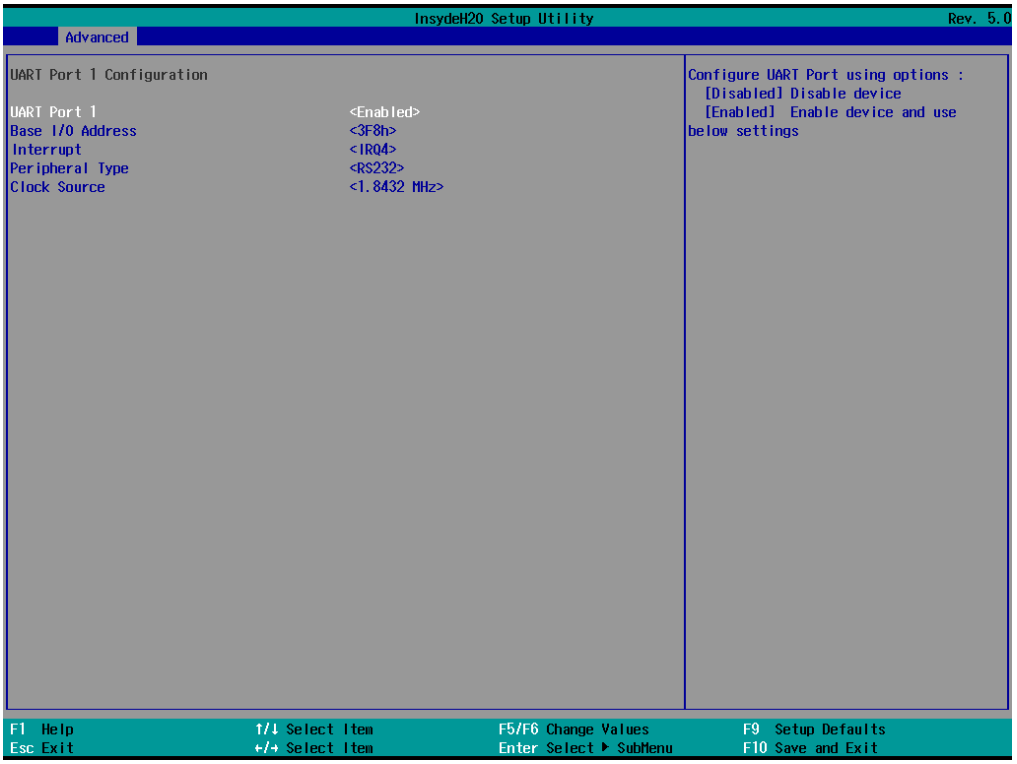
To change serial port settings (i5-1135G7):

1. To enter the BIOS setup connect an external USB keyboard, external monitor and quickly press **Del** key when the prompt appears on the screen during start up.
2. In BIOS go to **Advanced** > **S10 F81968 Configuration.**



3. Click to UART Port 1 Configuration.





4. Change Setting from UART mode to RS232/422/485.



5. Exit BIOS utility.

3.4 Changing DIDO Settings

Download driver CD that comes in a package with Box PC.

To change DIDO Settings:

1. Click the **Option Device Config Tool** icon on the desktop.
2. Click **DI4DO4**.



3. Adjust DI4DO4 settings and press **Start**.



3.5 Changing NMEA Port Settings

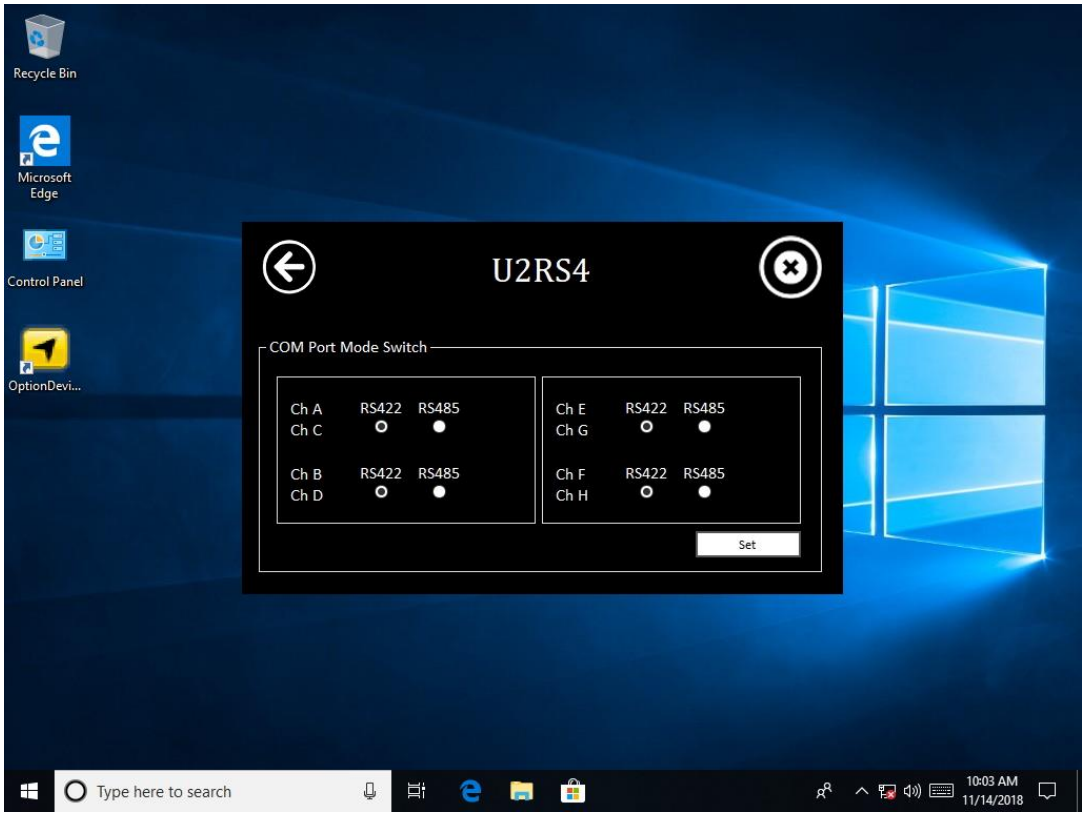
Download driver CD that comes in a package with Box PC.

To change DIDO Settings:

1. Click the **Option Device Config Tool** icon on the desktop.
2. Click **U2RS4**.



3. Adjust U2RS4 settings and press **Start**.



3.6 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 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 BIOS installation utility.

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 Sub Menu
↑/ ↓	Select Item
← / →	Select Item

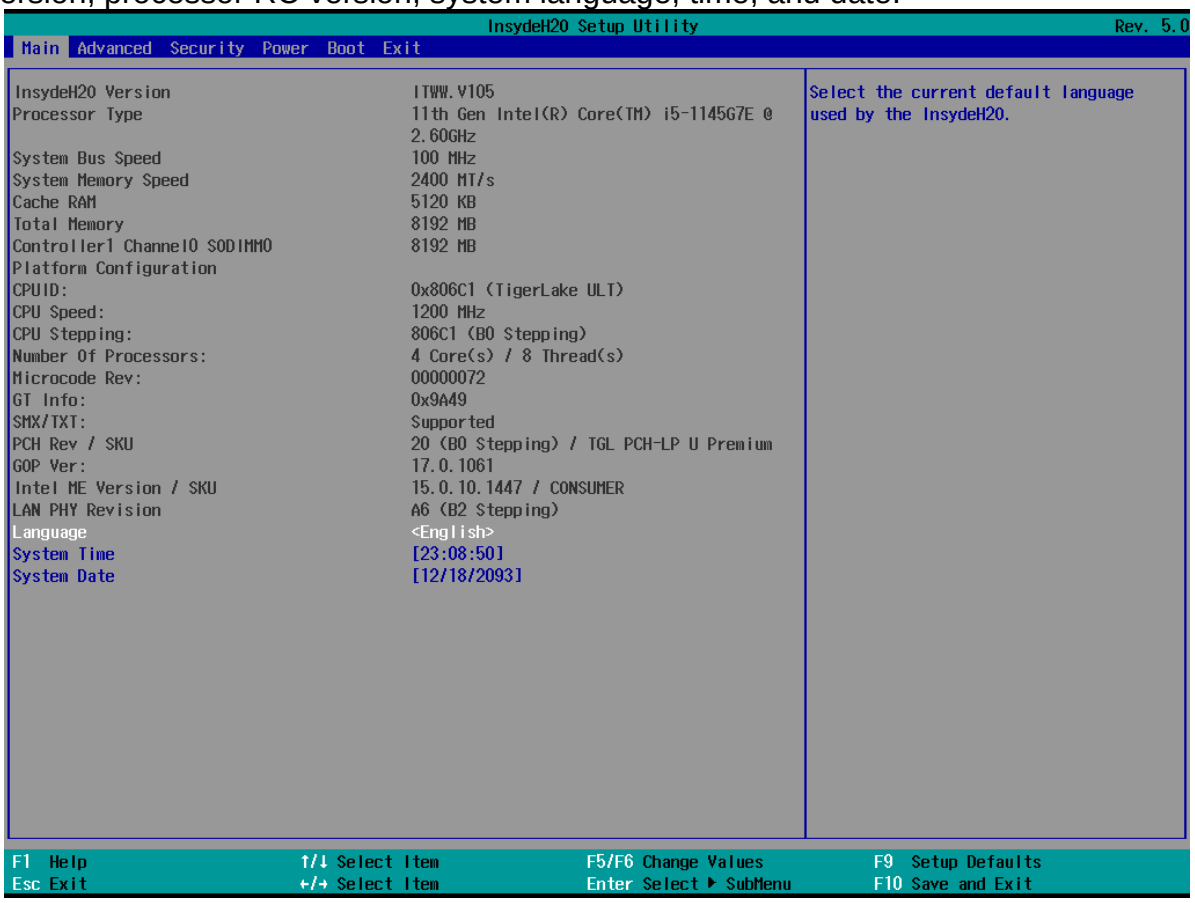
Note: You can press the F1, F2, F3, F4, –/+, and Esc keys by connecting a USB keyboard to your computer.

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 your system 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.

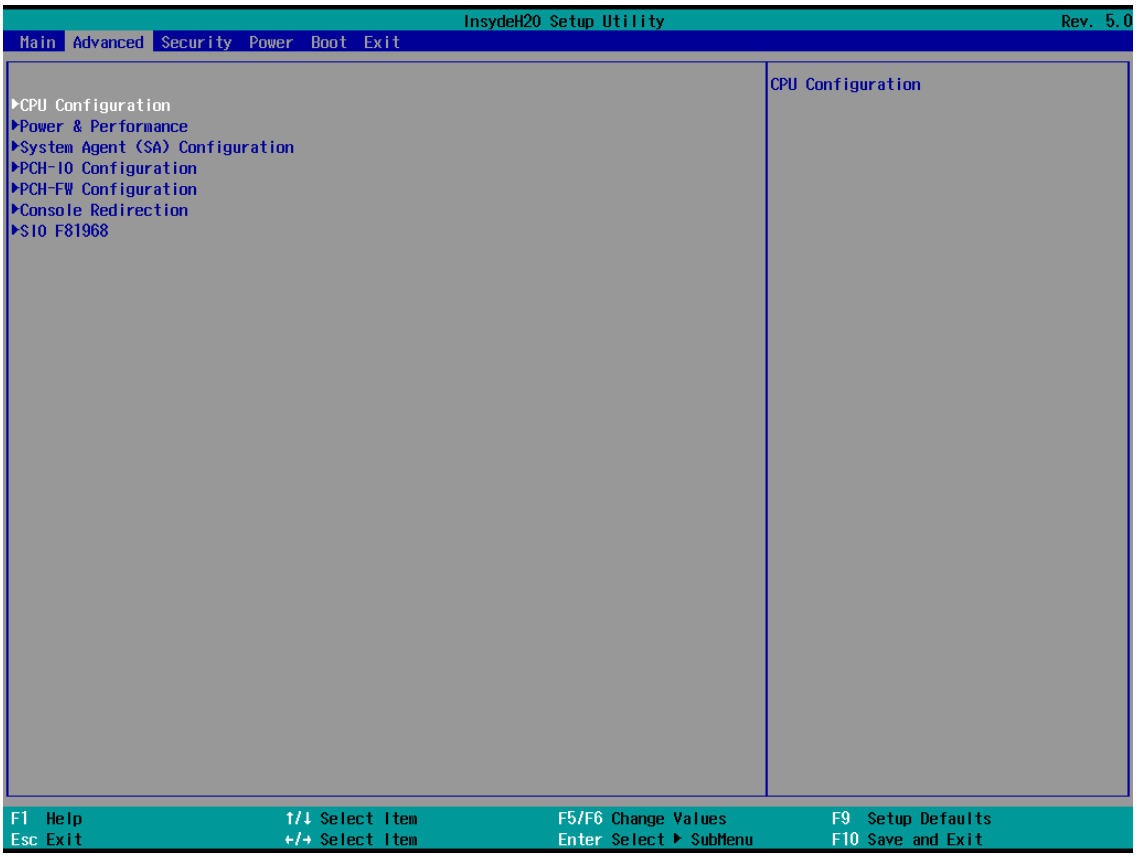


BIOS Setting	Description	Setting Option	Effect
Language	Displays the system language. [English] is set up by default.	Adjustment of the language	Set the language in other language. The language in this device is English.
System Time	This is current time setting. The time is maintained by the battery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

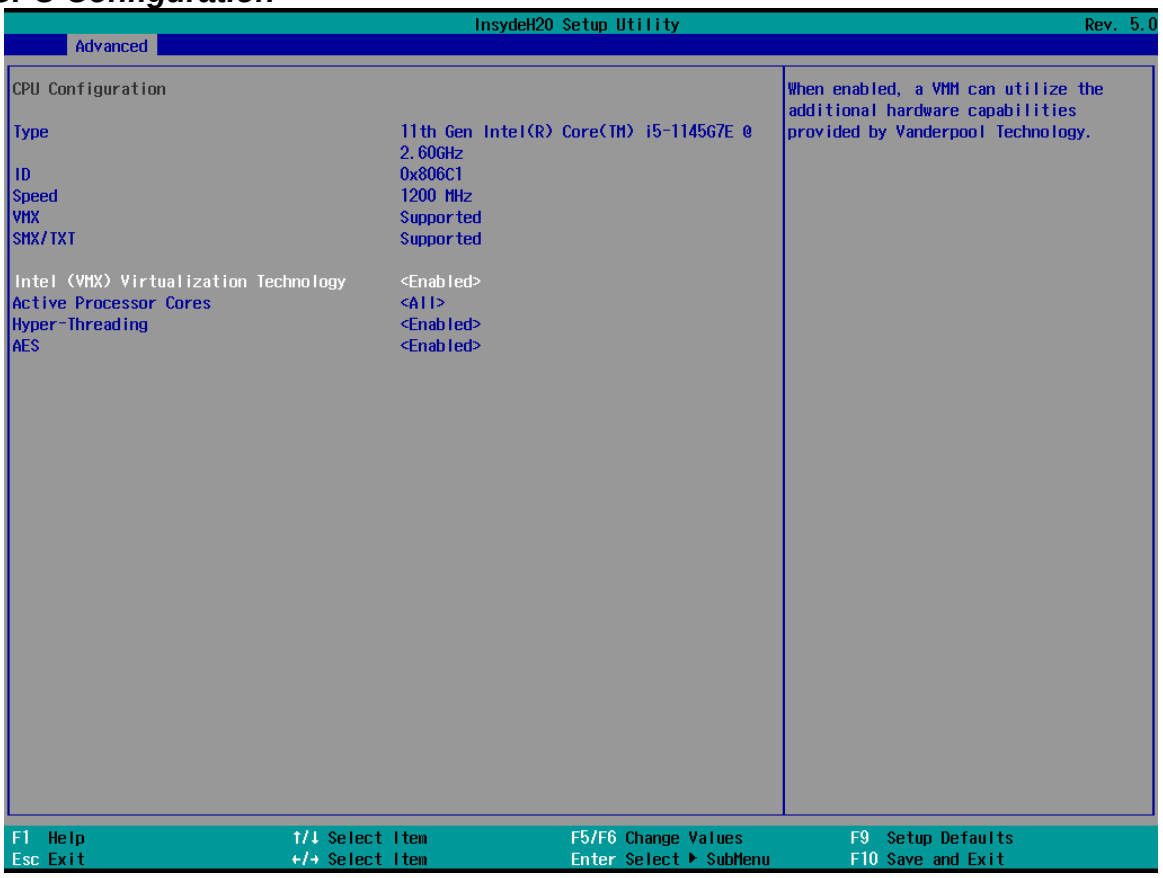
Select the Advanced Tab from the setup menu to enter the advanced BIOS setup screen. You can select any of the items on the left frame of the screen to go to the sub menu for the item, such as CPU Configuration. You can use the <Arrow> keys enter all advanced BIOS setup options. The advanced BIOS setup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



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

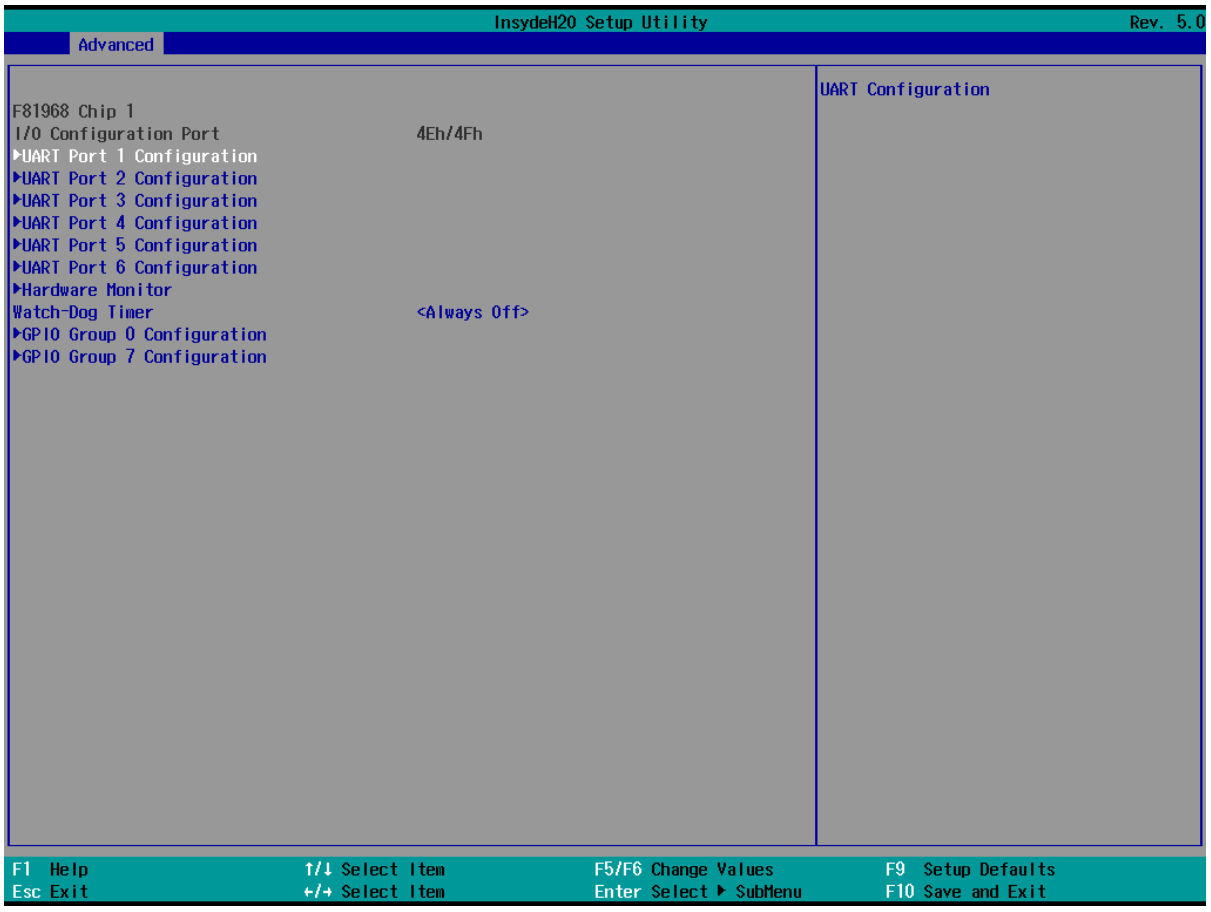
4.2.2.1 CPU Configuration



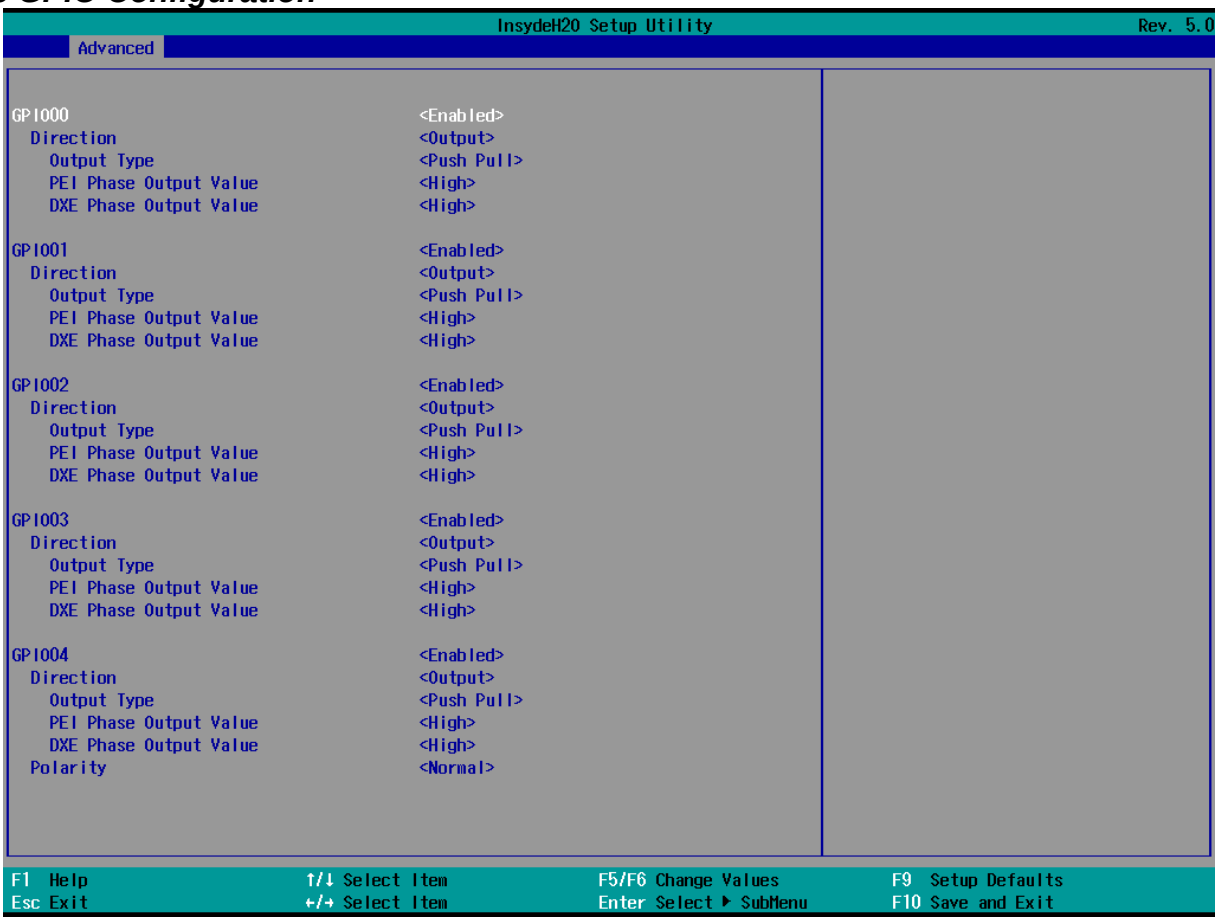
BIOS Setting	Description	Setting Option	Effect
Intel (VMM) Virtualization Technology	Enable or disable Intel Virtualization Technology.	Enable/Disable	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.
Active Processor Cores	Number of core to enable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

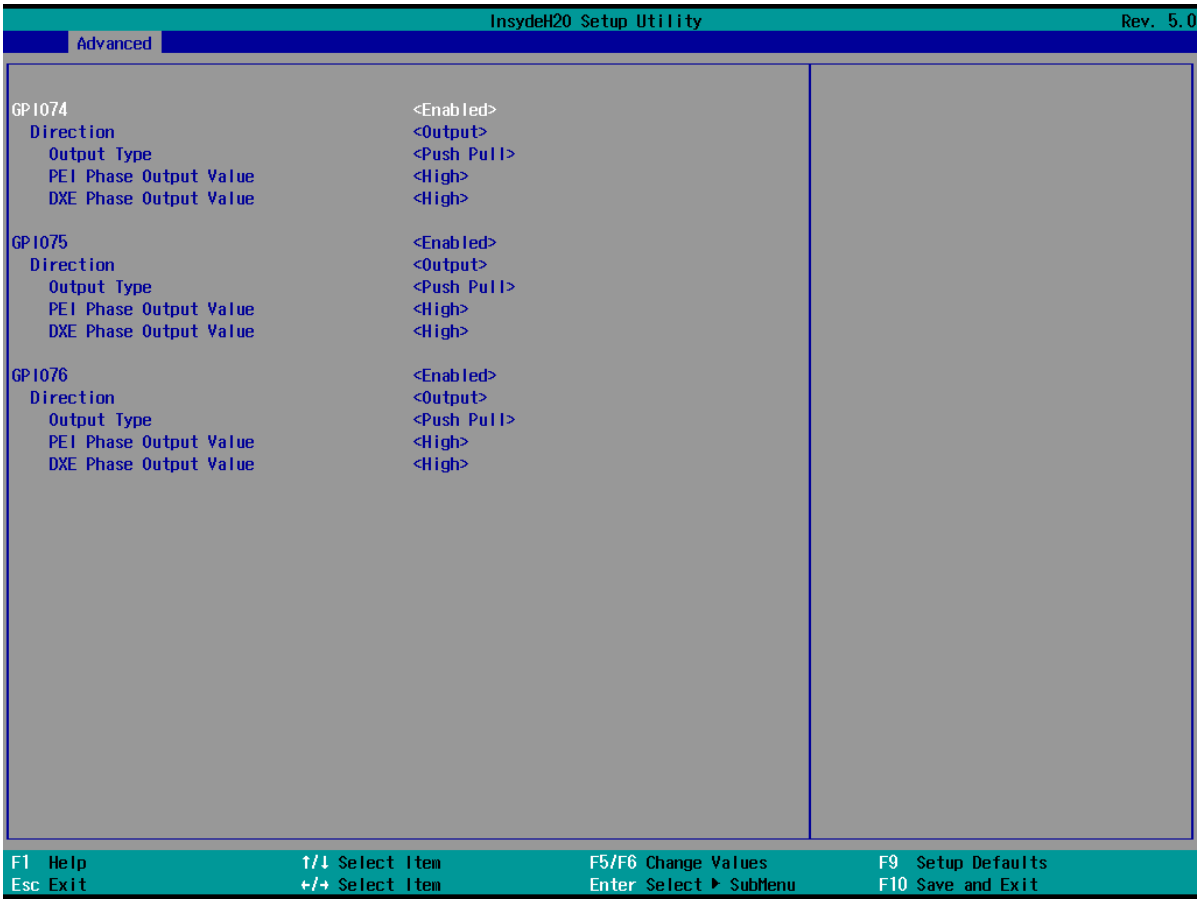
4.2.2.2 F81886A Configuration

BMP

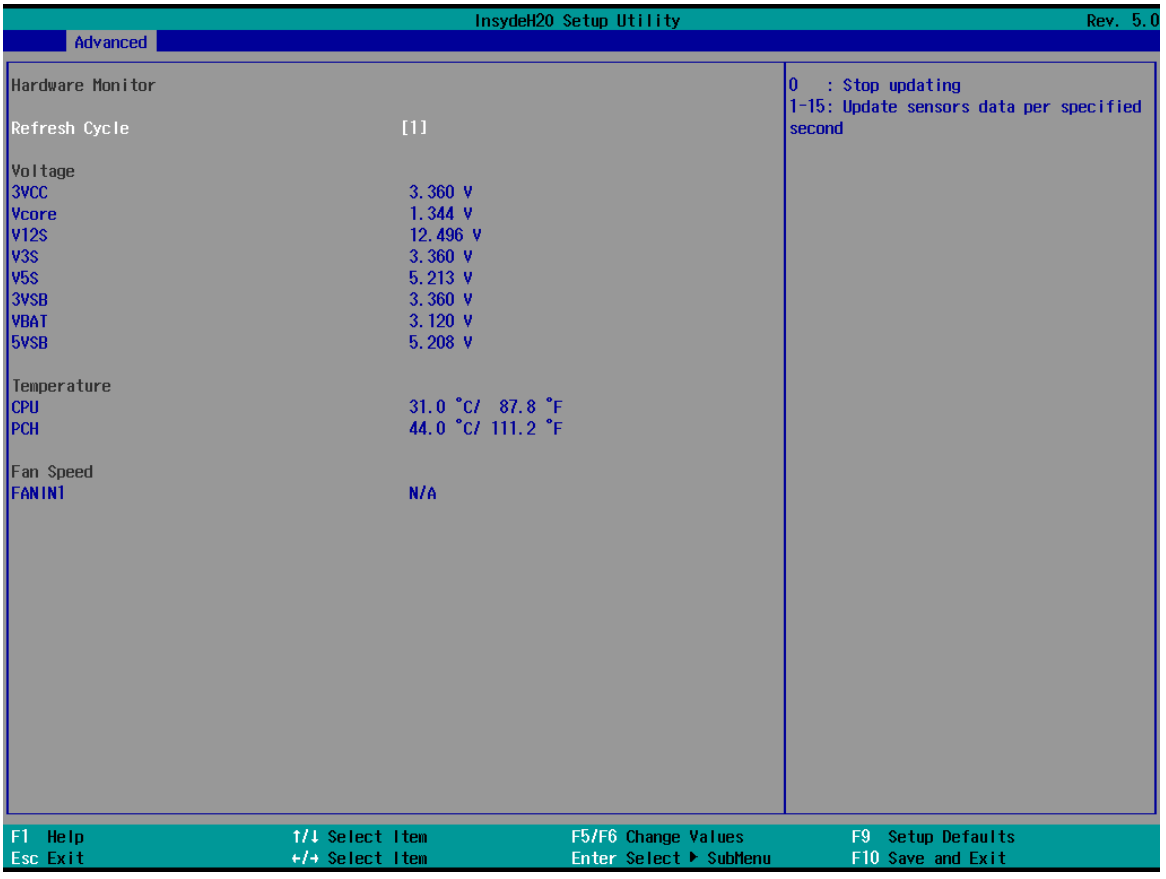


4.2.2.3 GPIO Configuration

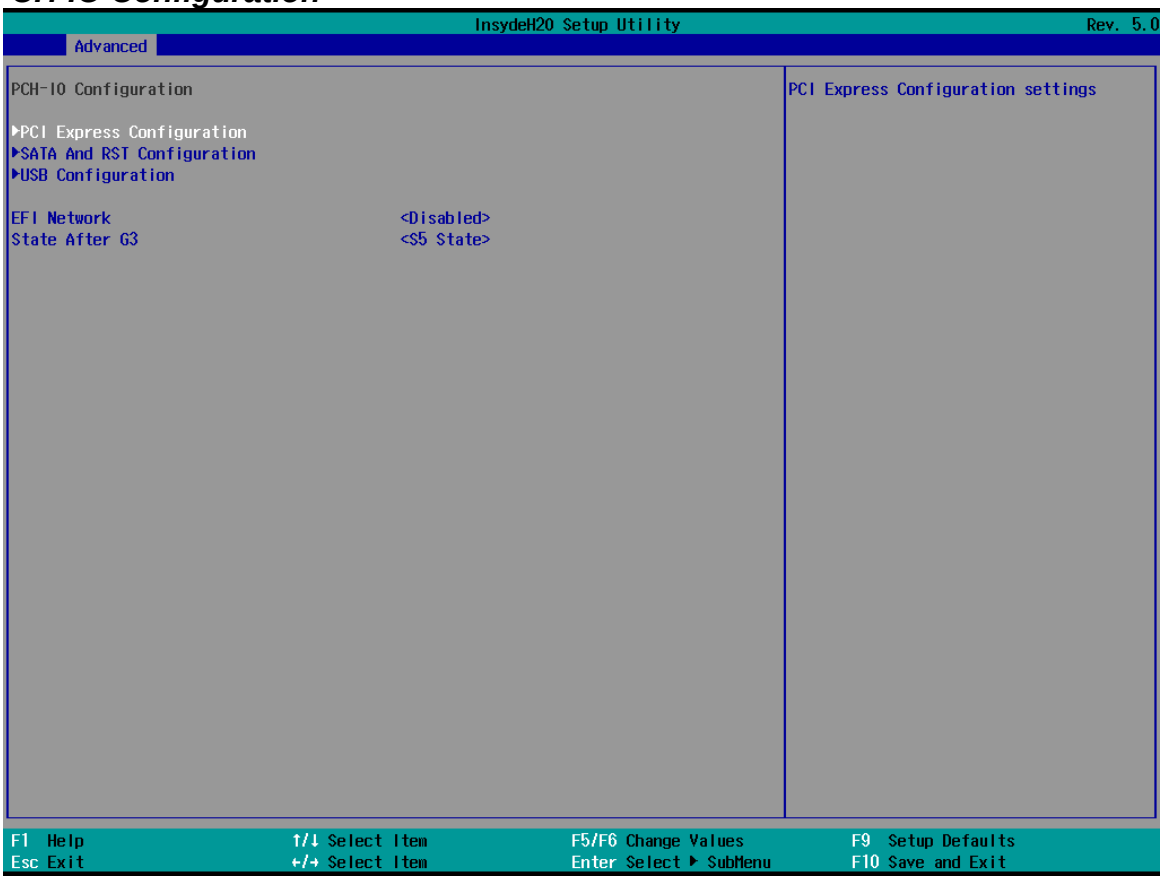




4.2.2.4 Hardware Monitor

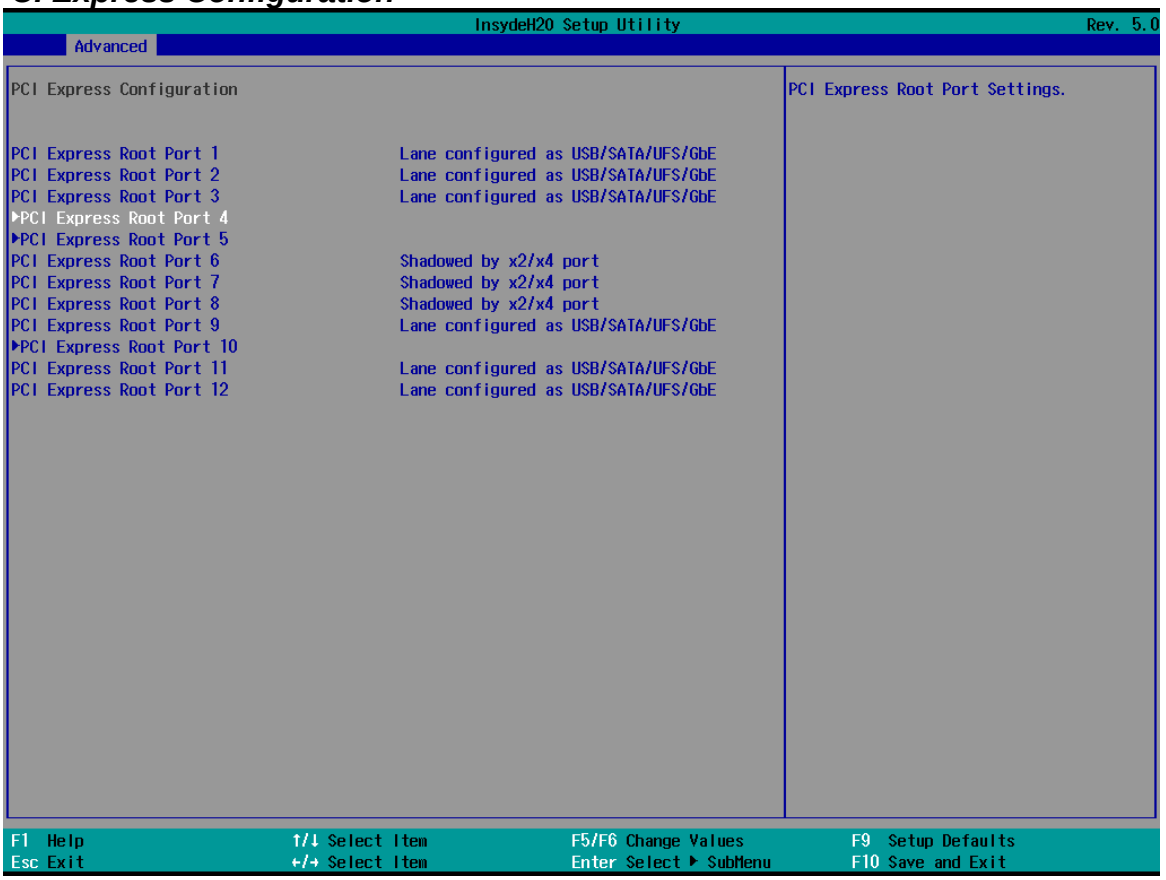


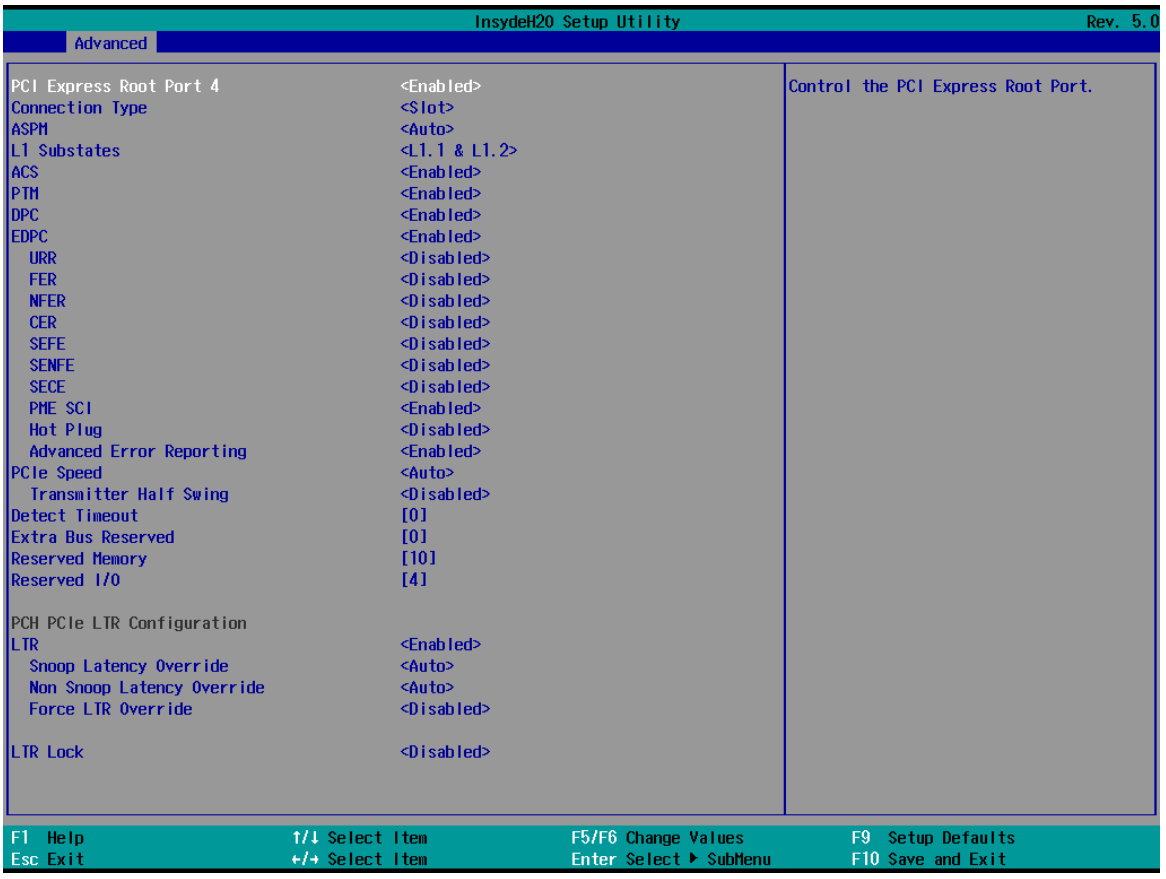
4.2.2.5 PCH-IO Configuration



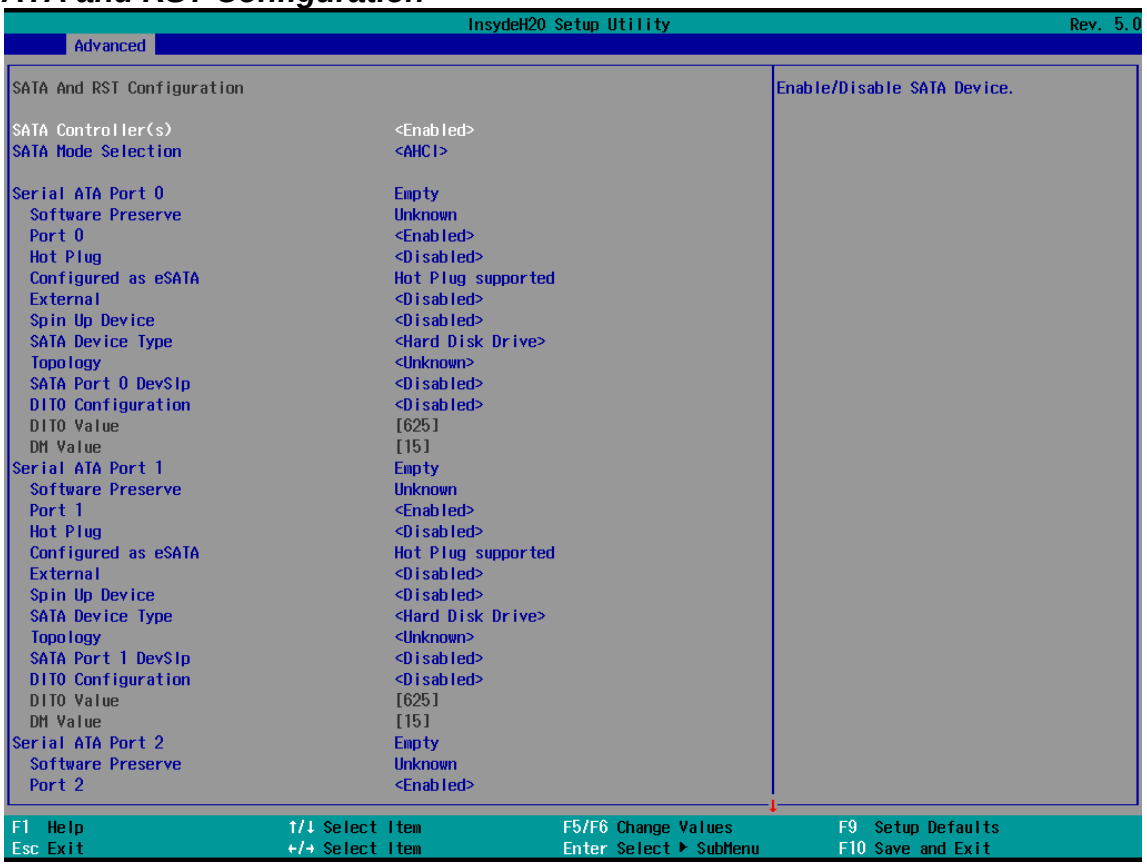
BIOS Setting	Description	Setting Option	Effect
PCI Express Configuration	PCI Express clock gating enable/disable for each root port.	Enter	Opens sub-menu
SATA And RST Configuration	Enable/ Disable SATA device	Enter	Opens sub-menu
USB Configuration	Selectively enable/ disable the corresponding USB port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

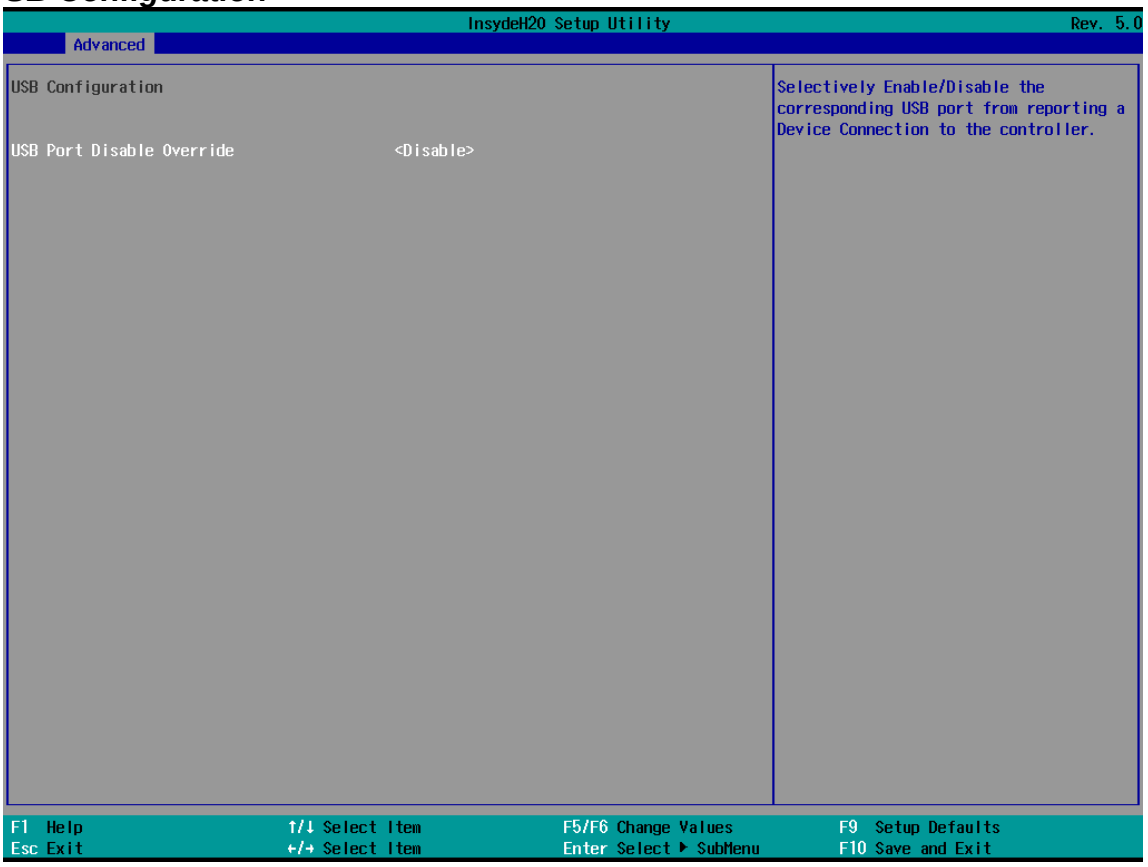




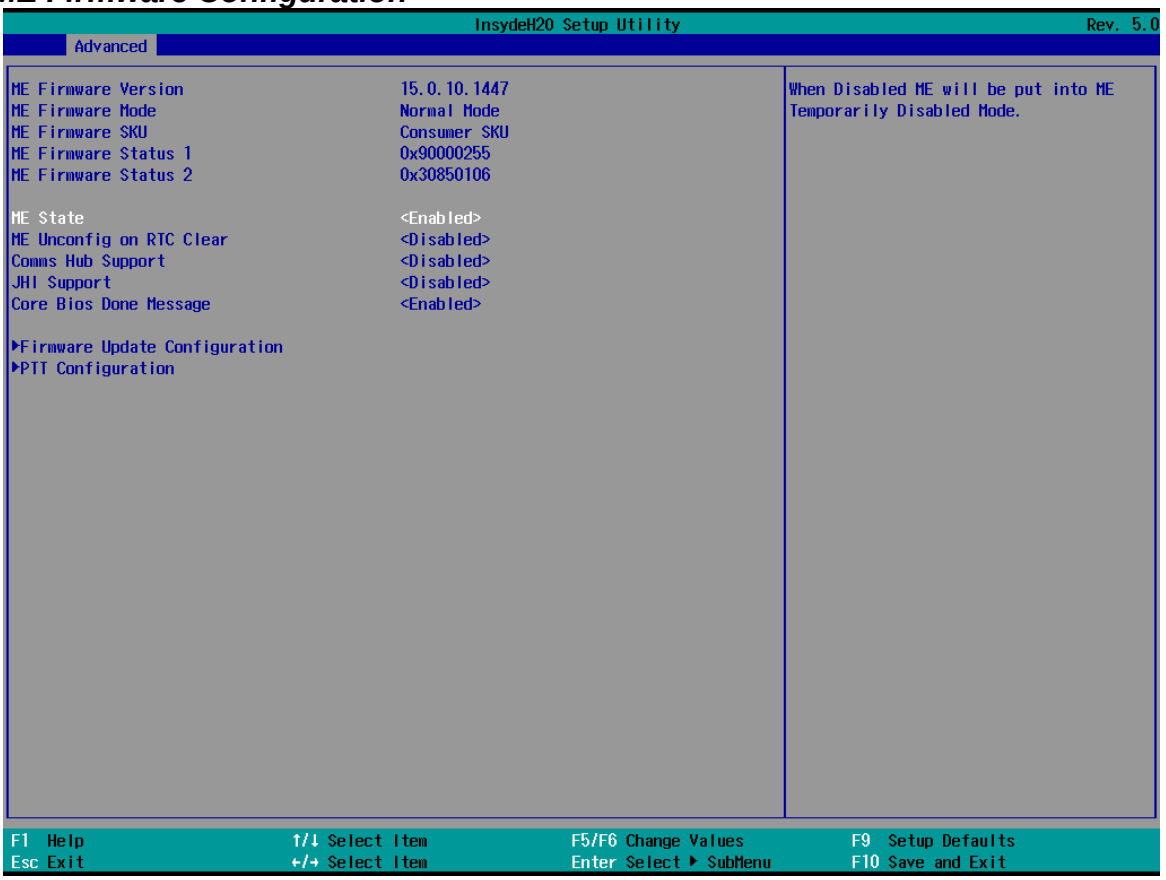
4.2.2.7 SATA and RST Configuration

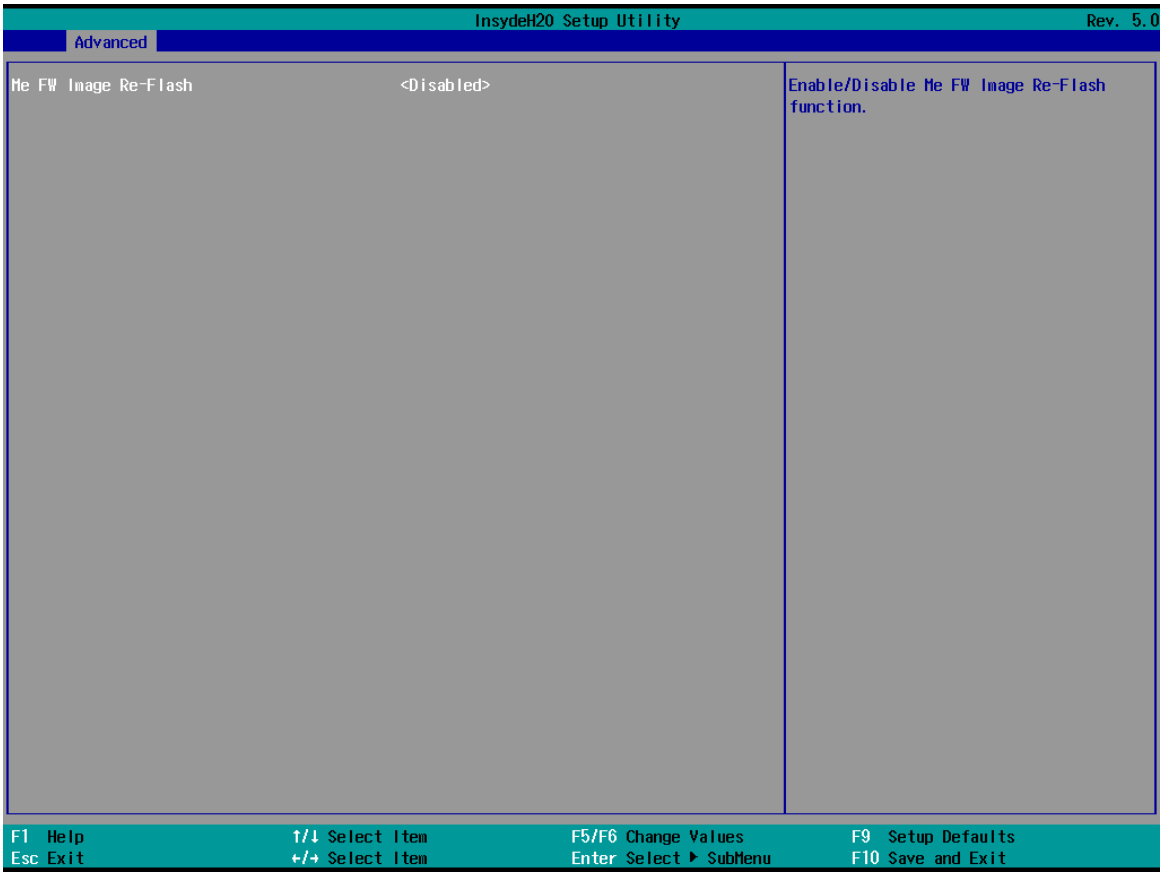


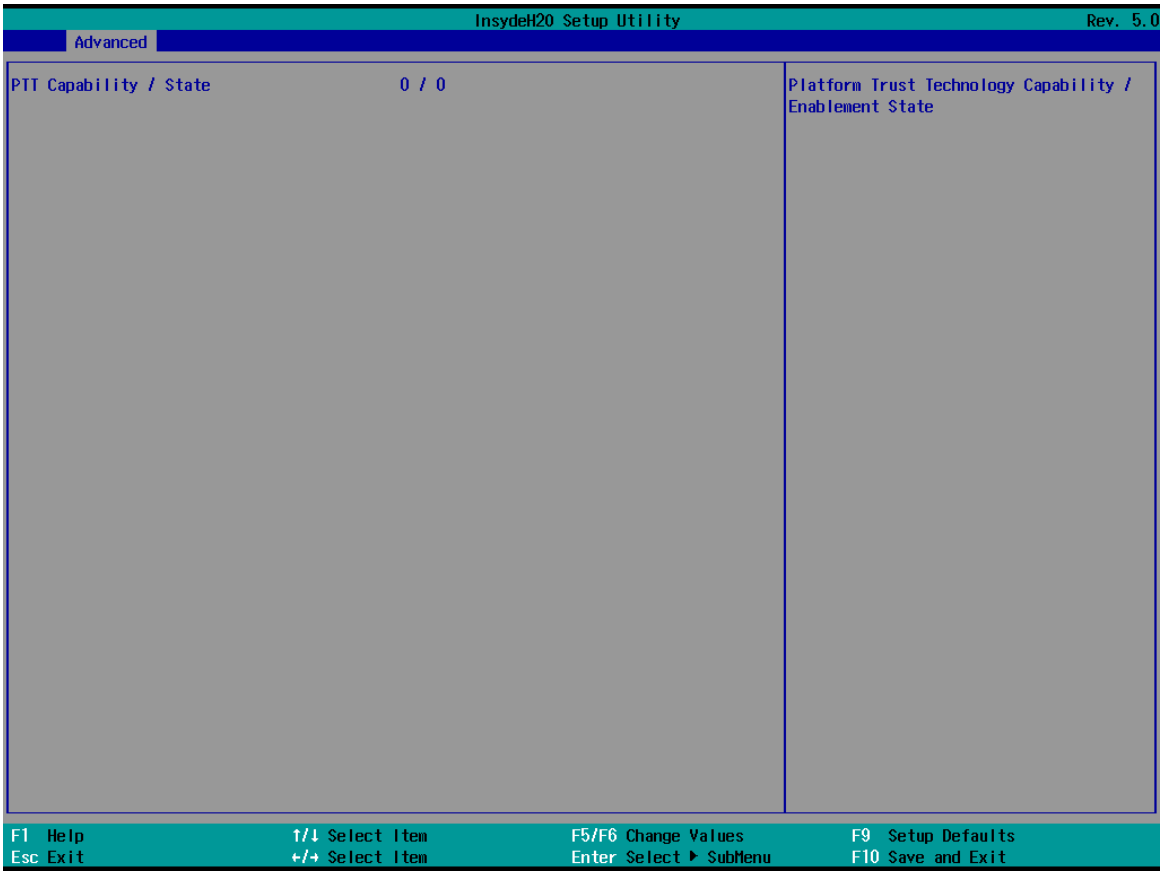
4.2.2.8 USB Configuration



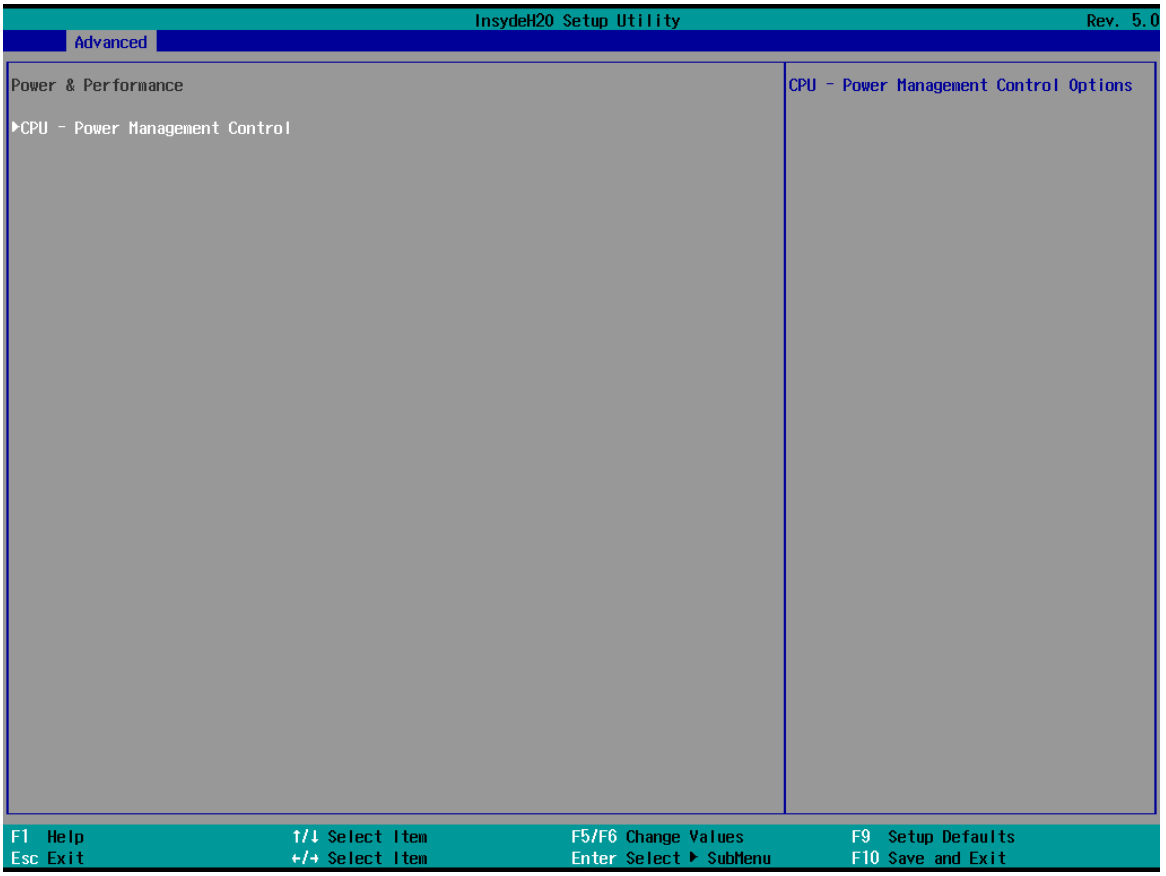
4.2.2.9 ME Firmware Configuration



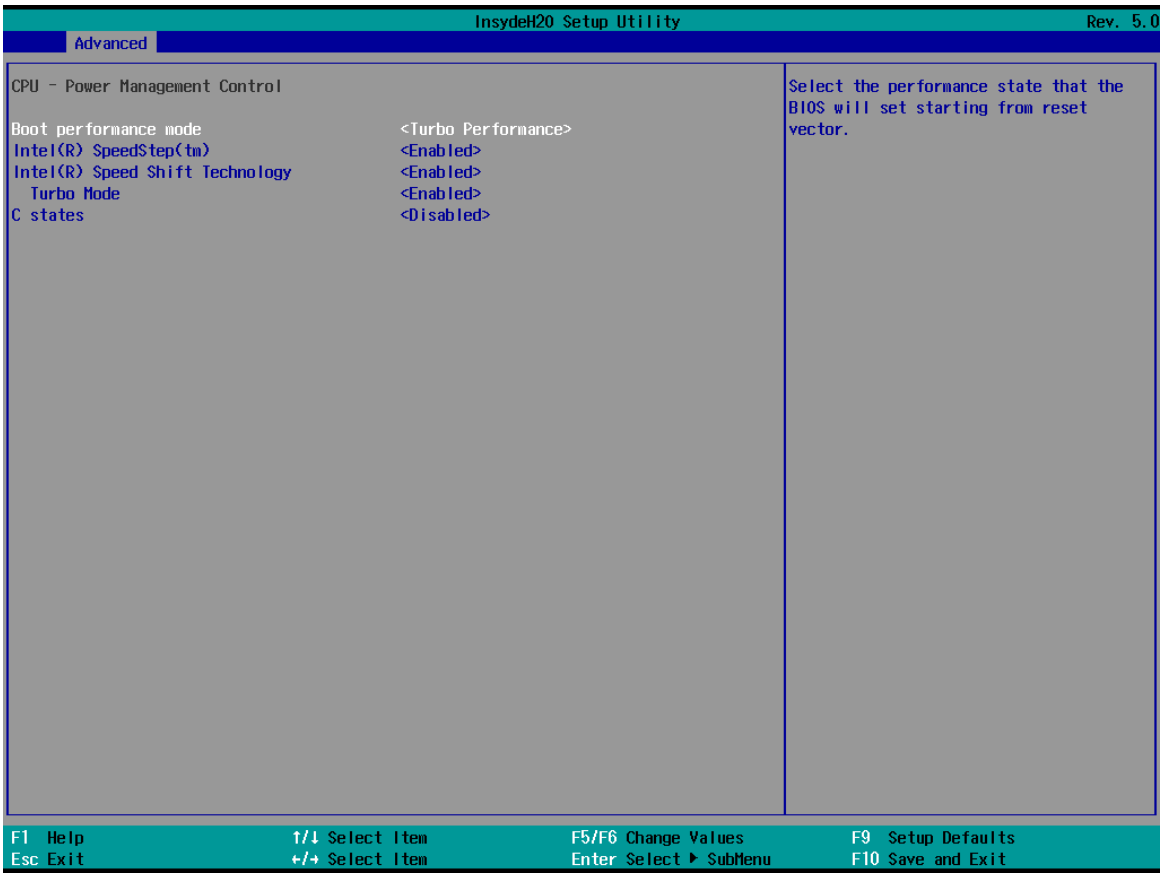


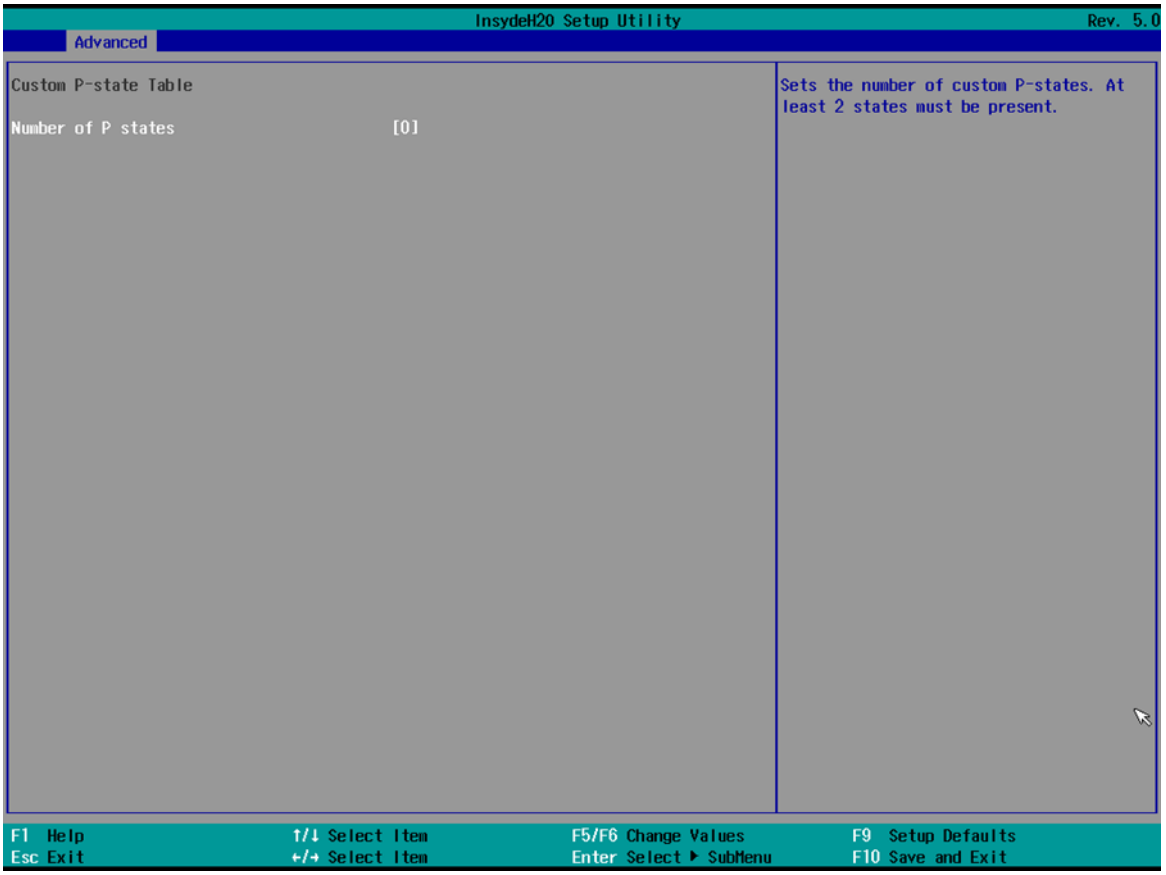

InsydeH20 Setup Utility
Rev. 5.0
Advanced
PTT Capability / State
0 / 0
Platform Trust Technology Capability / Enablement State
F1 Help
↑/↓ Select Item
F5/F6 Change Values
F9 Setup Defaults
Esc Exit
←/→ Select Item
Enter Select ▶ SubMenu
F10 Save and Exit

4.2.2.10 Power & Performance



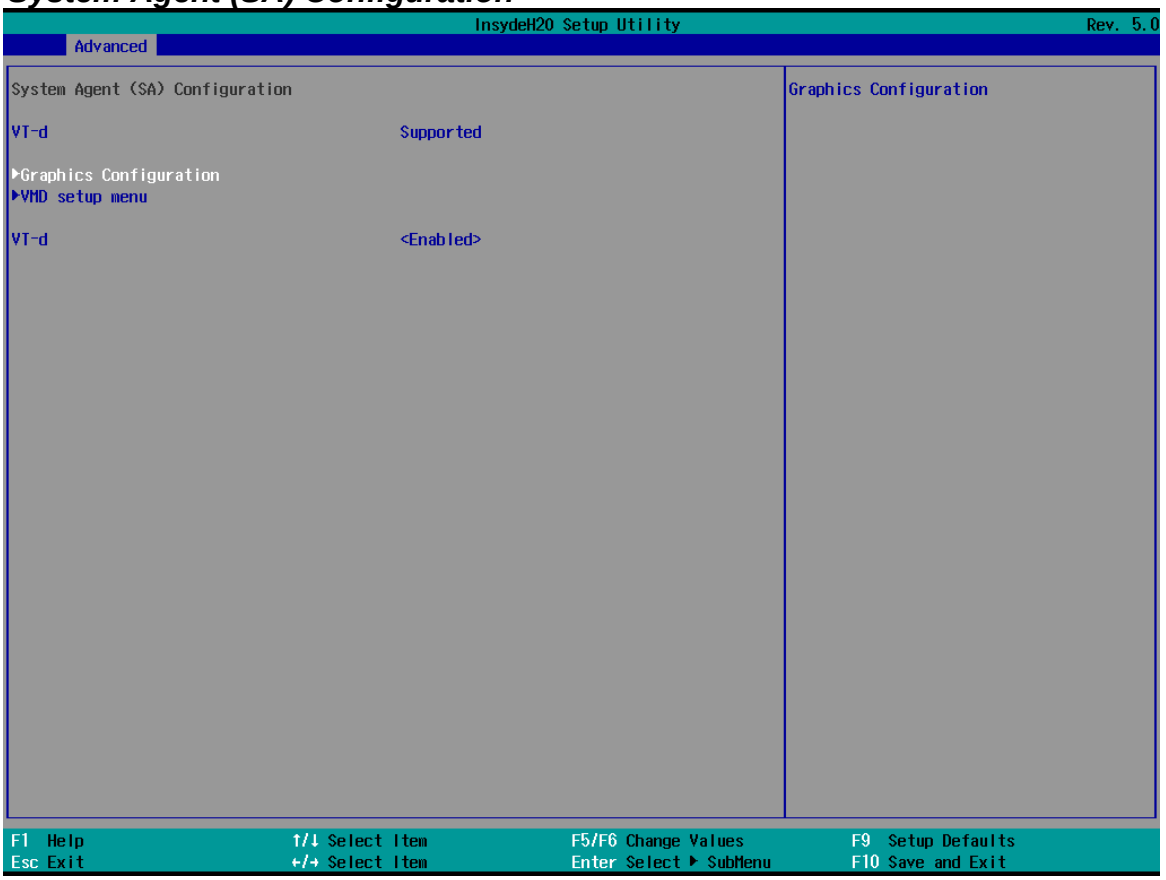
BIOS Setting	Description	Setting Option	Effect
CPU – Power Management Control	Configure CPU – Power Management parameters	Enter	Opens sub-menu





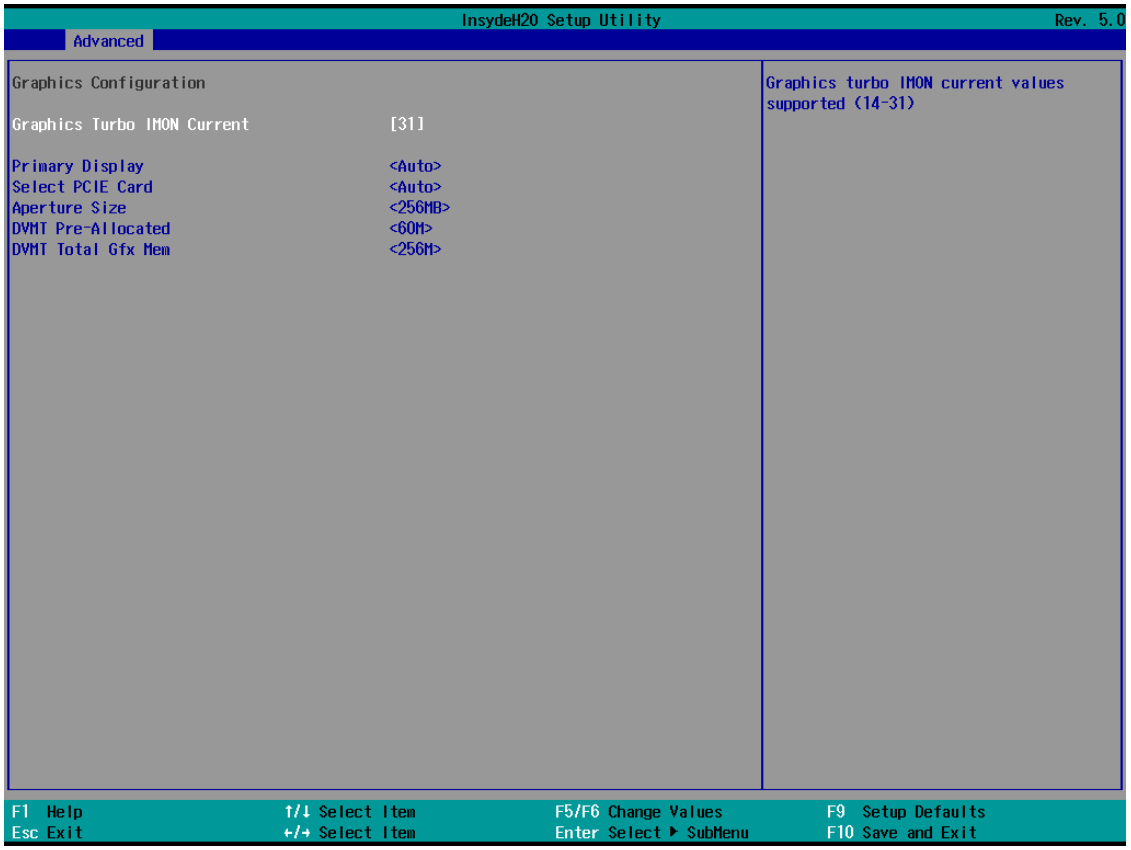
BIOS Setting	Description	Setting Option	Effect
Boot Performance Mode	Configure Boot Performance Mode parameters	-Max non-turbo performance -Max battery -Turbo Performance	Select the performance state that the BIOS will set starting from reset vector
Intel SpeedStep (ta)	Configure Intel SpeedStep (ta)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



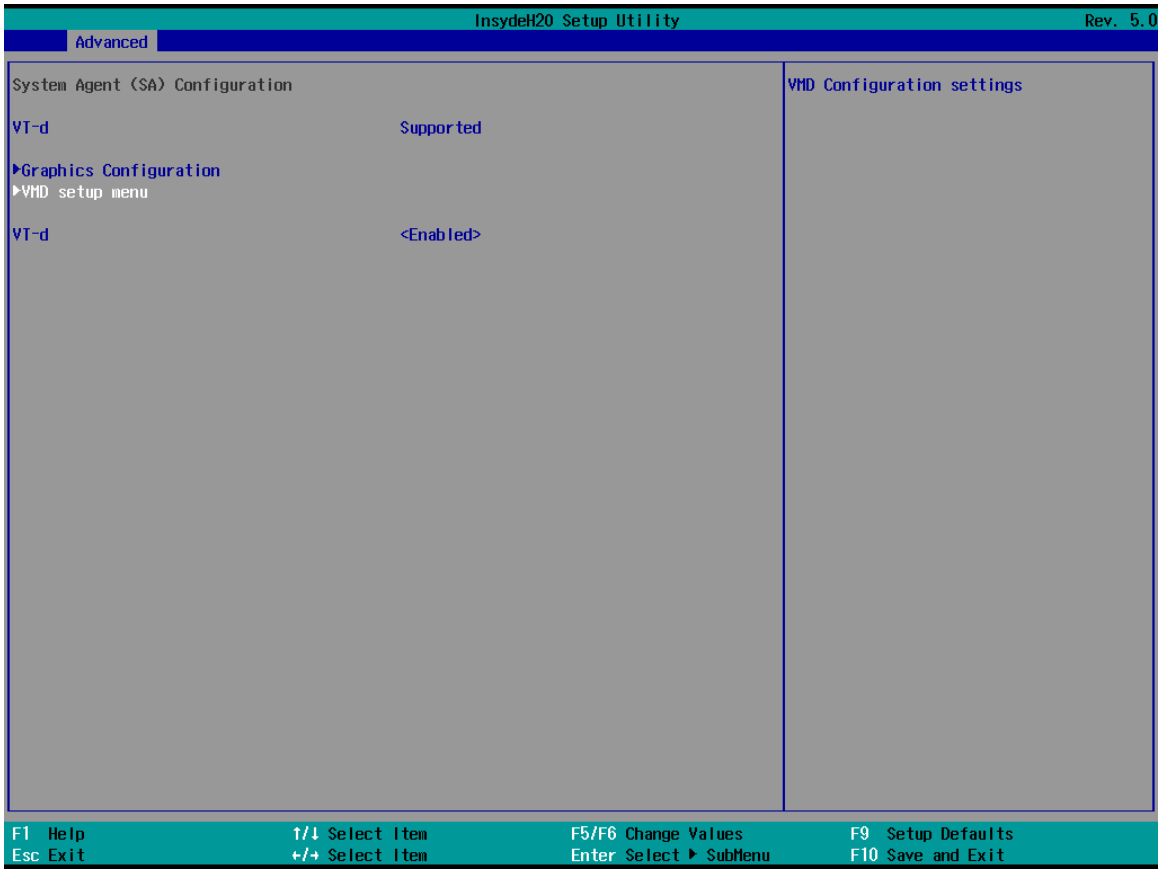
BIOS Setting	Description	Setting Option	Effect
Graphics Configuration	Configure Graphics Configuration parameters	Enter	Opens sub-menu
Vt-d	Intel® Virtualization Technology for Directed I/O	Enabled Disabled	Vt-d capability

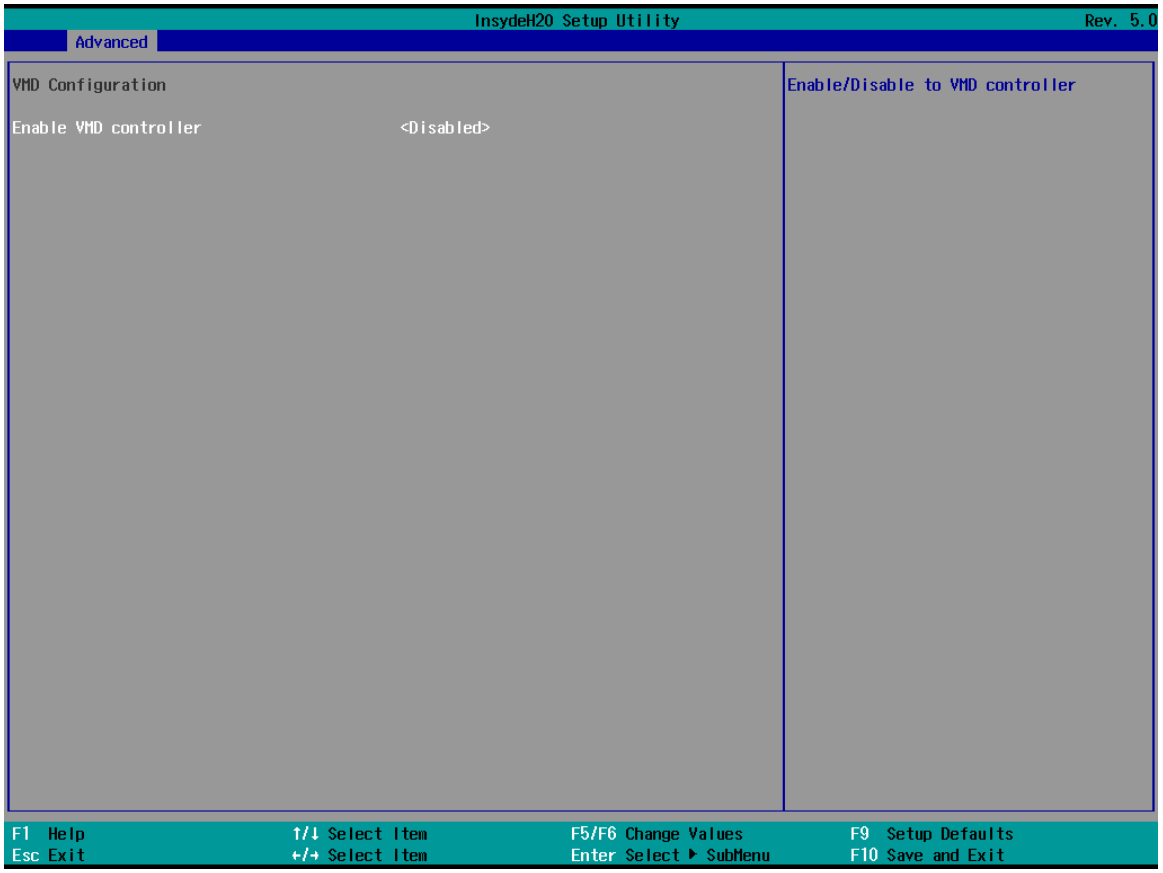
4.2.2.11.1 Graphics Configuration



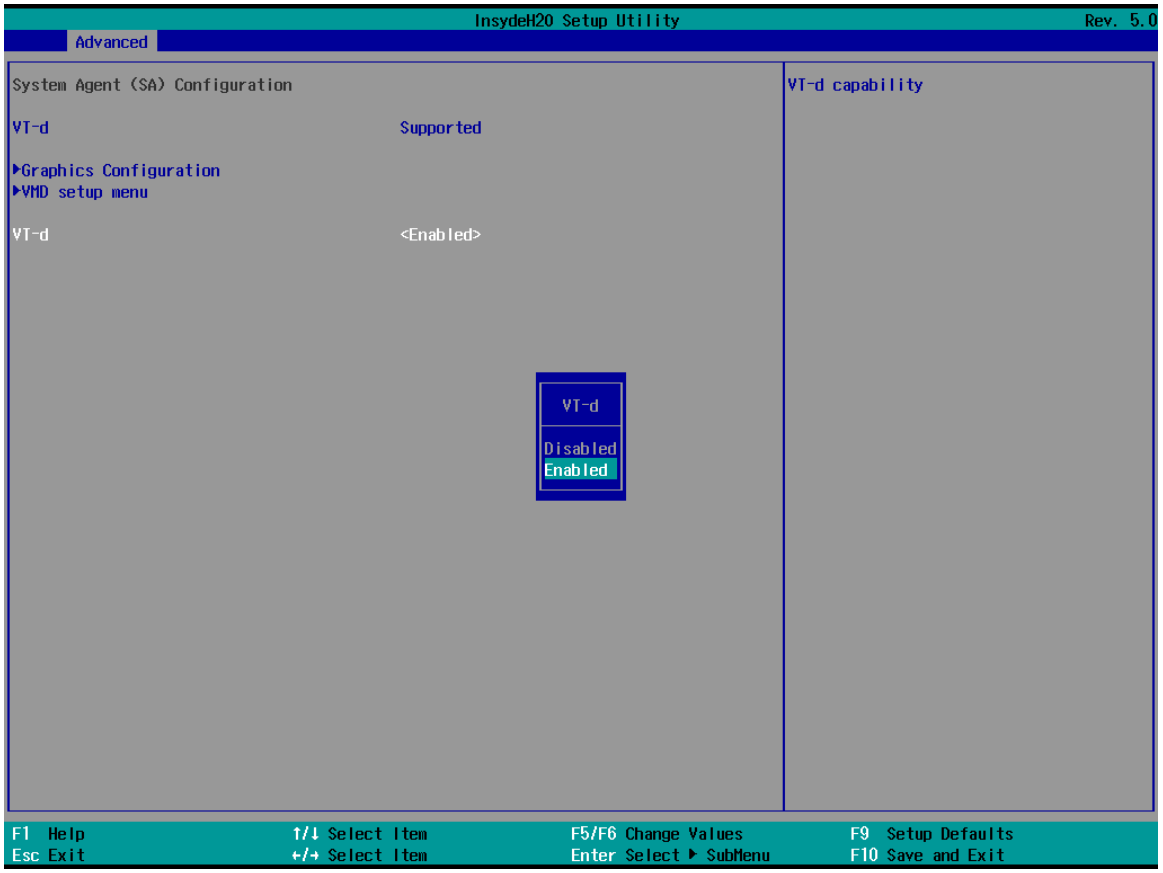
BIOS Setting	Description	Setting Option	Effect
Internal Graphics	Internal Graphics settings	Auto Enabled Disabled	Keep IGFX enabled based on the setup options
Aperture Size	Select the aperture size	128MB 256MB 512MB 1024MB 2048 MB	Select the aperture size *Note: Above 4MB MMIO BIOS assignment is automatically 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 VMD


InsydeH20 Setup Utility
Rev. 5.0
Advanced
System Agent (SA) Configuration
VT-d
Supported
▶Graphics Configuration
▶VMD setup menu
VT-d
<Enabled>
VMD Configuration settings
F1 Help
↑/↓ Select Item
F5/F6 Change Values
F9 Setup Defaults
Esc Exit
←/→ Select Item
Enter Select ▶ SubMenu
F10 Save and Exit

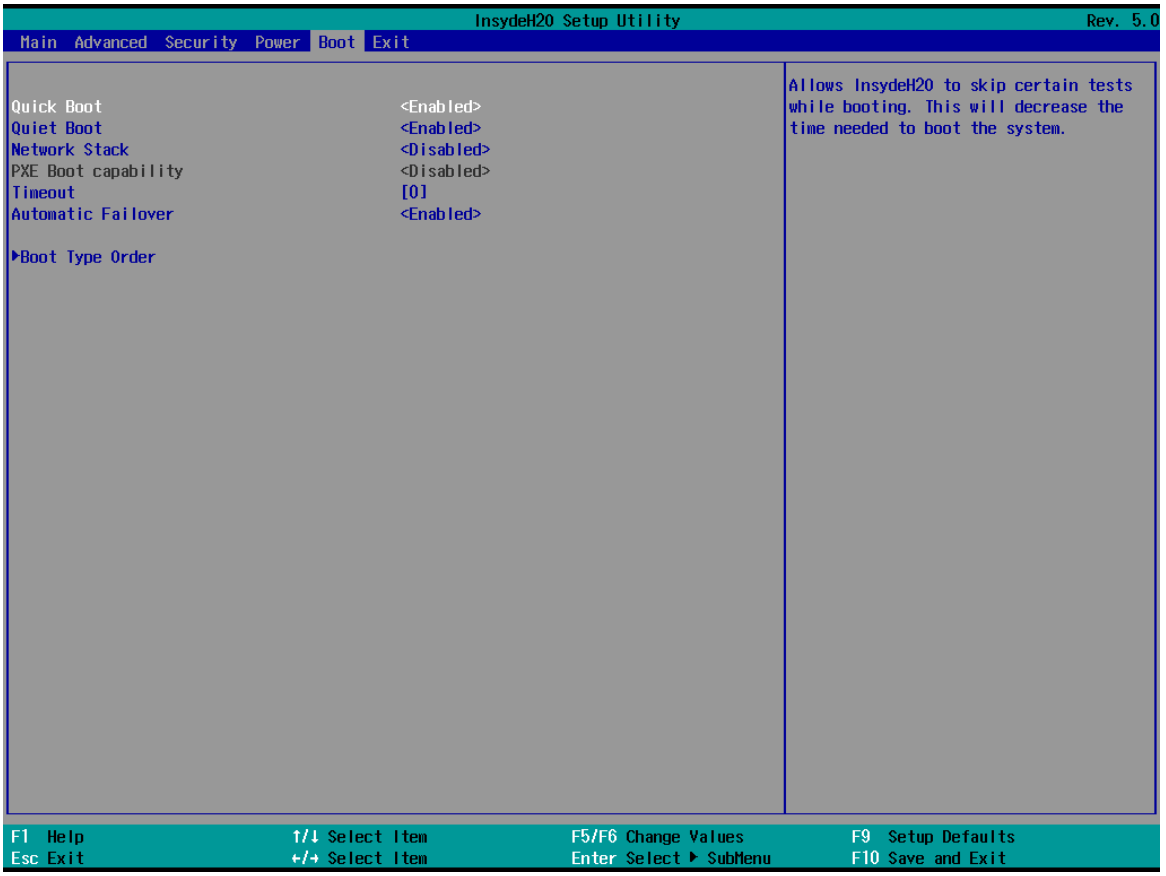

InsydeH20 Setup Utility
Rev. 5.0
Advanced
VMD Configuration
Enable VMD controller
<Disabled>
Enable/Disable to VMD controller
F1 Help
↑/↓ Select Item
F5/F6 Change Values
F9 Setup Defaults
Esc Exit
←/→ Select Item
Enter Select ▶ SubMenu
F10 Save and Exit

4.2.2.11.3 Vt-d



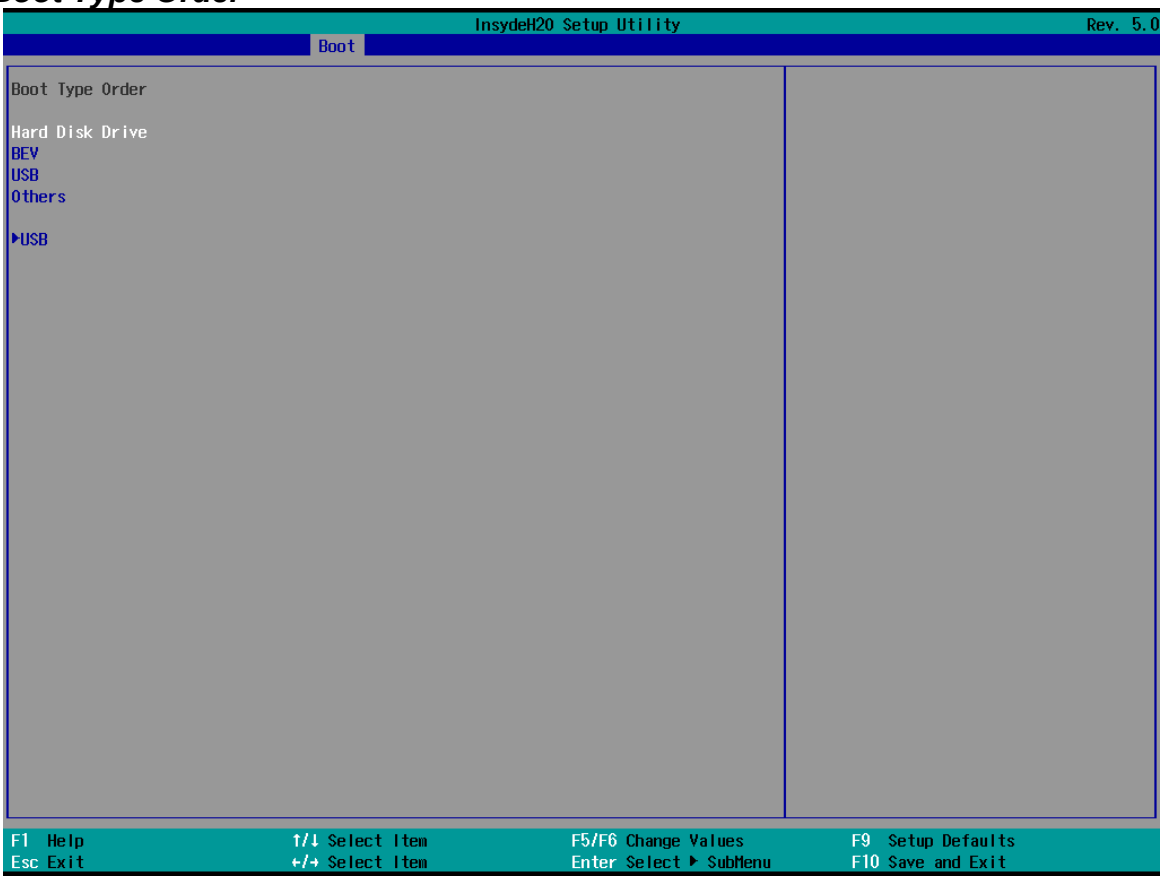
BIOS Setting	Description	Setting Option	Effect
Vt-d	Intel® Virtualization Technology for Directed I/O	Enabled Disabled	Vt-d capability

4.2.3 Boot



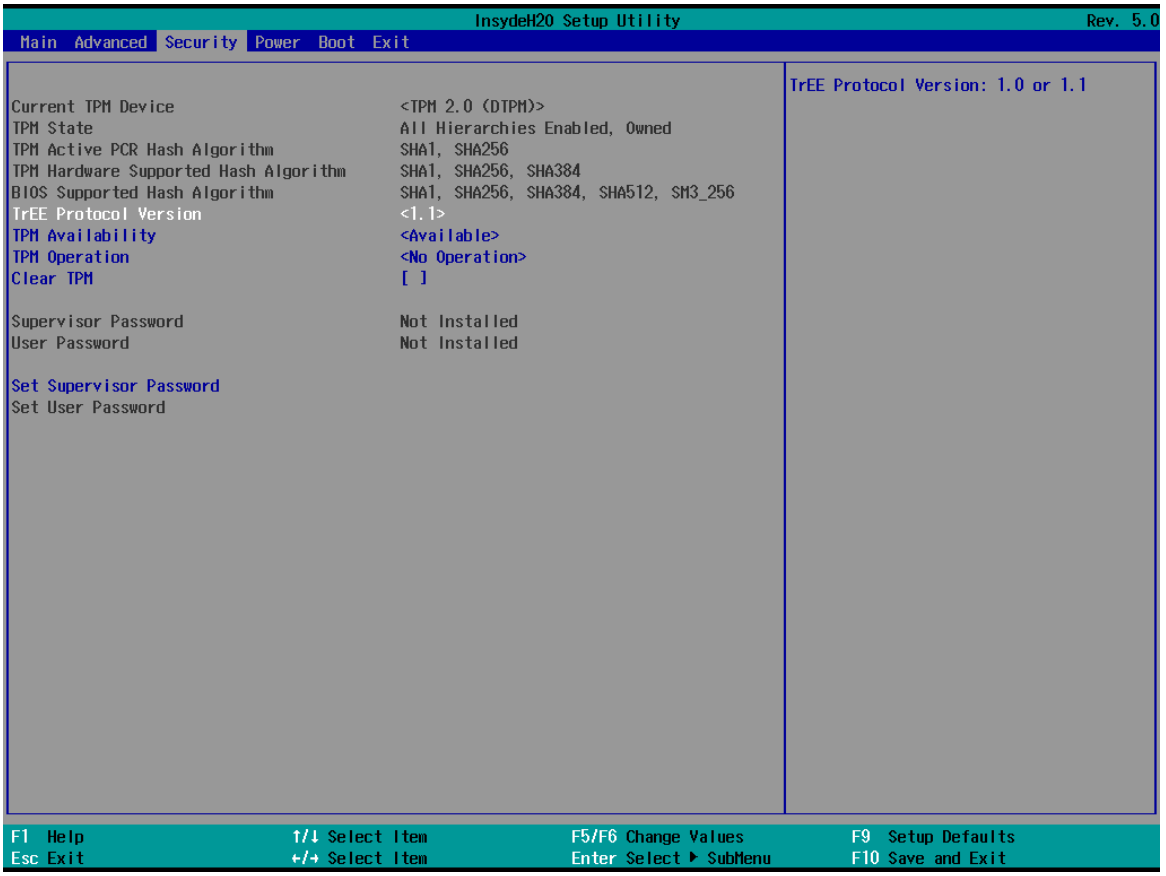
BIOS Setting	Description	Setting Option	Effect
Boot Type	Boot Type configuration	UEFI Boot Type	Select boot type to Dual type, Legacy type or UEFI type
Quick Boot	Quick Boot configuration	Enabled Disabled	Allows InsydeH20 to skip certain tests while booting. This will decrease the time needed to boot 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

4.2.3.1 Boot Type Order



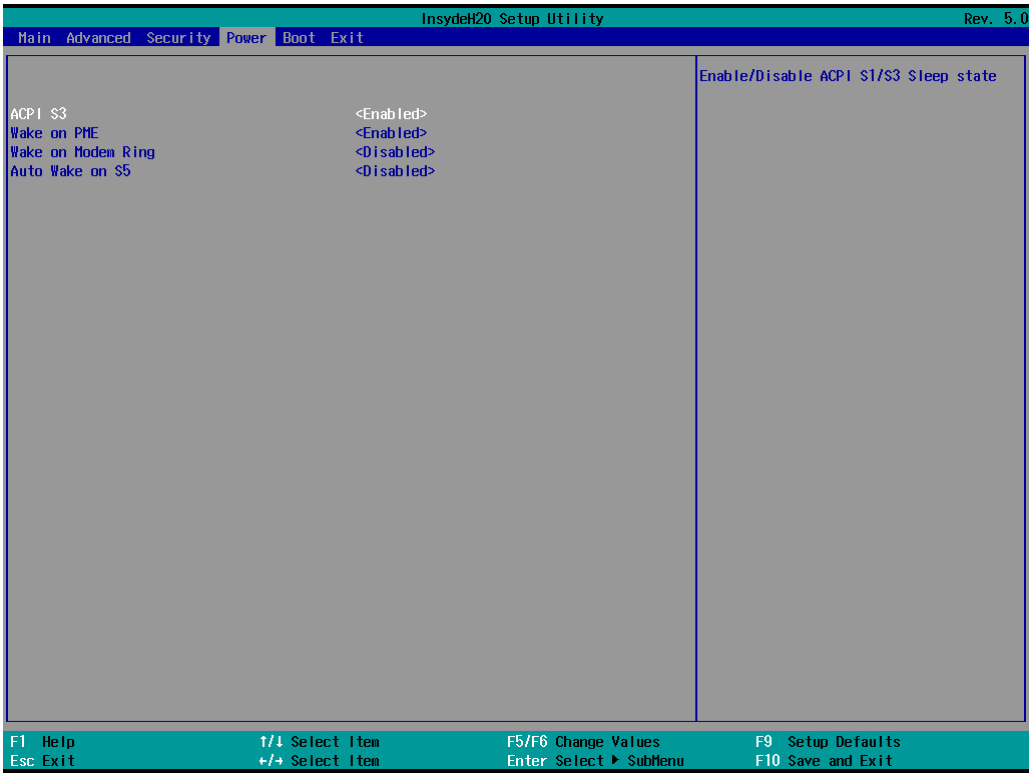
BIOS Setting	Description	Setting Option	Effect
Hard Disk Drive	Hard Disk Drive configuration	Enter	Opens Sub-menu
Others	Other configuration	Enter	Opens Sub-menu

4.2.4 Security



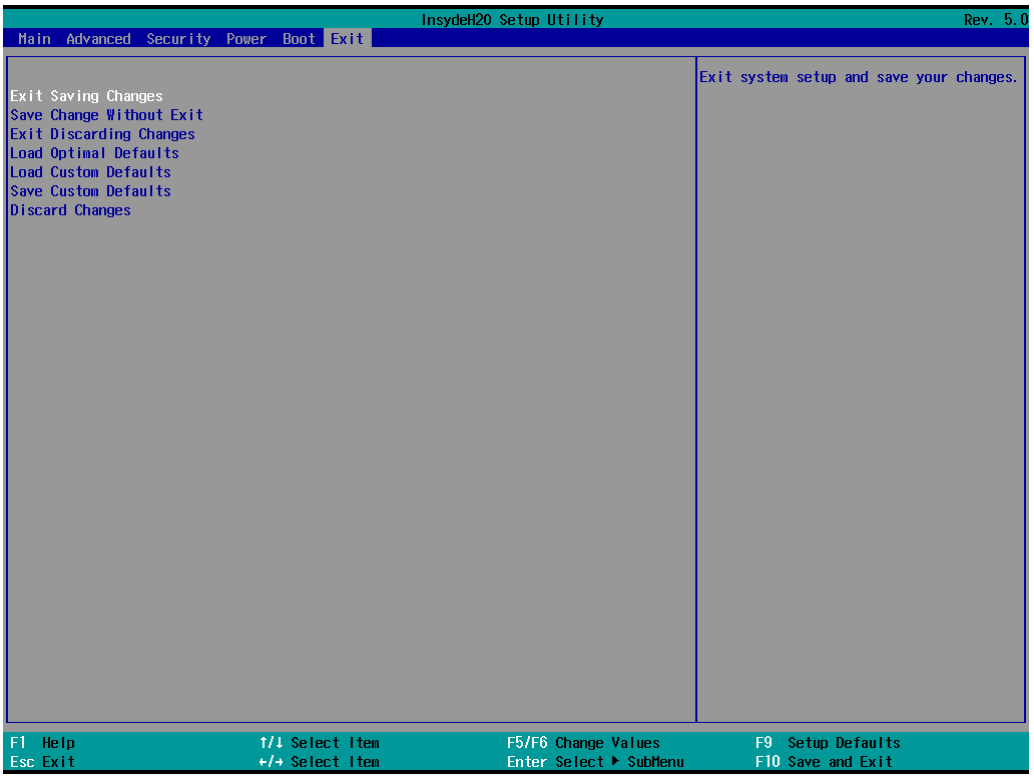
BIOS Setting	Description	Setting Option	Effect
TrEE Protocol Version	Choose TrEE Protocol Version	1.0 1.1	TrEE Protovol Version: 1.0 or 1.1
TPM Availability	TPM Availability configuration	Available Hidden	When hidden don't exposes TPM to 0
TPM Operation	TPM Operation configuration	[ ]	Select one of the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

4.2.5 Exit



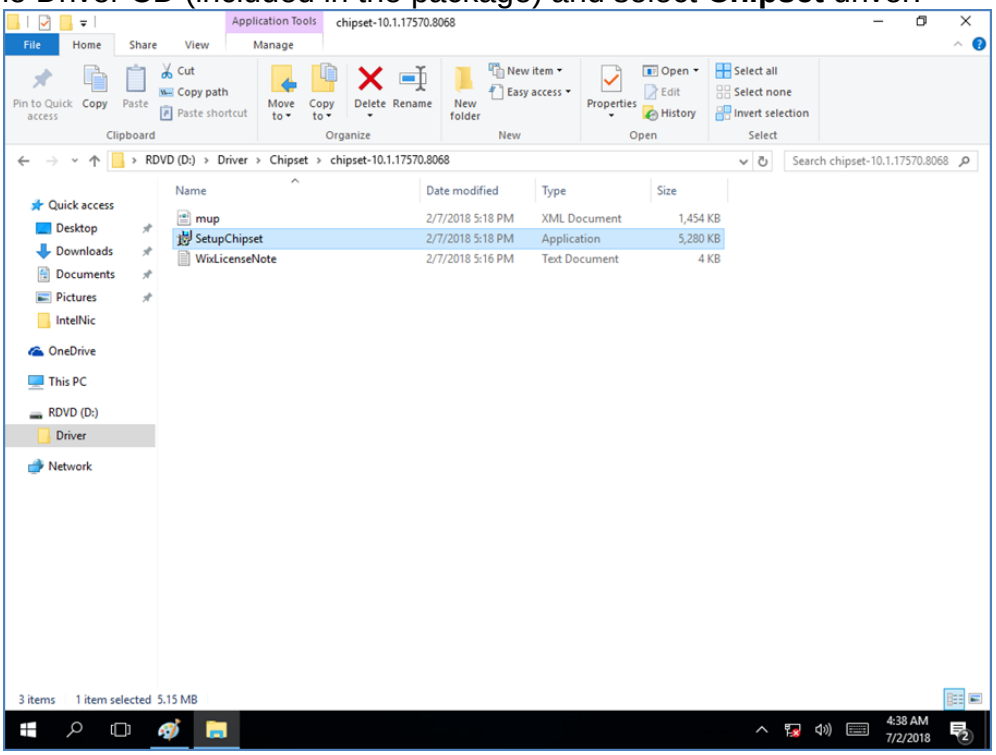
Chapter 5: Driver Installation

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 MPC-E10-1300 Box PC.

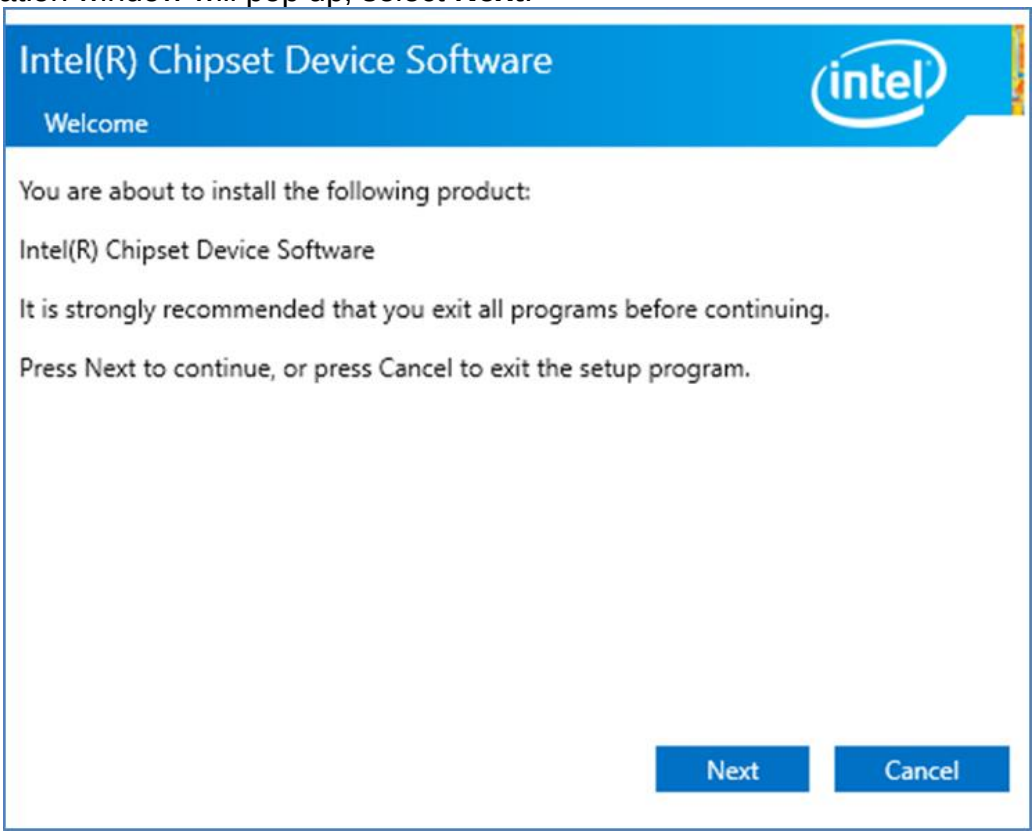
5.1 Chipset Driver

Follow instructions below to install Chipset driver.

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



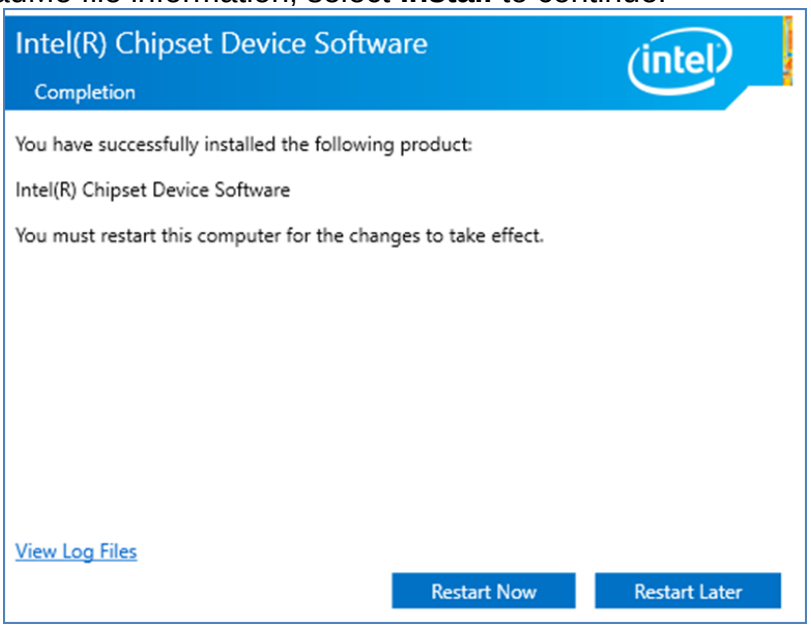
2. Installation window will pop up, select **Next**.



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



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



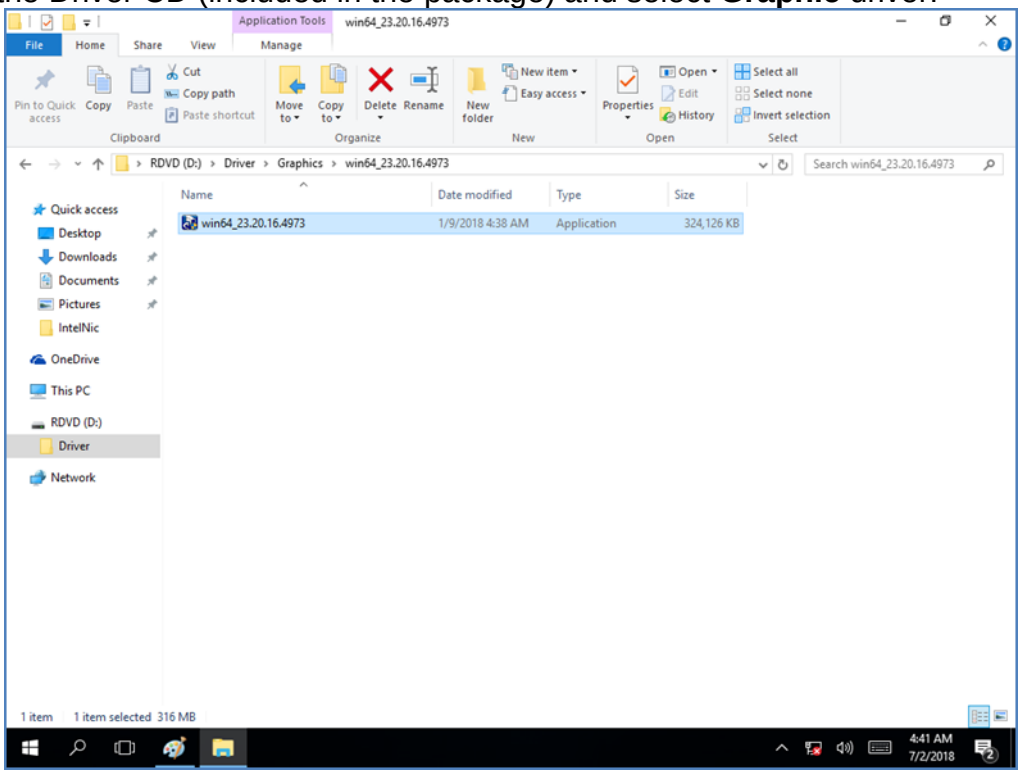
5. Wait for the driver to be installed. When installation completed, select **Restart Now** to restart your computer.



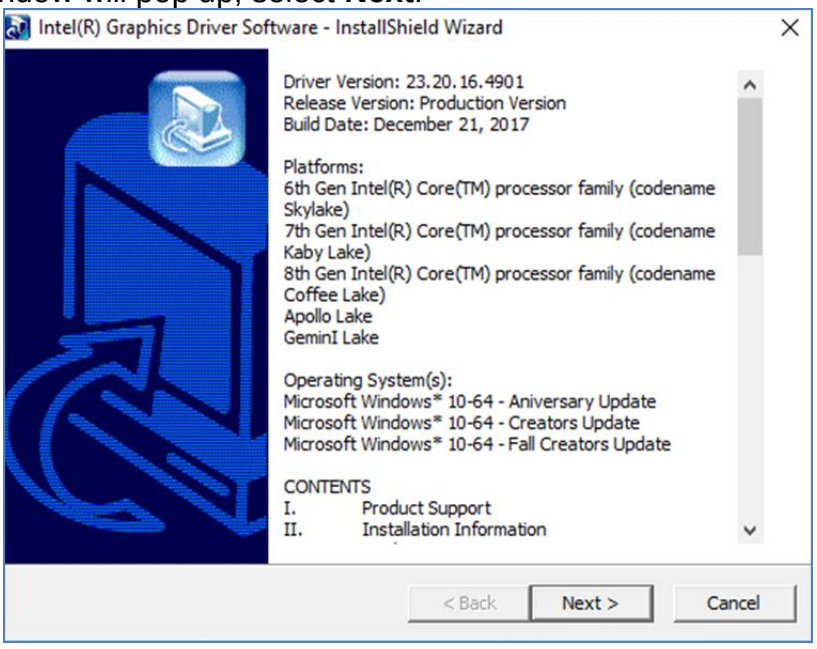
5.2 Graphic Driver

Follow instructions below to install Graphic driver.

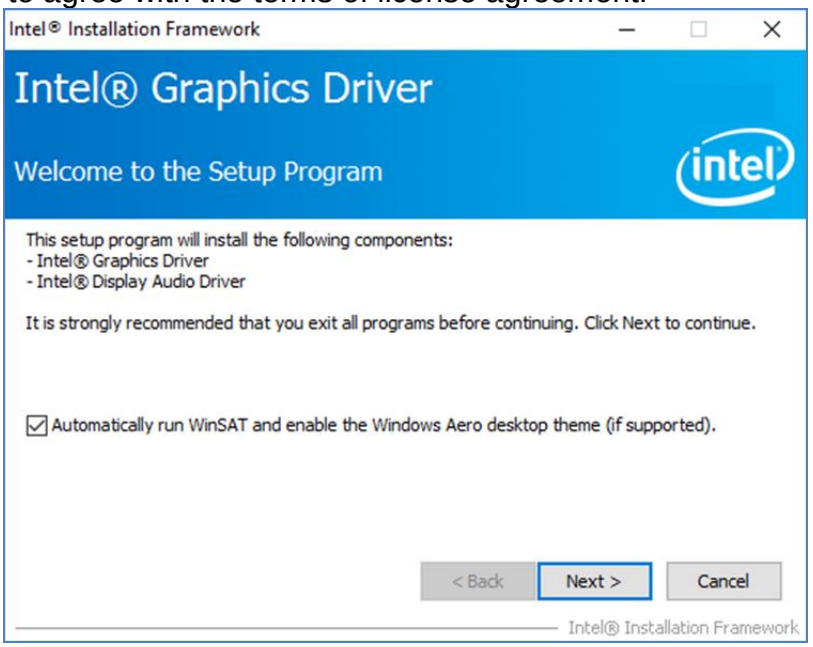
1. Open the Driver CD (included in the package) and select **Graphic** driver.

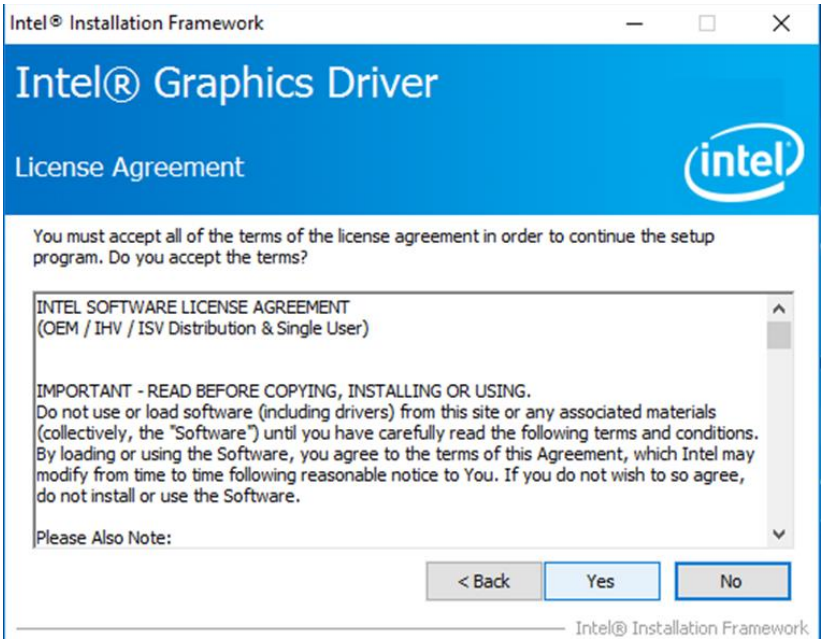


2. Installation window will pop up, select **Next**.

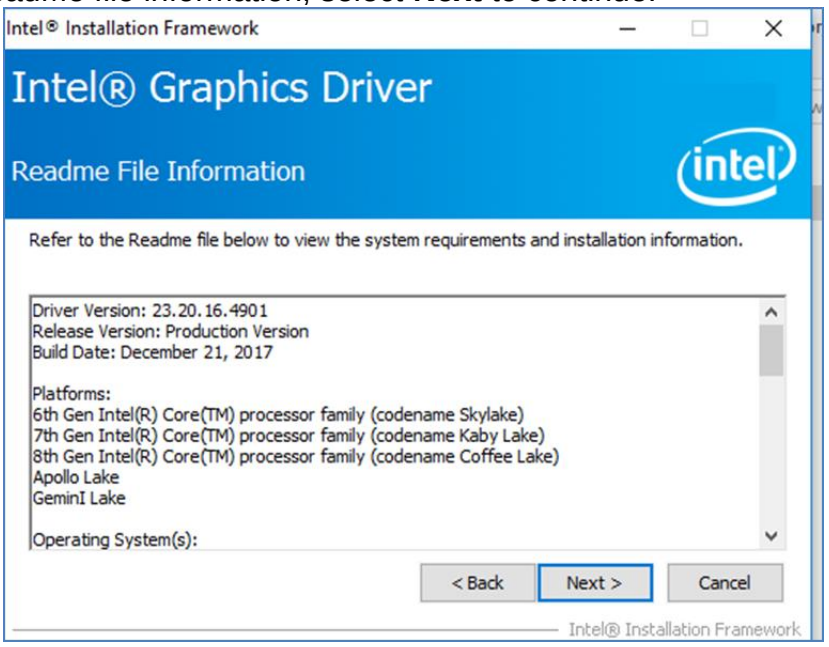


3. Select Accept to agree with the terms of license agreement.

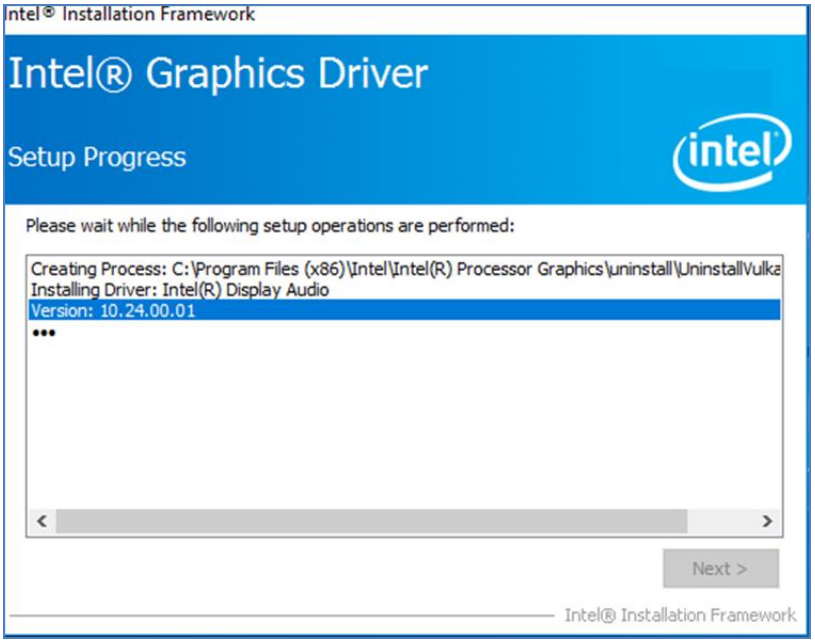




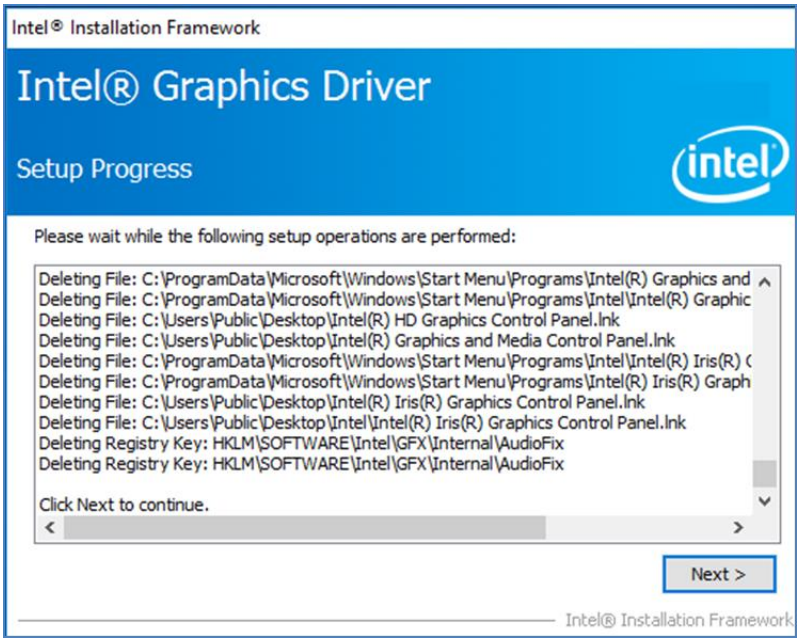
4. Check the ReadMe file information, select **Next** to continue.



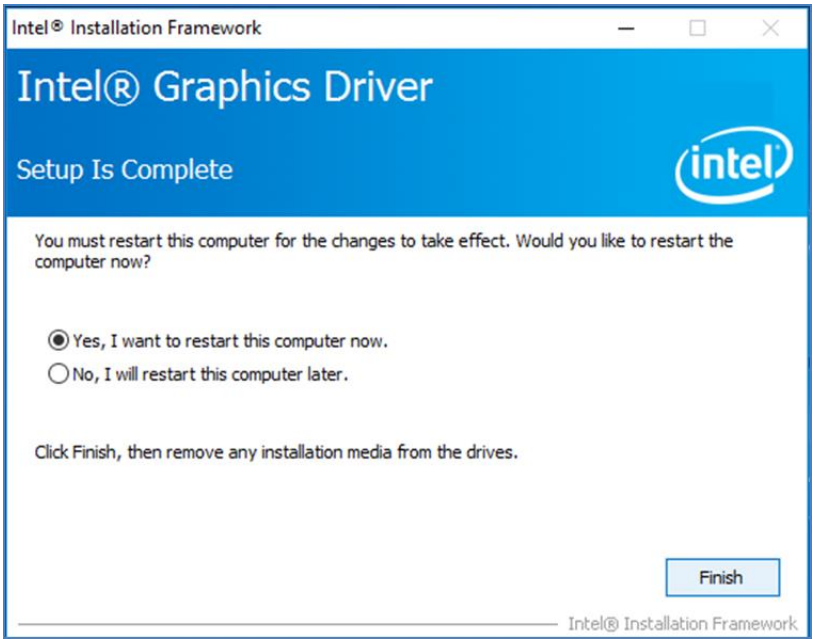
5. Wait for the driver to be installed.



6. Select **Next** to continue.



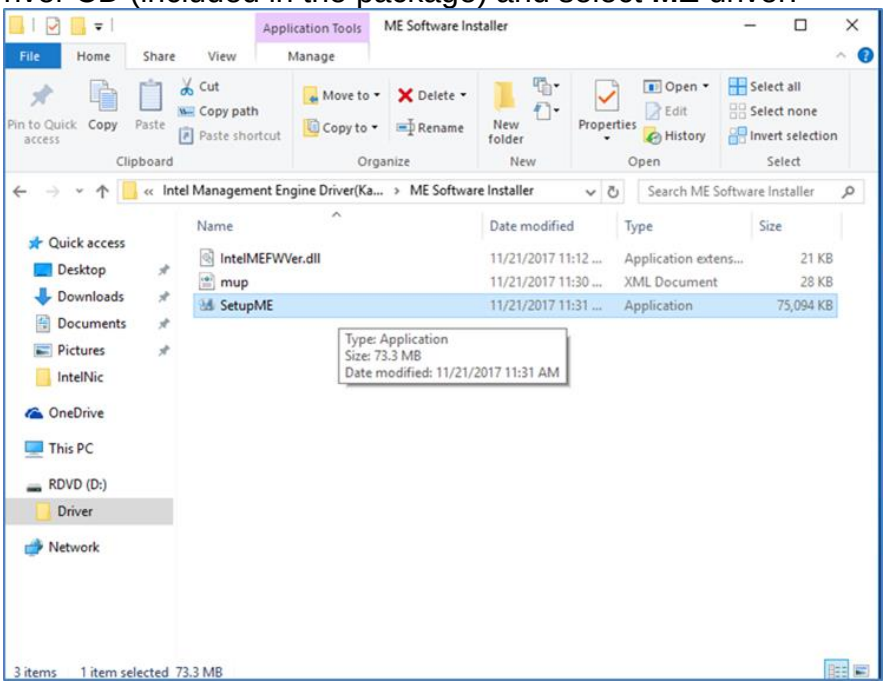
7. After installation is completed, select "**Yes, I want to restart this computer now**", and click **Finish**.



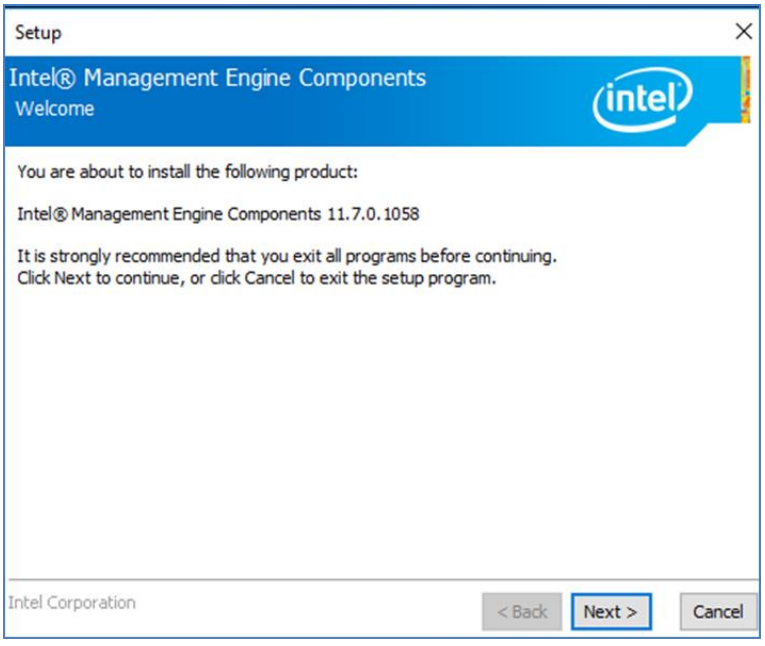
5.3 Management Engine (ME)

Follow instructions below to install Management Engine (ME) .

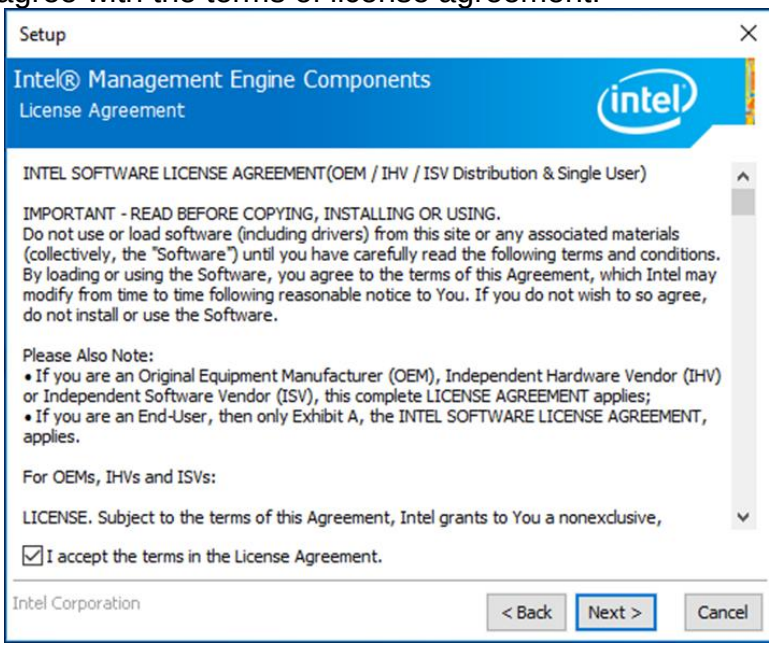
1. Open the Driver CD (included in the package) and select **ME** driver.



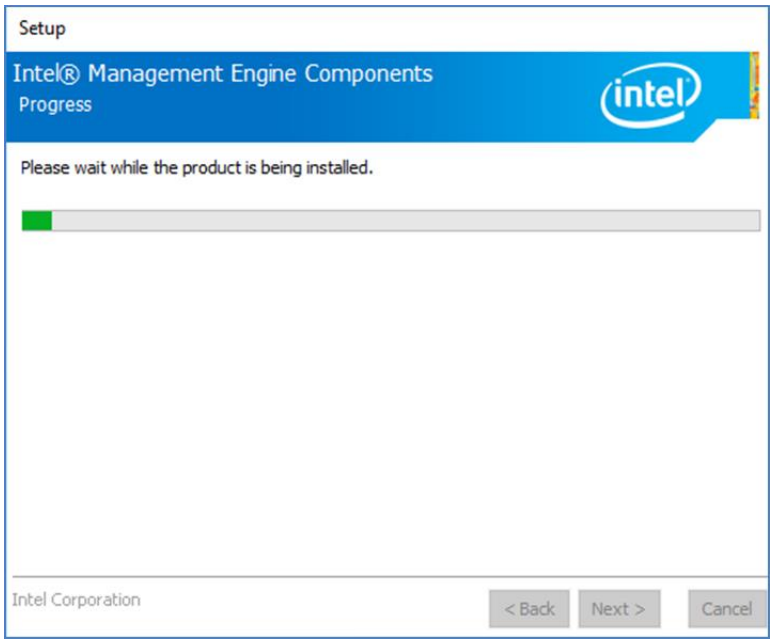
2. Select **Next** to start the installation.



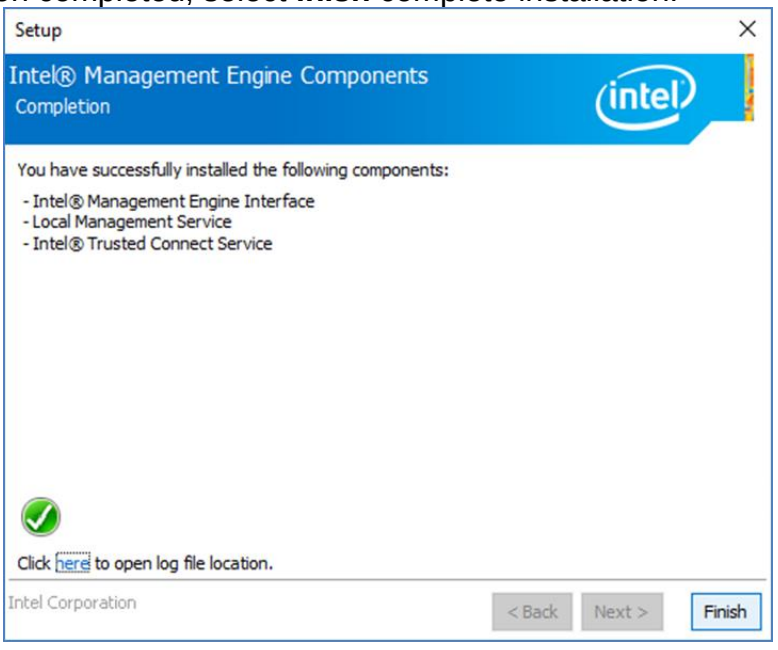
3. Select **Next** to agree with the terms of license agreement.



4. Wait for the driver to be installed.



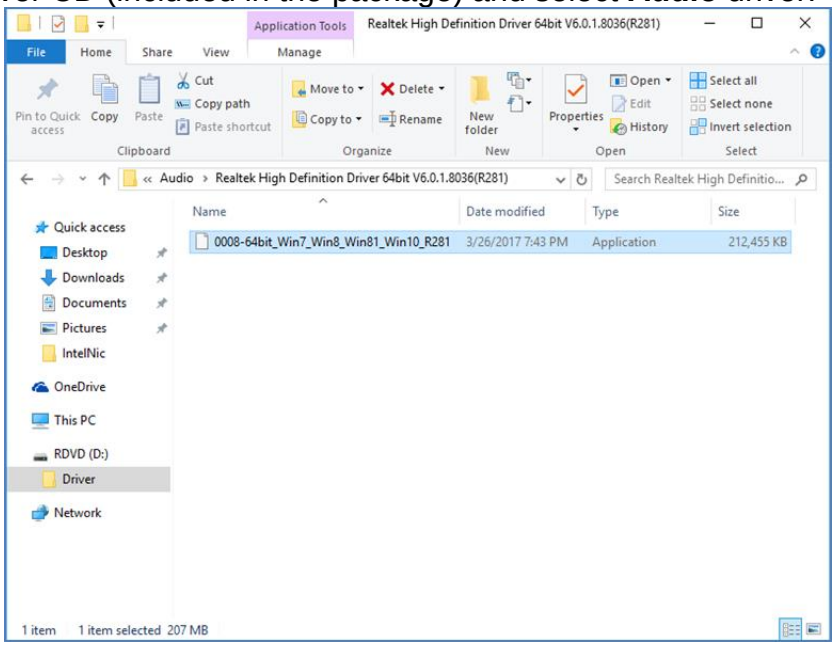
5. When installation completed, select **inish** complete installation.



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 **Start** to continue.



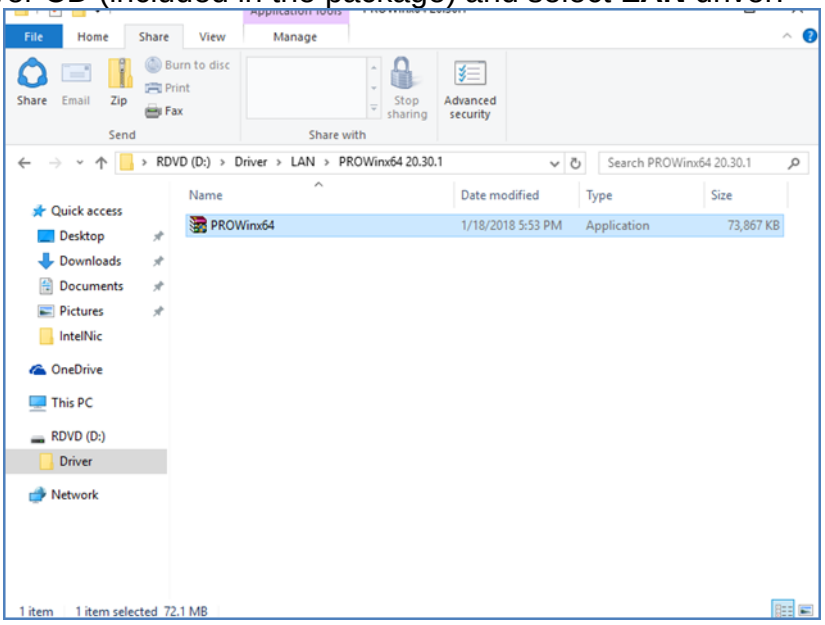
3. When installation completed, select **Finish** complete installation.



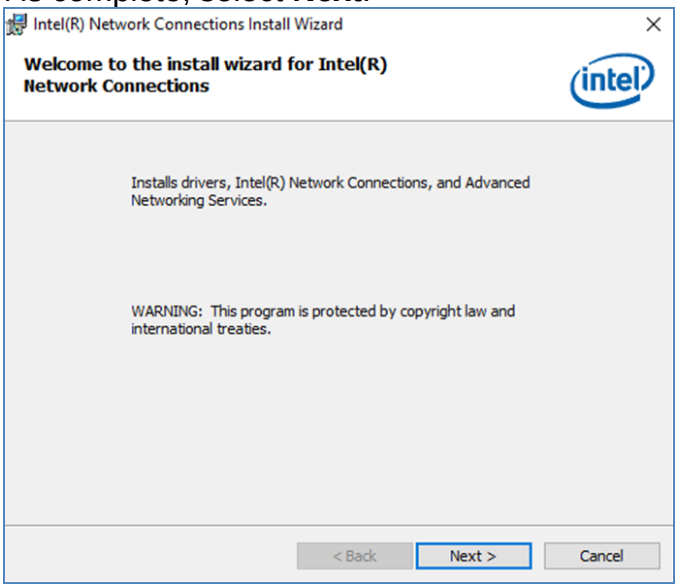
5.5 Ethernet Driver

Follow instructions below to install LAN driver.

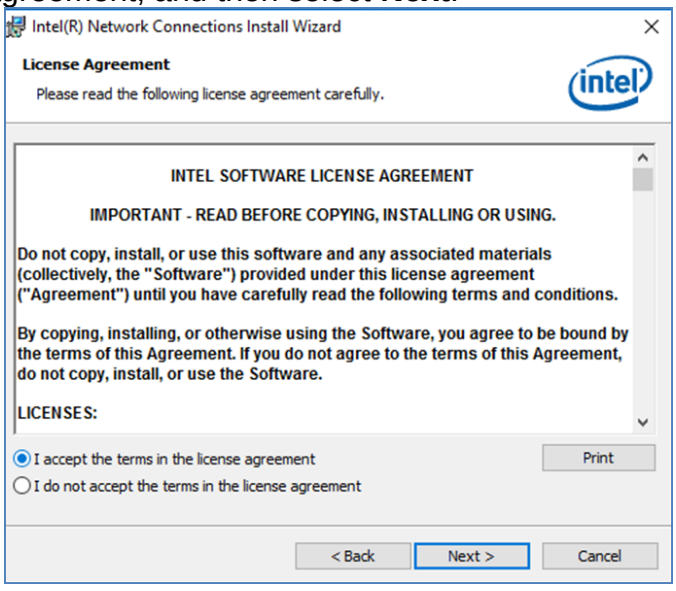
1. Open the Driver CD (included in the package) and select **LAN** driver.



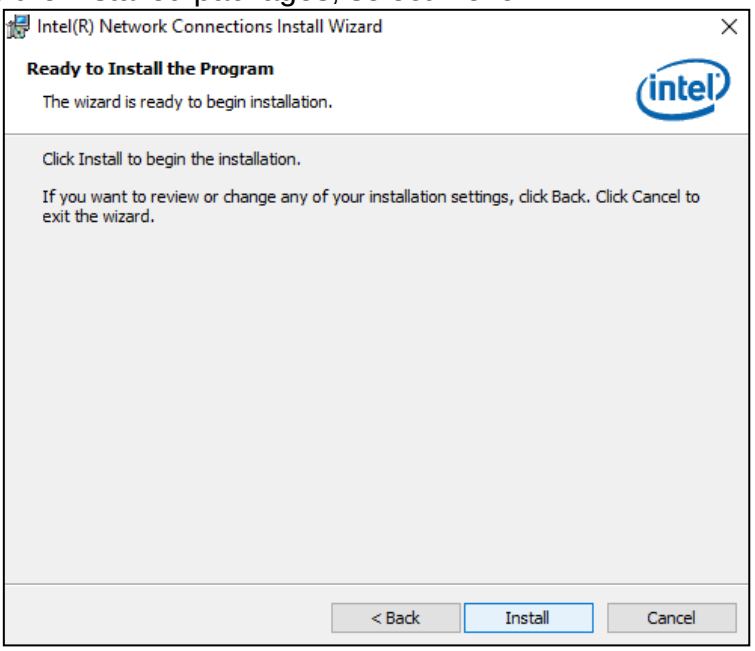
2. When compression is complete, select **Next**.



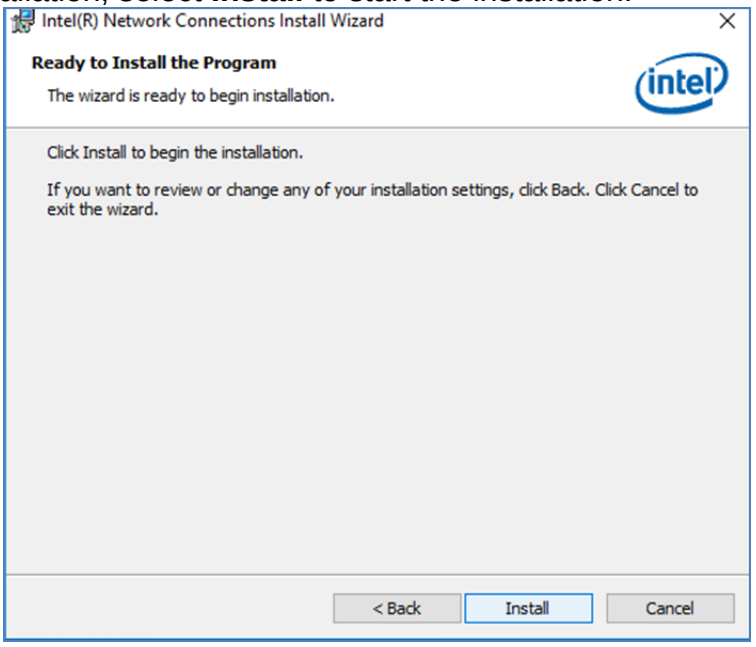
3. Read the license agreement, and then select **Next**.



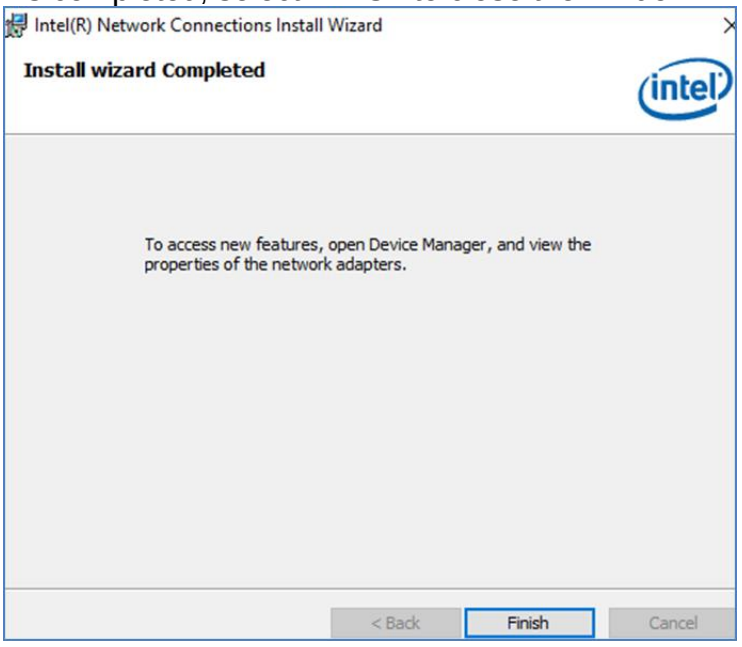
4. System displays the installed packages, select **Next**.



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



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

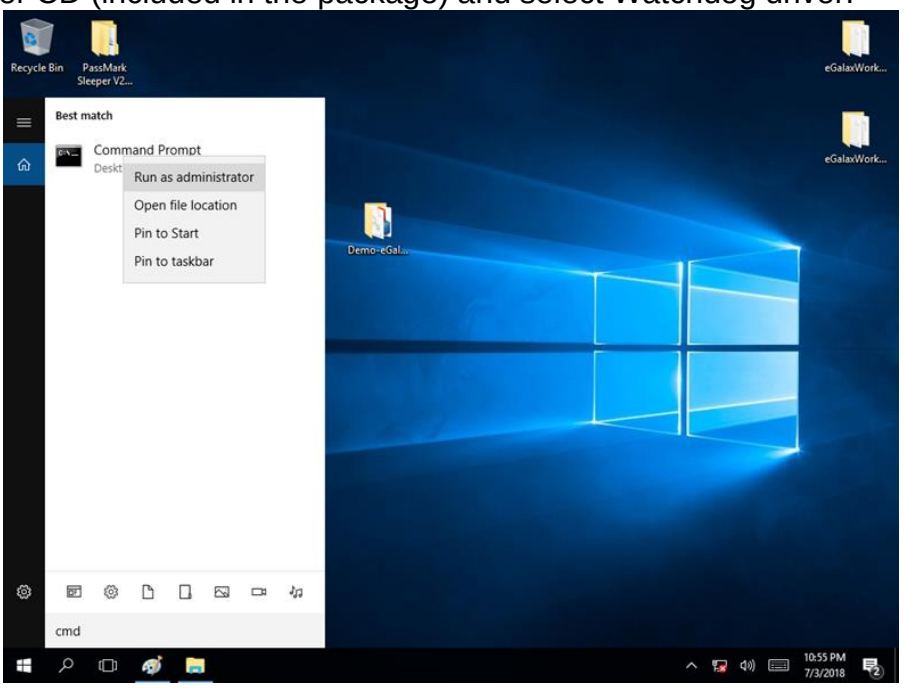


5.6 Watchdog Driver

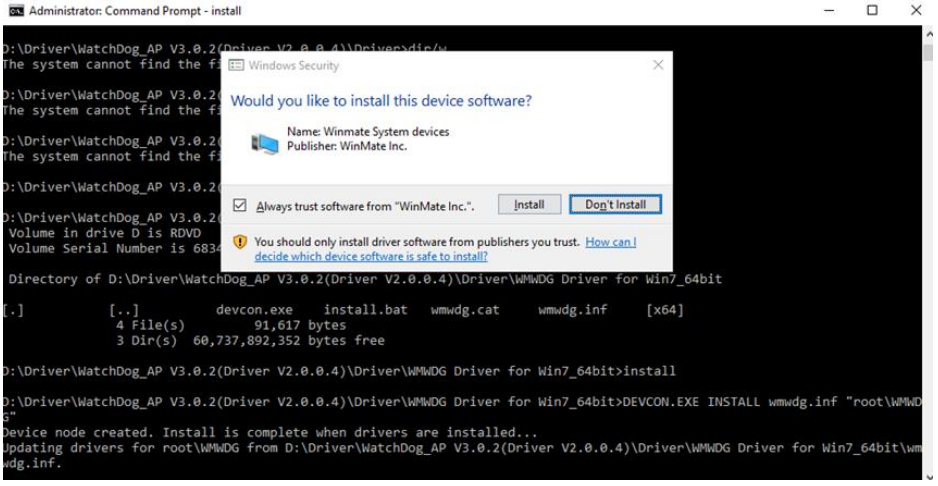
For more details about Seatronx Watchdog, please download Watchdog Guide from Seatronx Downloads Center.

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

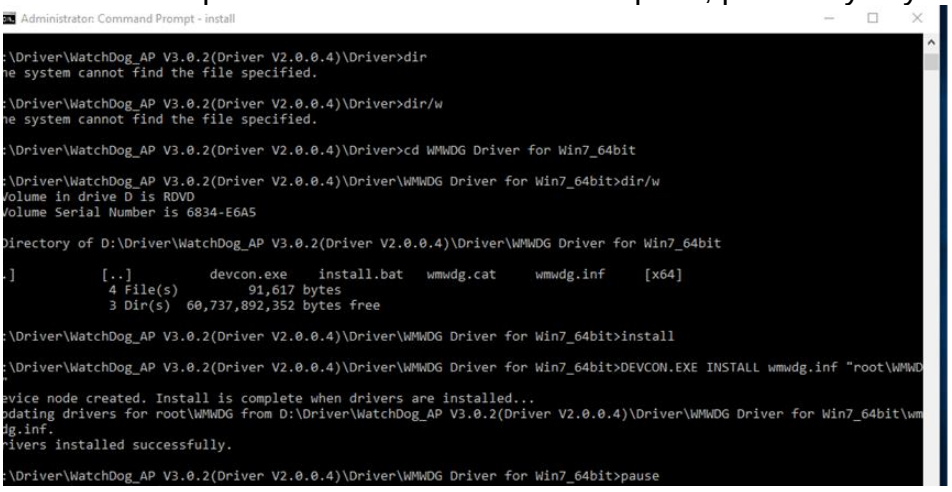
1. Type “cmd” in the run box then the cmd.exe will appear in programs.
2. Right click on the cmd.exe and click on “Run as administrator” to start
3. Open the Driver CD (included in the package) and select Watchdog driver.



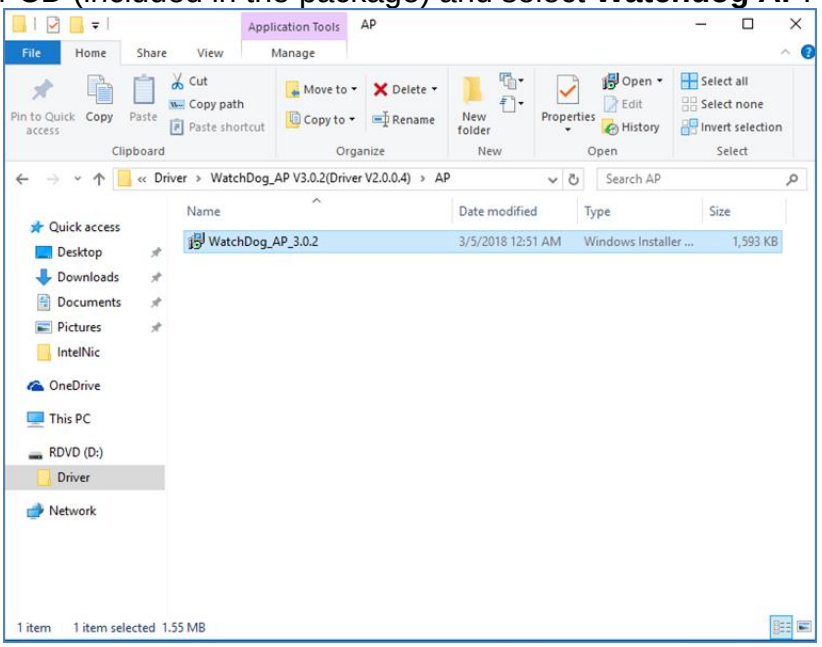
4. When Windows Security dialog appear, select **install** to continue the Installation.



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



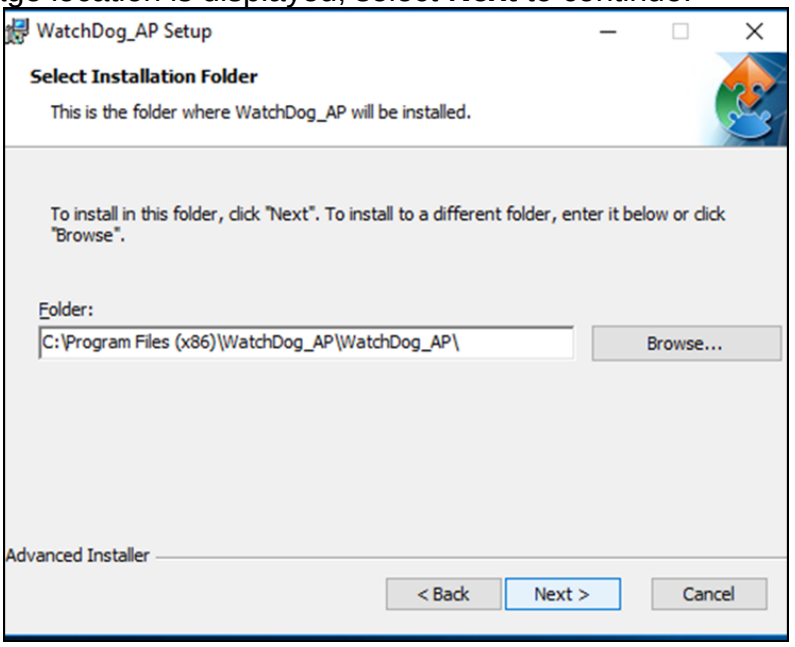
6. Open the Driver CD (included in the package) and select **Watchdog AP**.



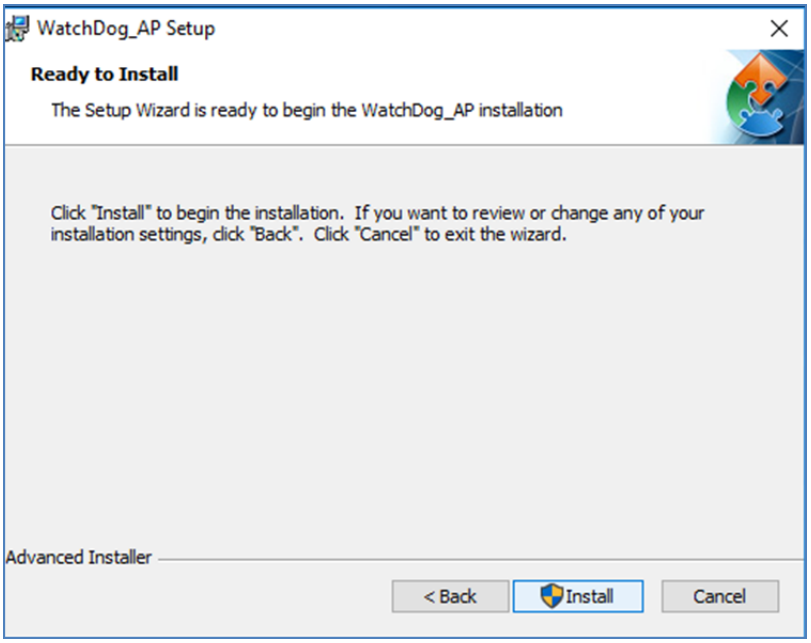
7. Select **Next**.



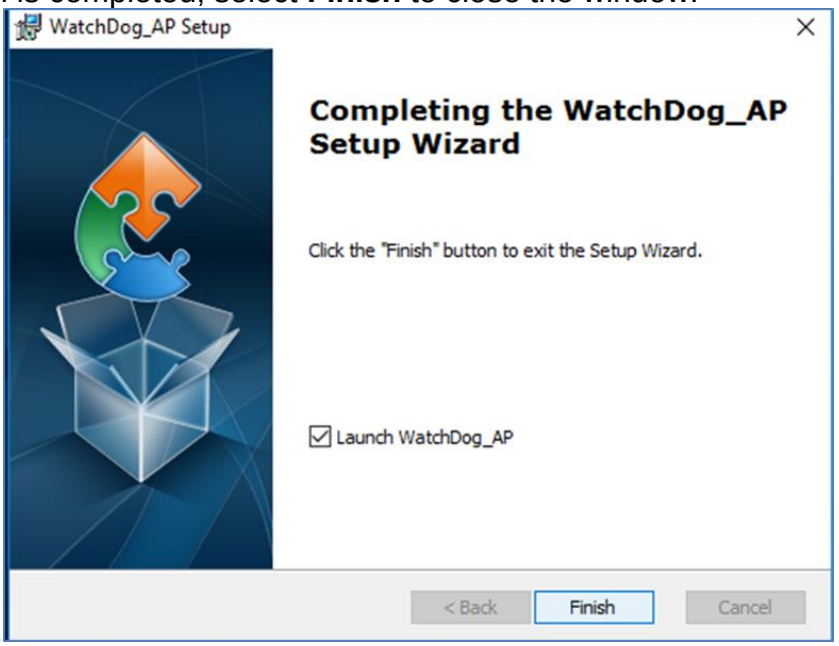
8. The installed storage location is displayed, select **Next** to continue.



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



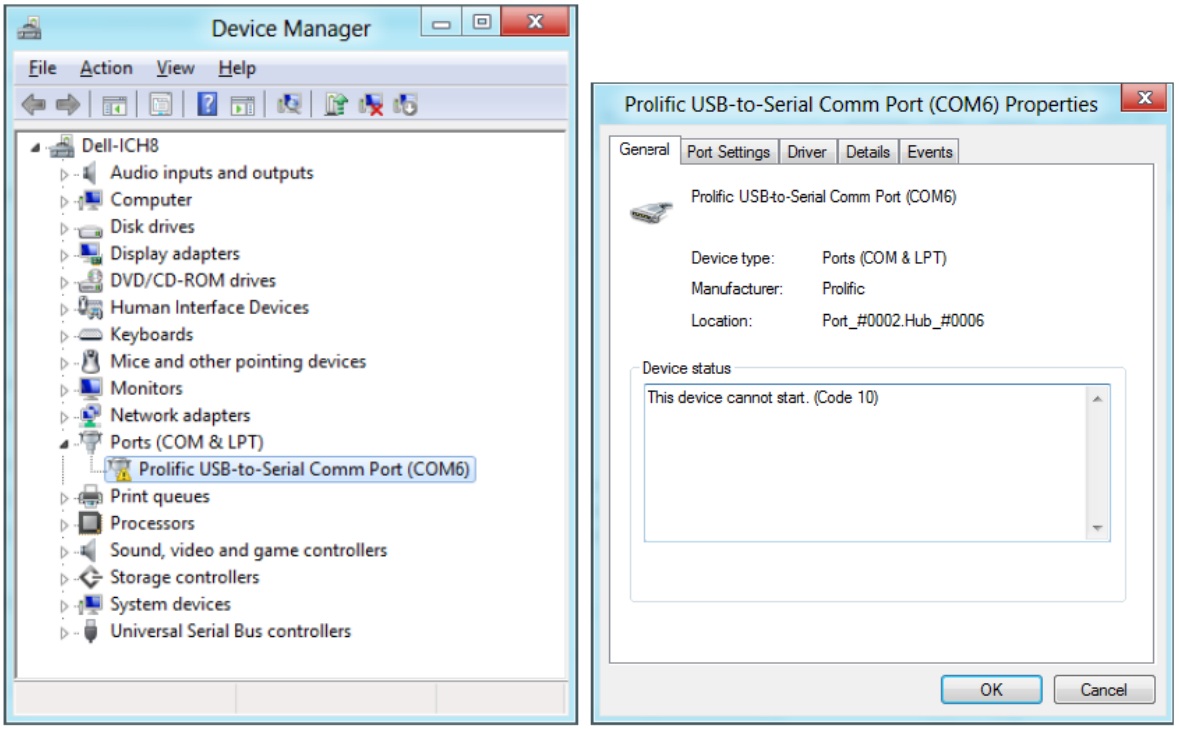
10. When installation is completed, select **Finish** to close the window.



5.7 Option Devices Driver Installation

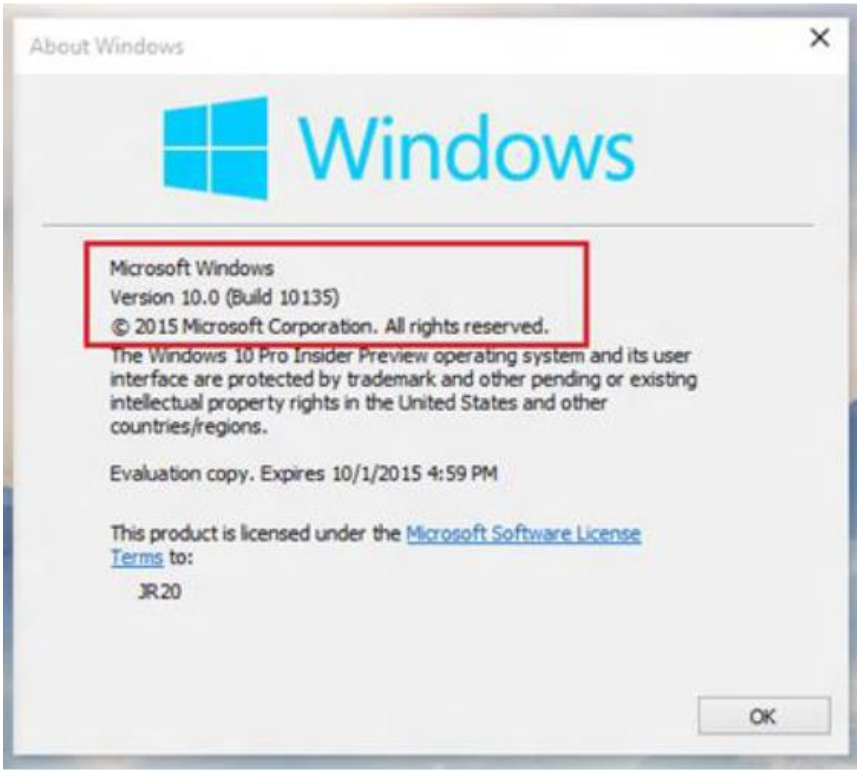
5.7.1 WIDOM Driver

Important: Please be warned that counterfeit/fake PL-2303HX Rev A (or PL-2303HXA) USB-to-Serial Controller ICs using Prolific's trademark logo, brandname, and drivers, are being sold in the China market. Counterfeit IC products show exactly the same outside chip markings but generally are of poor quality
and causes Windows driver compatibility issues (Yellow Mark Error Code 10 in Device Manager under WinXP, Vista, and 7). This warning is issued to all customers and consumers to avoid confusion and false purchase. Please purchase only from stores or vendors providing technical and RMA support.

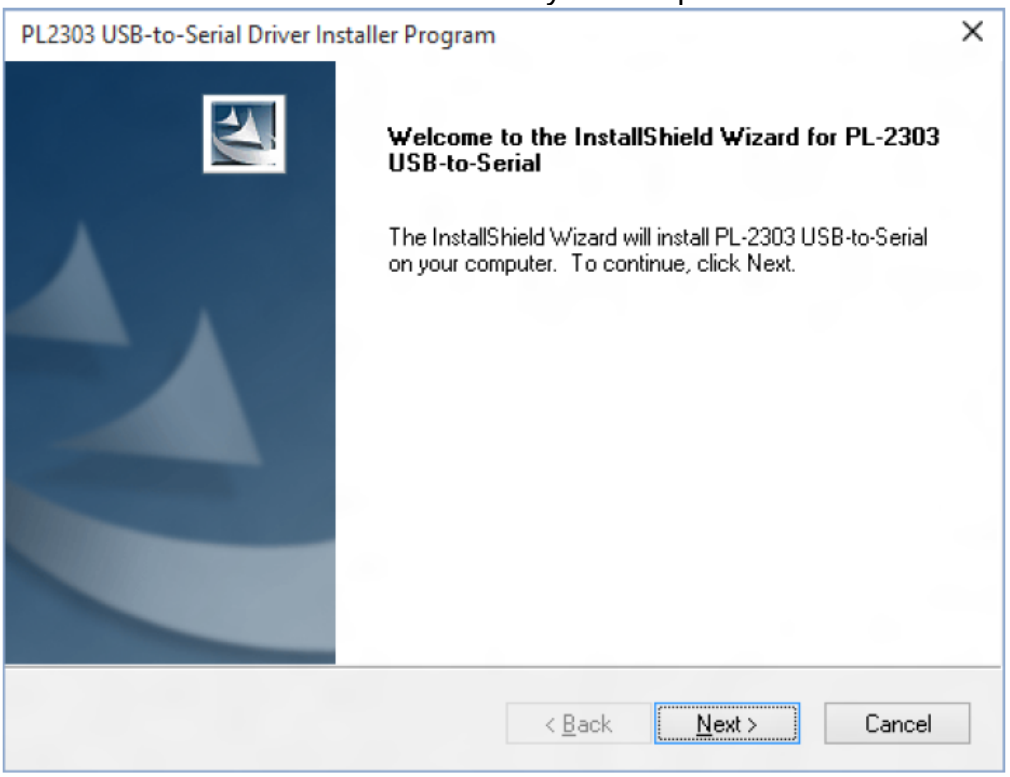


5.7.1.1 Windows 10 Driver Installation

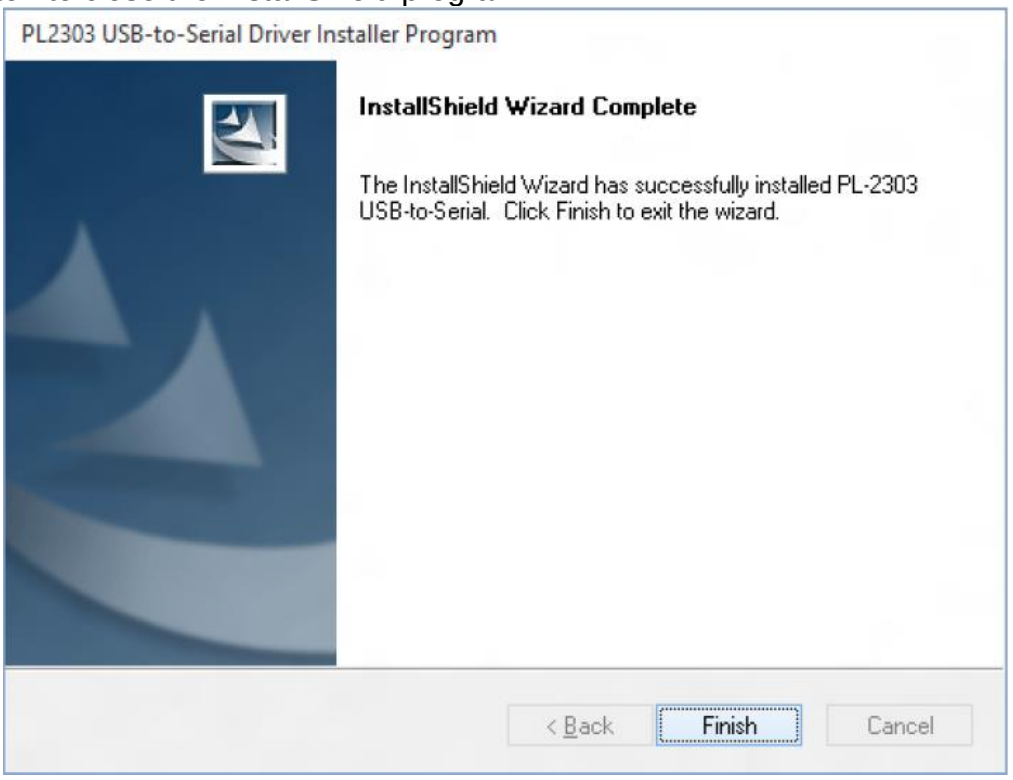
This section shows how to install the PL-2303 device in Windows 10 Operating System. You can download the latest Driver Installer program from Prolific Support website:
http://www.prolific.com.tw/US/ShowProduct.aspx?p_id=225&pcid=41



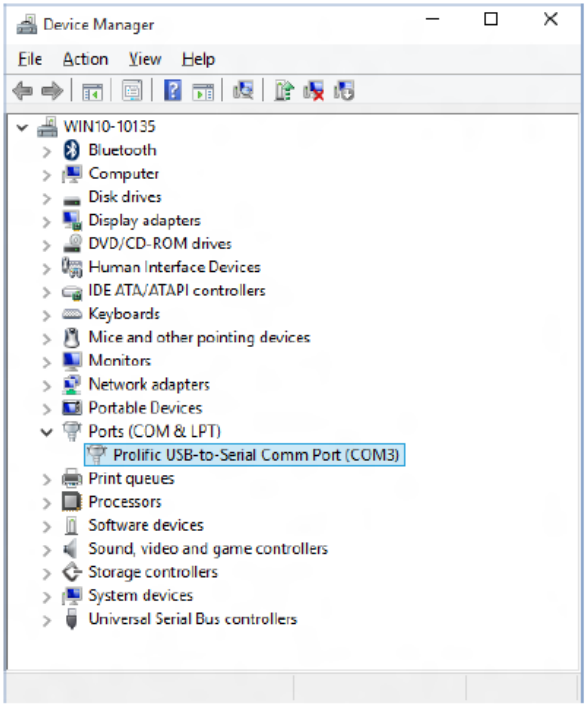
1. Power on your computer and boot to Windows. Run or double-click the PL-2303 Windows Driver Installer program. The InstallShield Wizard will be displayed to inform you that the PL-2303 USB-to-Serial driver will be installed on your computer. Click Next to continue.

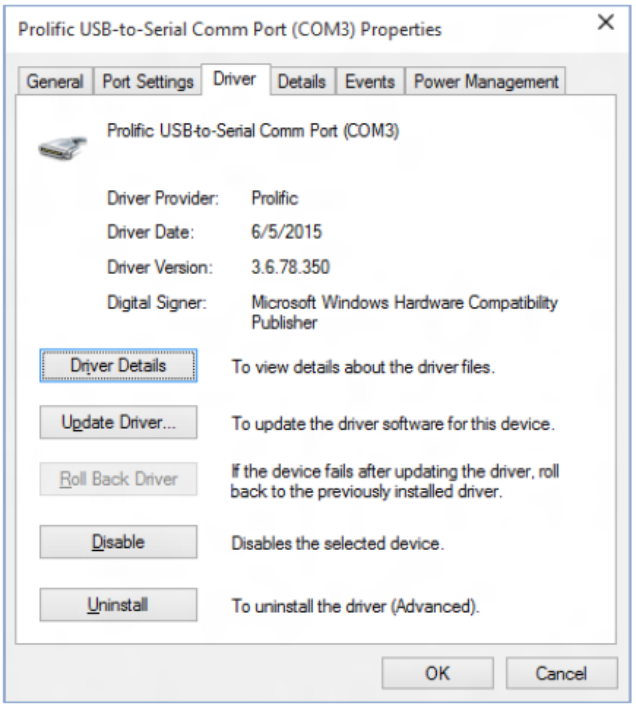


2. The PL-2303 Driver Installer program will then start to install the drivers needed. Click the Finish button to close the InstallShield program.

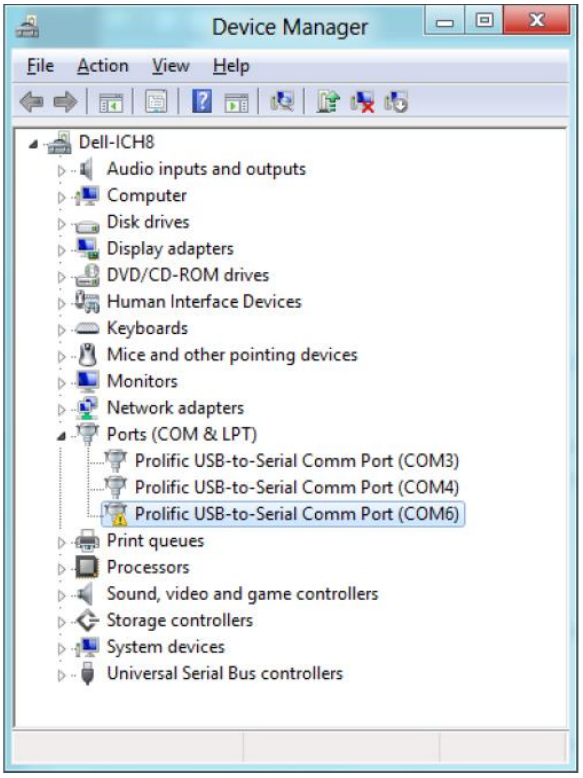


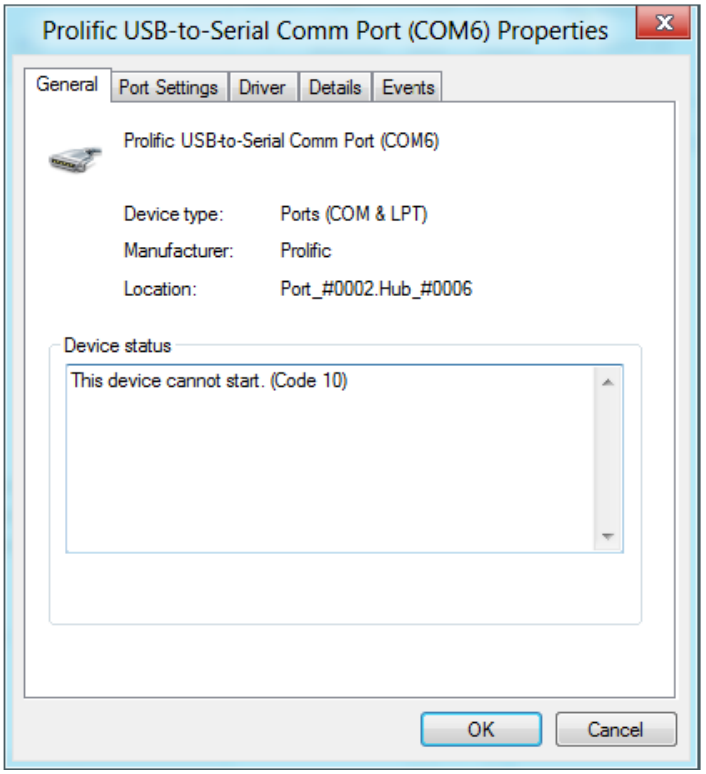
3. Plug in the USB to Serial adapter to the PC USB port. Windows should detect the driver as “Prolific USB-to-Serial Comm Port”. Go to Device Manager and check for the device and the COM port number assigned by Windows. You can also check the driver version by right-clicking on the “Prolific USB-to-Serial Comm Port” device and select Properties and Driver tab.





4. The COM Port number for the PL-2303 is assigned by the Windows Operating System. If you encounter a device that shows a yellow mark (Error Code 10), you need to check if that device is using an old version Prolific chip (PL-2303HXA or PL-2303XA) or a counterfeit chip. As mentioned in the previous sections, Prolific does not support old version chips in Windows 8.

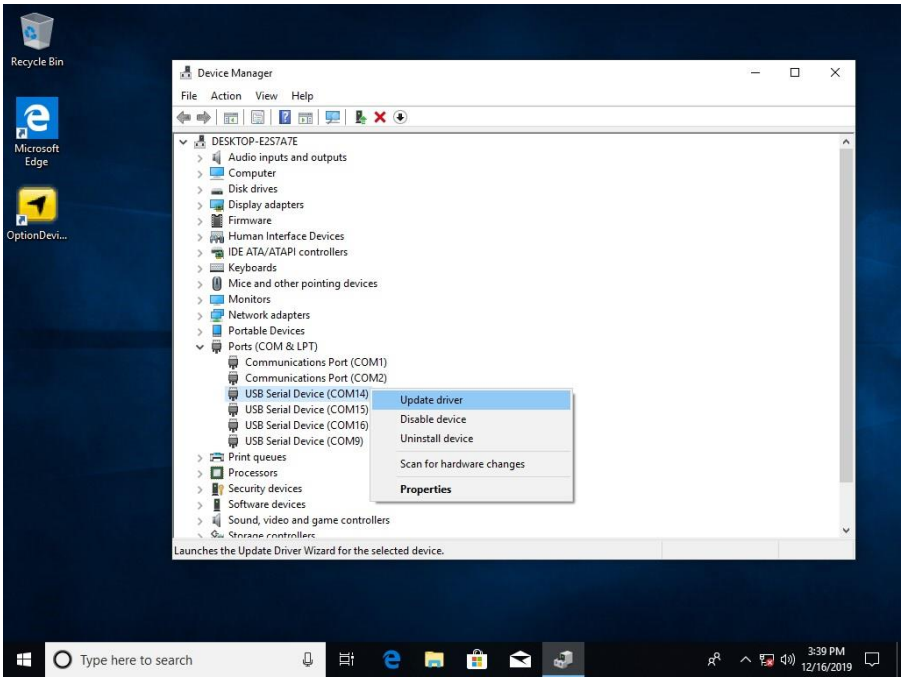




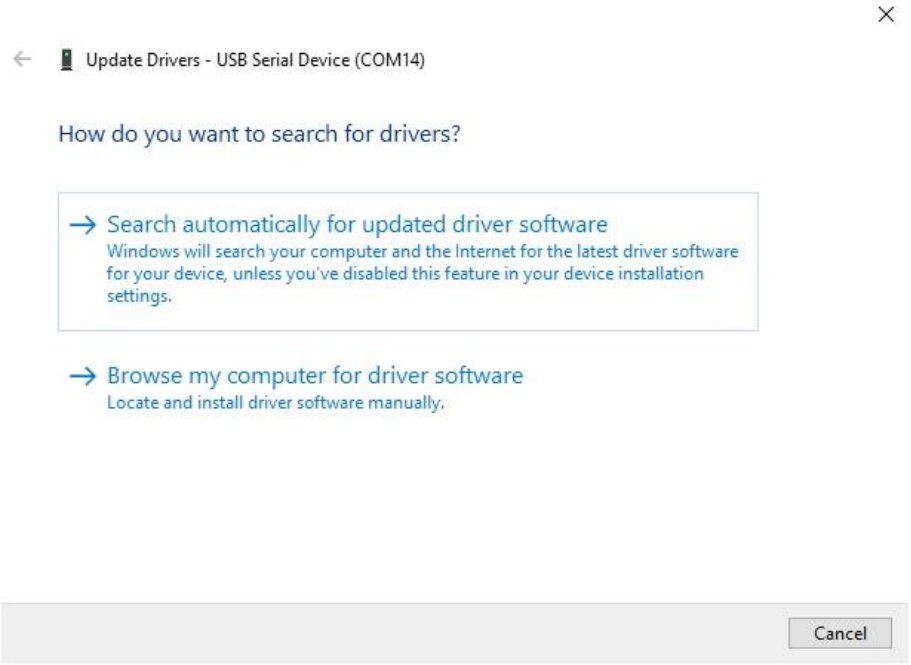
5.7.2 U2RS4 Driver

Follow instructions below to install U2RS4.

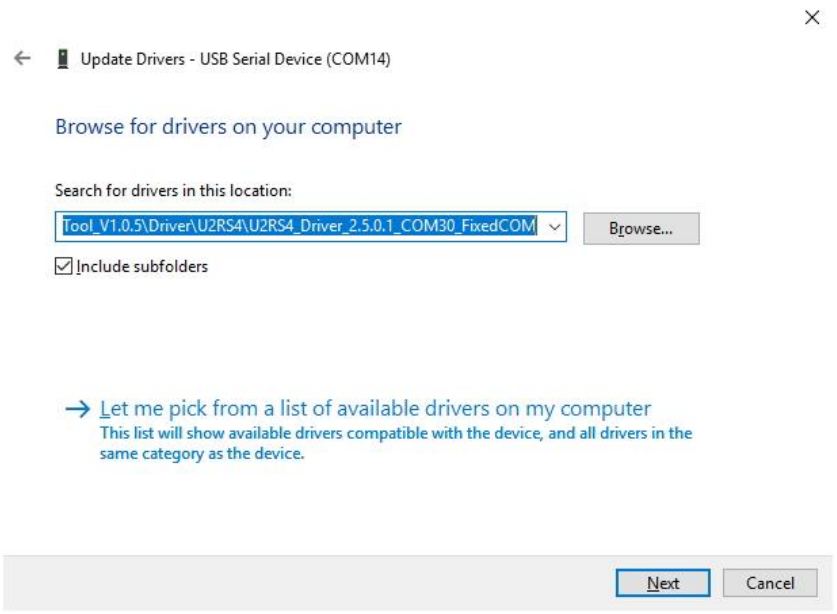
1. Open the Driver CD (included in the package) and select USB Serial Device (COM14) driver.



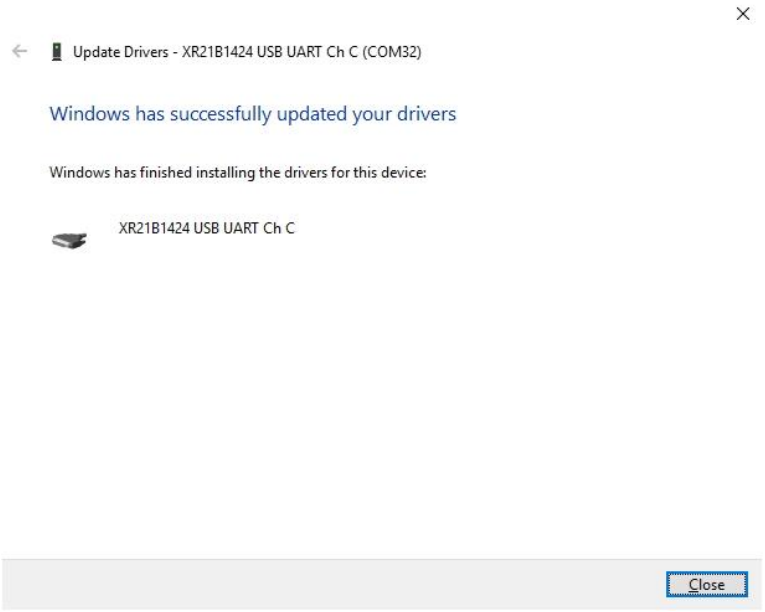
2. Select “Search automatically for updated driver software.”



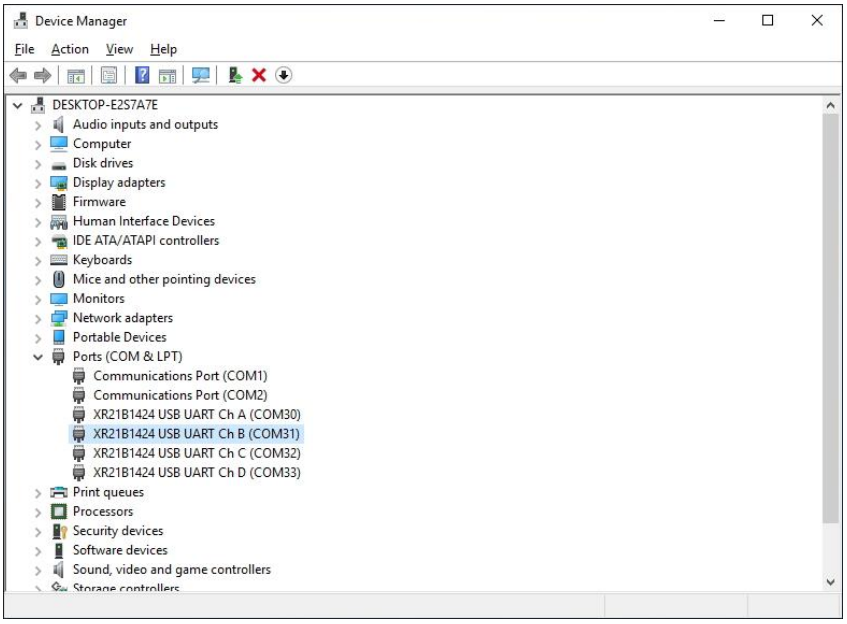
3. Press **Next** to continue.



4. Installation complete. Press **Close** to exit installation program.



5. Open Device Manager and check the tool being added.

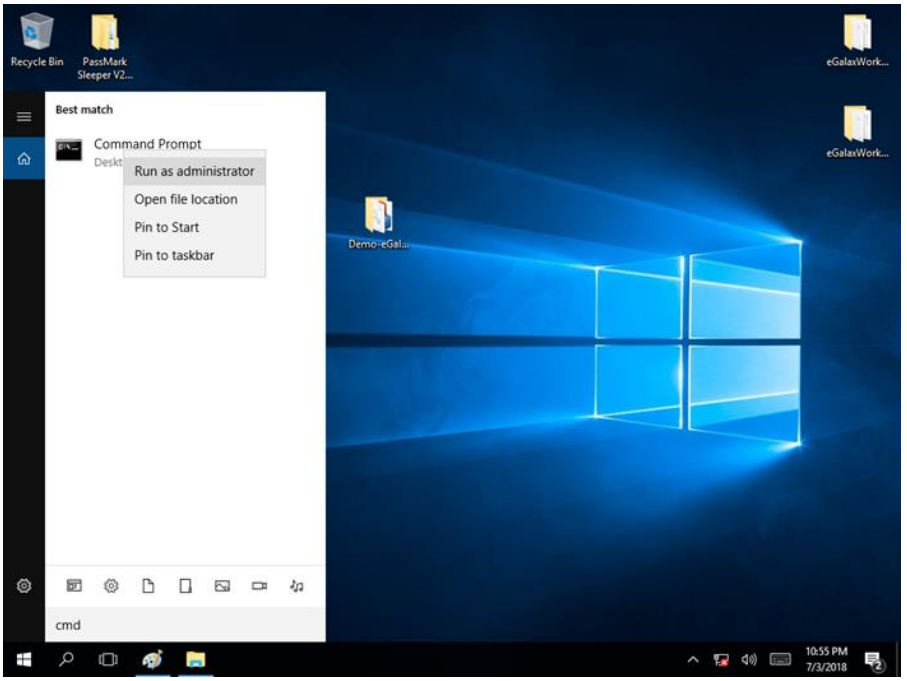


5.7.3 DIDO Driver

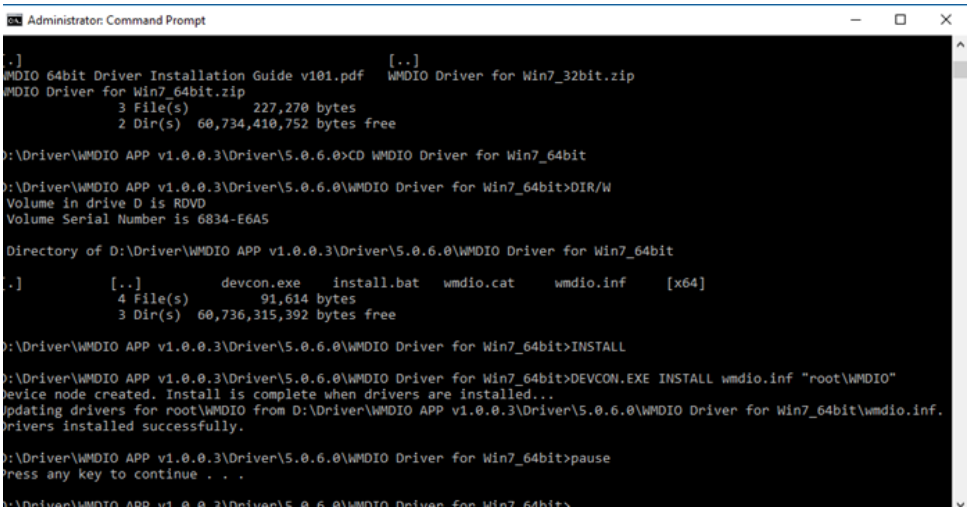
For more details about Seatronx Watchdog, please download Digital IO Guide from Seatronx Downloads Center.

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.



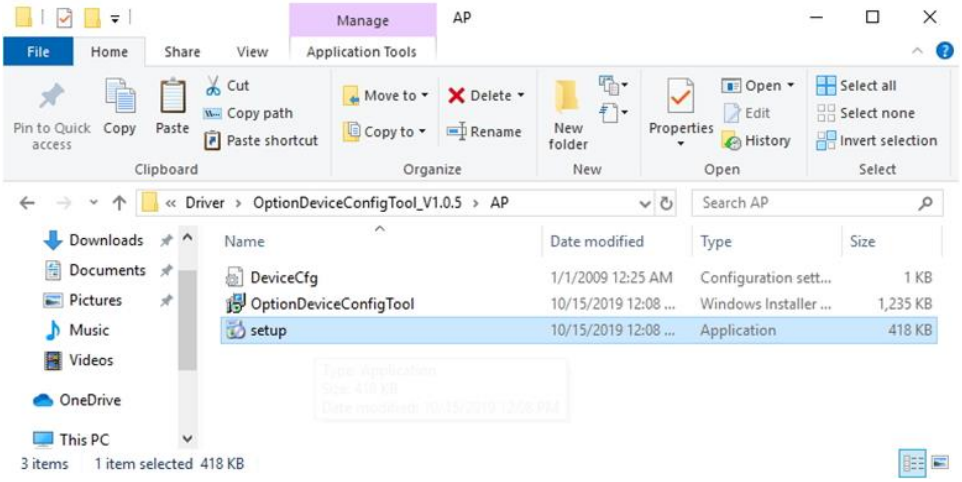
3. Open the Driver CD (included in the package) and select Digital IO driver.
4. When Windows Security dialog appear, select **install** to continue the Installation.
5. Wait for installation to complete. When installation is complete, press any key to close.



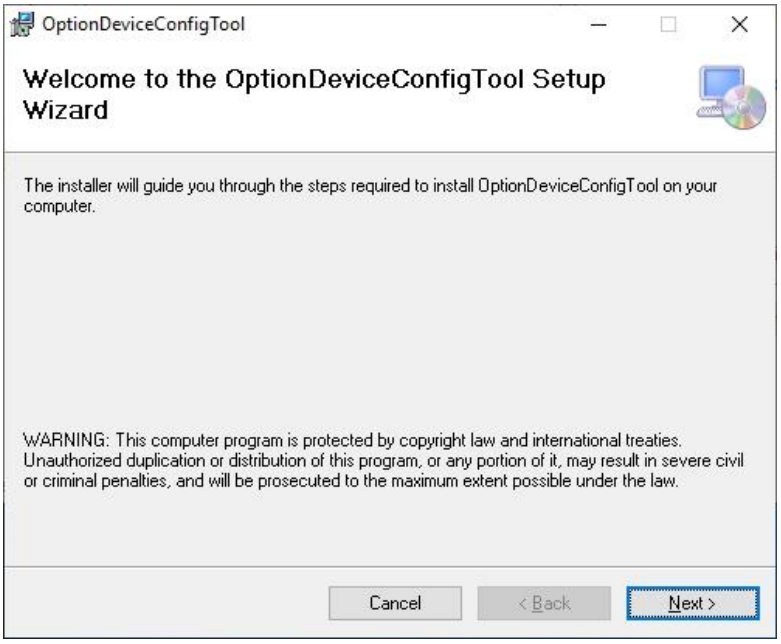
5.8 Option Device Configuration Tool Installation

Follow instructions below to install Option Device Configuration Tool:

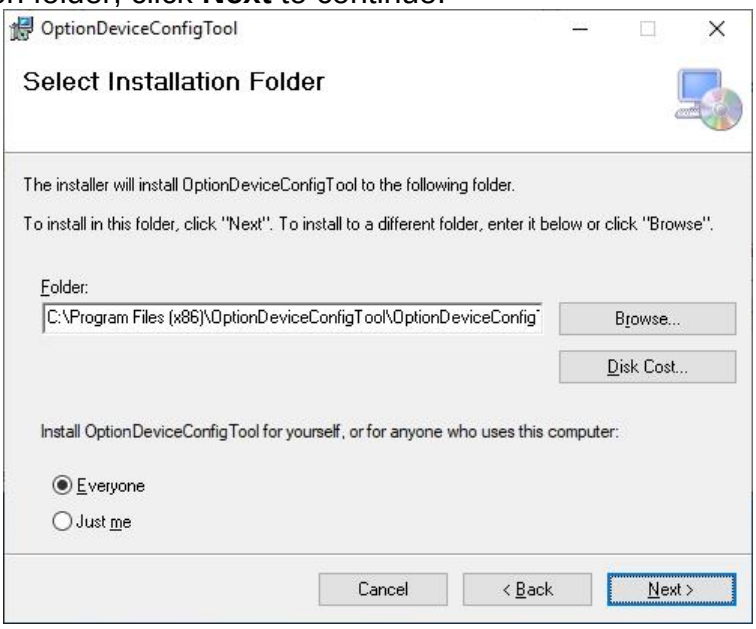
1. Open the Driver CD (included in the package) and select **OpenDeviceConfigTool**.



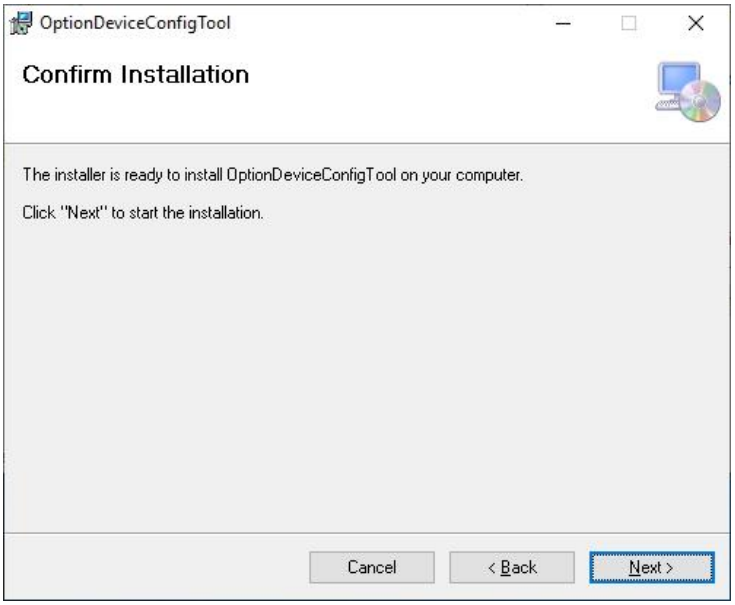
2. Click **Next**.



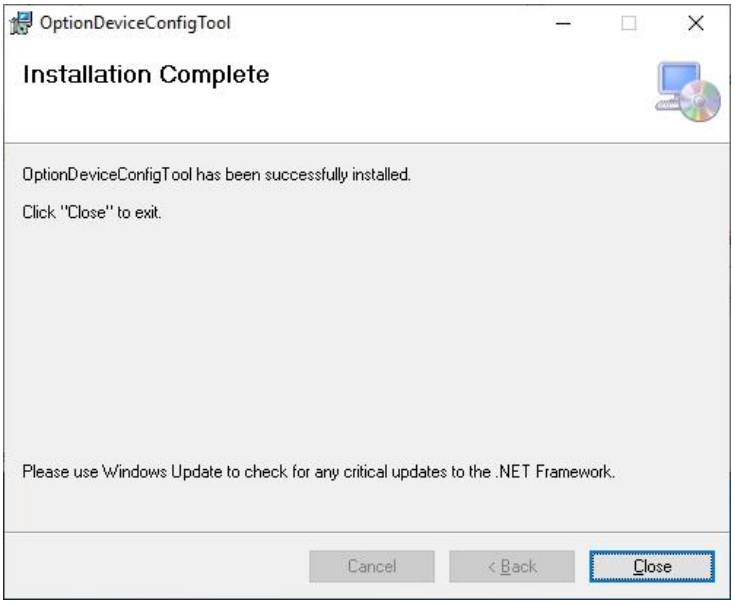
3. Select installation folder, click **Next** to continue.



4. Click **Next** to start the installation.



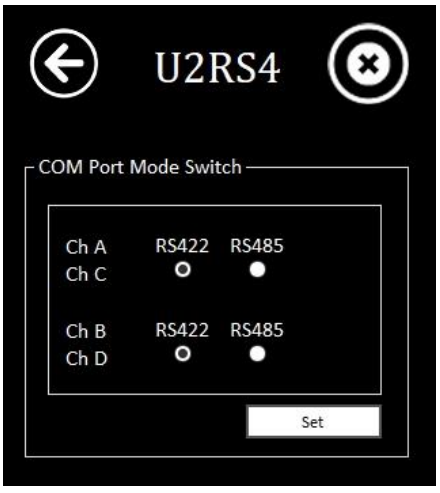
5. Installation complete. Click **Close** to exit..



6. Open Option Device Config Tool. You will see DI4DO4 and U2RS4 options available.





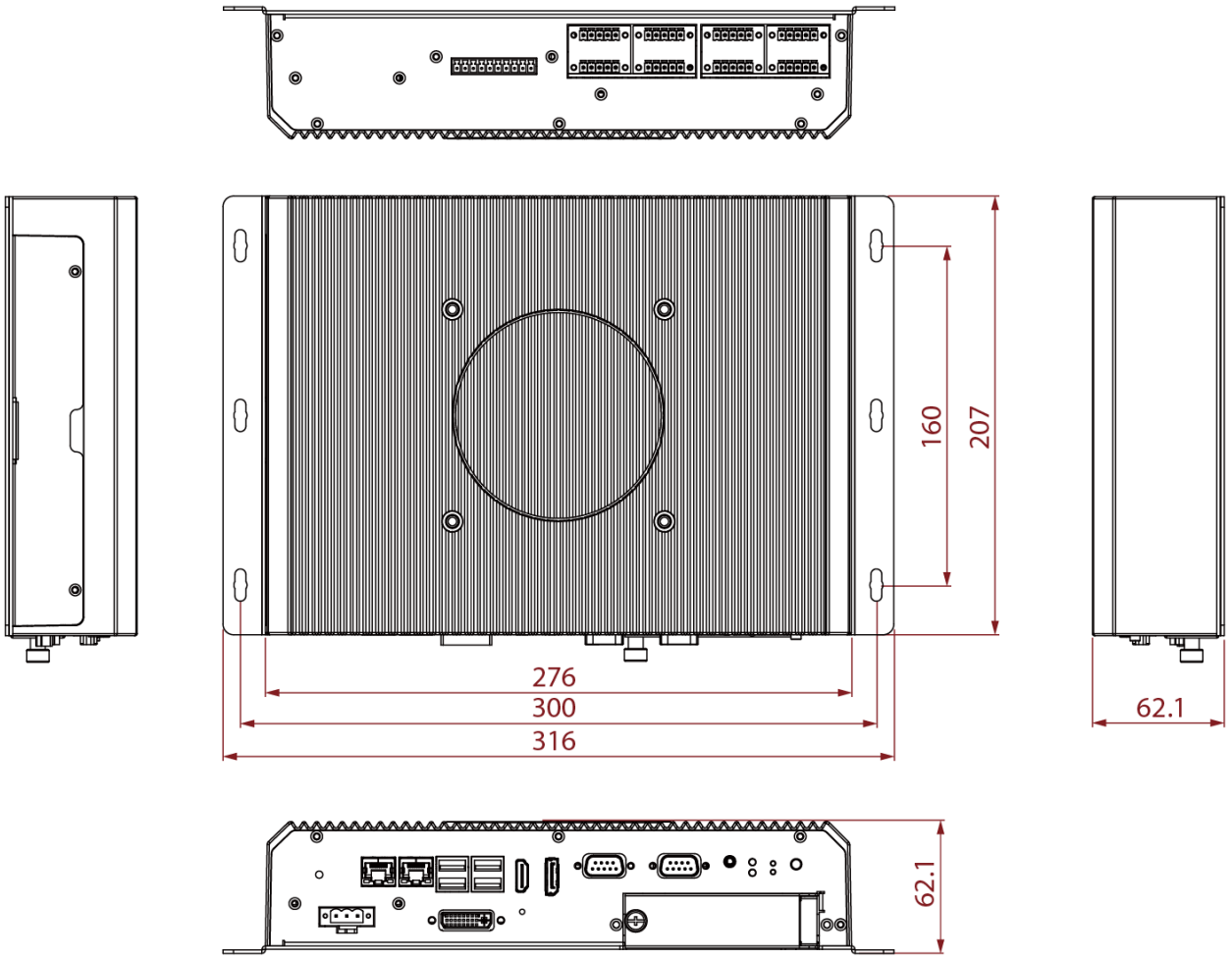


Appendix

Appendix A: Hardware Specifications

Model Name		
MPC-E10-1300		
System Specifications	CPU	Intel® Tiger Lake Core™ i5-1135G7, 2.4 GHz(turbo up to 4.2GHz)
	BIOS	InsydeH20 BIOS
	System Chipset	Intel® SoC Integrated
	System Memory	1x SODIMM, DDR4 2133 MHz, 4G 8GB (Optional), 16GB (Optional), 32GB (Optional)
	Ethernet Controller	Intel® Ethernet Controller I211AT Intel® Ethernet Connection I219LM
	Storage	1 x M.2 64GB, 128GB (Optional), 256GB (Optional), 512GB (Optional)
	Second Storage	2.5” Removable SSD/HDD (Optional)
Front External I/O	DC	1 x DC Input
	USB	4 x USB3.0
	COM	2 x RS232/422/485 port (Selectable by BIOS)
	DVI	1 x DVI Output
	HDMI	1 x HDMI Output
	Audio	1 x Audio in, 1 x Audio out
	Expansion Port	2 x 2.5” SSD Slot
	LAN	2 x LAN
	Power Button	1 x Power Button
	Reset Button	1 x Reset Button
Rear External I/O	DIDO	8 x Isolated DIDO, 4 In/ 4out (Optional) (Programmable by S/W AP Jumper)
	NMEA Port	8 x NMEA 0183 (Optional)
Power Management	Power Input	24V DC In (Approval by Certificate) 9~36V DC Input Accpetable
Mechanical Specifications	Construction	Aluminum housing
	Color	Black
	Mounting	VESA / Wall-mount / Desktop
	Dimensions	316 x 207 x 62.1 mm
Environment	Operating Temp.	-15 to +55 deg. C
	Operating Humidity	5% to 95% (non-condensing)
	Storage Temp.	-20 to +60 deg. C
	Vibration	0.7g@DNVGL CG0339(Class A)
	Shock	15G, 11ms duration
Standards & Certificates	Safety	IEC 60945 4th Edition (Test Report Available), CE / FCC, DNVGL-CG-0339

Appendix B: System Dimensions



NOTE

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