

Rack Mount Panel PC

17"/ 19"/ 24" touchscreen, with Intel®
Core i7 4650U 3.30GHz processor



Military Grade

Model No: R17IH3S-MLA1-89
R19IH3S-MLA3-89
W24IH3S-MLS1-89

User Manual

Version 1.0
Document Part Number: 9152111100U

Preface

Copyright Notice

No part of this document may be reproduced, copied, translated, or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the prior written permission of the original manufacturer.

Trademark Acknowledgement

Brand and product names are trademarks or registered trademarks of their respective owners.

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 1W15Axxxxxxx means October of year 2015.

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.)
- Detailed description of the problem
- The exact wording of error messages

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

Advisory Conventions

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



NOTE:

A note is used to emphasize helpful information



IMPORTANT:

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



CAUTION/ ATTENTION

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

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



WARNING! / AVERTISSEMENT!

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

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



ALTERNATING CURRENT / MISE À LE TERRE!

The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.

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

Safety Information



WARNING! / AVERTISSEMENT!

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

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



CAUTION/ATTENTION

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

Toujours vérifier 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.

Safety Precautions

For your safety carefully read all the safety instructions before using the device. All cautions and warnings on the equipment should be noted. Keep this user manual for future reference.



CAUTION/ATTENTION

Do not cover the openings!
Ne pas couvrir les ouvertures!

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

- The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well or you cannot get it to work according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
 - Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20°C (-4°F) or above 60°C (140°F). It may damage the equipment.
-
-



CAUTION/ATTENTION

Use the recommended mounting apparatus to avoid risk of injury.

Utiliser l'appareil de fixation recommandé pour éliminer le risque de blessure.



WARNING! / AVERTISSEMENT!

Only use the connection cords that come with the product. When in doubt, please contact the manufacturer.

Utiliser seulement les cordons d'alimentation fournis avec le produit. Si vous doutez de leur provenance, contactez le fabricant.



WARNING! / AVERTISSEMENT!

Always ground yourself against electrostatic damage to the device.

Toujours vérifier votre mise à la terre afin que l'équipement ne se décharge pas sur vous.

Important Information

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

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 "A" 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



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 (2014/30/EU)

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

Revision History

Version	Date	Note	Author
1.0	20-June-2016	Initial release	Tom Huang

Contents

Preface	ii
1 Introduction	13
1.1 Product Features.....	13
1.2 Hardware Specifications	14
1.3 Software Support	15
1.4 Packing List.....	16
1.5 Appearance	17
1.5.1 Appearance	17
1.5.2 On-Screen Display Control	18
1.6 Dimensions.....	19
1.6.1 Dimensions 17”	19
1.6.2 Dimensions 19”	20
1.6.3 Dimensions 24”	21
2 Getting Started	23
2.1 Powering On.....	23
2.1.1 Power Considerations	23
2.1.2 Connecting the Power	24
2.2 Connecting Other Devices	26
2.2.1 AC Power IN Connector	26
2.2.2 VGA Connector	27
2.2.3 RS-232 Connector.....	27
2.2.4 USB 2.0 A Type Connector.....	28
2.2.5 LAN Connector.....	28
2.4 Turning ON /OFF	28
3 Mounting Solutions	30
3.1 Cable Mounting Considerations	30
3.2 Safety Precautions	31
3.3 Mounting Guide	31
3.3.1 Console / Rack Mount	31
3.3.2 VESA Mount.....	32

4 Maintenance	35
4.1 Cleaning the Display Screen.....	35
4.2 Cleaning the Casing.....	35
5 Driver Installation	37
5.1 Chipset Driver.....	37
5.2 Graphics Driver	40
5.3 Audio Driver	43
5.4 Ethernet Driver	45
5.5 Intel® Management Engine Software	48
5.6 USB 3.0 Driver Installation (Windows 7).....	51
6 BIOS Setup	56
6.1 How and When to Use BIOS Setup	56
6.2 BIOS Functions	57
6.2.1 Main Menu	57
6.2.2 Advanced Settings	58
6.2.3 Chipset Menu	72
6.2.4 Boot Menu.....	78
6.2.5 Security Menu	79
6.2.6 Save & Exit.....	80
6.3 Using Recovery Wizard to Restore Computer	81
7 Technical Support	84
7.1 Introduction	84
7.1.1 Winmate Download Center.....	84
7.1.2 Winmate File Share	84
7.2 Problem Report Form	85
Appendix A MIL-STD-810F/G Compliance	87
A1 MIL-STD-810F/G Compliance	87
Appendix B MIL-STD-461E/F Compliance	89
B1 MIL-STD-461E/F Compliance	89

Introduction

This chapter gives you product overview, describes features and hardware specification. You will find all accessories that come with the Panel PC in the packing list.



1 Introduction

Military Grade Panel PCs feature low power high performance CPU with fanless design. Anti-corrosive coating with aluminum alloy housing withstands the harshest military environments. Armored connectors MIL-DTL-38999 (type I and III) initially developed for aerospace industry perfectly fit in our Military grade product line.

Withstanding rigors of harsh environments and tough weather conditions these Panel PCs meet the most demanding requirements. Suitable for Army Headquarters and being connected to mobile devices on the field Panel PC can provide up-to-date information for immediate commands.

1.1 Product Features

Military Grade Rack Mount Panel PCs offer the following features:

- Intel® Core i7 4650U 3.30GHz processor.
- Fanless, streamlined enclosure for highly efficient heat dissipation.
- Aluminum housing with anti-corrosive coating.
- 5-wire resistive touch.
- Convenient on-screen display control.
- Built-in Light Sensor for auto brightness control.
- AC 110~240V Power input (default) with isolation DC 9~36V (Optional).
- Flush Rack / Rack Mount mechanical design (8U).
- Military Grade connectors (MIL-DTL-38999/1 and 38999/3).
- Compliance with military standard MIL-STD-810G/F.



1.2 Hardware Specifications

	Model Name		
	R17IH3S-MLA1-89	R19IH3S-MLA3-89	W24IH3S-MLS1-89
Display:			
Size	17"	19"	24"
Resolution	1280 x 1024	1280 x 1024	1920 x 1200
Brightness	350 cd/m ² (typ.)	350 cd/m ² (typ.)	300 cd/m ² (typ.)
Contrast Ratio	1000:1 (typ.)	1000:1 (typ.)	1000:1 (typ.)
Viewing Angle	-85~85(H);-80~80(V)	-85~85(H);-80~80(V)	-89~89(H);-89~89(V)
Display colors	16.7M (colors)		
System:			
Processor	Intel® Core™ i7 4650U 3.30GHz		
BIOS	AMI 16Mbit Flash		
System Memory	1 x SO-DIMM DDR3L 1600 (default 4GB)		
System Chipset	Intel® HD Graphics 5000		
Storage	mSATA SSD (default 64GB)		
LAN Controller	Intel® Ethernet Controller 1211-AT + Intel® Gigabit Etherne PHY 1218-LM		
Expansion Slot	1 x Mini PCIe slot (for USB module) <i>*For PCI expansion customized housing required.</i>		
Input/ Output:			
Plug & Play	VESA DDC 1/2B		
Back panel I/O ports	1 x Power Input (MIL-DTL-38999/1) 1 x VGA (MIL-DTL-38999/3) 1 x RS232 (MIL-DTL-38999/3) 1 x USB 2.0 A Type (MIL-DTL-38999/3) 1 x LAN (MIL-DTL-38999/3)		
Environment and Mechanical:			
Operating Temperature	-20°C to +60°C		
Operating Humidity	95%RH ±3%		
Power Specifications:			
Power Input	Default AC 110~240V IN Optional isolation DC 9~36V IN		
Ordering Information (optional):			
Touch	5-wire resistive / 5-wire resistive with EMI coating		
Glass	EMI coating glass (default AR glass)		
Storage	mSATA SSD up to 256GB		
RAM	SO-DIMM DDR3 1666, up to 8GB		
Power	Optional isolation 9~36V DC IN		
OS	Windows 10 IoT Enterprise Windows Embedded 8.1 Industry Windows Embedded 8 Standard Windows Embedded Standard 7		

1.3 Software Support

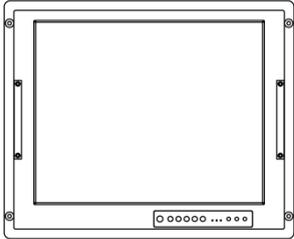
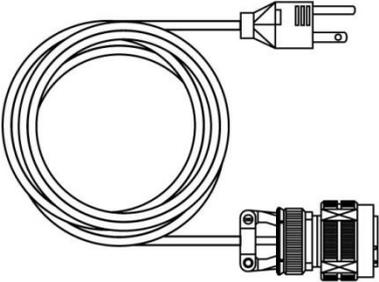
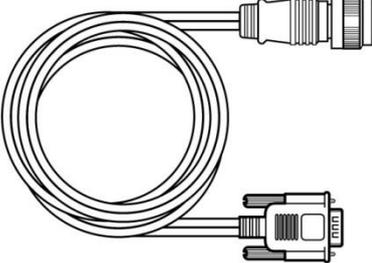
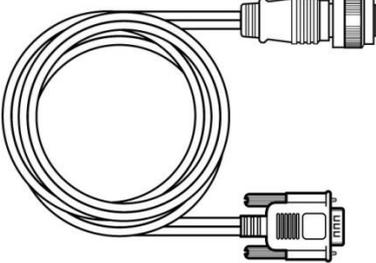
Winmate provide all necessary drivers and Software Development Kit (SDK).

Drivers:
Chipset Driver
Graphics Driver
Audio Driver
Ethernet Driver
Intel ® Management Engine Software
USB 3.0 Driver (for Windows 7)
SDK:
Watchdog SDK

1.4 Packing List

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.

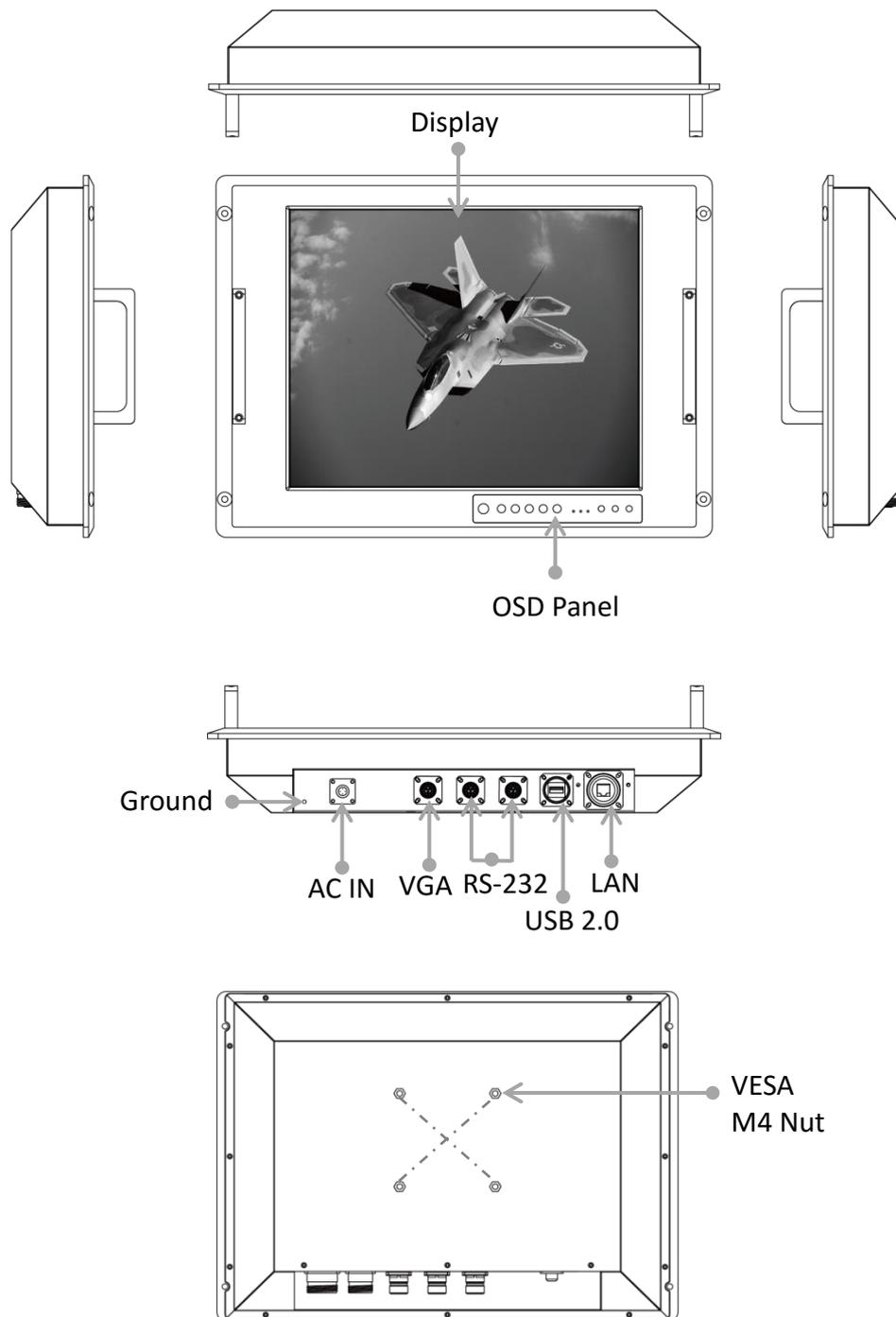
Standard factory shipment list:

		
<p>Panel PC</p>	<p>User Manual (Hardcopy)</p>	<p>CD-ROM with Driver Utility and User Manual</p>
		
<p>Power cord MIL-DTL-38999/1</p>	<p>VGA Cable MIL-DTL-38999/3</p>	<p>RS-232 Cable MIL-DTL-38999/3</p>

1.5 Appearance

This section includes appearance and input/ output connectors' layout.

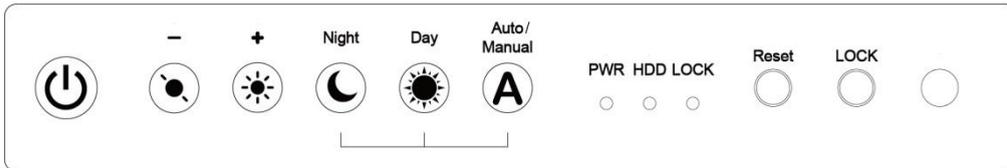
1.5.1 Appearance



1.5.2 On-Screen Display Control

On-Screen Display (OSD) is a user-friendly interface to remote the display function and to adjust the display’s image properties. It also supports special Hot Keys for easy control, such as auto-adjustment and brightness control for backlight.

1.5.2.1 Control Keys



Icon	Button	Function
	Power	Turn ON or turn OFF the Panel PC.
	Brightness DOWN	Decrease the brightness of the display screen, or allows user to navigate items of a single OSD menu.
	Brightness UP	Increase the brightness of the display screen, or allows user to navigate items of a single OSD menu.
	Night	Tap this button to enter NIGHT MODE to increase visibility in low-light conditions.
	Day	Tap this button to enter DAY MODE.
	Auto/ Manual	Tap the button once to AUTOMATICALLY adjust brightness mode. Press the button again to MANUALLY adjust brightness mode.
	Reset	Clear any pending errors or events and brings a system to normal condition or an initial state.
	LOCK	Tap this button to lock the function of OSD panel.

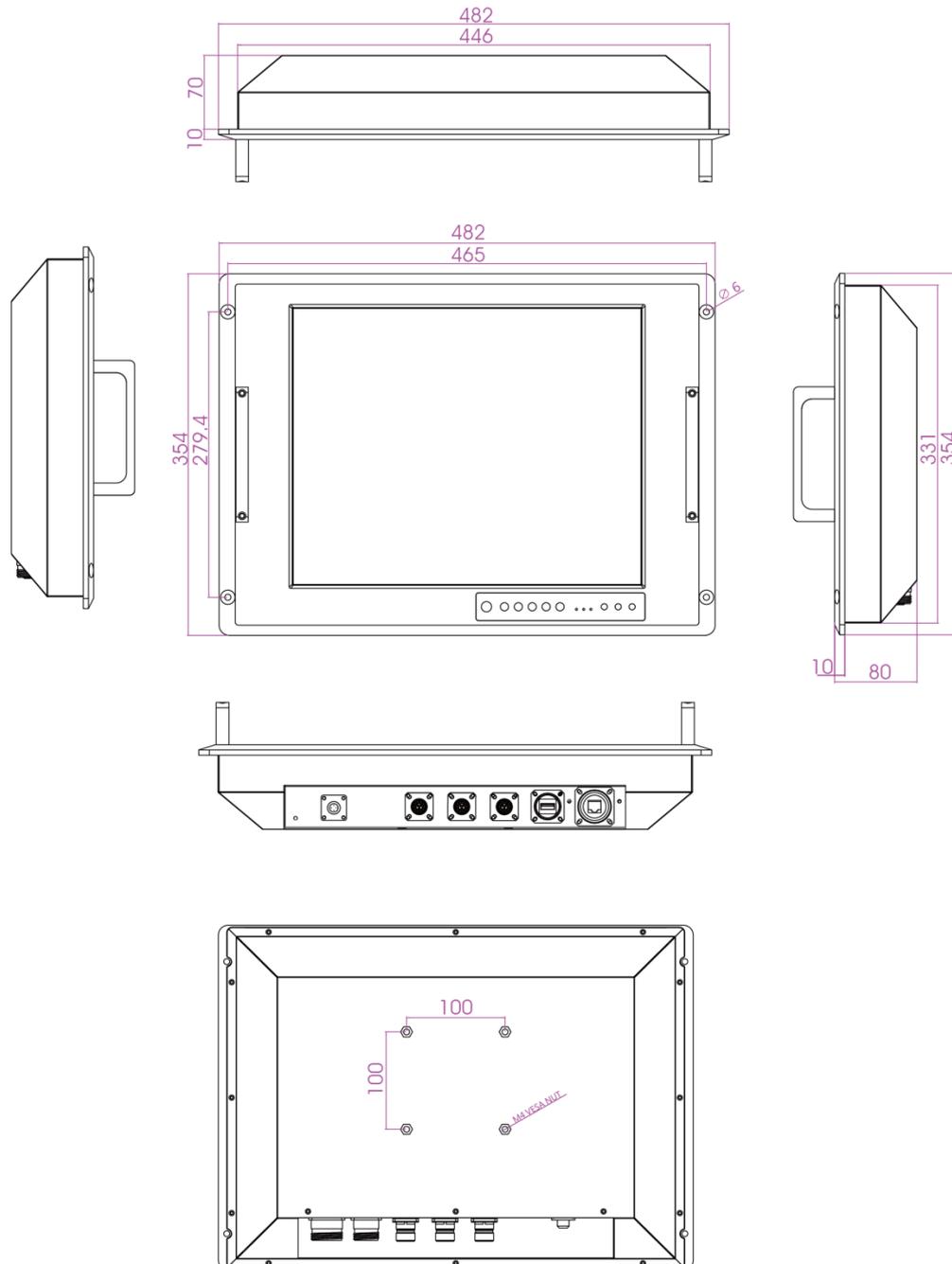
1.5.2.2 LED Indicators

Indicator	Color	Definition
PWR	Green	Power is ON and the device functions normally
	Orange	Panel PC is suspended
HDD	Green	HDD is active
	OFF	HDD is inactive
LOCK	Red	The function of OSD buttons is locked
	OFF	Lock function disabled

1.6 Dimensions

This section includes mechanical drawing and dimensions of Panel PCs.

1.6.1 Dimensions 17"

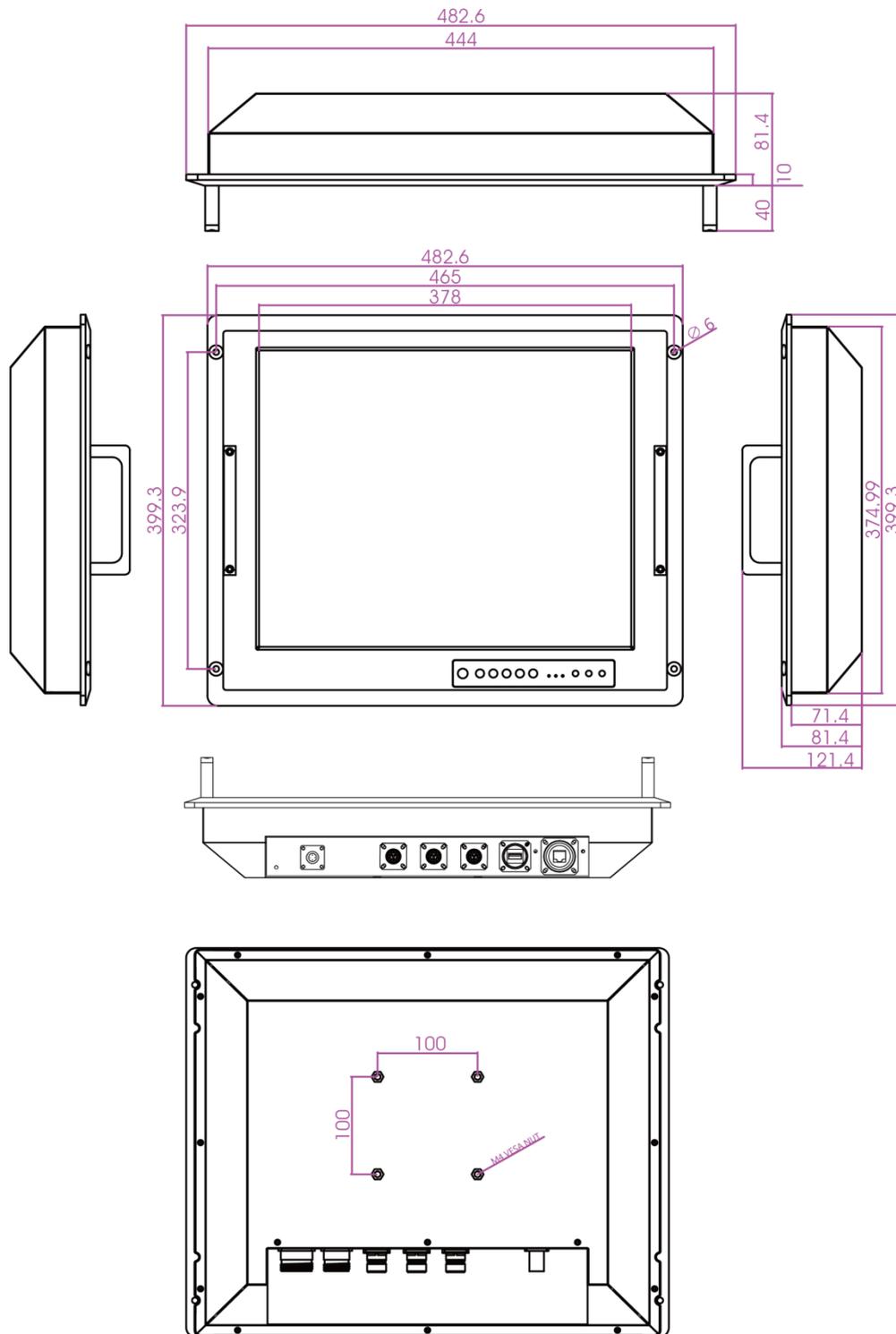


**Measurements shown in mm.*

***Tolerance of all dimensions is shown as follow 0~30 mm ± 0.1 mm, 30~50 mm ± 0.15 mm, 50~120 mm ± 0.2 mm, above 120 mm ± 0.25 mm.*

****Note: this is a simplified drawing and some components are not marked in detail.*

1.6.2 Dimensions 19"

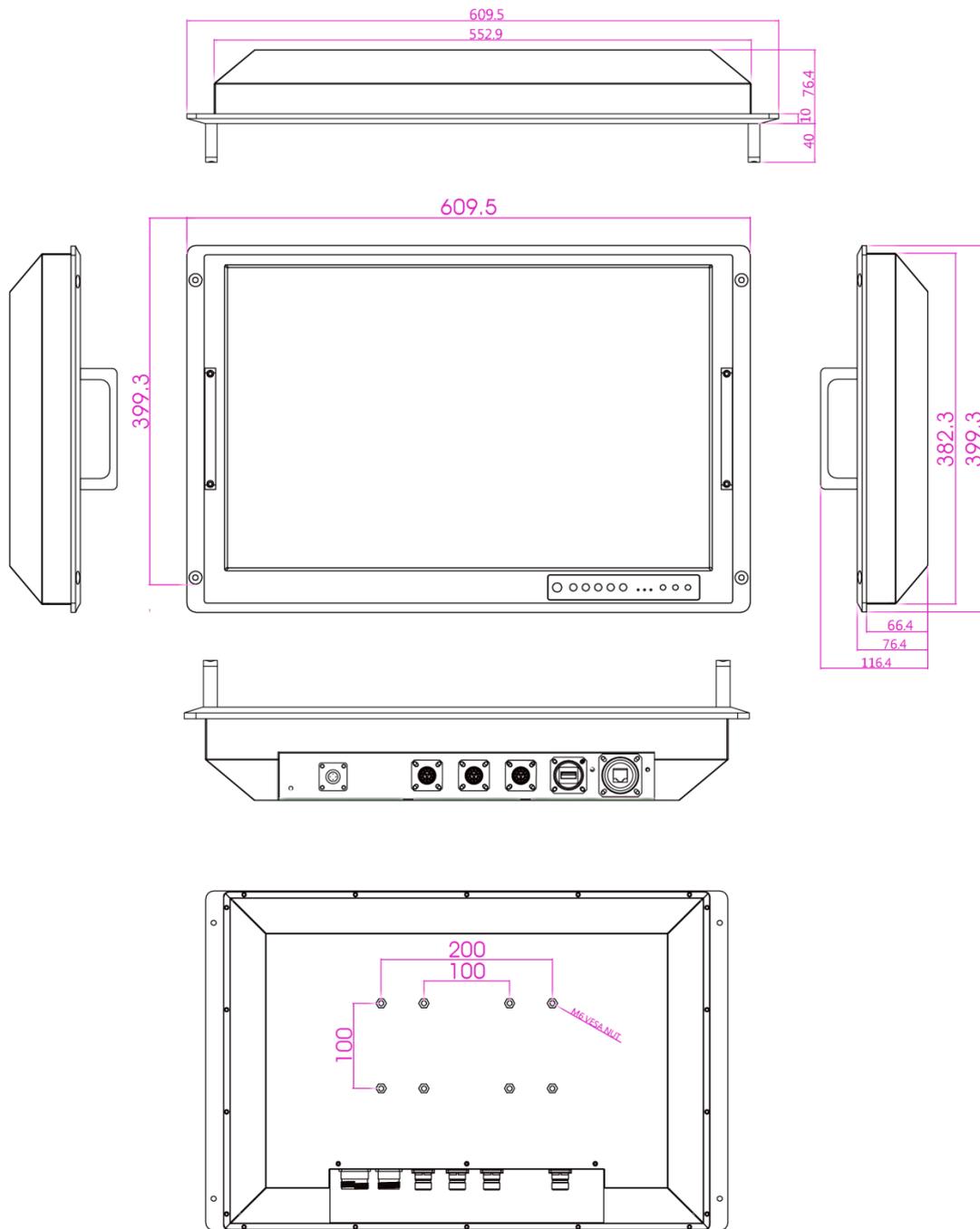


*Measurements shown in mm.

**Tolerance of all dimensions is shown as follow 0~30 mm ± 0.1 mm, 30~50 mm ± 0.15 mm, 50~120 mm ± 0.2 mm, above 120 mm ± 0.25 mm.

***Note: this is a simplified drawing and some components are not marked in detail.

1.6.3 Dimensions 24"



*Measurements shown in mm.

**Tolerance of all dimensions is shown as follow 0~30 mm ± 0.1 mm, 30~50 mm ± 0.15 mm, 50~120 mm ± 0.2 mm, above 120 mm ± 0.25 mm.

***Note: this is a simplified drawing and some components are not marked in detail.

Getting Started

This chapter tells you important information on power supply, adapter and precautions tips. Pay attention to power considerations.



2 Getting Started

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

2.1 Powering On

2.1.1 Power Considerations

The device operates on external DC power.



ALTERNATING CURRENT / MISE À LE TERRE!

This product must be grounded. Use only a grounded AC outlet. Install the additional PE ground wire if the local installation regulations require it.

**If you do not use a grounded outlet while using the device, you may notice an electrical tingling sensation when the palms of your hands touch the device.*

Ce produit doit être mis à la terre. Utiliser seulement un cordon d'alimentation avec mise à la terre. Si les règlements locaux le requiert, installer des câbles de mise à la terre supplémentaires.

**Si vous n'utiliser pas une prise d'alimentation avec mise à la terre, vous pourriez remarquer une sensation de picotement électrique quand la paume de vos mains touche à l'appareil.*

- Plug-in the power cord to easy accessible AC outlet.
- Plug-in the AC adapter to a grounded outlet.

2.1.2 Connecting the Power

2.1.2.1 Connecting to AC Input Power Source

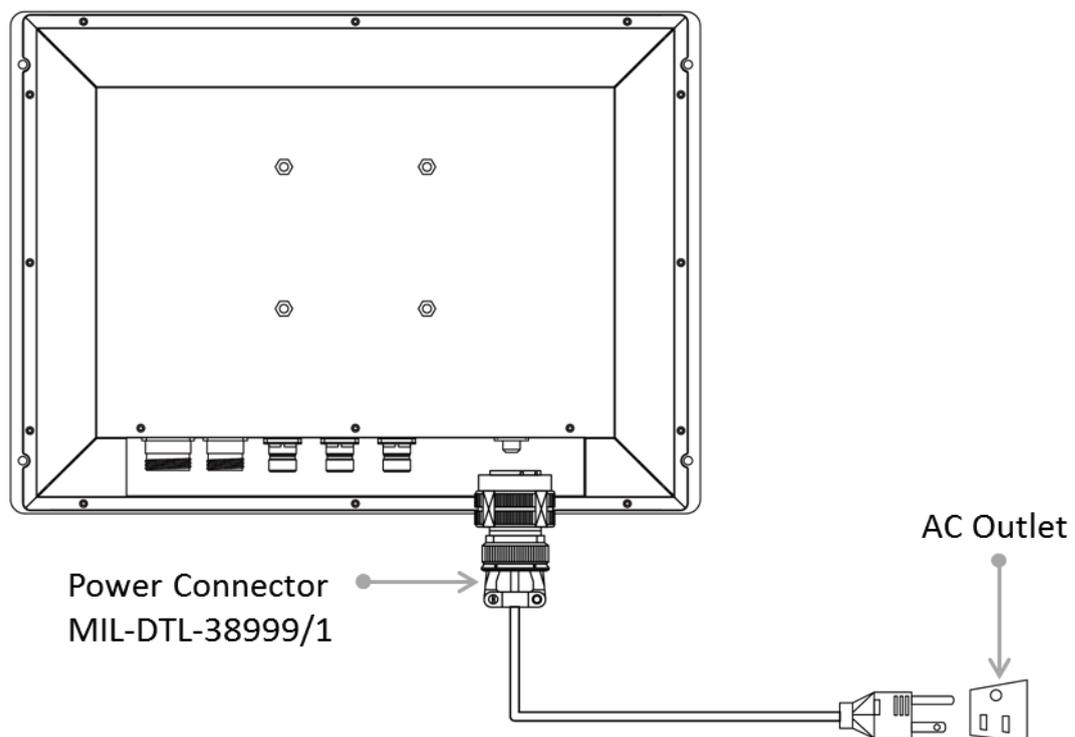
1. Connect one end of the Military Grade power connector MIL-DTL-38999/1 to the Panel PC.
2. Plug the other end of the power connector in to a working AC outlet.



WARNING!/ AVERTISSEMENT!

Serious injury due to shock is possible if unit is wired incorrectly or connected to voltage exceeding the input voltage range.

Des blessures graves en raison du choc est possible si l'unité est mal câblé ou connecté à la tension maximale de la plage de tension d'entrée.



Note:

Power cords vary in appearance by region and country.

AC Power Requirements

AC Input	115~230V AC 50-60Hz
Voltage Range	100~240V AC 47-63Hz
Power Rating	100W Max

2.1.2.2 Connecting to DC Input Power Source

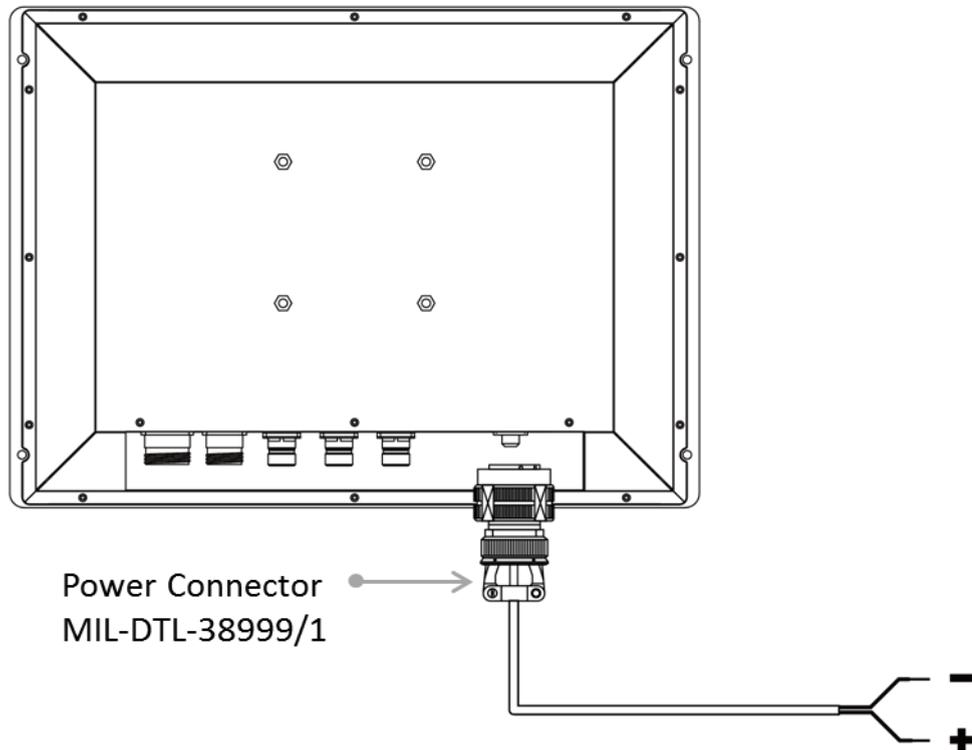
1. Insert the exposed wires of the DC Power Cable to the appropriate connectors on the terminal block plug.



CAUTION/ ATTENTION

Make sure that the polarization of the power lines is correct and complete including earth ground and PE.

Assurez-vous que la polarisation des lignes électriques est correcte et complète, y compris la terre et le PE.



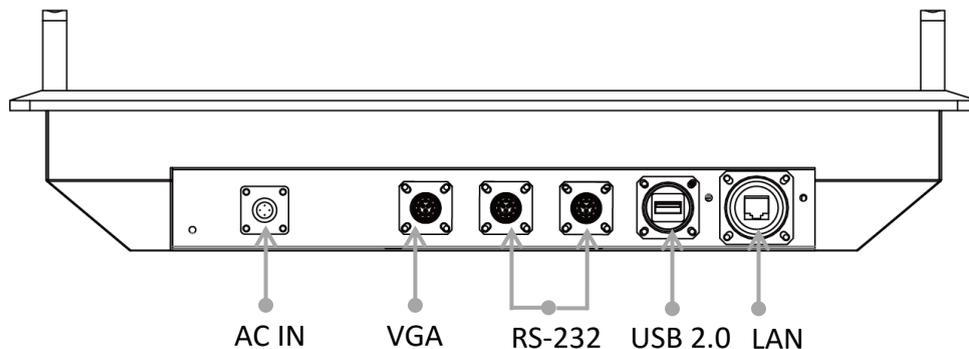
2. Plug the terminal block plug firmly to the DC IN Jack.
3. Connect the other end of the DC power cable (wires with lug terminals that are labeled + and – to the terminals of the 9-36V DC Power Source). Ensure that the power connections maintain the proper polarity.

DC Power Requirements

DC Input	9-36V DC IN
Voltage Range	9-36V DC IN
Power Rating	100W Max

2.2 Connecting Other Devices

Note that all the connectors are military grade and comply with military standard. The pin assignment of the cables are as follows.



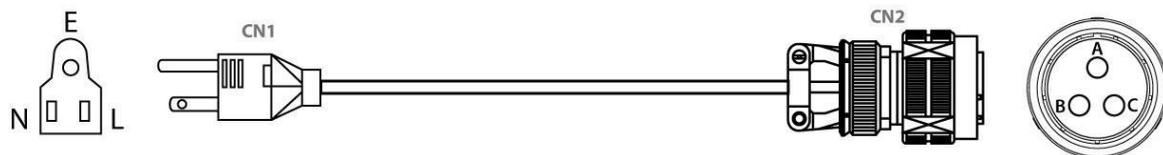
WARNING!/ AVERTISSEMENT!

Make sure the power is off when connecting and disconnecting the connectors.

Assurez-vous que l'alimentation est coupée lors de la connexion et la déconnexion des connecteurs.

2.2.1 AC Power IN Connector

Connect one end of the Military Grade power connector MIL-DTL-38999/1 to the Panel PC (CN2), and the other end of connector to the power source (CN1).



Pin №	Name
A	VCC+
B	VCC-
C	GND



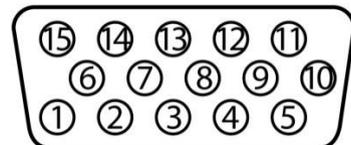
Note:

*Power cable shown at the picture above is for the U.S.A and North America.

**Power cables vary in appearance by region and country. Your package includes power cable based on your order.

2.2.2 VGA Connector

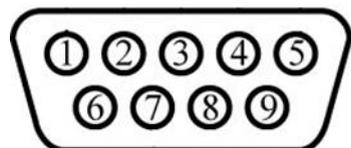
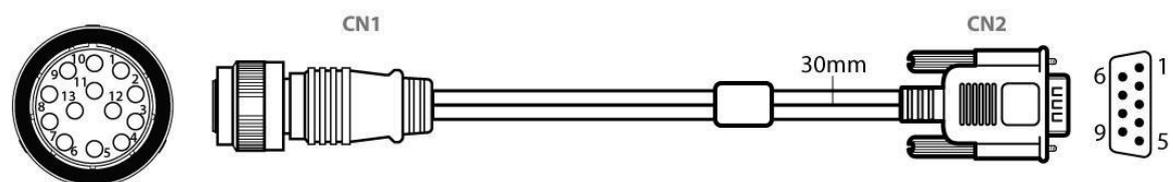
Plug one end of the 15-pin D-Sub signal cable (CN1) to the video signal MIL-DTL-38999/3 connector at the rear of the PC system and the other end (CN2) to the display.



Pin No	Name	Pin No	Name
1	RED	2	GREEN
3	BLUE	4	ID2/RES
5	GND	6	RED_RTN
7	GREEN_RTN	8	BLUE_RTN
9	KEY/PWR	10	GND
11	ID0/RES	12	ID1/SDA
13	HSync	14	VSynC
15	ID3/SCL		

2.2.3 RS-232 Connector

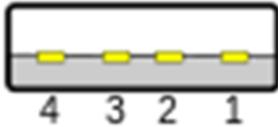
Connect one side of the serial port cable to the MIL-DTL-38999/3 RS-232 connector on the Panel PC (CN1) and the other side to Serial COM interface (CN2).



Pin No	Name	Pin No	Name
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

2.2.4 USB 2.0 A Type Connector

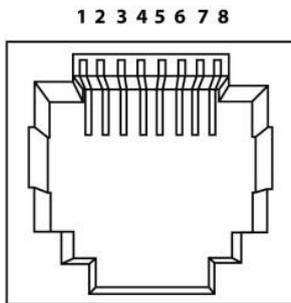
Connect USB 2.0 A type MIL-DTL-38999/3 connector to the external USB 2.0 compatible device, for example mouse or keyboard.



Pin №	Name	Pin №	Name
1	+5V	2	Data-
3	Data+	4	GND

2.2.5 LAN Connector

Connect Ethernet MIL-DTL-38999/3 connector to Ethernet interface.



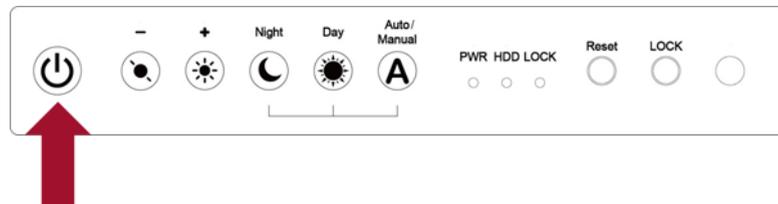
Pin №	Name	Pin №	Name
1	RD+	2	RD-
3	TD+	4	NC
5	NC	6	TD-
7	NC	8	NC

2.4 Turning ON /OFF

To **Turn ON** the Panel PC:

1. Tap the power button to turn the Panel PC on.
2. Press “DEL” to enter the CMOS setting and check the BIOS setup.

The Power Switch is located on the front side OSD panel.



You can **Turn OFF** the device with the Windows power settings.

To shut down the device:

1. Tap **Start**  > **Shut down**.
2. Wait for your device to completely turn off before disconnecting the power cord (if necessary).

Mounting Solutions

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



3 Mounting Solutions

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

**CAUTION/ ATTENTION**

Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.

Suivez les instructions de montage et d'utilisation recommandé le matériel de montage pour éviter le risque de blessure.

3.1 Cable Mounting Considerations

For a nice look and safe installation, make sure cables are neatly hidden behind the device.

**CAUTION/ ATTENTION**

Observe all local installation requirements for connection cable type and protection level.

Suivre tous les règlements locaux d'installations, de câblage et niveaux de protection.

**CAUTION/ ATTENTION**

Turn off the device and disconnect other peripherals before installation.

Éteindre l'appareil et débrancher tous les périphériques avant l'installation.

**ALTERNATING CURRENT / MISE À LE TERRE!**

To prevent electrical shock, the Safety Ground location on the rear must be bonded to the local earth ground through a minimum 12 AWG wire as short as possible.

Pour éviter les chocs électriques, l'emplacement de la prise terre à l'arrière doit être lié à terre locale, à travers un 12 AWG minimum et aussi court que possible.

3.2 Safety Precautions

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

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

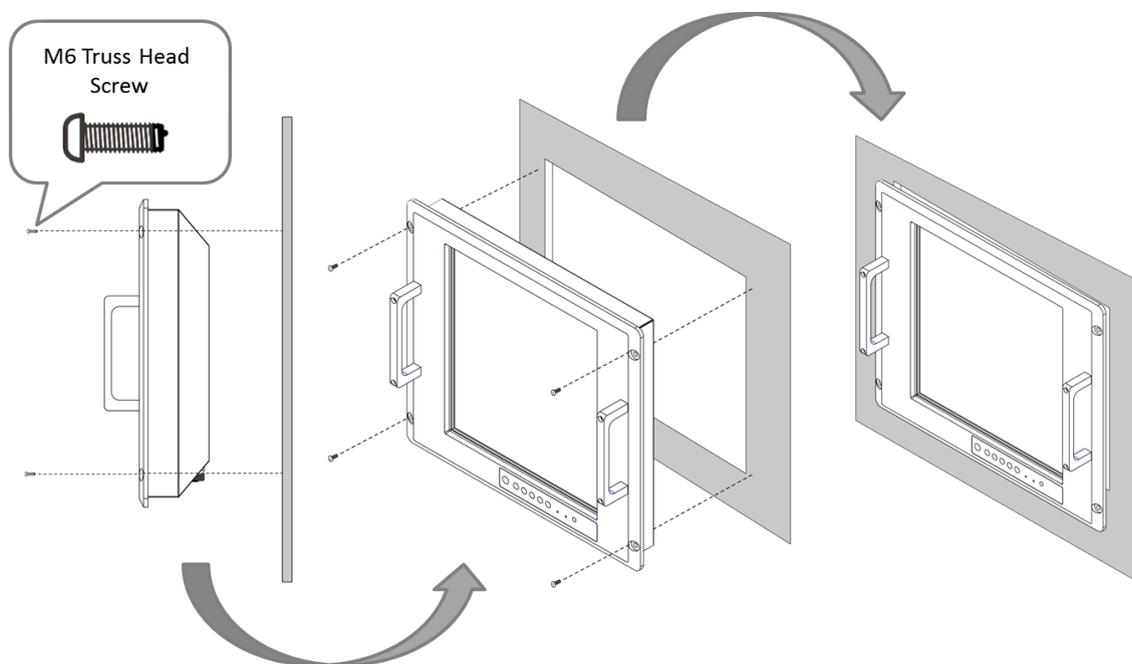
When necessary, it is strongly advised that you label wiring to all devices in the system.

3.3 Mounting Guide

Military Grade Panel PC comes with different mounting options suitable for most of the industrial and commercial applications. The main mounting approach is rack mount - very user-friendly in terms of installation. Refer to sub-sections below for more details.

3.3.1 Console / Rack Mount

Cutout dimensions (W x D in mm)		
17"	19"	24"
450 x 335	450 x 380	557 x 386
Screws		
M6 truss head (4 pcs)		



Mounting Steps:

1. Prepare a fixture for the specific dimensions of the device.
2. Cut a hole on a sub frame or panel according to the cutout dimensions.
3. Install the device properly onto the cutout area of the sub frame or panel with the sides of the front bezel.
4. Fix the device from the outside to the fixture with four M6 truss head screws.

**NOTE:**

Make sure that the eight holes on gasket can fit in the mounting holes on the device.

3.3.2 VESA Mount

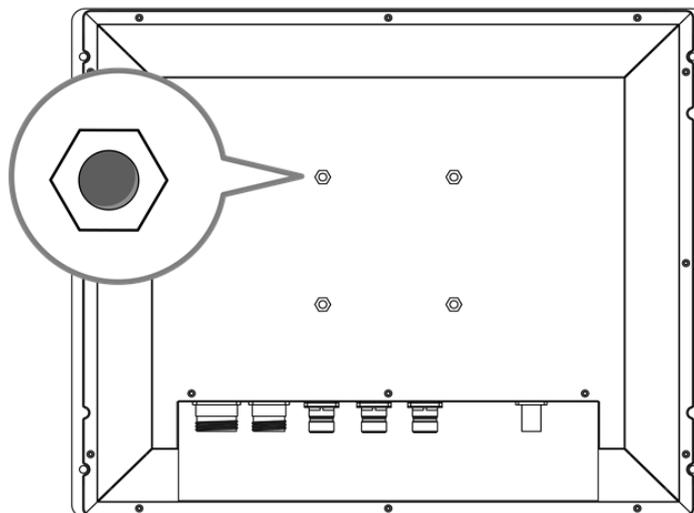
Tools Needed		
VESA Plate	Screws	Metal Nuts
100 x 100 mm	4 x VESA M4 truss head screws	4 x VESA M4 mounting nuts

**NOTE:**

VESA Plate is not included in Winmate's standard accessories package.

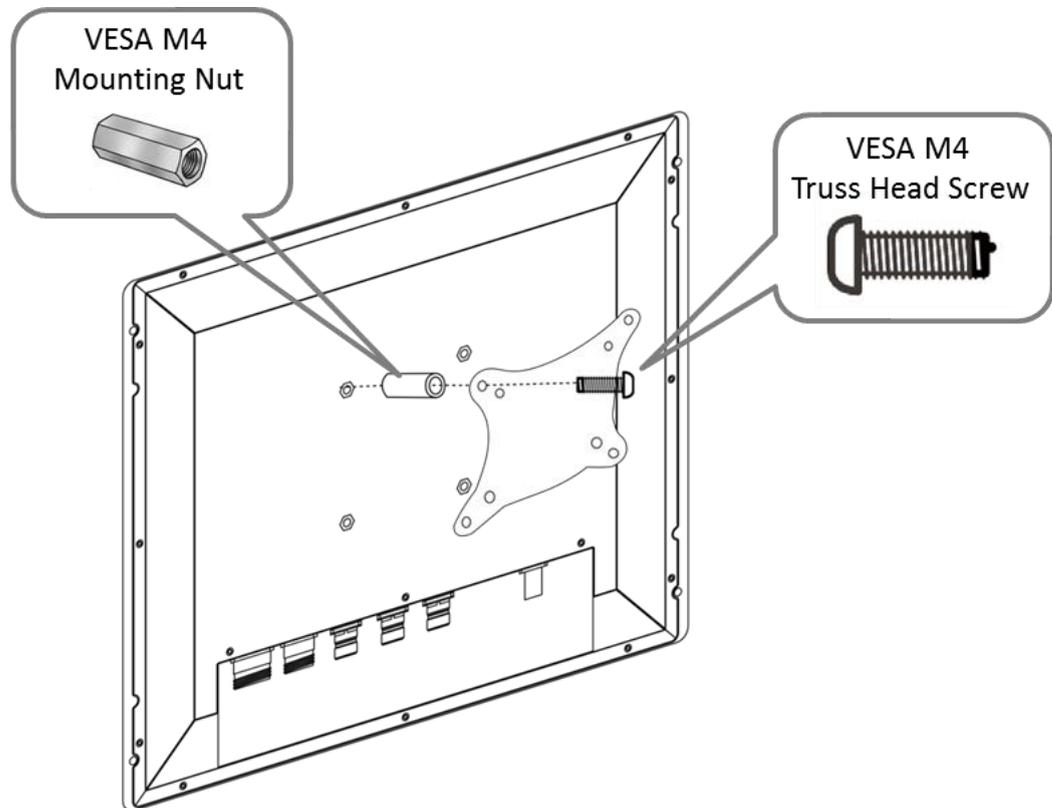
Mounting Steps:

1. Locate the four mounting nuts at the back of the Panel PC.



2. Align the VESA plate to the four mounting nuts, placing the spacers between the VESA plate and the mounting nuts.

3. Using a spanner, insert the bolts through the VESA plate and spacers, tightly securing the bolts to the mounting nuts.



4. Continue with the instructions provided with your VESA-compatible wall bracket (not supplied by Winmate).

Maintenance

This chapter provides information on regular cleaning and maintenance procedures. Follow all the recommendations included in this chapter in order to ensure long product lifecycle.

4

4 Maintenance

This chapter includes regular cleaning and maintenance procedures. Follow all the recommendations in this chapter in order to ensure long product lifecycle.

This equipment is extremely rugged and does not require a lot of maintenance. Remember that electrical equipment should be handled with care and used accordingly to its specifications.

4.1 Cleaning the Display Screen

- Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles. Do not use acetone, ethyl alcohol, toluene, ethyl acid or methyl chloride to clear the panel. It may permanently damage the display screen.
- You can apply a small amount of non-ammonia; non-alcohol based glass cleaner onto a clean, soft, lint-free cloth and wipe the screen.
- Never spray or pour any liquid directly on the screen or case.
- **Do Not** use water or oil directly on the display screen. If droplets are allowed to drop on the screen, permanent staining or discoloration may occur.

4.2 Cleaning the Casing

Use the following procedure to clean the equipment.



CAUTION/ ATTENTION

Always turn off the device and disconnect other peripherals before cleaning and maintenance procedures.

Toujours éteindre l'appareil et débrancher tous les périphériques avant que les procédures de nettoyage et d'entretien.

Before Cleaning:

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

When Cleaning:

- Wipe dust off the outside casing with a cloth slightly moistened with water or mild ammonia-based cleaning solution. Do not use this cloth on a display screen!
- Do not use an abrasive cleaner or high pressure washer on the screen.
- Do not rub the unit with a dry cloth. This action can result in a static charge being built up and cause a spark. Always use damp cloth while cleaning the unit.



WARNING!/ AVERTISSEMENT!

POTENTIAL ELECTROSTATIC CHARGE HAZARD – SEE INSTRUCTIONS

POTENTIEL ÉLECTROSTATIQUE CHARGE DANGER - VOIR INSTRUCTIONS

Driver Installation

This chapter describes how to install all necessary drivers.

5

5 Driver Installation

This chapter provides guideline to driver installation.

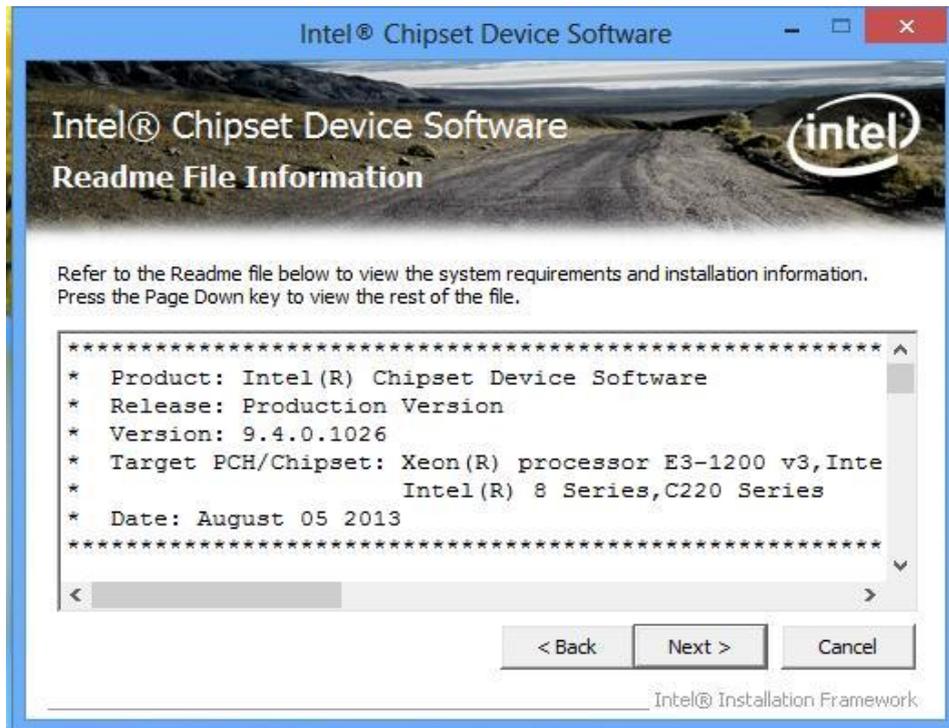
5.1 Chipset Driver

The Intel Chipset Drivers should be installed first before the software drivers enable Plug & Play INF support for Intel chipset components. Follow the instructions below to complete the installation.

Step 1 Insert the CD that comes with the motherboard. Open the file document “Chipset Driver” and click “Setup.exe” to install driver.

Name	Date modified	Type	Size
All	10/6/2014 3:14 PM	File folder	
ia64	10/6/2014 3:13 PM	File folder	
Lang	10/6/2014 3:13 PM	File folder	
WIN7	10/6/2014 3:13 PM	File folder	
x64	10/6/2014 3:13 PM	File folder	
CSVer.dll	8/5/2013 11:50 AM	Application extens...	52 KB
difxapi.dll	5/10/2012 12:34 PM	Application extens...	316 KB
Help	9/15/2006 10:10 AM	Text Document	1 KB
IIF2	2/12/2008 2:26 PM	Configuration sett...	1 KB
IIF2v	6/11/2013 3:45 PM	Configuration sett...	472 KB
mup	8/5/2013 11:50 AM	XML File	158 KB
readme	8/5/2013 11:49 AM	Text Document	94 KB
Setup	12/23/2013 5:09 PM	Application	936 KB

Step 2 Click “Next” to start the installation.



Step 3 Click “Next” to continue the installation.



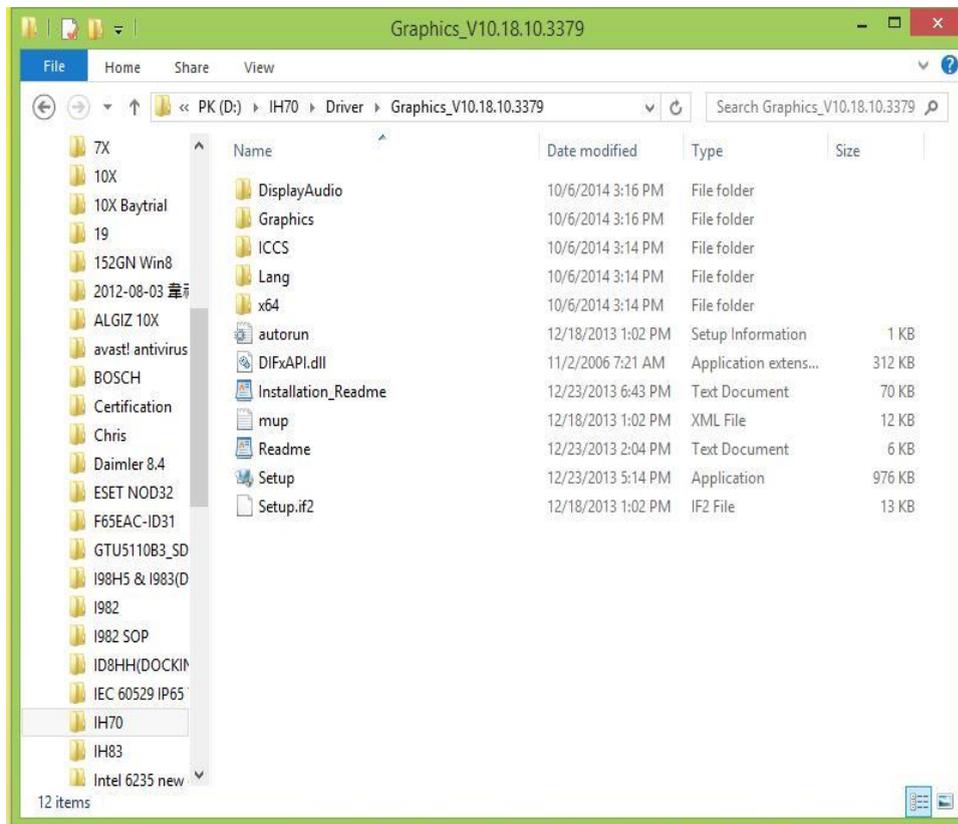
Step 4 Click “Yes, I want to restart this computer now” to finish installation.



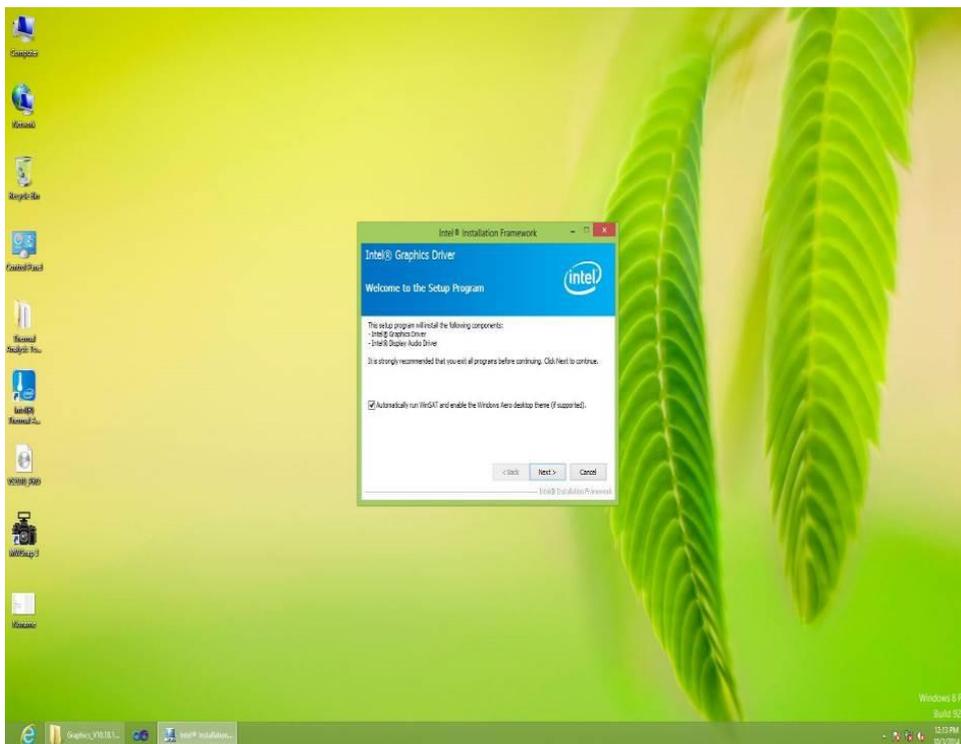
5.2 Graphics Driver

You need to install the Graphic driver to enable the function. Intel Graphic supports versatile display options and 32-bit 3D graphics engine. Triple independent display, enhanced display modes for widescreen flat panels for extend, twin, and clone display mode.

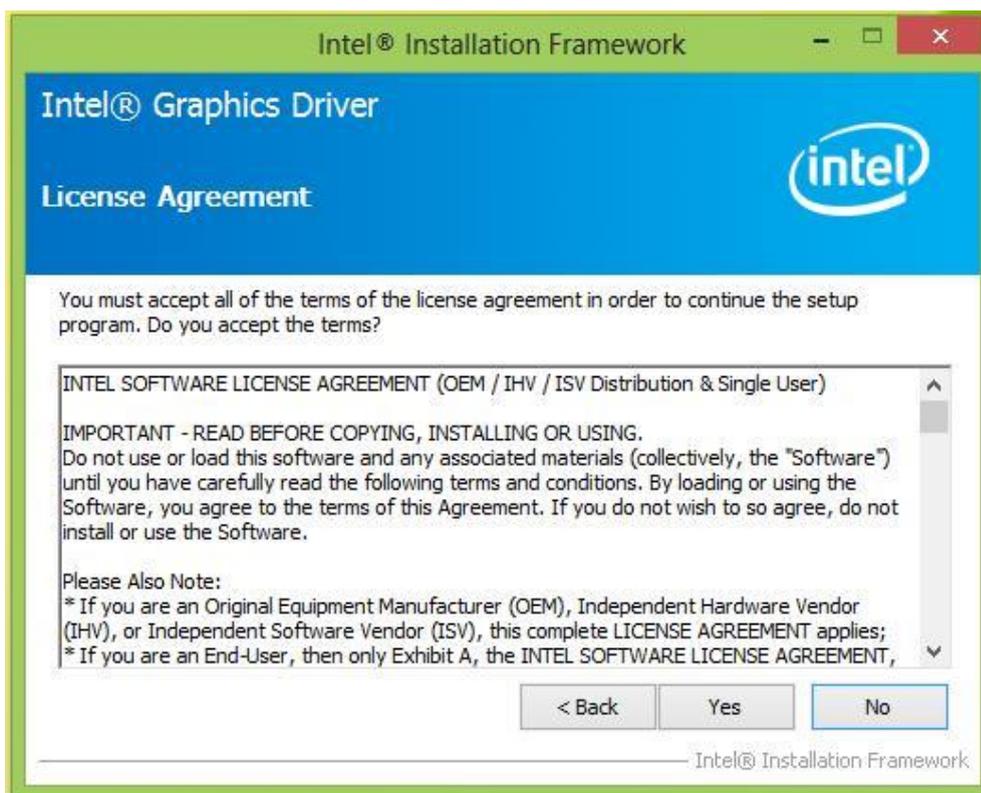
Step 1 Insert the driver CD into your system's CD-ROM drive. You can see the driver folders items. Navigate to the "Graphic Driver" folder and click "setup.exe" to complete the installation.



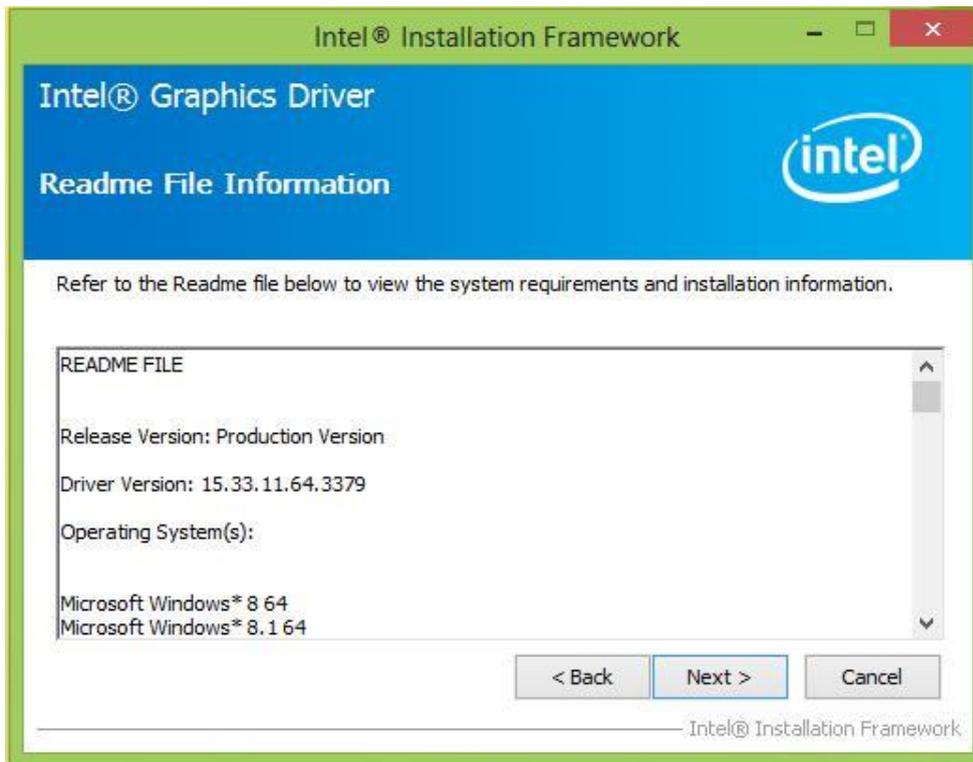
Step 2 Click “Next” to install the driver.



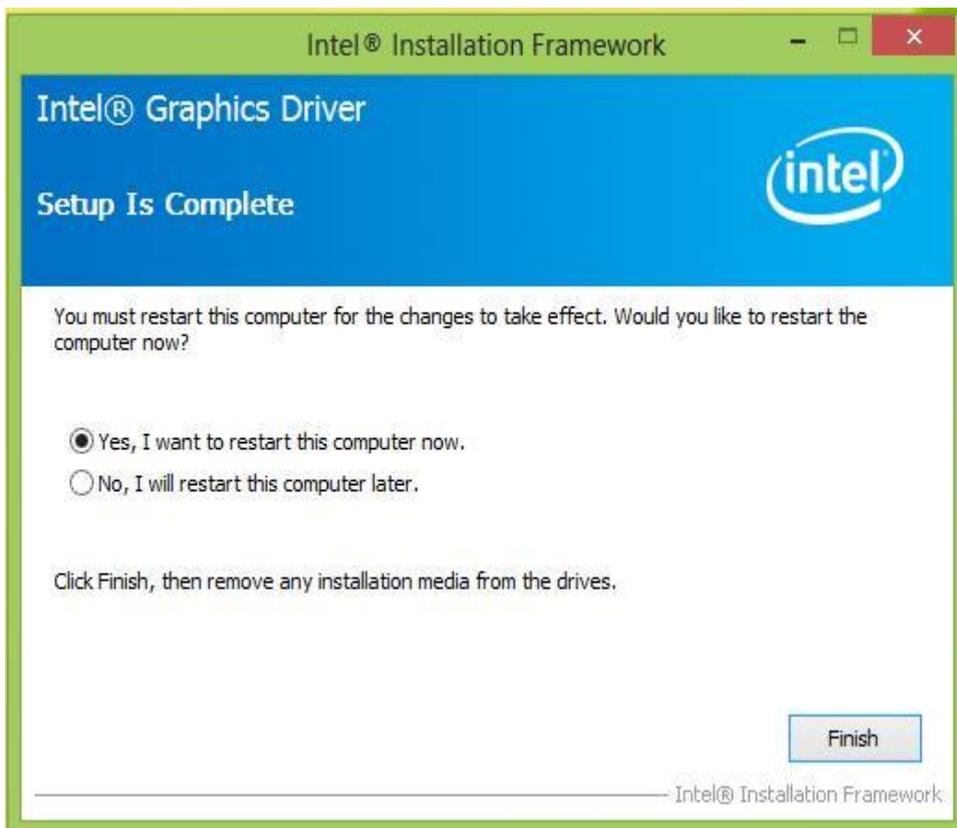
Step 3 Click “Yes” to agree with the license terms.



Step 4 Click “Next” to install the driver.



Step 5 Click “Yes, I want to restart this computer now” to finish installation.



5.3 Audio Driver

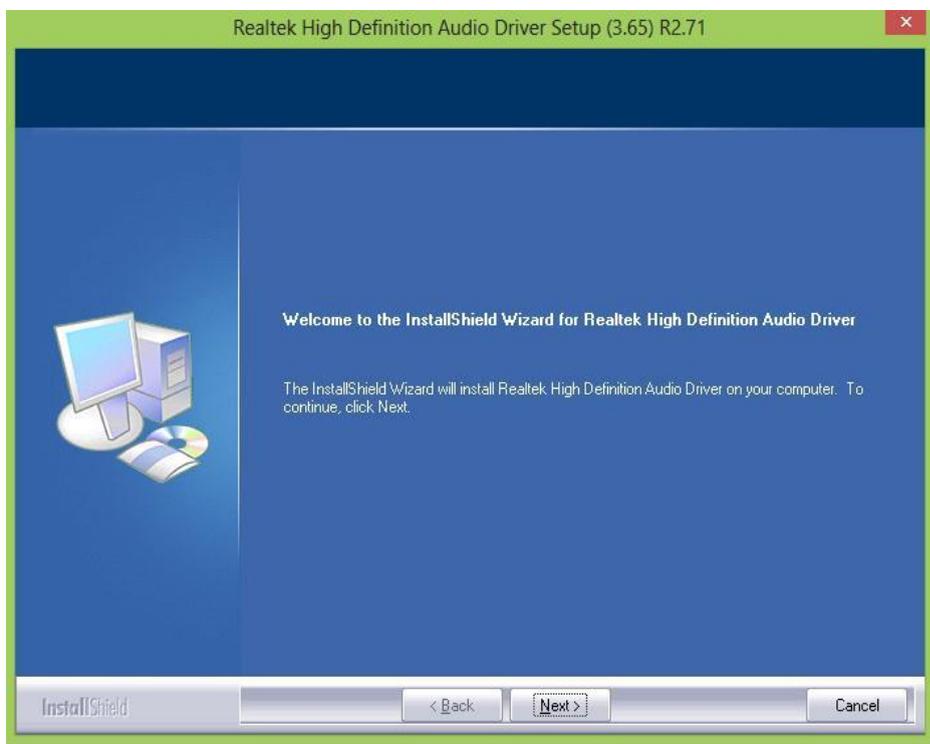
The ALC886 series are high-performance 7.1+2 Channel High Definition Audio Codecs providing ten DAC channels that simultaneously support 7.1 sound playbacks, plus 2 channels of independent stereo sound output (multiple streaming) through the front panel stereo outputs. The series integrates two stereo ADCs that can support a stereo microphone, and feature Acoustic Echo Cancellation (AEC), Beam Forming (BF), and Noise Suppression (NS) technology.

You must confirm which operating system is running on the IH32 Motherboard before installing the Audio drivers. Follow the steps below to complete the installation of the Realtek ALC886 Audio drivers. You will quickly complete the installation.

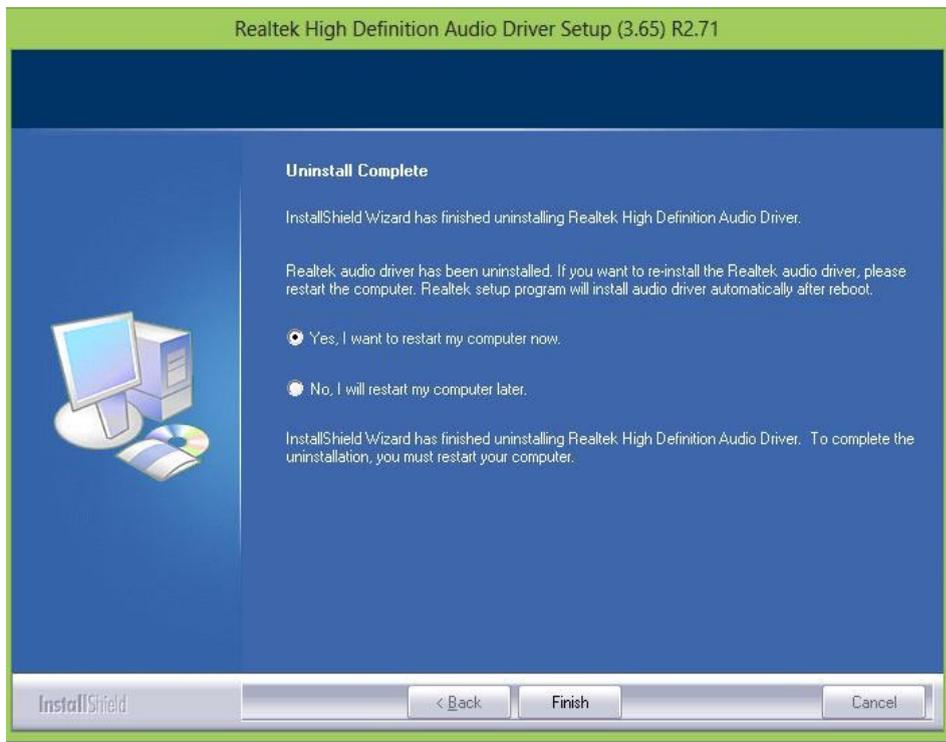
Step 1 Insert the CD that comes with the motherboard. Open the folder “Audio Driver” and click on “Audio” (64bit_Vista_Win7_Win8_R271) to execute the setup.



Step 2 Click “Next” to start the installation.



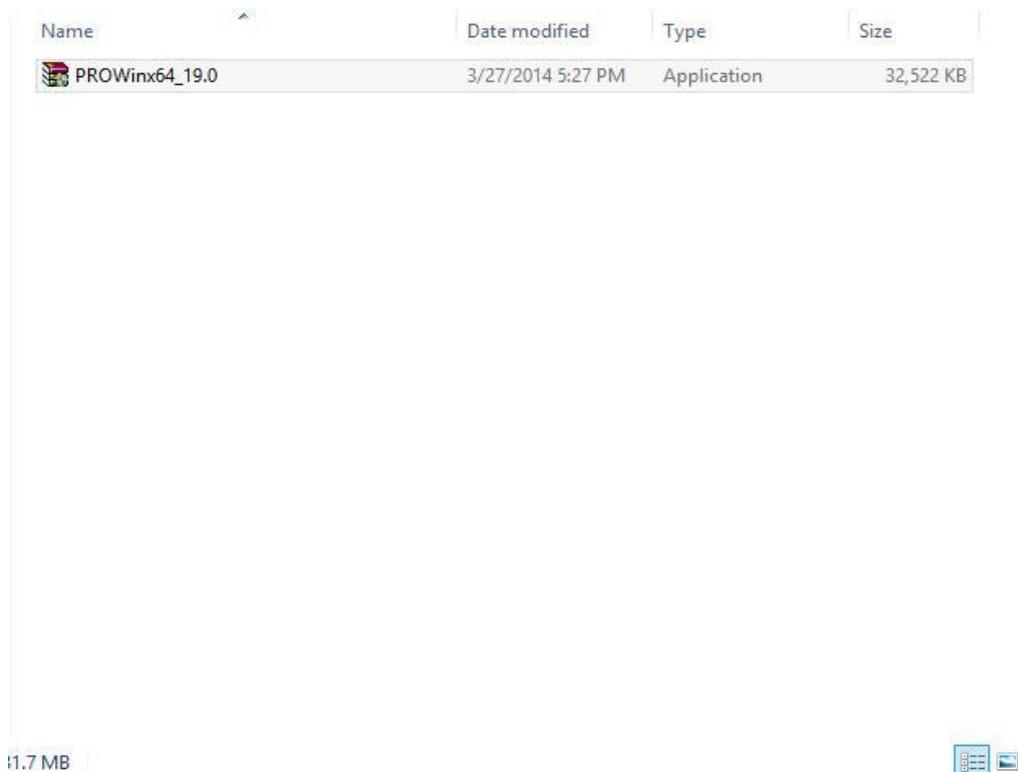
Step 3 Click “Yes, I want to restart my computer now” to finish the installation.



5.4 Ethernet Driver

You must confirm which operating system is used on the IH32 Motherboard before installing the Ethernet drivers. Follow the steps below to complete the installation of the Intel® I210IT Gigabit-LAN Controller + I218LM Gigabit-LAN drivers. You will quickly complete the installation.

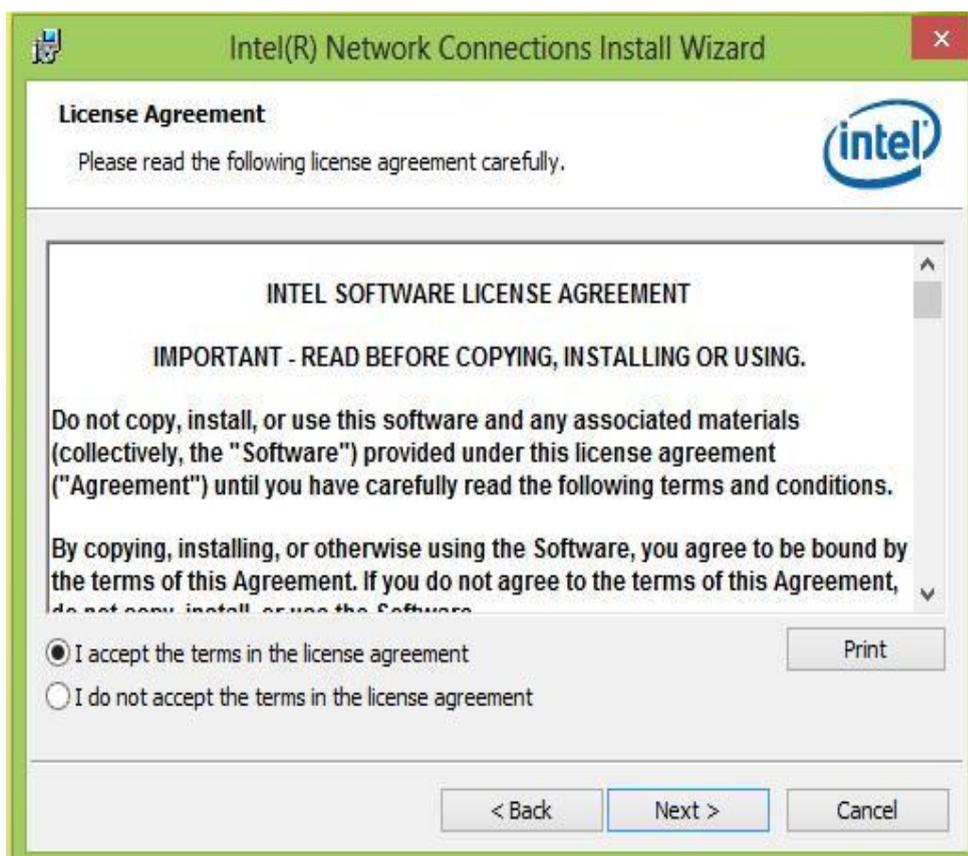
Step 1 Insert the driver CD and select the “LAN Driver” folder.



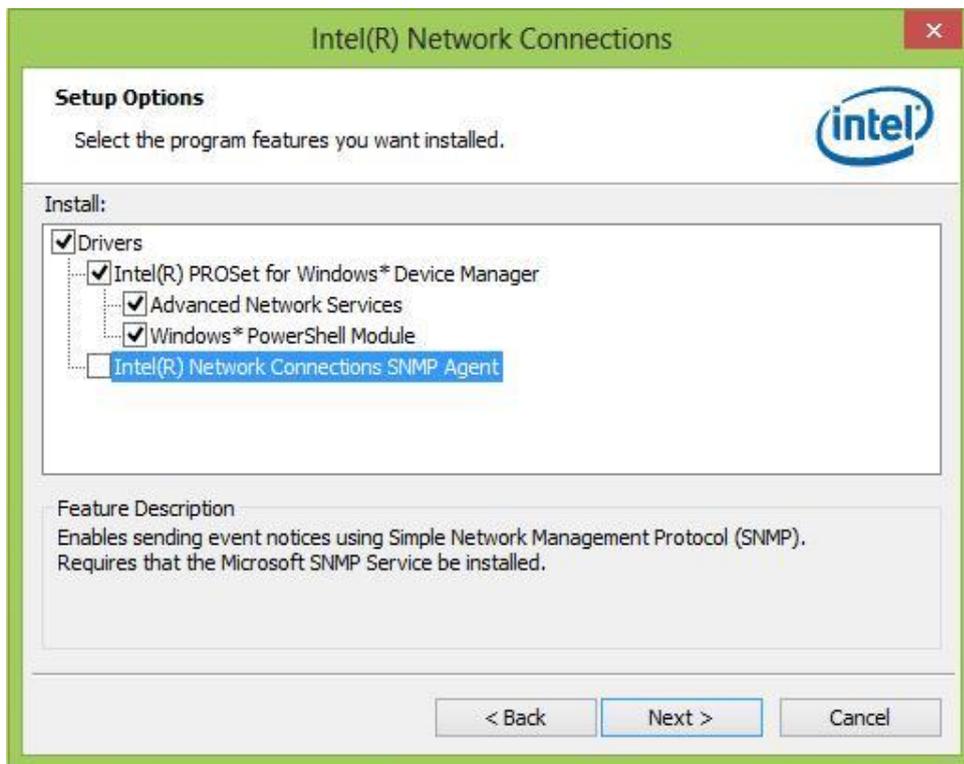
Step 2 Extract the “PROWinX64_19.0” file and click “Next” to install the driver.



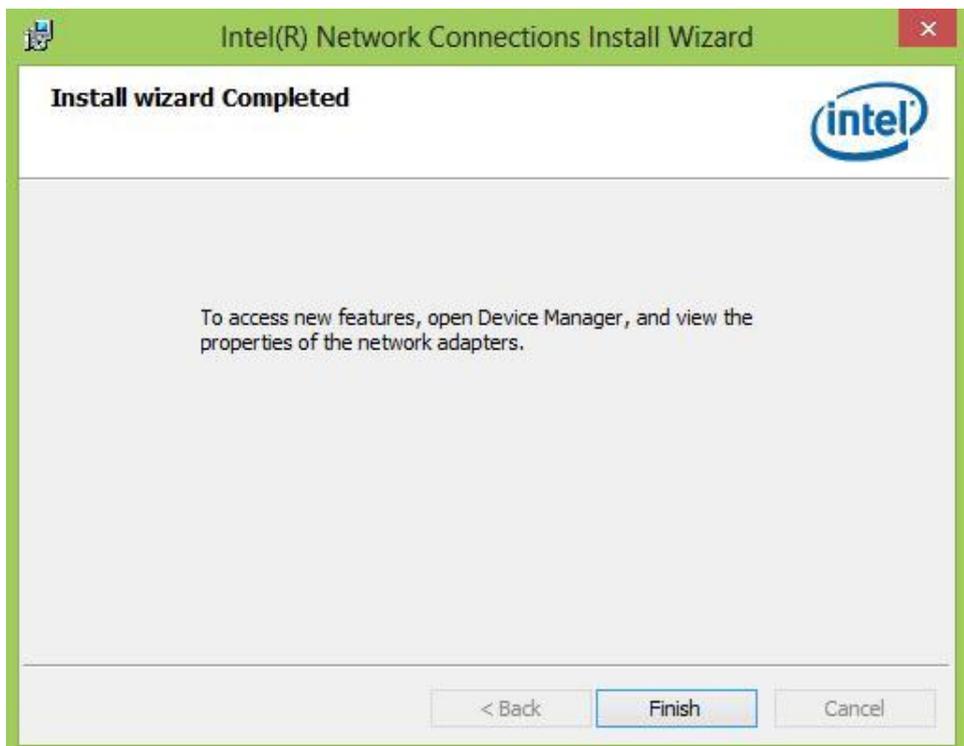
Step 3 Click “Next” to agree with the license terms.



Step 4 Click “Next” to install the driver.



Step 5 Click “Finish” to complete the driver installation.



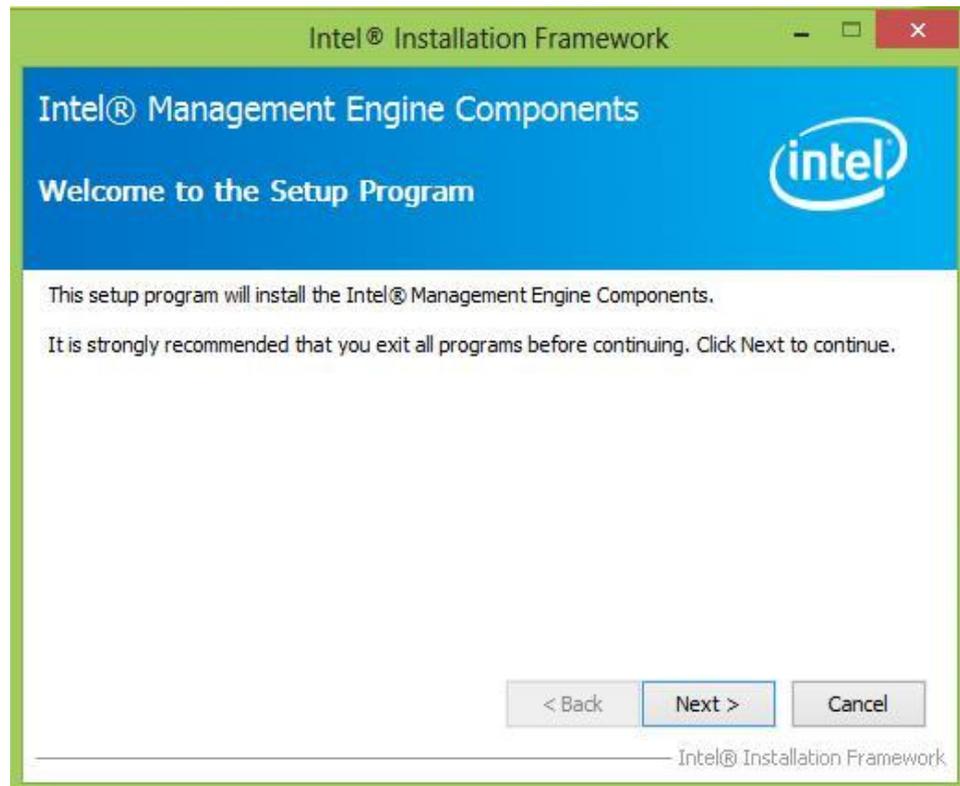
5.5 Intel® Management Engine Software

This installation program installs the Intel® ME software components required for the platform on which you are installing, and installs only those components that match your platform's capabilities.

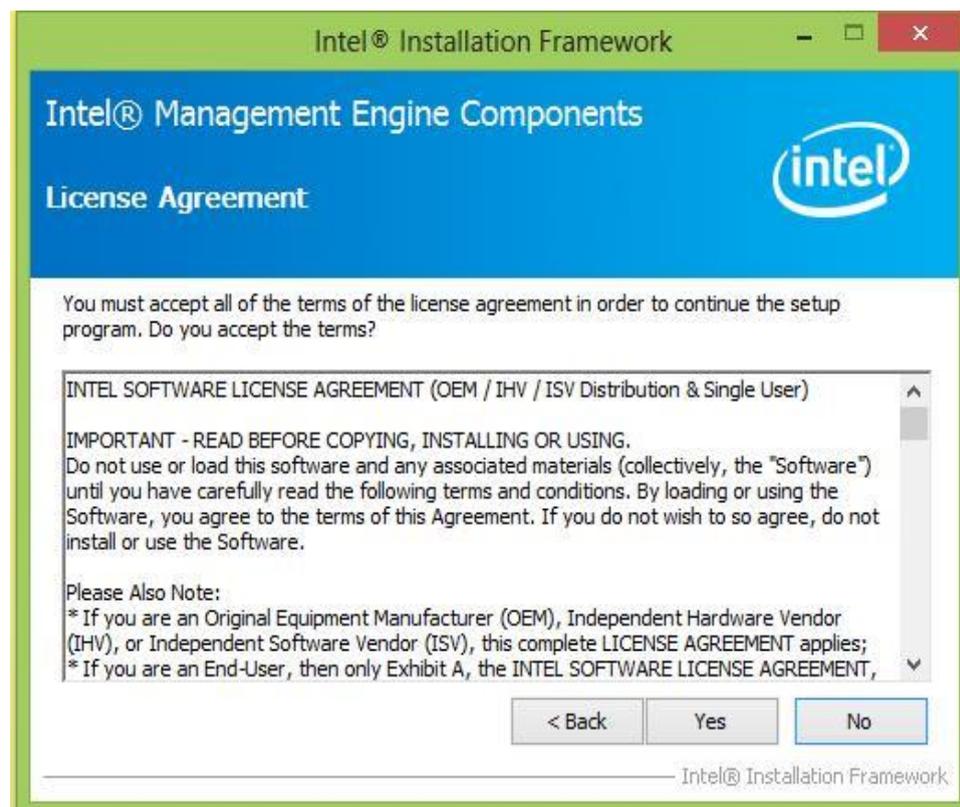
Step 1 Insert the driver CD and select the "Intel ME 10.0" folder and click "Setup.exe"

Name	Date modified	Type	Size
DAL	10/6/2014 3:17 PM	File folder	
Drivers	10/6/2014 3:17 PM	File folder	
Firmware Recovery Agent	10/6/2014 3:16 PM	File folder	
IFR	10/6/2014 3:16 PM	File folder	
Intel Control Center	10/6/2014 3:16 PM	File folder	
IntelMEFWVER	10/6/2014 3:16 PM	File folder	
IUS	10/6/2014 3:16 PM	File folder	
Lang	10/6/2014 3:16 PM	File folder	
LMS	10/6/2014 3:16 PM	File folder	
NAC_PP	10/6/2014 3:16 PM	File folder	
x64	10/6/2014 3:16 PM	File folder	
autorun	8/8/2013 1:25 PM	Setup Information	1 KB
DIFxAPI.dll	8/8/2013 1:25 PM	Application extens...	312 KB
mup	8/8/2013 1:25 PM	XML File	9 KB
Setup	8/8/2013 1:25 PM	Application	966 KB
Setup.if2	8/8/2013 1:25 PM	IF2 File	24 KB
version	8/8/2013 1:25 PM	Configuration sett...	1 KB

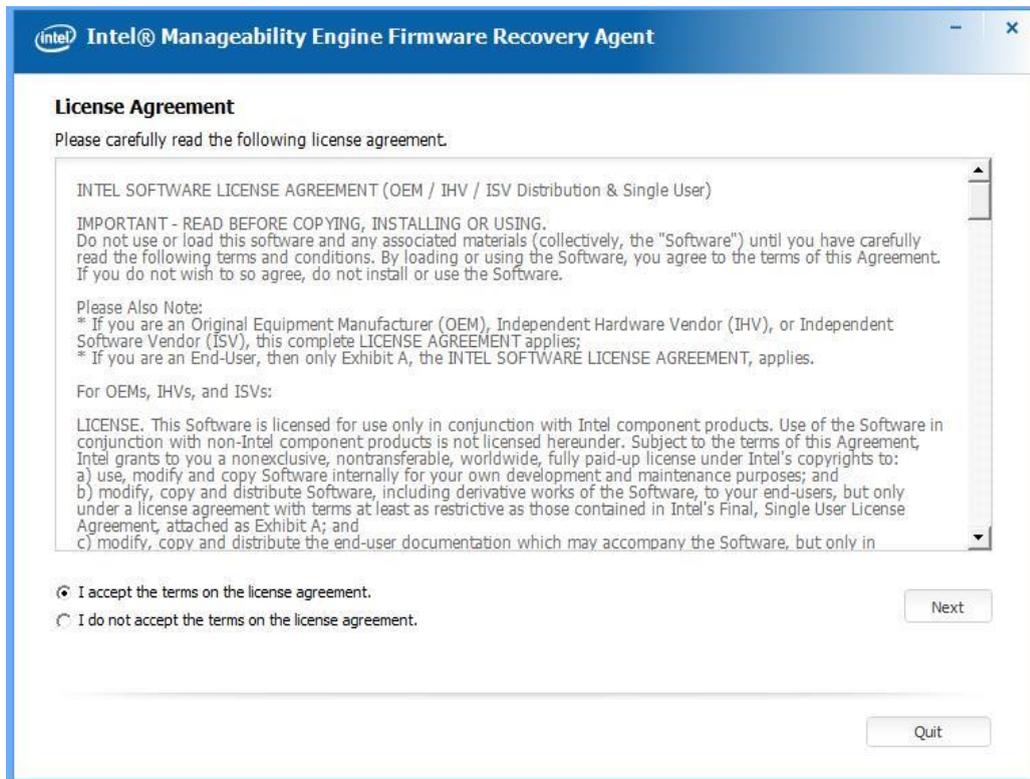
Step 2 Click “Next” to continue the installation.



Step 3 Click “Yes” to agree with the License terms.



Step 4 Choose “I accept the terms of the license agreement”, and click “Next” to continue.



Step 5 Click “Finish” to complete the software installation.



5.6 USB 3.0 Driver Installation (Windows 7)

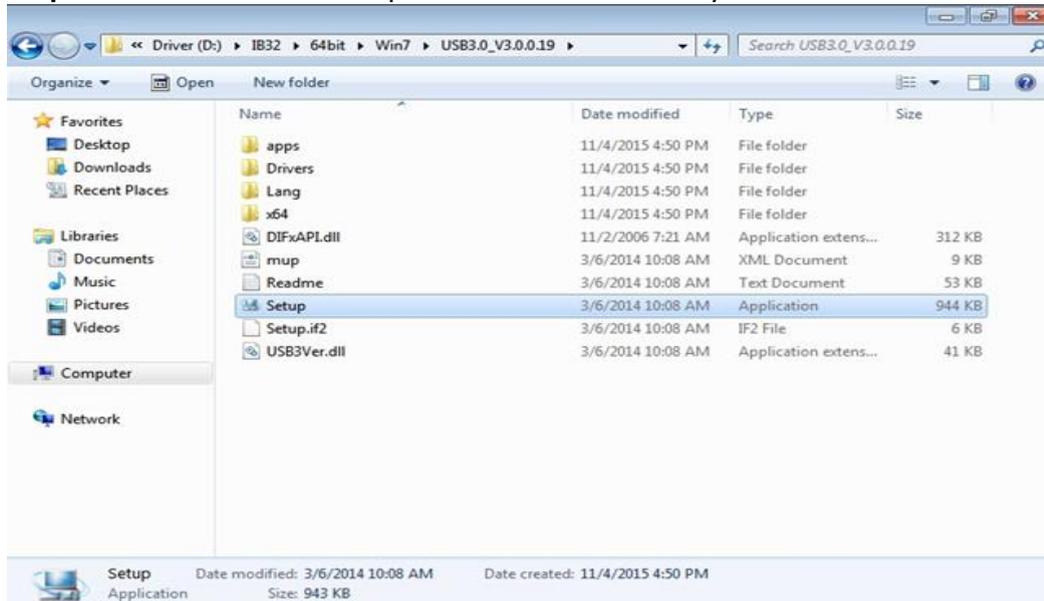


NOTE:

If the operating system of your device is Windows 10 IoT, Windows Embedded 8.1 Industry, Windows Embedded 8 Standard, users can skip this installation.

Step 1 Locate the hard drive directory where the driver files are stored with the browser or the explore feature of Windows*.

Step 2 Double-click the “Setup.exe” from this directory.



Step 3 Click “Next” to continue



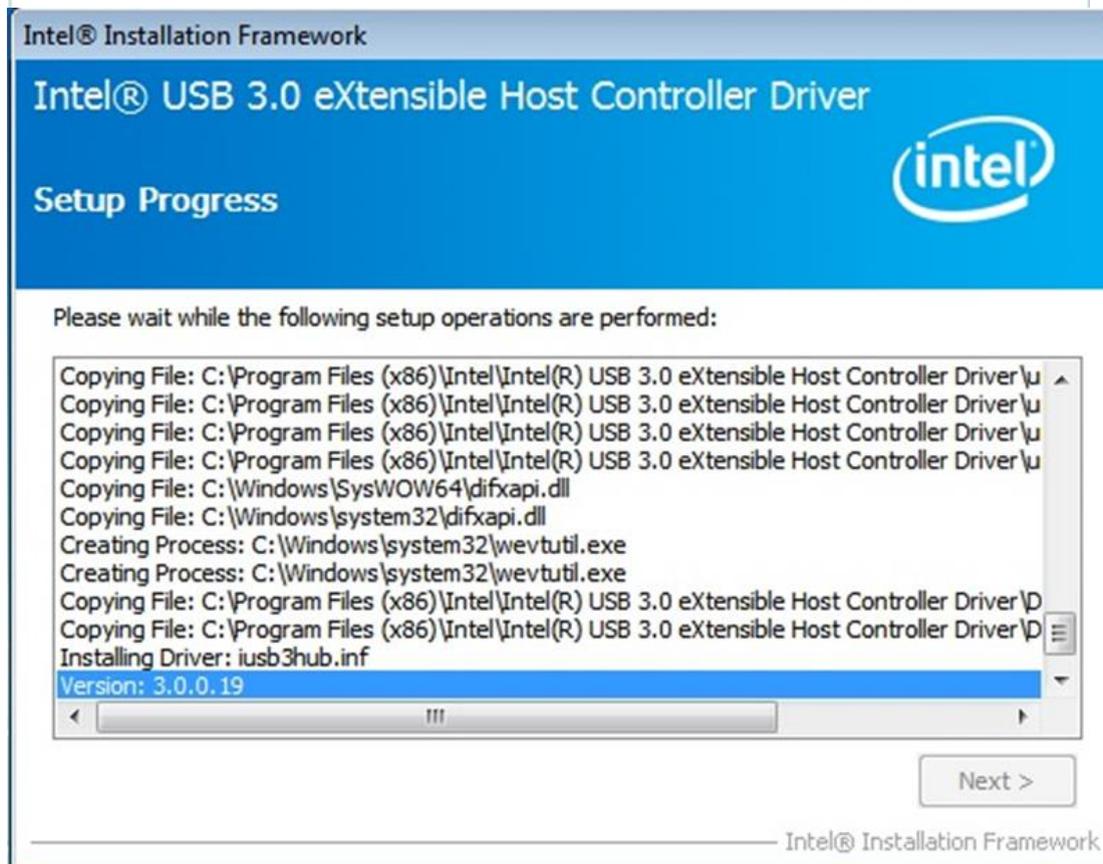
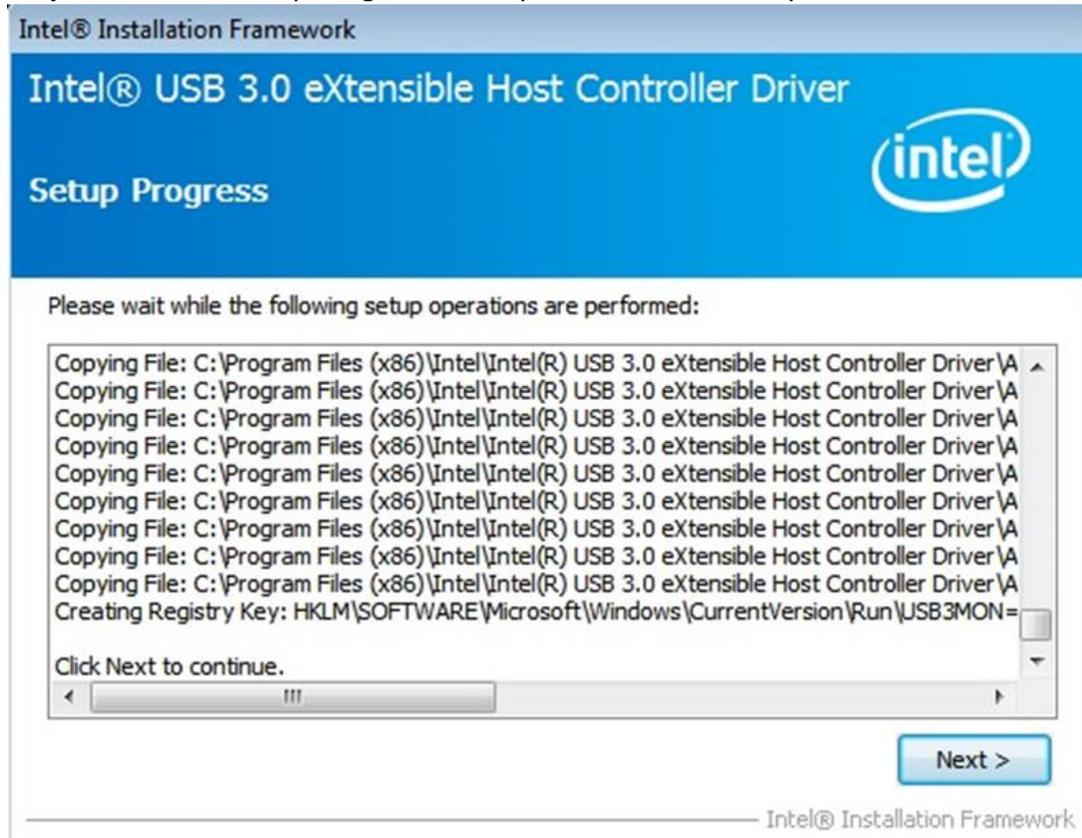
Step 4 Read the License Agreement and click “Yes” to proceed.



Step 5 Review Readme File Information and click “Next” to proceed



Step 6 When the Setup Progress is complete click “Next” to proceed.



Step 7 Click “Yes, I want to restart this computer now” to finish and then restart your computer.



BIOS Setup

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

6

6 BIOS Setup

6.1 How and When to Use BIOS Setup

To enter the BIOS setup, you need to connect an external USB keyboard, 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	General Help
F2	Previous Values
F3	Optimized Defaults
F4	Save & Exit
Esc	Exit
+/-	Change Opt.
Enter	Select or execute command
Cursor ↑	Moves to the previous item
Cursor ↓	Goes to the next item
Cursor ←	Moves to the previous item
Cursor →	Goes to the next item



NOTE:

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

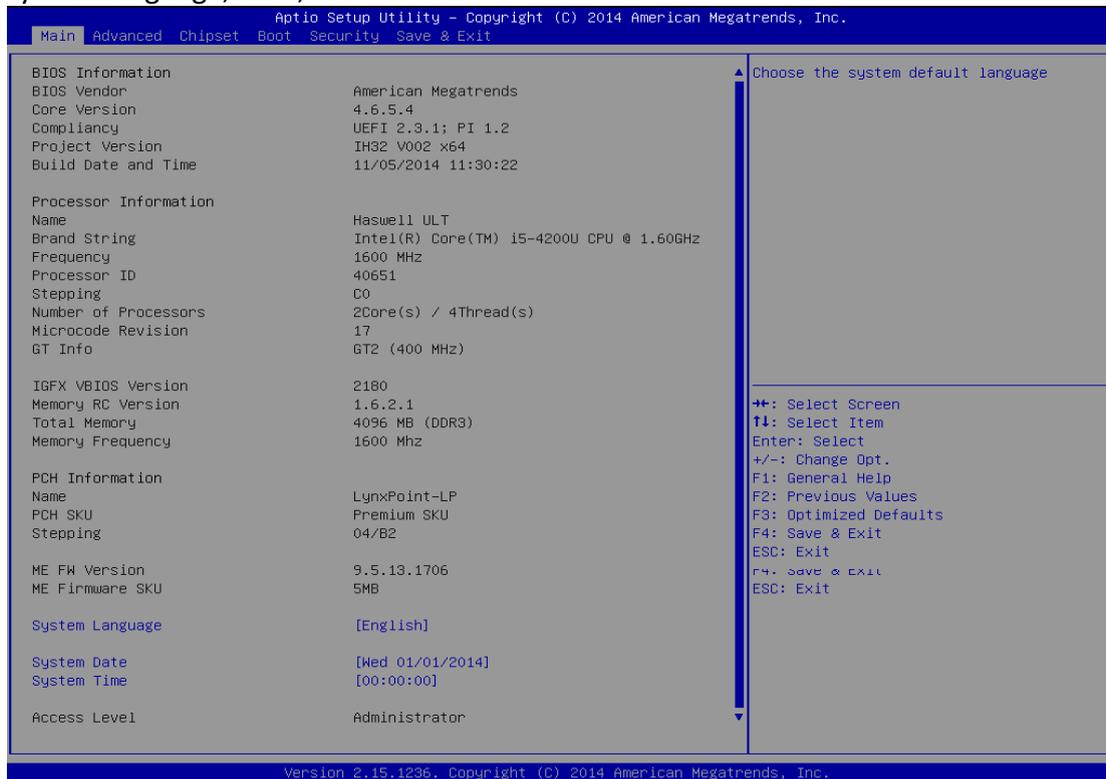
6.2 BIOS Functions

The IH32 motherboard has AMI BIOS built-in and a CMOS SETUP utility that allow users to configure required settings or to activate certain system features. The following sections describe the configuration options found in the menu items.

6.2.1 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
System 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 Date/Time	This is current date setting. The time is maintained by the battery when the device is turned off.	Date and time changes.	Set the date in the format [mm/dd/yyyy]; The time in the format: [hh/mm/ss]
Access Level	The current user access settings	Changes to the level of access	Administrator is set up by the default

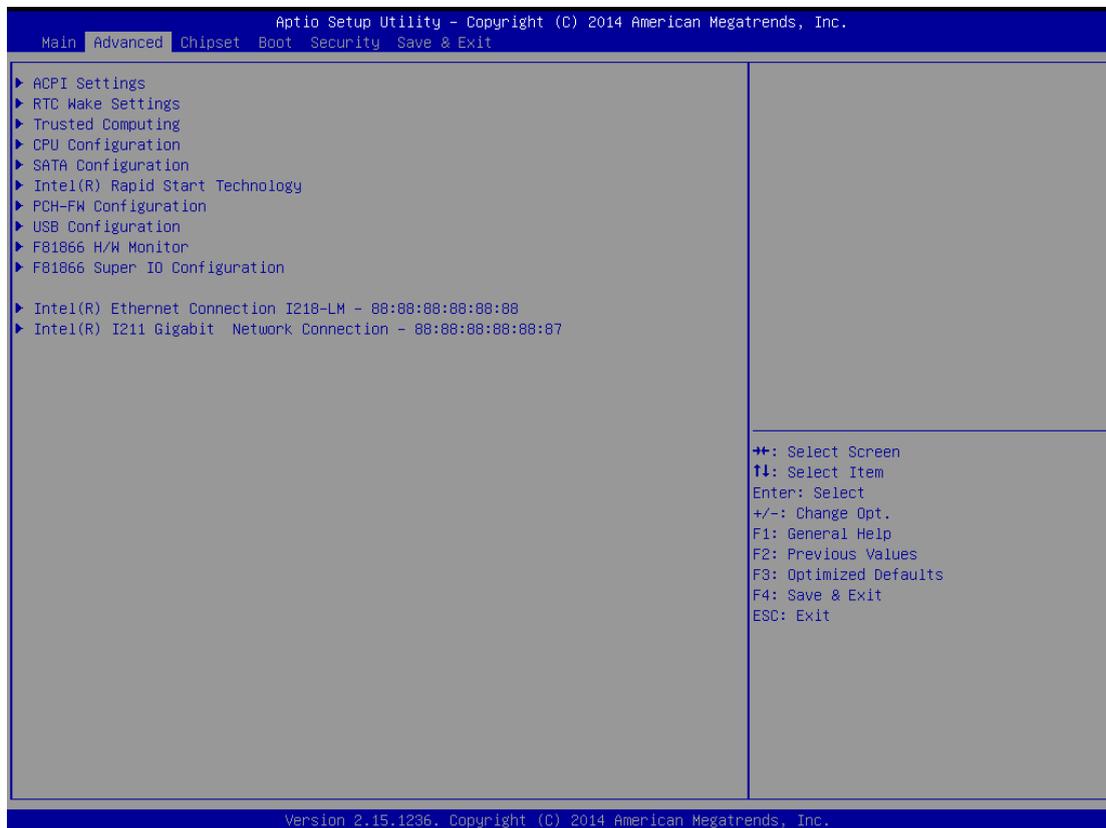
6.2.2 Advanced Settings

Select the Advanced Tab from the IH32 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

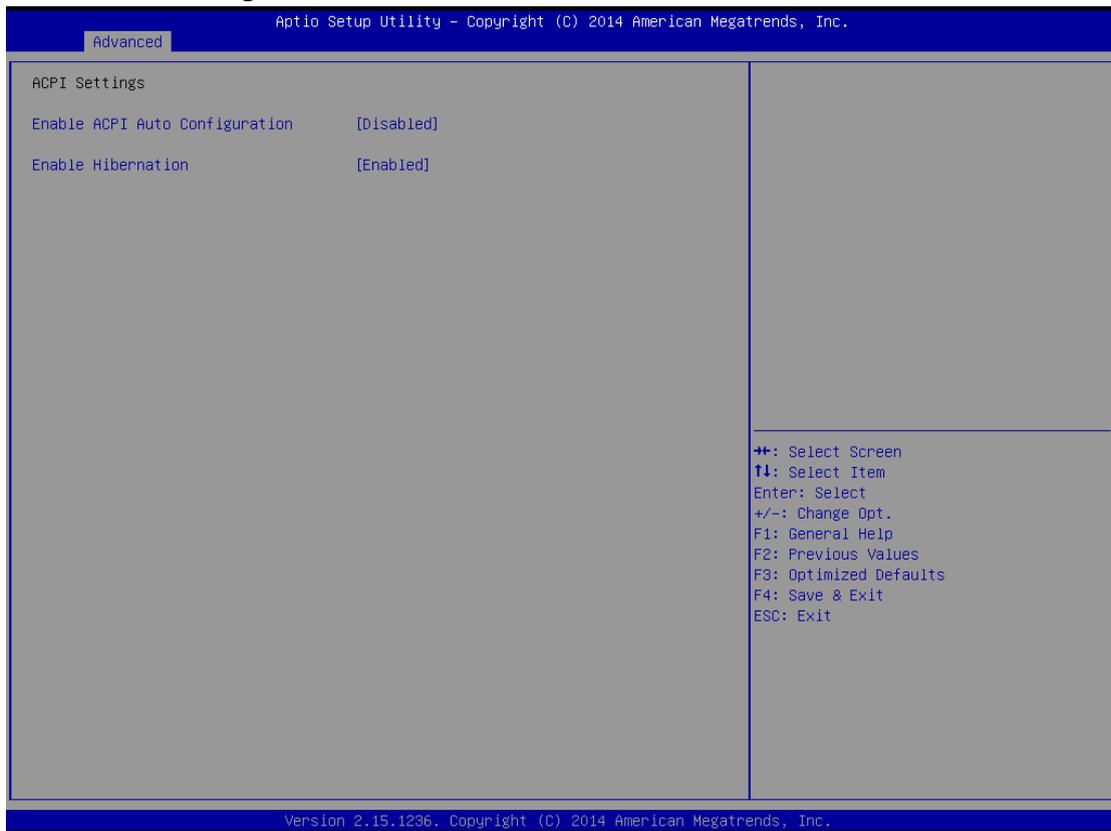
Handle advanced BIOS settings page with caution. Any changes can affect the operation of your computer.



BIOS Setting	Description	Setting Option	Effect
ACPI Settings	Configures ACPI settings	Enter	Opens submenu
RTC Wake Settings	Configures RTC Wake parameters	Enter	Opens submenu
Trusted Computing	Configures Trusted Computing parameters	Enter	Opens submenu
CPU Configuration	Configures CPU settings	Enter	Opens submenu
SATA Configuration	Configures SATA parameters	Enter	Opens submenu
Intel® Rapid Start Technology	Configures Intel Rapid Start Technology parameters	Enter	Opens submenu
PCH-FW Configuration	Configures PCH-FW parameters	Enter	Opens submenu
USB Configuration	Configures USB parameters	Enter	Opens submenu
F81866 H/W Monitor	Configures H/W Monitor settings	Enter	Opens submenu
F81866 Super I/O Configuration	Configures Super I/O settings	Enter	Opens submenu
Intel Ethernet Connection	Configures Intel Ethernet Connection settings	Enter	Opens submenu
Intel I211 Gigabit Network Connection	Configures Intel I211 Gigabit Network Connection settings	Enter	Opens submenu

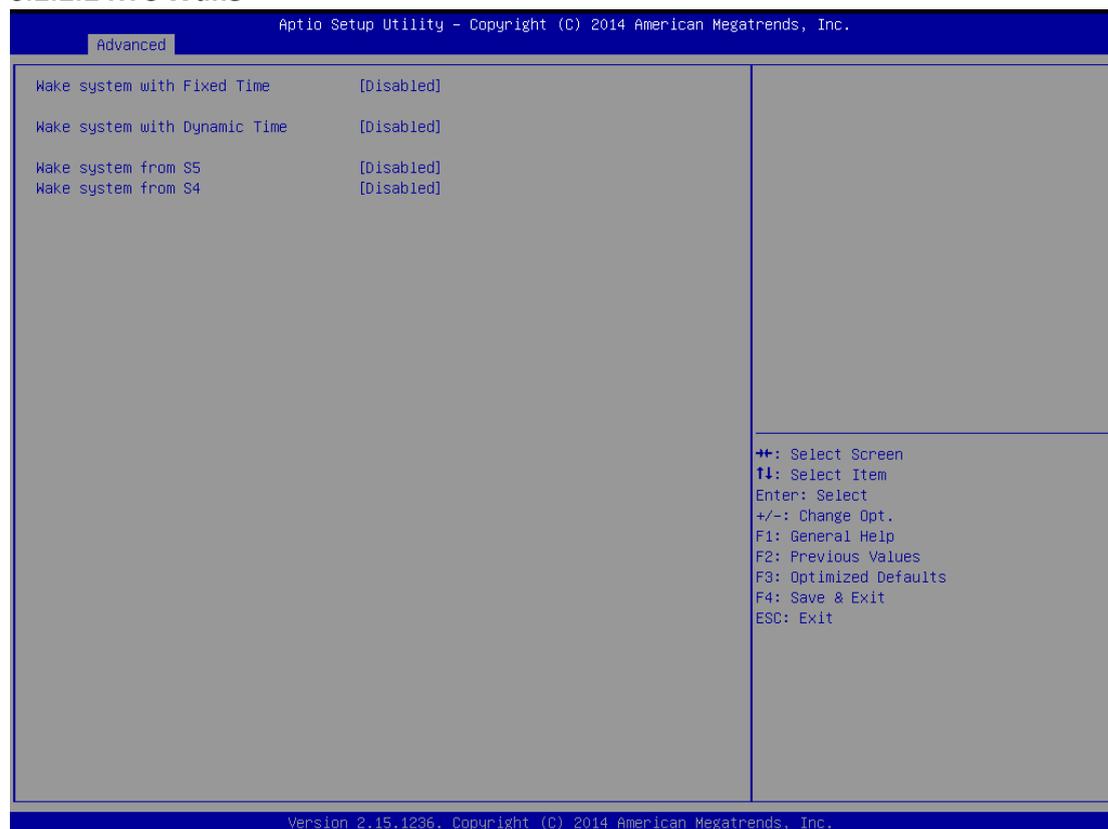
For items marked ► press <Enter> for more options.

6.2.2.1 ACPI Settings



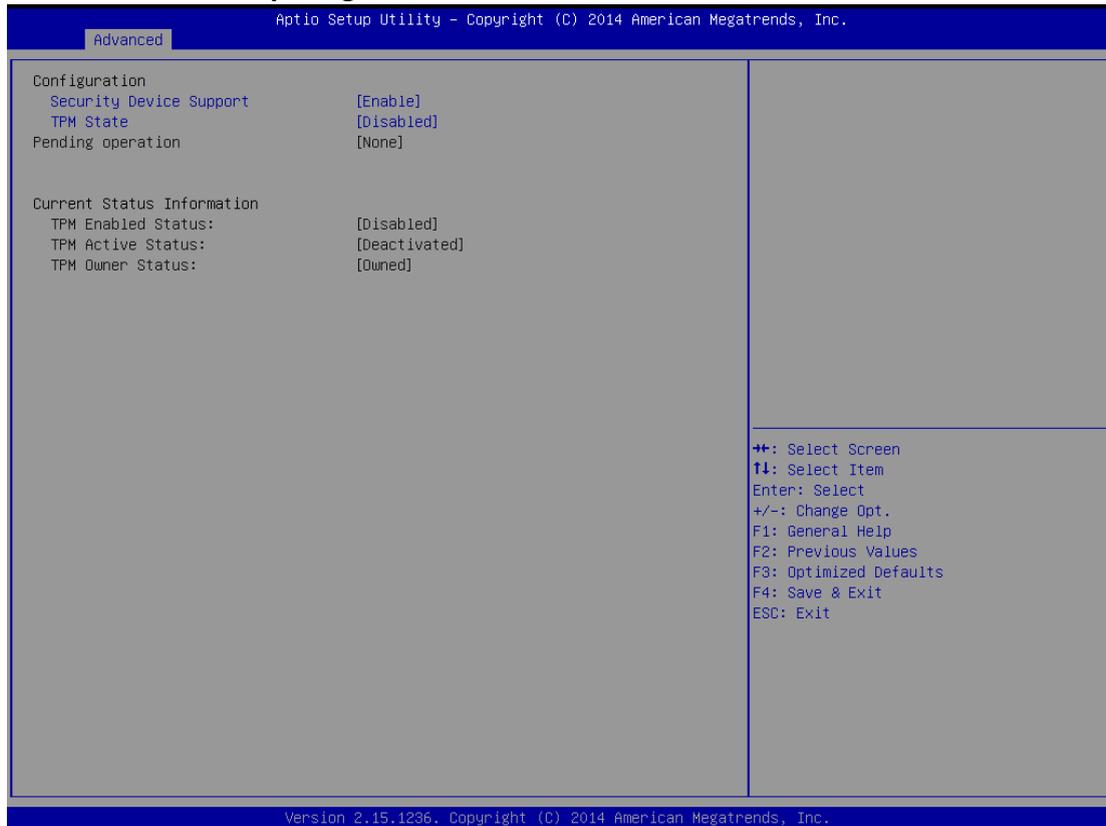
BIOS Setting	Description	Setting Option	Effect
Enable ACPI Auto Configuration	BIOS ACPI Auto Configuration	Enable/ Disable	Enables or Disables this function
Enable Hibernation	Control hibernation	Enable/ Disable	Enables or Disables this function

6.2.2.2 RTC Wake



BIOS Setting	Description	Setting Option	Effect
Wake system with Fixed Time	System awake on alarm events.	Enabled/ Disabled	System will awake at the hr: min: sec specified
Wake system with Dynamic Time	S set the system to wake on the current time + increase minute (s).	Enabled/ Disabled	System will awake at current time+ increase minute (s).
Wake System from S5	Enables or disables system wake on alarm event. It allows you to wake up the system in a certain time.	Enabled/ Disabled	System will awake at the hr: min: sec specified

6.2.2.3 Trusted Computing



BIOS Setting	Description	Setting Option	Effect
Security Device Support	Enable or disable BIOS support for security device	Enabled/Disabled	Set desirable configuration
TPM State	Enable or disable TPM state.	Enabled/Disabled	Set desirable configuration

6.2.2.4 CPU Configuration

CPU Configuration allows you to change CPU settings. Use key arrows to navigate through the menu.

The screenshot displays the 'Advanced' section of the Aptio Setup Utility. The 'CPU Configuration' menu is open, showing various system and processor settings. The interface is split into two columns: the left column lists configuration items, and the right column provides a detailed description of the XD bit feature and a list of navigation keys.

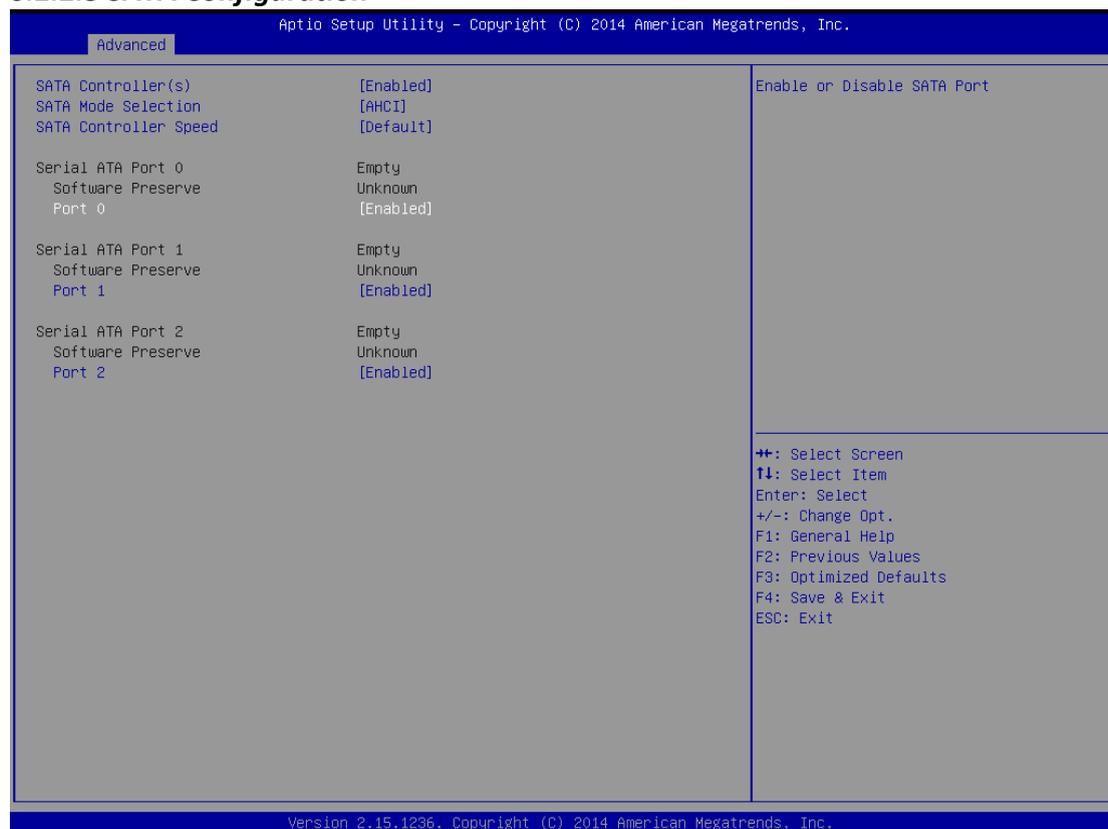
CPU Configuration	
Intel(R) Core(TM) i5-4200U CPU @ 1.60GHz	
CPU Signature	40651
Processor Family	6
Microcode Patch	17
FSB Speed	100 MHz
Max CPU Speed	1600 MHz
Min CPU Speed	800 MHz
CPU Speed	1600 MHz
Processor Cores	2
Intel HT Technology	Supported
Intel VT-x Technology	Supported
Intel SMX Technology	Not Supported
64-bit	Supported
EIST Technology	Supported
CPU C3 state	Supported
CPU C6 state	Supported
CPU C7 state	Supported
L1 Data Cache	32 kB x 2
L1 Code Cache	32 kB x 2
L2 Cache	256 kB x 2
L3 Cache	3072 kB
Execute Disable Bit	[Enabled]
Intel Virtualization Technology	[Enabled]
Boot performance mode	[Turbo Performance]
EIST	[Enabled]
Turbo Mode	[Disabled]
Energy Performance	[Performance]
ACPI CTDP BIOS	[Disabled]
CPU DTS	[Enabled]

XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.)

++: Select Screen
T↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F8: Optimized Defaults
F4: Save & Exit
ESC: Exit

Version 2.15.1236. Copyright (C) 2014 American Megatrends, Inc.

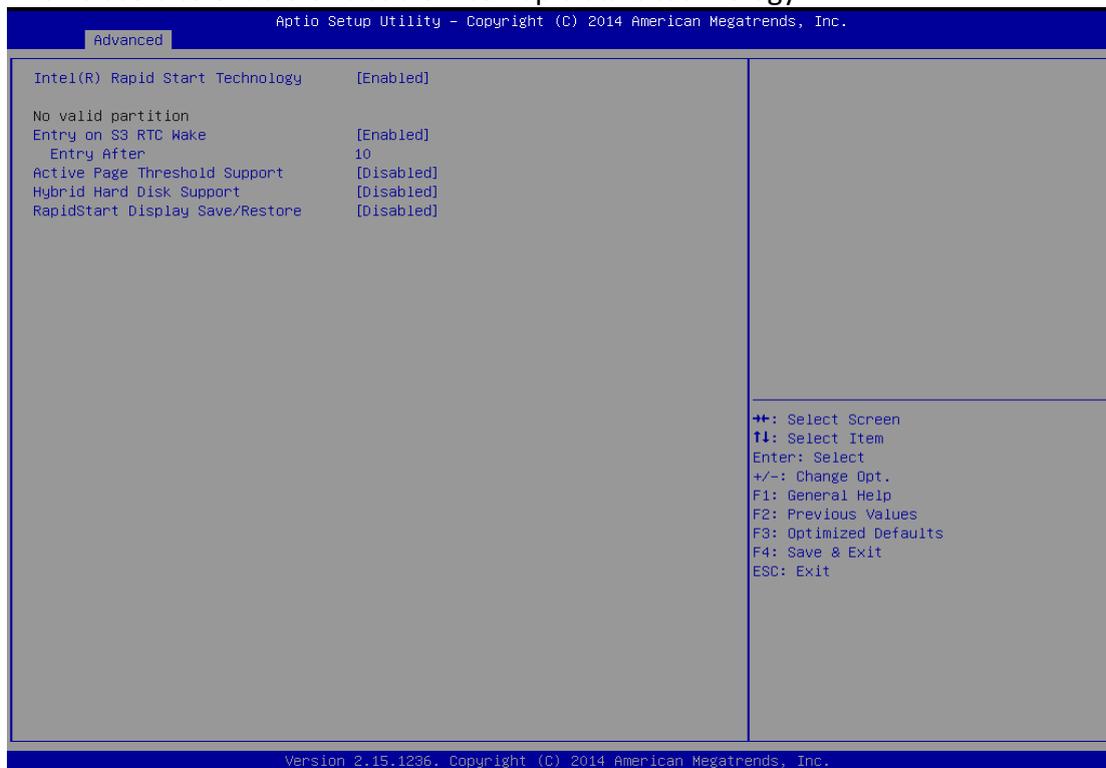
6.2.2.5 SATA Configuration



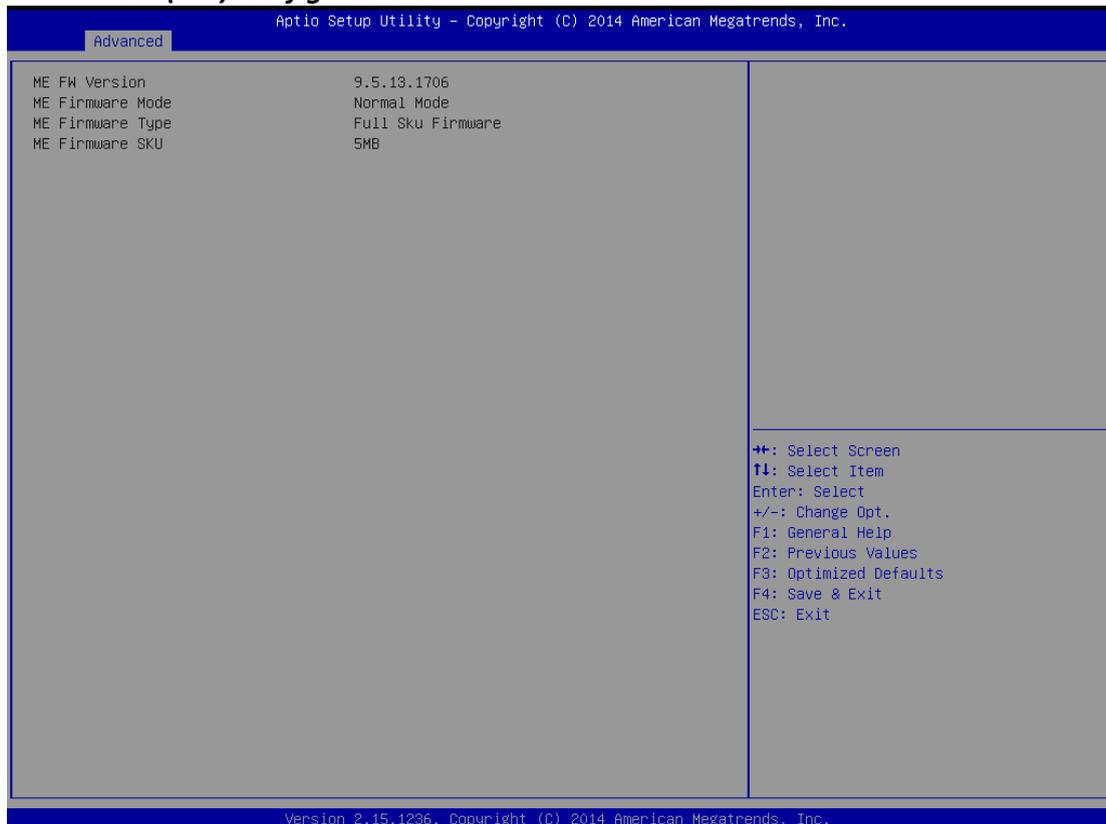
BIOS Setting	Description	Setting Option	Effect
SATA Controller (s)	Allows users to enable or disable the SATA controller (s)	Enabled/ Disabled	Set desirable configuration
SATA Mode Selection	Allows users to select mode of SATA controller (s)	Enabled/ Disabled	Set desirable configuration
SATA Controller Speed	Allows users to select mode of SATA Controller Speed	Enabled/ Disabled	Set desirable configuration
Serial ATA Port 0/1/2	Allows users to enable or disable the SATA Port	Enabled/ Disabled	Set desirable configuration

6.2.2.6 Intel® Rapid Start Technology

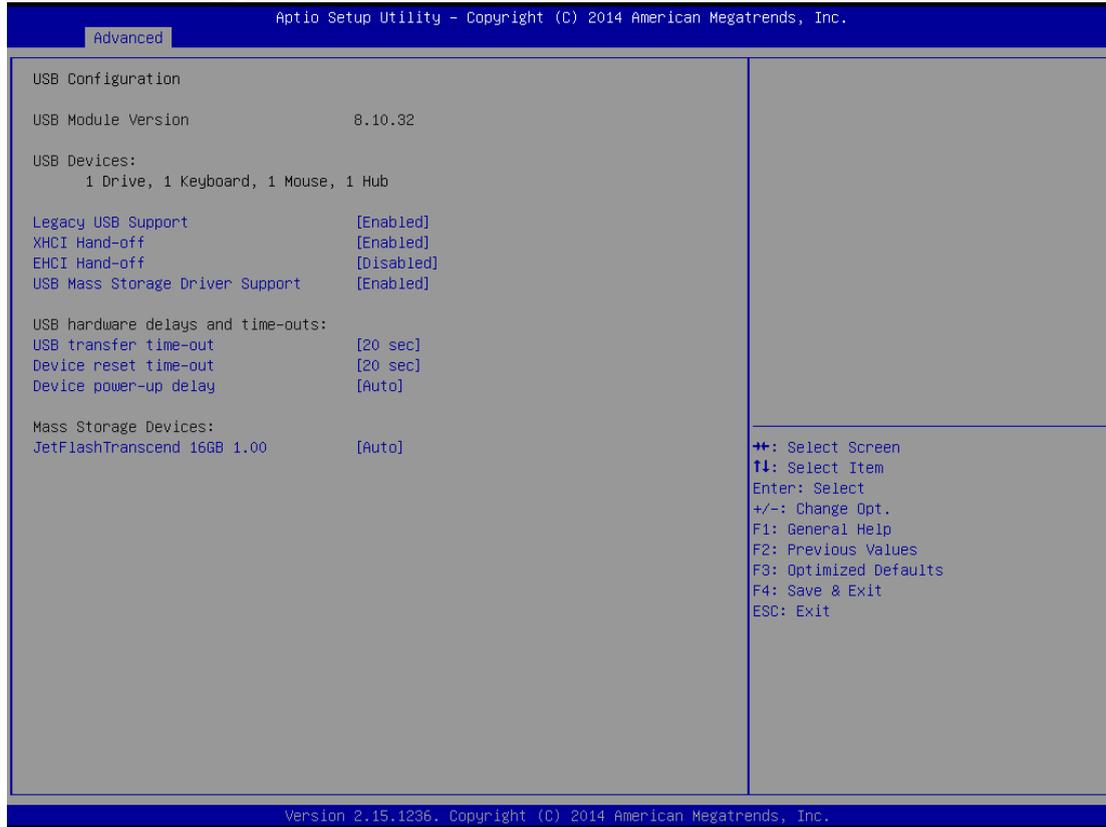
Allows users to enable or disable Intel rapid start technology.



6.2.2.7 PCH (FW) Configuration



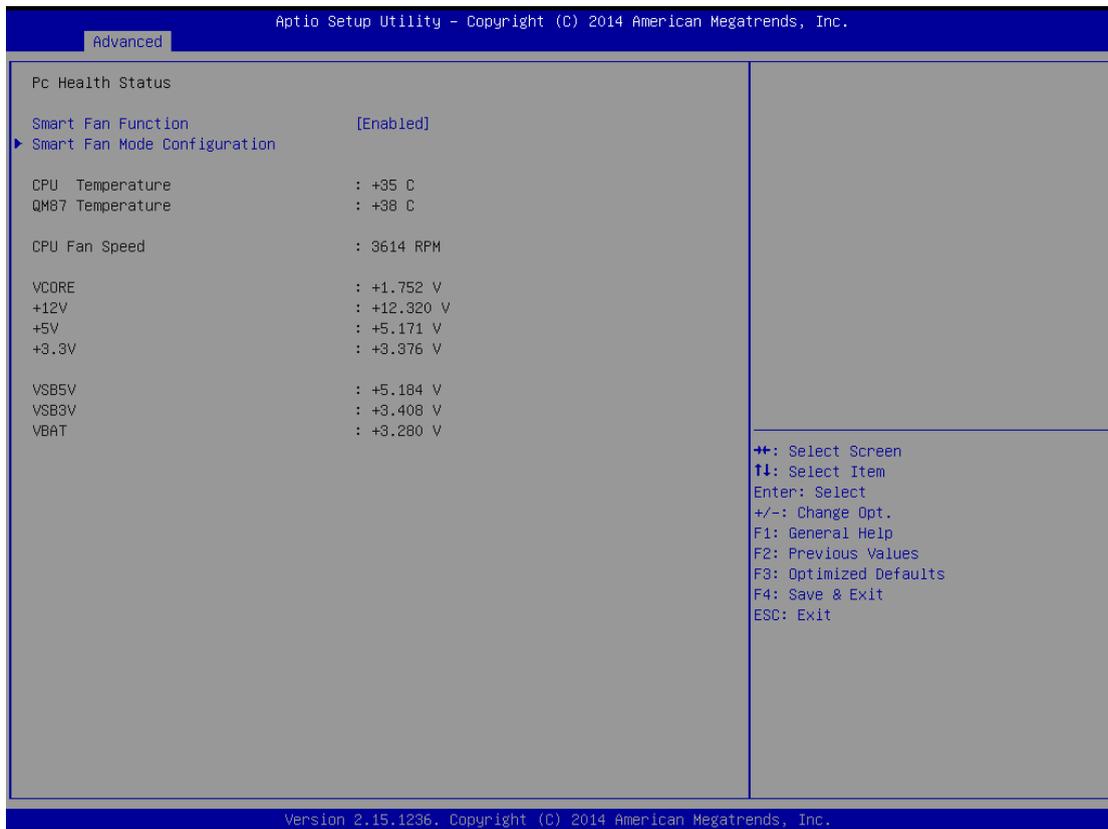
6.2.2.8 USB Configuration



BIOS Setting	Description	Setting Option	Effect
Legacy USB Support	User can enable or disable USB port.	Disabled	Will keep USB devices available only for EFI applications.
		Enabled	Enable all the USB devices
XHCI Hand-off	This is a workaround for OSs without XHCI hand- off support.	Disabled	Disables this function
		Enabled	Enables this function
EHCI Hand-off	This is a workaround for OSs without ECHI hand- off support.	Disabled	Disables this function
		Enabled	Enables this function
USB Mass Storage Driver Support	User can Enable or disable USB mass storage driver support.	Disabled	Disables this function
		Enabled	Enables this function
USB Transfer time- out	The time-out value for control, bulk, and interrupt transfers.	1 Sec 5 Sec 10 Sec 20 Sec	Depends on the time-out value

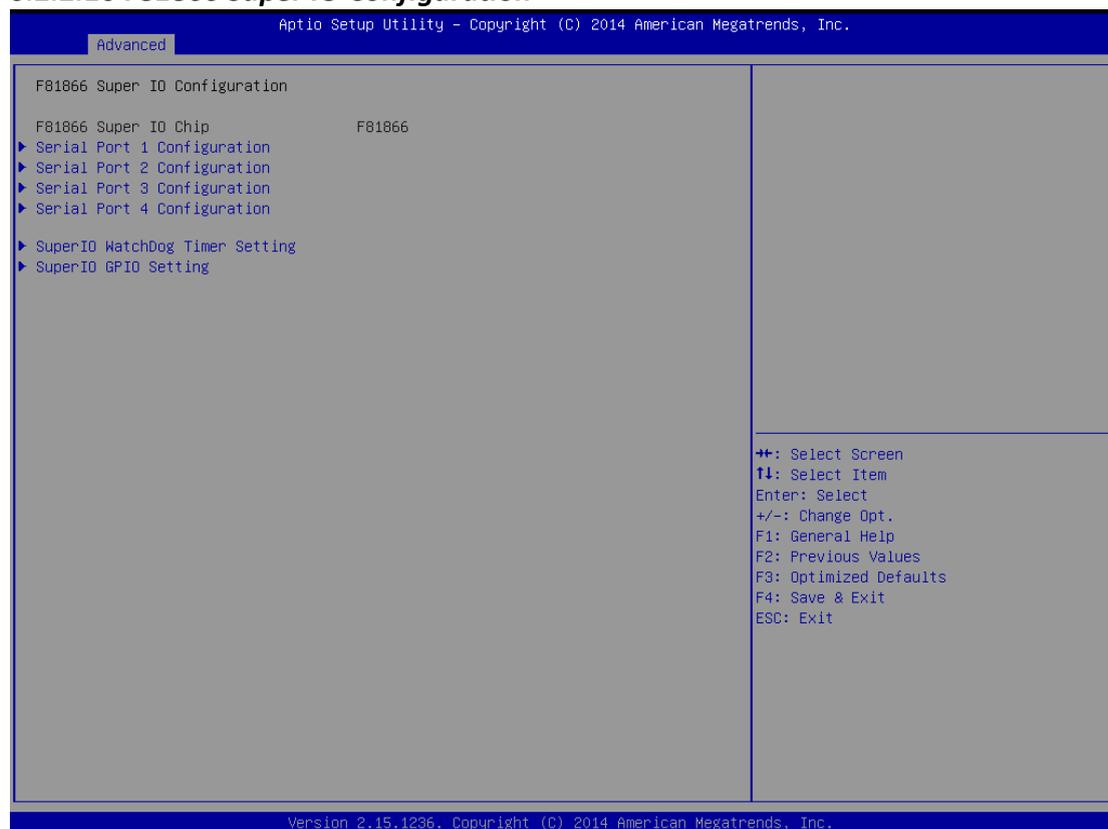
Device Reset time- out	USB mass storage device start unit command time- out.	10 Sec 20 Sec 30 Sec 40 Sec	Depends on the time-out value
Device power-up delay	Maximum time the device will take before it properly reports itself to the host controller.	Auto	Uses default value: for a root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor
Mass Storage Device	Mass storage device emulation type.	[AUTO] enumerates devices less than 530MB as floppies. Forced FDD option can be used to force HDD formatted drive to boot as FDD	Configure mass storage device emulation type

6.2.2.9 F81866 H/W Monitor



BIOS Setting	Description	Setting Option	Effect
Smart Fan Function	Set parameters of smart fan function	Enabled/ Disabled	Enable or disable this function
Smart Fan Mode Configuration	Configure smart fan mode settings		

6.2.2.10 F81866 Super IO Configuration



BIOS Setting	Description	Setting Option	Effect
Setting Serial Port Parameters	User can Enable/Disable the serial port and select optimal settings for the Super IO Device.	Enable/Disable Default: Enable	Enable or Disable Serial Port (COM).
Super IO Watch Dog Timer Setting	The watchdog timer circuit has to be triggered within a specified time by the application software. If the watchdog is not triggered because proper software execution fails or a hardware malfunction occurs, it will reset the system.		

Pin 3~ Pin 10 Control Settings.

The screenshot displays the BIOS Setup Utility interface. At the top, it reads "Aptio Setup Utility - Copyright (C) 2014 American Megatrends, Inc." and "Advanced". The main area is titled "SuperIO GPIO Setting" and lists eight pins, each with a "[Input]" value:

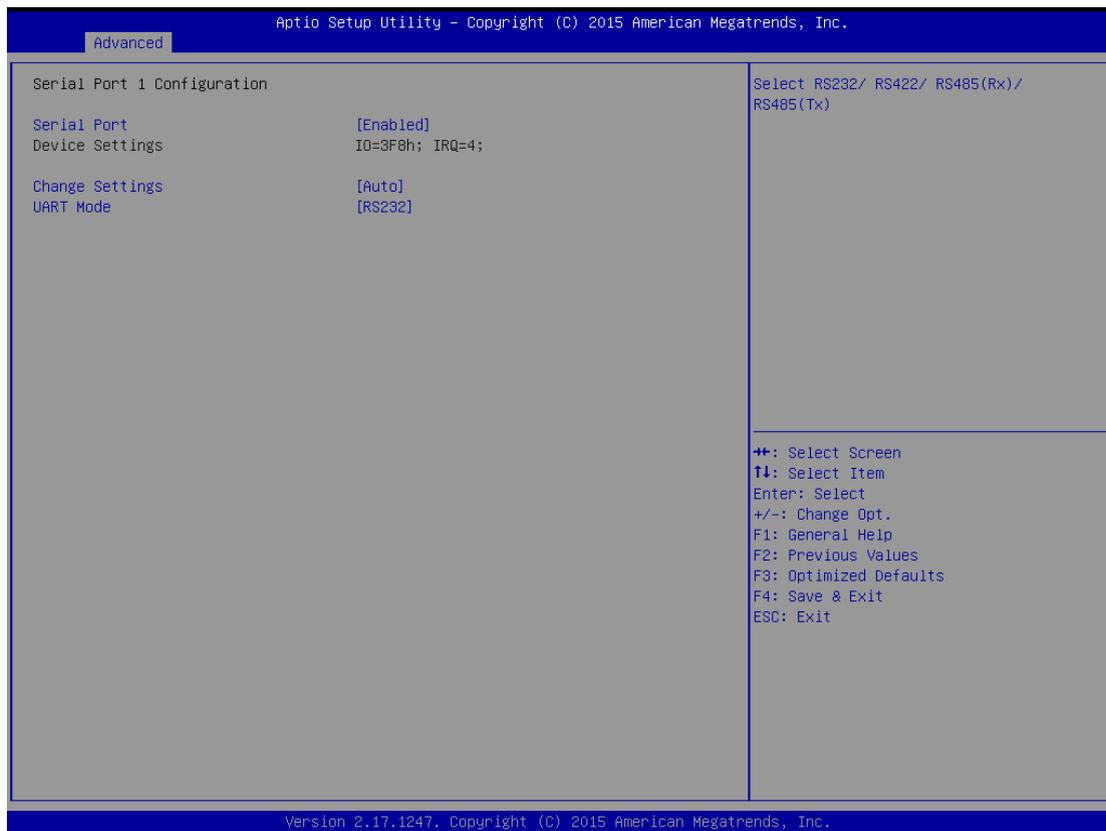
Pin	Control	Value
Pin 3	Control	[Input]
Pin 4	Control	[Input]
Pin 5	Control	[Input]
Pin 6	Control	[Input]
Pin 7	Control	[Input]
Pin 8	Control	[Input]
Pin 9	Control	[Input]
Pin 10	Control	[Input]

On the right side of the screen, a legend lists the following navigation options:

- ←→: Select Screen
- ↑↓: Select Item
- Enter: Select
- +/-: Change Opt.
- F1: General Help
- F2: Previous Values
- F3: Optimized Defaults
- F4: Save & Exit
- ESC: Exit

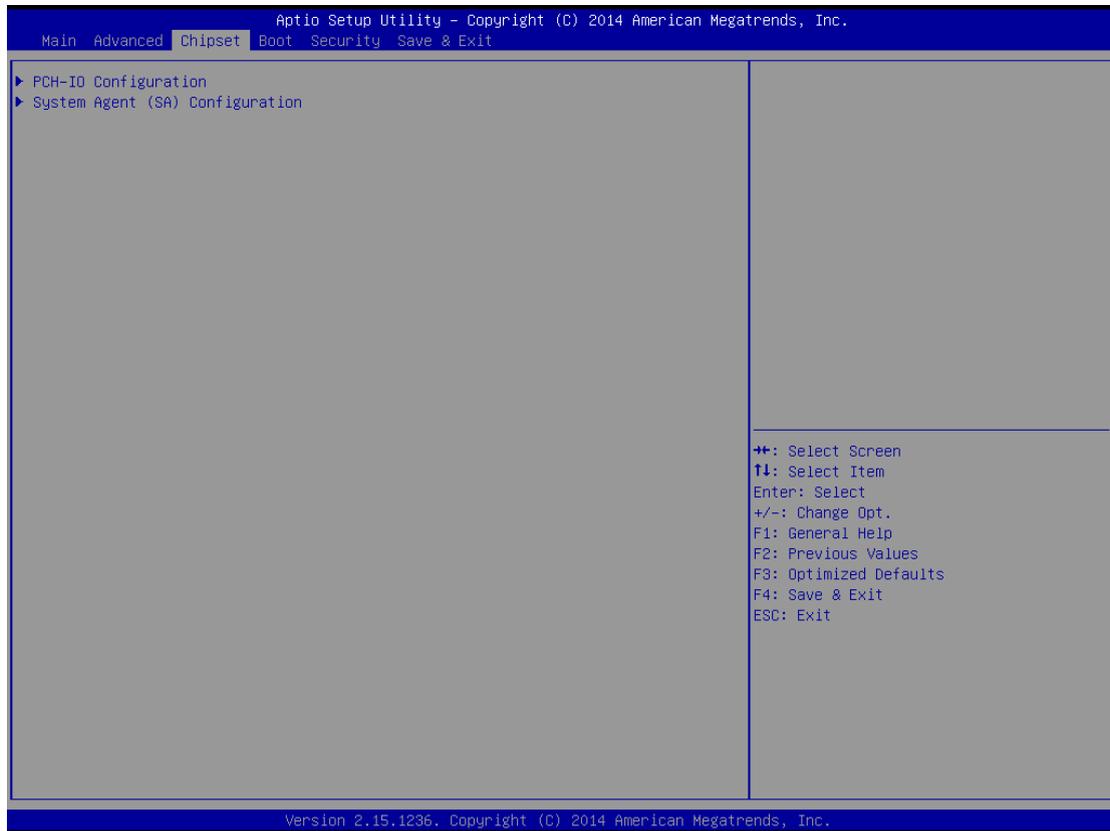
At the bottom of the screen, it reads "Version 2.15.1236. Copyright (C) 2014 American Megatrends, Inc."

6.2.2.11 Serial Port RS232/RS422/RS485 Settings

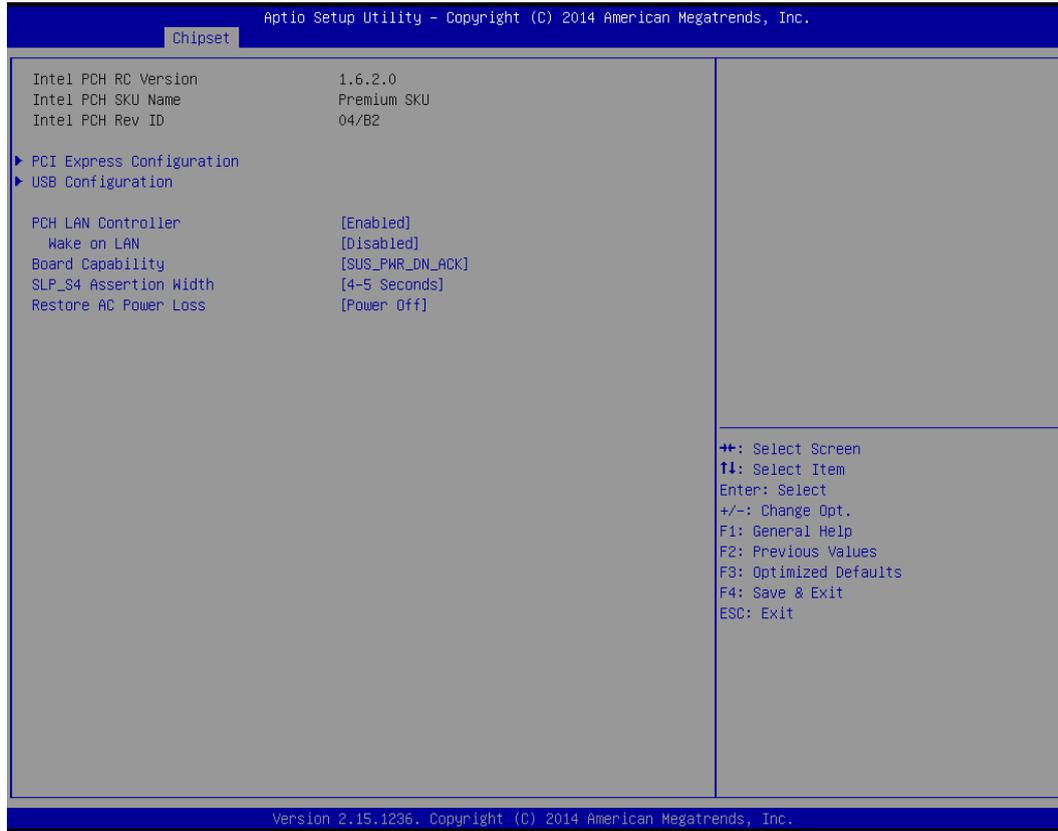


BIOS Setting	Description	Setting Option	Effect
Serial Port	Select Serial Port	RS232 / RS422 RS485 (Rx)/ RS485(Tx)	Choose Serial Port Settings
Change Settings	Allow Change Serial Port Settings	[AUTO]	
UART Mode	Show which serial port is used		

6.2.3 Chipset Menu

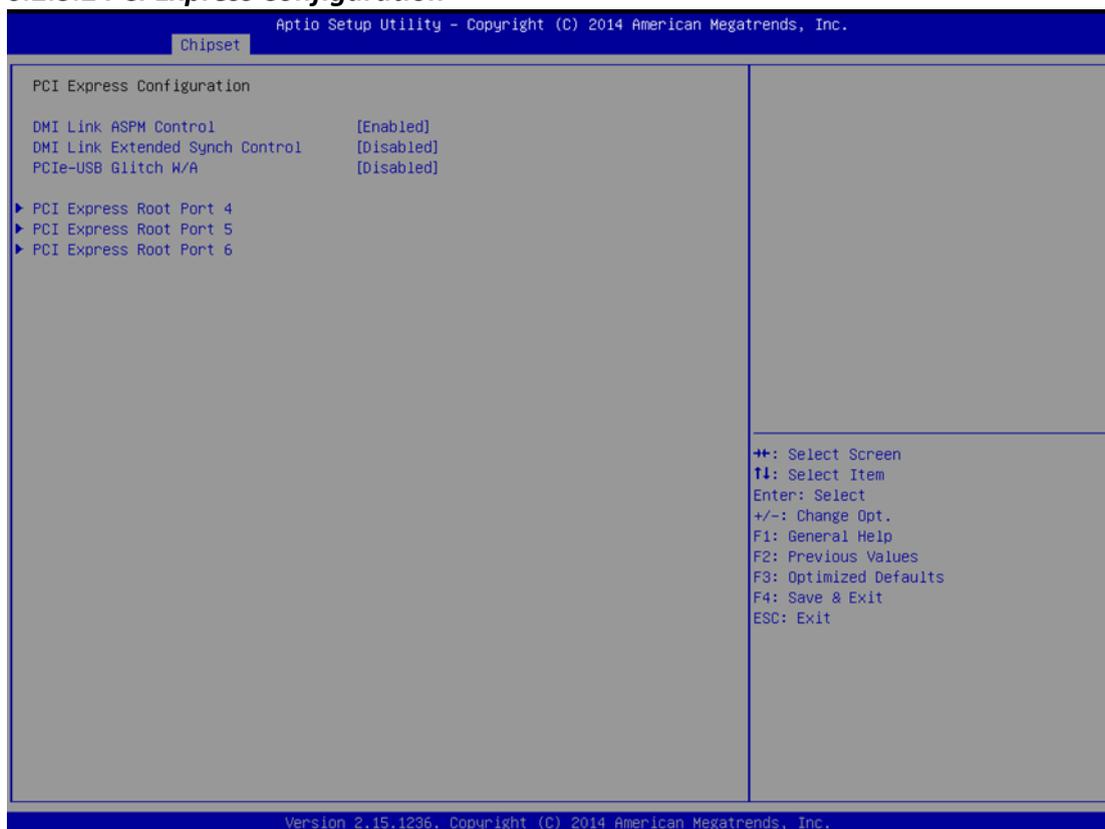


6.2.3.1 PCH- IO Configuration



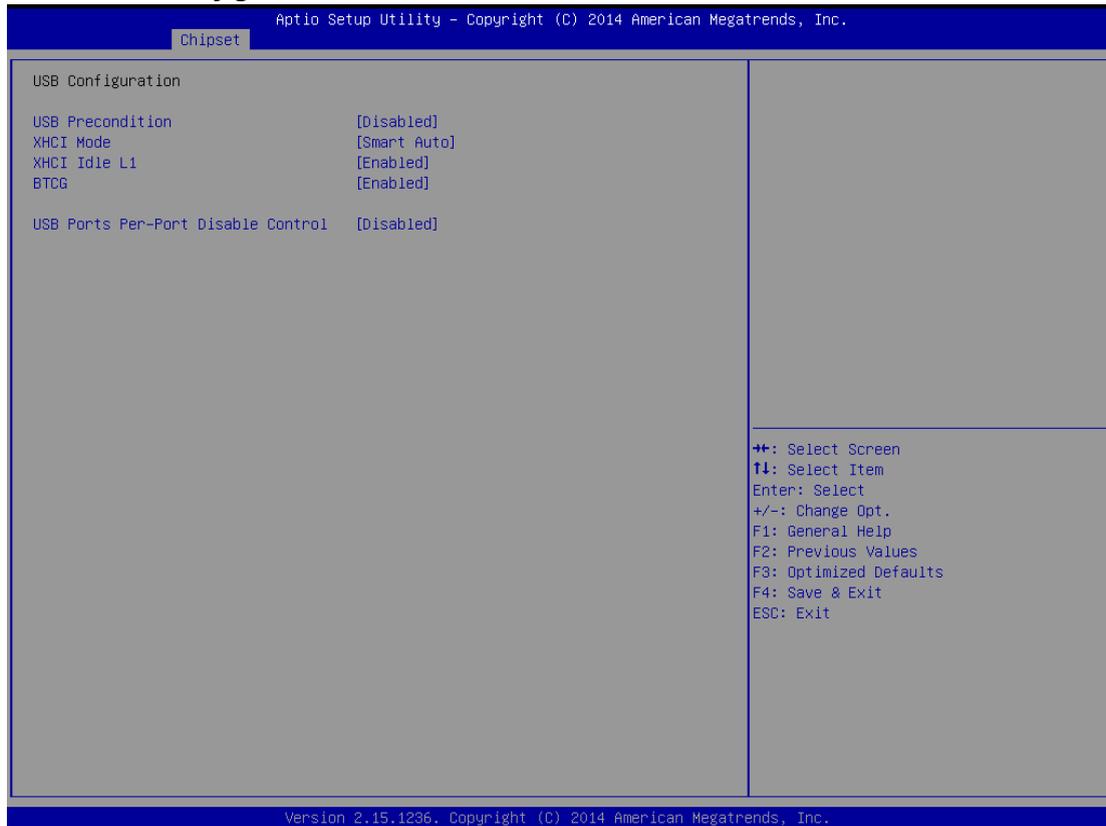
BIOS Setting	Description	Setting Option	Effect
PCI Express Configuration	Detail of PCI Express items.	N/A	Set desirable parameters
USB Configuration	Details of USB items	N/A	Set desirable parameters
PCH LAN controller	Enables or disables the LAN1/2 controller.	Enabled/ Disabled	Set desirable parameters
Wake On LAN	Enables or disables LAN1/2 wake up from sleep state.	Enabled/ Disabled	Set desirable parameters
SLP_S4 Assertion Width	Sets a minimum assertion width for the SLP_S4# signal	[4-5 seconds]	Set desirable parameters
Restore AC Power Loss	This item allows users to select off, on and last state.	Power on/ Power off	Set desirable parameters

6.2.3.2 PCI Express Configuration



BIOS Setting	Description	Setting Option	Effect
DMI Link ASPM Control	Allows users to enable or disable the DMI Link ASPM Control	Enabled/ Disabled	Set desirable parameters
DMI Link Extended Synch Control	Allows users to configure Mini PCI Express setting	Enabled/ Disabled	Set desirable parameters
PCIe- USB Glitch W/A	For bad USB devices connected behind PCIE/PEG port	Enabled/ Disabled	Set desirable parameters

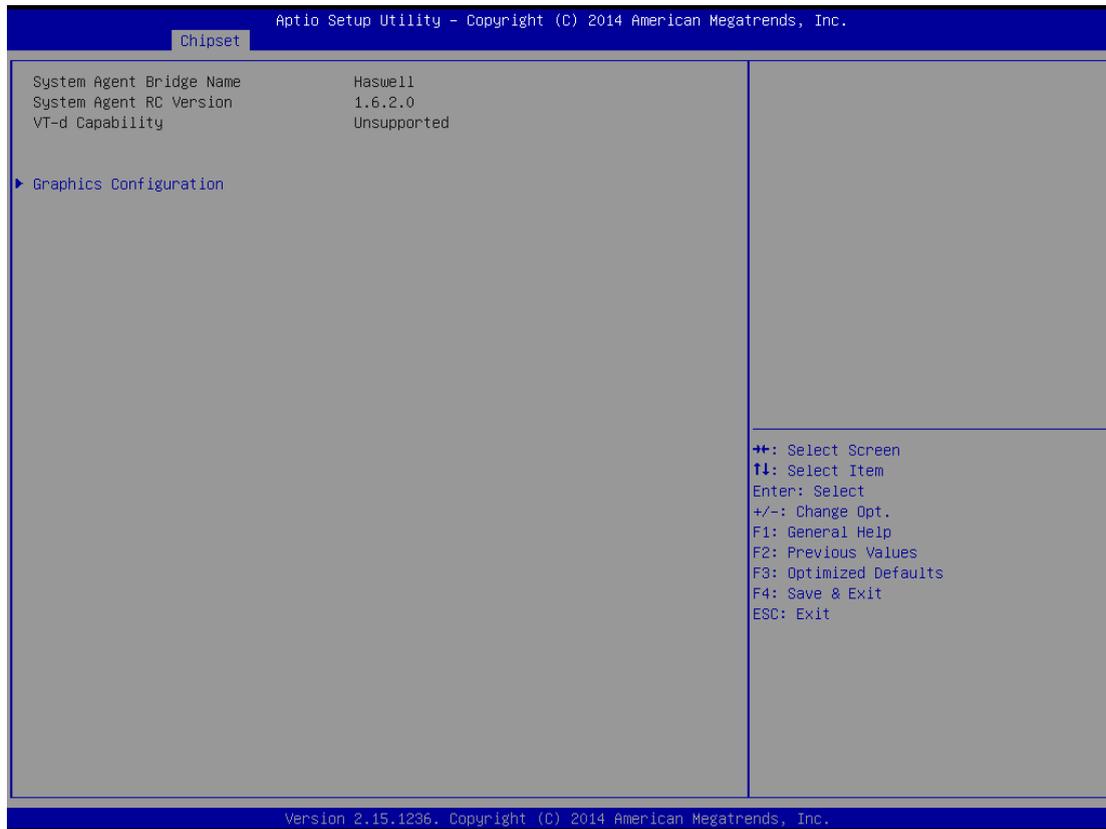
6.2.3.4 USB Configuration



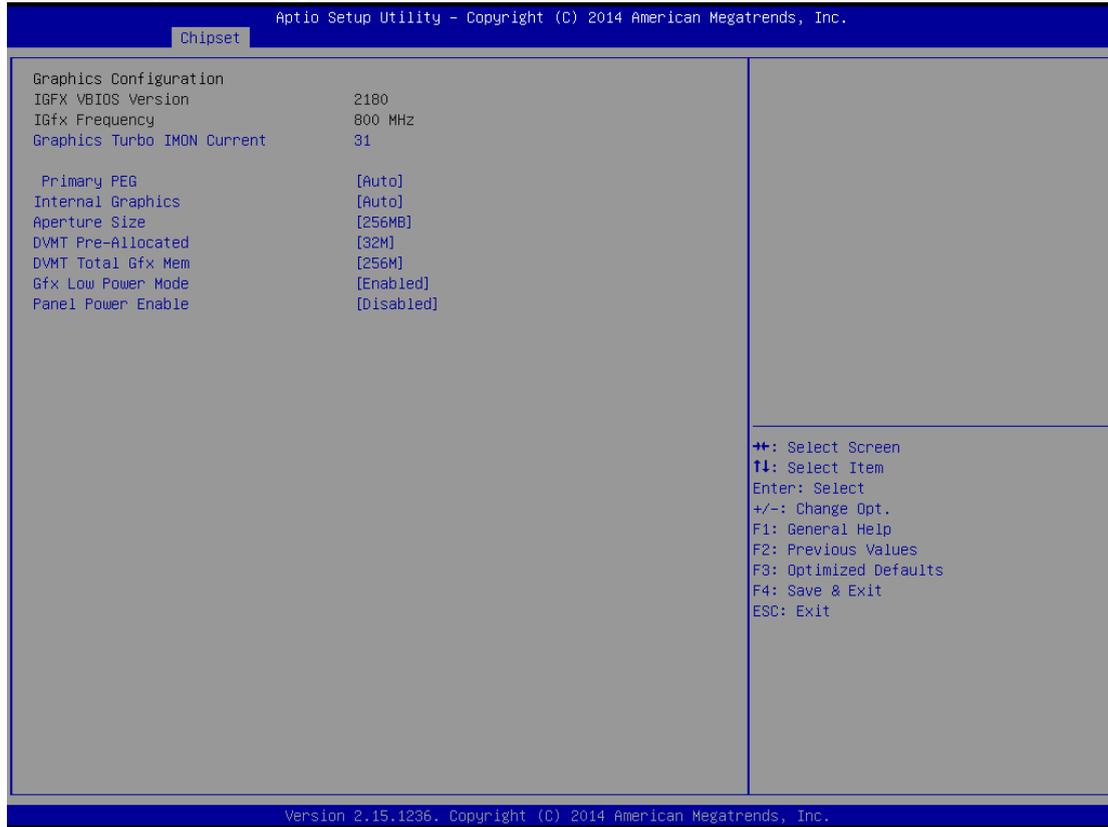
BIOS Setting	Description	Setting Option	Effect
USB Precondition	Allows user to enable or disable USB precondition	Enabled/ Disabled	Set desirable parameters
XHCI Mode	Allows user to enable or disable XHCI mode.	[Smart Auto]	Set desirable parameters
USB Ports Per-Port Disable Control	Control each of the USB ports (0~13) disabling	Enabled/ Disabled	Set desirable parameters

6.2.3.5 System Agent (SA) Configuration

Allows users to enable or disable VT-d.



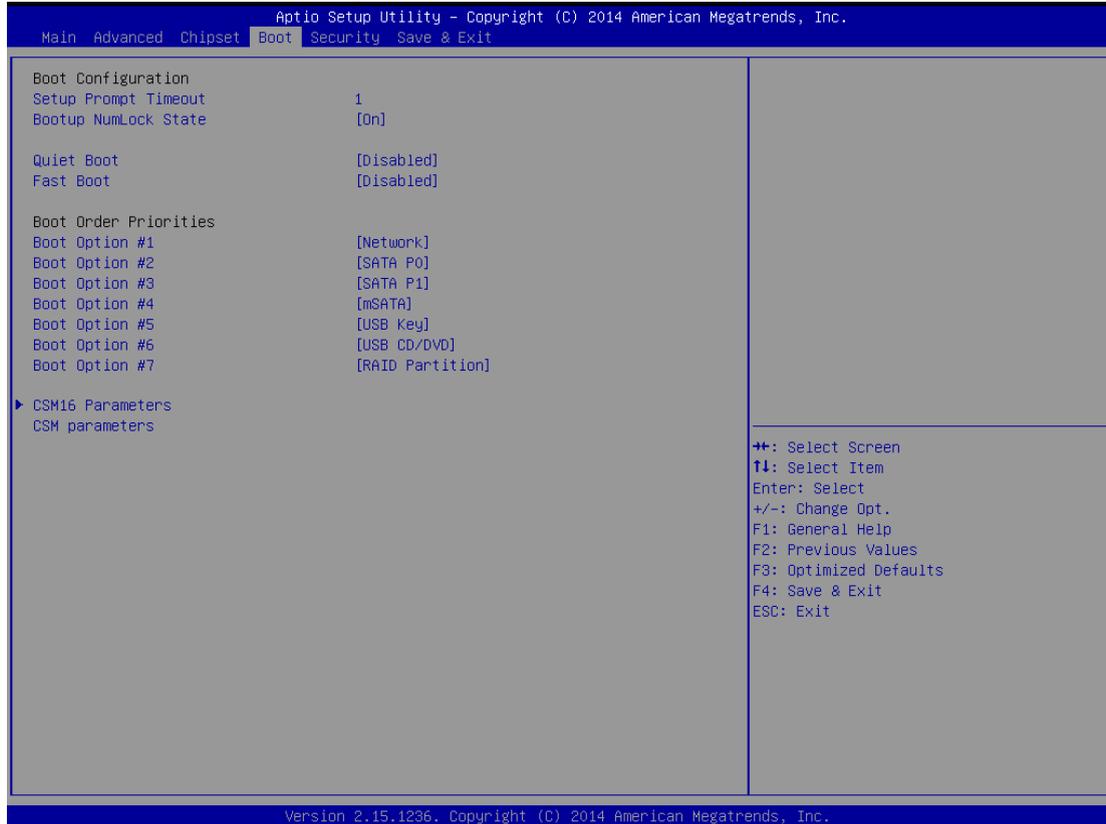
6.2.3.6 Graphics Configuration



BIOS Setting	Description
Graphics Turbo IMON Current	Allows users to select which Graphics Turbo IMON Current
Internal Graphics	Allows users to enable or disable IGD
Aperture Size	This item allows users to select aperture size
DVMT Pre-Allocated	Allows users to select DVMT pre-allocated memory size
DVMT Total Gfx Mem	Allows users to select DVMT total memory size
Gfx Low Power Mode	Allows users to enable or disable IGD low power mode
Panel Power Enable	Allows users to enable or disable Panel Power

6.2.4 Boot Menu

The Boot menu sets the sequence of the devices to be searched for the operating system. The bootable devices will be automatically detected during POST and shown here, allowing you to set the sequence that the BIOS use to look for a boot device from which to load the operating system.



BIOS Setting	Description	Setting Option	Effect
Setup Prompt Timeout	Allows user to configure the number of seconds to stay in BIOS setup prompt screen.	Enter	Set the prompt timeout
Boot NumLock State	Enables or disables NumLock feature on the numeric keypad of the keyboard after the POST (Default: On).	On	Remains On
		Off	Remains OFF
Quiet Boot	Determines if POST message or OEM logo is displayed.	Disabled	Disables this function
		Enabled	Enables this function
Fast Boot	Enables or disables Fast Boot to shorten the OS boot process. (Default: Disabled).	Disabled	Disables this function
		Enabled	Enables this function

Boot Option Priorities	Specifies the overall boot order from the available devices	Ex: Boot Option#1 (hard drive)	Hard drive as the first priority
------------------------	---	--------------------------------	----------------------------------

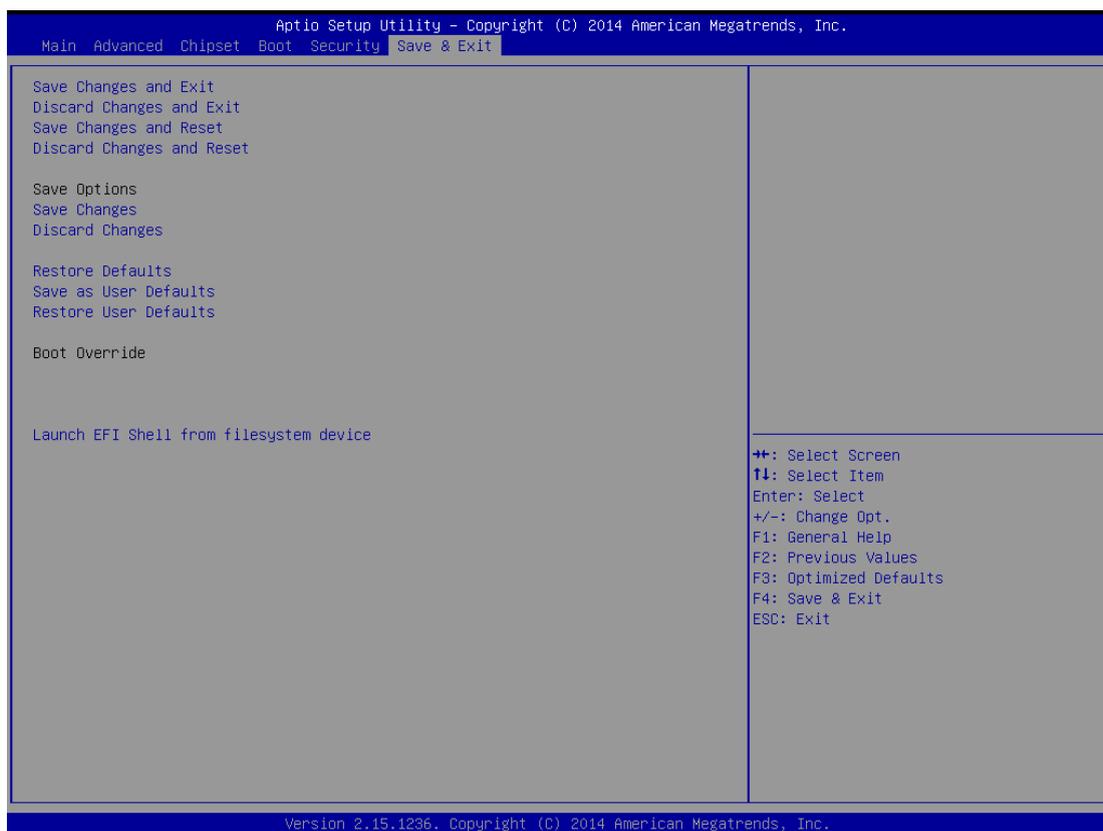
6.2.5 Security Menu

This section allows to configure and improve system, and set up some system features according to your preferences.



BIOS Setting	Description	Setting Option	Effect
Administrator Password	Displays whether or not an administrator password has been set.	Enter	Enter password
User Password	Display whether or not a user Password has been set.	Enter	Enter password

6.2.6 Save & Exit



BIOS Setting	Description	Setting Option	Effect
Save Changes and Exit	This saves the changes to the CMOS and exits the BIOS Setup program.	Enter <YES>	Save changes
Discard Changes and Exit	This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Save Changes and Reset	Reset the system after saving the changes.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Discard Changes and Reset	Reset system setup without saving any changes	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu

Save Changes	Save changes done so far to any of the setup options.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Discard Changes	Discard changes done so far to any of the setup options.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Restore Default	Restore/load default values for all the setup options.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Save as User Defaults	Save the changes done so far as User defaults.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Restore User Defaults	Restore the User Defaults to all the setup options.	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu
Boot Override	Boot device selection can override your boot priority	Enter <YES>	Saves the changes
		Enter <NO>	Return to the BIOS Setup Main Menu

6.3 Using Recovery Wizard to Restore Computer

IH32 motherboard has a dedicate recovery partition stored on the hard drive of the PC to enable quick one-key recovery process. This partition occupies about 11GB of the storage space, and comes built-in to each IH32 series PC.



IMPORTANT:

Before starting the recovery process, be sure to backup all user data, as all data will be lost after the recovery process.

Follow the procedure below to enable quick one-key recovery procedure:

- Plug-in the AC adapter to the Panel PC. Make sure the computer stays plugged in to power source during the recovery process
- Turn on the computer, and when the boot screen shows up, press the **F6** to initiate the Recovery Wizard
- The following screen shows the Recovery Wizard. Click on "Recovery" button to continue.



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 computer will restart automatically after recovery completed.



Technical Support

This chapter includes directory for technical support and Software Development Kit (SDK).



7 Technical Support

This chapter includes the directory for technical support. 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. If any problem occurs fill in [problem report form](#) enclosed and immediately contact us.

7.1 Introduction

Winmate provide the following Drivers for Military Grade Rack Mount Panel PC with Intel® Core i7 4650U 3.30GHz processor.

Item	Driver	Description
1	Windows 10	1_Chipset 2_Graphics 3_Audio 4_Network Connections 5_ME
2	Windows 8	1_Chipset 2_Graphics 3_Audio 4_Network Connections 5_ME
3	Windows 7	1_Chipset 2_Graphics 3_Audio 4_Network Connections 5_ME 6_USB3.0

Winmate provide the following SDK for Military Grade Rack Mount Panel PC with Intel® Core i7 4650U 3.30GHz processor:

Item	File Type	Description
1	SDK	Watchdog SDK

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 or Winmate File Share.

7.1.1 Winmate Download Center

Go to <http://www.winmate.com/> > Support > Download Center > Military Panel PC (IH32) > Drivers / Development Kit

7.1.2 Winmate File Share

Go to <http://www.winmate.com/> > Support > File Share > Public Documents > Panel PC> Military > Rack Military > IH32 > Drivers / Development Kit

MIL-STD-810F/G Compliance

This section includes information on testing methods and procedures in compliance with military standard MIL-STD-810 F/G.



Appendix A MIL-STD-810F/G Compliance

This section includes information on testing methods and procedures in compliance with military standard MIL-STD-810 F/G.

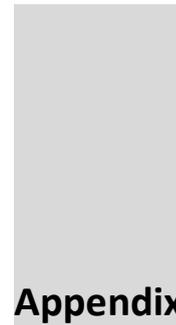
A1 MIL-STD-810F/G Compliance

MIL-STD-810F/G Compliance			
Test		Reference	Condition
* High Temperature	Storage	Method 501, Procedure I	Basic Hot 30 to 63°C ± 2°C
	Operation	Method 501, Procedure II	Basic Hot 30 to 63°C ± 2°C
* Low Temperature	Storage	Method 502, Procedure I	-21°C ± 2°C (MIL-STD-810F)
	Operation	Method 502, Procedure II	-33°C ± 2°C (MIL-STD-810G)
* Humidity		Method 507	20 to 60°C ± 2°C, 95%RH ± 3%
* Vibration		Method 514, Procedure I	5 ~ 500 Hz, 1.62/2.05/2.20 Grms, 3-Axis (MIL-STD-810F) 5 ~ 500 Hz, 1.48/1.90/2.24 Grms, 3-Axis (MIL-STD-810G)
* Transit Drop		Method 516, Procedure IV	4ft, 8 Corner, 12 edges, 6 faces
Low Pressure (Altitude)	Storage	Method 500, Procedure I	30°C ± 2°C, 15,000 ft (4,572 m)
	Operation	Method 500, Procedure II	30°C ± 2°C, 15,000 ft (4,572 m)
Thermal Shock		Method 503, Procedure II	-21 to 63°C ± 2°C (MIL-STD-810F) -33 to 63°C ± 2°C (MIL-STD-810G)
Salt Fog		Method 509	Salt Spray test, exposing for 24 Hrs Drying condition for 24 Hrs 24 Hrs Salt Spray exposure + 24 Hrs Drying condition
Shock		Method 516, Procedure I	Impact acceleration 40 G, 6 faces

**Default Test*

MIL-STD-810E/F Compliance

This section includes information on testing methods and procedures in compliance with military standard MIL-STD-810 E/F.



B



Appendix B MIL-STD-461E/F Compliance

This section includes information on testing methods and procedures in compliance with military standard MIL-STD-810 E/F.

B1 MIL-STD-461E/F Compliance

MIL-STD-461E/F Compliance			
Test	Description	Type	Frequency Range
CE101	Power Leads	Conducted Emission	30 Hz ~ 10 kHz
*CE102	Power Leads	Conducted Emission	10 kHz ~ 10 MHz
CS101	Power Leads	Conducted Susceptibility	30 Hz ~ 150 kHz
CS109	Structure Current	Conducted Susceptibility	60 Hz ~ 100 kHz
CS114	Bulk Cable Injection	Conducted Susceptibility	10 kHz ~ 200 MHz
CS116	Damped Sinusoidal Transients, Cables and Power Leads	Conducted Susceptibility	10 kHz ~ 100 MHz
RE101	Magnetic Field	Radiated Emission	30 Hz ~ 100 kHz
*RE102	Electric Field	Radiated Emission	10 kHz ~ 18 GHz
RS101	Magnetic Field	Radiated Susceptibility	30 Hz ~ 100 kHz
RS103	Electric Field	Radiated Susceptibility	2 MHz ~ 18 GHz

**Default Test*



Winmate Inc.

9F, No.111-6, Shing-De Rd., San-Chung District,
Taipei 241, Taiwan, R.O.C

Tel: 886-2-8511-0288

Fax: 886-2-8511-0211

Email: sales@winmate.com.tw

Official website: <http://www.winmate.com.tw>