

LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC

21.5"/ 23.6" Entry Level Panel PC



User's Manual

Version 1.0

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How to Use This Manual

The manual describes how to configure your LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC system to meet various operating requirements. It is divided into six chapters, with each chapter addressing a basic concept and operation of Fan-less Panel PC System.

Chapter 1: System Overview. Present what you have in the box and give you an overview of the product specifications and basic architecture for Panel PC system.

Chapter 2: System Installation. Show the definitions and locations of all the interfaces and describe a proper installation guide so that you can easily configure your system.

Chapter 3: BIOS Setup Information. Specify the meaning of each setup parameters, how to get advanced BIOS performance and update new BIOS. In addition, POST checkpoint list will give users some guidelines of trouble-shooting.

Chapter 4: Important Instructions. Indicate some instructions which must be carefully followed when the Panel PC system is used.

Chapter 5: Frequent Asked Questions. Provide the answers for the most frequently asked questions.

The content of this manual is subject to change without prior notice. These changes will be incorporated in new editions of the document. The vendor may make supplement or change in the products described in this document at any time.

Portwell, Inc. clearly informs the users that this manual only encloses a general description of technical processes and instructions which may not be applicable in every single case. In cases of doubt, please contact Portwell, Inc.

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Portwell, Inc.

<http://www.portwell.com.tw>

Address : No. 242, Bo-Ai Street, Shu-Lin District, New Taipei City, 238, Taiwan

TEL : +886-2-7731-8888 ; FAX : +886-2-7731-9888

Revision History

Revision	Date	Details of Change(s)
V1.0	2021/8/17	Initial Release

Chapter 1

System Overview

1.1 Introduction

LEAD-PPC-2150-X/ LEAD-PPC-2360-X is a 21.5"/ 23.6" panel PC with Intel® Atom® x5-E3930 processor (formerly Apollo Lake) mainly for semi-industrial applications. Portwell specially builds two sizes: 21.5" / 23.6", two volt of DC input: 12V/ 24V and also three OS: Win 10, Android, Linux Ubuntu for LEAD-PPC series product intend to fit various application in automation, digital signage, smart retail, kiosk and public infotainment.





In this modern society, we cannot live without screens. With a reliable human machine interface, people can easily receive necessary information as well as interact with devices or machines. To be an ideal human machine interface system, in addition to Win 10, Android and Linux OS compatibility, LEAD-PPC-2150-X/ LEAD-PPC-2360-X also features larger projected capacitive multi-touch screen, 1920 x 1080 full HD display, two 3W speakers and multiple wire or optional wireless communication supports.

LEAD-PPC series equipped with 8G DDR3L memory and 128G SSD; one HDMI; 2x USB3.0 ports and one COM port for RS-232 on rear I/O. Moreover, its streamlined outlook, ultra compact design, light weight, plus low power consumption with efficient computing power make LEAD-PPC-2150-X/ LEAD-PPC-2360-X a perfect solution for application including smart retail applications such as digital signage, recognition, customized advertisements/ promotions, merchandise locations, self-checkout, and delivery. Also, kiosk applications include point of interest, point of information in hospitality locations such as hotel or restaurant; transportation such as parking lot, train station, airport; library, exhibition hall; government infrastructure; industrial/factory automation; facility management; intralogistics or smart warehouse and much more.

The graceful mechanical design and advantageous performance – with Intel® Atom® X5-E3930 processor @1.3 GHz and tailor-made specification for semi-industrial application – make that PORTWELL LEAD-PPC series a perfect and practical solution to face end-users with standalone or VESA® 75mm x 75mm mounting options. Certified by CE (EN 55032 and EN 55024), FCC and EN 60068-2-6/ EN 60068-2-27 for vibration/ shock absorption, IP65 water and dust proof in front panel, this true flat LEAD-PPC series prove its reliability to be used in semi-industrial areas.

1.2 Check List

The LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC package covers the following items:

Essential											
✓ One LEAD-PPC series Panel PC											
	<table border="1"> <thead> <tr> <th>Panel Size, spec</th> <th>Model name</th> </tr> </thead> <tbody> <tr> <td>21.5 inch, 12V input</td> <td>LEAD-PPC-2150-A</td> </tr> <tr> <td>21.5 inch, 24V input</td> <td>LEAD-PPC-2150-B</td> </tr> <tr> <td>23.6 inch, 12V input</td> <td>LEAD-PPC-2360-A</td> </tr> <tr> <td>23.6 inch, 24V input</td> <td>LEAD-PPC-2360-B</td> </tr> </tbody> </table>	Panel Size, spec	Model name	21.5 inch, 12V input	LEAD-PPC-2150-A	21.5 inch, 24V input	LEAD-PPC-2150-B	23.6 inch, 12V input	LEAD-PPC-2360-A	23.6 inch, 24V input	LEAD-PPC-2360-B
	Panel Size, spec	Model name									
21.5 inch, 12V input	LEAD-PPC-2150-A										
21.5 inch, 24V input	LEAD-PPC-2150-B										
23.6 inch, 12V input	LEAD-PPC-2360-A										
23.6 inch, 24V input	LEAD-PPC-2360-B										
✓ AC-DC Power Adapter											
											
Optional											
✓ Power Cords (EU/US type)											
 <p>Power Cord (US type)</p>	 <p>Power Cord (EU type)</p>										

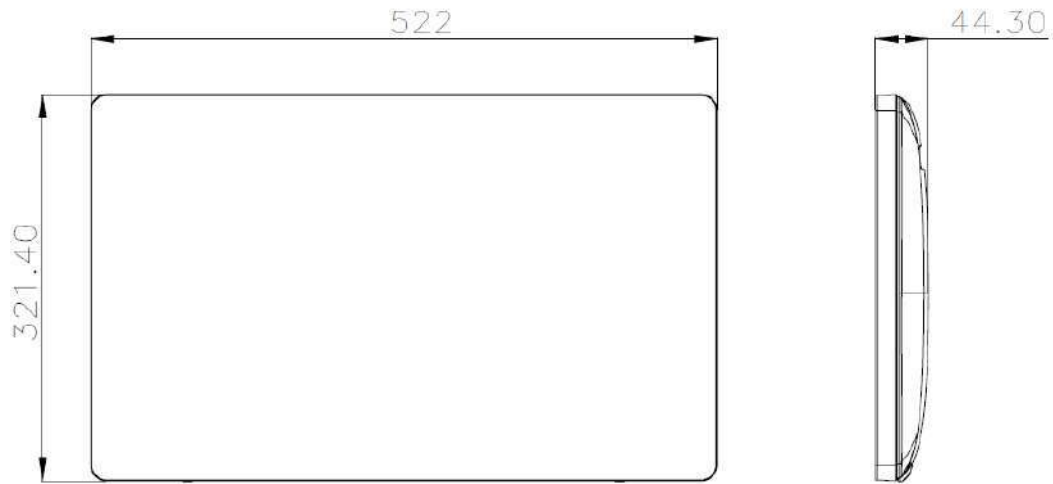
If any of these items is damaged or missing, please contact your vendor and keep all packing materials for future replacement and maintenance.

1.3 Product Specification

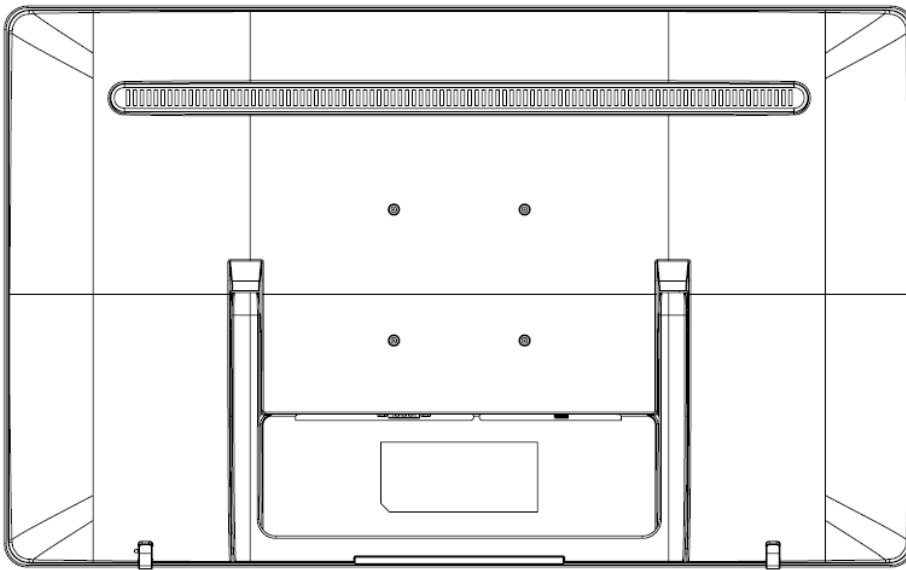
Display	
LCD Size	LEAD-PPC-2150-X: 21.5" LEAD-PPC-2360-X: 23.6"
Panel Type	TN
Resolution	FHD 1920 x 1080 (16:9)
Brightness	250 cd/m ²
Contrast Ratio	1000 : 1
Backlight	LED type
Touch Screen	Projected capacitive 10 point multi-touch
System	
SoC	Intel® Atom® Dual-Core x5-E3930 (1.3GHz, up to 1.8GHz)
Memory	1x 8GB DDR3L/1600 SO-DIMM
Storage Device	1x 128GB 3D TLC mSATA SSD
I/O Interface	
Series Port	1x RS-232/422/485
Display	Output: 1x HDMI
USB	2x USB 3.0
Ethernet	2x Gigabit Ethernet
Audio	2x 3W speaker
Power Switch	1x power on/off switch
Power	
Power Input	12V via DC Jack / 24V via 3-pin terminal block connector (Optional)
Power Supply	65W/60W AC-DC Adapter
Mechanical& Environmental	
Water/Dust Resistance	Front panel: IP65
Operating Temperature	0°C ~ 50°C
Operating Humidity	0% ~ 95%
Storage Temperature	-20°C ~ 60°C
Storage Humidity	0% ~ 95%
Dimensions	LEAD-PPC-2150-X: 521.9(W) x 321.4(H) x 44.3(D) mm LEAD-PPC-2360-X: 561.9(W) x 353.4(H) x 43(D) mm
Mounting (mm)	Standalone; VESA Mount 75 x 75
Certificate	CE/ FCC Class B, VCCI Conformity

1.4 Mechanical Dimension

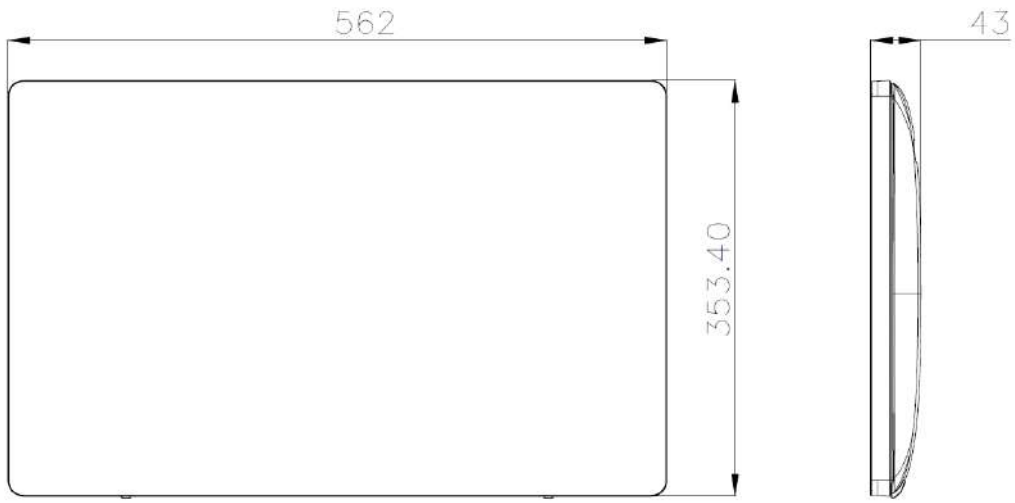
Front and side view of LEAD-PPC-2150-X



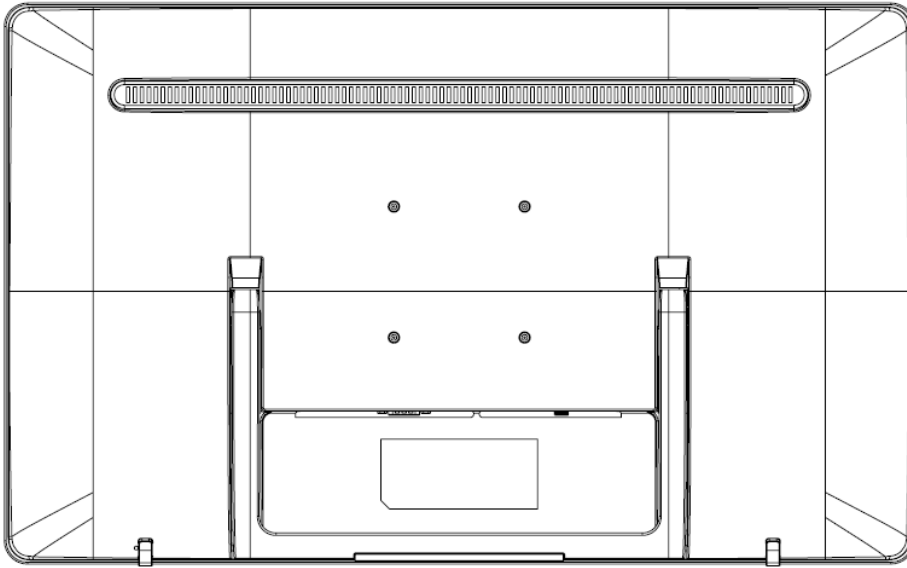
Back view of LEAD-PPC-2150-X



Front and side view of LEAD-PPC-2360-X



Back view of LEAD-PPC-2360-X



1.5 Safety Instruction



Caution:

This section should be carefully read and please abide by the instructions for your own safety and correct use of the unit.

The chapter also includes information on approval and interference inhibition of your unit. Please abide by the warnings and instructions on the unit and in the manual.

The LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC was built and tested by PORTWELL, Inc. in accordance with and kept the company within under perfectly safe condition.

In order to retain this condition and ensure safe operation, the users must abide by the instructions and warnings

- The unit must be used in accordance with the instructions of usage.
- The electrical installations in the room must not violate the requirements of the local (country-specific) regulations.
- Pay careful attention that there are no cables, especially power cables, in areas that people can go over them.
- Only use the power cord supplied as specification. Don't use damaged power cords.

Hints for DC power connection: The DC power source should be able to be switched off and on via an isolating switch. The unit is only completely disconnected from the DC main power source when the DC power cord is disconnected either from the power source or the unit. Therefore, the DC power cord and its connectors must always remain within reach. The Power source should be SELV or from the secondary circuits are circuits where separation from MAINS CIRCUITS is achieved by a transformer in which the primary windings are separated from the secondary windings by REINFORCED INSULATION, DOUBLE INSULATION, or a screen connected to the PROTECTIVE CONDUCTOR TERMINAL

Hints for AC power connection via external AC/DC adapter: The main power cable of the optional external AC/DC adapter serves as disconnecting device. For this reason the outlet of the AC power source must be located near to the device and easy to reach.

- Never place the unit under direct sunlight, near heat sources or in a humid place. Make sure the unit has proper ventilation.
- All plugs on the connection cables must be screwed or locked to the housing.
- LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC is designed to be used on the desk or upright with the I/O interfaces downwards.
- The unit generates heat under operation condition. Make sure it is properly ventilated. Never cover up the air intake and exhaust openings of the unit. Do not impede the fins of the heat sink.
- Be aware of the warm surface of heat sink at back side. A protective wear is recommended.

-
- Repairs may only be operated by specialists or technicians qualified and authorized by PORTWELL, Inc.
 - Maintenance or repair on the open unit may only be operated by specialists or technicians qualified and authorized by PORTWELL, Inc. and familiar with the related hazards.
 - When accessing internal components, users must switch off the unit and disconnect it from the power source.
 - Only original accessories (or suggested optional parts) approved and supplied by PORTWELL, Inc. may be used.
 - The installation that the safety of any system incorporating the equipment is the responsibility of the assembler of the system.
 - If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
 - Assumption of safe operation no longer possible must be taken,
 - if the unit has obvious damage or
 - if the unit no longer functions.
 - Under such cases, the unit must be shut down and secured against any unintended operation.

1.5.1 Electrostatic Discharge (ESD)

A sudden discharge of electrostatic electricity can damage electrostatic-sensitive devices or circuits. Adequate packaging and grounding techniques are essential to avoid damage. Following precautions should be taken:

1. Deliver printed circuit boards in electrostatic-safe containers such as cartons, boxes or anti-static bags.
2. Keep electrostatic-sensitive parts in their containers until they reach an electrostatic-free station.
3. Follow adequate grounding when a sensitive PCB, components, or assemblies are touched.
4. Store electrostatic-sensitive PCB's in a protective packaging or on conductive foam.

1.5.2 Grounding Method

Protect against electrostatic damage of the unit by taking the following preventative measures:

1. Cover workstations with approved anti-electrostatic material. Provide a wrist strap connected to a working bench and properly grounded tools and equipment.
2. For extra protection use anti-electrostatic mats, heel straps, or air ionizers.
3. Handle electrostatic-sensitive components, PCBs, and assemblies with care nearby the case or the edge of the board.
4. Prevent contact with pins, leads, or circuitry.
5. Switch off power and input signals before plugging and removing connectors or test equipment.

-
6. Keep the work area free from non-conductive materials such as ordinary plastic assembly aids and Styrofoam.
 7. Use field service tools with conductivity, such as screwdrivers, pliers, and vacuum cleaners.
 8. Always put drives and PCBs with the component-side down on the working bench.

1.5.3 Instructions for the Lithium Battery



Caution:

Please contact PORTWELL, Inc directly. Prohibit replace by user



Do not throw away used CMOS batteries to domestic waste. Throw away the battery according to the local regulations pertaining to the disposal of these special materials (e. g. to the collecting points for disposal of batteries).

1.5.4 FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device. These limits are designed to provide reasonable protection from 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 residential areas is likely to cause harmful interference in which case the users will be required to correct the interference at his/her own expense.

1.5.5 Electromagnetic Compatibility

The system has been designed for industrial use. The most recent version of the EMC guidelines (EMC Directive 2014/30/EU) is applied following standards, CE/FCC class B. If users modify and/or add device to the equipment (e.g. installation of add-on cards), the prerequisite for the CE conformity declaration (safety requirement) may not be applicable anymore.

Chapter 2

System Installation

This chapter provides you with instructions to set up your LEAD-PPC-2150-X/ LEAD-PPC-2360-X Series Panel PC. Definitions and locations of all the interfaces are described so that you can easily configure your system.

2.1 I/O Interfaces

2.1.1 Front View



TFT-LCD Display with Projective Capacitive Touch Screen:

The Panel PC is built in a TFT-LCD display and designed with a projective capacitive touch screen. The surface of the display is also mechanically protected through the touch screen. The touch screen of LEAD-PPC series can support up to 10 touch points.

Plastic Front Bezel:

Plastic front bezel which meets IP65 protection

True Flat Projective Capacitive Touch Screen:

The projective capacitive touch screen (USB interface) registers contacts of a conductive object such as fingers and allows moving the mouse pointer. It can sense a passive stylus or gloved fingers as well. Users don't need to install touch screen driver for projected capacitive multi-touch because driver is included in operating system.



Do not use a hard or a pointed object (like screw drivers or pliers) to operate the touch screen, because such an action will damage the surface of touch screen.

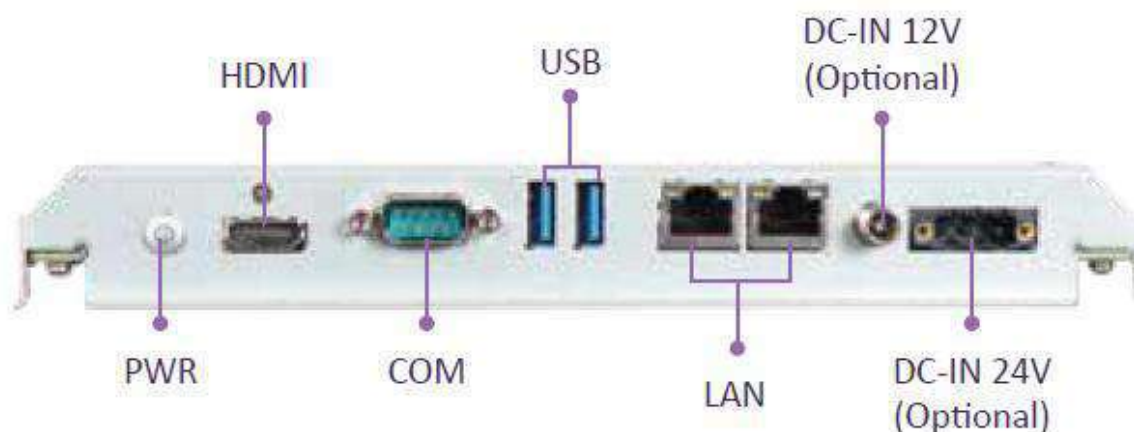


Front Panel Care and Clean

Front Mild detergent and water, or isopropyl alcohol is recommended for cleaning. Use of solvents with strong acidity or alkalinity, which could react with the paint or printed color or plastic, should be avoided.

The true flat touch screen surface is subject to burning and scarring from direct heat sources such as lighters or cigarettes. The front display is against water and dust (IP65). The touch screen built in LEAD-PPC-2150-X/ LEAD-PPC-2360-X can resist the following chemicals such as acetone, methylene chloride, methyl ethyl ketone, isopropyl alcohol, hexane, unleaded gas, diesel fuel, motor oil vinegar, cooking oil, saline water, and so on.

2.1.2 Rear View



DC-IN 12V via DC Jack or DC-IN 24V via 3-pin Terminal Block Connector:

Provide power connection of Panel PC to the main power source via DC power cable or AC/DC adapter.

Gigabit Ethernet:

Two Gigabit Ethernet (10/100/1000 Mbits/sec) LAN ports by using Intel WGI210IT

USB (Universal Serial Bus) ports:

Two USB 3.0 Connectors for USB-compatible devices

COM ports:

One connector for RS-232 connection

HDMI:

Type A HDMI display output

Power Button:

Press the button to turn ON/OFF the Panel PC.

2.1.3 VESA® Mount

The Panel PC can install with VESA® 75x75 compliant adapter plates in order to be mounted on a wall. M4*10L screws must be used to fix the system onto the wall mount adapter plate.



Chapter 3

BIOS Setup Information

LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC adopts MEDB-1002 mother board. MEDB-1002 is equipped with the AMI BIOS stored in Flash ROM. These BIOS has a built-in Setup program that allows users to modify the basic system configuration easily. This type of information is stored in CMOS RAM so that it is retained during power-off periods. When system is turned on, LEAD-PPC-2150-X/ LEAD-PPC-2360-X communicates with peripheral devices and checks its hardware resources against the configuration information stored in the CMOS memory. If any error is detected, or the CMOS parameters need to be initially defined, the diagnostic program will prompt the user to enter the SETUP program. Some errors are significant enough to abort the start up.

3.1 Entering Setup—Launch System Setup

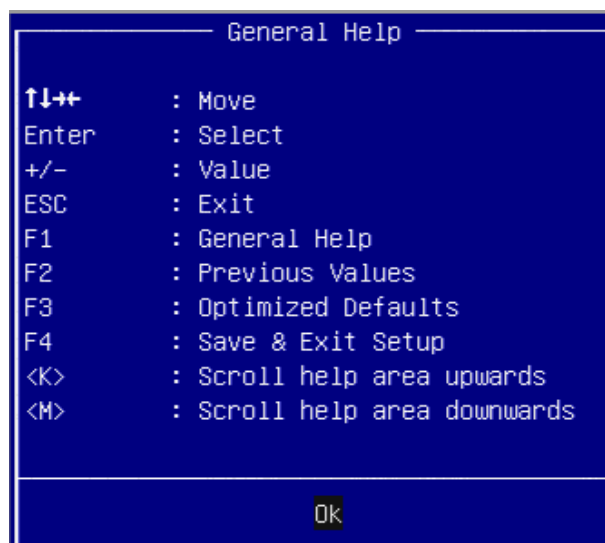
Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press key will enter BIOS setup screen.

Press to enter SETUP

If the message disappears before responding and still wish to enter Setup, please restart the system by turning it OFF and On or pressing the RESET button. It can be also restarted by pressing <Ctrl>, <Alt>, and <Delete> keys on keyboard simultaneously.

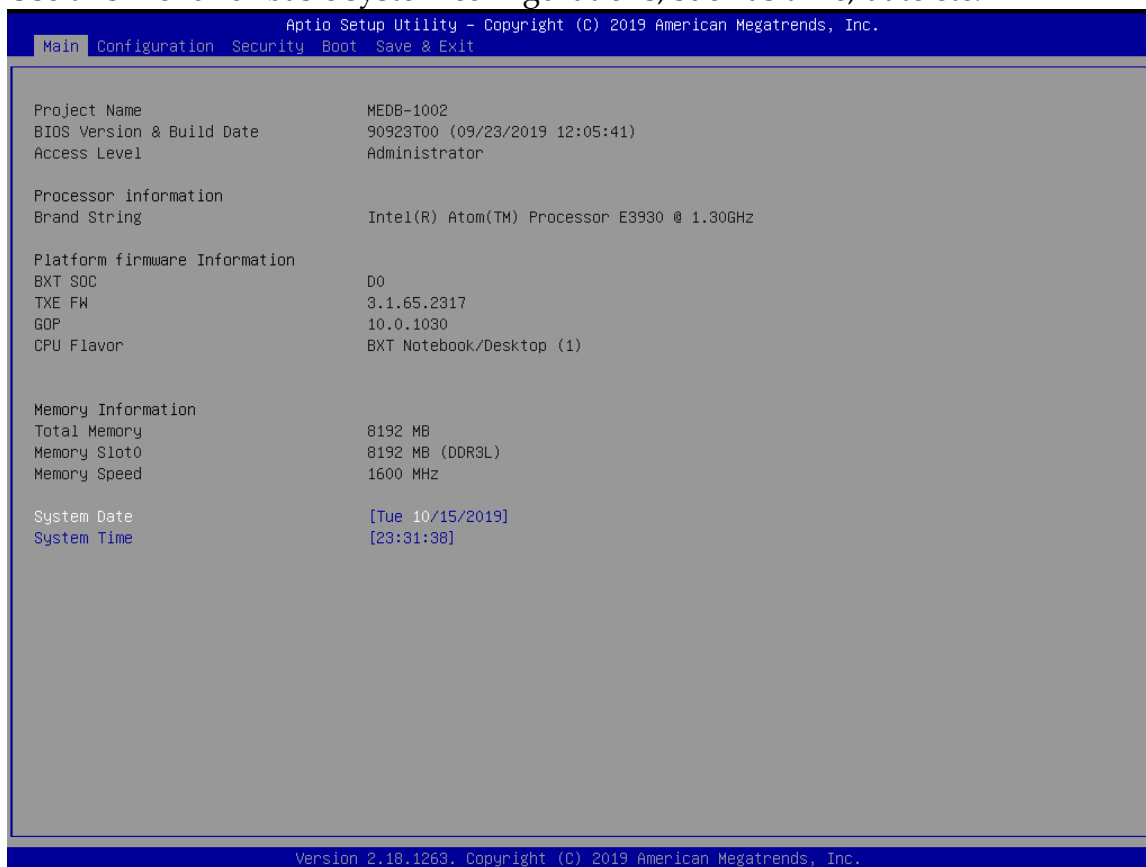
Press <F1> to Run General Help or Resume

The BIOS setup program provides a General Help screen. The menu can be easily called up from any menu by pressing <F1>. The Help screen lists all the possible keys to use and the selections for the highlighted item. Press <Esc> to exit the Help screen.



3.2 Main

Use this menu for basic system configurations, such as time, date etc.



BIOS Information, Memory Information

These items show the firmware and memory specifications of your system. Read only.

System Date

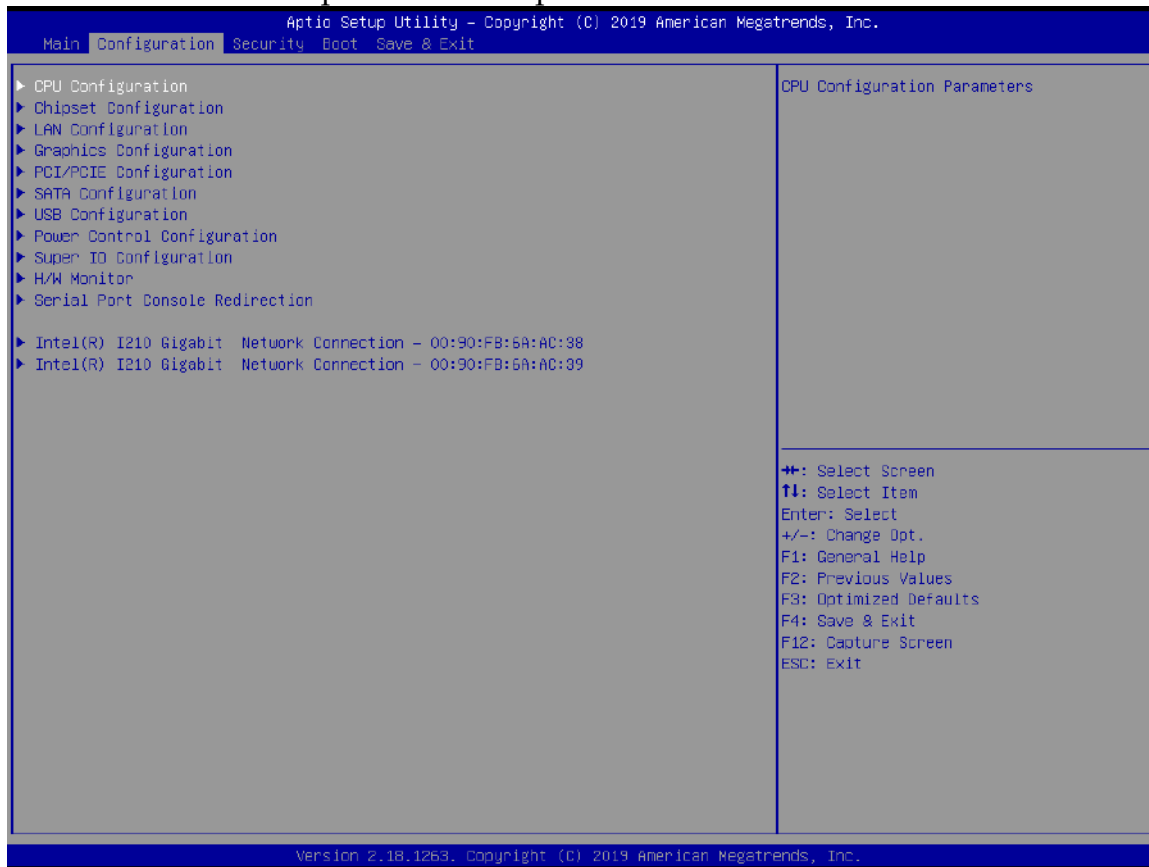
The date format is <Day>, <Month> <Date> <Year>. Use [+] or [-] to configure system Date.

System Time

The time format is <Hour> <Minute> <Second>. Use [+] or [-] to configure system Time.

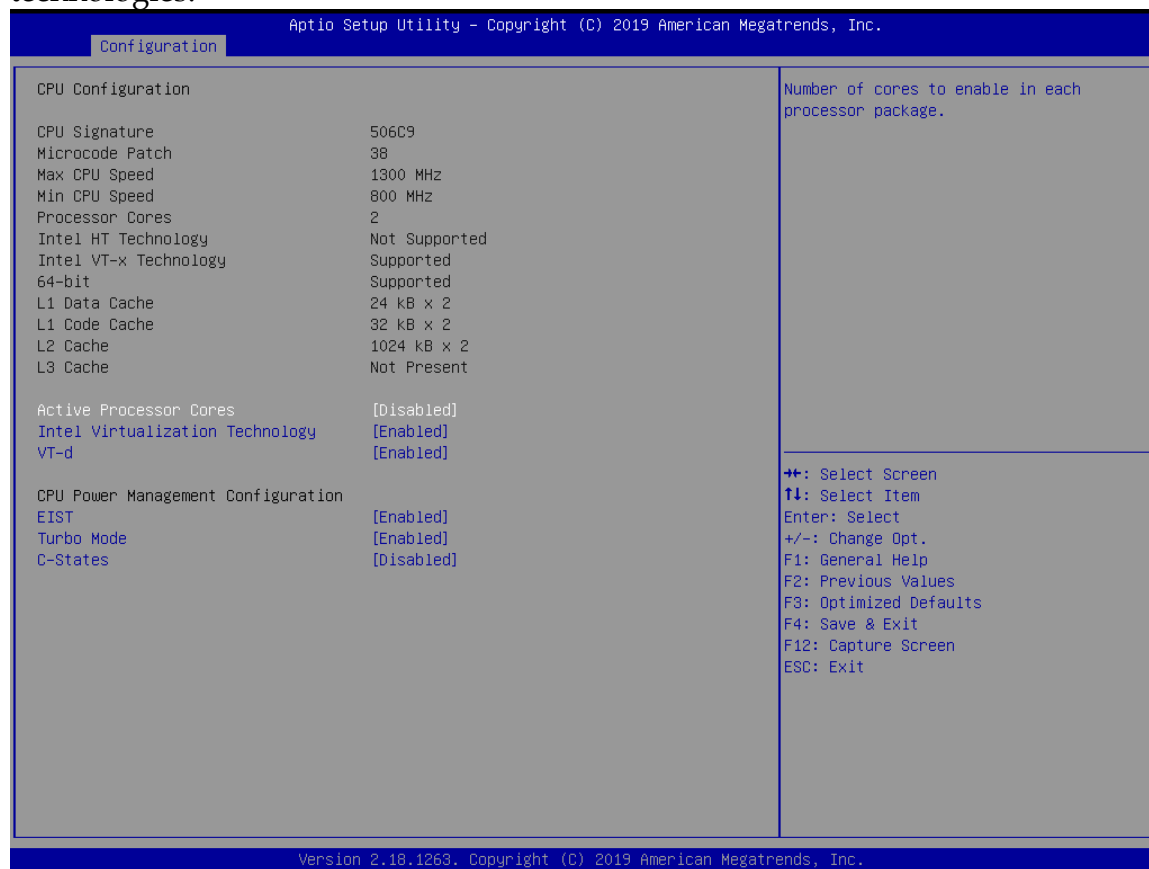
3.3 Configuration

Use this menu to set up the items of special enhanced features.



CPU configuration

CPU Configure the specific active core(s) and advanced processor management technologies.



Active Processor Cores

Number of cores to enable in each processor package.

The choice: Disabled(Default). Enabled.

Intel Virtualization Technology

When enabled, a VMM can utilize the additional hardware capabilities provided by Vander pool Technology.

The choice: Disabled. Enabled(Default).

VT-d

Enable/ Disable CPU VT-d

The choice: Disabled. Enabled(Default).

EIST

Enable/Disable Intel Speed Step.

The choice: Disabled. Enabled(Default).

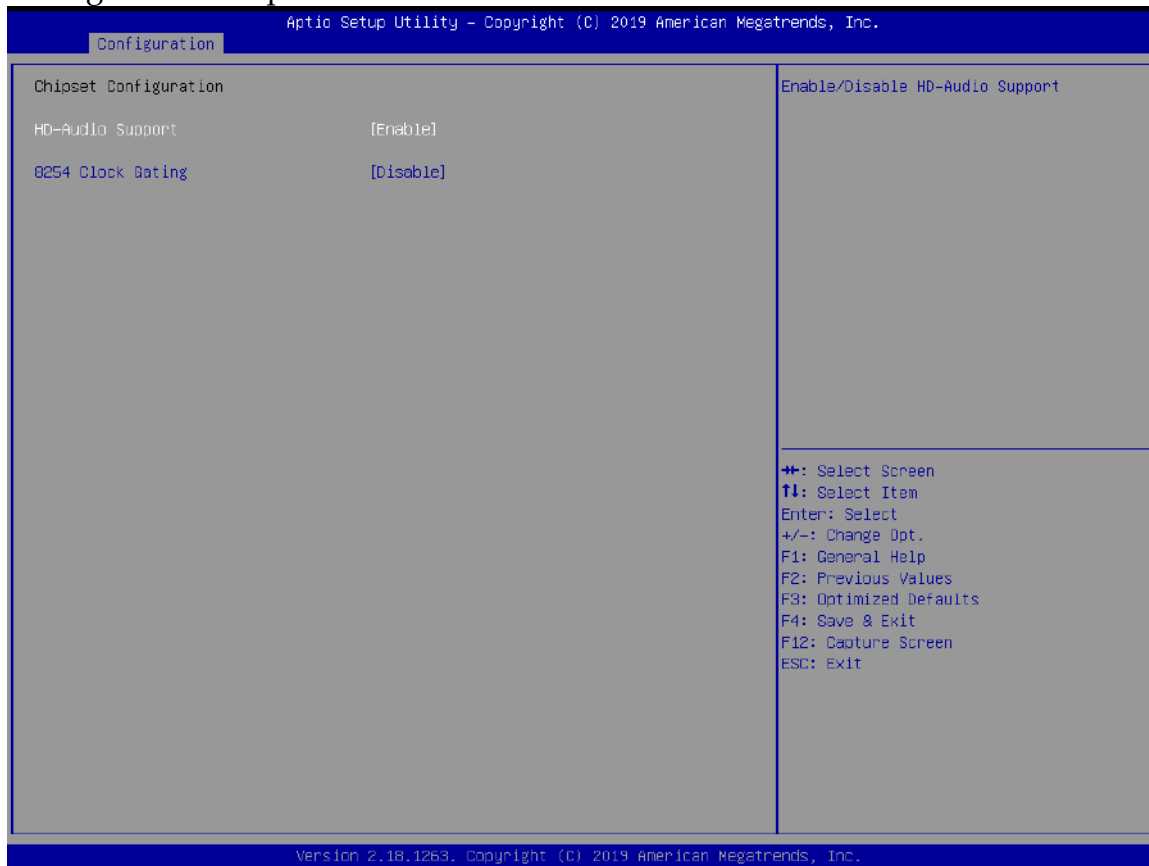
C-States

Enable or Disable C-States.

The choice: Disabled(Default). Enabled.

Chipset Configuration

Configuration Chipset feature.



HD-Audio Support

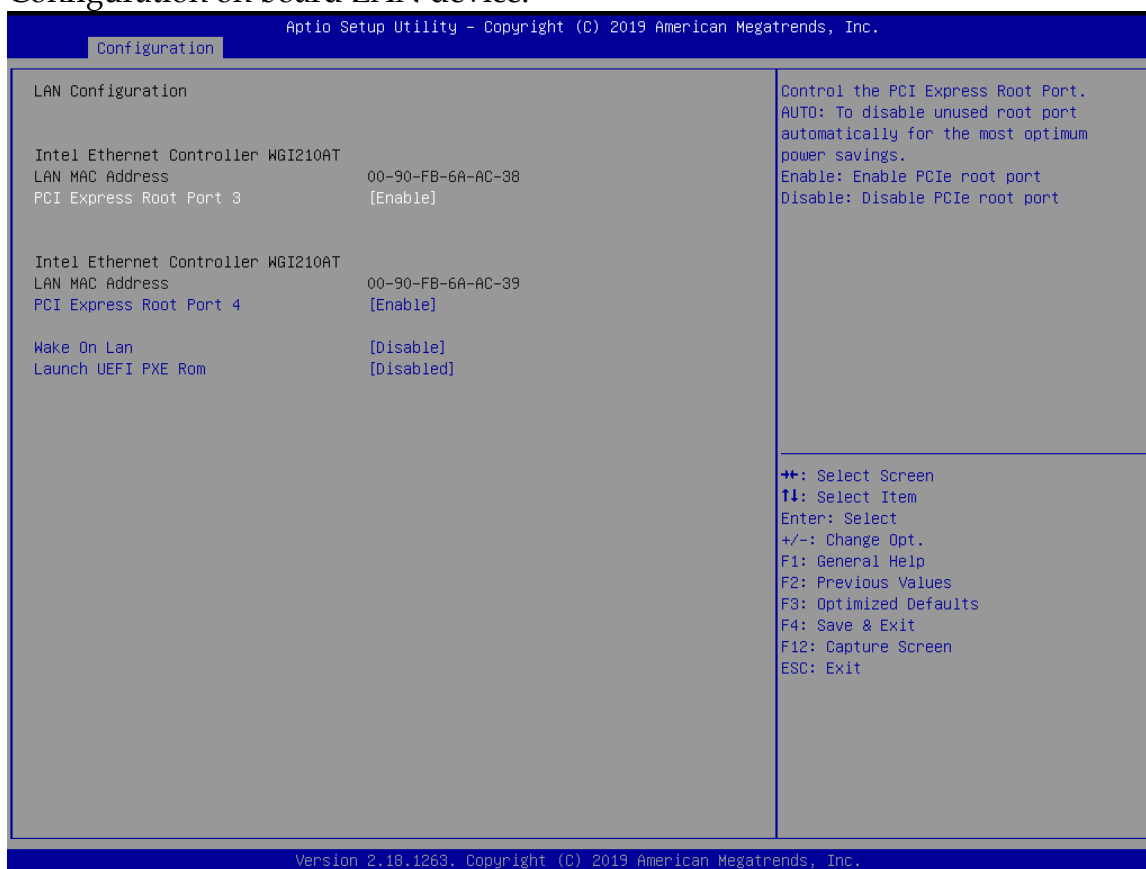
Enable or Disable the HD-Audio support.
The choice: Disabled. Enabled(Default).

8254 Clock Gating

Enable or Disable the 8254 Clock Gating
The choice: Disabled(Default). Enabled.

LAN Configuration

Configuration on board LAN device.



LAN Controller 1

Enable or Disable LAN Controller 1 (PCI Express Port 3).
The choice: Disabled. Enabled(Default).

LAN Controller 2

Enable or Disable LAN Controller 2 (PCI Express Port 4).
The choice: Disabled. Enabled(Default).

Wake on LAN Controller

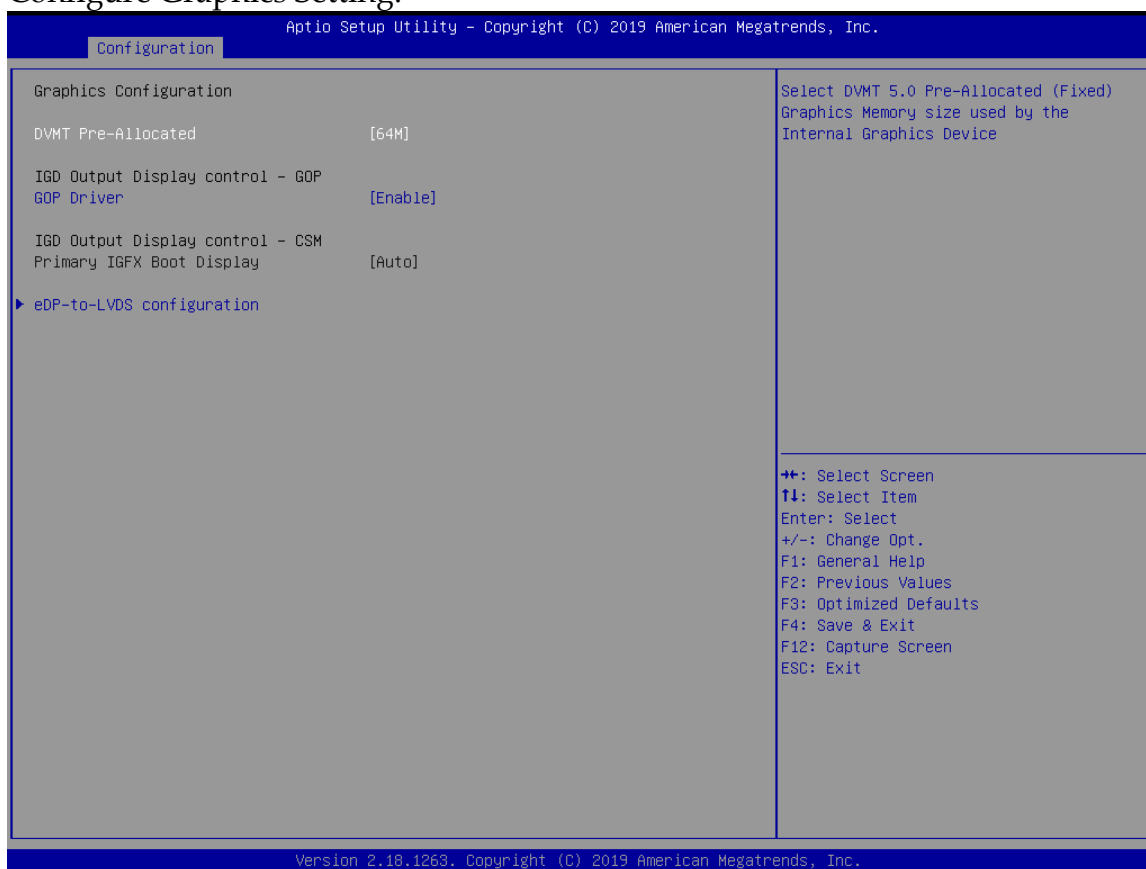
Enable or Disable Intel LAN 0 and Intel LAN 1 WGI210AT wakeup function.
The choice: Disabled(Default). Enabled.

Launch UEFI PXE Rom

Launch UEFI PXE Rom. [Disable] Not Launch Rom, [Enabled] Force Launch Rom.
The choice: Disabled(Default). Enabled.

Graphic Configuration

Configure Graphics Setting.



DVMT Pre-Allocated

Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory sized used by the Internal Graphic Device

Choices: 64M(Default), 96M, 128M, 160M, 192M, 224M, 256M, 288M, 320M, 352M, 384M,416M, 448M, 480M, 512M.

GOP Driver

Enable GOP Driver will unload VBIOS; Disable it will load VBIOS

Choices: Enable(Default), Disable.

PCI/PCIE Configuration

PCI, PCI -X and PCI Express Setting.

Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.

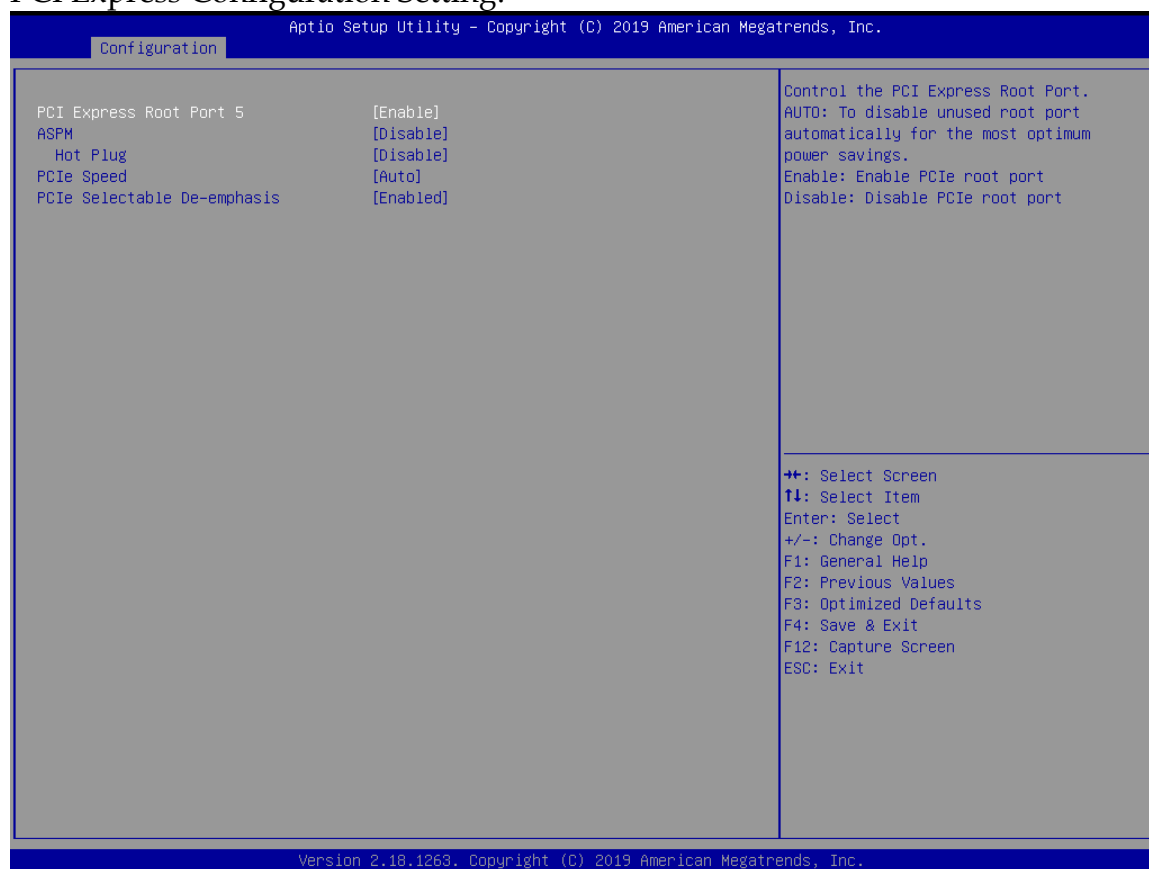
Configuration

<pre> PCI/PCIE Configuration PCIe Port 3 is assigned to LAN PCIe Port 4 is assigned to LAN ▶ PCI Express Root Port 5 ▶ PCI Express Root Port 6 PCIe Port PCIe Port Current Current Config Link Width Link Speed ===== P3(D19/F0) x1 x1 GEN1 (2.5GT/s) P4(D19/F1) x1 x1 GEN1 (2.5GT/s) P5(D19/F2) x1 -- -- P6(D19/F3) x1 x1 GEN1 (2.5GT/s) </pre>	<pre> Control the PCI Express Root Port. AUTO: To disable unused root port automatically for the most optimum power savings. Enable: Enable PCIe root port Disable: Disable PCIe root port ++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Capture Screen ESC: Exit </pre>
--	---

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PCI Express Configuration

PCI Express Configuration Setting.



PCI Express Configuration Port 5

Enable or disabled the PCI Express Root port.
 Choices: Enable(Default), Disable.

ASPM

PCI Express Active State Power Management setting
 Choice: Disabled(Default), L0s, L1, L0sL1, Auto

Hot Plug

PCI Express Hot Plug Enable/ Disable

PCIe Speed

Configuration PCIe Speed
 Choices: Auto(Default), Gen1, Gen2.

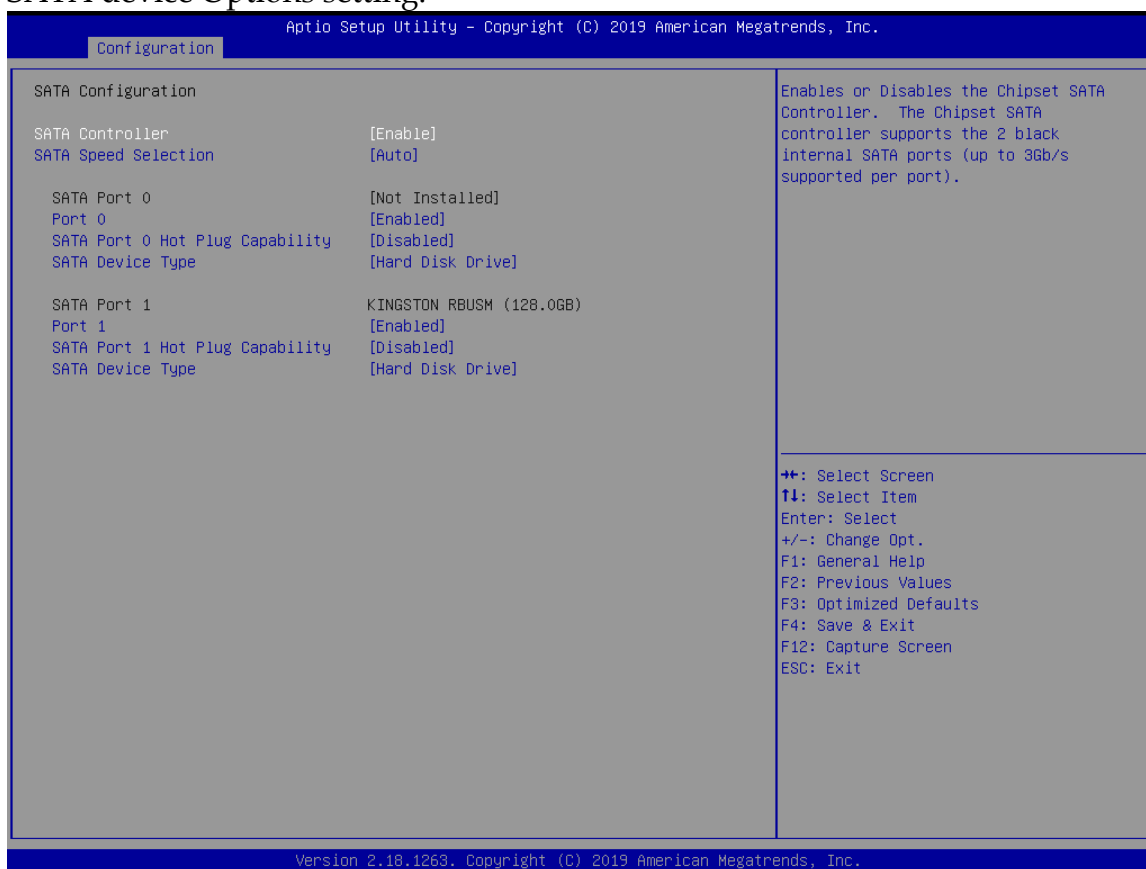
PCI Express Configuration Port 6

Enable or Disable the PCI Express Port 6 in the Chipset.
 Choices: Enable, Disable(Default).

Noticed: PCI Express Port 6 control the Wi-Fi/ Bluetooth function, if your LEAD-PPC-2150-X/ LEAD-PPC-2360-X equipped with Wi-Fi/ Bluetooth module, please enable PCI Express port 6.

SATA Configuration

SATA device Options setting.



SATA Controller

Enable or Disable the Chipset SATA controller.

Choices: Disabled, Enabled(Default).

SATA Speed Selection

Select SATA interface speed.

Choices: Auto.

Serial-ATA Port 0

Enable or Disable Serial ATA Port 0.

Choices: Disabled, Enabled(Default).

Serial-ATA Port 1

Enable or Disable Serial ATA Port 1.

Choices: Disabled, Enabled(Default).

USB Configuration

USB Configuration Parameters.

The screenshot shows the 'Configuration' tab in the Aptio Setup Utility. The main area is divided into several sections:

- USB Configuration:**
 - USB Controllers: 1 XHCI
 - USB Devices: 1 Drive, 1 Keyboard, 1 Mouse, 1 Point
- SoC USB Configuration:**
 - USB Port #0: [Enable]
 - USB Port #1: [Enable]
 - USB Port #2: [Enable]
 - USB Port #3: [Enable]
 - USB Port #4: [Enable]
 - USB Port #5: [Enable]
 - USB 3 Port #1: [Enable]
 - USB 3 Port #2: [Enable]
- Common USB Configuration:**
 - Legacy USB Support: [Enabled]
 - USB Mass Storage Driver Support: [Enabled]
- USB hardware delays and time-outs:**
 - USB transfer time-out: [20 sec]
 - Device reset time-out: [20 sec]
 - Device power-up delay: [Auto]
- Mass Storage Devices:**
 - SMI USB DISK 1100: [Auto]

On the right side, there is a help box with the following text: 'Enable/Disable USB port. Once disabled, any USB devices plug into the connector will not be detected by BIOS or OS.' Below this is a legend for navigation keys: ++: Select Screen, ↑↓: Select Item, Enter: Select, +/-: Change Opt., F1: General Help, F2: Previous Values, F3: Optimized Defaults, F4: Save & Exit, F12: Capture Screen, ESC: Exit.

At the bottom of the screen, it says 'Version 2.18.1263. Copyright (C) 2019 American Megatrends, Inc.'

USB Port 0

Enable/Disable USB Port 0.

Choices: Enable(Default), Disable.

USB Port 1

Enable/Disable USB Port 1.

Choices: Enable(Default), Disable.

USB Port 2

Enable/Disable USB Port 2.

Choices: Enable(Default), Disable.

USB Port 3

Enable/Disable USB Port 3.

Choices: Enable(Default), Disable.

USB Port 4

Enable/Disable USB Port 4.

Choices: Enable(Default), Disable.

USB Port 5

Enable/Disable USB Port 5.

Choices: Enable(Default), Disable.

USB 3.0 Port 1

Enable/Disable USB 3.0 Port 1: External USB 3.0 port.

Choices: Enable(Default), Disable.

USB 3.0 Port 2

Enable/Disable USB 3.0 Port 2: External USB 3.0 port.

Choices: Enable(Default), Disable.

Legacy USB Support

Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.

Choices: Enabled, Disabled(Default).

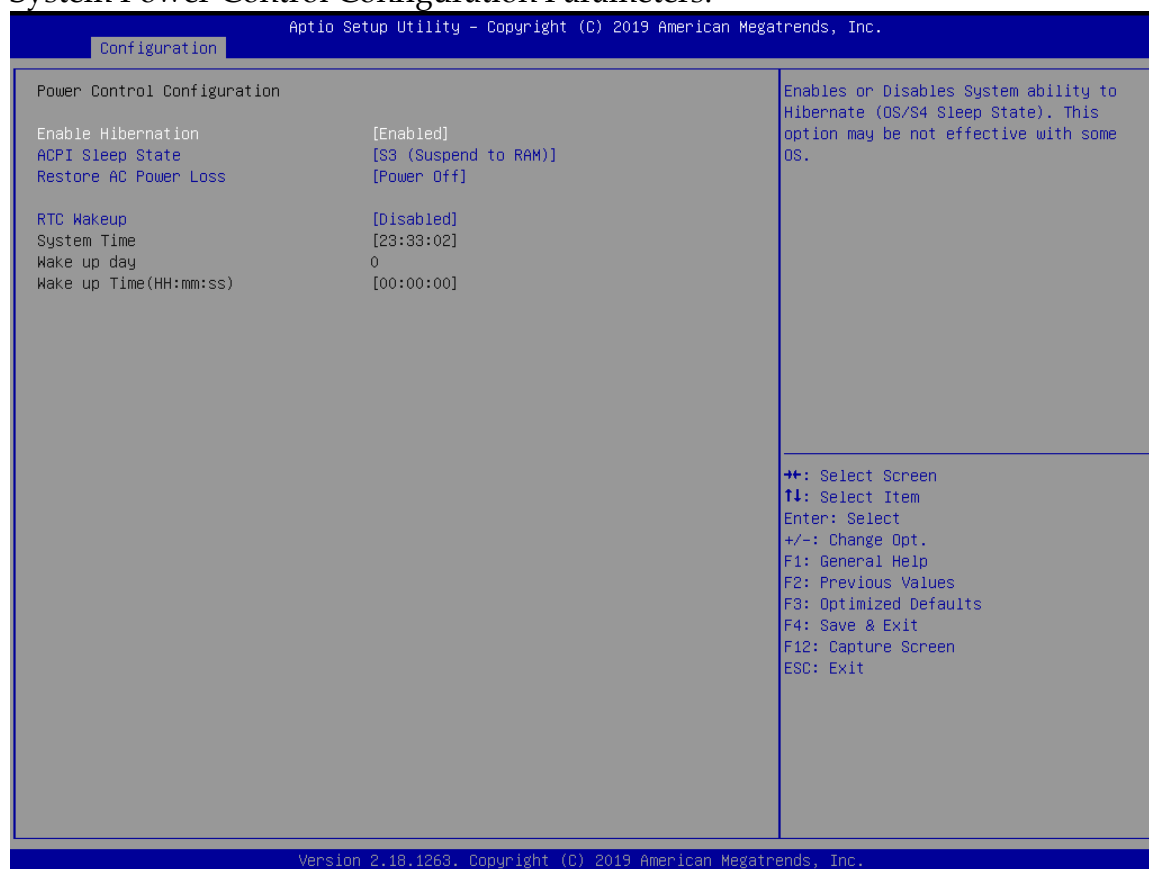
USB Mass storage Driver Support

Enable/Disable USB Mass storage Driver Support.

Choices: Enabled(Default), Disabled.

Power Control Configuration

System Power Control Configuration Parameters.



Enable Hibernation

Enable or disable System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

Choices: Disabled, Enabled(Default).

ACPI Sleep State

Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

Choices: Suspend Disable, S3 (Suspend to RAM) (Default)

Restore AC Power Loss

Select AC Power state when power is re-applied after a power failure.

Choices: Power Off(Default), Power on, Last State.

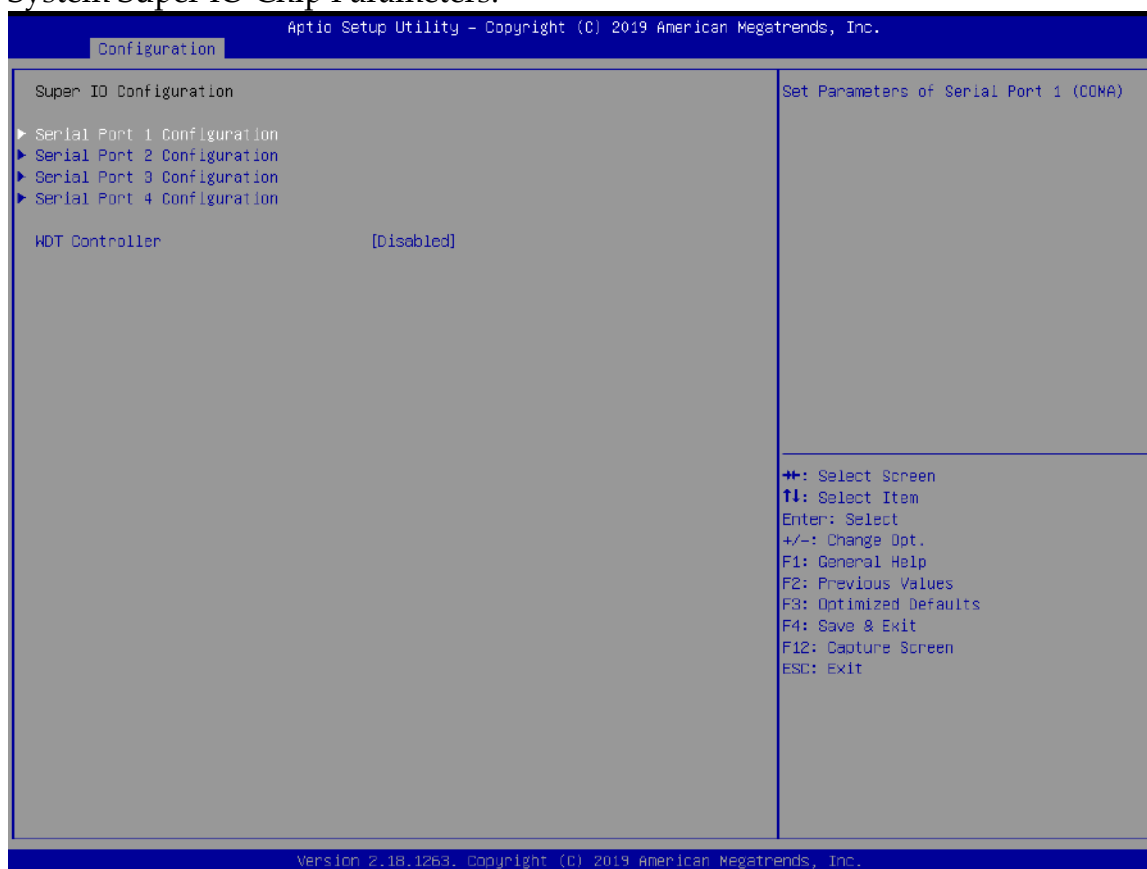
RTC Wakeup

Enable or disabled System wake on alarm event.

Choices: Enable, Disabled(Default).

Super IO Configuration

System Super IO Chip Parameters.



Serial Port 1 Configuration

Enable or Disable Serial Port 1(COM) IO=3F8H; IRQ=4.
 Choices: Disabled, Enabled(Default).

UART mode

Set Current UART mode RS232, RS485, RS422.
 Choices: RS232(Default), RS485, RS422.

Serial Port 2 Configuration

Enable or Disable Serial Port 2(COM) IO=2F8H; IRQ=3.
 Choices: Disabled, Enabled(Default).

UART mode

Set Current UART mode RS232, RS485, RS422.
 Choices: RS232(Default), RS485, RS422.

Serial Port 3 Configuration

Enable or Disable Serial Port 3(COM) IO=3E8H; IRQ=10.
 Choices: Disabled, Enabled(Default).

UART mode

Set Current UART mode RS232, RS485, RS422.

Choices: RS232(Default), RS485, RS422.

Serial Port 4 Configuration

Enable or Disable Serial Port 4(COM) IO=3E8H; IRQ=11.

Choices: Disabled, Enabled(Default).

UART mode

Set Current UART mode RS232, RS485, RS422.

Choices: RS232(Default), RS485, RS422.

WDT Controller

Enable or Disable WDT Controller.

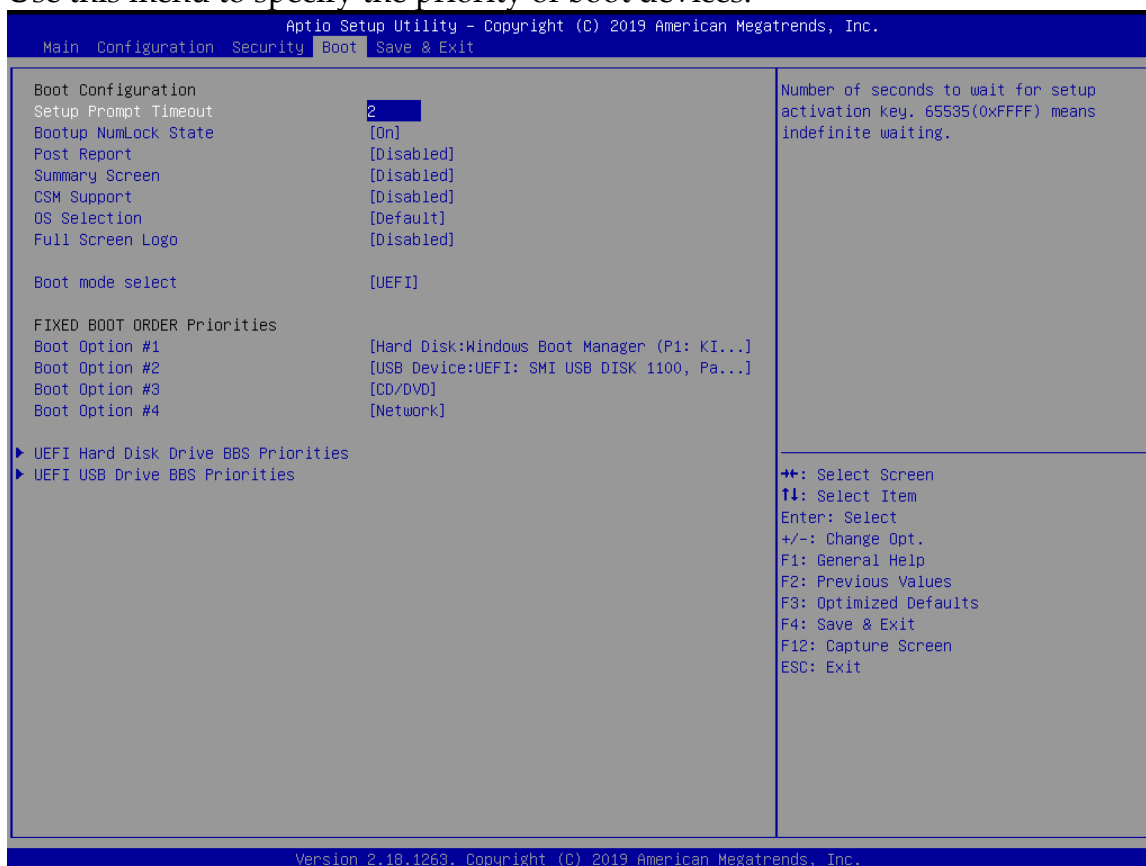
Choices: Disabled(Default), Enabled.

Hardware Monitor

Monitor hardware status.

3.4 Boot

Use this menu to specify the priority of boot devices.



Setup Prompt Timeout

Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.

Choices: Default [2].

Bootup NumLock state

Select the keyboard NumLock state.

Choices: On(Default), Off.

Post Report

Post Report Support Enabled/Disabled.

Choices: Disabled(Default), Enabled.

Summary Screen

Summary Screen Support Enabled/Disabled.

Choices: Disabled(Default), Enabled.

CSM Support

Enabled/Disabled CSM Support.

Choices: Disabled, Enabled(Default).

OS Selection

OS Selection

Choices: Default(Default), Others, Legacy system, Intel Linux.

Full Screen Logo

Enables or Disables Quiet Boot option and Full screen Logo.

Choices: Disabled(Default), Enabled.

Boot mode selection

Select boot mode LEGACY/ UEFI

Choices: LEGACY(Default)/ UEFI

Boot Option #1

Sets the system boot order

Default: Hard Disk: Windows Boot Manager.

Boot Option #2

Sets the system boot order

Default: Hard Disk: USB Device.

Boot Option #3

Sets the system boot order

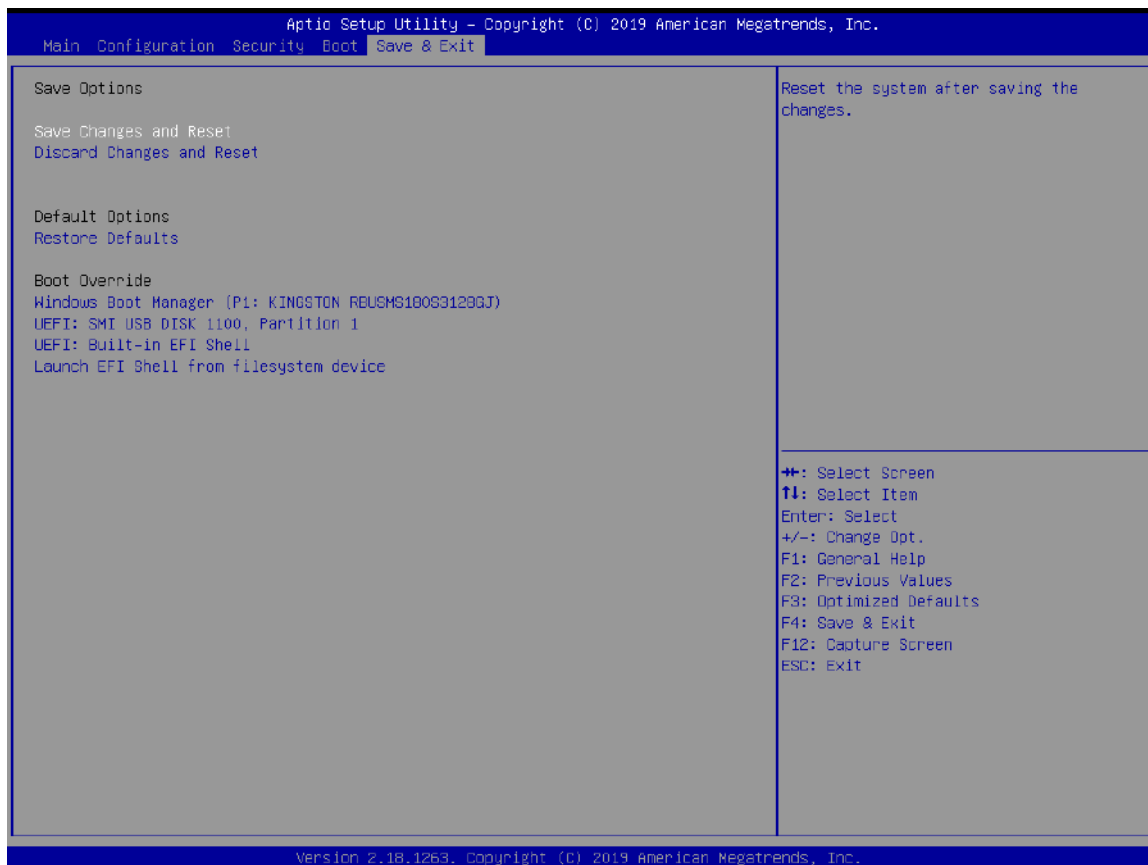
Default: CD/ DVD.

Boot Option #4

Sets the system boot order

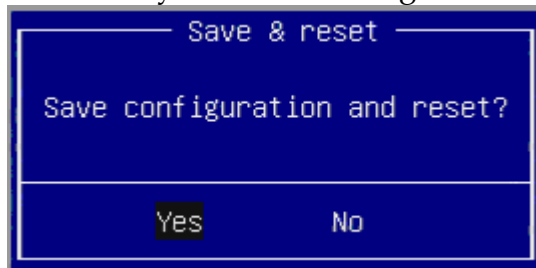
Default: Hard Disk: Network.

3.5 Save and Exit



Save Changes and Reset

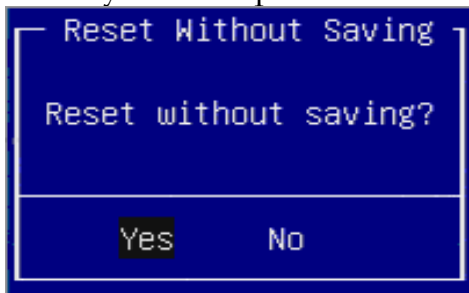
Reset the system after saving the changes.



Pressing <Enter> on this item asks for confirmation: Save configuration and reset.

Discard Changes and Exit

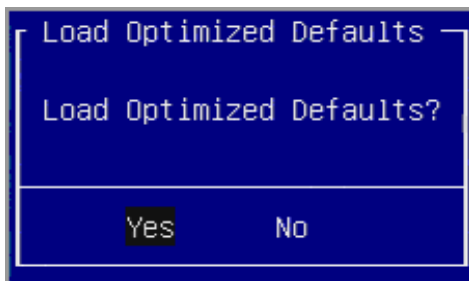
Reset system setup without saving any changes.



Pressing <Enter> on this item asks for confirmation: Reset without saving.

Restore Defaults

Restore/Load Default values for all the setup options.



Pressing <Enter> on this item asks for confirmation: Load Optimized Default.

Chapter 4

Important Instructions

This chapter includes instructions which must be carefully followed when the fan-less embedded system is used.

4.1 Note on the Warranty

Due to their limited service life, parts which, by their nature, are especially subject to wear are not included in the guarantee beyond the legal stipulations.

4.2 Exclusion of Accident Liability Obligation

PORTWELL, Inc. shall be exempt from the statutory accident liability obligation if users fail to abide by the safety instructions.

4.3 Liability Limitations / Exemption from the Warranty Obligation

In the event of damage to the system unit caused by failure to abide by the hints in this manual and on the unit (especially the safety instructions), PORTWELL, Inc. shall not be required to respect the warranty even during the warranty period and shall be free from the statutory accident liability obligation.

4.4 Declaration of Conformity

EMC: CE/FCC Class B.

Operation is subject to the following two conditions:

1. This equipment may not cause harmful interference.
2. This equipment must accept any interference that may cause undesired operation.

Chapter 5

Frequent Asked Questions

Q1: What materials can be applied to clean the front of Panel PC?

Answer:

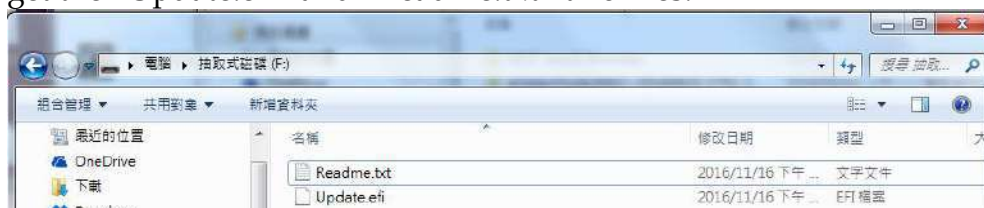
Mild detergent and water, or isopropyl alcohol is recommended for cleaning. Use of solvents with strong acidity or alkalinity, which could react with the paint or printed color or plastic, should be avoided.

Q2: How to update BIOS?

Answer:

Please follow procedures below step by step.

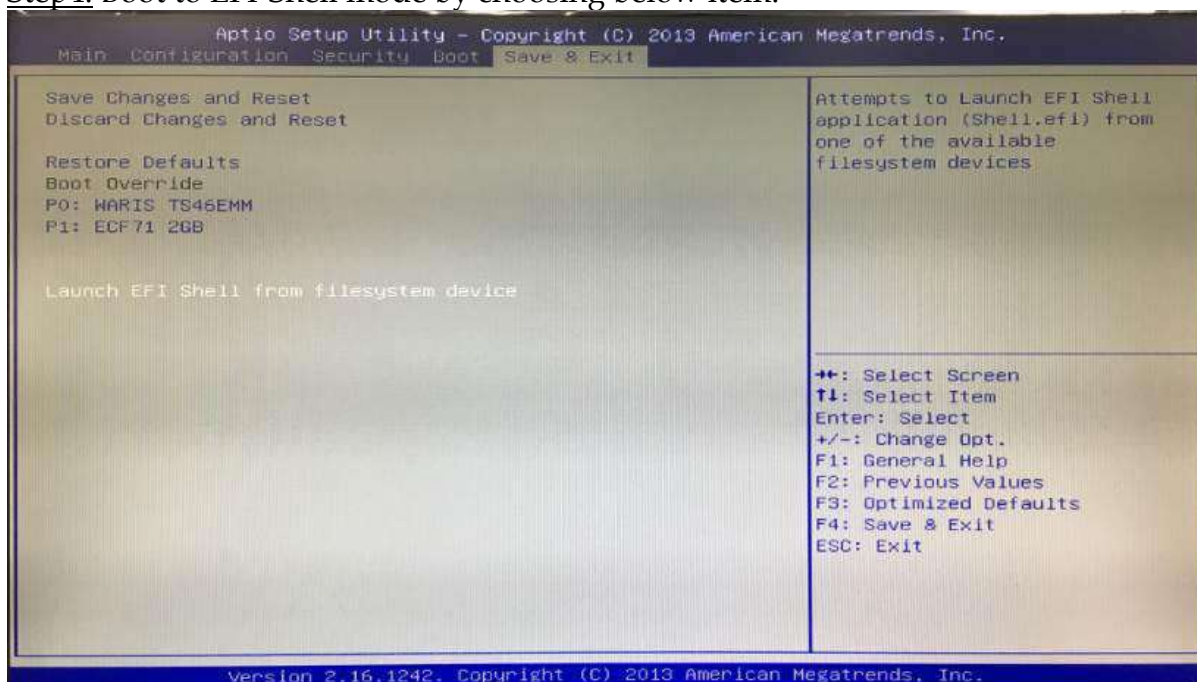
Step1. Execute the “Update.zip” file to root of the bootable USB pen drive. You can get the “Update.efi” and “Readme.txt” two files.



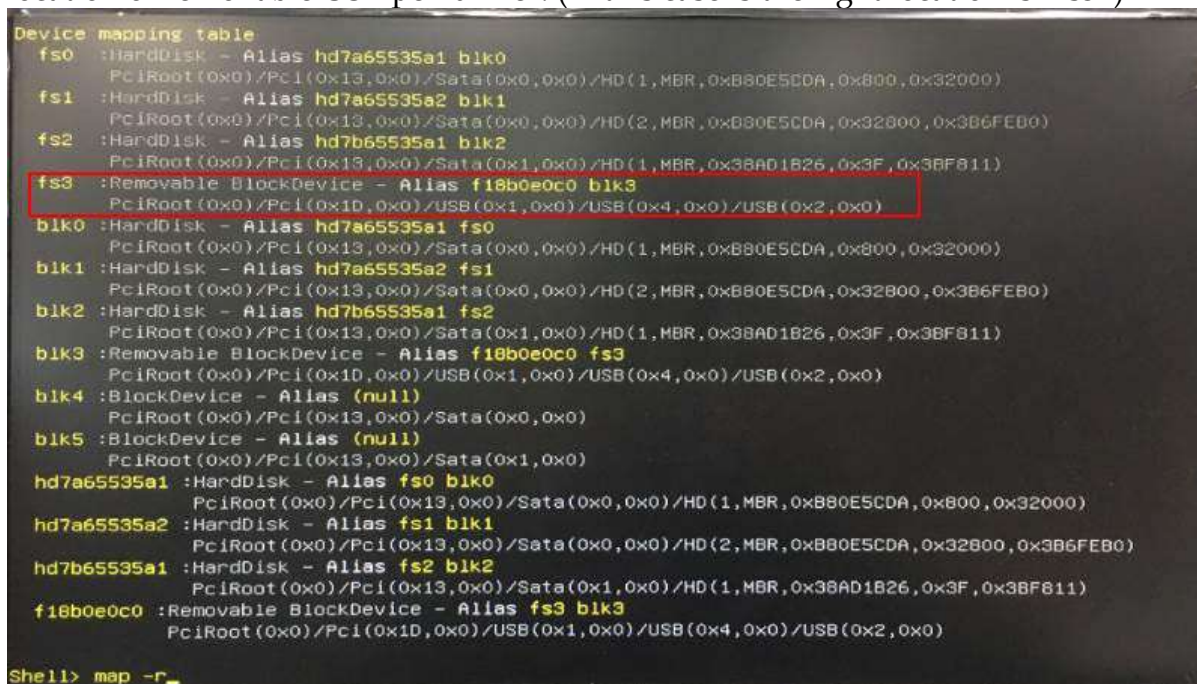
Step2. Insert your USB pen drive in USB port of the LEAD-PPC-2150-X/ LEAD-PPC-2360-X Panel PC and press the power button to power on.

Step3. Press key during the POST (Power On Self Test) process will enter BIOS setup screen.

Step4. Boot to EFI-Shell mode by choosing below item.



Step5. Type “map -r” command to show the mapping table and find the right location of removable USB pen driver. (in this case is the right location is “fs3”)



Step5. Type “fs3:” command to switch to the root of the USB pen drive. And type “dir” to find the directory of fs3.

```
blk3 :Removable BlockDevice - Alias f18b0e0c0 fs3
      PciRoot(0x0)/Pci(0x10,0x0)/USB(0x1,0x0)/USB(0x4,0x0)/USB(0x2,0x0)
blk4 :BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x13,0x0)/Sata(0x0,0x0)
blk5 :BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x13,0x0)/Sata(0x1,0x0)
hd7a65535a1 :HardDisk - Alias fs0 blk0
            PciRoot(0x0)/Pci(0x13,0x0)/Sata(0x0,0x0)/HD(1,MBR,0xB80E5CDA,0x800,0x32000)
hd7a65535a2 :HardDisk - Alias fs1 blk1
            PciRoot(0x0)/Pci(0x13,0x0)/Sata(0x0,0x0)/HD(2,MBR,0xB80E5CDA,0x32800,0x3B6FE80)
hd7b65535a1 :HardDisk - Alias fs2 blk2
            PciRoot(0x0)/Pci(0x13,0x0)/Sata(0x1,0x0)/HD(1,MBR,0x38AD1B26,0x3F,0x3BF811)
f18b0e0c0 :Removable BlockDevice - Alias fs3 blk3
          PciRoot(0x0)/Pci(0x1D,0x0)/USB(0x1,0x0)/USB(0x4,0x0)/USB(0x2,0x0)

Shell> fs3:
fs3:\> dir
Directory of: fs3:\

    11/16/16  08:21p                370  Readme.txt
    11/16/16  08:21p          4,426,915  Update.efi
```

Step6. Type the “update” command to start flash BIOS processes.

```
fs3:\> update
=====
= Start update procedure =
=
=  UEFI Unpacker  v1.1<F> =
=====
> Unpacking package ....DONE
> Ready to Update BIOS .....
```

Step7. Press “Ctrl+Alt+Del” to reboot when it finish all update process.