IEI Integration Corp.

MODEL:

TRN-TABLET3

15.6" Tablet PC with Intel® Core™ i7-7820EQ CPU, 16 GB DDR4 SDRAM, USB 3.0, HDMI, 1 TB M.2 SSD, Wi-Fi, Bluetooth, 5-Megapixel Camera, RoHS Compliant

User Manual

Rev. 1.01 – February 11, 2020

RoHS Lead Free

Revision

Date	Version	Changes
February 11, 2020	1.01	Spec. modification
February 11, 2019	1.00	Initial release

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CONTACT INFORMATION

Manufactured by:
IEI Integration Corp.

Address: No. 29, Zongxing Rd., Xizhi Dist.,
New Taipei City 221, Taiwan

Phone: +886-2-8691-6798

Fax: +886-2-6616-0028

Web Site: www.ieiworld.com

Sales Email: sales@ieiworld.com.tw

Manual Conventions

WARNING

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.

CAUTION

Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.

NOTE

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

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Chapter

1

Introduction

1.1 Overview

Figure 1-1: TRN-TABLET3

The TRN-TABLET3 is a 15.6" tablet PC with the Intel® Core™ i7-7820EQ processor and 16 GB DDR4 SDRAM. Its storage needs are met by the preinstalled 1 TB M.2 SSD. In addition, an NVIDIA® Quadro® P3000 MXM graphics card can be installed to enhance graphics processing capability.

The TRN-TABLET3 is integrated with a selection of wireless communication technologies, including Wi-Fi and Bluetooth. There are four external USB 3.0 ports and one HDMI port for peripherals. The TRN-TABLET3 also features a 5-megapixel camera and digital microphone for video conferencing and data acquisition.

WARNING:

This equipment is not suitable for use in locations where children are likely to be present.

1.2 Features

Some of the standard features of the TRN-TABLET3 tablet PC include:

- Intel® Core™ i7-7820EQ processor platform
- 16 GB DDR4 SDRAM
- NVIDIA® Quadro® P3000 MXM graphics card (optional)
- 10-point projected capacitive touchscreen
- Built-in 5-megapixel camera
- Built-in stereo speakers and digital microphone
- 802.11a/b/g/n/ac wireless LAN
- Bluetooth v4.0
- One HDMI and four USB 3.0 ports (three Type-A and one Type-C) on the side panel
- RoHS compliant

1.3 Front Panel

The front panel of the TRN-TABLET3 is a 15.6" LCD with a 10-point capacitive touchscreen. A 5-megapixel camera and a digital microphone are also located on the front panel.

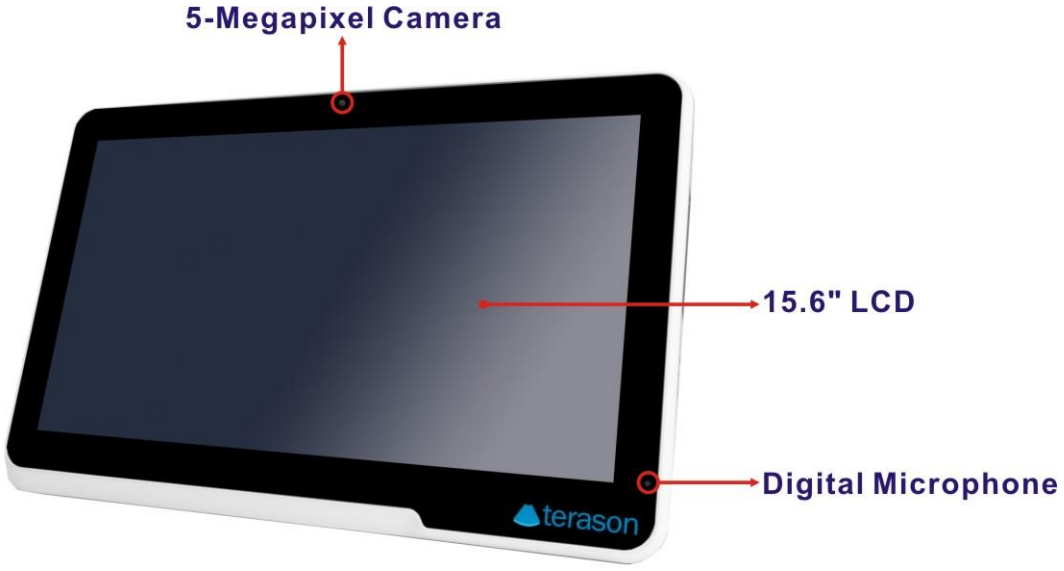


Figure 1-2: Front Panel

1.4 Rear Panel

The rear panel has a battery pack and a 2-in-1 stand that can turn into a carrying handle. The two speakers are also located on the rear panel.

Figure 1-3: Rear Panel

1.5 Top Panel

The power button (with power LED) is located on the top panel as shown in the following diagram. To power-up the system, short press the power button, and the power LED on the button lights up in blue.

Figure 1-4: Top Panel

1.6 Side Panel

The right side panel contains several I/O interfaces as shown below.

Figure 1-5: Side Panel

NOTE:

The LED indication of the RJ-45 LAN port is listed below:

LED Status	Link Speed
Orange LED	100 Mbps
Green LED	1000 Mbps

1.7 Technical Specifications

The TRN-TABLET3 technical specifications are listed in the table below.

Display	
LCD Size	15.6"
Brightness (cd/m²)	400
Max. Resolution	1920 (H) x 1080 (V)
Viewing Angle	88/88/88/88 degree (wide viewing angle, IPS)
Touchscreen	10-point projected capacitive
System	
CPU	Intel® Core™ i7-7820EQ
Memory	16 GB DDR4 SDRAM
OS	Windows 10 Pro
Storage	1 TB M.2 SSD
GPU	NVIDIA® Quadro® P3000 graphics card (optional)
Front Camera	5-megapixel webcam (front panel)
TPM	Trusted Platform Module (optional)
Communication	
Wireless LAN	802.11a/b/g/n/ac, diversity antenna design
Bluetooth	Bluetooth v4.0
I/O Interfaces	
Audio	2 x Stereo loudspeaker 1 x Headset jack (φ3.5mm) Built-in digital microphone
LAN	1 x RJ-45 (10/100/1000 Mbps)
HDMI	1 x HDMI slot
USB	4 x USB 3.0 (external, three Type-A, one Type-C) 1 x USB 3.0 (internal, for engine connection)

Power	
Power Adapter	AC Input: 100 V AC ~ 240 V AC DC Output: 19 V @ 10.53 A, 200 W
Battery	External: 6500 mAH Li-ion battery pack with battery capacity LED indicators, 10.8 V, 3S2P Internal: for backup
Environment	
Operation Temperature	0ºC ~ 35ºC
Storage Temperature	0ºC ~ 60ºC
Environment Protection	IP 54 complaint front panel, wipe cleanable
Drop Survival	TBD
Mounting	Built-in kick-stand VESA mount (75 mm) for optional arm/stand/cart
Physical Characteristics	
Dimensions (W x H x D)	396.66 mm x 260.06 mm x 52.29 mm
Net Weight	5 kg
Security	Kensington lock

Table 1-1: Technical Specifications

1.8 Dimensions

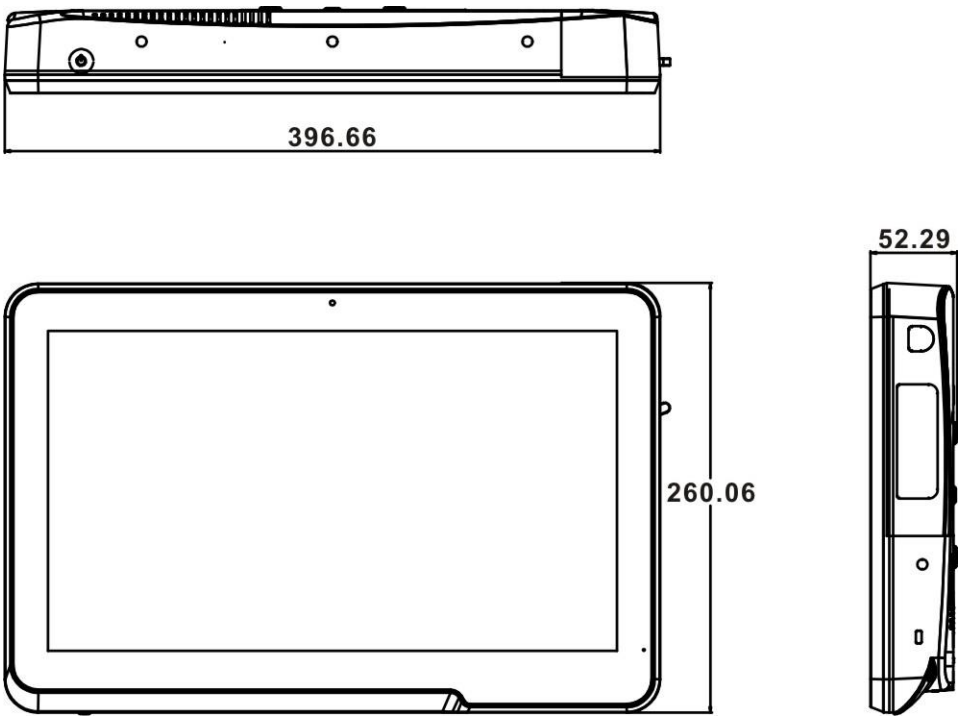


Figure 1-6: Dimensions (units in mm)

Chapter

2

Unpacking

To unpack the TRN-TABLET3, follow the steps below:

WARNING!

Only remove the protective plastic cover stuck to the front screen after installation. The plastic layer protects the monitor surface during installation process.

Step 1: Use sharp cutters to open the external and internal boxes.

Step 2: Lift the TRN-TABLET3 and the packing material out of the box.

Step 3: Make sure all the components listed in the packing list are present.

The TRN-TABLET3 tablet PC is shipped with the following components. If any of these items are missing or damaged, contact the distributor or sales representative immediately.

Quantity	Item	Image
1	TRN-TABLET3	
1	Power adapter	
1	Battery pack	

Table 2-1: Packing List

Chapter

3

Installation

3.1 Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- ***To prevent the risk of electric shock, make sure power cord is unplugged from wall socket.*** To fully disengage the power to the unit, please disconnect the power cord from the ac outlet. Refer servicing to qualified service personnel. The AC outlet shall be readily available and accessible.
- ***Follow the electrostatic precautions*** outlined below whenever the TRN-TABLET3 is opened.
- ***Make sure the power is turned off and the power cord is disconnected*** whenever the TRN-TABLET3 is being installed, moved or modified.
- ***Do not apply voltage levels that exceed the specified voltage range***. Doing so may cause fire and/or an electrical shock. Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.
- ***Electric shocks can occur*** if the TRN-TABLET3 chassis is opened when the TRN-TABLET3 is running. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
- **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW 0°C (32°F) OR ABOVE 60°C (140°F). IT MAY DAMAGE THE EQUIPMENT.**
- ***Do not drop or insert any objects*** into the ventilation openings of the TRN-TABLET3.
- ***If considerable amounts of dust, water, or fluids enter the TRN-TABLET3***, turn off the power supply immediately, unplug the power cord, and contact the TRN-TABLET3 vendor.
- **DO NOT**:
  - Drop the TRN-TABLET3 against a hard surface.
  - Strike or exert excessive force onto the LCD panel.
  - Touch any of the LCD panels with a sharp object
  - In a site where the ambient temperature exceeds the rated temperature

3.2 Anti-static Precautions

WARNING:

Failure to take ESD precautions during the maintenance of the TRN-TABLET3 may result in permanent damage to the TRN-TABLET3 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the TRN-TABLET3. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the TRN-TABLET3 is accessed internally, or any other electrical component is handled, the following anti-static precautions are strictly adhered to.

- ***Wear an anti-static wristband***: - Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- ***Self-grounding***: - Before handling the board touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- ***Use an anti-static pad***: - When configuring the TRN-TABLET3, place it on an antic-static pad. This reduces the possibility of ESD damaging the TRN-TABLET3.
- ***Only handle the edges of the PCB***: - When handling the PCB, hold the PCB by the edges.

3.3 Installation Precautions

When installing the TRN-TABLET3, please follow the precautions listed below:

- **Power turned off**: When installing the TRN-TABLET3, make sure the power is off. Failing to turn off the power may cause severe injury to the body and/or damage to the system.
- **Certified Engineers**: Only certified engineers should install and modify onboard functionalities.

- **Anti-static Discharge**: If a user open the rear panel of the TRN-TABLET3, to configure the jumpers or plug in added peripheral devices, ground themselves first and wear and anti-static wristband.

3.4 Installing and Charging the Battery Pack

CAUTION:

- Risk of explosion if the battery is replaced by an incorrect type;
- Replacement of a battery with an incorrect type that can defeat a safeguard (for example, in the case of some lithium battery types);
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion;
- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;
- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas

To install and charge the battery pack, please follow the steps below.

Step 1: Adjust the stand to a position that allows the installation of the battery pack (**Figure 3-1**).

Figure 3-1: Adjusting the 2-in-1 Stand Kit

Step 2: Install the battery pack as shown in **Figure 3-2**.

Figure 3-2: Battery Pack Installation

Step 3: To charge the battery, connect the TRN-TABLET3 with a power source through the supplied power adapter.

Step 4: To view the battery capacity, press the battery capacity button on the battery (**Figure 3-3**).

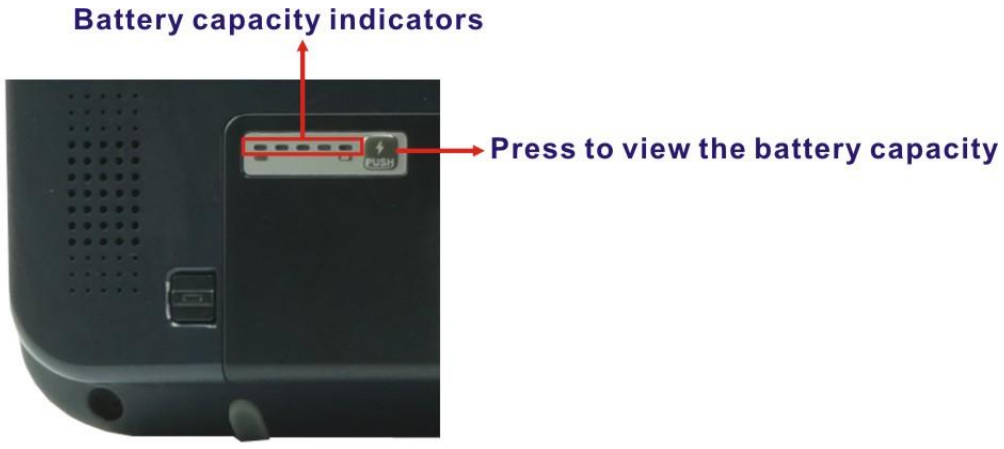


Figure 3-3: Battery Capacity Indicators

Step 5: To remove the battery pack, press the two buttons indicated in the following diagram at the same time to eject the battery jack.

CAUTION:

Do not remove the battery pack while the TRN-TABLET3 is on and running.

Figure 3-4: Battery Pack Removal

3.5 Using the 2-in-1 Stand

The 2-in-1 stand secured on the rear panel can stabilize the TRN-TABLET3 on a surface, and also can be turned into a carrying handle.

Stand

Adjust the 2-in-1 stand to have a best angle to operate the system (see **Figure 3-5**).

Figure 3-5: Tablet Stand

Carrying Handle

Adjust the 2-in-1 stand to the upright position to use it as a handle (see **Figure 3-6**).

Figure 3-6: Tablet Carrying Handle

3.6 VESA Mounting

The TRN-TABLET3 is VESA (Video Electronics Standards Association) compliant and can be mounted on a mounting device with a 75 mm interface pad. The TRN-TABLET3 VESA mount retention screw holes are shown in **Figure 3-7**. Refer to the installation guide that came with the mounting device to mount the TRN-TABLET3.

Figure 3-7: VESA Mounting Retention Screw Holes

NOTE:

When purchasing the mounting device, please ensure that it is VESA compliant and that the device has a 75 mm interface pad. If the mounting device is not VESA compliant, it cannot be used to support the TRN-TABLET3.

Chapter

4

BIOS Setup

4.1 Introduction

The BIOS is programmed onto the BIOS chip. The BIOS setup program allows changes to certain system settings. This chapter outlines the options that can be changed.

NOTE:

Some of the BIOS options may vary throughout the life cycle of the product and are subject to change without prior notice.

4.1.1 Starting Setup

The UEFI BIOS is activated when the computer is turned on. The setup program can be activated in one of two ways.

1. Press the **DEL** or **F2** key as soon as the system is turned on or
2. Press the **DEL** or **F2** key when the "**Press DEL or F2 to enter SETUP**" message appears on the screen.

If the message disappears before the **DEL or F2** key is pressed, restart the computer and try again.

4.1.2 Using Setup

Use the arrow keys to highlight items, press **ENTER** to select, use the PageUp and PageDown keys to change entries, press **F1** for help and press **ESC** to quit. Navigation keys are shown in **Table 4-1**.

Key	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left hand side
Right arrow	Move to the item on the right hand side
+	Increase the numeric value or make changes
-	Decrease the numeric value or make changes

Key	Function
Page Up	Move to the previous page
Page Dn	Move to the next page
Esc	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
F1	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2	Load previous values
F3	Load optimized defaults
F4	Save changes and Exit BIOS

Table 4-1: BIOS Navigation Keys

4.1.3 Getting Help

When **F1** is pressed a small help window describing the appropriate keys to use and the possible selections for the highlighted item appears. To exit the Help Window press **Esc** or the **F1** key again.

4.1.4 BIOS Menu Bar

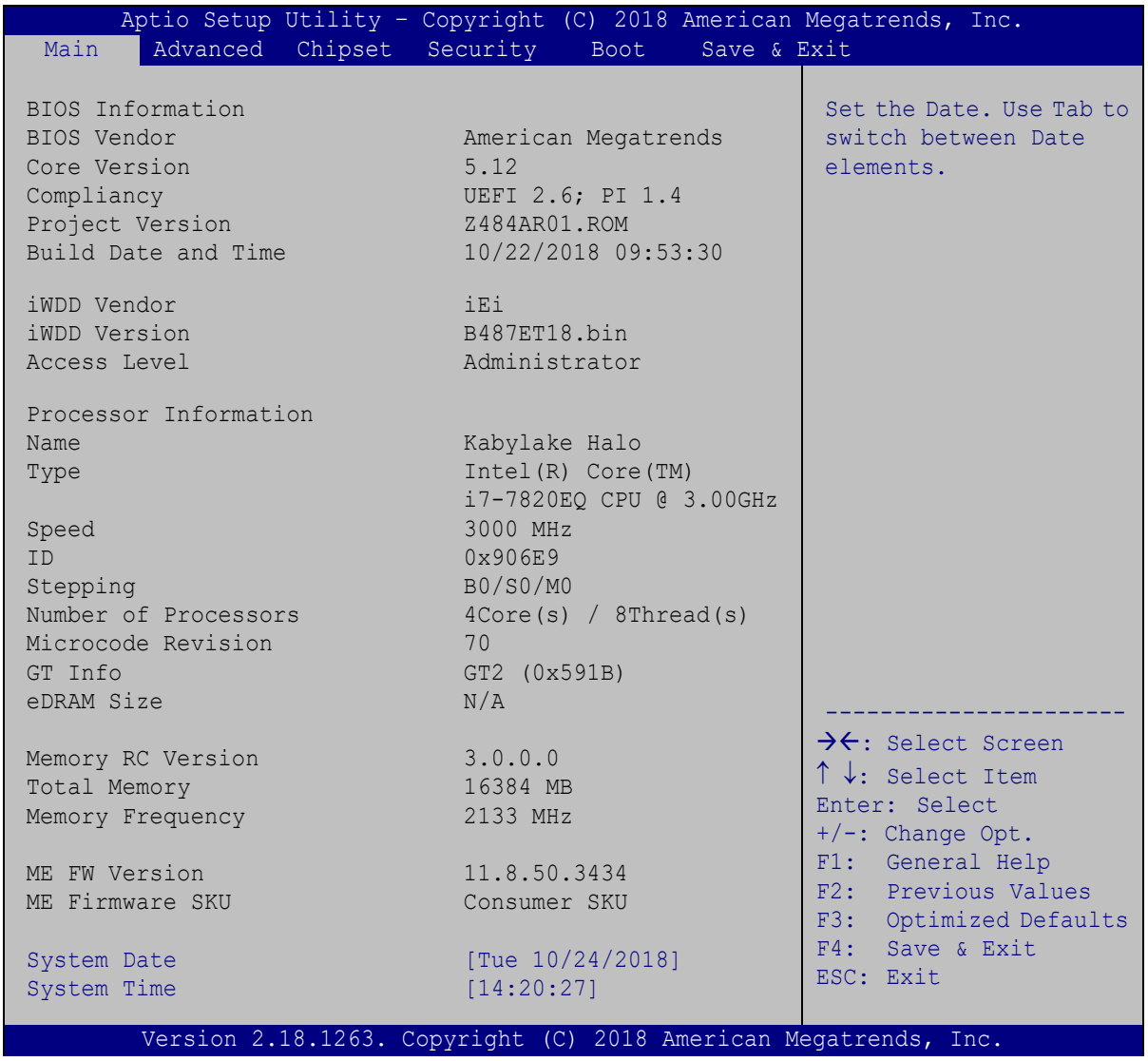
The **menu bar** on top of the BIOS screen has the following main items:

- Main – Changes the basic system configuration.
- Advanced – Changes the advanced system settings.
- Chipset – Changes the chipset settings.
- Security – Sets User and Supervisor Passwords.
- Boot – Changes the system boot configuration.
- Save & Exit – Selects exit options and loads default settings

The following sections completely describe the configuration options found in the menu items at the top of the BIOS screen and listed above.

4.2 Main

The **Main** BIOS menu (**BIOS Menu 1**) appears when the **BIOS Setup** program is entered. The **Main** menu gives an overview of the basic system information.



BIOS Menu 1: Main

The Main menu has two user configurable fields:

➔ **System Date [xx/xx/xx]**

Use the **System Date** option to set the system date. Manually enter the day, month and year.

➔ **System Time [xx:xx:xx]**

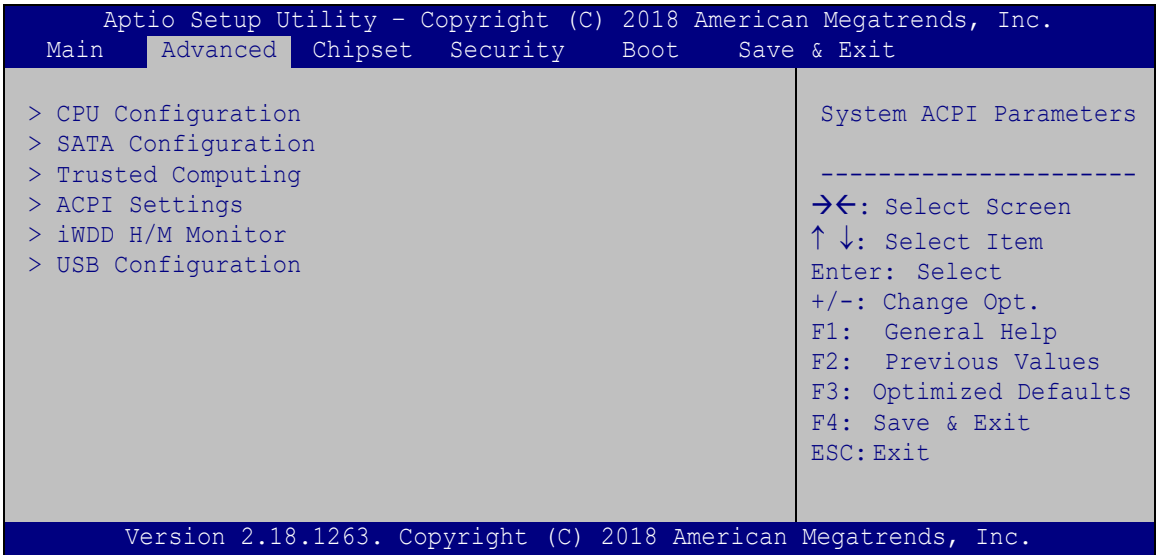
Use the **System Time** option to set the system time. Manually enter the hours, minutes and seconds.

4.3 Advanced

Use the **Advanced** menu (_**BIOS Menu 2**) to configure the CPU and peripheral devices through the following sub-menus:

WARNING!

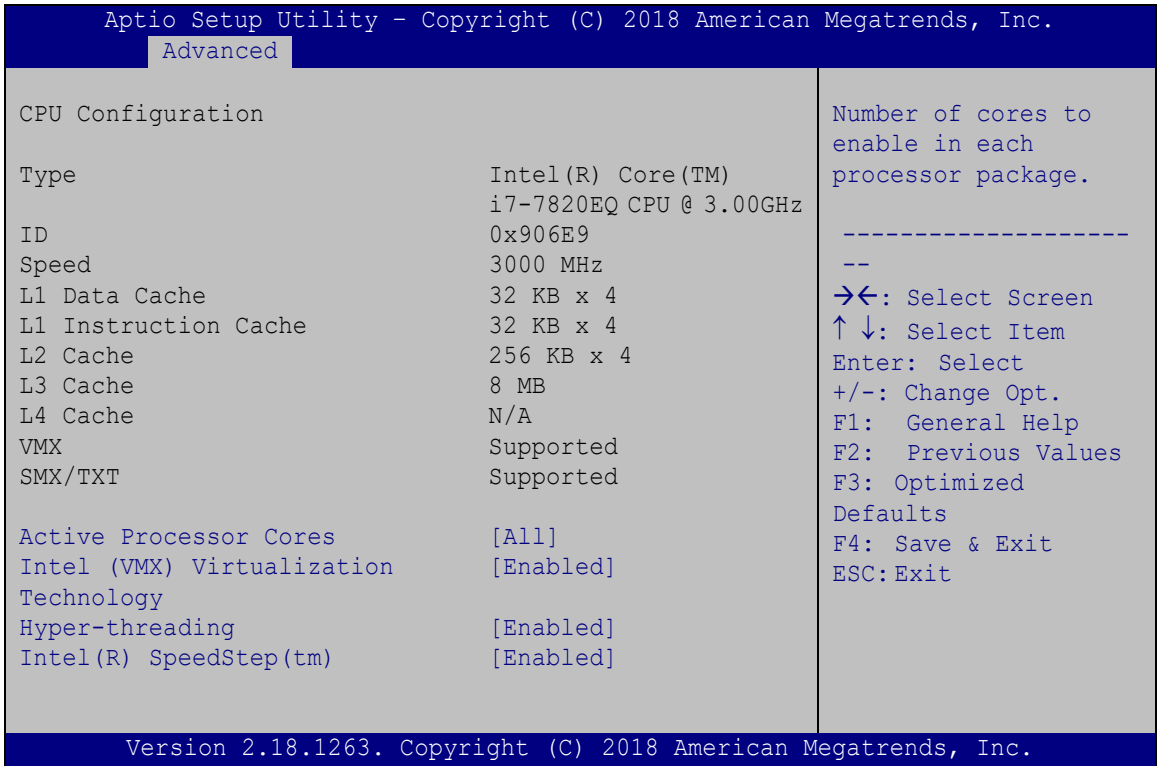
Setting the wrong values in the sections below may cause the system to malfunction. Make sure that the settings made are compatible with the hardware.



BIOS Menu 2: Advanced

4.3.1 CPU Configuration

Use the **CPU Configuration** menu (**BIOS Menu 3**) to view detailed CPU specifications and configure the CPU.



BIOS Menu 3: CPU Configuration

➔ **Active Processor Cores [All]**

Use the **Active Processor Cores** BIOS option to enable numbers of cores in the processor package.

➔	**All**	**DEFAULT**	Enable all cores in the processor package.
➔	**1**		Enable one core in the processor package.
➔	**2**		Enable two cores in the processor package.
➔	**3**		Enable three cores in the processor package.

➔ **Intel (VMX) Virtualization Technology [Enabled]**

Use the **Intel (VMX) Virtualization Technology** option to enable or disable virtualization on the system. When combined with third party software, Intel® Virtualization technology allows several OSs to run on the same system at the same time.

➔	**Disabled**		Disables Intel Virtualization Technology.
➔	**Enabled**	**DEFAULT**	Enables Intel Virtualization Technology.

➔ **Hyper-threading [Enabled]**

Use the **Hyper-threading** to enable or disable the CPU hyper threading function.

➔	**Disabled**		Disables the use of hyper threading technology
➔	**Enabled**	**DEFAULT**	Enables the use of hyper threading technology

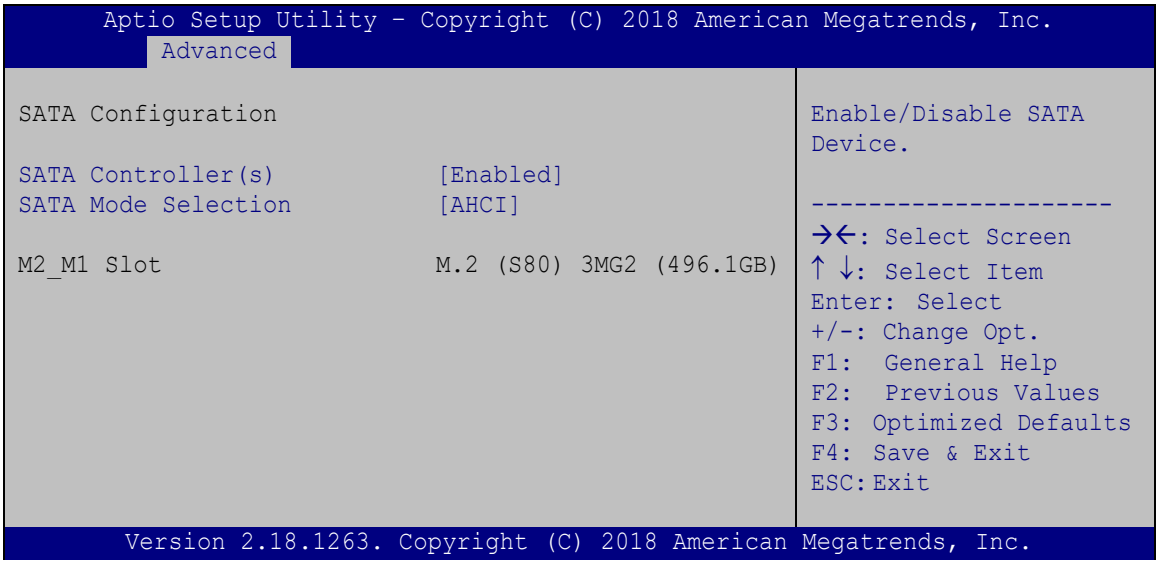
➔ **Intel(R) SpeedStep(tm) [Enabled]**

Use the **Intel(R) SpeedStep(tm)** option to enable or disable the Intel® SpeedStep Technology which allows more than two frequency ranges to be supported.

➔	**Disabled**		Disables Intel® SpeedStep Technology
➔	**Enabled**	**DEFAULT**	Enables Intel® SpeedStep Technology

4.3.2 SATA Configuration

Use the **SATA Configuration** menu (**BIOS Menu 4**) to change and/or set the configuration of the SATA devices installed in the system.



BIOS Menu 4: SATA Configuration

➔ **SATA Controller(s) [Enabled]**

Use the **SATA Controller(s)** option to configure the SATA controller(s).

➔ **Enabled** **DEFAULT** Enables the on-board SATA controller(s).

➔ **Disabled** Disables the on-board SATA controller(s).

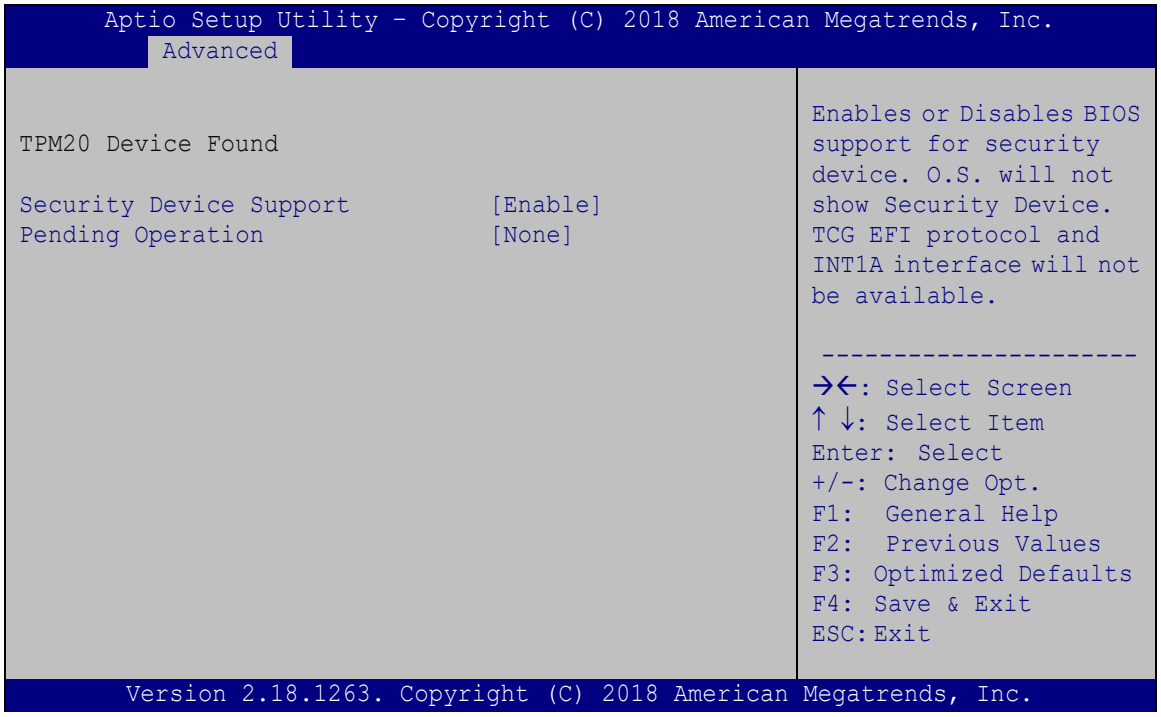
➔ **SATA Mode Selection [AHCI]**

Use the **SATA Mode Selection** option to determine how SATA devices operate.

➔ **AHCI** **DEFAULT** Configures SATA devices as AHCI device.

4.3.3 Trusted Computing

Use the **Trusted Computing** menu (**BIOS Menu 5**) to configure settings related to the Trusted Computing Group (TCG) Trusted Platform Module (TPM).



BIOS Menu 5: Trusted Computing

➔ **Security Device Support [Enable]**

Use the **Security Device Support** option to configure the BIOS support for the security device.

➔ **Disable** BIOS support for the security device is disabled.

➔ **Enable** **DEFAULT** BIOS support for the security device is enabled.

➔ **Pending operation [None]**

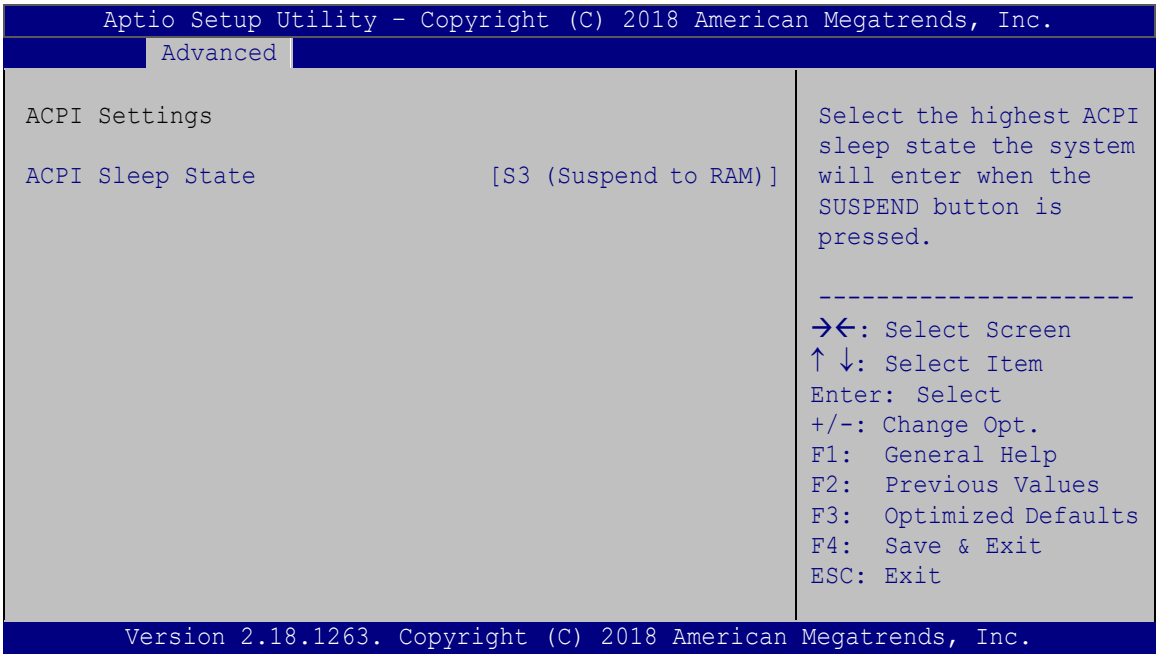
Use the **Pending operation** option to schedule an operation for the security device.

➔ **None** **DEFAULT** No operation is scheduled.

➔ **TPM Clear** Clears the TPM

4.3.4 ACPI Settings

The **ACPI Settings** menu (_**BIOS Menu 6**) configures the Advanced Configuration and Power Interface (ACPI) options.



BIOS Menu 6: ACPI Configuration

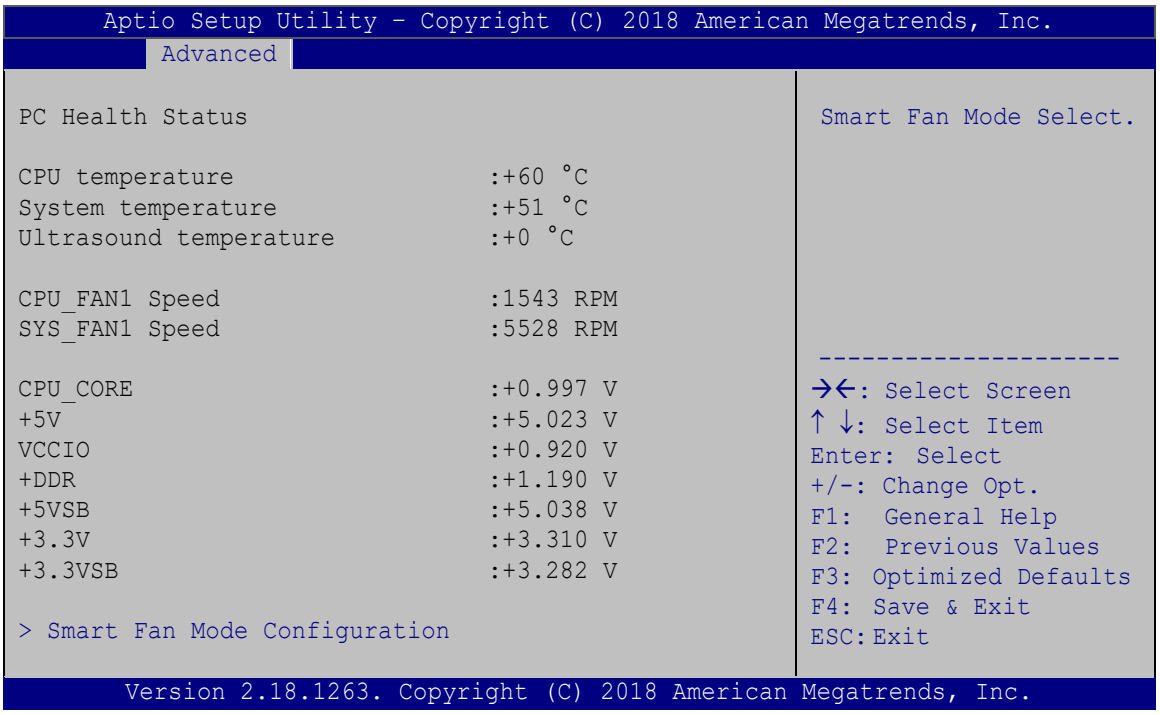
➔ **ACPI Sleep State [S3 (Suspend to RAM)]**

Use the **ACPI Sleep State** option to specify the sleep state the system enters when it is not being used.

➔ **S3 only (Suspend to RAM)** **DEFAULT** The caches are flushed and the CPU is powered off. Power to the RAM is maintained. The computer returns slower to a working state, but more power is saved.

4.3.5 iWDD H/W Monitor

The iWDD H/W Monitor menu (**BIOS Menu 7**) shows the operating temperature.



BIOS Menu 7: iWDD H/W Monitor

➔ **PC Health Status**

The following system parameters and values are shown. The system parameter that is monitored is:

- System Temperatures:
  - CPU Temperature
  - System Temperature
  - Ultrasound Temperature
- Fan Speeds:
  - CPU Fan Speed
  - System Fan Speed
- Voltages:
  - CPU_CORE
  - +5V

- VCCIO
- DDR
- +5VSB
- +3.3V
- +3.3VSB

4.3.5.1 Smart Fan Mode Configuration

Use the **Smart Fan Mode Configuration** submenu (**BIOS Menu 8**) to configure the system fan temperature and speed settings.

```
Aptio Setup Utility – Copyright (C) 2018 American Megatrends, Inc.
        Advanced
Smart Fan Mode Configuration                    Smart Fan Mode Select

CPU_FAN1 Smart Fan Control1      [Auto Mode]
Auto mode fan start temperature  50
Auto mode fan off temperature    20
Auto mode fan start PWM          10
Auto mode fan slope PWM          3

SYS_FAN1 Smart Fan Control2      [Auto Mode]
Auto mode fan start temperature  50
Auto mode fan off temperature    20
Auto mode fan start PWM          10
Auto mode fan slope PWM          3

                                 ---------------------
                                 →←: Select Screen
                                 ↑ ↓: Select Item
                                 Enter: Select
                                 +/-: Change Opt.
                                 F1: General Help
                                 F2: Previous Values
                                 F3: Optimized Defaults
                                 F4: Save & Exit
                                 ESC: Exit
Version 2.18.1263. Copyright (C) 2018 American Megatrends, Inc.
```

BIOS Menu 8: Smart Fan Mode Configuration

➔ **CPU_FAN1 Smart Fan Control/SYS_FAN1 Smart Fan Control [Auto Mode]**

Use the **CPU_FAN1 Smart Fan Control/SYS_FAN1 Smart Fan Control** option to configure the CPU/System Smart Fan.

➔ **Manual Mode**		The fan spins at the speed set in Manual Mode settings.
➔ **Auto Mode**	**DEFAULT**	The fan adjusts its speed using Auto Mode settings.

The following options can only be set if the CPU/SYS Smart Fan Control option is set to Auto Mode.

➔ **Auto mode fan start temperature**

If the CPU temperature is between **fan off** and **fan start**, the fan speed change to **fan start PWM**. To set a value, Use the + or – key to change the value or enter a decimal number between 1 and 100.

➔ **Auto mode fan off temperature**

If the CPU temperature is lower than the value set this option, the fan speed change to be lowest. To set a value, Use the + or – key to change the value or enter a decimal number between 1 and 100.

➔ **Auto mode fan start PWM**

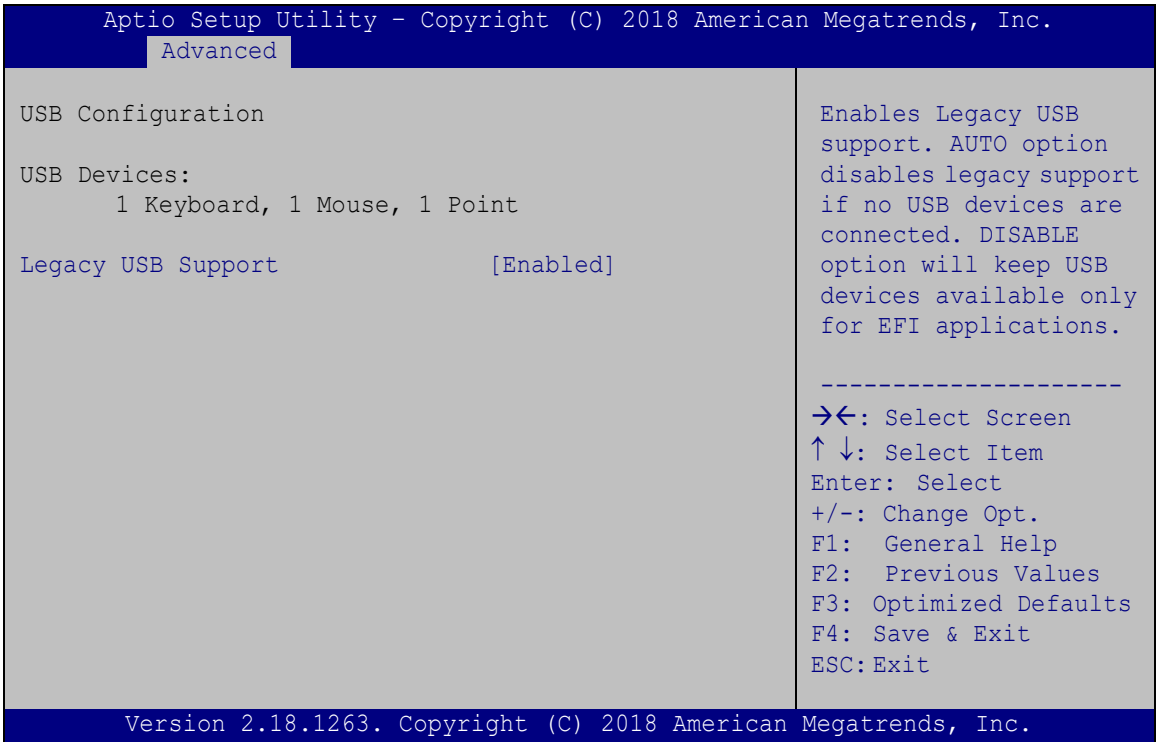
Use the **Auto mode fan start PWM** option to set the PWM start value. Use the + or – key to change the value or enter a decimal number between 1 and 100.

➔ **Auto mode fan slope PWM**

Use the Auto mode fan slope PWM option to select the linear rate at which the PWM mode increases with respect to an increase in temperature. Use the + or – key to change the value or enter a decimal number between 1 and 8.

4.3.6 USB Configuration

Use the **USB Configuration** menu (**BIOS Menu 9**) to read USB configuration information and configure the USB settings.



BIOS Menu 9: USB Configuration

➔ **USB Devices**

The **USB Devices Enabled** field lists the USB devices that are enabled on the system.

➔ **Legacy USB Support [Enabled]**

Use the **Legacy USB Support** BIOS option to enable USB mouse and USB keyboard support. Normally if this option is not enabled, any attached USB mouse or USB keyboard does not become available until a USB compatible operating system is fully booted with all USB drivers loaded. When this option is enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB driver loaded onto the system.

➔	**Enabled**	**DEFAULT**	Legacy USB support enabled
➔	**Disabled**		Legacy USB support disabled
➔	**Auto**		Legacy USB support disabled if no USB devices are connected

4.4 Chipset

Use the **Chipset** menu (**BIOS Menu 10**) to access the PCH and System Agent (SA) configuration menus.

WARNING!

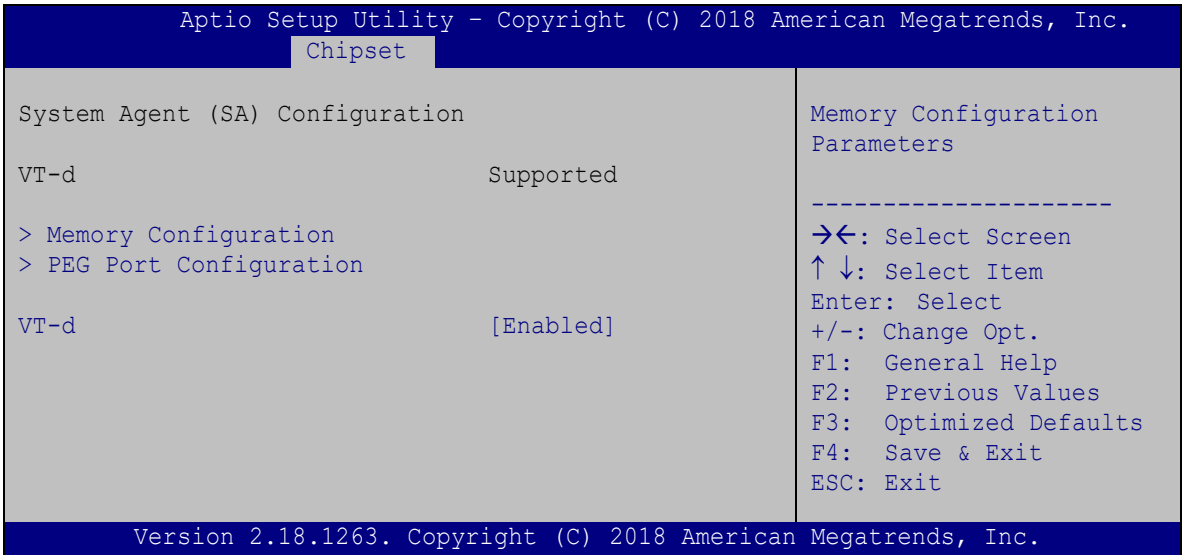
Setting the wrong values for the Chipset BIOS selections in the Chipset BIOS menu may cause the system to malfunction.

```
      Aptio Setup Utility – Copyright (C) 2018 American Megatrends, Inc.
  Main    Advanced   Chipset   Security    Boot    Save & Exit

> System Agent (SA) Configuration                  System Agent (SA)
> PCH-IO Configuration                             Parameters


                                                   ----------------------
                                                   →←: Select Screen
                                                   ↑ ↓: Select Item
                                                   Enter: Select
                                                   +/-: Change Opt.
                                                   F1:  General Help
                                                   F2:  Previous Values
                                                   F3: Optimized Defaults
                                                   F4: Save & Exit
                                                   ESC: Exit
      Version 2.18.1263. Copyright (C) 2018 American Megatrends, Inc.
```

BIOS Menu 10: Chipset

4.4.1 System Agent (SA) Configuration

Use the **System Agent (SA) Configuration** menu (**BIOS Menu 11**) to configure the System Agent (SA) parameters.



BIOS Menu 11: System Agent (SA) Configuration

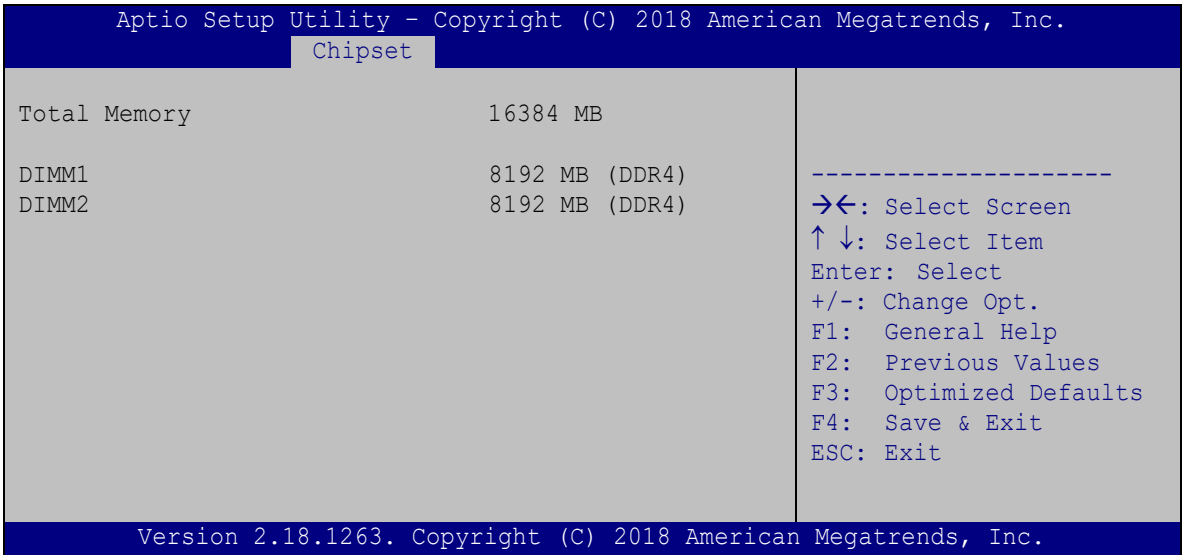
➔ **VT-d [Enabled]**

Use the **VT-d** option to enable or disable VT-d support.

➔	**Disabled**		Disables VT-d support.
➔	**Enabled**	**DEFAULT**	Enables VT-d support.

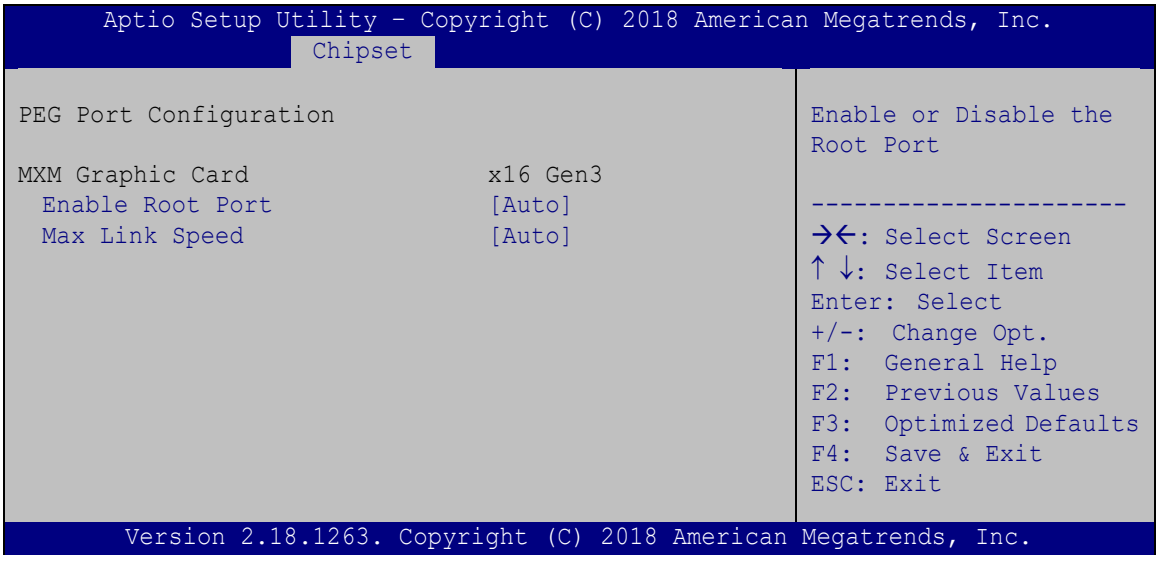
4.4.1.1 Memory Configuration

Use the **Memory Configuration** menu (**BIOS Menu 12**) to display the memory information.



BIOS Menu 12: Memory Configuration

4.4.1.2 PEG Port Configuration



BIOS Menu 13: PEG Port Configuration

➔ **Enable Root Port [Auto]**

Use the **Enable Root Port** option to enable or disable the PCI Express (PEG) controller.

➔ **Disabled**		Disables the PCI Express (PEG) controller.
➔ **Enabled**		Enables the PCI Express (PEG) controller.
➔ **Auto**	**DEFAULT**	PCI Express (PEG) controller is automatically detected and enabled.

➔ **Max Link Speed [Auto]**

Use the **Max Link Speed** option to select the maximum link speed of the PCI Express slot. The following options are available:

- Auto **Default**
- Gen1
- Gen2
- Gen3

4.4.2 PCH-IO Configuration

Use the **PCH-IO Configuration** menu (**BIOS Menu 14**) to configure the PCH IO settings.

```
Aptio Setup Utility – Copyright (C) 2018 American Megatrends, Inc.
                    Chipset
PCH-IO Configuration                          Configure PCIe Speed

PCI Express Configuration                     ---------------------
M2_A1 Slot                                    →←: Select Screen
PCIe Speed                    [Auto]          ↑ ↓: Select Item
Detect Non-Compliance Device  [Disabled]      Enter: Select
                                              +/-: Change Opt.
HD Audio Subsystem Configuration Settings     F1:  General Help
HD Audio                      [Auto]          F2:  Previous Values
                                              F3: Optimized Defaults
Power Saving Function(EUP)    [Enabled]       F4: Save & Exit
                                              ESC: Exit
Version 2.18.1263. Copyright (C) 2018 American Megatrends, Inc.
```

BIOS Menu 14: PCH-IO Configuration

➔ **PCIe Speed [Auto]**

Use this option to select the support type of the PCI Express slot (M2_A1). The following options are available:

- Auto **Default**
- Gen1
- Gen2
- Gen3

➔ **Detect Non-Compliance Device [Disabled]**

Use the **Detect Non-Compliance Device** option to configure whether to detect if a non-compliance PCI Express device is connected to the PCI Express port.

➔ **Disabled** **DEFAULT** Do not detect if a non-compliance PCI Express device is connected to the PCI Express port.

➔ **Enabled** Detect if a non-compliance PCI Express device is connected to the PCI Express port.

➔ **HD Audio [Auto]**

The **HD Audio** option enables or disables the High Definition Audio controller.

➔ **Disabled** The onboard HD Audio controller is disabled.

➔ **Enabled** The onboard HD Audio controller is enabled.

➔ **Auto** **DEFAULT** The onboard HD Audio controller is detected automatically and enabled

➔ **Power Saving Function(ERP) [Enabled]**

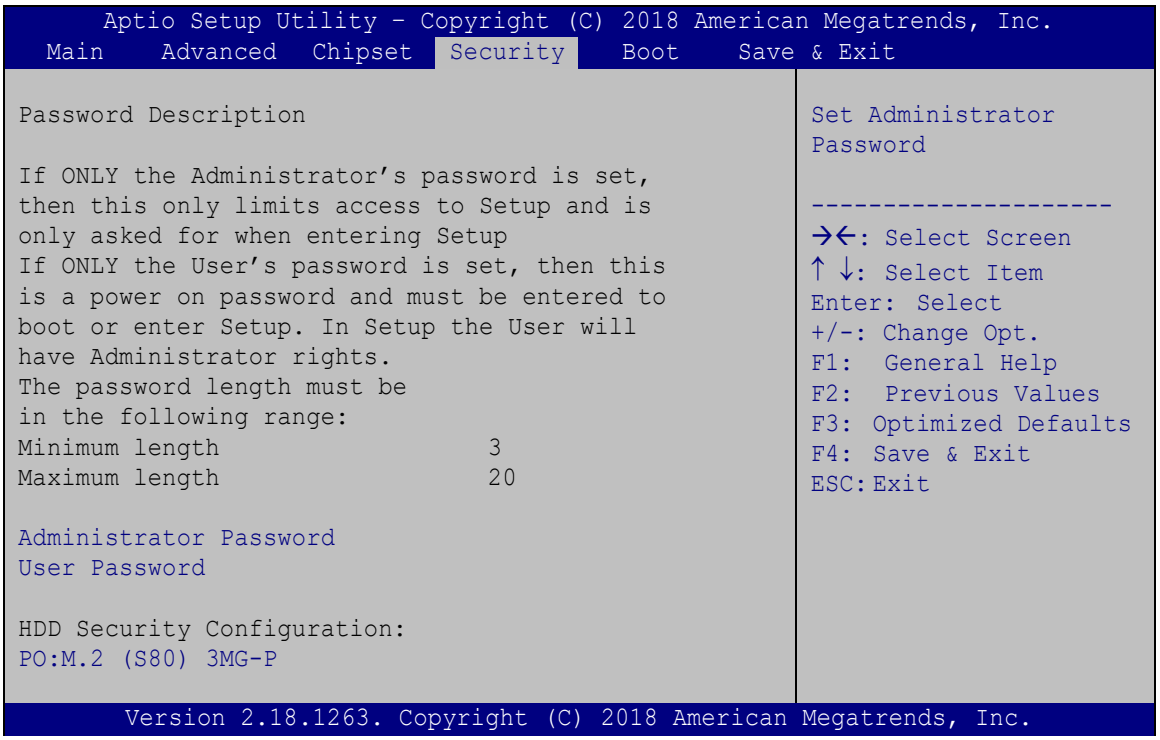
Use the **Power Saving Function** BIOS option to enable or disable the power saving function.

➔ **Disabled** Power saving function is disabled.

➔ **Enabled** **DEFAULT** Power saving function is enabled. It will reduce power consumption when the system is off.

4.5 Security

Use the **Security** menu (**BIOS Menu 15**) to set system and user passwords.



BIOS Menu 15: Security

➔ **Administrator Password**

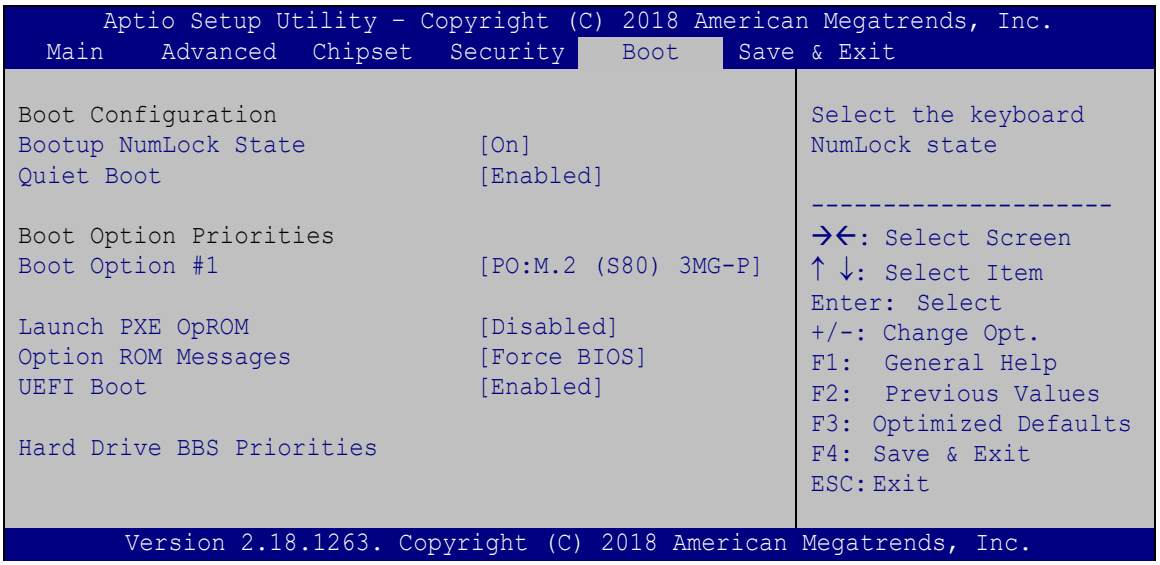
Use the **Administrator Password** to set or change a administrator password.

➔ **User Password**

Use the **User Password** to set or change a user password.

4.6 Boot

Use the **Boot** menu (**BIOS Menu 16**) to configure system boot options.



BIOS Menu 16: Boot

➔ **Bootup NumLock State [On]**

Use the **Bootup NumLock State** BIOS option to specify if the number lock setting must be modified during boot up.

➔ **On** **DEFAULT** Allows the Number Lock on the keyboard to be enabled automatically when the computer system boots up. This allows the immediate use of the 10-key numeric keypad located on the right side of the keyboard. To confirm this, the Number Lock LED light on the keyboard is lit.

➔ **Off** Does not enable the keyboard Number Lock automatically. To use the 10-keys on the keyboard, press the Number Lock key located on the upper left-hand corner of the 10-key pad. The Number Lock LED on the keyboard lights up when the Number Lock is engaged.

➔ **Quiet Boot [Enabled]**

Use the **Quiet Boot** BIOS option to select the screen display when the system boots.

➔ **Disabled**		Normal POST messages displayed
➔ **Enabled**	**DEFAULT**	OEM Logo displayed instead of POST messages

➔ **Launch PXE OpROM [Disabled]**

Use the **Launch PXE OpROM** option to enable or disable boot option for legacy network devices.

➔ **Disabled**	**DEFAULT**	Ignore all PXE Option ROMs
➔ **Enabled**		Load PXE Option ROMs.

➔ **Option ROM Messages [Force BIOS]**

Use the **Option ROM Messages** option to set the Option ROM display mode.

➔ **Force BIOS**	**DEFAULT**	Sets display mode to force BIOS.
➔ **Keep Current**		Sets display mode to current.

➔ **UEFI Boot [Enabled]**

Use the **UEFI Boot** option to enable or disable to boot from the UEFI devices.

➔ **Enabled**	**DEFAULT**	Boot from UEFI devices is enabled.
➔ **Disabled**		Boot from UEFI devices is disabled.

➔ **Boot Option #1 [PO:M.2 (S80) 3MG-P]**

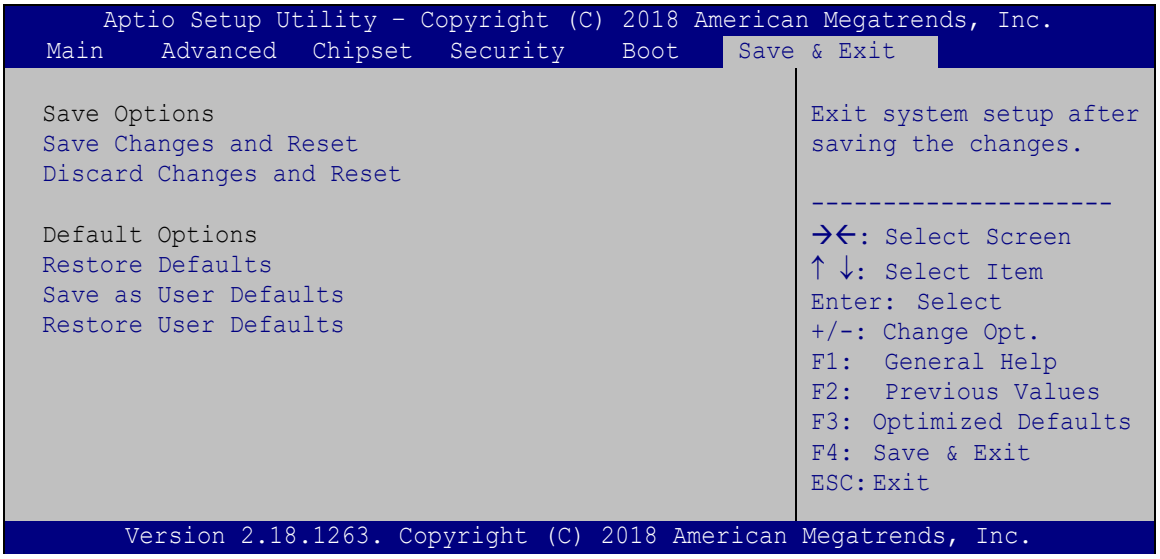
Use the **Boot Option #1** option to specify the boot priority from the available devices.

➔ **Hard Drive BBS Priorities**

Use the **Hard Drive BBS Priorities** option to set the order of the legacy devices in this group.

4.7 Save & Exit

Use the **Save & Exit** menu (_**BIOS Menu 17**) to load default BIOS values, optimal failsafe values and to save configuration changes.



BIOS Menu 17:Exit

➔ **Save Changes and Reset**

Use the **Save Changes and Reset** option to save the changes made to the BIOS options and to exit the BIOS configuration setup program.

➔ **Discard Changes and Reset**

Use the **Discard Changes and Reset** option to exit the system without saving the changes made to the BIOS configuration setup program.

➔ **Restore Defaults**

Use the **Restore Defaults** option to load the optimal default values for each of the parameters on the Setup menus. **F3 key can be used for this operation.**

➔ **Save as User Defaults**

Use the **Save as User Defaults** option to save the changes done so far as user defaults.

➔ **Restore User Defaults**

Use the **Restore User Defaults** option to restore the user defaults to all the setup options.

Appendix

A

Regulatory Compliance

DECLARATION OF CONFORMITY

CE

This equipment is in conformity with the following EU directives:

- EMC Directive (2014/30/EU)
- Low-Voltage Directive (2014/35/EU)
- RoHS II Directive (2011/65/EU, 2015/863/EU)

If the user modifies and/or install other devices in the equipment, the CE conformity declaration may no longer apply.

If this equipment has telecommunications functionality, it also complies with the requirements of the R&TTE Directive 1999/5/EC.

English IEI Integration Corp declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Български [Bulgarian] IEI Integration Corp. декларира, че този оборудване е в съответствие със съществените изисквания и другите приложими правила на Директива 1999/5/EC.
Česky [Czech] IEI Integration Corp tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish] IEI Integration Corp erklærer herved, at følgende udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German] IEI Integration Corp, erklärt dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.
Eesti [Estonian] IEI Integration Corp deklareerib seadme seadme vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Español [Spanish] IEI Integration Corp declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek] IEI Integration Corp ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French] IEI Integration Corp déclare que l'appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian] IEI Integration Corp dichiara che questo apparecchio è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian] IEI Integration Corp deklarē, ka iekārta atbilst būtiskajām prasībām un citiem ar to saistītajiem noteikumiem Direktīvas 1999/5/EK.
Lietuvių [Lithuanian] IEI Integration Corp deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch] IEI Integration Corp dat het toestel toestel in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese] IEI Integration Corp jiddikjara li dan prodott jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian] IEI Integration Corp nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish] IEI Integration Corp oświadcza, że wyrobu jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese] IEI Integration Corp declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Româna [Romanian] IEI Integration Corp declară că acest echipament este in conformitate cu cerinţele esenţiale şi cu celelalte prevederi relevante ale Directivei 1999/5/CE.
Slovensko [Slovenian] IEI Integration Corp izjavlja, da je ta opreme v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak] IEI Integration Corp týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish] IEI Integration Corp vakuuttaa täten että laitteet on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish] IEI Integration Corp förklarar att denna utrustningstyp står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

FCC WARNING

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

ROHS STATEMENT

The label on the product indicates this product conforms to European (EU) Restriction of Hazardous Substances (RoHS) that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

CHINA ROHS

The label on the product indicates the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Appendix

B

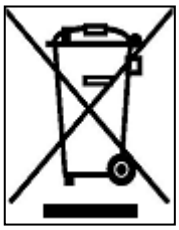
Product Disposal

CAUTION:

Risk of explosion if battery is replaced by an incorrect type. Only certified engineers should replace the on-board battery.

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union–The device that produces less waste and is easier to recycle is classified as electronic device in terms of the European Directive 2012/19/EU (WEEE), and must not be disposed of as domestic garbage.



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

Appendix

C

Maintenance and Cleaning Precautions

When maintaining or cleaning the TRN-TABLET3, please follow the guidelines below.

WARNING:

If you dropped any material or liquid such as water onto the tablet when cleaning, unplug the power cable immediately and contact your dealer or the nearest service center. Always make sure your hands are dry when unplugging the power cable.

CAUTION:

- For safety reasons, turn-off the power switch and unplug the tablet before cleaning.
- Do not scratch or rub the screen with a hard object.
- Never use any of the following solvents on the tablet. Harsh chemicals may cause damage to the cabinet and the touch sensor. **Thinner Spray-type cleaner, Benzene, Wax, Abrasive cleaner, Acid or Alkaline solvent.**

C.1.1 Maintenance and Cleaning

Prior to cleaning any part or component of the TRN-TABLET3, please read the details below.

- To clean the TRN-TABLET3,
  - remove dirt with a lightly moistened cloth. Then wipe the external chassis with a soft dry cloth.
  - use 75% ethanol alcohol to clean the external chassis.
- Except for the LCD panel, never spray or squirt liquids directly onto any other components.
- The interior of the TRN-TABLET3 does not require cleaning. Keep fluids away from the TRN-TABLET3 interior.
- Never drop any objects or liquids through the openings of the TRN-TABLET3.

C.1.2 Cleaning Tools

Some components in the TRN-TABLET3 may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the TRN-TABLET3.

- ***Cloth*** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the TRN-TABLET3.
- ***Water/Ethanol alcohol*** – A cloth moistened with water or 75% ethanol alcohol can be used to clean the TRN-TABLET3.
- ***Using solvents*** – The use of solvents is not recommended when cleaning the TRN-TABLET3 as they may damage the plastic parts.
- ***Cotton swabs*** - Cotton swaps moistened with water are excellent tools for wiping hard to reach areas.
- ***Foam swabs*** - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

D

Symbol Definitions

The following symbols appear on the product, its labeling, or the product packing. Each symbol carries a special definition, as defined below:

	This side up
	Consult the operating instructions
	Fragile, handle with care
	Keep dry
	Refer to instruction manual
	Indicates the manufacturer
	Indicates proof of conformity to applicable European Economic Community Council directives and to harmonized standards published in the official journal of the European Communities.
	Tested to comply with FCC Class B standard.
	This symbol indicates that the waste of electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or other authorized disposal company to decommission your equipment.
	This product is recyclable.

Appendix

E

BIOS Options

Below is a list of BIOS configuration options in the BIOS chapter.

System Date [xx/xx/xx] 22
System Time [xx:xx:xx] 23
Active Processor Cores [All] 24
Intel (VMX) Virtualization Technology [Enabled] 25
Hyper-threading [Enabled] 25
Intel(R) SpeedStep(tm) [Enabled] 25
SATA Controller(s) [Enabled] 26
SATA Mode Selection [AHCI] 26
Security Device Support [Enable] 27
Pending operation [None] 27
ACPI Sleep State [S3 (Suspend to RAM)] 28
PC Health Status 29
CPU_FAN1 Smart Fan Control/SYS_FAN1 Smart Fan Control [Auto Mode] 30
Auto mode fan start temperature 31
Auto mode fan off temperature 31
Auto mode fan start PWM 31
Auto mode fan slope PWM 31
USB Devices 32
Legacy USB Support [Enabled] 32
VT-d [Enabled] 34
Enable Root Port [Auto] 36
Max Link Speed [Auto] 36
PCIe Speed [Auto] 37
Detect Non-Compliance Device [Disabled] 37
HD Audio [Auto] 37
Power Saving Function(ERP) [Enabled] 37
Administrator Password 38
User Password 38
Bootup NumLock State [On] 39
Quiet Boot [Enabled] 40
Launch PXE OpROM [Disabled] 40
Option ROM Messages [Force BIOS] 40
UEFI Boot [Enabled] 40

Boot Option #1 [PO:M.2 (S80) 3MG-P] 40
Hard Drive BBS Priorities 41
Save Changes and Reset 41
Discard Changes and Reset 41
Restore Defaults 41
Save as User Defaults 42
Restore User Defaults 42

Appendix

F

Hazardous Materials Disclosure

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to below table.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	O	O	O	O	O	O
Display	O	O	O	O	O	O
Printed Circuit Board	O	O	O	O	O	O
Metal Fasteners	O	O	O	O	O	O
Cable Assembly	O	O	O	O	O	O
Fan Assembly	O	O	O	O	O	O
Power Supply Assemblies	O	O	O	O	O	O
Battery	O	O	O	O	O	O

O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).

X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签，此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	O	O	O	O	O	O
显示	O	O	O	O	O	O
印刷电路板	O	O	O	O	O	O
金属螺帽	O	O	O	O	O	O
电缆组装	O	O	O	O	O	O
风扇组装	O	O	O	O	O	O
电力供应组装	O	O	O	O	O	O
电池	O	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求。