



ELUKTRONICS

User Manual

MECH-15 G3

Notice

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The illustrations in this user's manual are for reference only. Actual product specifications may vary with territories.

The information in this user's manual is subject to change without notice.

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Chapter 1

Preface

1.1 Regulations Information

α CE compliance

This device is classed as a technical information equipment (ITE) in class B and is intended for use in living room and office. The CE-mark approves the conformity by the EU-guidelines:

- EMC Directive 2014/30/EU,
- Low Voltage Directive 2014/35/EU(equals A2 : 2013) ,
- RF Directive 2014/53/EU



The unit can be operated at an ambient temperature of max. 35°C (95°F). Do not subject it to temperatures below 5°C (41°F) or above 40°C (104 °F).

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.



PREVENTION OF HEARING LOSS

CAUTION: Listening to music at high volume levels and for extended durations can damage one's hearing. In order to reduce the risk of damage to hearing, one should lower the volume to a safe, comfortable level, and reduce the amount of time listening at high levels. Headsets should comply with EN 50332-2 requirements.



FCC Information

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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 or more 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.



CAUTION: Any changes or modifications not expressly approved by the manufacturer of this device could void the warranty if damage is determined from any form of modification.

RF Exposure Information(SAR)

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the EUT transmitting at the specified power level in different channels.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of www.fcc.gov/eot/ea/fccid after searching on FCC ID: 2AKHFAX201NG .

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

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

1.2 Safety Instructions



- 1** Do not apply heavy pressure to the computer or subject it to any form of strong impact as this can damage the computer's components or otherwise cause it to malfunction.
- 2** Never cover or block the air vents including those located at the base of the computer. Never cover your computer or AC adapter with any object.
- 3** To keep your computer in prime operating condition, protect your work area from direct sunlight.
- 4** Do NOT expose to or use near liquid, rain, or moisture.
Do NOT use the modem during electrical storms.
- 5** Do not use or expose this device around magnetic fields as magnetic interference may affect the performance of the device.

1.3 Important Warranty Void Notice



WARNING: This system has an advanced liquid metal thermal compound applied to the processor. This compound has been carefully applied and contained with special materials. It is very conductive and it is highly probable permanent damage will occur to your motherboard if you remove the thermal system. Damage caused from tampering with the thermal system resulting in spillage anywhere to the motherboard or unauthorized thermal modification will not be covered under warranty.



NOTE: Memory and/or storage can be easily accessed and modified on your MECH-15 G3. However, modifying your thermals is **NOT** worth the serious risk of voiding your warranty or more importantly damaging your PC.

1.4 Release History

Version	Date	Revision
1.0	04/2020	Initial release
1.1	06/2020	Phase in Liquid Metal CPU& 2070 GPU Option

Chapter 2

Getting to know the basics

2.1 Product Specification

This User's Manual provides technical information of instructions and illustrations on how to operate this notebook for the customer. Please read this manual carefully before using this notebook.

· Physical Characteristic

■ Dimension

359.8*243*23mm

2.1 KG +/- 5%

· CPU

■ Support Processor

CML-H Intel Core i7 & Core i9 (Optional)

· GPU

■ Supporting Options

NVIDIA RTX 2070 (Max-P) [N18E-G1R], 256bits

NVIDIA RTX 2070 Super (Max-P) [N18E-G2R], 256bits

NVIDIA RTX 2080 Super (Max-Q) [N18E-G3R], 256bits

· Memory

■ RAM

DDR4 2666MHz or 2933MHz

· I/O Port

DC-in	x 1
USB	USB 3.1 X 1 (Gen2) USB 3.1 X 2 (Gen1) TBT3 X 1
RJ45	x 1
HDMI	x 1
Audio out & Mic in	x 2
Card reader	x 1 SD Card reader connector type -Support SD/SDHC/SDXC card -SDCard support up to UHS-I

· Audio

- Audio Codec : Realtek ALC274-CG / AMP: Realtek ALC1306-CGT

*Azalia standard support

*D3 mode support

*Smart AMP support

- Speaker/MIC

*Built-in 2 speakers

*Speaker with smart amplifier

*Digital Microphone support

· Display

- LCD

15.6" FHD, 16:9,(Narrow)

1920x1080

· Input

■ Keyboard

mechanical keyboard RGB (343 X114.4mm) travel=2.0mm cap5backlight=
individual LED per key

■ Pointing Device

TDA1470 (114.5*70*0.8mm)

TP glass

Enable/Disable area :10mmx10mm

Palm Rejection:Support

· Communication Port

■ LAN

*Supports 10/100/1000 Mb/Sec

*PCI-E interface

*DSM (Deep sleep mode) support

■ Wireless LAN +BT

*M.2 2230 w/ CNVI interface (Intel WiFi 6 AX series)

*IEEE802.11AX mode support

· Webcam

- Infrared capability for facial recognition camera

IR CCD with D-MIC*2
underside

· Power

- AC Adapter

Automatic Voltage adjustment between 100 and 240V AC 50/60Hz,
230 Watts , (19.5V/11.8A) 3 Pins

- Battery

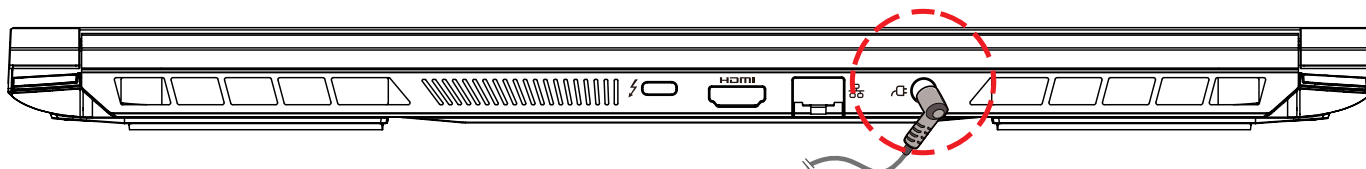
Li-polymer Battery, SW Gas Gauge IC, soft pack,
6-cell (3S2P), 8200mAh, 93.48Wh



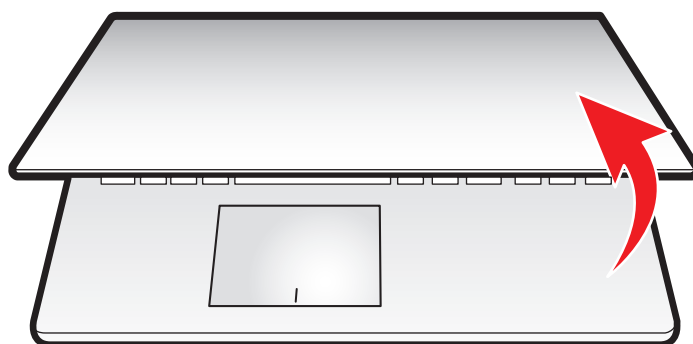
CAUTION: Attempting to use a lower wattage adapter will cause damage to the system and would not be protected under warranty.

2.2 Preparing your Computer

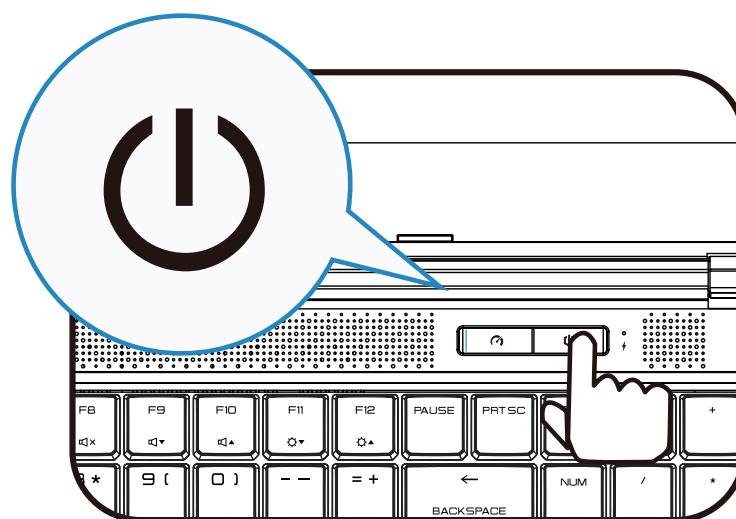
- A** Connect the AC adapter's DC output plug to the DC IN jack.



- B** The display panel can be opened to a wide range of angles for optimal viewing.



- C** Press the power button to turn on your notebook computer.



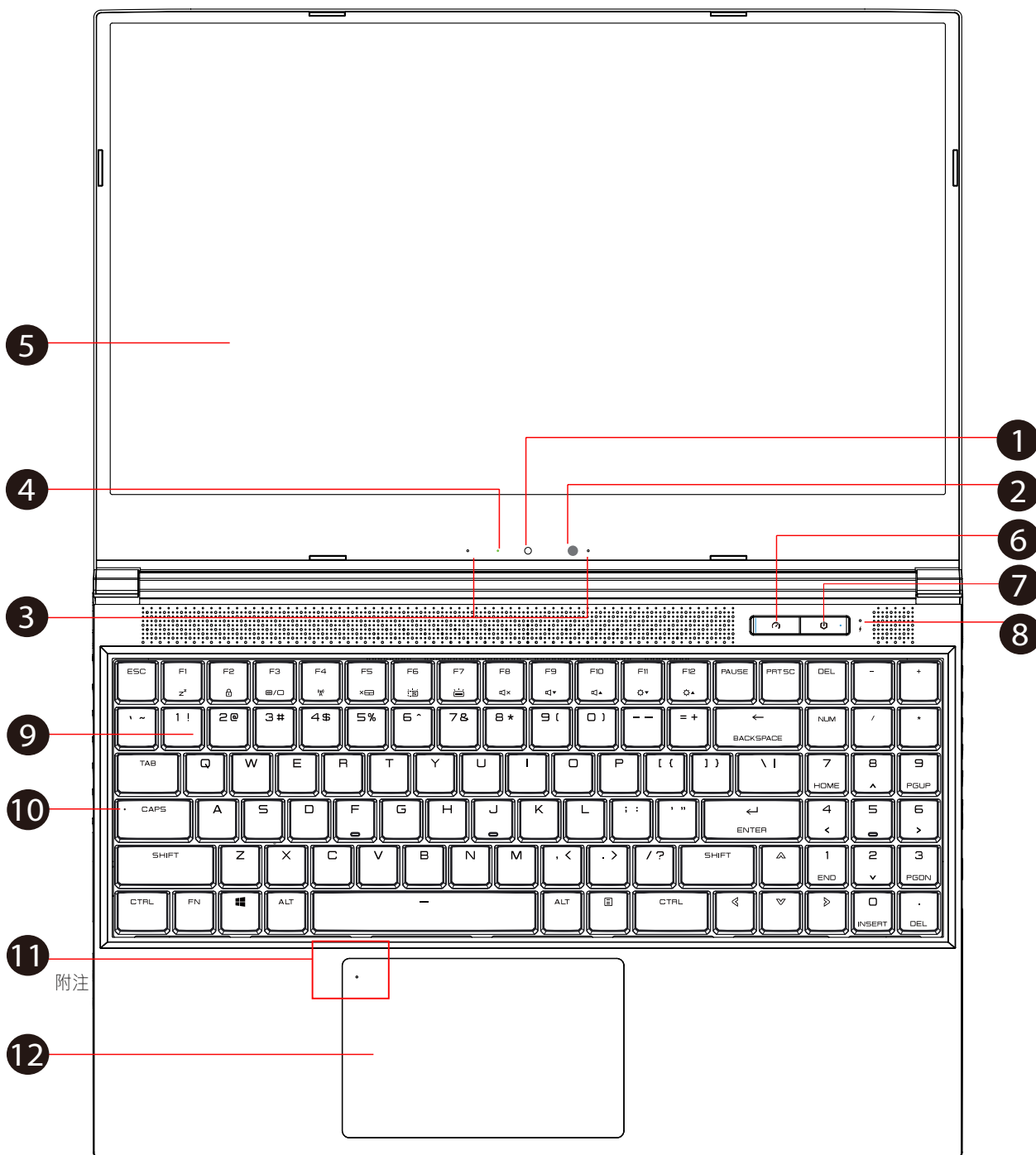
2.3 Product Overview

Please become familiar with each component before you operate the computer.

Top-Open View



NOTE: The product's color/ LED color, I/O port, indicator location, and specification can vary based on configuration.



1 Camera ○

A device that allows you to record video or take photographs with your computer.

2 Infrared capability for facial recognition camera ●

can be used to identify and authenticate user to unlock notebook, conduct payment and other security functions.

3 Microphone

Built-in microphones.

IR CCD MIC*2

4 Camera Status LED

The Camera Status LED shows the Camera status.

5 LCD screen

Displays of your notebook computer.

6 Office/Game/Beast Mode Switch

On screen display



Beast mode: Both White (Bright)



Game mode: White (Faint light)



Office mode: OFF(default)



Tip: When you are not using the computer, keep the LCD-screen closed to protect it from dust.

7 Power Button

Press this button to turn the computer's power on or off.

Power ON: White

Suspend: White, Slow / Smooth, Blinking White (3Sec/Cycle)

Power Off: OFF

8 Charging & Battery indicator



Charging(Power ON): White

Charging(Power Off): White,

Battery Low (<6%): Orange

Charging finish (w/AC): White ,(w/o AC): Off

9 Keyboard

mechanical keyboard

(The keyboard legend will depend on the spec / region)

10 Caps Lock Status LED

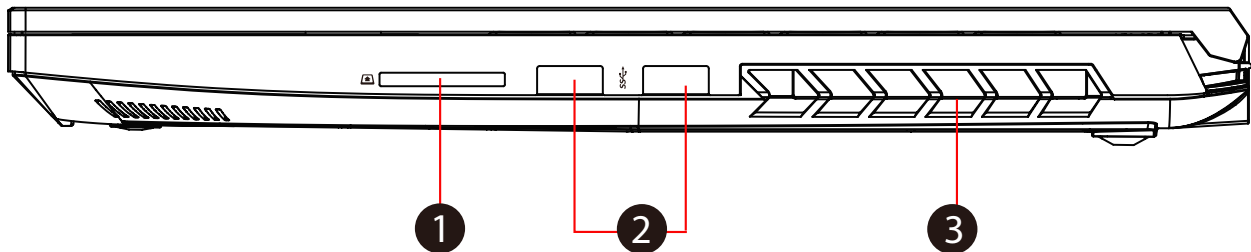
Default: ON (White)

11 Touchpad LED indicator/ Touchpad switch

12 Touchpad/Click pad

Touch-sensitive pointing device which functions like the mouse.

Right Side View



1 2 in 1 Card Reader

Insert Memory Card.

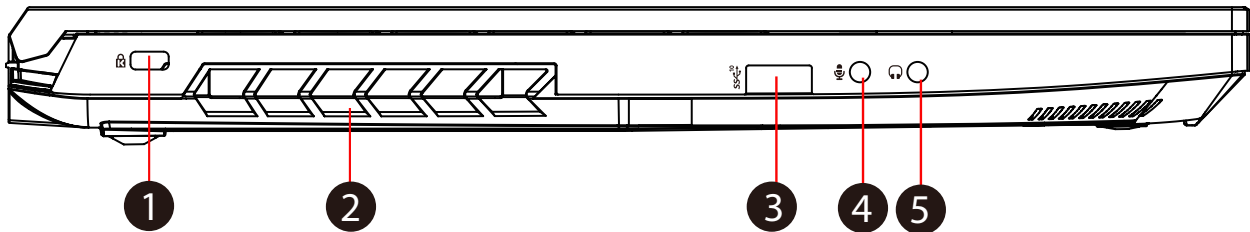
2 USB Port





Connects a USB device
(such as USB Zip drive, keyboard or mouse) into this jack.

3 Vents

The thermal vents are designed to cool the internal components and avoid overheating.

Left Side View

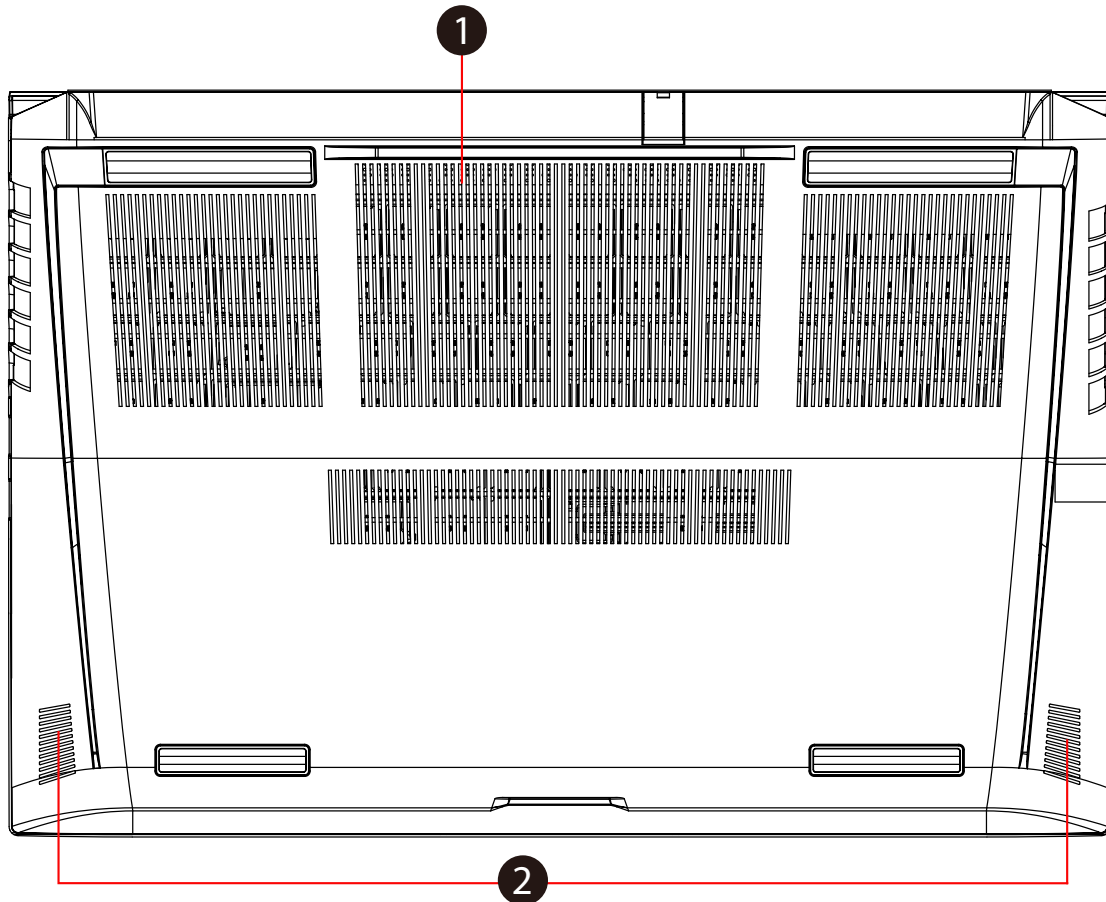


- 1 Kensington® Lock Port** 
To be secured using Kensington® Lock Port security products.
- 2 Vents**
The thermal vents are designed to cool the internal components and avoid overheating.
- 3 USB Port** 
Connects a USB device.
(such as USB Zip drive, keyboard or mouse) into this jack.
- 4 Mic In Jack** 
Connects amplified speakers, headphones or microphone into this jack.
- 5 Audio Out Jack** 
Connects amplified speakers, headphones or microphone into this jack.

Bottom Side View



NOTE : The product's thermal vent can vary based on hardware configuration.

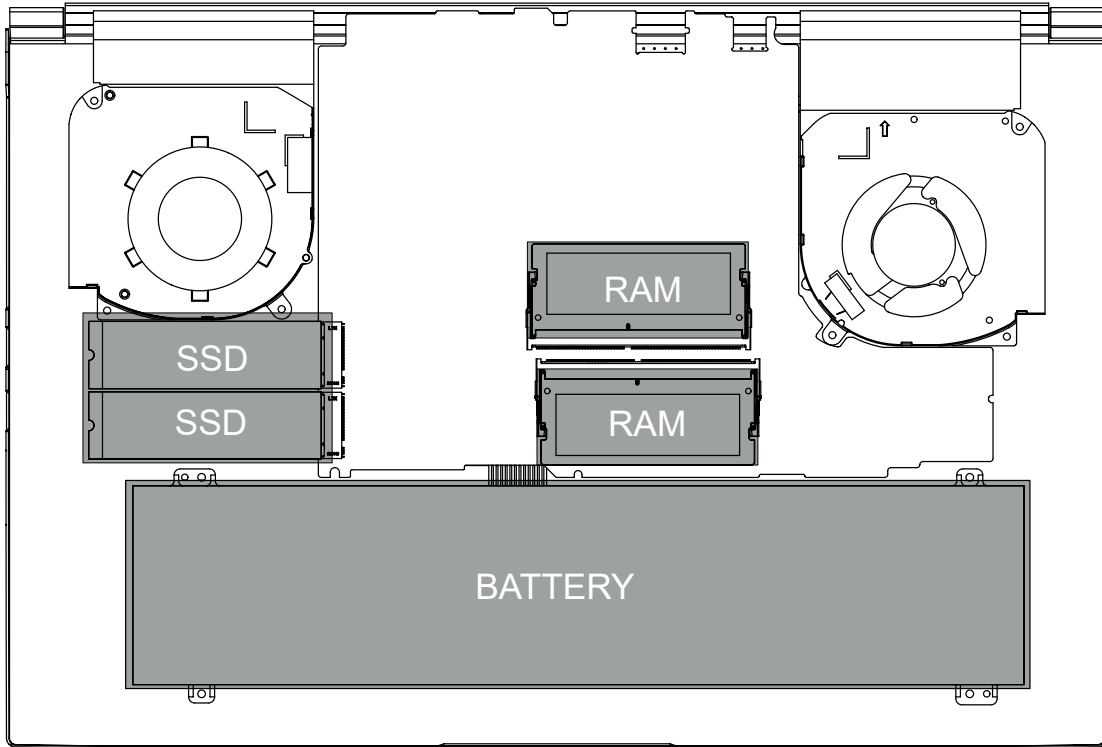


1 Vents

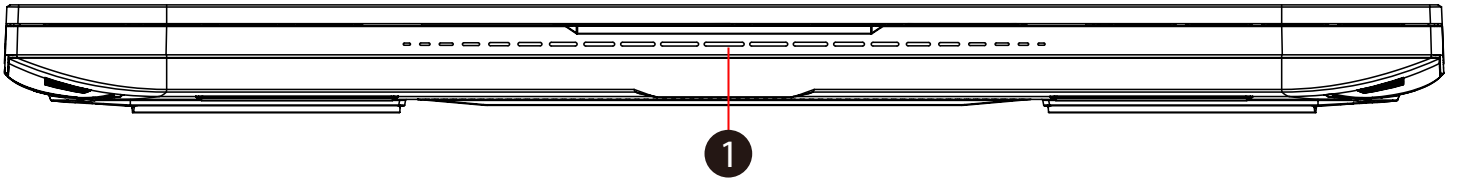
The thermal vents are designed to cool the internal components and avoid overheating.

2 Speakers

RAM / SSD (Compartment View)



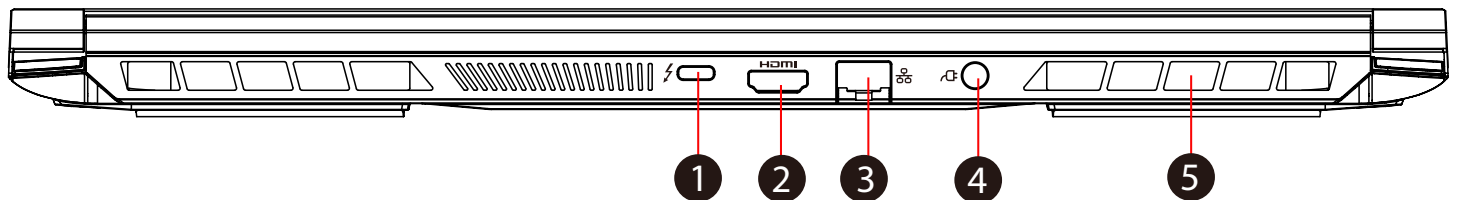
Front Side View



1 Light bar

Smart lighting color control of light bar.

Back Side View



1 Thunderbolt™ 3 ⚡

Thunderbolt™ 3 technology is 8x faster than USB 3.0 and provides 4x more video bandwidth than HDMI 1.41 helping you work and play more efficiently. It also enables a simple, single cable connection to displays, docks, and storage.

2

HDMI port **HDMI**

Connected to the screen, or home theater system.

3

Network Jack

This jack lets you connect to a LAN.

4

Power Connector

Connects the AC adapter into this connector.

5

Vents

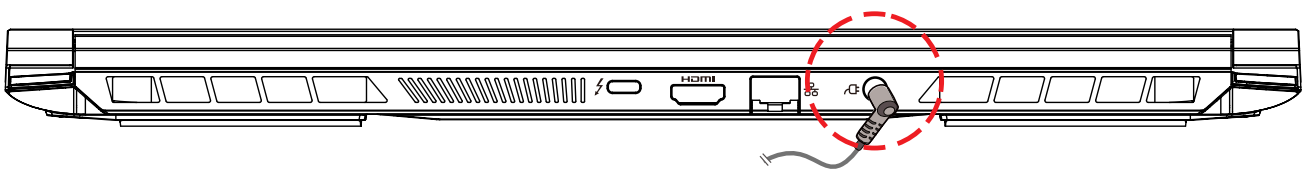
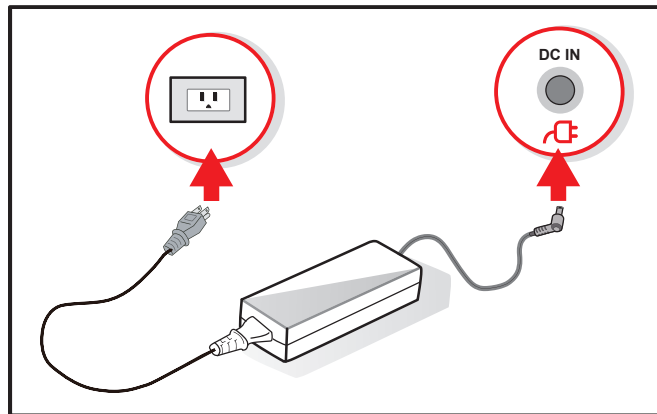
The thermal vents are designed to cool the internal components and avoid overheating.

Chapter 3

Getting started

3.1 AC Adapter

The AC adapter included with your PC was specifically designed and approved for your model. Utilization of an after-market adapter or lower wattage adapter may damage either the notebook or other devices connected to it. If damage is determined to have been caused by utilization of an unauthorized power supply, it will not be protected under warranty. Eluktronics does offer additional adapters for sale if needed.



CAUTION: The use of inferior extension cords may result in damage to your notebook. Your notebook comes with its own authorized AC adapter. Use of a different AC adapter or cable extension which is not authorized for use will void warranty protection if damage to hardware is found in association to said adapter or extension cable.

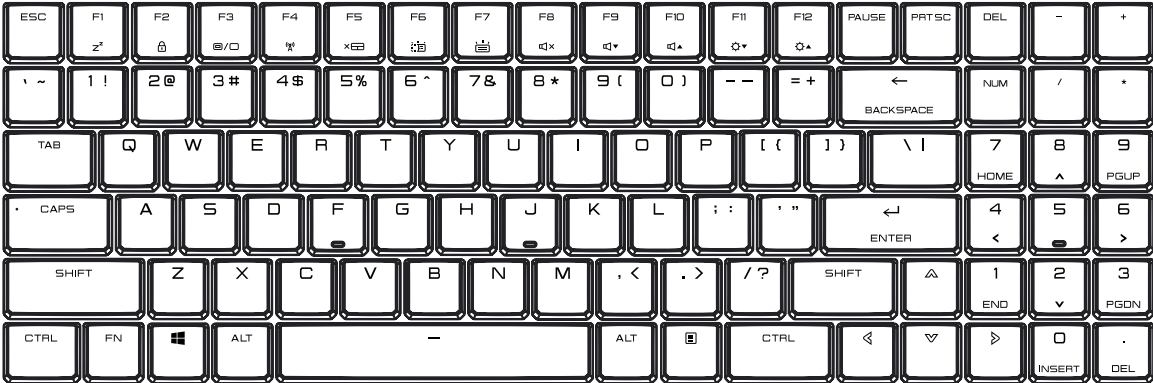


NOTE: The power adapter can become hot when in use. Please be sure the AC adapter is not covered with any materials keep it away from exposed parts of your body. The AC adapter appearance may vary depending on your region.

3.2 Knowing the Keyboard

The following defines the colored hot keys on the Keyboard.

The colored commands can only be accessed by first pressing and holding the function key while pressing a key with a colored command.


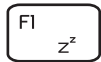



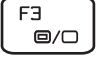






NOTE: The number of keys available on your keyboard will depend on the country/region in which the keyboard was designed and built.















3.2.1 For keyboard users

To activate these functions, press the hot key associated with the desired function as below :

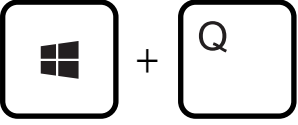
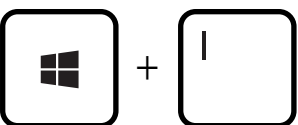

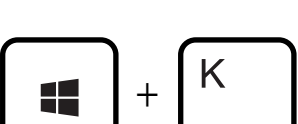
Function Keys

Keypad	Function Description
 +  Suspend:	Press this key combination (Fn+F1) to enter sleep mode.
 +  Windows Lock/On:	Press this key combination (Fn+F2) to turn Windows Lock/On .
 +  Display mode:	Press this key combination (Fn+F3) to enable Display Mode.
 +  RADIO On/Off:	Press this key combination (Fn+F4) to turn all radios on or off.
 +  Touch pad On/Off:	Press this key combination (Fn+F5) to On/Off Touch pad mode.

Function Keys

Keypad	Function Description
 + 	<p>Keyboard Brightness down: Press this key combination (Fn+F6) to decrease brightness of Keyboard.</p>
 + 	<p>Keyboard Brightness up: Press this key combination (Fn+F7) to increase brightness of Keyboard.</p>
 + 	<p>MUTE: Press this key combination (Fn+F8) to enter MUTE mode.</p>
 + 	<p>Volume down: Press this key combination (Fn+F9) to enter Volume down mode.</p>
 + 	<p>Volume up: Press this key combination (Fn+F10) to enter Volume up mode.</p>
 + 	<p>Brightness down: Press this key combination (Fn+F11) to decrease brightness of LCD display.</p>
 + 	<p>Brightness up: Press this key combination (Fn+F12) to increase brightness of LCD display.</p>

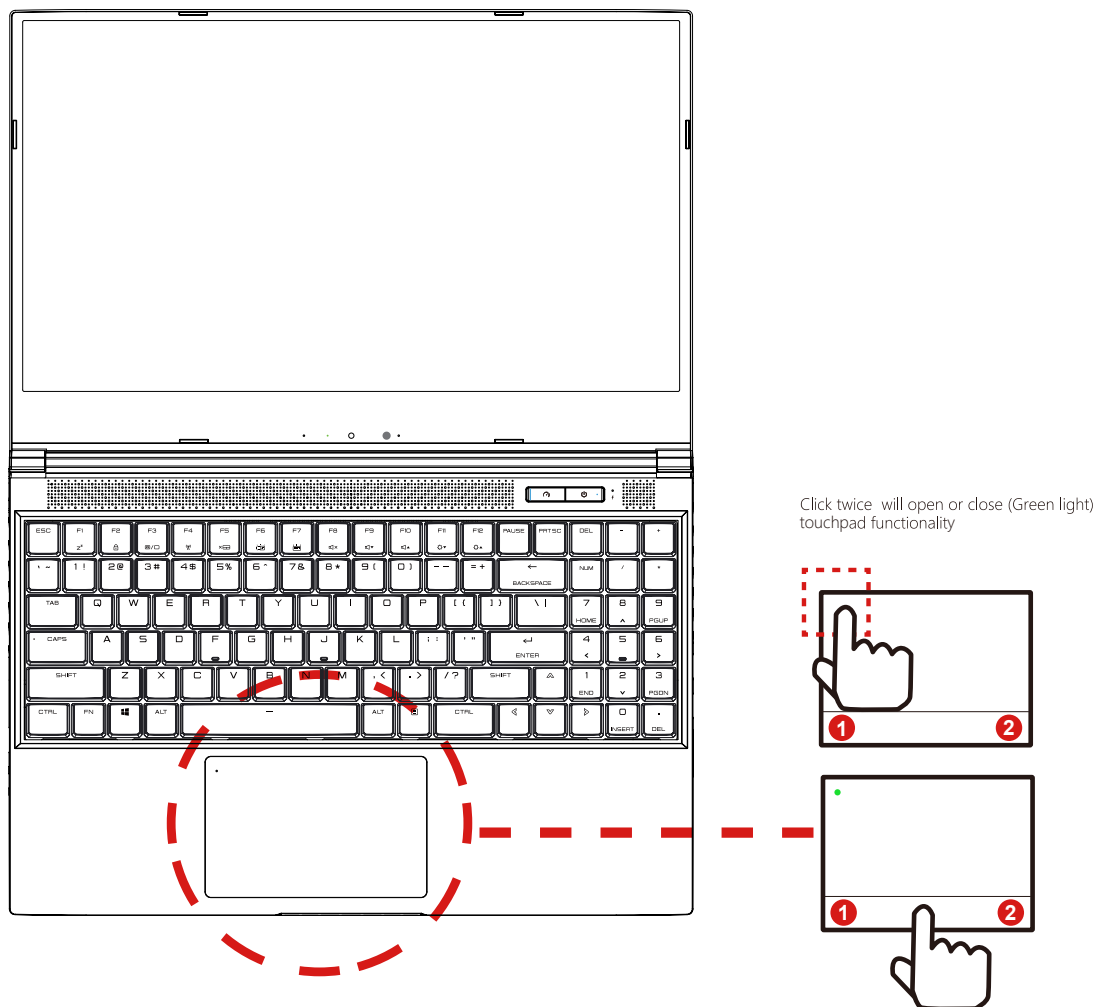
Function Keys

Keypad	Function Description
 Search Charm : (Optional)	Press this key combination (Windows logo key+Q) to open the search charm and search apps.
 Settings Charm : (Optional)	Press this key combination (Windows logo key+I) to open the settings charm.
 Share Charm : (Optional)	Press this key combination (Windows logo key+H) to open the share charm.
 Devices Charm : (Optional)	Press this key combination (Windows logo key+K) to open the devices charm.

3.3 Using the touchpad / clickpad

The touchpad / clickpad is a rectangular electronic panel located just below your keyboard. Click twice left corner will open or close (Green light) touchpad functionality. You can use the static-sensitive panel of the touchpad / clickpad and slide it to move the cursor. You can use the buttons below the touchpad as left and right mouse buttons.

Press the left **1** and right **2** buttons located on the edge of the touchpad / clickpad to make selections and run functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad / clickpad produces similar results.



Chapter 4

BIOS setup

4.1 About BIOS Setup

4.1.1 When to Use BIOS Setup ?

You may need to run the BIOS Setup when:

- An error message appears on the screen during the system booting up and is requested to run SETUP.
- You want to change the default settings for customized features.
- You want to reload the default BIOS settings.

4.1.2 How to Run BIOS Setup ?

To run the BIOS Setup Utility, turn on the notebook and press the [Del] key during the POST procedure.

If the message disappears before you respond and you still wish to enter Setup, either restart the system by turning it OFF and ON, or simultaneously pressing [Ctrl]+[Alt]+[Del] keys to restart.

Be noted that the screen snaps and setting options in this chapter are for your references only. The actual setting screens and options on your Notebook may be different because of BIOS update.

The setup function only can be invoked by pressing [Del] or [F2] key during POST that provide a approach to change some setting and configuration the user prefer, and the changed values will save in the NVRAM and will take effect after the system rebooted. The setup uses a menu interface to allow the user to configure their system and the features are briefly listed as follow.

Press [F7] key for Boot Menu.



NOTE : The drivers, BIOS and utilities bundled in the support DVD may vary by models and are subject to change without notice.

4.2 BIOS Setup Menu

Once you enter the BIOS Setup Utility, the Main Menu will appear on the screen. Select the tags to enter the other menus.

Main Menu

Show system overview about memory size and setting of system time and date.

Advanced Menu

To select the XD feature enable or disable XD feature only work with Intel platform + Windows.

Security Menu

Install or clear the password settings for supervisor and user.

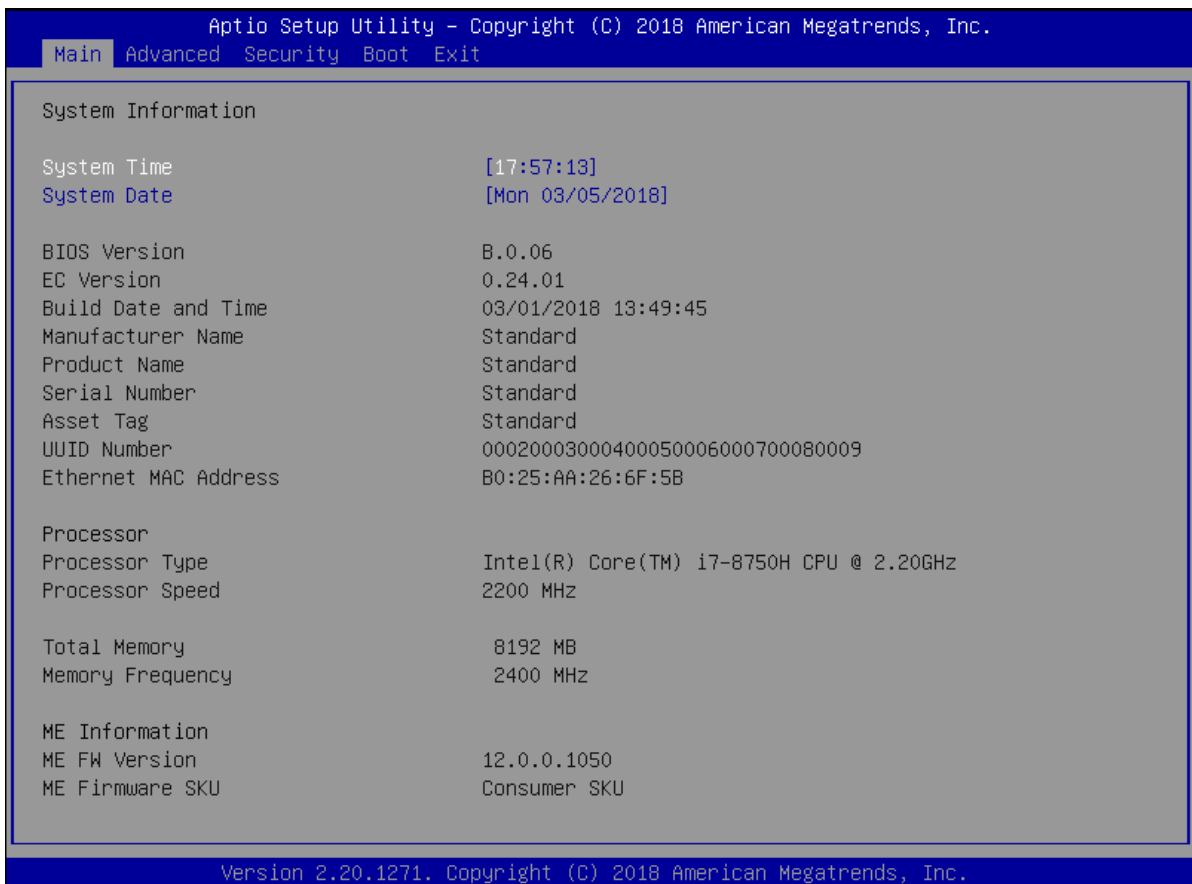
Boot Menu

Configure Settings during System Boot.

EXIT Menu

Save or discard the changes before leaving the BIOS Setup Menu.

4.2.1 Main Menu



- System Time

This item allows you to set the system time. There is a small internal (CMOS) battery which is designed to maintain your system clock. It is designed to maintain time even when the PC is powered down or in sleep mode. The time format is [hour:minute:second].

Use [+] or [-] to configure system Time.

- System Date

This item allows you to set the system date. The date format is [day:month:date:year].

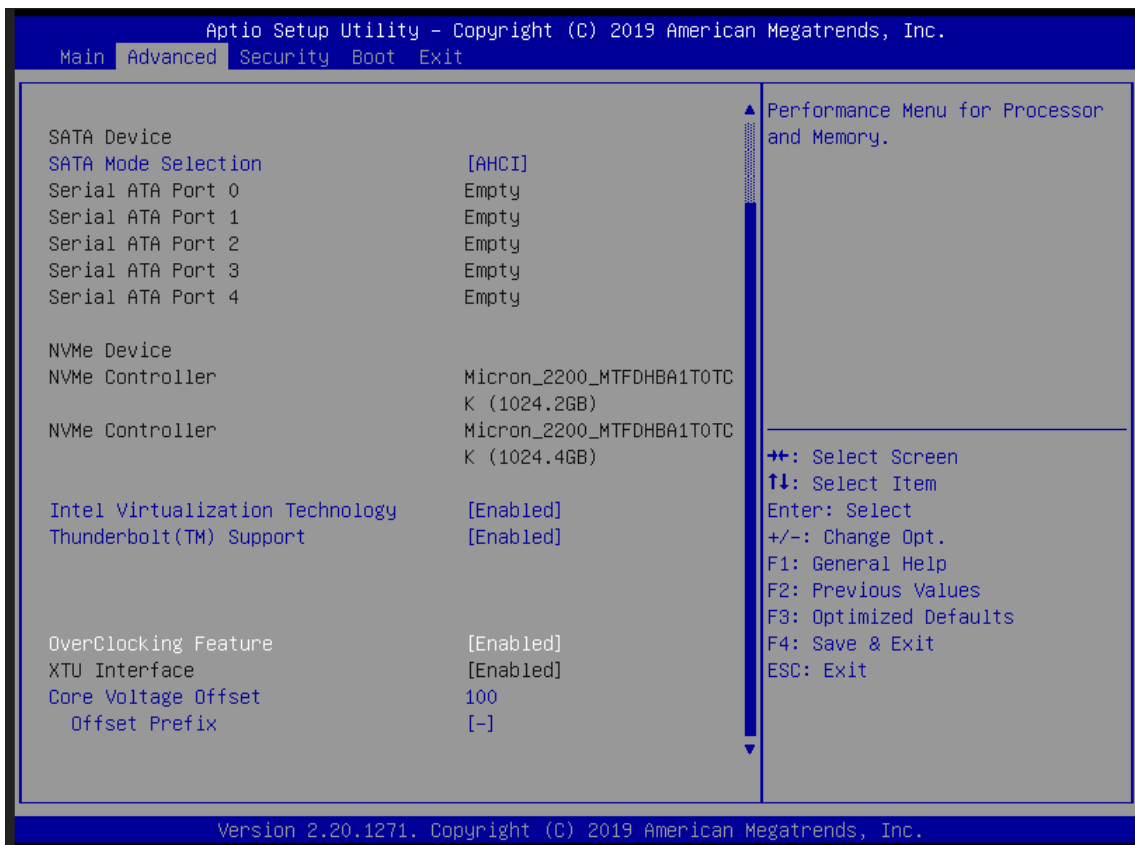
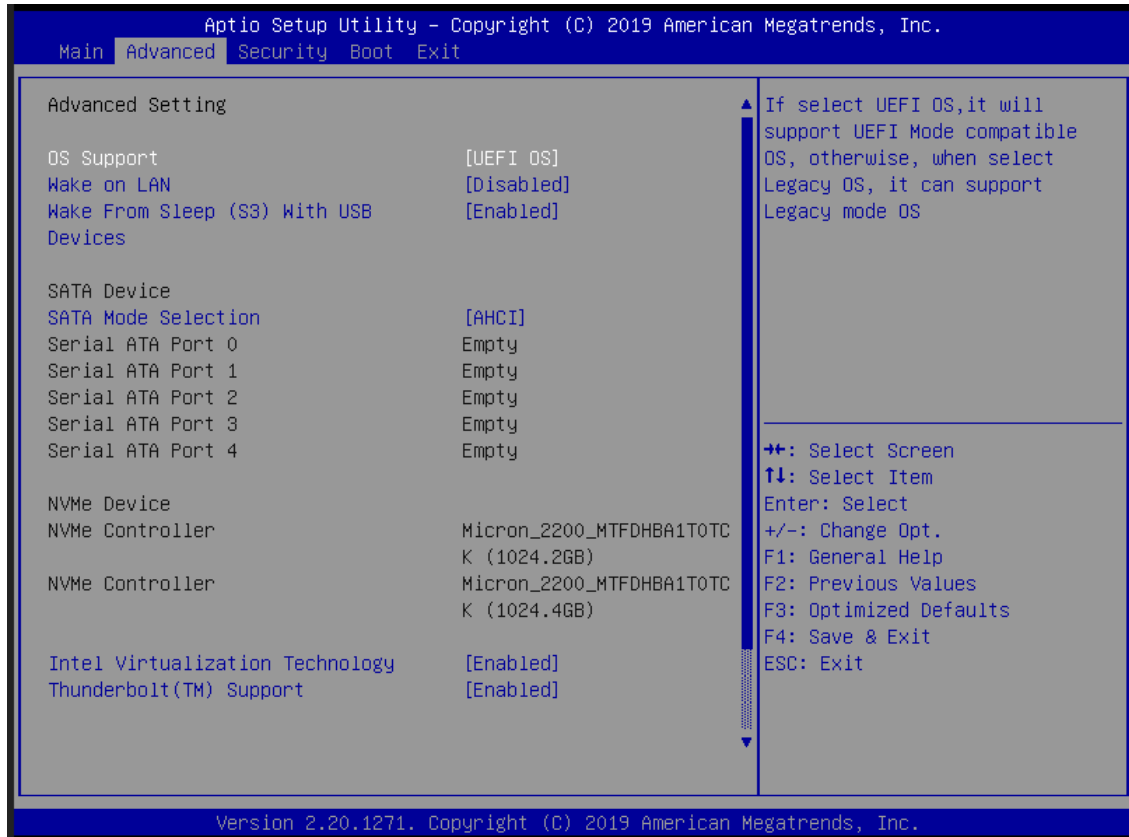
Use [ENTER], [TAB] or [SHIFT-TAB] to select a field.

Day	Day of the week, from Sun to Sat, which is determined by BIOS (read-only).
Month (Month)	The month from 01 (January) to 12 (December).
Date (Date)	The date from 01 to 31.
Year (Year)	The year can be adjusted by users.

- Total Memory

This allows you to see the total amount of memory.

4.2.2 Advanced Menu



- Wake From Sleep(S3) With USB Devices:

Enable/Disable wake from sleep(S3) with USB devices

- Serial ATA HDD

It will show AHCI SATA HDD info.

- NVMe Device

It will show NVMe Device info.

- Intel Virtualization Technology

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

- RAID mode reminder

Please update strip size in BIOS to 128K in order for RAID to optimize performance.

- Thunderbolt(TM) Support : [Enabled/ Disabled]

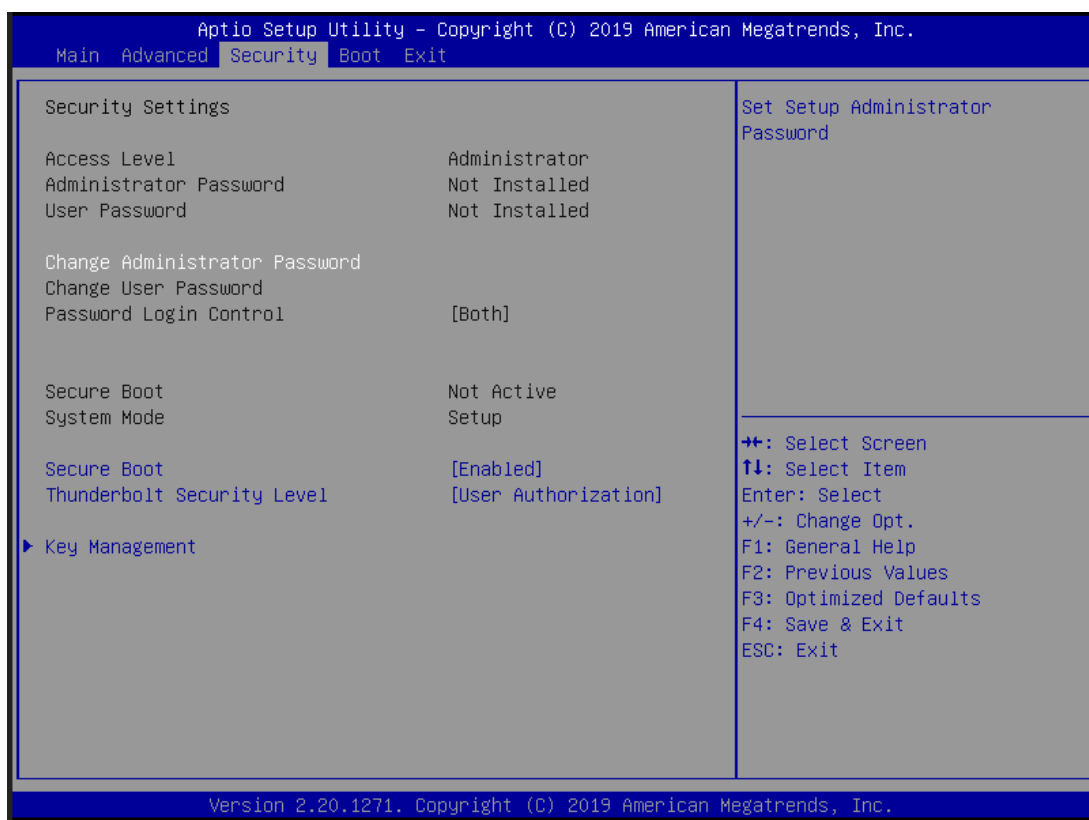
- OverClocking Feature: Performance Menu for Processor and Memory. [Disabled/Enabled]

- Core Voltage Offset: [50] Specifies the Offset Voltage applied to the IA Core domain. This voltage is specified in millivolts. Uses Mailbox MSR 0x150, cmd 0x11. Range -500 to 500 mV.

- XTU Interface:[Enabled]

- Offset Prefix [+/-]

4.2.3 Security Menu



- Thunderbolt Security Level [User Authorization / Secure Connect/ Display Port only / USB Docking Only / Unknow Status]
- Change Administrator Password

When this item is selected, a message box shall appear on the screen as below:

Enter New Password

Type a maximum of 20-digit password and press [Enter].

The password typed now will replace any previously set password from CMOS memory. You may also press [ESC] to abandon new password setting. It is extremely important to keep record for any BIOS password which is set as it can not be reset even with the removal of a CMOS battery for the security of your PC.

Select Change User Password to give or to abandon password setting same as Change Administrator Password item above.

Note that Administrator Password field allows users to enter and change the settings of the BIOS SETUP UTILITY, while User Password field only allows users to enter the BIOS SETUP UTILITY without having the authorization to make any change.

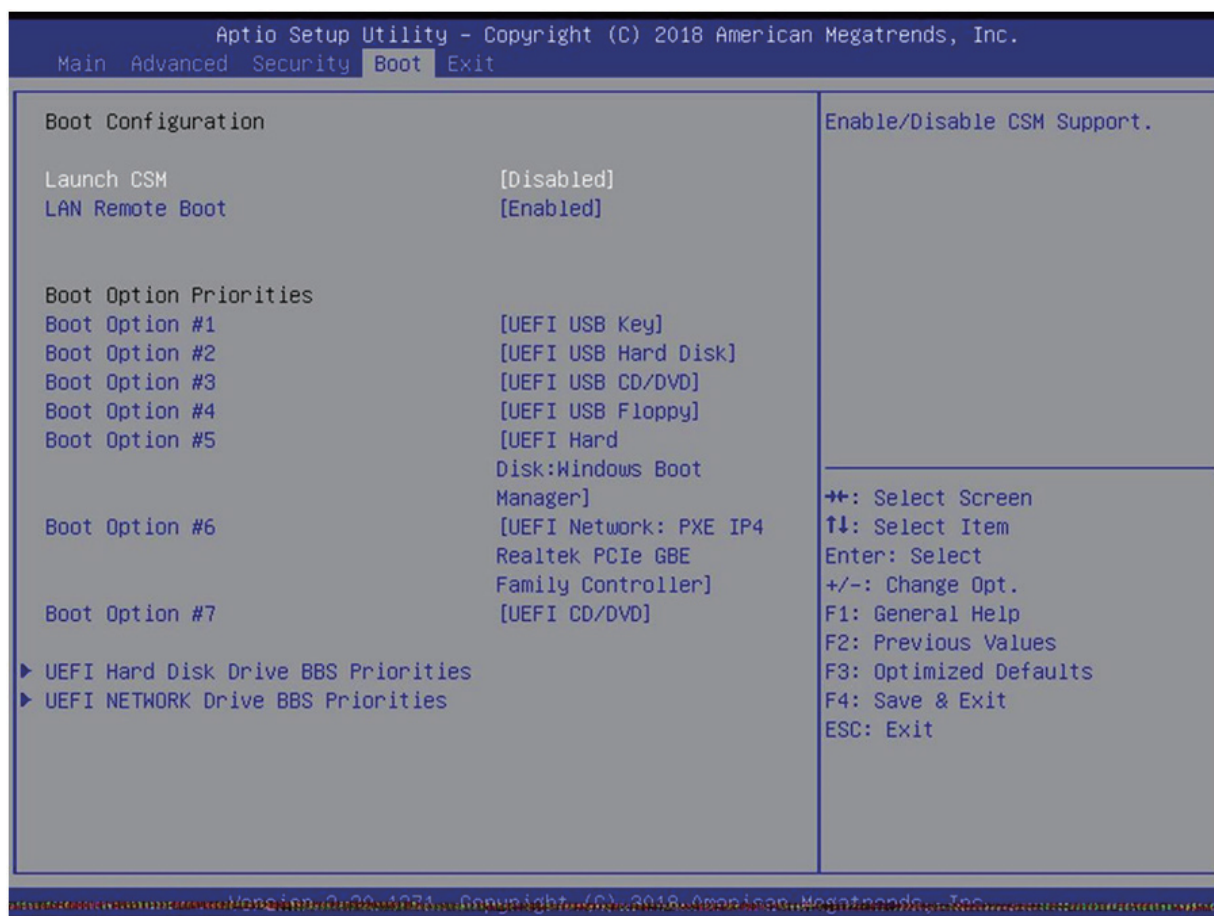
The Password Check item is used to specify the type of BIOS password protection that is implemented.

To clear a set Administrator Password/ User Password, just press [Enter] under Change Administrator Password/ Change User Password field when you are prompted to enter the password. A message box will pop up confirming password will be disabled. Once the password is disabled, the system will boot and user can enter setup without entering password.

Key Management:

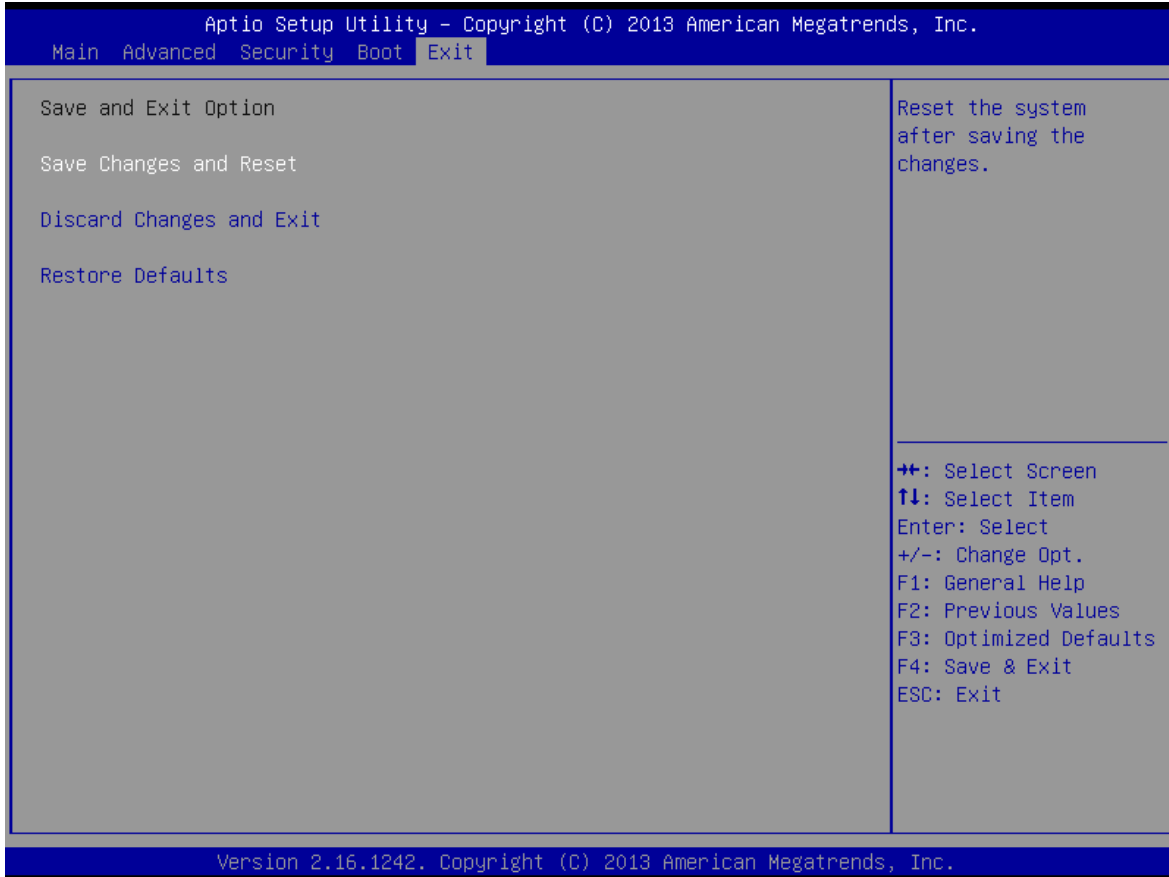
Enables expert user to modify Secure Boot Policy variables without full authentication.

4.2.4 Boot Menu



- **Boot Configuration**
Configure Settings during System Boot.
- **LAN Remote Boot [Disable]:** Boot from LAN or not.
- **Set Boot Priority (1st/2nd/3rd/..... Boot)**
Specifies the boot sequence from the available devices.
A device enclosed in parenthesis has been disabled in the corresponding type menu.
- **Hard Disk Drive / USB HardDisk Drive**
Specifies the Boot Device Priority sequence.

4.2.5 Exit Menu



- **Save Changes and Reset**
Exit system setup after saving the changes. F4 key can be used for this operation.
- **Discard Changes and Exit**
Exit system setup without saving any changes. ESC key can be used for this operation.
- **Restore Defaults**
Restore/Load Defaults values for all the setup options. F3 key can be used for this operation.