

# Preface

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Version 1.0

## Disclaimer

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## Trademark Recognition

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MMX, Pentium, Pentium-II, Pentium-III, Celeron are registered trademarks of Intel Corporation.

Other product names used in this manual are the properties of their respective owners and are acknowledged.

## **Federal Communications Commission (FCC)**

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 the receiver
- Connect the equipment onto 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

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

# Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

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

This device is in conformity with the following EC/EMC directives:

- |                                              |                                                                                                                                                                                                                                                                     |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <b>EN 55032</b>     | Electromagnetic compatibility of multimedia equipment - Emission requirements                                                                                                                                                                                       |
| <input type="checkbox"/> <b>EN 61000-3-2</b> | Electromagnetic Compatibility(EMC)<br>Part 3-2: Limits-Limits for harmonic current emissions (equipment input current $\leq 16\text{A}$ per phase)                                                                                                                  |
| <input type="checkbox"/> <b>EN 61000-3-3</b> | Electromagnetic Compatibility(EMC)<br>Part 3-3: Limits-Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq 16\text{A}$ per phase and not subject to conditional connection |
| <input type="checkbox"/> <b>EN 55024</b>     | Information technology equipment-Immunity characteristics-Limits and methods of measurement                                                                                                                                                                         |
| <input type="checkbox"/> <b>EN 60950</b>     | Safety for information technology equipment including electrical business equipment                                                                                                                                                                                 |
| <input type="checkbox"/> <b>CE marking</b>   |                                                                                                                                                                                  |

## **Safety Instructions**

Your system is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions.

### **Setting up your system**

- Read and follow all instructions in the documentation before you operate your system.
- Do not use this product near water or a heated source such as a radiator.
- Set up the system on a stable surface.
- Openings on the chassis are for ventilation. Do not block or cover these openings. Make sure you leave plenty of space around the system for ventilation. Never insert objects of any kind into the ventilation openings.
- Use this product in environments with ambient temperatures between 0°C and 40°C.
- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.

### **Attention during use**

- Do not step on the power cord or let anything rest on top of it.
- Do not spill water or any other liquid on your system.
- When the system is turned OFF, a small amount of electrical current still flows. Always unplug all power, modem, and network cables from the power outlets before cleaning the system.

- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not function properly even if you follow the operating instructions.
  - The system was dropped or the cabinet is damaged.
  - The system performance changes.



*The warranty does not apply to products that have been disassembled by users.*

## **Safety cautions and warnings**

### ***Optical Drive Safety Information***

Optical drive sold with this system contains a CLASS 1 LASER PRODUCT.



#### **CAUTION:**

*Invisible laser radiation when open. Do not stare into beam or view directly with optical instruments.*

#### **WARNING:**

*Making adjustments or performing procedures other than those specified in the user's manual may result in hazardous laser exposure. Do not attempt to disassemble the optical drive. For your safety, have the optical drive serviced only by an authorized service provider.*

## Product disposal notice



### IMPORTANT:

*This symbol if the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.*

## Nordic Lithium Cautions (for lithium-ion batteries)



### CAUTION:

*Danger of explosion if battery is incorrectly replaced only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.*

## Product disposal notice



*1. Do not place this product underneath heavy loads or in an unstable position.*

*2. Do not use or expose this product around magnetic fields as magnetic interference may affect the performance of the product.*

*3. Do not expose this product to high levels of direct sunlight, high-humidity or wet conditions.*

*4. Do not block the air vents to this product or impede the airflow in any way.*

# Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## About the Manual

The manual consists of the following:

### Chapter 1 Introducing the PC

Describes features of the PC.

⇒ page 1

### Chapter 2 Using BIOS

Provides information on using the BIOS Setup Utility.

⇒ page 11

### Chapter 3 Using the Motherboard Software

Describes the motherboard software.

⇒ page 49

### Chapter 4 Troubleshooting

Provides basic troubleshooting tips.

⇒ page 61

***Memo***

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# Chapter 1

## *Introducing the PC*

---

### Introduction

Thank you for choosing **LIVA Z2 Small Form Factor PC** featuring GLKM-MINI of great performance and with stylish and flexible design.

This Small Form Factor PC is based on Intel® SoC N4000 / N4100 / N5000 Mobile platform. This latest Core-M processor is a multi-core system-on-a-chip (SoC) that integrates the next generation Intel® processor core, graphics, memory, and I/O interfaces into one solution. One M.2 slot is for extending usage. It implements three Type-A USB 3.0 ports and one Type-C USB 3.0 port.

It supports DDR4 up to 8 GB Dual-channel SO-DIMM memory.

The system is equipped with a set of I/O ports at the rear panel, including one DC\_IN port (19V), one HDMI 2.0 port, one HDMI 1.4 port, two USB 2.0 ports, one Giga LAN connector.



*Note:*  
ID design and specification may vary, please refer to actual goods you purchase.

## Specifications

|                        |                                                                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CPU/Chipset</b>     | <ul style="list-style-type: none"> <li>Intel® SoC N4000 / N4100 / N5000</li> </ul>                                                                                                            |
| <b>Memory</b>          | <ul style="list-style-type: none"> <li>Support DDR4 up to 8GB</li> <li>- Dual-channel DDR4 SDRAM SO-DIMM</li> </ul>                                                                           |
| <b>Expansion Slots</b> | <ul style="list-style-type: none"> <li>1 x M.2 slot (supports 2230 WiFi card)</li> <li>1 x 2.5" HDD</li> </ul>                                                                                |
| <b>Storage</b>         | <ul style="list-style-type: none"> <li>Support eMMC 32 GB/64 GB</li> </ul>                                                                                                                    |
| <b>Wireless</b>        | <ul style="list-style-type: none"> <li>Support IEEE 802.11 a/b/g/n/ac and Bluetooth 4.2</li> </ul>                                                                                            |
| <b>Rear Panel I/O</b>  | <ul style="list-style-type: none"> <li>1 x DC_IN port (19V only)</li> <li>1 x Giga LAN connectors</li> <li>1 x HDMI 2.0 port</li> <li>1 x HDMI 1.4 port</li> <li>2 x USB 2.0 ports</li> </ul> |

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Internal I/O Connectors &amp; Headers</b> | <ul style="list-style-type: none"> <li>• 3 x Type-A USB 3.0 ports and 1 x Type-C USB 3.0 port*</li> <li>• 1 x Power On/Off button</li> <li>• 1 x Audio combo jack</li> <li>• 1 x 2-pin Front LED header (optional)</li> <li>• 1 x 2-pin battery connector</li> <li>• 1 x 3-pin CPU Cooling Fan connector</li> <li>• 1 x 4-pin Digital Microphone connector</li> <li>• 1 x M.2 slot</li> <li>• 1 x HDD connector (SATA_CONN)</li> <li>• 1 x LED light</li> </ul> |
| <b>Power Supply</b>                          | • Adapter DA-65C19, 19V, 3.42A, 65W                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Dimension</b>                             | • 132mm x 118mm x 56.4mm                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>VESA</b>                                  | • 100mm x 100mm                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

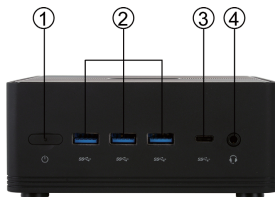
**\*Note:**

*The Type-C USB 3.0 port of this model is used for data transmission only, it can not be used for DC-in power supply and video output.*

**WARNING:**

*Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, or using the third-party overclocking tools. Overclocking may affect your system stability, or even case damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage casesd by overclocking.*

## Front and Rear I/O



*Note:*

*ID design and specification may vary, please refer to actual goods you purchase.*

- |                                |                                                     |
|--------------------------------|-----------------------------------------------------|
| <b>1. Power Button</b>         | Use this button to power on/off the system.         |
| <b>2. Type-A USB 3.0 Ports</b> | Connect your Type-A USB 3.0 devices to these ports. |
| <b>3. Type-C USB 3.0 Port*</b> | Connect your Type-C USB 3.0 device to this port.    |



*\*Note:*

*The Type-C USB 3.0 port of this model is used for data transmission only, it can not be used for DC-in power supply and video output.*

#### 4. Combo Audio Jack (Line out & Mic in)

Connect a microphone or speaker to the combo audio jack.



#### 5. 19V DC\_IN Port

Connect the DC\_IN port to the power adapter.

#### 6. HDMI 1.4 Port

You can connect the display device to the HDMI 1.4 port.

#### 7. HDMI 2.0 Port

You can connect the display device to the HDMI 2.0 port.

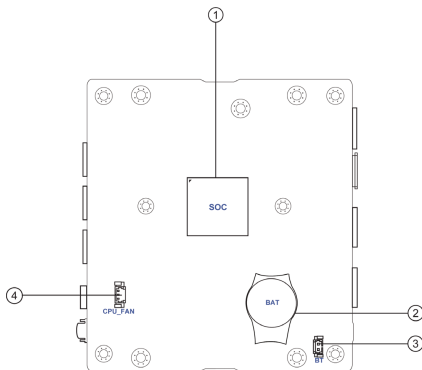
#### 8. USB 2.0 Ports

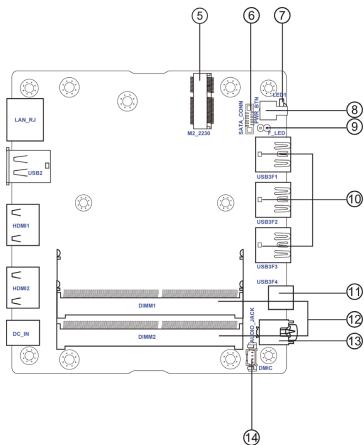
Use the USB 2.0 port to connect USB 2.0 device.

#### 9. Giga LAN Port

Connect the RJ-45 jack to the LAN ports for Network connecting.

# Motherboard Components



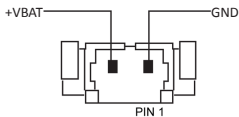


## Table of Motherboard Components

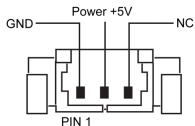
| LABEL          | COMPONENTS                         |
|----------------|------------------------------------|
| 1. SoC         | Intel® SoC N4000 / N4100 / N5000   |
| 2. BAT         | Battery                            |
| 3. BT          | Battery connector                  |
| 4. CPU_FAN     | 3-pin CPU cooling fan connector    |
| 5. M2_2230     | M.2 slot supports WiFi card        |
| 6. SATA_CONN   | HDD connector                      |
| 7. LED1        | LED light                          |
| 8. PWR_BTN     | Power On/Off button                |
| 9. F_LED       | Front LED header (optional)        |
| 10. USB3F1~3   | Front USB 3.0 ports (Type-A)       |
| 11. USB3F4     | Front USB 3.0 port (Type-C)        |
| 12. DIMM1~2    | Dual-channel DDR4 SDRAM SO-DIMM    |
| 13. AUDIO_JACK | Audio jack                         |
| 14. DMIC       | 4-pin Digital microphone connector |

## Header Pin Definition

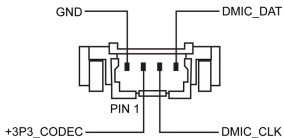
### BT (Battery)



### CPU\_FAN



### DMIC





## Chapter 2

### *Using BIOS*

---

#### About the Setup Utility

The computer uses the latest “American Megatrends Inc. ” BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system’s configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

## ***The Standard Configuration***

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

## ***Entering the Setup Utility***

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

### ***Press DEL to enter SETUP***

Press the delete key to access BIOS Setup Utility.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |          |                  |         |      |          |                                                                                                                                                                               |  |
|--------------------------------------------------------------------|----------|------------------|---------|------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Main                                                               | Advanced | Chipset          | M.I.B X | Boot | Security | Exit                                                                                                                                                                          |  |
| BIOS Information                                                   |          |                  |         |      |          | Choose the system default language                                                                                                                                            |  |
| System Language                                                    |          | [English]        |         |      |          | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |  |
| System Date                                                        |          | [Fri 06/01/2018] |         |      |          |                                                                                                                                                                               |  |
| System Time                                                        |          | [20:43:17]       |         |      |          |                                                                                                                                                                               |  |
| BIOS Version                                                       |          | 18.05.23         |         |      |          |                                                                                                                                                                               |  |
|                                                                    |          |                  |         |      |          |                                                                                                                                                                               |  |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |          |                  |         |      |          |                                                                                                                                                                               |  |

## Resetting the Default CMOS Values

When powering on for the first time, the POST screen may show a “CMOS Settings Wrong” message. This standard message will appear following a clear CMOS data at factory by the manufacturer. You simply need to Load Default Settings and Save it to reset the default CMOS values.

Note: Changes to system hardware such as different CPU, memories, etc. may also trigger this message.



## Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ►) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle ►.



*The default BIOS setting for this motherboard apply for most conditions with optimum performance. We do not suggest users change the default values in the BIOS setup and take no responsibility to any damage caused by changing the BIOS settings.*

## BIOS Navigation Keys

The BIOS navigation keys are listed below:

| KEY          | FUNCTION                            |
|--------------|-------------------------------------|
| <b>ESC</b>   | Exits the current menu              |
| <b>↑↓→←</b>  | Scrolls through the items on a menu |
| <b>+/-</b>   | Change Opt.                         |
| <b>Enter</b> | Select                              |
| <b>F1</b>    | General Help                        |
| <b>F2</b>    | Previous Value                      |
| <b>F3</b>    | Optimized Defaults                  |
| <b>F4</b>    | Save & Exit                         |



*For the purpose of better product maintenance, the manufacture reserves the right to change the BIOS items presented in this manual. The BIOS setup screens shown in this chapter are for reference only and may differ from the actual BIOS. Please visit the manufacture's website for updated manual.*

## Main Menu

When you enter the BIOS Setup program, the main menu appears, giving you an overview of the basic system information. Select an item and press <Enter> to display the submenu.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |          |                  |         |      |          |                                                                                                                                                                               |  |
|--------------------------------------------------------------------|----------|------------------|---------|------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Main                                                               | Advanced | Chipset          | M.I.B X | Boot | Security | Exit                                                                                                                                                                          |  |
| BIOS Information                                                   |          |                  |         |      |          | Choose the system default language                                                                                                                                            |  |
| System Language                                                    |          | [English]        |         |      |          | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |  |
| System Date                                                        |          | [Fri 06/01/2018] |         |      |          |                                                                                                                                                                               |  |
| System Time                                                        |          | [20:43:17]       |         |      |          |                                                                                                                                                                               |  |
| BIOS Version                                                       |          | 18.05.23         |         |      |          |                                                                                                                                                                               |  |
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### System Language (English)

This item is used to set system language.

### System Date & Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

### BIOS Version (18.05.23)

This item shows the information of BIOS version.

## Advanced Menu

The Advanced menu items allow you to change the settings for the CPU and other system.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc.                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main                                                                                                                                                                                                                                                                                                            | <b>Advanced</b> Chipset M.I.B X Boot Security Exit                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>▶ Power Management Setup</li> <li>▶ SATA Configuration</li> <li>▶ LAN Configuration</li> <li>▶ PC Health Status</li> <li>▶ eMMC Configuration</li> <li>▶ ACPI Settings</li> <li>▶ CPU Configuration</li> <li>▶ USB Configuration</li> <li>▶ Trusted Computing</li> </ul> | ACPI Power Management Configuration<br><br>→ ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
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## ► Power Management Setup

This page sets up some parameters for system power management operation.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |            |                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |            |                                                                                                                                                                                                                                                                           |
| Power Management Setup                                             |            | Enable/Disable functionality: Resume by PCIE devices, Onboard LAN controllers<br><br>→ ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Resume By PME                                                      | [Disabled] |                                                                                                                                                                                                                                                                           |
| Resume By USB                                                      | [Disabled] |                                                                                                                                                                                                                                                                           |
| Resume By RTC Alarm                                                | [Disabled] |                                                                                                                                                                                                                                                                           |
| EuP Function                                                       | [Enabled]  |                                                                                                                                                                                                                                                                           |
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### Resume By PME (Disabled)

This item specifies whether the system will be awakened from power saving modes when activity or input signal of the specified hardware peripheral or components is detected.

### Resume By USB (Disabled)

This item allows you to enable/disable the USB device wakeup function from S3 mode.

**Resume By RTC Alarm (Disabled)**

The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wakeup alarm. You must use an ATX power supply in order to use this feature.

**EUP Function (Enabled)**

This item allows user to enable or disable EUP support.

Press <Esc> to return to the Advanced Menu page.

## ► SATA Configuration

This page provides the information and configuration for SATA storages.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |             |                                                                                                                                                                                      |
|--------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |             |                                                                                                                                                                                      |
| SATA Configuration                                                 |             | Determines how SATA controller(s) operate.                                                                                                                                           |
| SATA Mode                                                          | [AHCI]      |                                                                                                                                                                                      |
| SATA Port                                                          | Not Present | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |             |                                                                                                                                                                                      |

### SATA Mode (AHCI Mode)

Use this item to select SATA mode.

### SATA Port (Not Present)

This item displays the information of SATA storage installed on the SATA port.

Press <Esc> to return to the Advanced Menu page.

## ► LAN Configuration

The item in the menu shows the LAN-related information that the BIOS automatically detects.

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|--------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |           |                                                                                                                                                                                      |
| LAN Configuration                                                  |           | Enabled/Disabled                                                                                                                                                                     |
| Onboard LAN Controller                                             | [Enabled] | Onboard LAN 1 Controller                                                                                                                                                             |
|                                                                    |           | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
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### Onboard LAN Controller (Enabled)

Use this item to enable or disable Onboard LAN controller.

Press <Esc> to return to the Advanced Menu page.

## ► PC Health Status

On motherboards support hardware monitoring, this item lets you monitor the parameters for critical voltages, temperatures and fan speeds.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |     |                                                                                                                                                                             |
|--------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |     |                                                                                                                                                                             |
| PC Health Status                                                   |     | → ← :Select Screen<br>↑↓:Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |
| SoC Temperature (DTS)                                              | 45  |                                                                                                                                                                             |
| TCC Activation Temperature (DTS)                                   | 105 |                                                                                                                                                                             |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |     |                                                                                                                                                                             |

### System Component Characteristics

These items display the monitoring of the overall inboard hardware health events, such as System temperature, CPU & DIMM voltage, CPU & System fan speed... etc.

- SoC Temperature (DTS)
- TCC Activation Temperature (DTS)

Press <Esc> to return to the Advanced Menu page.

## ► eMMC Configuration

This page provides the information and configuration for Embedded Multimedia Card.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |                                                                                                                                                                                      |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |                                                                                                                                                                                      |
| eMMC Configuration                                                 | Enable/Disable<br>Embedded Multi<br>Media Card Support                                                                                                                               |
| eMMC Support [Enabled]                                             |                                                                                                                                                                                      |
| eMMC Information<br>MMC - TA2832 (31.3 GB)                         | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
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### eMMC Support (Enabled)

Use this item to enable or disable Embedded Multi Media Card support.

### eMMC Information (MMC - TA2832 (31.3 GB))

This item shows the information of eMMC storage.

Press <Esc> to return to the Advanced Menu page.

## ► ACPI Settings

This page provides items for ACPI configuration.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |                       |                                                                                                                                                                               |
|--------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |                       |                                                                                                                                                                               |
| ACPI Settings                                                      |                       | Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.                                                                                 |
| ACPI Sleep State                                                   | [S3 (Suspend to RAM)] |                                                                                                                                                                               |
|                                                                    |                       | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |                       |                                                                                                                                                                               |

### ACPI Sleep State [S3(Suspend to RAM)]

This item allows user to select the highest ACPI sleep state that the system will enter.

Press <Esc> to return to the Advanced Menu page.

## ► CPU Configuration

The item in the menu shows the CPU Configuration.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |            |                                 |
|--------------------------------------------------------------------|------------|---------------------------------|
| Advanced                                                           |            |                                 |
| CPU Configuration                                                  |            | Socket specific CPU Information |
| ► CPU Information                                                  |            |                                 |
| CPU Speed                                                          | 1.10 GHz   |                                 |
| 64-bit                                                             | Supported  |                                 |
| Active Processor Cores                                             | [Disabled] | → ← :Select Screen              |
| Bi-directional PROCHOT                                             | [Enabled]  | ↑↓ :Select Item                 |
| Intel Virtualization Technology                                    | [Enabled]  | Enter : Select                  |
| ► CPU Power Management                                             |            | +/- : Change Opt.               |
| Enhanced Halt (C1E)                                                | [Enabled]  | F1:General Help                 |
|                                                                    |            | F2:Previous Values              |
|                                                                    |            | F3:Optimized Defaults           |
|                                                                    |            | F4:Save & Exit                  |
|                                                                    |            | ESC:Exit                        |
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## ► CPU Information

Scroll to this item and press <Enter> to view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |               |                                                                                                                                                                                      |
|--------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |               |                                                                                                                                                                                      |
| CPU Information                                                    |               |                                                                                                                                                                                      |
| Intel(R) Celeron(R) CPU N4100 @ 1.10GHz                            |               |                                                                                                                                                                                      |
| CPU Signature                                                      | 706A1         |                                                                                                                                                                                      |
| Microcode Patch                                                    | 22            |                                                                                                                                                                                      |
| Max CPU Speed                                                      | 1100 MHz      |                                                                                                                                                                                      |
| Min CPU Speed                                                      | 800 MHz       |                                                                                                                                                                                      |
| Processor Cores                                                    | 4             |                                                                                                                                                                                      |
| Intel HT Technology                                                | Not Supported |                                                                                                                                                                                      |
| Intel VT-x Technology                                              | Supported     |                                                                                                                                                                                      |
| L1 Data Cache                                                      | 24 kB x 2     |                                                                                                                                                                                      |
| L2 Code Cache                                                      | 32 kB x 2     |                                                                                                                                                                                      |
| L2 Cache                                                           | 4096 kB       |                                                                                                                                                                                      |
| L3 Cache                                                           | Not Present   |                                                                                                                                                                                      |
|                                                                    |               | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |               |                                                                                                                                                                                      |

### ***Intel(R) Celeron(R) CPU N4100 @ 1.10GHz***

This is display-only field which displays the information of the CPU installed in your computer.

### ***CPU Signature (706A1)***

This item shows the information of the CPU signature.

### ***Microcode Patch (22)***

This item shows the version of microcode patch.

### ***Max CPU Speed (1100 MHz)***

This item shows the max speed of the CPU.

### ***Min CPU Speed (800 MHz)***

This item shows the min speed of the CPU.

**Processor Cores (4)**

This item shows the number of cores of the processor.

**Intel HT Technology (Not Supported)**

This item shows the CPU supports Intel HT technology or not.

**Intel VT-x Technology (Supported)**

This item shows the CPU supports Intel VT-X technology or not.

**L1 Data Cache (24 kB x 2)**

This item shows the size of CPU L1 Data Cache memory.

**L1 Code Cache (32 kB x 2)**

This item shows the size of CPU L1 Code Cache memory.

**L2/L3 Cache (4096 kB/Not Present)**

These items show the size of CPU L2/L3 Cache memory.

Press <Esc> to return to the CPU Configuration page.

**CPU Speed (1.10 GHz)**

This item shows the CPU speed.

**64-bit (Supported)**

This item shows the CPU supports EMT64.

**Active Processor Cores (Disabled)**

Number of cores to be enabled in each processor package.

**Bi-directional PROCHOT (Enabled)**

When a processor thermal sensor trips (either core), the PROCHOT# will be driven. If bi-direction is enabled, external agents can drive PROCHOT# to throttle the processor.

**Intel Virtualization Technology (Enabled)**

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

## ► CPU Power Management

Scroll to this item and press <Enter> to view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |               |                                                                                                                                                                                      |
|--------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |               |                                                                                                                                                                                      |
| EIST                                                               | [Enabled]     | Enable/Disable Intel SpeedStep                                                                                                                                                       |
| Turbo Mode                                                         | [Enabled]     |                                                                                                                                                                                      |
| P-STATE Coordination                                               | [HW_ALL]      |                                                                                                                                                                                      |
| C-States                                                           | [Enabled]     |                                                                                                                                                                                      |
| Max Package C State                                                | [C0]          |                                                                                                                                                                                      |
| Max Core C State                                                   | [Fused value] |                                                                                                                                                                                      |
|                                                                    |               | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |               |                                                                                                                                                                                      |

### ***EIST (Enabled)***

This item allows you to enable or disable the EIST (Enhanced Intel SpeedStep Technology).

### ***Turbo Mode (Enabled)***

This item allows you to control the Intel Turbo Boost Technology.

### ***P-STATE Coordination (HW\_ALL)***

This item allows you to select the type of P-State coordination among processors with dependencies. The available options are HW\_ALL, SW\_ALL, and SW\_ANY.

### ***C-States (Enabled)***

This item allows you to enable or disable the C-States.

**Max Package C State (C0)**

This item controls the maximum Package C-State that the processor will support.

**Max Core C State (Fused value)**

This item controls the maximum Core C-State that cores will support.

Press <Esc> to return to the CPU Configuration page.

**Enhanced Halt (C1E) (Enabled)**

Enable/Disable C1E. When enabled, CPU will switch to minimum speed when all cores enter C-State.

Press <Esc> to return to the Advanced Menu page.

## ► USB Configuration

Scroll to this item and press <Enter> and view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |           |                                                                                                                                                                                      |
|--------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |           |                                                                                                                                                                                      |
| USB Configuration                                                  |           | Enable/Disable all USB ports                                                                                                                                                         |
| All USB Devices                                                    | [Enabled] | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Legacy USB Support                                                 | [Enabled] |                                                                                                                                                                                      |
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### All USB Devices (Enabled)

Use this item to enable or disable all USB devices.

### Legacy USB Support (Enabled)

Use this item to enable or disable support legacy USB devices.

Press <Esc> to return to the Advanced Menu page.

## ► Trusted Computing

This page provides configuration for Trusted Computing.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |               |                                                                                                                                                                               |
|--------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced                                                           |               |                                                                                                                                                                               |
| TPM20 Device Found<br>Vendor: INTC<br>Firmware Version: 401.0      |               | Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.                         |
| Security Device Support                                            | [Enabled]     |                                                                                                                                                                               |
| Active PCR banks                                                   | SHA-1, SHA256 |                                                                                                                                                                               |
| Available PCR banks                                                | SHA-1, SHA256 |                                                                                                                                                                               |
| Pending operation                                                  | [None]        |                                                                                                                                                                               |
| Platform Hierarchy                                                 | [Enabled]     |                                                                                                                                                                               |
| Storage Hierachy                                                   | [Enabled]     |                                                                                                                                                                               |
| Endorsement Hierarchy                                              | [Enabled]     |                                                                                                                                                                               |
| TPM2.0 UEFI Spec Version                                           | [TCG_2]       |                                                                                                                                                                               |
| Physical Presence Spec Version                                     | [1.3]         |                                                                                                                                                                               |
| TPM 20 InterfaceType                                               | [CRB]         |                                                                                                                                                                               |
| Device Select                                                      | [TPM 2.0]     |                                                                                                                                                                               |
|                                                                    |               | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |
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### Security Device Support (Enabled)

This item allows you to enable or disable the security device support.

### Active PCR banks (SHA-1, SHA256)

This item shows activated PCR banks.

### Available PCR banks (SHA-1, SHA256)

This item shows available PCR banks.

**Pending operation (None)**

Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.

**Platform Hierarchy (Enabled)**

Use this item to enable or disable the Platform Hierarchy.

**Storage Hierarchy (Enabled)**

Use this item to enable or disable the Storage Hierarchy.

**Endorsement Hierarchy (Enabled)**

Use this item to enable or disable the Endorsement Hierarchy.

**TPM2.0 UEFI Spec Version (TCG\_2)**

Use this item to select the TPM2.0 UEFI Spec Version.

**Physical Presence Spec Version (1.3)**

Select to tell OS to support PPI Spec Version 1.2 or 1.3.

**TPM 20 InterfaceType (CRB)**

Select the Communication Interface to TPM 20 device.

**Device Select (TPM 2.0)**

TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with default set to TPM 2.0 devices if notfound, TPM 1.2 devices will be enumerated.

Press <Esc> to return to the Advanced Menu page.

## Chipset Menu

The chipset menu items allow you to change the settings for the SoC chip and other system.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |          |                                                                                                                                                                                                                                           |         |      |          |      |
|--------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|----------|------|
| Main                                                               | Advanced | Chipset                                                                                                                                                                                                                                   | M.I.B X | Boot | Security | Exit |
| ▶ Platform Firmware<br>▶ SoC Configuration                         |          | Platform Firmware Information & Configuration<br><br>→ ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |         |      |          |      |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |          |                                                                                                                                                                                                                                           |         |      |          |      |

## ► Platform Firmware

Scroll to this item and press <Enter> and view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |            |                                                                                                                                                                               |
|--------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chipset                                                            |            |                                                                                                                                                                               |
| Platform Firmware                                                  |            |                                                                                                                                                                               |
| MRC Version                                                        | 1.31       | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |
| P-Unit Firmware Version                                            | 22         |                                                                                                                                                                               |
| PMC Firmware Version                                               | 06.06      |                                                                                                                                                                               |
| TXE Firmware Version                                               | 4.0.0.1245 |                                                                                                                                                                               |
| GOP Driver Version                                                 | 13.0.1016  |                                                                                                                                                                               |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |            |                                                                                                                                                                               |

### MRC Version (1.31)

Use this item to show the Memory Reference Code version.

### P-Unit Firmware Version (22)

Use this item to show the P-Unit Firmware version.

### PMC Firmware Version (06.06)

Use this item to show the PMC Firmware version.

### TXE Firmware Version (4.0.0.1016)

Use this item to show the TXE Firmware version.

### GOP Driver Version (13.0.1016)

Use this item to show the GOP Driver version.

Press <Esc> to return to the Chipset Menu page.

## ► SoC Configuration

Scroll to this item and press <Enter> and view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |             |                                                                                                                        |
|--------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------|
| Chipset                                                            |             |                                                                                                                        |
| SoC Configuration                                                  |             | Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device                        |
| IGD Configuration                                                  |             |                                                                                                                        |
| DVMT Pre-Allocated                                                 | [64M]       |                                                                                                                        |
| DVMT Total Gfx Mem                                                 | [256M]      |                                                                                                                        |
| Audio Configuration                                                |             | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select                                                             |
| Azalia HD Audio                                                    | [Enabled]   | +/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Miscellaneous Configuration                                        |             |                                                                                                                        |
| Restore AC Power Loss                                              | [Power Off] |                                                                                                                        |
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### DVMT Pre-Allocated (64M)

This item is used to select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

### DVMT Total Gfx Mem (256MB)

Select DVMT 5.0 Total Graphic Memory size used by the Internal Graphics Device.

### Azalia HD Audio (Enabled)

This item enables or disables Azalia HD audio.

### Restore AC Power Loss\* (Power Off)

This item enables your computer to automatically restart or return to its operating status.



*\*When **Eup Function** is set to **Enabled**, this item will be nonadjustable.*

## M.I.B X (MB Intelligent BIOS X) Menu

This page enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |          |                |         |                                                                                                                                                                               |          |      |
|--------------------------------------------------------------------|----------|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|
| Main                                                               | Advanced | Chipset        | M.I.B X | Boot                                                                                                                                                                          | Security | Exit |
| M.I.B X (MB Intelligent BIOS X)                                    |          |                |         |                                                                                                                                                                               |          |      |
| CPU Information                                                    |          |                |         |                                                                                                                                                                               |          |      |
| Intel(R) Celeron(R) CPU N4100 @ 1.10GHz                            |          |                |         |                                                                                                                                                                               |          |      |
| CPU Frequency                                                      |          | 100.0 MHz      |         |                                                                                                                                                                               |          |      |
| CPU Ratio                                                          |          | 11             |         |                                                                                                                                                                               |          |      |
| CPU Speed                                                          |          | 1.10 GHz       |         |                                                                                                                                                                               |          |      |
| Memory Information                                                 |          |                |         |                                                                                                                                                                               |          |      |
| Memory Speed                                                       |          | 2133 MHz       |         |                                                                                                                                                                               |          |      |
| Total Memory                                                       |          | 8192 MB (DDR4) |         |                                                                                                                                                                               |          |      |
|                                                                    |          |                |         | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |          |      |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |          |                |         |                                                                                                                                                                               |          |      |

### Intel(R) Celeron(R) CPU N4100 @ 1.10GHz

This is display-only field which displays the information of the CPU installed in your computer.

### CPU Frequency (100.0 MHz)

This item shows the information of the CPU frequency.

### CPU Ratio (11)

This item shows the information of the CPU Ratio.

### CPU Speed (1.10 GHz)

This item shows the processor speed.

### Memory Speed (2133 MHz)

This item shows the memory speed.

## **Total Memory (8192 MB (DDR4))**

This item shows the total memory.

## Boot Menu

This page enables you to configure the system boot related parameters.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |          |         |                                                                                  |
|--------------------------------------------------------------------|----------|---------|----------------------------------------------------------------------------------|
| Main                                                               | Advanced | Chipset | M.I.B X                                                                          |
| Boot                                                               |          |         | Security Exit                                                                    |
| Boot Configuration                                                 |          |         | Other OS: Boot policy for Legacy OS                                              |
| Operation System Select [Windows 10]                               |          |         | Windows 10: Boot policy for UEFI OS without Compatibility Support Module(CSM)    |
| Launch Network OpROM [Disabled]                                    |          |         | Linux: Boot policy for UEFI mode Linux without Compatability Support Module(CSM) |
| Fast Boot [Disabled]                                               |          |         |                                                                                  |
| Bootup Numlock State [On]                                          |          |         |                                                                                  |
| Quiet Boot [Enabled]                                               |          |         |                                                                                  |
| Boot Mode Select [UEFI]                                            |          |         |                                                                                  |
| Set Boot Priority                                                  |          |         |                                                                                  |
| Boot Option #1 [Hard Disk: Windows B...]                           |          |         |                                                                                  |
| Boot Option #2 [CD/DVD]                                            |          |         |                                                                                  |
| Boot Option #3 [USB/Floppy]                                        |          |         |                                                                                  |
| Boot Option #4 [USB CD/DVD]                                        |          |         |                                                                                  |
| Boot Option #5 [USB Hard Disk]                                     |          |         |                                                                                  |
| Boot Option #6 [USB Flash: UEFI: Jet...]                           |          |         |                                                                                  |
| Boot Option #7 [Network]                                           |          |         |                                                                                  |
| ▶UEFI Hard Disk Drive Priorities                                   |          |         | → ← :Select Screen                                                               |
| ▶UEFI USB Flash Drive Priorities                                   |          |         | ↑↓ :Select Item                                                                  |
|                                                                    |          |         | Enter : Select                                                                   |
|                                                                    |          |         | +/- : Change Opt.                                                                |
|                                                                    |          |         | F1:General Help                                                                  |
|                                                                    |          |         | F2:Previous Values                                                               |
|                                                                    |          |         | F3:Optimized Defaults                                                            |
|                                                                    |          |         | F4:Save & Exit                                                                   |
|                                                                    |          |         | ESC:Exit                                                                         |
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### Operation System Select (Windows 10)

This item is used to select the operation system.

**Launch Network OpROM (Disabled)**

The item enables or disables launch Network Option ROM.

**Fast Boot (Disabled)**

This item enables or disables the fast boot.

**Bootup Numlock State (On)**

This item enables you to select Numlock state.

**Quiet Boot (Enabled)**

This item enables or disables the quiet boot.

**Boot Mode select (UEFI)**

Use this item to select boot mode.

**Boot Option #1~7**

These items show the boot priorities and can be used to set the boot priorities of various device categories.

## ►UEFI Hard Disk Drive Priorities

Scroll to this item and press <Enter> to view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |                                                                                                                                                                                      |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Boot                                                               |                                                                                                                                                                                      |
| Boot Option #1 [Windows Boot Manage...]                            | Sets the system boot order                                                                                                                                                           |
|                                                                    | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |                                                                                                                                                                                      |

### Boot Option #1 (Windows Boot Manage...)

Use this item to set the system boot order.

Press <Esc> to return to the Boot Menu page.

## ►UEFI USB Flash Drive Priorities

Scroll to this item and press <Enter> to view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |                                                                                                                                                                                                                 |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Boot</b>                                                        |                                                                                                                                                                                                                 |
| Boot Option #1 [UEFI: JetFlashTrans...]                            | Sets the system boot order<br><br>→ ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |                                                                                                                                                                                                                 |

### Boot Option #1 (UEFI: JetFlashTrans...)

Use this item to set the system boot order.

## Security Menu

This page enables you to configure system security settings.

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |               |                                                                                                                                                                                      |
|--------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main                                                               | Advanced      | Chipset M.I.B X Boot Security Exit                                                                                                                                                   |
| Administrator Password Status                                      | Not Installed | Set Administrator Password                                                                                                                                                           |
| User Password Status                                               | Not Installed |                                                                                                                                                                                      |
| Administrator Password                                             |               |                                                                                                                                                                                      |
| ► Secure Boot                                                      |               | → ← : Select Screen<br>↑ ↓ : Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1: General Help<br>F2: Previous Values<br>F3: Optimized Defaults<br>F4: Save & Exit<br>ESC: Exit |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |               |                                                                                                                                                                                      |

### Administrator Password Status (Not Installed)

This item shows administrator password is installed or not.

### User Password Status (Not Installed)

This item shows user password is installed or not.

## ► Secure Boot

Scroll to this item and press <Enter> and view the following screen:

| Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc. |              | Security                                                                                                                                                                      |
|--------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Mode                                                        | Setup        | Secure Boot activated when: Secure Boot is enabled Platform Key(PK) is enrolled. System mode is User/ Deployed, and CSM is disabled                                           |
| Vendor Keys                                                        | Not Modified |                                                                                                                                                                               |
| Secure Boot                                                        | [Enabled]    | → ← :Select Screen<br>↑ ↓ :Select Item<br>Enter : Select<br>+/- : Change Opt.<br>F1:General Help<br>F2:Previous Values<br>F3:Optimized Defaults<br>F4:Save & Exit<br>ESC:Exit |
| Secure Boot Customization                                          | [Standard]   |                                                                                                                                                                               |
|                                                                    |              |                                                                                                                                                                               |
| Version 2.19.1268. Copyright (C) 2018 American Megatrends, Inc.    |              |                                                                                                                                                                               |

### System Mode (Setup)

This item displays current system mode. Possible modes are “Setup” mode or “User” mode.

### Vendor Keys (Not Modified)

This item shows the active state of Vendor keys.

### Secure Boot (Enabled)

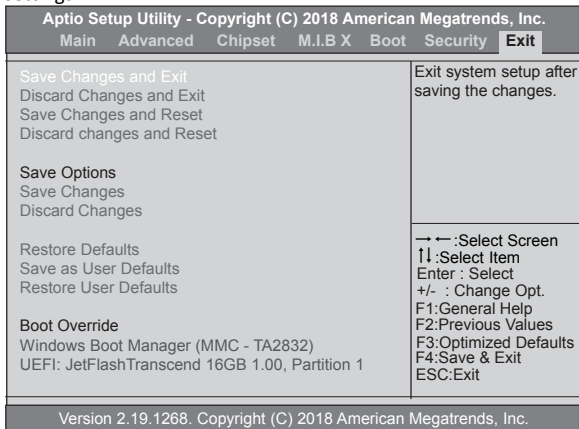
This item is used to control the secure boot flow, it is possible only if system runs in User Mode.

### Secure Boot Customization (Standard)

This item is used to set the secure boot customization.

## Exit Menu

This page enables you to save, discard, or restore Setup Utility settings.



### Save Changes and Exit

This item enables you to exit the system setup after saving the changes.

### Discard Changes and Exit

This item enables you to exit the system setup without saving any changes.

### Save Changes and Reset

This item enables you to reset the system setup after saving the changes.

**Discard Changes and Reset**

This item enables you to reset the system setup without saving any changes.

**Save Changes**

This item enables you to save the changes that you have made.

**Discard Changes**

This item enables you to discard any change that you have made.

**Restore Defaults**

This item enables you to restore the system defaults.

**Save as User Defaults**

This item enables you to save the changes that you have made as user defaults.

**Restore User Defaults**

This item enables you to restore the user defaults.

**Boot Override**

Use this item to select the boot device.

## Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Website. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

- 1 If your motherboard has a BIOS protection jumper, change the setting to allow BIOS flashing.
- 2 If your motherboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.)
- 3 Prepare a bootable device or create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)
- 4 Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the bootable device.
- 5 Turn off your computer and insert the bootable device in your computer. (You might need to run the Setup Utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the bootable device first.)
- 6 At the C:\ or A:\ prompt, type the Flash Utility program name and the file name of the new BIOS and then press <Enter>. Example: AFUDOS.EXE 040706.ROM
- 7 When the installation is complete, remove the bootable device from the computer and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten. The computer will restart automatically.

# ***Memo***

## **Chapter 2**

## Chapter 3

### *Using the Motherboard Software*

---

#### Installing the Windows OS

There are two ways to install the Windows OS:

1. Install Windows OS via Windows official DVD.
2. Install Windows OS via USB flash drive.
  - a) Create an ISO file from the Windows 10 DVD.

This free program from Microsoft properly formats your flash drive and then copies the contents of the Windows 10 installation ISO file to the flash drive.

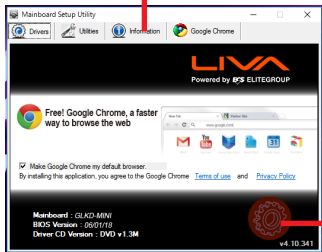
- b) Boot from the USB device that you just created to start the Windows 10 installing process.



*You need to change the booting priority in BIOS in order to boot from USB device. Enter into BIOS and select the Boot in menu (or press the hotkey F7), set USB drive as the first booting priority.*

## Drivers auto-installing under Windows 10

The auto-install DVD-ROM makes it easy for you to install the drivers and software. The support software DVD-ROM disc loads automatically under Windows 10. When you insert the DVD-ROM disc in the DVD-ROM drive, the auto-run feature will automatically bring up the installation screen.



### Information:

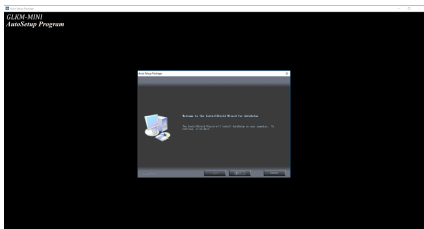
Displays the path for all software and drivers available on the disk.

Click the **“Setup”** button to select and run the software installation program.

## Running Setup

Follow these instructions to install device drivers and software for the motherboard:

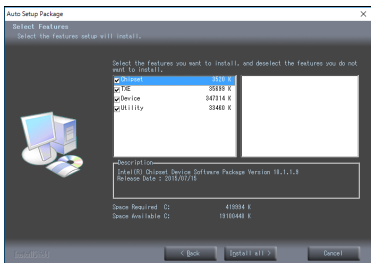
1. Click **Setup**. The installation program begins:



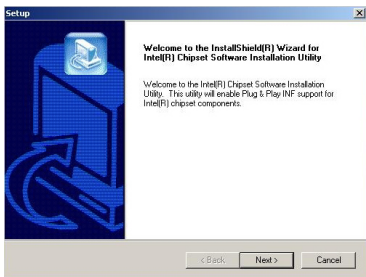
*The following screens are examples only. The screens and driver lists will be different according to the motherboard you are installing.*

The motherboard identification is located in the upper left-hand corner.

2. Click **Next**. The following screen appears:



3. Check the box next to the items you want to install. The default options are recommended.
4. Click **Next** to run the Installation Wizard. An item installation screen appears:

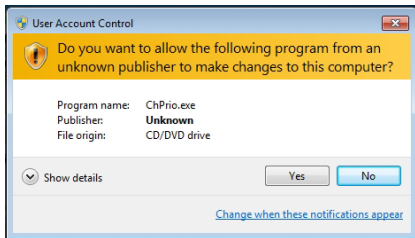


5. Follow the instructions on the screen to install the items.



*Drivers and software are automatically installed in sequence. Follow the onscreen instructions, confirm commands and allow the computer to restart a few times to complete the installation.*

*Windows 10 will appear below UAC (User Account Control) message after the system restart. You must select “Yes” to install the next driver. Continue this process to complete the drivers installation.*



## Manual Installation

If the auto-install DVD-ROM does not work on your system, you can still install drivers through the file manager for your OS (for example, Windows Explorer). Look for the chipset and motherboard model, and then browse to the directory and path to begin installing the drivers. Most drivers have a setup program (SETUP.EXE) that automatically detects your operating system before installation. Other drivers have the setup program located in the operating system subfolder.

If the driver you want to install does not have a setup program, browse to the operating system subfolder and locate the readme text file (README.TXT or README.DOC) for information on installing the driver or software for your operating system.

### ECS Utility Software (Intelligent EZ Utility)

ECS Intelligent EZ Utility provides friendly interfaces under Windows O.S., which make your computing more easily and conveniently.



*These software(s) are subject to change at anytime without prior notice. Please refer to the support disk for available software.*

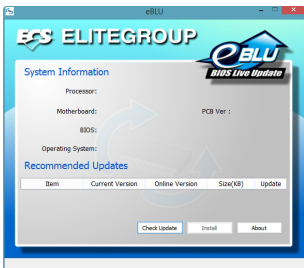
## eDLU

ECS eDLU utility makes updating drivers fast and easy. eDLU saves time and hassle by listing all the latest drivers online. Just select the one you prefer and start to download and install the drivers.



## eBLU

ECS eBLU utility makes BIOS update faster and easier. eBLU will list the latest BIOS with a default check-mark. Click "install" button to install.

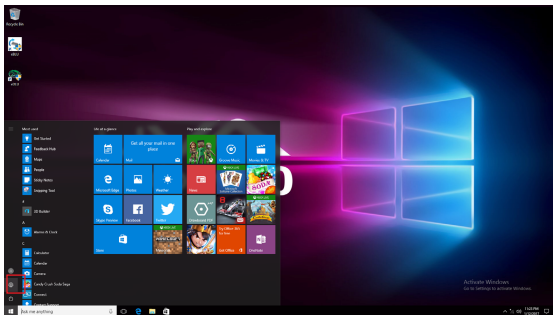


Microsoft .NET Framework 3.5 is required.

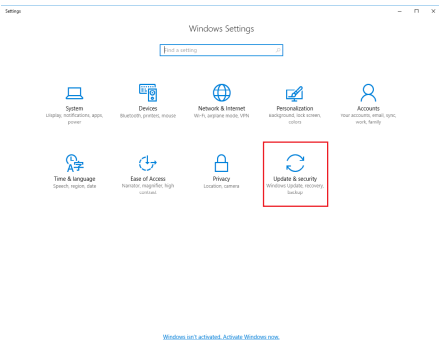
# Windows 10 OS Recovery

Windows 10 Recovery has basically 2 categories. Keep my files & Remove everything. Each types of recovery was defined by Microsoft, you can check their website “Reset my PC” section for further definition and recovery scenarios.<https://support.microsoft.com/en-us/help/12415/windows-10-recovery-options>

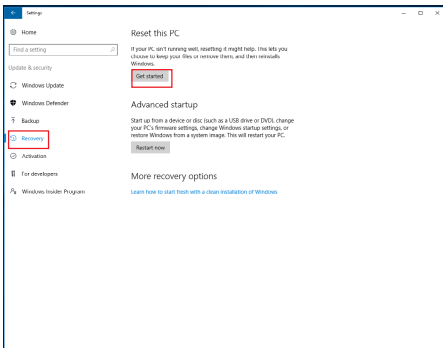
## 1. Select “Setting”



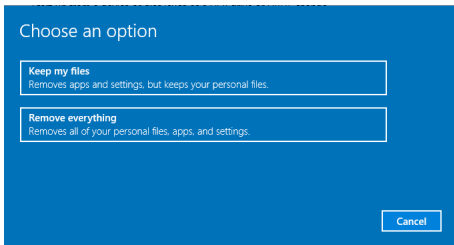
## 2. Select “Update & security”



## 3. Select “Recovery” → “Reset this PC – Get started”



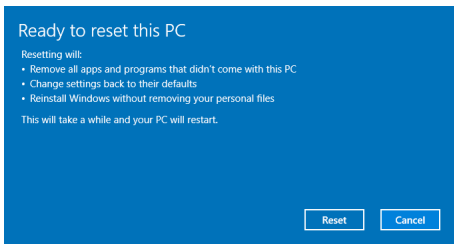
Once “Get started” was selected, there are 2 types of recovery mode will be presented.



### [Keep my files]

Keep my files

- Reinstalls Windows 10 and keeps your personal files.
- Removes apps and drivers you installed.
- Removes changes you made to settings.
- Removes any apps your PC manufacturer installed. (If your PC came with Windows 10, apps from your PC manufacturer will be reinstalled.)



Click “Reset” and start the recovery process.

## [Remove everything]

Remove everything

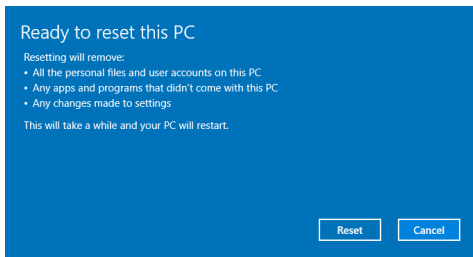
- Reinstalls Windows 10 and removes all your personal files.
- Removes apps and drivers you installed.
- Removes changes you made to settings.
- Removes any apps your PC manufacturer installed. (If your PC came with Windows 10, apps from your PC manufacturer will be reinstalled.)



[Remove everything – Just remove my files]

[Remove everything – Remove files and clean the drive]

Select “Reset” to start the recovery process.





## Chapter 4

### *Trouble Shooting*

---

#### **Troubleshooting and problem solution**

After assembling the PC for the first time you may experience some start up problems. Before calling for technical support or returning for warranty, this chapter may help to address some of the common questions using some basic troubleshooting tips.

##### ***a) Boot up failed.***

1. Use the specified adapter provided by ECS.
2. Check whether the adapter has been plugged in.
3. Check the connection between adapter and the system.
4. Check that the power button can be pushed normally. If it is successfully power on , the green light from LED will show up.
5. If the boot up problem still exists after these checking steps, please turn to local dealer or repair center for further customer service.

##### ***b) Black screen or no image is displayed on the monitor.***

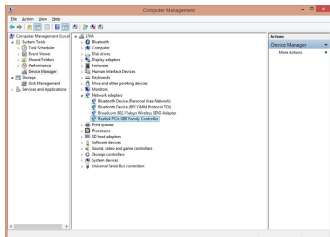
1. Check whether the monitor has been turned on or works normally on other system.
2. Check whether the system has been power on successfully.

3. Check the cable is securely inserted into rear IO ports(VGA/HDMI) and also at monitor side(VGA/HDMI).

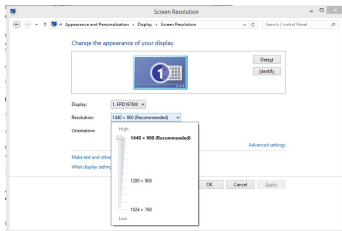
4. If the display problem still exists after checking steps, please turn to local dealer or repair center for further customer service.

### c) Display Error

1. Check whether the driver is correctly installed in “Device Manager”. If there is yellow mark or unknown devices message shown in the list, please reinstall the driver via LIVA official Driver DVD or ECS official website.



2. Adjust the screen to the best resolution to get better using experience.



#### ***d) Wire LAN connecting failed.***

1. Check whether the LAN driver is correctly installed in “Device Manager”. If there is yellow mark or unknown devices message shown in the list, please reinstall the driver via LIVA official Driver DVD or ECS official website.

2. Ensure the LAN cable is securely inserted to the RJ45 port and the LED light flashes normally.

3. Check IP address.

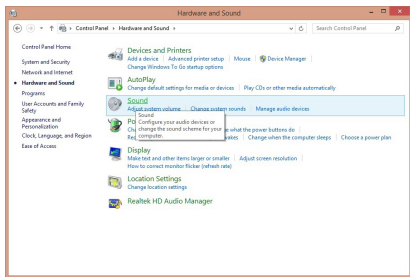
4. If the LAN connection problem still exists after these checking steps, please turn to local dealer or repair center for further customer service.

#### ***e) Wireless LAN connecting failed***

1. Check whether the WLAN card driver is correctly installed in “Device Manager”. If there is yellow mark or unknown devices message shown in the list, please reinstall the driver via LIVA official Driver DVD or ECS official website.
2. Check the WIFI in your working area is well functional and has good reception.
3. If the WIFI connection problem still exists after these checking steps, please turn to local dealer or repair center for further customer service.

## ***f) No sound from audio combo jack***

1. Check whether the audio driver is correctly installed in “Device Manager”. If there is yellow mark or unknown devices message shown in the list, please reinstall the driver via LIVA official Driver DVD or ECS official website.
2. After connecting the speaker or header phone, adjust audio setting in Control panel> Hardware and sound.



*Note: Due to chipset limitation, the mic function of audio codec AL282 can be only compatibel to iPhone devices.*

3. If the audio problem still exists after these checking steps, please turn to local dealer or repair center for further customer service.

## ***Memo***