## **GOT515-RPL-WCD**

All-in-One 15.6" FHD TFT Fanless PCT Multi-Touch Panel PC

**User's Manual** 

# USER'S MANUAL



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- Replacing the battery with an incorrect model may cause an explosion. Only use the same or equivalent type of battery as recommended by the manufacturer.
- Properly dispose of used batteries according to the instructions.

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## **Safety Precautions**

Before getting started, please read the following important safety precautions.

- 1. Be sure to ground yourself to prevent static charge when installing any internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
- 2. Disconnect the power cord from the GOT515-RPL-WCD prior to any installation. Be sure both the system and all external devices are turned off. Sudden surge of power could ruin sensitive components. Make sure the GOT515-RPL-WCD series is properly grounded.
- 3. Make sure the voltage of the power source is correct before connecting the GOT515-RPL-WCD to any power outlet.
- 4. Turn off system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen.
- 5. Do not leave the GOT515-RPL-WCD in an uncontrolled environment where the storage temperature is below -10°C or above 50°C as it may damage the equipment.
- 6. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
  - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on human body.
  - When handling boards and components, wear a grounding wrist strap available from most electronic component stores.

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## SECTION 1 INTRODUCTION

This section contains general information and detailed specifications of the GOT515-RPL-WCD, including the following subsections:



Figure 1-1 Front panel of the GOT515-RPL-WCD

- General Descriptions
- Specifications
- Dimensions and Outlines
- I/O Outlets
- Packing List

## **1.1 General Descriptions**

The GOT515-RPL-WCD multi-touch panel PC adopts a 15.6-inch FHD TFT LCD with 450-nits brightness and supports Intel® Core<sup>™</sup> processor i5-1335UE/U300E (Raptor Lake) up to 15W, providing excellent computing performance and thermal resistance. This fanless platform is particularly designed for operation under harsh environments including steel refineries, oil pipes, ships, machine makers, and many more. Having the abilities described below surely makes GOT515-RPL-WCD the most robust and cost-effective solution.

#### Designed for extended operating temperature range and ingress protection

The GOT515-RPL-WCD's compact industrial design and fanless cooling system allow the panel PC to sustain an extended operating temperature range between -20°C and +50°C, making the system a power-efficient solution. It also features an ultra-thin, modular design and Full IP66-rated with lockable M12 I/Os from liquids and dust

#### Reliable and stable design

The GOT515-RPL-WCD is specifically designed for vibration-prone environments, best for the transportation (vehicle, railway, marine) and industrial machinery markets. With a patented anti-vibration design, the GOT515-RPL-WCD is able to work in operation mode under 1G (5  $\sim$  500Hz), which has significantly improved system reliability and sustainability.

## **(Note)** Heavy-vibration may sometimes cause the LCD screen to flash in white color; however, it won't affect the function of the product.

#### Features

- 15.6" FHD (1920x1080) LCD 450 nits with LED backlight, PCAP
- Fanless design with Intel® Core<sup>TM</sup> i5-1335UE or processor U300E
- Full IP66-rated with lockable M12 I/Os
- Full stainless-steel enclosure made of SUS 304
- Supports M.2 2280 SSD (NVMe/SATA), mSATA, Wi-Fi (6/6E/7) or 4G LTE
- Supports VESA mount (100 mm x100 mm)
- Supports both proximity and light sensors (optional)
- EC control (backlight on/off, brightness, light sensor, touch on/off, and Super I/O)
- Intelligent power management solution (Smart Ignition)
- Programmable OSD function key
- Operating temperature: -20°C to +50°C

## 1.2 Specifications

## CPU

- CPU
  - Intel® Core™ i5-1335UE (1.3 GHz, 15W)
  - Intel® U series U300E (1.1 GHz, 15W)
- Chipset
  - SoC integrated
- System Memory
  - 1 x DDR5 4800MHz SO-DIMM socket (Max. up to 32GB)
- BIOS
  - American Megatrends Inc. UEFI (Unified Extensible Firmware Interface) BIOS.

## I/O System

- Standard I/O
  - 1 x COM for RS-232/422/485 (default RS-232, A-coded)
  - 1 x USB 2.0 dual-Ports (A-Code, Support power on/off management)
  - 1 x DC power input (M12, A-coded)
  - 1 x 2.5GBase-T Ethernet with Intel® I226 (X-coded), supporting Wake-on-LAN and PXE Boot ROM
  - 1 x 1GBase-T Ethernet with Intel® I210 (X-coded)
  - 1 x M12 I/O Blank Via Cable (2x USB2.0 / 1x COM RS232 / 1x CAN Bus, by option)
- Ethernet
  - 1 x 2.5GBASE-T Ethernet with Intel® I226LM (TSN) in support of Wake-on-LAN and PXE Boot ROM (M12, X-coded)
  - 1 x 1GBASE-T Ethernet with Intel® I210 (M12, X-coded)

#### • Expansion and Storage

- 1 x Full-size mini card slot (USB + PCIe/SATA) with nano-SIM socket, supports mini card or mSATA auto detection.
- 1 x M.2 Key E 2230 slot for Wi-Fi + Bluetooth module
- 1 x M.2 Key M 2280 slot (PCIe Gen.4 x4/SATA) for SSD (NVMe/SATA) or PCIe device auto detection.
- OSD 3+1key keypad with Green/Red LED
  - Programable 3-key (backlight on/off; touch on/off), Power Switch
  - Status LED (green) for system power, LED (red) for Storage active
  - Statue: Power ON=Always bright; S3=Slow Flicker; Backlight OFF=Fast Flicker

## **System Specification**

- 15.6" FHD TFT LCD
  - 15.6" FHD TFT LCD 450nits, PCAP, resolution:1920x1080

- Weight(Net/Gross) .
  - 5.2kg(11.46lb)/ 8.5kg(18.74lb)
- **Dimensions** •
  - System: 397.6mm(15.65")(W)x60.5mm(2.4")(D)x245mm(9.65")(H) -
  - Packing: 533mm(20.98")(W)x463mm(18.23")(D)x222mm(8.74")(H) -

#### **Operating temperatures** •

- -20°C to 50°C (-4°F to +122°F)
- Storage temperatures .
  - -10°C to 50°C (+14°F to +122°F)
- **Relative humidity** .
  - 10% to 95% @ 40°C, Non-condensing
- System power input
  - DC power input: +9 to 36VDC with ACC -
- System Block diagram .



Block

Solution [Note] 1. All specifications and images are subject to change without notice.

> 2. The performance of the system might be adversely affected at an operating temperature above 40°C.

## 1.3 Dimensions and Outlines

The figures below show the dimensions and outlines of the GOT515-RPL-WCD panel PC.

Front dimensions: 3397.6mm(15.65")(W)x60.5mm(2.4")(D)x245mm(9.65")(H)





#### Cut-out dimensions of the GOT515-RPL-WCD

Cut-out dimensions: 291.7 x 231.8 mm

## 1.4 I/O Outlets

Please refer to figure 1-4 for the I/O locations of the GOT515-RPL-WCD.



Figure 1-4: Front and bottom views of the GOT515-RPL-WCD.

No.	Note.	No.	Note.
1	1 x Optional M12 I/O blank via cable: 2 x USB 2.0, 1 x COM (RS-232) 2 x CAN Bus	6	DC power input
2	1 GbE LAN	7	Brightness settings +/-
3	2.5GbE LAN	8	Display on/off (backlight and touch configurable)
4	COM (RS-232/422/485)	9	LED light (green LED: power status; red LED: storage)
5	1 x USB 2.0 dual-ports (the connection of two USB 2.0 devices using a single port)	10	Power on/off
11	Proximity(left) & light sensor(right) (optional)		

## 1.5 Packing List

A complete bundled package should contain the following items:

- GOT515-RPL-WCD unit x 1
- M12 DC Power cable x 1

Please contact an Axiomtek distributor immediately if any of the above-mentioned items is missing.

## **SECTION 2** SYSTEM CONFIGURATIONS

The GOT515-RPL-WCD provides rich I/O ports and flexible expansion features for users to perform various tasks. This section provides detailed information on the hardware components of the panel PC as well as installation instructions, including the following subsections:

- Board Layout •
- I/O Pin Assignment
- M12 I/O blank Cables (Optional)
- DC Power Jack w/ M12 connector
- Hardware Installation (Optional)
- VESA mounting (Optional)

#### 2.1 I/O Pin Assignment

The GOT515-RPL-WCD has one serial ports, M12-8P for COM (RS-232/422/485, default RS-232), M12-8P for USB ports(2x M12 dual port), has two M12-8P Ethernet for 2.5GBE LAN, 1Gbe LAN, M12 customize I/O port for optional and DC-in 9V~36V connecter.

## 2.1.1 Serial Port Interface

The following table 1 shows you the pin assignments of this connector.

at	ble 1: Pin Assignment				
	Pin	RS-232	RS-422	RS-485	
	1	DCD	TX-	Data-	
	2	RXD	TX+	Data+	
	3	TXD	RX+	No use	
	4	DTR	RX-	No use	
	5	GND	GND	GND	
	6	DSR	No use	No use	
	7	RTS	No use	No use	
	8	CTS	No use	No use	
	9	RI	No use	No use	



## 2.1.2 Ethernet

The GOT515-RPL-WCD is equipped with a high-performance Plug and Play Ethernet interface, full compliant with IEEE 802.3 standard, and can be connected with a M12 LAN connector.

Please refer to detailed pin assignment list below:

Pin	Signal
1	MDI0+
2	MDI0-
3	MDI1+
4	MDI1-
5	MDI3+
6	MDI3-
7	MDI2-
8	MDI2+



#### 1GBE LAN

Pin	Signal
1	MDI0+
2	MDI0-
3	MDI1+
4	MDI1-
5	MDI3+
6	MDI3-
7	MDI2-
8	MDI2+



## 2.1.3 USB Port

The USB is a Universal Serial Bus (compliant with USB 2.0 (480Mbps)) connector on the rear I/O. It is commonly used for installing USB peripherals such as keyboard, mouse, scanner, etc.

Pin	Signal	Pin	Signal
1	USB VCC (+5V level)	5	USB VCC (+5V level)
2	USB #0_D-	6	USB #1_D-
3	USB #0_D+	7	USB #1_D+
4	GND	8	GND



## 2.1.4 DC Power Jack w/M12

Please follow pin assignment for the power input.

Pin	Signal
1	+12 ~ 24V
2	+12 ~ 24V
3	GND
4	GND
5	ACC ignition



## 2.1.5 Full-Size PCI Express Mini Card Slot (CN16)

The GOT515-RPL-WCD supports one full-size PCI-Express Mini Card slots. CN16 is applying for PCI-Express or SATA (mSATA) via BIOS selection and USB signals; PCI-Express complies with PCI-Express Mini Card Spec. V1.2. Thus, users can install mSATA or WLAN/WWAN cards into this slot. Please refer to the SATA of BIOS setting to enable or disable mSATA supported.

Pin	Signal	Pin	Signal
1	WAKE#	2	+3.3VSB
3	No use	4	GND
5	No use	6	+1.5V
7	CLKREQ# 8 No use	8	UIM_PWR
9	GND	10	UIM_DATA
11	REFCLK-	12	UIM_CLK
13	REFCLK+	14	UIM_RESET
15	GND	16	UIM_VPP
17	No use	18	GND
19	No use	20	W_DISABLE#
21	GND	22	PERST#
23	PE_RXN3/	24	+3.3VSB
25	PE_RXP3/	26	GND
27	GND	28	+1.5V
29	GND	30	SMB_CLK
31	PE_TXN3/	32	SMB_DATA
33	SATA_TXN	34	GND
35	GND	36	USB_D8-
37	GND	38	USB_D8+
39	+3.3VSB	40	GND
41	+3.3VSB	42	No use
43	GND	44	No use
45	No use	46	No use
47	No use	48	+1.5V
49	No use	50	GND
51	mSATA detect	52	+3.3VSB

## 2.1.6 M.2 Key E (CN21)

The M.2 Key E for Wireless Module.

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	GND	2	+3.3V	3	USB_D+	4	+3.3V
5	USB_D-	6	NC	7	GND	8	NC
9	NC	10	NC	11	NC	12	NC
13	NC	14	NC	15	NC	16	NC
17	NC	18	GND	19	NC	20	NC
21	NC	22	NC	23	NC	24	CONNECTOR KEY E
25	CONNECTOR KEY	26	CONNECTOR KEY E	27	CONNECTOR KEY E	28	CONNECTOR KEY E
29	CONNECTOR KEY	30	CONNECTOR KEY E	31	CONNECTOR KEY E	32	NC
33	GND	34	NC	35	PETp0	36	NC
37	PETn0	38	NC	39	GND	40	NC
41	PERp0	42	NC	43	PERn0	44	NC
45	GND	46	NC	47	REFCLKp0	48	NC
49	REFCLKn0	50	SUSCLK	51	GND	52	PERST0#
53	CLKREQ0#	54	W_DISABLE2#	55	PEWAKE0#	56	W_DISABLE1#
57	GND	58	NC	59	NC	60	NC
61	NC	62	NC	63	GND	64	NC
65	NC	66	NC	67	NC	68	NC
69	GND	70	NC	71	NC	72	+3.3V
73	NC	74	+3.3V	75	GND		



## 2.1.7 SIM Slot (CN16)

The GOT515-RPL-WCD has one SIM slots: CN16 on top side that support mini PCIe slot (for CN16). It is mainly used in wireless network application.

Pin	Signal
1	PWR
2	RST
3	CLK
4	NC
5	GND
6	VPP
7	I/O
8	NC



## 2.2 M12 I/O blank Cables (Optional)

GOT500 series uses specific M12 connector for water-proof. Therefore, you will order each cable base on application.

There are four kind cables of GOT500 series, by the optional, if you will apply the USB, COM or Ethernet then you can select a cable for the package.

The Power cable is included in the accessory box, when you will need the power adapter, also it can be selected by optional.

## 2.2.1 COM port cable

There are two COM port cables which are combined M12 connector. Also, you can refer 2.1.1 for the Series port pin assignment.



## 2.2.2 USB cables

The USB cable is combined M12 connector for water-proof. It is extended two USB ports for application.



## 2.2.3 LAN cables

The LAN cable is combined M12 connector for water-proof. It is extended one LAN ports for use. Choose one of the cable options shown below.





System Configurations

## 2.2.4 CANbus cables



#### 2.2.5 Power cables

The power cable includes a combined M12 connector for water-proofing, and it features a DC input with an ACC function. It extends to one additional port for use.



innut	with	ACC	func	tion	ality

Pin	Signal
V+	DC power input
ACC	Toggle ignition
GND	GND
GND	GND



## 2.2.6 Power adapter

If you order the power adapter, you should choose the power cord type for your location. The power adapter is 110-240V which is combined M12 connector.



## 2.4 Hardware Installation (Optional)

## 2.4.1 Installing DRAM

The GOT515-RPL-WCD provides one 262-pin DDR5 SO-DIMM socket that supports system memory up to 32GB. Please follow the steps below to install a memory module:

#### Step 1 Remove the twelve screws (see red circles in Figure 2-1) on the back cover.



Figure 2-1: Back cover

Step 2 Remove the back cover.



Step 3 Locate the DIMM socket on the mainboard, as shown below.

Step 4 Prepare thermal pad, the system will come with 1pcs thermal pad in accessory pack. The thermal pads will come with plastic liner on one side, so make sure it is removed before use. And then stick the thermal pad on the DRAM socket.



Step 5 To ensure correct installation, align the memory module with the socket so that the notches of the memory module can match the socket keys.



#### Step 6 Put the bottom cover and fasten all the screws onto the system.

#### 2.4.2 Installing the NVMe SSD, Mini Card & M.2 key E Module

The GOT515-RPL-WCD comes equipped with a mini card slot, an optional M.2 key E slot and a M.2 key M slot for users to install wireless LAN cards and SSD. Please refer to the following instructions and illustrations for the installation of the wireless LAN and SSD.



- A. 1 x M.2 key M 2280, NVMe (Gen4x4) or auto-detect SATA
- B. 1 x mSATA full-size mini card slot for Wi-Fi/LTE module
- C. 1 x M.2 Key E 2230 slot (for Wi-Fi)
- D. 1 x SIM socket for mini PCIe
- Step 1 Refer to Section 2.1 to open the back cover.

#### Step 2 Locate the Mini card socket on the mainboard, as shown below.

#### 1.Installing the NVMe SSD:

Insert the NVMe SSD into the designated M.2 slot. Ensure it is aligned properly with the connector, then gently push down and secure it with a screw.



#### 2. Installing the Mini Card:

Align the Mini Card with the Mini PCIe slot. Insert it carefully into the slot, ensuring the pins match up. Once in place, use a screw to fasten the card.



#### 3. Installing the M.2 key E 2230 Module:

Position the M.2 key E module in its corresponding slot. Align it correctly and push it into place, then fasten it with a screw to secure.



Remove the screw from the top of the system's back cover.



Install the antenna onto the antenna connector.



## 2.5 Mounting the Panel PC



Only trained and qualified technicians are permitted to mount the product. To prevent accidental damage to the product or human injury when mounting the product, at least two people are required to perform the installation.

## 2.5.1 VESA Mount (Support VESA standard 100x100)

Alternatively, the GOT515-RPL-WCD supports VESA arm mount by using a VESA arm kit attached to the back, allowing users to tilt or rotate the panel PC for best visibility. Refer to the following steps when adopting VESA arm mount for the panel PC.

#### Step 1 Locate the four screwing holes on the back side of the panel PC.



Step 2 As shown in the image, attach the VESA mount kit to the back cover of the tablet. Tighten the four screws to securely fasten the VESA arm kit to the back cover.





This display supports vertical installation. To rotate the I/O ports by 90 degrees, simply adjust the mount to the desired orientation. If you encounter any installation issues, please contact your distributor.

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## SECTION 3 AMI BIOS SETUP UTILITY

This section provides users with detailed descriptions about how to set up basic system configurations through the AMI BIOS setup utility.

## 3.1 Starting

To enter the setup screens, follow the steps below:

- 1. Turn on the computer and press the <Del> key immediately.
- 2. After pressing the <Del> key, the main BIOS setup menu displays. Users can access to other setup screens, such as the Advanced and Chipset menus, from the main BIOS setup menu.

## 3.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F2>, <Enter>, <ESC>, <Arrow> keys, and so on.

Y)	【Note】	Some of the navigation keys differ from one screen to another.
----	--------	--

Hot Keys	Description
→← Left/Right	The Left and Right <arrow> keys allow you to select a setup screen.</arrow>
<b>↑</b> ↓ Up/Down	The Up and Down <arrow> keys allow you to select a setup screen or sub screen.</arrow>
Enter	The <enter> key allows you to display or change the setup option listed for a particular setup item. The <enter> key can also allow you to display the setup sub screens.</enter></enter>
+– Plus/Minus	The Plus and Minus <arrow> keys allow you to change the field value of a particular setup item.</arrow>
F1	The <f1> key allows you to display the General Help screen.</f1>
F2	The <f2> key allows you to Load Previous Values.</f2>
F3	The <f3> key allows you to Load Optimized Defaults.</f3>
F4	The <f4> key allows you to save any changes you have made and exit Setup. Press the <f4> key to save your changes.</f4></f4>
Esc	The <esc> key allows you to discard any changes you have made and exit the Setup. Press the <esc> key to exit the setup without saving your changes.</esc></esc>

#### Table 3-1 Descriptions of hot keys

## 3.3 Main Menu

When you first enter the setup utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. System Time/Date can be set up as described below. The Main BIOS setup screen is shown below

Main Advanced Chipset	Aptio Setup – AMI Security Boot Save & Exit	
BIOS Information Build Date and Time BIOS Version	01/01/2024 00:00:00 PSB588 V1.0	•
Firmware Information EC Version ME Firmware Version ME Firmware Mode ME Firmware SKU	PSB588 V1.0 16.1.25.2049 Normal Mode Corporate SKU	
Board Information Processor Name Type	RaptorLake ULT 13th Gen Intel(R) Core(TM) 15–1335UE	++: Select Screen
Stepping PMC FW Version FSP version	Q0 160.1.0.1029 0C.01.94.10	t↓: Select Item Enter: Select +/-: Change Opt.
IGFX GOP Version Memory RC Version Frequency	21.0.1064 0.0.4.103 4800 MHz	F1: General Help F2: Previous Values F3: Optimized Defaults
Size	16384 MB (DDR5)	ESC: Exit
	Version 2.22.1287 Copyright (C) 202	4 AMI

#### **BIOS Information**

Display the BIOS information.

#### System Date/Time

Use this option to change the system time and date. Highlight System Time or System Date using the keys. Enter new values through the keyboard. Press the key or the keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

#### Access Level

Display the access level of current user.

## 3.4 Advanced Menu

The Advanced menu allows users to configure the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus

- CPU Configuration
- ACPI Setting
- MISC. Configuration
- Trusted Computing
- AMT Configuration
- Serial Port Configuration
- ► EC DIO Configuration
- USB Configuration
- Network Stack Configuration
- Smart Ignition Management
- Hardware Monitor

For items marked with "▶", please press <Enter> for more options.

Aptio Setup – AMI Main <mark>Advanced</mark> Chipset Security Boot Save & Exit	
<ul> <li>CPU Configuration</li> <li>ACPI Settings</li> <li>MISC. Configuration</li> <li>Trusted Computing</li> <li>AMT Configuration</li> <li>Serial Port Configuration</li> <li>EC DIO Configuration</li> <li>Network Stack Configuration</li> <li>Smart Ignition Management</li> <li>Hardware Monitor</li> </ul>	CPU Configuration Parameters 
Version 2.22.1287 Copyright	(C) 2024 AMI

#### CPU Configuration

Advanced	Aptio Setup — AMI	
CPU Configuration		Enable or Disable
Type ID Speed L1 Data Cache L1 Instruction Cache L2 Cache L3 Cache VMX SMX/TXT	13th Gen Intel(R) Core(TM) 15-1335UE 0xB06A3 800 MHz 48 KB x 2 32 KB x 2 1280 KB x 2 1280 KB x 2 12 MB Supported Supported	Hyper-Inreading Technology.
Hyper-Threading Intel (VMX) Virtualization Technology Boot performance mode Intel(R) SpeedStep(tm) CPU Performance Turbo Mode	[Enabled] [Enabled] [Turbo Performance] [Enabled] [Dynamic] [Enabled]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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#### Hyper-Threading

Enable or disable Hyper-Threading Technology. When enabled, it allows a single physical processor to multitask as multiple logical processors. When disabled, only one thread per enabled core is enabled.

#### Intel (VMX) Virtualization Technology

Enable or disable Intel Virtualization Technology. When enabled, a VMM (Virtual Machine Mode) can utilize the additional hardware capabilities. It allows a platform to run multiple operating systems and applications independently, hence enabling a single computer system to work as several virtual systems.

Below shows a page of CPU configuration with item *Intel Virtualization Technology [enable/disable]* highlighted.

#### Boot performance mode

In this BIOS screen under CPU Configuration, the Boot Performance Mode setting is set to Turbo Performance. This option is typically used to configure the system's performance during the boot process.

• Turbo Performance: Boosts CPU performance during startup by running at higher frequencies, which can lead to faster boot times but may consume more power.

#### Intel(R) Speedstep(tm)

Enable or disable Intel(R) Speedstep(tm). When enabled, it allows a single physical processor to multitask as multiple logical processors. When disabled, only one thread per enabled core is enabled.

#### **CPU** performance

#### -Turbo Mode

Dynamic: Typical power consumption is 13W, with Turbo power consumption at 21W; recommended airflow is 0.4 CFM.

Maximum: Typical power consumption is 15W, with Turbo power consumption at 28W; recommended airflow is 0.7 CFM.

#### ACPI Setting

Use this screen to select options for the ACPI configuration and change the value of the selected option. A description of the selected item appears on the right side of the screen.

Advanced	Aptio Setup – AMI	
ACPI Settings ACPI Sleep State	[S3 (Suspend to RAM)]	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
		++: Select Screen
		<pre>f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit FSC: Fxit</pre>
	ersion 2 22 1287 Convright (C) 20	24 AMT

#### MISC. Configuration

Use this screen to select options for the MISC configuration and change the value of the selected option. A description of the selected item appears on the right side of the screen.

Advanced	Aptio Setup — AMI	
Advanced MISC. Configuration Mini card device SMbus Interface M.2 2280 device OSD 3rd Key Function Status LED Brightness Light sensor control	[AUTO] [Disable] [AUTO] [Both On/Off] [100%]	Mini card device
FrontSensor Detect Time ▶ SATA Configuration ▶ NVMe Configuration	[1ndoor] [1 second]	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Ven	sion 2.22.1287 Copyright (C) 2	2024 AMI



#### Mini card device

AUTO: System will detect device (PCIe/mSATA) automatically.

mSATA: Force to mSATA.

	Aptio Setup - AMI	
Advanced		
MISC. Configuration Mini card device SMbus Interface	(AUTO) (Disable)	Minicard slot SMBUS Clock & Data signal connection.
M.2 2280 device OSD 3rd Key Function Status LED Brightness	[AUTO] [Both On∕Off] [100%]	
Light sensor control FrontSensor Detect Time > SATA Configuration	[Indoor] SMbus Interface	
▶ NVMe Configuration	Disable	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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#### SMbus Interface

If your mini card device has SM bus or I2C interface, please select "Enable".

Advanced	Aptio Setup — AMI	
Advanced MISC. Configuration Mini card device SMbus Interface M.2 2280 device OSD 3rd Key Function Status LED Brightness Light sensor control FrontSensor Detect Time SATA Configuration NVMe Configuration	(AUTO) [Disable] [AUTO] [Both On/Off] [100%] [Indoor] M.2 2280 device AUTO SATA	M.2 2280 device ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Ver	rsion 2.22.1287 Copyright (C) 20	024 AMI

#### M.2 2280 device

AUTO: System will detect M.2 SSD type (NVMe/SATA) automatically.

SATA: Force to SATA SSD

Advanced	Aptio Setup – AMI	
Advanced MISC. Configuration Mini card device SMbus Interface M.2 2280 device OSD 3rd Key Function Status LED Brightness Light sensor control FrontSensor Detect Time > SATA Configuration > NVMe Configuration	[AUTO] [Disable] [AUTO] [Both On/Off] [100%] OSD 3rd Key Function Touch On/Off Display On/Off Both On/Off	Side keypad function ++: Select Screen TH: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.22.1287 Copyright (C)	) 2024 AMI

#### **OSD 3rd Key Function**

The "OSD 3rd Key Function" setting in this BIOS screen allows you to configure the function of the OSD (On-Screen Display) third key. The available options are:

- Touch On/Off: Toggles the touch functionality on or off.
- **Display On/Off**: Toggles the display on or off.
- Both On/Off: Toggles both the touch and display functionalities on or off simultaneously.



This setting provides flexibility for controlling touch and display features directly from the OSD.

#### Status LED Brightness

This BIOS screen shows the **Status LED Brightness** setting under **MISC. Configuration**. It allows you to adjust the brightness level of the status LED on the device. The available options are:

- 60%
- 80%
- 100%



#### Light Sensor Control FrontSensor

Light sensor (optional, default: Indoor), set indoor/outdoor & detection time according to user environment, light sensor is divided into ten levels, indoor maximum brightness 1000nits, outdoor maximum brightness 1500nits

After installing the operating system graphics card driver, the backlight adjustment function can be turned on. No functionality in other environments.



#### **Detect time**

The chosen value determines how frequently the system will adjust the brightness based on ambient light conditions. For instance, setting it to 1 second will make the brightness adjust more frequently, while 10 seconds will make adjustments less frequent. The default setting is 1 second. The available options are:

- 1 second
- 3 seconds
- 10 seconds

Advanced	Aptio Setup – AMI	
Advanced SATA Configuration SATA Controller(s) M.2 2280 SATA Port Port 1 Hot Plug Spin Up Device SATA Device Type mSATA Port Port 2 Hot Plug Spin Up Device SATA Device Type	Aptio Setup - AMI [Enabled] SK hynix SC311 (128.0GB) [Enabled] [Disabled] [Solid State Drive] Empty [Enabled] [Disabled] [Disabled] [Solid State Drive]	<pre>Enable/Disable SATA Device.  ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults</pre>
		F4: Save & Exit ESC: Exit

#### **SATA** Configuration

During system boot up, BIOS automatically detects the presence of SATA devices. In the SATA Configuration menu, you can see hardware currently installed in the SATA port.

Advanced	Aptio Setup – AMI	
Seg:Bus:Dev:Func Model Number Total Size Vendor ID Device ID Namespace: 1	00:01:00:00 TEAM TM8FP6256G 256.0 GB 10EC 5765 Size: 256.0 GB	Select either Short or Extended Self Test. Short option will take couple of minutes and extended option will take several minutes to complete.
Device Self Test: Self Test Option Self Test Action Run Device Self Test	[Short] [Controller Only Test]	
Short Device Selftest Result Extended Device Selftest Result	[Not Available] [Not Available]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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#### **NVMe Configuration**

This screen shows NVMe device information.

#### Trusted Computing

You can use this screen for TPM (Trusted Platform Module) configuration. It also shows current TPM status information.



#### ► AMT Configuration

Use this screen to configure AMT parameters

Advanced	Aptio Setup — AMI	
SATA Configuration Serial ATA Port SATA Device Type Topology	CT250MX500SSD1 (250.0GB) [Solid State Drive] [ISATA]	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive
	SATA Device Type Hard Disk Drive Solid State Drive	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Ve	ersion 2.21.1278 Copyright (C) 2022	2 AMI

#### Serial Port Configuration

You can use this screen to select options for serial port configuration and change the value of the selected option. A description of the selected item appears on the right side of the screen. For items marked with. " $\blacktriangleright$ ", please press for more options.

Advanced	Aptio Setup – AMI	
Serial Port Configuration		Set Parameters of Serial Port
Super IO Chip ▶ Serial Port 1 Configuration ▶ Serial Port 2 Configuration	ECSUPERIO	1 (COMA)
		<pre>File Select Scheen File Select Item Enter: Select +/-: Change Opt. Fi: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version	2.22.1287 Copyright (C) 2024	AMI

#### Serial Port 1 Configuration

Aptio Setup - AMI Advanced		
Serial Port 1 Configuration Serial Port Device Settings COM Port Type	[Enabled] IO=3F8h; IRQ=4; [RS232]	COM Port Type: RS232, RS422, RS485
	COM Port Type RS232 RS422 RS485	<pre>#*: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.22.1287 Copyright (C) 2024 AMI		

#### Serial Port 1

Enable or disable serial port 1. The optimal setting for base I/O address is 248h and for interrupt request address is IRQ7.

#### COM Port Type

Use this item to set RS-232/422/485 communication mode and default set is RS-232.

#### Serial Port 2 Configuration

Advanced	Aptio Setup – AMI	
Serial Port 1 Configuration		Enable or Disable Terminal Mode
Serial Port Device Settings COM Port Type Terminal Mode	[Enabled] IO=3F8h; IRQ=4; [RS422] [Enabled]	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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#### Serial Port 2

Enable or disable serial port 2. The optimal setting for base I/O address is 258h and for interrupt request address is IRQ6.

#### **COM Port Type**

Use this item to set RS-232/422/485 communication mode and default set is RS-232.

Advanced	Aptio Setup – AMI	
USB Configuration		Control USB2.0 5vsb power
USB Module Version	30	Enable : 5Vdc output
USB Devices: 1 Keyboard, 2 Mice		Disable . No power butput
USB2.0 PORT 1-2 USB2.0 PORT 3-4	[Enabled] [Enabled]	
		++: Select Screen ↑↓: Select Item
		Enter: Select +∕−: Change Opt.
		F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit
		LOG. EAT
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#### **USB** Devices

Display all detected USB devices

#### Network Stack Configuration

The Network Stack configuration in the BIOS enables network-related boot options, allowing the setup of PXE (Preboot Execution Environment) booting and UEFI network support."

Advanced	Aptio Setup – AMI	
Network Stack IPv4 PXE Support IPv6 PXE Support PXE boot wait time Media detect count	[Enabled] [Enabled] [Enabled] 0 1	Enable/Disable UEFI Network Stack ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
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#### **Network Stack**

Enabled: The UEFI Network Stack is turned on, allowing network booting via PXE.

#### IPv4 PXE Support

Enabled: Allows booting from the network using the IPv4 protocol. This is typically used in PXE environments where the system can boot from an IPv4 network connection.

#### IPv6 PXE Support

Enabled: Allows booting from the network using the IPv6 protocol. This is useful in modern networks that rely on IPv6 addressing.

#### PXE Boot Wait Time

0: The system does not wait before attempting PXE boot. This setting defines how long the system waits for a PXE boot server response.

#### **Media Detect Count**

1: The system attempts to detect the boot media once before moving to the next

#### Smart Ignition Management

The Smart Ignition Management settings in the BIOS allow for configurations tailored to automotive or industrial environments where power management is critical.

Advanced	Aptio Setup – AMI	
Smart Ignition Management Manufacturer Model Firmware Version PSU State Power Mode Vin Voltage(V) IGN Signal Shutdown Delay Timer (IGN Off)	Axiomtek GOT515-RPL-WCD V101 System On AT Mode 23.7 Off 00:00:02	Change power mode Enabled : In-Vehicle Disabled : AT/Raiway *PSU and system would reset after save setting
Shutdown Delay Timer (Low Voltage)	00:03:00	
Ignition Management		↔+: Select Screen ↑↓: Select Item
Auto Power On	[Enabled]	Enter: Select +/-: Change Opt.
Advance Setting		F1: General Help F2: Previous Values F3: Optimized Defaults
<ul> <li>Save Settings</li> <li>Restore Factory Settings</li> </ul>		F4: Save & Exit ESC: Exit
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**Ignition Management:** Currently Disabled. Enabling this would allow for additional power control based on ignition signals, useful for in-vehicle scenarios.

If system doesn't detect IGN signal, Ignition Management cannot set to enabled.

Please connect ACC signal before setting this item.

Advanced	Aptio Setup — AMI	
====== Voltage ======		The counter will be activated
Activate Voltage Trigger(V) Low Voltage Trigger(V)	9 8	once power source voltage is smaller than the value of [Low Voltage Trigger] then sustem
Shutdown Delay Timer (Low Voltage)		will be forced to turn off
Minuium Timer	00:01:00	when time's up
Maximum Timer	03:00:00	
Hour	0	
Minute	3	
Second	0	
======= IGN Function ========	2.	
IGN Trigger	[Disabled]	
		<pre>→+: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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Auto Power On: Enabled to automatically power on the system after a power loss.

This screen shows advanced settings under **Smart Ignition Management**, specifically focused on voltage triggers and shutdown delay timers. Here's a summary:

#### Voltage Triggers:

- Activate Voltage Trigger (V): Set to 9V. When the input voltage rises to or above this level, certain power functions may be activated.
- **Low Voltage Trigger (V)**: Set to **8V**. When the voltage drops below this threshold, it triggers a sequence that could lead to a shutdown.

#### Shutdown Delay Timer (Low Voltage):

- **Minimum Timer**: Set to **1 minute**. This is the shortest delay allowed before shutdown due to low voltage.
- **Maximum Timer**: Set to **3 hours** (03:00:00), allowing up to a 3-hour delay before shutdown.
- **Current Timer Setting**: Configured to **3 minutes** (0 hours, 3 minutes, 0 seconds), meaning the system will wait 3 minutes after detecting low voltage before shutting down.

#### **IGN Function**:

 IGN Trigger: Currently Disabled. If enabled, this would allow the system to react to an ignition signal, such as powering up or shutting down based on vehicle ignition status.

#### Hardware Monitor

This screen monitors and displays the hardware health status of the system in real time, including system and CPU temperatures, and system voltages (VBAT, +3.3V\_SBY, +5V).

Advanced	Aptio Setup – AMI	
Pc Health Status		
CPU Temperature System Temperature VBAT +3.3V_SBY +5V	: +39 % : +40 % : +2.24 V : +3.28 V : +4.96 V	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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## 3.5 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings.

The Chipset menu here shows the System Agent (SA) Configuration options, which allow you to control various advanced chipset settings. Here are the main options available in this section:



#### VT-d:

Intel's Virtualization Technology for Directed I/O, which helps manage and isolate I/O devices for virtual machines. This setting is Enabled, meaning VT-d is active, allowing better resource control for virtualized environments.

#### In-Band ECC Support:

ECC (Error-Correcting Code) memory can detect and correct memory corruption. This option is Disabled, meaning ECC support is not active for this configuration.

#### GNA Device (B0:D8):

This likely refers to Intel's GNA (Gaussian & Neural Accelerator) for low-power AI workloads, such as voice or noise suppression. It is currently Disabled.

## 3.6 Security Menu

The Security menu allows users to change the security settings for the system.

- Administrator Password Set administrator password.
- User Password Set user password.
- Secure Boot Setting Secure boot

Aptio Setup – AMI Main Advanced Chipset Security Boot Save & Exit								
Password Description		Set Administrator Password						
If ONLY the Administrator's passwor then this only limits access to Set only asked for when entering Setup. If ONLY the User's password is set, is a power on password and must be boot or enter Setup. In Setup the U have Administrator rights. The password length must be in the following range: Minimum length	d is set, up and is then this entered to ser will 3							
Administrator Password	20	++: Select Screen						
User Password		Enter: Select +/-: Change Opt.						
▶ Secure Boot		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit						
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#### Secure Boot

Secure Boot feature is Active if Secure Boot is Enabled or Disable

	Aptio Setup - AMI	
System Mode Secure Boot	Setup [Enabled] Not Active	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode.
Secure Boot Mode ▶ Restore Factory Keys ▶ Reset To Setup Mode	[Standard]	The mode change requires platform reset
▶ Key Management		
		<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
	Version 2.22.1287 Copyright (C) 202	4 AMI
	Aptio Setup – AMI Security	
System Mode	Aptio Setup - AMI Security Setup	Secure Boot feature is Active
System Mode Secure Boot	Aptio Setup - AMI Security Setup [Disabled] Not Active	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode. The mode change requires
System Mode Secure Boot Secure Boot Mode ▶ Restore Factory Keys ▶ Reset To Setup Mode	Aptio Setup - AMI Security Setup [Disabled] Not Active [Custom]	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode. The mode change requires platform reset
System Mode Secure Boot Secure Boot Mode ▶ Restore Factory Keys ▶ Reset To Setup Mode ▶ Key Management	Aptio Setup - AMI Security [Disabled] Not Active [Custom] Secure Boot	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode. The mode change requires platform reset
System Mode Secure Boot Secure Boot Mode Restore Factory Keys Reset To Setup Mode Key Management	Aptio Setup - AMI Security [Disabled] Not Active [Custom] Secure Boot - Disabled Enabled	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode. The mode change requires platform reset ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

#### Secure Boot Mode

Secure Boot mode options Standard or Custom

	Aptio Setup – AMI Security	
System Mode	Setup	Secure Boot mode options: Standard or Custom
Secure Boot	[Disabled] Not Active	In Custom mode, Secure Boot Policy variables can be configured by a obysically
Secure Boot Mode ▶ Restore Factory Keys ▶ Reset To Setup Mode		present user without full authentication
▶ Key Management	Standard	
		↔: Select Screen ↑↓: Select Item Enter: Select
		+/−: Change Opt. F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.22.1282 Convright (C) 202	2 AMT

#### Key management

Install factory default Secure Boot key the platform rest and while the System is in Setup mode.

Se	Aptio Setup – AMI Security							
Vendor Keys	Valid	Install factory default Secure						
Factory Key Provision Restore Factory Keys Reset To Setup Mode Export Secure Boot variables Enroll Efi Image	[Disabled]	Boot Regs after the platform reset and while the System is in Setup mode						
Device Guard Ready ▶ Remove 'UEFI CA' from DB ▶ Restore DB defaults								
Secure Boot variable   Size  Platform Key(PK)   862  Key Exchange Keys   1560  Authorized Signatures   3143  Forbidden Signatures   11064  Authorized TimeStamps   0  OsRecovery Signatures   0	Keys  Key Source 1  Test(AMI) 1  Factory 2  Factory 192  Factory 0  No Keys 0  No Keys	<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>						
V	ersion 2.22.1282 Copyright (C)	2022 AMI						

## 3.7 Boot Menu

• Setup Prompt Timeout

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

- **Bootup NumLock State** Use this item to select the power-on state for the keyboard NumLock.
- Quiet Boot Select to display either POST output messages or a splash screen during boot-up.
- Network Stack Enable or Disable UEFI Network Stack.

The Boot menu allows users to change boot options of the system.

Main Advanced Chipset	Aptio Setup – AMI Security Boot Save & Exit MEBx	
Boot Configuration Setup Prompt Timeout Bootup NumLock State Quiet Boot Network Stack	1 [On] [Disabled] [Disabled]	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
Boot Option Priorities Boot Option #1	[Disabled]	
		<pre>++: Select Screen f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
	Version 2.22.1287 Copyright (C) 2024	A AMI

Main Advanced Chipset	Aptio Setup – AMI Security Boot Save & Exit	
Boot Configuration Setup Prompt Timeout Bootup NumLock State Quiet Boot Network Stack Boot Option Priorities Boot Option #1	1 [Disabled] [Disabled] [UEFI: KingstonDataTraveler 2.01.00, Partition 1 Bootup NumLock State	Select the keyboard NumLock state ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.22.1282 Copyright (C) 2023	3 AMI
Main Advanced Chipset	Aptio Setup – AMI Security Boot Save & Exit	
Boot Configuration Setup Prompt Timeout Bootup NumLock State Quiet Boot Network Stack Boot Option Priorities Boot Option #1	1 [Disabled] [Disabled] [UEFI: KingstonDataTraveler 2.01.00, Partition 1 Quiet Boot r Disabled Enabled	Enables or disables Quiet Boot option ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Main Advanced Chipset	Aptio Setup – AMI Security <mark>Boot</mark> Save & Exit	
Boot Configuration Setup Prompt Timeout Bootup NumLock State Quiet Boot Network Stack	1 [On] [Disabled] [Disabled]	Enable/Disable UEFI Network Stack
Boot Option Priorities Boot Option #1	[UEFI: KingstonDataTraveler 2.01.00, Partition 1 Network Stack Disabled Enabled	<pre>**: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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## 3.8 Save & Exit Menu

The Save & Exit menu allows users to load your system configuration with optimal or fail-safe default values.

Aptio Setup – AMI Main Advanced Chipset Security Boot Save & Exit MEBx	
MainAdvancedChipsetSecurityBootSave & ExitMEBxSave Options Save Changes and ExitDiscard Changes and ExitSave Changes and ResetDiscard Changes and ResetSave ChangesDiscard ChangesDiscard ChangesDiscard ChangesDefault Options Restore Defaults Save as User Defaults 	Exit system setup after saving the changes. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. E1: General Help
	F1: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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#### Save Changes and Exit

When you have completed the system configuration changes, select this option to leave Setup and return to Main Menu. Select Save Changes and Exit from the Save & Exit menu and press <Enter>. Select Yes to save changes and exit.

#### **Discard Changes and Exit**

Select this option to quit Setup without making any permanent changes to the system configuration and return to Main Menu. Select Discard Changes and Exit from the Save & Exit menu and press <Enter>. Select Yes to discard changes and exit.

#### Save Changes and Reset

When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to save changes and reset.

#### **Discard Changes and Reset**

Select this option to quit Setup without making any permanent changes to the system configuration and reboot the computer. Select Discard Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to discard changes and reset.

#### Save Changes

When you have completed the system configuration changes, select this option to save changes. Select Save Changes from the Save & Exit menu and press <Enter>. Select Yes to save changes.

#### **Restore Defaults**

Restore or Load Default values for all the setup options.

#### **Discard Changes**

Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes from the Save & Exit menu and press <Enter>. Select Yes to discard changes.

#### **Restore Defaults**

It automatically sets all Setup options to a complete set of default settings when you select this option. Select Restore Defaults from the Save & Exit menu and press <Enter>.

#### Save as User Defaults

Select this option to save system configuration changes done so far as User Defaults. Select Save as User Defaults from the Save & Exit menu and press <Enter>.

#### **Restore User Defaults**

It automatically sets all Setup options to a complete set of User Defaults when you select this option. Select Restore User Defaults from the Save & Exit menu and press <Enter>.

#### **Boot Override**

Select a drive to immediately boot that device regardless of the current boot order.

## SECTION 4 DRIVER AND INSTALLATION

## 4.1 Operating System

The GOT515-RPL-WCD is compatible with operating systems Windows 10/11 and Windows 10/11 IoT Enterprise. To facilitate the installation of system drivers, please carefully read the instructions in this section before any of such installation.

## 4.1.1 Driver download

1. Please download the following GOT515-RPL-WCD driver from Axiomtek official website

Support->Downloads->select a product series->Search by Product Category

- 2. Please follow below Steps to install driver in GOT515-RPL-WCD.
- Step 1. Chipset
- Step 2. LAN
- Step 3. ME
- Step 4. Serial IO
- Step 5. Graphics

]]	AXIOMTEK		Products	Solutions	What's New	Resources	Support	Services At	out Us	Contact Us
	Downloads Select a Product Series Search by Product Catego Recently Released	Please select Please select		~ ~ ~	] ] ]		Downloads Datasheet ( Technical S Online Foru Online RMA (Internation Online RMA Partner Zor	PDF) upport AQ m al) (USA) e		
	Drivers									
	Model	Description					Version	Download File	Release	e Date
	IPC960-525-FL	5. Intel ME Driver					VA1.0	275,095.8KB	2021/0	13/12
	IPC960-525-FL	6. Intel RST Driver					VA1.0	17,896.5KB	2021/0	13/12
	IPC960-525-FL	4. Intel LAN Driver					VA1.0	383,368.4KB	2021/0	13/12
	IPC960-525-FL	3. Realtek Audio Drive	er				VA1.0	430,788KB	2021/0	13/12
	IPC960-525-FL	Intel Graphic Driver					VA1.0	247,419.7KB	2021/0	13/12
	IPC960-525-FL	Intel Chipset Driver					VA1.0	КВ	2021/0	13/12
	G0T317-502-FR	Win7_driver					VA1.2	812,892.5KB	2021/0	13/08
	MVS100-323-FL	IO Driver & SDK					VA1.0	16,964.8KB	2021/0	12/03

## 4.2 Touch Screen

The GOT515-RPL-WCD is designed based on the technology of projected capacitive multitouch screen of which specifications are listed below

## 4.2.1 Specification

Touch Screen	10-point Projected capacitive multi-touch
Communications	USB interface
Transparency	> 85%
Input Method	Finger or Cap.Stylus

## 4.3 Embedded O.S.

The GOT515-RPL-WCD provides the Windows  $\ensuremath{\mathbb{R}}$  10 Embedded. The O.S. is supported devices which are listed below.

#### WES 10

Here are supported onboard devices:

- Onboard Multi I/O
- SATA HDD
- USB
- LCD display
- 10/100/1000 base-T Ethernet
- mSATA
- Touch Screen

## APPENDIX A TPM BITLOCKER SETTINGS

1. Set up BitLocker Drive Encryption main storage. Press <Win + R> and type "Control Panel", and then select BitLocker Drive Encryption.

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2. Insert an external storage device, for example USB Storage. Back up BitLocker Recovery Key in a new file and save it to the USB Storage.

1	Ą	BitLocker	Drive Encryption			_						
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2			How do you want to back	up your recovery key?	← → · ↑ Organize ▼	■ > 16G	B (D:) →	2	~ p	Search 16GB (D:)	م • (2)	
Sh	0		A recovery key can be used to acc	ess your files and folders if you're having pro	E Pictures	* ^ Pro 5.5	Name	^		Date modified 2/21/2018 4:25 PM	Type File folder	
a Mi	6 61		It's a good idea to have more than	n one and keep each in a safe place other tha	n 🎝 Music 🚟 Videos	- 6	LOCALE PASSMAR	K BurninTest Pro 4	I.0	4/29/2019 10:59 AM 7/11/2013 6:42 PM	File folder File folder	
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PC	DI		How can I find my recovery key la	ter?	File na Save as t	me: BitLock	ter Recovery Key es (*.txt)	F809F878-040F-4	A1E-A4AC-2F	6D629A3DD7	~	
	9	See al: TPM #			∧ Hide Folders					Save	Cancel	
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3. Please follow the steps below to encrypt your storage device:

		×
÷	Reference BitLocker Drive Encryption (C:)	
	Choose how much of your drive to encrypt	
	If you're setting up BitLocker on a new drive or a new PC, you only need to encrypt the part of the drive that's currently being used. BitLocker encrypts new data automatically as you add it.	
	If you're enabling BitLocker on a PC or drive that's already in use, consider encrypting the entire drive. Encrypting the entire drive ensures that all data is protected–even data that you deleted but that might st contain retrievable info.	ill
ſ	Encrypt used disk space only (faster and best for new PCs and drives)	
	<u>N</u> ext Cance	
		×
		~

	Choose which encryption mode to use
	Windows 10 (Version 1511) introduces a new disk encryption mode (XTS-AES). This mode provides additional integrity support, but it is not compatible with older versions of Windows.
	If this is a removable drive that you're going to use on older version of Windows, you should choose Compatible mode.
	If this is a fixed drive or if this drive will only be used on devices running at least Windows 10 (Version 1511) or later, you should choose the new encryption mode
1	Mew encryption mode (best for fixed drives on this device)
1	○ <u>C</u> ompatible mode (best for drives that can be moved from this device)
	2



Now, the system prompts that the operating system drive encryption is in progress, and the encryption progress is checked.

Recycle Bin	3DMark 11 Ei	BitLocker Drive Encryption     ← → ✓ ↑ ♠ → Control Pi	anel → All Control Panel Items → BitLocker	Drive Encryption V		□ × USB3.0Test USB2Tester
1		Eile Edit View Tools				
BurnInTest	3DMark06	Control Panel Home	BitLocker Drive Encryption Help protect your files and folders from	unauthorized access by protecting your driv	es with BitLocker.	V Test_result
			For your security, some settings are	managed by your system administrator.		
hw64_551	CINEBENCH Qu B10 Dri		Operating system drive			LuxMark-v3:1
			Windows (C:) BitLocker Encry	oting	$\odot$	
MonitorTest	HDD Test			<ul> <li>Back up your recovery key</li> <li>Turn off BitLocker</li> </ul>		繁茵錄Alina - Cover不曾
			Fixed data drives			
saneng201	Jperf Inte		Removable data drives - BitLoc	ker To Go		BurninTest Profession
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		TPM Administration				Enstruction in program
CrystalDisk u	usb3loopdr P	Disk Management Privacy statement			1	Encryption of C: by BitLocker Drive Encryption has started. Click for more information.
		Sanura rec				BitLocker Drive Encryption Notification Utility
0	Type here to se	earch d	0 🤆 🗟 🔒 😫	🤹 🔚 🚖 💆 🔹	ø 👫 📟	x <sup>Q</sup> ∧ 🏘 🙀 Φ)) 7:49 PM 😽



Select and click the icon in the lower right corner to complete the encryption.



Recycle Bin	3DMark 11 EI	BitLocker Drive Encry	yption			<u>.</u>	-		USB3.0Test USB2	tester
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Control Panel Home	BitLocker Drive Encryption Help protect your files and failors from unautheread access by protecting your dives with BitLocker.	°
	For your security, some settings are managed by your system administratos.	
	Operating system dr C. Bittocker on C. Bittocker on	
	Cher	
	Removable data drives - BitLocker To Go TRANSCEND (E) BitLocker off	
See also FPM Administration Solic Management Prives statement		

4. Confirm the completion of encryption.

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← → ∽ ↑ 🏘 > Control	Panel > All Control Panel Items > BitLocker Drive Encryption 🗸 🖑	Search Control Panel	٩			
Control Panel Home	BitLocker Drive Encryption Help protect your files and folders from unauthorized access by protecting your o	drives with BitLocker.	G			
	For your security, some settings are managed by your system administrator.					
	Operating system drive					
	Windows (C:) BitLocker on	$\odot$				
	Suspend protection Suspend protection Suspend protection Turn off BitLocker					
	Fixed data drives					
	Removable data drives - BitLocker To Go					
	D: BitLocker off	$\odot$				
See also						
TPM Administration						
💡 Disk Management						
Privacy statement						

5. Disable the TPM function in BIOS Setup Utility.

TPM20 Device Found	402 1	Enables or Disables BIOS
Firmware Version:	402.1 INTC	support for security device
		Device. TCG EFI protocol an
		INTIA interface will not be available.
		↔: Select Screen
		<pre> \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$</pre>
		+/-: Change Ont.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC. EXIC

6. If you see the following screen when the system is powered on, it means that the TPM module function is working fine. Note that BitLocker cannot be executed if your system does not support the TPM function.



## **(Note)** The user will experience the following situation when using a system not supporting TPM.

1. TPM information is not found in Device Manager.



2. When trying to turn on Bitlocker, the following error message shows up.



		×						
4	Rev BitLocker Drive Encryption (C:)							
	Starting BitLocker							
	Nis device can't use a Trusted Platform Module. Your administrator must set the "Allow BitLocker without a compatible TPM" option in the "Require additional authentication at startup" policy for OS volumes.							
	What are BitLocker's system requirements?							
	Cancel							