P115-ADL-TRA

All-in-One 15" XGA TFT Expandable Panel PC

User's Manual





USER'S MANUAL

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CAUTION

Wrong type of batteries may cause explosion. It is recommended that users only replace with the same or equivalent type of batteries as suggested by the manufacturer once properly disposing of any used ones.

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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 the 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 P100 series prior to any installation. Be sure both the system and the external devices are turned off. Sudden surge of power could ruin sensitive components. Make sure the P100 series is properly grounded.
- 3. Do not open the system's top 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 your body.
 - When handling boards and components, wear a grounding wrist strap available from most electronic component stores.

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Table of Contents

Safety Precautions Section 1 Introduction 1.1 General Description 1.2 Specifications	1 2 3 4 5
Section 1 Introduction 1.1 General Description	1 2 3 4 5
1.1 General Description	2 3 4 5
-	3 4 5
1.2 Specifications	3 4 5
-	4 5
1.2.1 System Specifications	5
1.2.2 Mechanical/Environmental Specifications	
1.3 Dimensions and Outlines	7
1.4 I/O Outlets	
Section 2 Hardware and Installation	9
2.1 Packing List	10
2.2 System Layout	10
2.3 SSD Installation	12
2.4 DRAM Installation	
2.5 PCIe Mini-Card module Installation (optional)	
2.6 Add-on Card Installation	
2.7 Mountings: Panel / Wall / Desktop / VESA	
2.7.1 VESA-ARM / Wall-mount / Desktop-mount	
2.7.2 Panel-mount Kit Assembly	
2.8 Rear I/O	
2.9 Jumper Settings	21
2.9.1 COM1 Data/Power Select (JP1)	
2.9.2 Clear CMOS (JP3)	
2.9.3 AT/ATX Power Mode Select (JP5)	22
2.10 Connectors	23
2.10.1 COM1 and COM2 D-Sub Connector (CN1)	24
2.10.2 SATA 3.0 Connectors (CN7)	
2.10.3 USB 3.2 GEN1 Stack Port (CN10)	
2.10.4 LAN and USB 2.0 Connectors (CN11 and CN19)	
2.10.5 PCI-Express Mini Card Connector (CN21)	
2.10.6 M.2 Key E Socket (CN22) 2.10.7 DisplayPort1.3 Connector (CN32)	
2.10.7 DisplayFort1.3 Connector (CN32)	
2.10.9 VGA Connector (CN34)	
2.10.10 Audio Jack (CN82)	

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Sec	tion 3 AMI BIOS Setup Utility	31
3.1	Starting	31
3.2	Navigation Keys	31
3.3	Main Menu	32
3.4	Advanced Menu	33
3.5	Chipset Menu	46
3.6	Boot Menu	49
3.7	Security Menu	50
3.8	Save & Exit Menu	52
Sec	tion 4 Drivers Installation	54
4.1	Operating System	54
4.2	Touch Screen	55
APF	PENDIX A TPM BitLocker SETTINGS	

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Section 1 Introduction

This section contains general information and detailed specifications of the P115-ADL-TRA, including the following subsections:

Figure 1-1 Front View of the P115-ADL-TRA



- General Description
- Specification
- Dimensions
- I/O Outlets
- Package List

1.1 General Description

The P115-ADL-TRA adopts a 15-inch XGA TFT LCD with 300-nits brightness, a high performance LGA1700 socket for 12th generation Intel® Core™ i7/i5/i3 & Pentium® processor, and an Intel® H610 Express chipset to provide excellent computing performance. Furthermore, P115-ADL-TRA supports optional WLAN module & antenna for wireless connectivity.

Industrial-grade front bezel

The P115-ADL-TRA adopts industrial-grade front bezel which incorporates the advantages of light weight, high degree of hardness, better heat releasing, easy-to-shape and anti-corrosion. Therefore, the P115-ADL-TRA is especially suitable for most rugged industrial environments.

Expandable for PCIe

P115-ADL-TRA comes with one PCIe x16 for expansion purpose. User can easily plug in PCIe card as required.

WLAN Antenna Supported

The P115-ADL-TRA supports a WLAN module (optional) antenna for wireless network connectivity.

High Performance computing: 12th Generation Intel[®] Core[™] Processors

The P115-ADL-TRA is powered by LGA1700 Socket 12th Generation Intel® Core[™] i7/i5/i3, Pentium® processors which provide powerful performance and less power consumption. The latest Intel® Alder lake-S platform offers reliable and stable performance suitable for rugged environments.

1.2 Specifications

1.2.1 System Specifications

Main CPU Board

- CPU
 - LGA1700 socket 12th generation Intel® Core™ i7/i5/i3 and Pentium® processors, up to 65W
- Chipset
 - ➢ Intel® H610
- System Memory
 - 2 x 260-pin DDR4-3200/2666/2400MHz SO-DIMM, up to 64GB
- BIOS
 - AMI BIOS via SPI interface.

I/O System

- Standard I/O
 - > 1 x RS-232/422/485
 - ▶ 1 x RS-232
 - > 2 x USB 3.2 GEN1(Type A)
 - 4 x USB 2.0(Type A)
 - > 1 x AC Socket for power input
 - > 1 x Switch for power on/off
 - 1 x Remote power switch
 - > 1 x HDMI
 - > 1 x VGA
 - > 1 x Display Port
 - 1 x Audio Line-out
 - 1 x Audio Mic-in
 - 1 x flexible I/O windows, by option 2x RS232,DIO, CAN, LAN
- Ethernet
 - LAN1: 1000/100/10Mbps Gigabit/Fast Ethernet supports Wake-on-LAN, PXE with Intel® i219V.
 - LAN2: 2500/1000/100/10Mbps Gigabit/Fast Ethernet supports Wake-on-LAN, PXE with Intel® i225V.

- Expansion
 - 1 x PCle x16 slot.

Note: Supports dimensions of standard half size PCIE card. (Max. up 167.65mm x 111.15mm x 18.71mm)

- > 1 x PCI-Express Mini Card USB + SATA signal (USB+PCIe signal by option)
- > 3 x SMA Type Antenna Hole
- > 1 x M.2 Key E type 2230 with PCIe x1 and USB2.0.
- Storage
 1 x 2.5" SATA SSD (supports 7mm and 9.5mm)
- Power connector
 1 x AC Socket for power input

1.2.2 Mechanical/Environmental Specifications

- 15" XGA (1024x768) LCD 300 nits with LED backlight
- 5-wire resistive touch
- Aluminum w/ IP65/NEMA 4 rugged protection
- Net Weight
 - ■5.4 Kgs (11.90 lbs)
- Dimensions (Main Body Size)
 - 378.3 mm (14.89") (W) x 88.8 mm (3.5") (D) x 310.3 mm (12.22") (H)
- Operation Temperature
 - ■0°C to 50°C (35W/65W CPU/SSD)
- Relative Humidity
 - ■10% to 90% @ 40°C, non-condensing
- Power Input
 - ■100~240VAC power connector

NOTE All specifications and images are subject to change without notice.

1.3 Dimensions and Outlines

Diagram 1-1 and 1-2 show the outlines and dimensions of P115-ADL-TRA, respectively.





CUT OUT DIM. 60 368±0.5







1.4 I/O Outlets

Figure 1-2,1-3 and Table 1-1,1-2 illustrate I/O locations and their functions of the P115-ADL-TRA.



Figure 1-2 Front View of the P115-ADL-TRA

No	Function		
1	1 x Power status LED		
2	1 x SATA status LED		
3	1 x Brightness down		
4	1 x Display monitor ON/OFF		
5	1 x Brightness up		



Figure 1-3 Side View of the P115-ADL-TRA

Table 1-2 Functions of the I/O Outlets of the P115-ADL-TRA

No	Function
1	AC Socket for power input
2	1 x VGA
3	2 x USB 3.2 Gen1
4	1 x RS-232
	1 x RS-232/422/485
5	2 x LAN
6	1 x Line-out
7	1 x PCIE x16 slot
8	1 x HDMI
9	1 x DisplayPort
10	4 x USB 2.0
11	1 x Mic-in
12	Remote power switch
13	Switch for power on/off

Section 2 Hardware and Installation

The P115-ADL-TRA provides rich I/O ports and flexible expansion options to meet different demands. The Section explains how to install the hardware.

- Packing List
- System Layout
- SSD Installation
- DRAM Installation
- PCIe Mini-Card module Installation (optional)
- Add-on Card Installation
- Mountings: Panel / Wall / Desktop / VESA
- Rear I/O
- Jumper Settings
- Connectors

2.1 Packing List

The package bundled with the P115-ADL-TRA should contain the following items:

- P115-ADL-TRA x 1
- Panel mount kit x 10
- Wall mount (optional)
- Power cord x 1

If any above-mentioned item is missing, please contact an Axiomtek distributor immediately.

2.2 System Layout

To open the P115-ADL-TRA, simply unscrew the two screws on the rear cover and pull the cover backward as shown in Figure 2-1.

Figure 2-1 Remove Back Cover of the P115-ADL-TRA

Once the back cover is removed, the internal system should look like Figure 2-2.



Figure 2-2 After Removing the back cover of the P115-ADL-TRA, install memory, storage and any other peripheral.

2.3 SSD Installation

The P115-ADL-TRA provides a convenient SSD bracket for users to install one 2.5" SATA SSD. Please follow the steps:

- Step 1 Refer section 2.1 to open the back cover.
- Step 2 Unscrew four screws to take off the SSD bracket.



Step 3 Fix the SSD on bracket by the screws.



▲1 x 2.5" SATA SSD Bracket



▲ Fix the 2.5" SSD on the back of bracket

 Step 4
 Fix the SSD bracket onto the main base.



Step 5 Plug the power and SATA cables to connectors. Installation completes.



2.4 DRAM Installation

The P115-ADL-TRA provides one 260-pin DDR4 SO-DIMM socket that supports system memory up to 32GB. Please follow the steps below to install the memory modules:

Step 1 Refer to section 2.1 to open the back cover and find the DIMM socket on the mainboard (MANO560).



- Step 2 Install the SO-DIMM module into the slot and press it firmly down until it seats correctly.
- Step 3 The slot latches are levered upwards and latch on to the edges of the SO-DIMM.



2.5 PCIe Mini-Card module Installation (optional)

The P115-ADL-TRA supports PCIe Mini-Card module to establish wireless connection. When installing the wireless LAN module, refer to the following instructions and illustration:



Step 1 Refer to section 2.1 to open the back cover and locate PCIe Mini-Card slot.

Step 2 Insert wireless LAN module to the Mini card slot and fixing it by one screw.







Step 4 Lift the rubber stopper from the top of back cover.



Step 5 Install the antenna on the antenna connector.



Add-on Card Installation 2.6

The P115-ADL-TRA provides one PCIe x16 slot for expansion. The system can accommodate half-size riser cards. To install the riser card, refer to the following figure and instructions below:

- Step 1 Refer section 2.1 to open the back cover and unscrew the one screw to remove the fixing bracket.
- Step 2 Insert the riser card into the socket firmly until it is installed completely.



Step 3 Secure the metal bracket of the card to the system case with one screw. Installation complete.





NOTE: Please use the standard size of add-on card to avoid conflicts with the mechanism.

2.7 Mountings: Panel / Wall / Desktop / VESA

There are four mounting options for the P115-ADL-TRA, including Panel/Wall/Desktop/VESA mount.

2.7.1 VESA-ARM / Wall-mount / Desktop-mount

The P115-ADL-TRA can be installed by way of VESA mount which is in the dimensions of 100x100 mm. Simply fix four screws to fasten the kit from the back cover, as shown in Diagram 2-3.



▲ VESA mount (back cover)

2.7.2 Panel-mount Kit Assembly

The P115-ADL-TRA is designed for panel mount. To mount the P115-ADL-TRA, the standard set of mounting kit (10pcs included in the system packaging) is needed.



2.8 Rear I/O



Table 2-1 Jumpers/ Headers/ Connectors associated with each Label

	Jumpers/Headers/Connectors				
1	PCI-Express x16 Slot (CN20)	10	Audio Header (CN52)		
2	M.2 Key E Socket (CN22)	11	USB 3.2 GEN1 Stack Port (CN10)		
3	PCI-Express Mini Card Connector (CN21)	12	VGA Connector (CN34)		
4	DDR4 SO-DIMM Connectors (DIMM1, DIMM2)	13	HDMI1.4 Connector (CN33)		
5	SATA 3.0 Connector (CN7)	14	DisplayPort1.3 Connector (CN32)		
6	Clear CMOS (JP3)	15	COM1and COM2 D-Sub Connector (CN1)		
7	AT/ATX Power Mode Select Jumper (JP5)	16	LAN1(RJ-45) and USB 2.0 Connector (CN19)		
8	USB 2.0 Header (CN62)	17	LAN2(RJ-45) and USB 2.0 Connector (CN11)		
9	COM VDD Select Jumper (JP1)	18	Audio Jack (CN82)		



Pir



The triangle

To identify the first pin of a header or jumper, please refer to the following information:
Usually, there is a thick line or a triangle near the header or jumper pin 1.

Pin 14-300000

Squared, which you can find on the back of the motherboard, is usually used for pin 1.

Jumper Settings 2.9

Jumper is a small component consisting of jumper clip and jumper pins. Install jumper clip on 2 jumper pins to close. And remove jumper clip from 2 jumper pins to open. The following illustration shows how to set up jumper.

jumper clip open pin 1-2 close close all open

Diagram 2-1 Definitions of Pin Settings

Before applying power to the P115-ADL-TRA series, please make sure the jumpers are in default positions which are defined as follows:

NOTE: In case that default jumper setting needs to be changed, please make any change under the power-off condition.

Table	2-2	Jumper	Settings
-------	-----	--------	----------

Jumper	Description	Setting
JP1	COM Data/Power Select	3-5 Close
JEI	Default: RS-232 Data	4-6 Close
JP3	Clear CMOS	1-2 Close
01 0	Default: Normal Operation	1-2 01036
JP5	AT/ATX Power Mode Select	1-2 Close
010	Default: ATX Mode	1-2 01036

2.9.1 COM1 Data/Power Select (JP1)

This is a 3x2-pin (pitch=2.00mm) jumper. The COM1 port has +5V power capability on DCD and +12V on RI by setting JP1.

Table 2-3 Jur	nper Settings	for JP1
---------------	---------------	---------

Function	Setting	
Power: Set COM1 pin 1 to +5V	1-3 close	246
Data: Set COM1 pin 1 to DCD (Default)	3-5 close	
Power: Set COM1 pin 9 to +12V	2-4 close	
Data: Set COM1 pin 9 to RI (Default)	4-6 close	1 3 5

2.9.2 Clear CMOS (JP3)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which includes system setup information such as system passwords.

To erase the RTC RAM:

- 1. Turn OFF the computer and unplug the power cord.
- 2. Remove the onboard battery.
- 3. Move the jumper clip from pins 1-2 (default) to pins 2-3. Keep the clip-on pins 2-3 for about
- $5\sim10$ seconds, then move the clip back to pins 1-2.
- 4. Re-install the battery.
- 5. Plug the power cord and turn ON the computer.
- 6. Hold down the key during the boot process and enter BIOS setup to re-enter data.

Table 2-4 Jumper Settings for JP3

Function	Setting	
Normal operation (Default)	1-2 close	123
Clear CMOS	2-3 close	

2.9.3 AT/ATX Power Mode Select (JP5)

This 3-pin (pitch=2.0mm) jumper allows you to select AT or ATX power mode.

Table 2-5 Jumper Settings for JP5

Function	Setting	
ATX mode (Default)	1-2 close	
AT mode	2-3 close	123

2.10 Connectors

Signals go to other parts of the system through connectors. Loose or improper connection might cause problems, please make sure all connectors are properly and firmly connected. Here is a summary table showing connectors on the hardware.

Connector	Description
CN1	COM1 and COM2 D-Sub Connector
CN7	SATA 3.0 Connector
CN10	USB 3.2 GEN1 Stack Port
CN11, CN19	LAN and USB 2.0 Connectors
CN20	PCI-Express x16 Slot
CN21	PCI-Express Mini Card Connector
CN22	M.2 Key E Socket
CN32	DisplayPort Connector
CN33	HDMI1.4 Connector
CN34	VGA Connector
CN52	Audio Header
CN62	USB 2.0 Header
CN82	Audio Jack

Table 2-6 A Summary of Connectors

2.10.1 COM1 and COM2 D-Sub Connector (CN1)

The CN1 is a double 9-pin D-Sub connector for COM1 and COM2 serial port interfaces on the rear I/O. Only COM1 supports RS-232/422/485 mode. The pin assignments of RS-232/422/485 are listed in table below.

ററ	ΝЛ•	1.
$\mathbf{v}\mathbf{v}$	IVI	

Pin	RS-232 (3T/5R)	RS-422 (1T/1R Full Duplex)	RS-485 (1T/1R TX Enable Low Active)
1	COM1C_DCD ^[*]	TX (-)	(R (-) / T (-))
2	COM1C_RXD	TX (+)	(R (+) / T (+))
3	COM1C_TXD	RX (+)	NC
4	COM1C_DTR	RX (-)	NC
5	GND	GND	GND
6	COM1C_DSR	NC	NC
7	COM1C_RTS	NC	NC
8	COM1C_CTS	NC	NC
9	COM1C_RI ^[*]	NC	NC



NOTE: Pin 1 of COM1 can be DCD/+5V and pin 9 of COM1 can be RI/+12V by selecting JP1 (see section 2.3.1).

COM2:

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

2.10.2 SATA 3.0 Connectors (CN7)

This connector supports the thin Serial ATA cable for primary internal storage device..

Pin	Signal
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND



2.10.3 USB 3.2 GEN1 Stack Port (CN10)

The motherboard comes with one stacked Universal Serial Bus (compliant with USB 3.2 GEN1) connector on the rear I/O for installing USB peripherals such as a keyboard, mouse, scanner, etc.

Pin	Signal	Pin	Signal
1	USB_PWR	10	USB_PWR
2	USB#1_D-	11	USB#2_D-
3	USB#1_D+	12	USB#2_D+
4	GND	13	GND
5	SSRX1-	14	SSRX2-
6	SSRX1+	15	SSRX2+
7	GND	16	GND
8	SSTX1-	17	SSTX2-
9	SSTX1+	18	SSTX2+

10	17 0 1	16 1 13	15 1	1
	8	7	6 1	P

2.10.4 LAN and USB 2.0 Connectors (CN11 and CN19)

The motherboard supports two Ethernet ports (CN11, CN19): two RJ45 connectors with

CN11: Intel® i225-V controller support 10/100/1000/2500Mbps.

CN19: Intel® i219-V controller support 10/100/1000 Mbps.

The Universal Serial Bus (compliant with USB 2.0) connectors on the rear I/O are for installing USB peripherals such as keyboard, mouse, scanner, etc.

Pin	LAN Signal	Pin	LAN Signal
L1	Tx+ (Data transmission positive)	L2	Tx- (Data transmission negative)
L3	Rx+ (Data reception positive)	L4	RJ-1 (For 1000 Base-T only)
L5	RJ-1 (For 1000 Base-T only)	L6	Rx- (Data reception negative)
L7	RJ-1 (For 1000 Base-T only)	L8	RJ-1 (For 1000 Base-T only)
A	Speed LED LAN1: Intel® i219-V OFF: 10Mbps data rate Green: 100Mbps data rate Orange: 1Gbps data rate LAN2: Intel® i225-V OFF: 10/100Mbps data rate Green: 1Gbps data rate Orange: 2.5Gbps data rate	В	Active LED(Yellow) OFF: No link Blinking: Link established; data activity detected



NOTE: CN11/CN19 supports Wake-on-LAN.

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

2.10.5 PCI-Express Mini Card Connector (CN21) The CN21 complies with PCI-Express Mini Card Spec. V1.2.

Pin	Signal	Pi	Signal
-		n	
1	WAKE#	2	+3.3VAUX
3	NC	4	GND
5	NC	6	+1.5V
7	CLKREQ#	8	UIM_PWR/NC
9	GND	10	UIM_DAT/NC
11	REFCLK-	12	UIM_CLK/NC
13	REFCLK+	14	UIM_REST/NC
15	GND	16	UIM_VPP/NC
17	NC	18	GND
19	NC	20	NC
21	GND	22	PERST#
23	SATA_RP(PCIE_RX_D-)	24	+3.3VAUX
25	SATA_RN(PCIE_RX_D+)	26	GND
27	GND	28	+1.5V
29	GND	30	SMB_CLK
31	SATA_TN(PCIE_TX_D-)	32	SMB_DATA
33	SATA_TP(PCIE_TX_D+)	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+3.3VAUX	40	GND
41	+3.3VAUX	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	+1.5V
49	NC	50	GND
51	NC	52	+3.3VAUX



2.10.6 M.2 Key E Socket (CN22) The motherboard comes with one M.2 Key E socket (PCIe & USB2.0), The CN22 supports CNVi module.

Pin	Signal	Pin	Signal	
1	GND	2	+3.3V_SBY	
3	USB_D+	4	+3.3V_SBY	
5	USB_D-	6	NC	
7	GND	8	M.2_BT_PCMCLK	
9	CNVI_WGR_DATA1_D-	10	M.2_BT_PCMRST	
11	CNVI_WGR_DATA1_D+	12	M.2_BT_PCMIN	
13	GND	14	M.2_BT_PCMOUT	
15	CNVI_WGR_DATA0_D-	16	NC	
17	CNVI_WGR_DATA0_D+	18	GND	
19	GND	20	UART_BT_WAKE-	
21	CNVI_WGR_CLK_D-	22	CNVI_BRI_RSP	
23	CNVI_WGR_CLK_D+	24		
25		26	Key F	
27	Kov E	28	Key E	
29	Key E	30	1	
31		32	CNVI_RGI_DT	
33	GND	34	CNVI_RGI_RSP	
35	PCIE_TX_+	36	CNVI_BRI_DT	
37	PCIE_TX	38	CL_RST	
39	GND	40	CL_DATA	
41	PCIE_RX_+	42	CL_CLK	
43	PCIE_RX	44	CNVI_GNSS_PA_BLANKING	
45	GND	46	CNVI_MFUART_TXD	
47	CLK_PCIE_+	48	CNVI_MFUART_RXD	
49	CLK_PCIE	50	SUSCLK (+3.3V Level)	
51	GND	52	PERST# (+3.3V Level)	
53	CLKREQ0#	54	BT_RF_KILL	
55	PEWAKE0#	56	WIFI_RF_KILL	
57	GND	58	NC	
59	CNVI_WT_DATA1_D-	60	NC	
61	CNVI_WT_DATA1_D+	62	NC	
63	GND	64	GND	
65	CNVI_WT_DATA0_D-	66	NC	
67	CNVI_WT_DATA0_D+	68	NC	
69	GND	70	NC	
71	CNVI_WT_CLK_D-	72	+3.3V_SBY	
73	CNVI_WT_CLK_D+	74	+3.3V_SBY	
75	GND			



2.10.7 DisplayPort1.3 Connector (CN32) The motherboard comes with DisplayPort interface on the rear I/O.

Pin	Signal		
1	DP_TX0_+		
2	GND		
3	DP_TX0		
4	DP_TX1_+		
5	GND		
6	DP_TX1		
7	DP_TX2_+		
8	GND		
9	DP_TX2		
10	DP_TX3_+		
11	GND		
12	DP_TX3		
13	GND		
14	GND		
15	DP_AUX+		
16	GND		
17	DP_AUX-		
18	DP_HPD		
19	GND		
20	+3.3V		



2.10.8 HDMI1.4 Connector (CN33)

The HDMI (High-Definition Multimedia Interface) is a compact digital interface which can transmit high-definition video and high-resolution audio over a single cable.

Pin	Signal	Pin	Signal
1	HDMI OUT_DATA2+	2	GND
3	HDMI OUT_DATA2-	4	HDMI OUT_DATA1+
5	GND	6	HDMI OUT_DATA1-
7	HDMI OUT_DATA0+	8	GND
9	HDMI OUT_DATA0-	10	HDMI OUT_CLK+
11	GND	12	HDMI OUT_CLK-
13	NC	14	NC
15	HDMI OUT_SCL	16	HDMI OUT_SDA
17	GND	18	+5V
19	HDMI_HPDET		



2.10.9 VGA Connector (CN34) The CN34 is a high rise 15-pin D-Sub connector which is commonly used for VGA display. This VGA interface configuration can be configured via software utility.

Pin	Signal	Pin	Signal
1	Red	2	Green
3	Blue	4	NC
5	GND	6	GND
7	GND	8	GND
9	VCC	10	GND
11	NC	12	DDC DATA
13	Horizontal Sync	14	Vertical Sync
15	DDC CLK		



2.10.10 Audio Jack (CN82)

The motherboard provides HD audio jack on the rear I/O. Install audio driver, and then attach audio devices to CN82.

Pin Color	Signal
Green	Line-out
Pink	MIC-in
Section 3 AMI BIOS Setup Utility

The AMI UEFI BIOS provides users with a built-in setup program to modify basic system configuration. All configured parameters are stored in a flash chip to save the setup information whenever the power is turned off. This Section provides users with detailed description about how to set up basic system configuration 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 during the Power On Self-Test (POST) to enter BIOS setup, otherwise, POST will continue with its test routines.
- 2. Once you enter the BIOS, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Advanced and Chipset menus.

It is strongly recommended that you should avoid changing the chipset's defaults. Both AMI and your system manufacturer have carefully set up these defaults that provide the best performance and reliability.

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>, <F9>, <F10>, <F11>, <F12>, <Enter>, <ESC>, <Arrow> keys, and so on.

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.
↑ ↓ 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>
F9	The <f9> key allows you to Load Optimized Defaults.</f9>
F10	The <f10> key allows you to save any changes you have made and exit Setup.</f10>
F11	The <f11> key allows you to print the BIOS setting screen.</f11>
F12	The <f12> key allows you to update BIOS.</f12>
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>

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 Boot Security Save & Exit	
BIOS Information		Choose the system default language
Compliancy Project Code Model Name BIOS Version Build Date	UEFI 2.8; PI 1.7 MA560429.BA MAND560 MAND560 V1.00 04/29/2022	Tanguage
Access Level	Administrator	
Total Memory Memory Frequency	8192 MB 2667 MHz (DDR4)	
System Language	[English]	++: Select Screen ↑↓: Select Item
System Date System Time	[Fri 05/13/2022] [10:41:41]	Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit
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BIOS Information

Display system BIOS information.

System Language

Use this option to choose the system default language.

System Date/Time

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

3.4 Advanced Menu

The Advanced menu also allows users to set configuration of 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:

- Connectivity Configuration
- CPU Configuration
- SATA Configuration
- Trusted Computing
- ACPI Settings
- ► F81966 Super IO Configuration
- Hardware Monitor
- Smart Fan Mode Configuration
- USB Configuration
- Network Stack Configuration
- Offboard PCIe SATA Controller

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

Main Advanced Chipset Boot	Aptio Setup – AMI Security Save & Exit	
 Connectivity Configuration CPU Configuration SATA Configuration Trusted Computing ACPI Settings F81966 Super ID Configuration Hardware Monitor Smart Fan Mode Configuration USB Configuration Network Stack Configuration Offboard PCIE SATA Controller 		Configure Connectivity related options
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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• Connectivity Configuration

The CNVi (Connectivity Integration) is a proprietary connectivity interface by Intel for Wi-Fi and Bluetooth radios to lower costs and simplify their wireless modules.

Advanced	Aptio Setup — AMI	
CNVi CRF Present CNVi Configuration	No	This option configures
CNVi Mode	[Auto Detection]	[Auto Detection] means that if
Wi-Fi Core	[Enabled]	Discrete solution is
BT Core	[Enabled]	discovered it will be enabled
BT Audio Offload	[Disabled]	by default. Otherwise
RFI Mitigation	[Enabled]	Integrated solution (CNVi) will be enabled;
CoExistence Manager	[Disabled]	[Disable Integrated] disables Integrated Solution.
Preboot BLE	[Disabled]	NOTE: When CNVi is present, 🔍 🔻
▶ WWAN Configuration		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit
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CNVi Mode

This option configures Connectivity.

- 1. Auto Detection: If Discrete solution is discovered it will be enabled by default.
- 2. Disable Integrated: Disables Integrated Solution.

RFI Mitigation

This is an option intended to Enable/Disable DDR-RFIM feature for Connectivity.

Preboot BLE

This option is used to enable Preboot Bluetooth function.

WWAN Configuration

Select the M.2 WWAN Device options to enable:

- 1. Disabled (Default)
- 2. 4G 7360/7560 (Intel)
- 3. 5G M80 (MediaTek) Modems

CPU Configuration

This screen shows CPU information.

Advanced	Aptio Setup – AMI	
CPU Configuration 12th Gen Intel(R) Core(TM) i7–12700E ID Microcode Revision Speed Number of Efficient-cores Number of Performance-cores VMX SMX/TXT	0x90672 15 2100 MHz 4Core(s) / 4Thread(s) 8Core(s) / 16Thread(s) Supported Supported	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.
Intel (VMX) Virtualization Technology Hyper-Threading Turbo Mode	[Enabled] [Enabled] [Enabled]	<pre>++: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>

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.

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.

Turbo Mode

Enable or disable processor Turbo Mode (requires Intel® Speed Step or Intel® Speed Shift to available and enabled) allowing processor cores to run faster but not exceed CPU defined frequency limits.

P115-ADL-TRA User's Manual

During system boot up, BIOS automatically detects the presence of SATA devices. In the SATA Configuration menu, you can see all currently installed SATA device(s).

Advanced	Aptio Setup – AMI	
SATA Configuration		Enable/Disable SATA Device.
SATA Controller(s)	[Enabled]	
SATA_1 M2 MINI_PCIE	Empty Empty Empty	++: Select Screen fl: Select Item Enter: Select
	2.22.1282 Copyright (C) 2022	+/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit

SATA Controller(s)

Enable or disable the SATA Controller feature.

• Trusted Computing

This screen provides function for specifying the TPM settings.

Advanced	Aptio Setup – AMI	
TPM 2.0 Device Found		Selects TPM device: PTT or
Firmware Version: Vendor:	600.18 INTC	dTPM. PTT – Enables PTT in SkuMgr dTPM 1.2 – Disables PTT in SkuMgr Warning ! PTT/dTPM
TPM Device Selection Security Device Support	[PTT] [Enable]	will be disabled and all data saved on it will be lost.
Active PCR banks Available PCR banks	SHA256 SHA256,SHA384,SM3	
		†∔: Select Item Enter: Select
		+/−: Change Opt. F1: General Help
		F9: Optimized Defaults F10: Save & Exit
		F11: Print Screen F12: BIOS Flash
		ESC: Exit
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TPM Device Selection

Select TPM device:

- PTT: Intel[®] built-in TPM. Enables PTT in SkuMgr.
- dTPM: External extended Infineon's TPM. Disables PTT in SkuMgr.

Security Device Support

Enable or disable BIOS support for security device. OS will not show security device. TCG EFI protocol and INT1A interface will not be available.

P115-ADL-TRA User's Manual

ACPI Settings ACPI Sleep State S3 Video Repost Restore AC Power Loss PME Wake up from S5 Wake system with Fixed Time Wake up date Wake up hour Wake up minute Wake up second	[S3 (Suspend to RAM)] [Disabled] [Power Off] [Disabled] [Disabled] [EveryDay] 0 0	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>

ACPI Sleep State

When the suspend button is pressed, the ACPI (Advanced Configuration and Power Interface) sleep state is S3 (Suspend to RAM).

S3 Video Repost

On enabling, Video Option ROM will be dispatched during S3 resume.

Restore AC Power Loss

Decide the state of system when power is re-applied after a power failure.

- Power Off: Keep the power off until the power button is pressed.
- Power On: Restore power to the computer.

PME Wake up from S5

Enable system to wake from S5 using PME event.

Wake System with Fixed Time

Enable or disable system wake on alarm event. When enabled, system will wake on the hr: min:sec specified..

• F81966 Super IO Configuration

You can use this screen to select options for the Super IO 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 "▶", please press <Enter> for more options.

Advanced	Aptio Setup – AMI	
F81966 Super IO Configuration		Set Parameters of Serial Port 1 (COMA)
Super IO Chip > Serial Port 1 Configuration > Serial Port 2 Configuration > Serial Port 3 Configuration > Serial Port 4 Configuration	F81966	
UART IRQ Mode	[PCI Mode]	
Watch Dog Degree Watch Dog Timer	[Second] Auto	
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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Serial Port 1~4 Configuration

Use these items to set parameters related to serial port 1~4.

UART IRQ Mode

PCI IRQ sharing for OS (ex. Windows), ISA IRQ for Dos.

Watch Dog Degree

Watchdog degree selection in minute or second.

Watch Dog Timer

Watchdog timer value range from 1 to 255. Set 0 will disable watchdog timer.

• Serial Port 1 Configuration

Advanced	Aptio Setup – AMI	
Serial Port 1 Configuration		COM Port Type selection
<mark>Serial Port</mark> Device Settings	[Enabled] IO=3F8h; IRQ=4;	RS232 RS485 RS422
Change Settings COM1 Port Type	[Auto] [RS232]	
	COM1 Port Type RS232 RS485 RS422	++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit

Serial Port

Enable or disable serial port 1.

Change Settings

Select an optimal setting for Super IO device.

- Áuto
- IO=3F8h, IRQ=4;
- IO=3F8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2F8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=3E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

COM1 Port Type

Select RS-232/422/485 mode for serial port 1.

• Serial Port 2~4 Configuration

Serial Port 2 Configuration Serial Port [Enabled] Device Settings IO=2F8h; IRQ=3; Change Settings [Auto]	Enable or Disable Serial Port (COM)
Device Settings IO=2F8h; IRQ=3;	
Change Settings [Auto]	
	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>

Serial Port

Enable or disable serial port 2~4.

Change Settings

Select an optimal setting for Super IO device. For serial port 2:

- Auto
- IO=2F8h, IRQ=3;
- IO=3F8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2F8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=3E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

For serial port 3:

- Auto
- IO=3E8h, IRQ=7;
- IO=3E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2F0h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2E0h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

For serial port 4:

- Auto
- IO=2E8h, IRQ=7;
- IO=3E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2E8h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2F0h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;
- IO=2E0h, IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

Hardware Monitor

This screen monitors hardware health status.

Advanced	Aptio Setup – AMI	
Pc Health Status		
MOS temperature System temperature CPU temperature CPU Fan Speed SYS Fan Speed VCCIO Voltage CPU SA Voltage + 5V DC Voltage	: +29 °C : +31 °C : +27 °C : 4132 RPM : N/A : +0.768 V : +1.208 V : +5.087 V : +12.144 V	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit
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This screen displays the temperature of system and CPU, cooling fans speed in RPM and system voltages (VCCIO, CPU SA, +5V and +12V).

• Smart Fan Mode Configuration

This screen allows you to configure Smart Fan mode. You can use Smart Fan function to control CN60.

Advanced	Aptio Setup – AMI	
Smart Fan Mode Configuration		Enable or Disable Smart Fan
Smart Fan Function Fan 1 Smart Fan Control Temperature 1 Temperature 2 Temperature 3 Temperature 4 Full Speed RPM RPM Percentage 1 RPM Percentage 2 RPM Percentage 3 RPM Percentage 4	[Enabled] [Auto RPM Mode] 80 70 60 50 6500 100 80 60 40	<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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Smart Fan Function

Enable or disable Smart Fan.

Fan 1 Smart Fan Control

Select Smart Fan operating mode. Auto RPM Mode: The fan speed is controlled automatically according to temperature and RPM.

Temperature 1

Auto fan speed control. Fan speed will follow different temperature by different RPM 1~100.

Full Speed RPM

Set fan full speed RPM.

RPM Percentage 1

Auto fan speed control. Fan speed will follow different temperature by different RPM 1~100.

USB Configuration

Advanced	Aptio Setup — AMI	
USB Configuration		
USB Module Version	28	
USB Controllers: 1 XHCI USB Devices: 1 Drive, 1 Keyboard, 1 Mouse		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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USB Devices Display all detected USB devices

• Network Stack Configuration

Advanced	Aptio Setup – AMI	
Network Stack IPv4 PXE Support IPv4 HTTP Support IPv6 PXE Support IPv6 HTTP Support PXE boot wait time Media detect count	[Enabled] [Disabled] [Disabled] [Disabled] [Disabled] 0 1	Enable/Disable UEFI Network Stack
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>

Network Stack

Enable or disable UEFI Network Stack.

IPv4/IPv6 PXE Support

Enable or disable IPv4 PXE boot support. If disabled, IPv4/IPv6 PXE boot support will not be available.

IPv4/IPv6 HTTP Support

Enable or disable IPv4/IPv6 HTTP boot support. If disabled, IPv4/IPv6 HTTP boot support will not be available.

PXE boot wait time

Wait time in seconds to press <ESC> key to abort the PXE boot. Use either +/- or numeric keys to set the value.

Media detect count

Number of times the presence of media will be checked. Use either +/- or numeric keys to set the value.

3.5 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

- ► PCH-IO Configuration
- Onboard Device

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



• PCH-IO Configuration

This screen allows you to set PCH parameters.

▶ PCI Express Configuration HD Audio [Enabled] ErP Control [Disabled] BIOS Lock [Disabled]	
1 E + F F	PCI Express Configuration settings
F	<pre> +: Select Screen +: Select Item Enter: Select +/-: Change Opt. 5: General Help 59: Optimized Defaults 510: Save & Exit 511: Print Screen 512: BIOS Flash 550: Exit </pre>

HD Audio

Control detection of the HD Audio device.

- Disabled: HDA will be unconditionally disabled.
- Enabled: HDA will be unconditionally enabled.
- Auto: HDA will be enabled if present, disabled otherwise.

ErP Control

When ErP is enabled, system meets ErP requirement.

BIOS Lock

Enable or disable the PCH BIOS Lock Enable feature. Required to be enabled to ensure SMM protection of flash.

Onboard Device

Chipset	Aptio Setup — AMI	
Onboard Device		Enable/Disable Onboard LAN1
LAN1 MAC ID = 00-60-E0-68-D0-D1 LAN2 MAC ID = 00-60-E0-68-D0-D0		
Onboard LAN1 Onboard LAN2	[Enabled] [Enabled]	
		<pre>++: Select Screen t4: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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Onboard LAN 1/2 Enable or disable onboard LAN 1/2.

3.6 Boot Menu

Aptio Setup – AMI Main Advanced Chipset Boot Security Save & Exit Boot Configuration Number of seconds to wait for setup activation key. 1 [Enabled] Full Screen Logo Display 65535(0xFFFF) means indefinite waiting. Boot Success Beep [Enabled] CSM Support [Disabled] Boot Option Priorities [Windows Boot Manag...] Boot Option #1 [UEFI: USB, Partit...] Boot Option #2 ++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit Version 2.22.1282 Copyright (C)

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

- Setup Prompt Timeout Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
- Full Screen Logo Display. Enable or disable full screen logo display feature.
- Boot Success Beep

Enable or disable beep sound after successful boot.

• CSM Support

Enable or disable to launch the CSM (Compatibility Support Module) support. Please do not disable unless you're running a WHCK test. If you are using Windows[®] 8 64-bit and all of your devices support UEFI, you may also disable CSM for faster boot speed.

Boot Option Priorities

These are settings for boot priority. Specify the boot device priority sequence from the available devices.

3.7 Security Menu

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

Main Advanced Chipset Boo	Aptio Setup – A ot Security Save & Exit	
Password Description		Set Administrator Password
If ONLY the Administrator's p then this only limits access only asked for when entering If ONLY the User's password i is a power on password and mu boot or enter Setup. In Setup have Administrator rights. The password length must be in the following range: Minimum length	to Setup and is Setup. s set, then this ist be entered to the User will 3	
Maximum length Administrator Password User Password ▶ Secure Boot	20	<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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- Administrator Password Set administrator password.
- User Password Set user password.
- Secure Boot

• Secure Boot

Secure Boot is a security standard to help ensure that devices will only boot using software trusted by original equipment manufacturers (OEMs). When the computer starts, this firmware checks the signature of every boot software, including UEFI firmware drivers (also called option Rom), EFI applications, and operating systems. If the signature is valid, the computer will boot up, and this firmware allows you to control the operating system.

	Aptio Setup – AMI Security	
System Mode	Setup	Secure Boot feature is Active if Secure Boot is Enabled,
Secure Boot	[Disabled] Not Active	Platform Key(PK) is enrolled and the System is in User mode.
Secure Boot Mode ▶ Restore Factory Keys ▶ Reset To Setup Mode	[Custom]	The mode change requires platform reset
▶ Key Management		
		<pre> ++: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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Secure Boot Mode

In Custom mode, Secure Boot Policy variables can be configured by a physically present User without full authentication.

Restore Factory Keys

Force system to User mode. Install factory default Secure Boot key databases.

Reset To Setup Mode

Delete all Secure Boot key databases from NVRAM.

Key Management

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

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 Boot Security Save & Exit	
Save Options Discard Changes and Exit	Exit system setup without saving any changes.
Save Changes and Reset	
Default Options Restore Defaults	
Boot Override Windows Boot Manager (TS256GMTE452T) UEFI: USB, Partition 1 (USB)	
	<pre>++: Select Screen f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F9: Optimized Defaults F10: Save & Exit F11: Print Screen F12: BIOS Flash ESC: Exit</pre>
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- **Discard Changes and Exit** Exit system setup without saving any changes.
- Save Changes and Reset Reset the system after saving the changes.
- **Restore Defaults** Restore or load default values for all the setup options.
- **Boot Override** Select a drive to immediately boot that device regardless of the current boot order.

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Section 4 Drivers Installation

4.1 Operating System

P115-ADL-TRA is compatible with operating systems Windows 11 and Windows 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

Please download the P115-ADL-TRA driver from Axiomtek's official website

		Products	Solutions	What's New	Resources	Support	Services	About Us	Contact Us
Support -						Download			
♠ > Support > <u>Downloads</u>						Datasheet Technical Online RM Partner Zo	Support A		
Downloads									
Select a Product Series	Please select		~						
Search by Product Category	Please select		*						
			~						
			~						
Recently Released									
Drivers									
Model	Description					Version	Download F	ile Releas	e Date
mBOX600	05. Audio_R281					VA1.0	367,293.1K	B 2023-0	8-11
mBOX600	04. Intel LAN Driver_2	3.2				VA1.0	431,501.5K	B 2023-0	8-11
mBOX600	03. ME_2103.15.0.21	25				VA1.0	690,839.9K	B 2023-0	8-11
mBOX600	02. Graphic_27.20.10	0.9466				VA1.0	438,822.2K	B 2023-0	8-11
mBOX600	01. Chipset-10.1.1863	4.8254				VA1.0	3,863.2KB	2023-0	8-11

4.2 Touch Screen

The P115-ADL-TRA adopts a projected capacitive multi-touch screen of which specifications are listed below. The touch driver will be installed automatically to allow the user to operate the touch panel using two-finger touch functions on the Windows 11 and Windows11 IoT Enterprise environments.

Touch Screen	5-wire Analog Resistive type	
Touch Screen Controller	PenMount 6500 USB Touch Screen Controller IC	
Communications	USB interface	
Resolution	1024x1024	

Table 4-1 Touch screen specifications

APPENDIX A TPM BitLocker SETTINGS

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

	f a program, folder, document, or indows will open it for you.	Internet		
Open: control		~		
	DK Cancel <u>B</u> ru	owse		
All Control Panel Items			- 0	>
Control Panel	All Control Panel Items	v Ö	Search Control Panel	٥
Administrative Tools	AutoPlay	🐌 Backup and Restore (Wind	ows 7)	
BitLocker Drive Encryption	Color Management	Credential Manager		
0-	of ault Programs			
📸 Date and Time	- Deladic Programs	📇 Device Manager		
	S Ease of Access Center	Device Manager File Explorer Options		
Devices and Printers				
 Devices and Printers File History 	S Ease of Access Center	File Explorer Options		
 Devices and Printers File History HomeGroup 	 Ease of Access Center Flash Player (32-bit) 	File Explorer Options		
Devices and Printers File History HomeGroup Intel® Graphics Settings	 Ease of Access Center Flash Player (32-bit) Indexing Options 	File Explorer Options Fonts		
Devices and Printers File History HomeGroup Intel® Graphics Settings Keyboard	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options 	File Explorer Options Fonts Infrared Java		
 Devices and Printers File History HomeGroup Intel® Graphics Settings Keyboard Network and Sharing Center 	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options Eanguage 	File Explorer Options File Explorer Options file Infrared Java Mouse		
Devices and Printers File History HomeGroup Intel® Graphics Settings Keyboard Network and Sharing Center Power Options	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options Language Pen and Touch 	 File Explorer Options Fonts Infrared Java Mouse Phone and Modem 		
Devices and Printers File History file History funeGroup Intel® Graphics Settings Keyboard Network and Sharing Center Power Options Region	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options Language Pen and Touch Programs and Features 	 File Explorer Options Fonts Infrared Java Mouse Phone and Modem Recovery 		
Devices and Printers File History Keyboard Network and Sharing Center Power Options SiSoftware Sandra	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options Language Pen and Touch Programs and Features RemoteApp and Desktop Connections 	 File Explorer Options Fonts Infrared Java Mouse Phone and Modem Recovery Security and Maintenance 		
Devices and Printers File History HomeGroup Intel © Graphics Settings Keyboard Network and Sharing Center Power Options Region SiSoftware Sandra Storage Spaces	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options Language Pen and Touch Programs and Features RemoteApp and Desktop Connections Sound 	 File Explorer Options Fonts Infrared Java Mouse Phone and Modem Recovery Security and Maintenance Speech Recognition 		
 Date and Time Devices and Printers File History HomeGroup Intel® Graphics Settings Keyboard Network and Sharing Center Power Options Region SiSoftware Sandra Storage Spaces Tablet PC Settings User Accounts 	 Ease of Access Center Flash Player (32-bit) Indexing Options Internet Options Language Pen and Touch Programs and Features RemoteApp and Desktop Connections Sound Sync Center 	 File Explorer Options Fonts Infrared Java Mouse Phone and Modem Recovery Security and Maintenance Speech Recognition System 		

RitLocker Drive Encryption			р.	×
← → ~ ↑ 🏘 > Cont	rol Panel > All Control Panel Items > BitLocker Drive Encryption	~ Ö	Search Control Panel	Q
Control Panel Home	BitLocker Drive Encryption Help protect your files and folders from unauthorized access by protectin	g your dri	ves with BitLocker.	
	Operating system drive			
	Windows (C:) BitLocker off		\odot	
	Turn on BitLocker			
	Fixed data drives			
	Removable data drives - BitLocker To Go			
	Insert a removable USB flash drive to use BitLocker To Go.			
See also				
TPM Administration				
💎 Disk Management				
Privacy statement				

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.

ontri 🔶 🎭 BitLocker Drive Encryption (C:)	👒 Save BitLocker recovery key as	×
	← → ~ ↑ → 16GB (D:) → ~ ↓	Search 16GB (D:)
How do you want to back up your recovery key?	Organize - New folder 2	JII + 🔞
A recovery key can be used to access your files and felders if you're having profits a good idea to have more than one and keep each in a safe place other than $ \rightarrow \text{ Save to your Microsoft account} $ $ \rightarrow \text{ Save to a file} \qquad 1 $ $ \rightarrow \text{ Print the recovery key} $	Image: Pictures Nume Image: Pictures Pictures Image: Pictures Pictures <td< td=""><td>Date modified Type 2/21/2019 4/25 PM 4/29/2019 1/35 PA/AF 7/17/2018 64/2 PM 3/3/2010 5/40 PM File folder 7/17/2010 5/40 PM</td></td<>	Date modified Type 2/21/2019 4/25 PM 4/29/2019 1/35 PA/AF 7/17/2018 64/2 PM 3/3/2010 5/40 PM File folder 7/17/2010 5/40 PM
How can I find my recovery key later?	File nan <mark>er Billocker Recovery Key F809F878-040F-4A1E-A4AC</mark> Save as types i rest Hies (*3st)	
PM X lok Management	∧ Hide Folders	Save Cancel
n vangeska		

3. Please follow the steps below to encrypt your storage device:

1		×
4	RitLocker 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 stil contain retrievable info.	I
I	Encrypt used disk space only (faster and best for new PCs and drives)	
	Encrypt entire drive (slower but best for PCs and drives already in use)	
	2 Next Cancel	
		-
4		×
÷	RitLocker Drive Encryption (C:)	
	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	New encryption mode (best for fixed drives on this device)	
	O Compatible mode (best for drives that can be moved from this device)	
	2	
		1
	<u>N</u> ext Cancel	

÷	BitLocker Drive Encryption (C:)	×
	Are you ready to encrypt this drive?	
	Encryption might take a while depending on the size of the drive.	
	You can keep working while the drive is being encrypted, although your PC might run more slowly.	
	Run BitLocker system check	
	The system check ensures that BitLocker can read the recovery and encryption keys correctly before encrypting the drive.	
	BitLocker will restart your computer before encrypting.	
	Note: This check might take a while, but is recommended to ensure that your selected unlock method works without requiring the recovery key.	d
	Start encrypting Cancel	10

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

0			\Diamond						بالغرب الالتقار على المان				
Recycle Bin	3DMark 11 E	RitLocker Drive E	ncryption						-		VS83/0Testa	USB2tester	
		< → · ↑ <	🗧 🔋 Control Pan	al > All Control Pa	and Items + BitLo	cker Drive Encryption	~ O	Search Ce	ontro Panel	5	2		
1		Ele Edit View	Iools										
BurninTest	SDMark06	Control Panel Ho	ome		ive Encryption r files and folders fr	rom unauthorized acce	ss by protecting your d	rives with Bitl	.ocker.		0		Test_resulti.
				For your set	curity, some setting	is are managed by you	system administrator.					-	
bw64 551	CINEBENCH Qu			Operating sy	stem drive							LosMark v3.1	
and the second second				Windows (C:) BitLocker En	crypting			\odot				
Monitor Test	HD0 Test				I		p your recovery key If BitLocker						変換型Alina Cover 不過
\diamond				Fixed data dr									
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		😗 TPM Administrat	ion							Energy	tion in progre		
CrystalDisk	ush3loopdr Pr	Oisk Managemen Privacy statemen						1		Encryp	tion of C: by B tion has starte		
) Type here to	search	0	0.2	a 🔒	a .	1	ø	₽	BitLocke	Drive Encryption	Notification Uti	2M





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Certral Panel Harra	BitLocker Drive Encryption His protection Respondences and the set of the set	0	
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	Operating system dr C Sittloder on	0	
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	Fixed data drives		
	Removable data drives - Fitl ocker To Go		
	TRANSCEND (E) Bitleder off	0	
Eno 2 bo Fill Minder webscher Dick Management Privacy statement			
-			

4. Confirm the completion of encryption.



5. Disable TPM function in BIOS Setup Utility.

TPM20 Device Found		Enables or Disables BIOS
Firmware Version:	402.1	support for security devic
Vendor:	INTC	0.S. will not show Securit
		Device. TCG EFI protocol a INT1A interface will not b available.
		→+: Select Screen
		<pre> fl: Select Item Enter: Select</pre>
		+/-: Change Opt.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
		ESC: EXIT

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

nter the recovery key f	or this drive
	how to retrieve this key, go to .com/recoverykeyfaq from another PC or mobile devic
Jse the number keys or f	unction keys F1-F10(use F10 for 0).
ACCOVERY KEY ID: 995366D	1-889b-4ada-ba42-dcd3929af074
Press Enter to conti Press Esc for more r	

NOTE: System with no TPM function support is as below:

1. TPM information is not found in Device Manager.



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

← → × ↑ 🎭 > Contro	ol Panel > All Control Panel Items > BitLocker Drive Encryption	
Control Panel Home	BitLocker Drive Encryption Help protect your files and folders from unauthorized access by protecting	your drives with BitL
	Operating system drive	
	C: BitLocker off	
	Fixed data drives	
	Removable data drives - BitLocker To Go	
	TRANSCEND (D:) BitLocker off	
	er use a Trusted Platform Module. Your administrator must set the "Allou stible TPM" option in the "Require additional authentication at startup'	
volumes.		
What are BitLocker's s	system requirements?	
What are BitLocker's s	system requirements?	Cance