OFP-15W38

15.6" Open Frame Panel PC

Quick Reference Guide

3rd Ed – 01 December, 2023

Copyright Notice

Copyright © 2023 Avalue Technology Inc., ALL RIGHTS RESERVED.

Part No. E2017O158A2R

Federal Communication Commission Interference Statement

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is

connected.

• Consult the dealer or an experienced radio/TV technician for help.

Notice:

- (1) A Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord by used.
- (2) Use only shielded cables to connect I/O devices to this equipment.

(3) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65 and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. The radiated output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation is minimized. When nearby persons has to be kept to ensure RF exposure compliance, in order to comply with RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than 20 cm.

WARNING

"CAUTION – Use suitable mounting apparatus to avoid risk of injury."

"CAUTION – This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures"

"CAUTION –Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions."

"CAUTION - Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country."

"WARNING – To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth."

Content

1.	Gett	ting Started	.8
	1.1	Safety Precautions	.8
	1.2	Packing List	.8
	1.3	System Specifications	9
	1.4	System Overview	12
	1.4.1	Right View	12
	1.4.2	Left View	12
	1.4.3	Bottom View	12
	1.5	System Dimensions	13
	1.5.1	Front and Rear side	13
	1.6 Pa	nel Mounting	14
	1.7 Wa	all Mounting	25
2.	Hare	dware Configuration	35
2	2.1	OFP-15W38 connector mapping	36
	2.1.1	Serial Port connector (COM)	36
	2.1.2	DC power-in connector (DC in)	37
	2.2	EMX-TGLP Product Overview	38
2	2.3	EMX-TGLP Jumper and Connector List	39
1	2.4	EMX-TGLP Setting Jumpers & Connectors	41
	2.4.1	Serial port 1/2 pin9 signal select (JRI1/JRI2)	41
	2.4.2	LVDS Back Light power selection (JSBKL1)	41
	2.4.3	AT/ATX Power Mode Select (JSATX1)	42
	2.4.4	M2KB1 Voltage setting (JP1)	42
	2.4.5	Clear CMOS (JBAT1)	43
	2.4.6	LCD Inverter connector (JBKL1)	43
	2.4.7	LCD Inverter connector (JBKL2)	44
	2.4.8	LVDS connector (LVDS1)	44
	2.4.9	eDP_Panel connector (EDP1)	45
	2.4.1	0 General purpose I/O connector (DIO1)	45
	2.4.1	1 Serial port1 connector (JCOM1)	46
	2.4.1	2 Serial port2 connector (JCOM2)	46
	2.4.1	3 Serial port 3/4/5/6 connector (JCOM3/4/5/6)	47
	2.4.1	4 Serial Port 1/2 RS485/422 Mode connector (JRS485_1/2)	47
	2.4.1	5 SATA Power connector 1 (SPWR1)	48
	2.4.1	b Power connector (PWR1)	48

	2.4.17	USB connector 3 (JUSB3)	49
	2.4.18	USB connector 4 (JUSB4)	49
	2.4.19	Speaker connector (SPK1)	50
	2.4.20	SPI connector (JSPI1)	50
	2.4.21	Battery connector (BT1)	51
	2.4.22	Audio connector (JFAUD1)	51
	2.4.23	EC Debug (JEC_SPI)	52
	2.4.24	Miscellaneous setting connector 1 (JFPT1)	52
	2.4.25	Miscellaneous setting connector 2 (FPT2)	53
	2.4.26	LPC connector (JLPC1)	53
	2.4.27	CPU fan connector (CPU_FAN1)	54
3.B	IOS Setu	ıp	55
3	3.1 Intr	oduction	56
3	.2 Sta	rting Setup	56
3	.3 Usi	ng Setup	57
3	.4 Get	ting Help	58
3	5.5 In C	Case of Problems	58
3	6.6 BIC	9S setup	59
	3.6.1 N	lain Menu	59
	3.6.1.1	System Language	60
	3.6.1.2	System Date	60
	3.6.1.3	System Time	60
	3.6.2 A	dvanced Menu	60
	3.6.2.1	Connectivity Configuration	61
	3.6.2.2	CPU Configuration	61
	3.6.2.3	Power & Performance	62
	3.6.2.3	.1 CPU - Power Management Control	62
	3.6.2.4	PCH-FW Configuration	63
	3.6.2.4	.1 Firmware Update Configuration	63
	3.6.2.5	Trusted Computing	64
	3.6.2.6	ACPI Settings	64
	3.6.2.7	IT8528 Super IO Configuration	65
	3.6.2.7	.1 Serial Port 1 Configuration	66
	3.6.2.7	.2 Serial Port 2 Configuration	66
	3.6.2.7	.3 Serial Port 3 Configuration	67
	3.6.2.7	.4 Serial Port 4 Configuration	67
	3.6.2.7	.5 Serial Port 5 Configuration	68
	3.6.2.8	EC 8528 H/W monitor	68
	3.6.2.9	S5 RTC Wake Settings	69
	3.6.2.1	0 Serial Port Console Redirection	69

	3.6	.2.10.1	Legacy Console Redirection Settings	70
	3.6	.2.11	USB Configuration	70
	3.6	.2.12	Network Stack Configuration	71
	3.6	.2.13	NVMe Configuration	72
3.	.6.3	Chip	set	72
	3.6	.3.1	System Agent (SA) Configuration	73
	3.6	.3.1.1	Memory Configuration	73
	3.6	.3.1.2	Graphics Configuration	74
	3.6	.3.1.3	VMD Configuration	74
	3.6	.3.2	PCH-IO Configuration	75
	3.6	.3.2.1	PCI Express Configuration	75
		3.6.3	3.2.1.1 PCI Express Root Port 5(LAN2-I225)	76
		3.6.3	3.2.1.2 PCI Express Root Port 6(M.2 KeyE)	77
		3.6.3	3.2.1.3 PCI Express Root Port 9(M.2 KeyB)	78
	3.6	.3.2.2	SATA And RST Configuration	79
	3.6	.3.2.3	HD Audio Configuration	79
	3.6	.3.3	Board & Panel Configuration	80
3.	.6.4	Secu	ırity	81
	3.6	.4.1	Secure Boot menu	81
3.	.6.5	Boot		82
3.	.6.6	Save	e and exit	83
	3.6	.6.1	Save Changes and Reset	83
	3.6	.6.2	Discard Changes and Reset	83
	3.6	.6.3	Restore Defaults	84
	3.6	.6.4	Launch EFI Shell from filesystem device	84
4. Dri	vers	s Inst	allation	85
4.1	I	nstall	Chipset Driver	86
4.2	I	nstall	VGA Driver	87
4.3	I	nstall	ME Driver	88
4.4	I	nstall	Audio Driver (For Realtek ALC897 and ALC888S HD Audio)	89
4.5	I	nstall	LAN Driver	90
4.6	I	nstall	RST for RAID Driver	92
4.7	/	Ascen	ding Network Adapter	93
5. D)eve	lopm	ent Resource	95

1. Getting Started

1.1 Safety Precautions

Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

- 1 x OFP-15W38 Open Frame Panel PC
- 4 x VESA Screw



If any of the above items is damaged or missing, contact your retailer.

1.3 System Specifications

Board Specification			
	EMX-TGLP-S05-A1R (6305E, 15W)		
Mathen Deend	EMX-TGLP-S15-A1R (I3-1115G4E, 15W)		
Mother Board	EMX-TGLP-S45-A1R (I5-1145G7E, 15W)		
	EMX-TGLP-S85-A1R (I7-1185G7E, 15W)		
CPU	Onboard Tiger Lake U 11th Intel® Core™ SoC i7/i5/i3 & Celeron® BGA		
CPU	Processor		
CPU Cooler (Type)	Fanless		
Momony	2* 260-pin DDR4 3200 MHz SO-DIMM socket, supports up to 64GB Max		
Memory	(non ECC only)		
Wireless LAN	IEEE802.11 ax/ac/a/b/g/n 2.4 GHz, 5 GHz, 6GHz (optional)		
Bluetooth	BT5.1 (optional)		
Operating System	Win10 64bit, Linux		
	1 x M.2 Key B 3042/3052/2242/2260/2280		
	Support 1xPCIE/SATA/USB3.0/USB2.0		
Expansion Card	with 1 x SIM card slot, support WWAN+GNSS		
	* M.2 key B SATA share from SATA2		
	1 x M.2 Key E 2230 support WiFi module and CNVi (1 x PCI-e x1 & USB 2.0		
	Signal)		
Storage			
Solid State Drive	N/A (Reserve space for future1 x 2.5" Drive Bay design)		
Other Storage	Default by M.2 Type B 3042/3052/2242/2260/2280 SSD (SATA/NVMe)		
Device	* M.2 key B SATA share from SATA2		
Panel			
I CD Panel	15.6" eDP Panel,		
	BOE NV156FHM-N42 1920*1080		
LCD Control Board	Built in		
Touch Screen	15.6" PCAP Touch,		
	Henghao HD-T156WP05-F4SB		
Touch Controller	EETI		
External I/O			
Serial Port	1 x RS232(default)/422/485,		
	1 x RS232/422/485(optional), 3 x RS232 (optional)		
	3 x LISB3 1 Gen2		
USB Port	1 x USB 3.1 Gen1		

Video Port	2 x DP++: 1920 x 1080@60 Hz		
Audio Port	Mic-in, Line-out		
	2 x RJ45 LAN port:		
LAN Port	1 x Intel® I219LM Gigabit Ethernet PHY (LAN1)		
	1 x Intel® I225LM 2.5 Gigabit Ethernet (LAN2)		
Wireless LAN	6 x Antonno Mounting with Dust Cover		
Antenna	6 x Antenna Mounting with Dust Cover		
Switch	2 pins Phoenix connector for reset		
Mechanical			
Power Type	+12V~24V DC in		
	1 x Mini Din 4-pin DC Jack		
Power Connector	1 x Phoenix connector for DC in		
Туре	1 x Phoenix connector for reset		
	* Default AT mode		
Dimension	387 x 235 x 48 mm		
Weight	4.4 Kg		
Color	Silver		
Fanless	Fanless		
OS Support	Windows 10 64bits, Linux (Linux does not support ACPI S3 Function)		
Reliability			
EMI Test	CE/FCC Class A		
	Random Vibration Operation		
	1 Test PSD : 0.00454G²/Hz , 1.5 Grms		
	2 System condition : operation mode		
	3 Test frequency : 5~500 Hz		
	4 Test axis : X,Y and Z axis		
	5 Test time : 30 minutes per each axis		
	6 IEC60068-2-64 Test Fh		
	6 Storage · mSATA		
	O Storage . IIISATA		
	O Storage . INSATA		
Vibration Test	Sine Vibration test (Non-operation)		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic)		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode 7. Reference IEC 60068-2-6 Testing procedures		
Vibration Test	Sine Vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep : 1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode 7. Reference IEC 60068-2-6 Testing procedures		

	1 Test PSD : 0.026G²/Hz , 2.16 Grms
	2 Test frequency : 5~500 Hz
	3 Test axis : X,Y and Z axis
	4 Test time : 30 minutes per each axis
	5 IEC 60068-2-64 Test Fh
	1 Wave from : Half Sine wave
	2 Acceleration Rate : 10g for operation mode
	3 Duration Time : 11ms
Mechanical Shock	4 No. of shock : Z axis 300 times
Test	5 Test Axis : Z axis
	6 operation mode
	7 Reference IEC 60068-2-27 testing procedures
	Test Eb : Shock Test
	Package drop test
	Reference ISTA 2A, Method : IEC-60068-2-32 Test:Ed
	Test Ea : Drop Test
Drop Test	1 Test phase : One corner, three edges, six faces
	2 Test high : 96.5cm
	3 Package weight : 4.4 kg
	4 Test drawing
Operating	0°C ~ 45°C (32°F ~ 113°F)
Temperature	*Air flow=0.5 m/s
Operating	40°C @ 95% Polativo Humidity, Non condensing
Humidity	40 C @ 95% Relative Humidity, Non-condensing
Storage	
Temperature	-20 C ~ 00 C (-4 F ~ 140 F)
Power	Max. load 48.64W with intel core i7-1195G7E/4GB/64GB(M.2
Consumption	SSD)/64BG(2.5" SSD), 24V DC in

Q

Note: Specifications are subject to change without notice.

1.4 System Overview

1.4.1 Right View



1.4.2 Left View



1.4.3 Bottom View



Connectors				
Label	Function	Note		
		1 x RS232(default)/422/485,		
СОМ	5 x Serial port connector	1 x RS232/422/485(optional)		
		3 x RS232 (optional)		
HDMI	HDMI connector			
USB3.2 Gen1	USB 3.2 Gen1 connector			
USB3.2 Gen2	3 x USB 3.2 Gen2 connector			
USB2.0	2 x USB 2.0 connector(option)			
LAN1/2	2 x RJ-45 Ethernet			
Line-out	Line-out jack			
Mic-in	Mic-in audio jack			
DC in	DC power-in connector			
DC in	2 pins Phoenix connector			
DP1/2	2 x DP connector			
Power Switch	2 pins Phoenix connector default for system reset function (option for power on/off)	Do not connect any power source to this connector to avoid damage of motherboard		

1.5 System Dimensions

1.5.1 Front and Rear side

8

Ū











(Unit: mm)

1.6 Panel Mounting

Panel mount is the solution for mounting OFP into the opening of wall (or cabinet). The dimension of opening is as below:



(Unit: mm)



Step1. Insert and fasten 12 pcs Hexagon Studs on each side of the OFP-15W38 Bracket.

2	Hexagon Stud	12
1	OFP-15W38	1
Item	Part Name	Quantity



Step2. Assemble the Front bracket to OFP-15W38 and fasten 4 screws on the corresponding Hexagon Studs.

4	Screw	4
3	Front Bracket	1
2	Hexagon Stud	4
Item	Part Name	Quantity



Step3. Assemble the 4pcs Panel Mount Brackets on the Front Bracket and fasten the 8 pcs screws to the corresponding holes.

5	Panel Mount Bracket	4
4	Screw	8
3	Front Bracket	1
Item	Part Name	Quantity



(outside the wall (or cabinet) opening)

Step4. Embed the OFP-15W38 semi-finished product into the wall (or cabinet) opening.

6	Wall	1
Item	Part Name	Quantity



(inside the wall (or cabinet))

Step5. Fasten the Panel mount screw*8 to the Panel mount kit bracket*8 (as shown in Figure 5-1), and then attach them to the Panel Mount Bracket*4 fixing slots.



Figure 5-1

8	Panel mount Screw	8
7	Panel Mount Kit Bracket	8
5	Panel Mount Bracket	4
Item	Part Name	Quantity







Step6. Fasten the Panel mount screw*8 against the wall, so that the entire module can be secured by the Panel mount screws and Panel mount kit brackets..

8	Panel mount Screw	8
6	Wall	1
Item	Part Name	Quantity



(The diagram is demonstrated by OFP-10W01, but the concept "the entire module can be secured by fastening the Panel mount screws against the wall" is the same)



Step7. Paste the Decoration Plate on the Front bracket to complete installation.

9	Decoration Plate	1
3	Front Bracket	1
Item	Part Name	Quantity







1.7 Wall Mounting

Wall mount is the solution for mounting OFP into the wall.

Size of the opening:





(Unit: mm)

Screw hole location:



(Unit: mm)



Step1. Install the 15" Wall Box and fix it on the wall, and use suitable screws to lock the wall box (the screws can be purchased according to actual needs)

1	Wall box	1
Item	Part Name	Quantity



Step2. Fasten 12pcs Hexagon Studs on each side of the OFP-15W38 Panel Bracket.

3	Hexagon Stud	12
2	OFP-15W38	1
Item	Part Name	Quantity



Step3-1. Assemble the Front bracket to the OFP-15W38, and fasten the 12 pcs screws on the corresponding Hexagon Studs;

Step3-2. Assemble the 3 pcs Wall mount kit to the Front bracket with 6pcs screws.

Step3-3. Insert the 3 pcs Support Bracket into the rectangular hole of Wall mount kit.

Step3-4. Insert the 3 pcs Wall mount kit's rectangular hole into the 3 pcs Support Bracket and fasten 6 pcs screws into the front bracket.

7	Support Bracket	3
6	Wall mount kit	6
5	Screw	24
4	Front bracket	1
Item	Part Name	Quantity







Step4. Fasten the Ground wire with 2 screws on the ground screw holes of Front bracket and Wall box.

8	Ground wire	1
5	Screw	2
4	Front bracket	1
1	Wall box	1
Item	Part Name	Quantity



Step5. Wrap the Kensington lock (option) around the hole in the Front bracket and attach the lock to the keyhole in the Wall box.

9	Kensington lock	1
4	Front bracket	1
1	Wall box	1
Item	Part Name	Quantity



Step6-1. Store the Ground wire and Kensington lock in the Wall box and embed the OFP-15W38 semi-finished product into the wall (Wall Box).

Step6-2. Paste the Decoration Plate on the Front bracket to complete installation.

10	PC bezel	1
Item	Part Name	Quantity



2. Hardware Configuration

For advanced information, please refer to:

1- EMX-TGLP included in this manual.



Note: If you need more information, please visit our website: http://www.avalue.com.tw

2.1 OFP-15W38 connector mapping

2.1.1 Serial Port connector (COM)





In RS-232 Mode

Signal	PIN	PIN	Signal
NDCD#	1	6	NDSR#
NRXD	2	7	NRTS#
NTXD	3	8	NCTS#
NDTR#	4	9	NRI#
GND	5		

In RS-422 Mode

Signal	PIN	PIN	Signal
TxD1-	1	6	NC
TxD1+	2	7	NC
RxD1+	3	8	NC
RxD1-	4	9	NC
GND	5		

In RS-485 Mode

Signal	PIN	PIN	Signal
DATA1-	1	6	NC
DATA1+	2	7	NC
NC	3	8	NC
NC	4	9	NC
GND	5		
2.1.2 DC power-in connector (DC in)





Signal	PIN
+V12-24_DCIN	1
GND	2

2.2 EMX-TGLP Product Overview



2.3 EMX-TGLP Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip. To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:

0 0		1 2 3 O
Open	Closed	Closed 2-3

A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

Jumpers		
Label	Function	Note
JRI1/2	Serial port 1/2 pin9 signal select	3 x 2 header, pitch 2.00mm
JSBKL1	LVDS Back Light power selection	3 x 1 header, pitch 2.00mm
JSATX1	AT/ATX Power Mode Select	3 x 1 header, pitch 2.54mm
JP1	M2KB1 Voltage setting	3 x 1 header, pitch 2.00mm
JBAT1	Clear CMOS	2 x 1 wafer, pitch 2.00mm

The following tables list the function of each of the board's jumpers and connectors.

Connectors

Label	Function	Note
FPT1	Miscellaneous setting connector 1	5 x 2 header, pitch 2.54mm
FPT2	Miscellaneous setting connector 2	5 x 2 header, pitch 2.54mm
SODIMM1/2	206-pin DDR4 SO-DIMM socket	
JFAUD1	Front Audio connector	6 x 2 header, pitch 2.00mm

JBKL1/2	LCD Inverter connector	5 x 1 wafer, pitch 2.00mm
JSPI1	SPI connector	4 x 2 header, pitch 2.00mm
JEC_SPI	EC Debug	5 x 2 header, pitch 2.00mm
JCOM1	Serial Port 1 connector	5 x 2 header, pitch 2.00mm
JCOM2	Serial Port 2 connector	5 x 2 header, pitch 2.00mm
JCOM3-6	Serial Port 3-6 connector	20 x 2 header, pitch 2.00mm
JDIO1	General purpose I/O connector	10 x 2 header, pitch 2.00mm
SPK1	Speaker connector	4 x 1 wafer, pitch 2.00mm
LVDS1	LVDS Connector	20 x 2 wafer, pitch 1.25mm
EDP1	eDP_Panel connector	10 x 2 wafer, pitch 1.25mm
USB1/2	USB connector 1/2	
JUSB3/4	USB connector 3/4	5 x 2 header, pitch 2.54mm
LAN1/2/3/4	RJ-45 Ethernet 1/2/3/4	
BT1	Battery connector	2 x 1 wafer, pitch 1.25mm
M2KE1	M.2 2230 Type E Slot	
M2KB1	M.2 3042/2242/2260/2280 Type B Slot	
DP1/2/3/4	DP connector 1/2/3/4	
JRS485_1/2	Serial Port 1/2 RS485/422 Mode	3 x 2 header, pitch 2.00mm
		5 x 2 header nitch 2 00mm
	DC Power-in connector	
PWR1	Power connector	2 x 2 water pitch 4 20mm
SATA1/2	Serial ATA connector 1/2	
SPWR1	SATA Power connector 1	4 x 1 wafer, pitch 2.54mm
	USIM card slot	
CPU FAN1	CPU fan connector	4 x 1 wafer pitch 2 54mm
		By OFM request Due to poor
PCIEX4 1	PCle connector	compatibility concern, remove
		this connector.

2.4 EMX-TGLP Setting Jumpers & Connectors

2.4.1 Serial port 1/2 pin9 signal select (JRI1/JRI2)



Ring*



+5V



+12V

1	5

* Default

2.4.2 LVDS Back Light power selection (JSBKL1)



PWM Mode*

3
1

DC Mode

	3
	1

* Default

2.4.3 AT/ATX Power Mode Select (JSATX1)







1

3

* Default

2.4.4 M2KB1 Voltage setting (JP1)



* Default

+3.8V







2.4.5 Clear CMOS (JBAT1)



* Default

2.4.6 LCD Inverter connector (JBKL1)



Protect*



Clear CMOS



5		1	

PIN	Signal		
1	+12V		
2	GND		
3	LVDS_BKLT_EN		
4	LVDS_BKLTCTL		
5	+5V		

2.4.7 LCD Inverter connector (JBKL2)



2.4.8 LVDS connector (LVDS1)







PIN	Signal	
1	+12V	
2	GND	
3	EDP2_BKLTEN	
4	EDP2_BKLT_CTL	
5	+5V	

Signal	PIN	PIN	Signal
+V5S_LVDS	2	1	+ V3.3S_LVDS
+V5S_LVDS	4	3	+ V3.3S_LVDS
NC	6	5	NC
GND	8	7	GND
LVDS_DATA0_P	10	9	LVDS_DATA1_P
LVDS_DATA0_N	12	11	LVDS_DATA1_N
GND	14	13	GND
LVDS_DATA2_P	16	15	LVDS_DATA3_P
LVDS_DATA2_N	18	17	LVDS_DATA3_N
GND	20	19	GND
LVDS_DATA4_P	22	21	LVDS_DATA5_P
LVDS_DATA4_N	24	23	LVDS_DATA5_N
GND	26	25	GND
LVDS_DATA6_P	28	27	LVDS_DATA7_P
LVDS_DATA6_N	30	29	LVDS_DATA7_N
GND	32	31	GND
LVDS_CLK1_P	34	33	LVDS_CLK2_P
LVDS_CLK1_N	36	35	LVDS_CLK2_N
GND	38	37	GND
+V12S_LVDS	40	39	+V12S_LVDS

2.4.9 eDP_Panel connector (EDP1)



19 1						
Signal	PIN	PIN	Signal			
GND	1	2	GND			
EDP_PANEL_TXN0	3	4	EDP_PANEL_TXN3			
EDP_PANEL_TXP0	5	6	EDP_PANEL_TXP3			
GND	7	8	NC			
EDP_PANEL_TXN1	9	10	GND			
EDP_PANEL_TXP1	11	12	EDP_PANEL_AUXN			
GND	13	14	EDP_PANEL_AUXP			
EDP_PANEL_TXN2	15	16	GND			
EDP_PANEL_TXP2	17	18	EDP_PANEL_HPD			
+V35_EDP	19	20	+V35_EDP			

2.4.10 General purpose I/O connector (DIO1)



1					19

Signal	PIN	PIN	Signal
DIO	1	2	DO0
DI1	3	4	DO1
DI2	5	6	DO2
DI3	7	8	DO3
DI4	9	10	DO4
DI5	11	12	DO5
DI6	13	14	DO6
DI7	15	16	DO7
SMB_SCL_S0_3P3EXT	17	18	SMB_SDA_S0_3P3EXT
GND	19	20	+5V
GND	19	20	(Max current = 0.5A)

2.4.11 Serial port1 connector (JCOM1)



1		9

Signal	PIN	PIN	Signal
COM_DCD#_1	1	2	COM_RXD_1
COM_TXD_1	3	4	COM_DTR#_1
GND	5	6	COM_DSR#_1
COM_RTS#_1	7	8	COM_CTS#_1
COM_RI#_1	9	10	NC

2.4.12 Serial port2 connector (JCOM2)



1		9

Signal	PIN	PIN	Signal
COM_DCD#_2	1	2	COM_RXD_2
COM_TXD_2	3	4	COM_DTR#_2
GND	5	6	COM_DSR#_2
COM_RTS#_2	7	8	COM_CTS#_2
COM_RI#_2	9	10	NC

2.4.13 Serial port 3/4/5/6 connector (JCOM3/4/5/6)



_	
	39
	1

Signal	PIN	PIN	Signal
NC	40	39	COM_RI#_6
COM_CTS#_6	38	37	COM_RTS#_6
COM_DSR#_6	36	35	GND
COM_DTR#_6	34	33	COM_TXD_6
COM_RXD_6	32	31	COM_DCD#_6
NC	30	29	COM_RI#_5
COM_CTS#_5	28	27	COM_RTS#_5
COM_DSR#_5	26	25	GND
COM_DTR#_5	24	23	COM_TXD_5
COM_RXD_5	22	21	COM_DCD#_5
NC	20	19	COM_RI#_4
COM_CTS#_4	18	17	COM_RTS#_4
COM_DSR#_4	16	15	GND
COM_DTR#_4	14	13	COM_TXD_4
COM_RXD_4	12	11	COM_DCD#_4
NC	10	9	COM_RI#_3
COM_CTS#_3	8	7	COM_RTS#_3
COM_DSR#_3	6	5	GND
COM_DTR#_3	4	3	COM_TXD_3
COM_RXD_3	2	1	COM_DCD#_3

2.4.14 Serial Port 1/2 RS485/422 Mode connector (JRS485_1/2)



1	5

Signal	PIN	PIN	Signal
485_422TX-	1	2	422RX-
485_422TX+	3	4	422RX+
+5V	5	6	GND

2.4.15 SATA Power connector 1 (SPWR1)



PIN	Signal				
1	+V5S_SATA				
2	GND				
3	GND				
4	+V12S_SATA				

2.4.16 Power connector (PWR1)





Signal	PIN	PIN	Signal
GND	2	4	+VIN
GND	1	3	+VIN

2.4.17 USB connector 3 (JUSB3)





Signal	PIN	PIN	Signal
+V5A_USB56	1	2	+V5A_USB56
USB_DN5	3	4	USB_DN6
USB_DP5	5	6	USB_DP6
GND	7	8	GND
		10	GND

2.4.18 USB connector 4 (JUSB4)



	_
	7
	1

Signal	PIN	PIN	Signal
+V5A_USB78	1	2	+V5A_USB78
USB_DN7	3	4	USB2_DN8
USB_DP7	5	6	USB2_DP8
GND	7	8	GND
		10	GND

ð h ... ()0(C€F©€ 0 100 DB ģ o

2.4.19 Speaker connector (SPK1)

2.4.20 SPI connector (JSPI1)





Signal	PIN
SPK_L+	1
SPK_L-	2
SPK_R+	3
SPK_R-	4

1	
7	

Signal	PIN	PIN	Signal
+V3.3A_1.8A_SPI	1	2	GND
SPI0_CS0#	3	4	SPI0_BIOS_CLK
SPI0_BIOS_MISO	5	6	SPI0_BIOS_MOSI
BIOS_HOLD#	7	8	BIOS_WP#



2.4.21 Battery connector (BT1)

2.4.22 Audio connector (JFAUD1)





PIN	Signal		
1	+RTCBAT		
2	GND		

1	
11	

Signal	PIN	PIN	Signal
LINEOUT_R	1	2	LINEOUT_L
GND_AUD	3	4	GND_AUD
LINEIN_R	5	6	LINEIN_L
MICIN_R	7	8	MICIN_L
LINEOUT1_JD	9	10	LINE1-JD
MIC1_JD	11	12	GND_AUD

2.4.23 EC Debug (JEC_SPI)



1		9

Signal	PIN	PIN	Signal
+V3.3A_EC	1	2	GND
EC_FSCE#	3	4	EC_FSCK
EC_FMISO	5	6	EC_FMOSI
EC_HOLD#	7	8	NC
EC_SMCLK_DEBUG	9	10	EC_SMDAT_DEBUG

2.4.24 Miscellaneous setting connector 1 (JFPT1)



	9
	1

Signal	PIN	PIN	Signal
		9	NC
-PWR_BNT	8	7	-Reset
+PWR_BNT	6	5	+Reset
-PWR_LED	4	3	-HD_LED
+PWR_LED	2	1	+HD_LED

2.4.25 Miscellaneous setting connector 2 (FPT2)



	9
	1
	-

Signal	PIN	PIN	Signal
		9	NC
GND	8	7	Speaker-
BLK_DN	6	5	NC
BLK_UP	4	3	NC
BLK_VR(10K)	2	1	Speaker+

2.4.26 LPC connector (JLPC1)



	9
	1

Signal	PIN	PIN	Signal
LPC_AD0	1	2	+3.3V
LPC_AD1	3	4	PLT_BUF_RST#
LPC_AD2	5	6	LPC_LFRAME#
LPC_AD3	7	8	CLK_24M_80
LPC_SERIRQ	9	10	GND

2.4.27 CPU fan connector (CPU_FAN1)





Signal	PIN
GND	1
+12V	2
CPU_FANIN	3
FAN_PWM0	4

Quick Reference Guide



3.1 Introduction

The BIOS setup program allows users to modify the basic system configuration. In this following chapter will describe how to access the BIOS setup program and the configuration options that may be changed.

3.2 Starting Setup

The AMI BIOS[™] is immediately activated when you first power on the computer. The BIOS reads the system information contained in the NVRAM and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated in one of two ways: By pressing or <F2> immediately after switching the system on, or By pressing the or <F2> key when the following message appears briefly at the left-top of the screen during the POST (Power On Self Test).

Press or <F2> to enter SETUP

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to.

Press F1 to Continue, DEL to enter SETUP

3.3 Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the PageUp and PageDown keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program using the keyboard.

Button	Description
↑↓→←	Move
Enter	Select
+/-	Value
Esc	Exit
F1	General Help
F2	Previous Values
F3	Optimized Defaults
F4	Save & Exit Setup
<k></k>	Scroll help area upwards
<m></m>	Scroll help area downwards

• Navigating Through The Menu Bar

Use the left and right arrow keys to choose the menu you want to be in.

Note: Some of the navigation keys differ from one screen to another.

• To Display a Sub Menu

Use the arrow keys to move the cursor to the sub menu you want. Then press <Enter>. A " \geq " pointer marks all sub menus.

3.4 Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or <Enter> key.

3.5 In Case of Problems

If, after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the AMI BIOS supports an override to the NVRAM settings which resets your system to its defaults.

The best advice is to only alter settings which you thoroughly understand. To this end, we strongly recommend that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both BIOS Vendor and your systems manufacturer to provide the absolute maximum performance and reliability. Even a seemingly small change to the chipset setup has the potential for causing you to use the override.

3.6 BIOS setup

Once you enter the Aptio Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

3.6.1 Main Menu

This section allows you to record some basic hardware configurations in your computer and set the system clock.

Main Advanced Chipset Sec	Aptio Setup – AMI urity Boot Save & Exit	
BIOS Information BIOS Vendor Core Version Compliancy Project Version Build Date and Time Access Level EC 8528 Firmware BIOS Name System Language ▶ Intel RC Version	American Megatrends 5.19 UEFI 2.7; PI 1.6 1AXRR 0.08 x64 07/11/2022 16:50:37 Administrator 0A DFP15382 [English]	Choose the system default language
System Date System Time	[Thu 08/18/2022] [10:57:15]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Ve	rsion 2.21.1278 Copyright (C) 20	022 AMI

Main	Aptio Setup — AMI	
Intel RC Version		
Board Information		
Board Name	EMX-TGLP(OFP15382)	
Processor Information		
Name	TigerLake ULT	
Туре	11th Gen Intel(R)	
	Core(TM) i7–1185G7E @	
	2.80GHz	
Speed	1800 MHz	
ID	0×806C1	
Stepping	BO	
Package	Not Implemented Yet	++: Select Screen
Number of Processors	4Core(s) / 8Thread(s)	T+: Select Item
Microcode Revision	88	Enter: Select
GI INTO	0X9H49	F1: Conorol Holp
TCEV COP Version	17 0 1064	F1. General nerp
PCTe GEN4 Dekel EW Version	0.0	E3: Ontimized Defaults
Memory RC Version	2020	F4: Save & Exit
Total Memory	8192 MB	ESC: Exit
Memory Speed	3200 MT/s	
PCH Information		
Vasat		200 ANT
Versi	υη <u>2.21.1278 </u> σοργright (Ο) 20	UZZ HMI

3.6.1.1 System Language

This option allows choosing the system default language.

3.6.1.2 System Date

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

3.6.1.3 System Time

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



Note: The BIOS setup screens shown in this chapter are for reference purposes only, and may not exactly match what you see on your screen. Visit the Avalue website (<u>www.avalue.com.tw</u>) to download the latest product and BIOS information.

3.6.2 Advanced Menu

This section allows you to configure your CPU and other system devices for basic operation through the following sub-menus.

Aptic Main Advanced Chipset Security Boot S) Setup – AMI ave & Exit
 Connectivity Configuration CPU Configuration Power & Performance PCH-FW Configuration Trusted Computing ACPI Settings IT8528 Super IO Configuration EC 8528 HW monitor SS RTC Wake Settings Serial Port Console Redirection USB Configuration Network Stack Configuration NVMe Configuration 	Configure Connectivity related options ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.21.12	8 Copyright (C) 2021 AMI

Advanced	Aptio Setup – AMI	
CNVi present CNVi Configuration CNVi Mode	No [Disable Integrated]	This option configures Connectivity. [Auto Detection] means that if Discrete solution is discovered it will be enabled by default. Otherwise Integrated solution (CNVi) will be enabled; [Disable Integrated] disables Integrated Solution. NOTE: When CNVI is present, *+: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
V	ersion 2.21.1278 Copyright (C) 20	021 AMI

3.6.2.1 Connectivity Configuration

Item	Options	Description
CNVi Mode	Disable Integrated [Default] Auto Detection	This option configures Connectivity. [Auto Detection] means that if Discrete solution is discovered it will be enabled by default. Otherwise Integrated solution (CNVi) will be enabled; [Disable Integrated] disables Integrated Solution. NOTE: When CNVi is present, the GPIO pins that are used for radio

3.6.2.2 CPU Configuration

Main	Aptio Setup – AMI	
CPU Configuration		When enabled, a VMM can
Type ID Speed L1 Data Cache L1 Instruction Cache L2 Cache L3 Cache L4 Cache	11th Gen Intel(R) Core(TM) i7-1185G7E @ 2.80GHz 0x806C1 2800 MHz 48 KB x 4 32 KB x 4 1280 KB x 4 12 MB N/A	hardware capabilities provided by Vanderpool Technology.
SMX/TXT	Supported	++: Select Screen
Intel (VMX) Virtualization Technology		I∔: Select Enter: Select +/-: Change Ont
Active Processor Cores	[A11]	F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Vers	ion 2.21.1278 Copyright (C) 20	21 AMI

Item	Options	Description
Intel (VMX)	Disabled	When enabled, a VMM can utilize the additional
Virtualization	Enabled[Default],	hardware capabilities provided by Vanderpool
Technology		Technology.
	All[Default],	
Active Processor Cores	1	Number of cores to enable in each processor
	2	package.
	3	

3.6.2.3 Power & Performance

Apt.	io Setup – AMI
Power & Performance ▶ CPU – Power Management Control	CPU – Power Management Control Options
	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.21.12	278 Copyright (C) 2021 AMI

3.6.2.3.1 CPU - Power Management Control

Main	Aptio Setup — AMI	
CPU – Power Management Control		Allows more than two frequency ranges to be supported.
Intel(R) SpeedStep(tm) Intel(R) Speed Shift Technology C states Enhanced C-states	[Enabled] [Enabled] [Enabled] [Enabled]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2	.21.1278 Copyright (C) 2021	AMI

Item	Options	Description
Intel(R) SpeedStep(tm)	Disabled	Allows more than two frequency ranges to be
	Enabled [Default] ,	supported.
Intel(R) Speed Shift	Disabled	Enable/Disable Intel(R) Speed Shift Technology
Technology	Enabled[Default],	support. Enabling will expose the CPPC v2 interface
recimology		to allow for hardware controlled P-states.
Disabled		Enable/Disable CPU Power Management. Allows
C states	Enabled[Default],	CPU to go to C states when it's not 100% utilized.
Enhanced C-states	Disabled	Enable/Disable C1E. When enabled, CPU will switch
	Enabled[Default],	to minimum speed when all cores enter C-State.

3.6.2.4 PCH-FW Configuration

Advanced	Aptio Setup – AMI	
ME Firmware Version ME Firmware Mode ME Firmware SKU ME Firmware Status 1 ME Firmware Status 2 ME State	15.0.23.1706 Normal Mode Corporate SKU 0x90000255 0x30858106 [Enabled]	Configure Management Engine Technology Parameters
▶ Firmware Update Configuration		
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2	.21.1278 Copyright (C) 2021	AMI

3.6.2.4.1 Firmware Update Configuration

Advanced	Aptio Setup — AMI	
Me FW Image Re-Flash	(Disabled)	Enable/Disable Me FW Image Re-Flash function.
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Versio	n 2.21.1278 Copyright (C) 2021	AMI

Item	Options	Description
Me FW Image Re-Flash	Disabled [Default] , Enabled	Enable/Disable Me FW Image Re-Flash function.

3.6.2.5 Trusted Computing

Advanced	Aptio Setup – AM:	I
TPM 2.0 Device Found Firmware Version: Vendor:	7.2 NTC	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TGG EFI orotocol and
		INTIA interface will not be available.
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Vers	ion 2.21.1278 Coouright	(C) 2021 AMI

Item	Options	Description
		Enables or Disables BIOS support for security
Security Device Support	Disabled	device. O.S. will not show Security Device.
	Enabled [Default] ,	TCG EFI protocol and INT1A interface will not
		be available.

3.6.2.6 ACPI Settings

Main	Aptio Setup — AMI	
ACPI Settings		Enables or Disables System ability to Hibernate (OS/S4 Sleen State) This ontion may
Enable Hibernation ACPI Sleep State	[Enabled] [S3 (Suspend to RAM)]	not be effective with some operating systems.
		↔: Select Screen †↓: Select Item
		Enter: Select +/-: Change Opt. E1: General Help
		F2: Previous Values F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
	Version 2.21.1278 Copyright (C) 202	1 AMI

Item	Options	Description
Enable Hibernation	Disabled Enabled [Default] ,	Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
ACPI Sleep State	Suspend Disabled, S3 (Suspend to RAM) [Default]	Select the highest ACPI sleep state the system will enter when the SUSPEDN button is pressed.

3.6.2.7 IT8528 Super IO Configuration

You can use this item to set up or change the IT8528 Super IO configuration for serial ports. Please refer to 3.6.2.7.1~ 3.6.2.7.5 for more information.

Advanced	Aptio Setup — AMI	
IT8528 Super IO Configuration		Set Parameters of Serial Port 1 (COMA)
Super IO Chip ▶ Serial Port 1 Configuration ▶ Serial Port 2 Configuration	IT8528	
Super IO Chip ▶ Serial Port 3 Configuration ▶ Serial Port 4 Configuration ▶ Serial Port 5 Configuration	F81216	
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2	.21.1278 Copyright (C) 2022	AMI

Item	Description
Serial Port 1 Configuration	Set Parameters of Serial Port 1 (COMA).
Serial Port 2 Configuration	Set Parameters of Serial Port 2 (COMB).
Serial Port 3 Configuration	Set Parameters of Serial Port 3 (COMC).
Serial Port 4 Configuration	Set Parameters of Serial Port 4 (COMD).
Serial Port 5 Configuration	Set Parameters of Serial Port 5 (COME).

3.6.2.7.1 Serial Port 1 Configuration



Item	Option	Description	
Sorial Port	Disabled	Enable or Disable Serial Port (COM)	
SenarFort	Enabled[Default],	Enable of Disable Senai Fort (CON).	
	UART 232 [Default] ,		
UART 232 422 485	UART 422,	Change the Serial Port as RS232/422/485.	
	UART 485		

3.6.2.7.2 Serial Port 2 Configuration

Advanced	Aptio Setup – AMI	
Serial Port 2 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2F8h; IRQ=3;	(COM)
UART 232 422 485	[UART 232]	
		↑↓: Select Item Enter: Select
		F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
version :	2.21.1278 Copyright (C) 2021	. AMI

Item	Option	Description
Control Dout	Disabled	Freeble or Dischle Cariel Dart (COM)
Serial Port	Enabled[Default],	Enable of Disable Senal Port (COM).
	UART 232 [Default] ,	
UART 232 422 485	UART 422,	Change the Serial Port as RS232/422/485.
	UART 485	

3.6.2.7.3 Serial Port 3 Configuration

Main Main	Aptio Setup — AMI	
Serial Port 3 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	(Enabled) IO=3E8h; IRQ=5;	(CDM) ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. E1: Conceal Webs
		F1: Beneral Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2	.21.1278 Copyright (C) 2021	AMI

Item	Option	Description
Serial Port	Enabled [Default] , Disabled	Enable or Disable Serial Port (COM).

3.6.2.7.4 Serial Port 4 Configuration

Main	Aptio Setup – AMI	
Serial Port 4 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2E8h; IRQ=5;	(cun)
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version	2.21.1278 Copyright (C) 2021	L AMI

Item	Option	Description
Serial Port	Enabled [Default] , Disabled	Enable or Disable Serial Port (COM).

3.6.2.7.5 Serial Port 5 Configuration

Main	Aptio Setup – AMI	
Serial Port 5 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=200h; IRQ=5;	<pre>++: Select Screen 14: Select Item Enter: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version	2.21.1278 Copyright (C) 2021	AMI

Item	Option	Description
Serial Port	Enabled [Default] ,	Enable or Disable Serial Port
	Disabled	(COM).

3.6.2.8 EC 8528 H/W monitor

Advanced	Aptio Setup – AMI	
Pc Health Status CPU temperature System temperature DCIN VCORE	: +32 C : +28 C : +11.507 V : +1.253 V	
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.21.1278 Copyright (C) 200	22 AMI

Advanced Advanced Hake system from S5 [Disabled] Enable or disable System wake on alarm event. Select FixedTime, system will wake on the hr:min::sec specified. Select DynamicTime, System will wake on the current time + Increase minute(s) ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

3.6.2.9	S 5	RTC	Wake	Settings

Item	Options	Description
		Enable or disable System wake on alarm event.
	Disabled[Default],	Select FixedTime, system will wake on the
Wake system from S5	Fixed Time	hr::min::sec specified. Select DynamicTime,
	Dynamic Time	System will wake on the current time + Increase
		minutes(s).

3.6.2.10 Serial Port Console Redirection

Huvanceu	
COMO Console Redirection [Disabled] ▶ Console Redirection Settings COM1(Pci Bus0,Dev0,Func0) (Disabled) Console Redirection Port Is Disabled	Console Redirection Enable or Disable.
Legacy Console Redirection ▶ Legacy Console Redirection Settings Serial Poet for Out-of-Pand Management/	
Windows Emergency Management Services (EMS) Console Redirection EMS [Disabled] ▶ Console Redirection Settings	++: Select Screen T4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.21.1278 Copyright (C) 2021	AMI

ltem	Options	Description	
Console Redirection	Disabled[Default],	Cancele Redirection Enable or Disable	
	Enabled	Console Redirection Enable of Disable.	

Console Redirection EMS	Disabled [Default] , Enabled	Console Redirection Enable or Disable.
-------------------------	--	--

3.6.2.10.1 Legacy Console Redirection Settings

Advanced	Aptio Setup – AMI	
Legacy Console Redirection Settings		Select a COM port to display
Redirection COM Port		redirection of Legacy OS and Legacy OPROM Messages ++: Select Screen 11: Select Item
		Fiter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2	.21.1278 Copyright (C) 2021	AMI

Item	Options	Description
Redirection COM Port	COM0	Select a COM port to display redirection of Legacy OS and Legacy OPROM Messages

3.6.2.11 USB Configuration

The USB Configuration menu helps read USB information and configures USB settings.

Advanced	Aptio Setup — AMI	
USB Configuration		The time-out value for
USB Module Version	26	transfers.
USB Controllers: 2 XHCIs USB Devices: 1 Drive, 1 Keyboard, 1 Mouse,	3 Hubs	
USB hardware delays and time-outs: USB transfer time-out	[20 sec]	
Device power-up delay	[20 SEC] [Auto]	↔: Select Screen ↑↓: Select Item
Mass Storage Devices:		Enter: Select
JetFlashTranscend 8GB 1100	[Auto]	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version :	2.21.1278 Copyright (C) 2021	AMI

Item	Options	Description
USB transfer time-out	1 sec 5 sec 10 sec	The time-out value for Control, Bulk, and Interrupt transfers.

	20 sec[Default]	
	10 sec	
Device react time out	20 sec[Default]	USB mass storage device Start Unit command
Device reset time-out	30 sec	time-out.
	40 sec	
		Maximum time the device will take before it
	Auto[Default]	properly reports itself to the Host Controller. 'Auto'
Device power-up delay	Manual	uses default value: for a Root port it is 100ms, for
		a Hub port the delay is taken form Hub descriptor.
	Auto[Default]	Mass storage device emulation type. 'AUTO'
	Floppy	enumerates devices according to their media
Mass Storage Devices	Forced FDD	format. Optical drives are emulated as 'CDROM',
	Hard Disk	drives with no media will be emulated according
	CD-ROM	to a drive type.

3.6.2.12 Network Stack Configuration

Advanced	Aptio Setup – AMI	
Network Stack	[Disabled]	Enable/Disable UEFI Network Stack
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	Version 2.21.1278 Copyright (C)) 2021 AMI

Item	Options	Description
Network Stack	Enabled Disabled [Default]	Enable/Disable UEFI Network Stack.

3.6.2.13 NVMe Configuration



3.6.3 Chipset

Aptio Setup – AMI Main Advanced <mark>Chipset</mark> Security Boot Save & Exit		
 ▶ System Agent (SA) Configuration ▶ PCH-IO Configuration ▶ Board & Panel Configuration 	System Agent (SA) Parameters	
	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.21.1278 Copyright (C) 2021 AMI		
3.6.3.1 System Agent (SA) Configuration

Chircot	Aptio Setup – AMI	
System Agent (SA) Configuration		Memory Configuration Parameters
VT-d	Supported	
Memory Configuration Graphics Configuration VMD setup menu		
VT-d	[Enabled]	
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2	.21.1278 Copyright (C) 2021	AMI

Item	Option	Description
VT-d	Disabled Enabled [Default]	VT-d capability.

3.6.3.1.1 Memory Configuration

Chipset	Aptio Setup – AMI	
Chipset Memory Configuration Memory RC Version Memory Speed Memory Timings (tCL-tRCD-tRP-tRAS) Controller 0 Channel 0 Slot 0 Controller 1 Channel 0 Slot 0 Size Number of Ranks Manufacturer	Aptio Setup - AMI 2.0.2.0 2133 MT/s 15-15-15-36 Not Populated / Disabled Populated & Enabled 4096 MB (DDR4) 1 Micron	++: Select Screen
		<pre>11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

3.6.3.1.2 Graphics Configuration

Chipset	Aptio Setup — AMI	
Graphics Configuration		Select which of IGFX/PEG/PCI
		Primary Display Or select HG for Hybrid Gfx.
		<pre>##: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version	2.21.1278 Copyright (C) 2021	AMI

Item	Option	Description
Primary Display	Auto [Default] IGFX	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select HG for Hybrid Gfx.

3.6.3.1.3 VMD Configuration

Chipset	Aptio Setup – AMI	
VMD Configuration		Enable/Disable to VMD
Enable VMD controller		
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	Version 2.21.1278 Copyright (C)	2021 AMI

Item	Option	Description	
Enchle VMD controller	Disabled[Default]	Enable/Disable to \/MD controller	
	Enabled	Enable/Disable to VMD controller	

3.6.3.2 PCH-IO Configuration

Chipset	Aptio Setup – AMI	
PCH-IO Configuration • PCI Express Configuration • SATA And RST Configuration • HD Audio Configuration		PCI Express Configuration settings
PCH LAN Controller	[Enabled]	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.	21.1278 Copyright (C) 2021	AMI

Item	Option	Description
PCH LAN Controller	Enabled [Default] Disabled	Enable/Disable onboard NIC.

3.6.3.2.1 PCI Express Configuration

Chipset	Aptio Setup – AMI	
PCI Express Configuration		PCI Express Root Port Settings.
 PCI Express Root Port 5(LAN2-I225) PCI Express Root Port 6(M.2 KeyE) PCI Express Root Port 7(LAN1-I219) PCI Express Root Port 9(M.2 KeyB) 	Lane configured as USB/SATA/UFS/GbE	
		++: Select Screen 11: Select Item Enter: Select
		+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2	2.21.1278 Copyright (C) 2022	AMI

3.6.3.2.1.1 PCI Express Root Port 5(LAN2-I225)

	Antio Setur – AMI	
Chipset		
PCI Express Root Port 5(LAN2-I225 ASPM L1 Substates PCIe Speed) [Enabled] [Disabled] [L1.1 % L1.2] [Auto]	Control the POI Express Root Port. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Versio	n 2.21.1278 Conuright (C) 20	21 AMT

Item	Option	Description
PCI Express Root Port	Disabled	Control the DCI Everyoon Dept
5(LAN2-I225)	Enabled[Default],	Control the PCI Express Root Port.
	Disabled[Default]	
	LOs	Set the ASPM Level: Force L0s – Force all
ASPM	L1	links to L0s State AUTO – BIOS auto
	L0sL1	configure DISABLE – Disables ASPM.
	Auto	
	Disabled	
L1 Substates	L1.1	PCI Express L1 Substates settings.
	L1.1 & L1.2[Default],	
	Auto[Default]	
PCIa Speed	Gen1	Salast DCIs speed
r cie speea	Gen2	
	Gen3	

3.6.3.2.1.2 PCI Express Root Port 6(M.2 KeyE)

Chipset	Aptio Setup – Al	MI
Chipset PCI Express Root Port 6(M.: ASPM L1 Substates PCIe Speed	2 KeyE) [Enabled] [Disabled] [L1.1 & L1.2] [Auto]	Control the PCI Express Root Port. ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2 21 1278 Conurigh	t (C) 2021 AMT

Item	Option	Description
PCI Express Root Port 6(M.2	Disabled	Control the DCI Everges Rest Part
KeyE)	Enabled[Default],	Control the PCI Express Root Port.
	Disabled[Default]	
	LOs	Set the ASPM Level: Force L0s – Force all
ASPM	L1	links to L0s State AUTO – BIOS auto
	L0sL1	configure DISABLE – Disables ASPM.
	Auto	
	Disabled	
L1 Substates	L1.1	PCI Express L1 Substates settings.
	L1.1 & L1.2[Default],	
	Auto[Default]	
DClo Speed	Gen1	Salast DCIs speed
r cie opeeu	Gen2	
	Gen3	

3.6.3.2.1.3 PCI Express Root Port 9(M.2 KeyB)

Chipset	Aptio Setup – AMI	
PCI Express Root Port 9(M.: ASPM L1 Substates PCIe Speed	2 KeyB) [Enabled] [Disabled] [L1.1 & L1.2] [Auto]	Control the PCI Express Root Port. ++: 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 21 1278 Conuright	(C) 2021 AMI

Item	Option	Description
PCI Express Root Port 9	Disabled	Control the DCI Everage Reat Part
(M.2 KeyB)	Enabled[Default],	Control the PCI Express Root Port.
	Disabled[Default]	
	LOs	Set the ASPM Level: Force L0s – Force all
ASPM	L1	links to L0s State AUTO – BIOS auto
	L0sL1	configure DISABLE – Disables ASPM.
	Auto	
	Disabled	
L1 Substates	L1.1	PCI Express L1 Substates settings.
	L1.1 & L1.2[Default],	
	Auto[Default]	
DCIe Speed	Gen1	Salast DCIs speed
r cie Speed	Gen2	
	Gen3	

3.6.3.2.2 SATA And RST Configuration



Item	Option	Description
SATA Controller(s)	Disabled	Enable/Disable SATA Device
	Enabled [Default] ,	
Port 0	Disabled	Enable or Disable SATA Port
Fort	Enabled[Default],	
Dort 1	Disabled	Encloser Dischla CATA Dert
Port	Enabled[Default],	Enable of Disable SATA Port

3.6.3.2.3 HD Audio Configuration

Chipset	Aptio Setup – AMI	
HD Audio Subsystem Configura	ation Settings	Control Detection of the
HD Audio		Disabled = HDA will be unconditionally disabled Enabled = HDA will be unconditionally enabled.
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	Vancion 2 21 1272 Comunicat (C)	2001 ANT

OFP-15W38

Item	Option	Description
HD Audio	Disabled Enabled [Default] ,	Control Detection of the HD-Audio device. Disable = HDA will be unconditionally disabled Enabled = HDA will be unconditionally enabled.

3.6.3.3 Board & Panel Configuration

Chipset	Aptio Setup — AMI	
Board & Panel Configuration		ErP Function (Deep S5).
ErP Function PWR-On After PWR-Fail Wake Up by Ring Watch Dog USB Standby Power Amplifier Gain M.2 KeyB type SHOW DMI INFO	[Disabled] [Off] [Enabled] [Disabled] [Enabled] [2W] [USB3] [Disabled]	
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Versio	on 2.21.1278 Copyright (C) 2	2022 AMI

Item	Option	Description
	Disabled[Default],	FrD Eurotian (Dean SE)
ErP Function	Enabled	ErP Function (Deep 55).
	Off [Default] ,	
PWR-On After PWR-Fail	On	AC loss resume.
	Last State	
Wake Up by Ping	Disabled	Wake Up by Ping from \$2/\$4/\$5
	Enabled[Default],	Wake op by Ring Holli 33/34/33
	Disabled[Default],	
	30 sec	
	40 sec	
Watah Dag	50 sec	Salaat Watah Dag
Watch Dog	1 min	Select Watchbog.
	2 min	
	10 min	
	30 min	
USB Standby Power	Disabled	Enabled/Disabled USB Standby Power
	Enabled [Default] ,	during S3/S4/S5
Amplifier Coin	2W[Default],	Amplifier Coin
Amplifier Gain	6W	Ampliner Gain
	USB3[Default],	M 2 KovP type
М.2 Кеув туре	PCIE	М.2 Кеув туре
	Disabled[Default],	
SHOW DMI INFO	Enabled	

3.6.4 Security



Administrator Password

Set setup Administrator Password

User Password

Set User Password

3.6.4.1 Secure Boot menu

	Aptio Setup – AMI Security	
System Mode	Setup	Secure Boot feature is Active
Secure Boot	[Enabled] Not Active	Platform Key(PK) is enrolled and the System is in User mode.
Secure Boot Mode ▶ Restore Factory Keys ▶ Reset To Setup Mode	[Standard]	platform reset
▶ Key Management		
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.21.1278 Copyright (C) 20	021 AMI

ltem	Option	Description
		Secure Boot feature is Active if Secure Boot is
Secure Poet	Disabled	Enabled, Platform Key(PK) is enrolled and the
Secure Boot	Enabled[Default]	System is in User mode. The mode change
		requires platform reset
		Secure Boot mode options: Standard or Custom.
Secure Reat Made	Standard[Default]	In Custom mode, Secure Boot Policy variables
Secure Boot Mode	Custom	can be configured by a physically present user
		without full authentication

3.6.5 Boot



Item	Option	Description
Satur Brompt Timoout		Number of seconds to wait for setup activation
Setup Prompt Timeout	Ι	key. 65535(0xFFFF) means indefinite waiting.
Bootup Numl ook State	On [Default]	Salact the Keyboard Numl ack state
Bootup NumLock State	Off	Select the Reyboard NullEOCK state
Quiat Boot	Disabled[Default]	Enables or disables Quiet Boot option
	Enabled	
Boot Option #1	Set the system boot order.	
Boot Option #2	Set the system boot order.	

3.6.6 Save and exit

Aptio Setup – AMI Main Advanced Chipset Security Boot <mark>Save & Exit</mark>	
Save Options Save Changes and Reset Discard Changes and Reset	Reset the system after saving the changes.
Default Options Restore Defaults Boot Override UEFI: JetFlashTranscend 8GB 1100, Partition 1 (JetFlashTranscend 8GB 1100) UEFI: JetFlashTranscend 8GB 1100, Partition 2	
(JetFlashTranscend 8GB 1100)	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.21.1278 Copyright (C) 202	1 AMI



3.6.6.1 Save Changes and Reset

Reset the system after saving the changes.

3.6.6.2 Discard Changes and Reset

Reset system setup without saving any changes.

OFP-15W38

3.6.6.3 Restore Defaults

Restore/Load Default values for all the setup options.

3.6.6.4 Launch EFI Shell from filesystem device

Attempts to Launch EFI Shell application (Shell.efi) from one of the available filesystem devices.

4. Drivers Installation



Note: Installation procedures and screen shots in this section are for your reference and may not be exactly the same as shown on your screen.

4.1 Install Chipset Driver

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.

(intel)

Next Cancel

ntel(R) C Readme Fi	Chipset Device le Information	Software	(intel
********* * Produc * Packaç * Instal * Date: ********	ct: Intel(R) Ch: ge version: 10.2 ller version: 3 07/17/2020	**************************************	**************************************	********
NOTE:	For the list to the Relea	t of supported . ase Notes	chipsets, plea	se refer
*********** * CONTEN ********** This docu	NTS OF THIS DOCU	MENT the following s	**************************************	******
1. Overv 2. Syste	view em Requirements			>
		Back	Install	Cancel

Step 3. Click Install.



Step1. Click Next.

Intel(R) Chipset Device Software

You are about to install the following product:

It is strongly recommended that you exit all programs before continuing

Press Next to continue, or press Cancel to exit the setup program.

Intel(R) Chipset Device Software



Step 2. Click Accept.

Step 4. Complete setup.

4.2 Install VGA Driver

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.







Step 2.

Click Next to accept license agreement.

intel. _{Gray}	hics Driver Installer
Pre-Install	The installer will install the following components: - Intel® Graphics Driver - Intel® Graphics Command Center "Classic"
Setup	
Install	
Done!	
	Start





Step 4. Click Reboot now.

4.3 Install ME Driver

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.

Setup	×
Intel® Management Engine Components Welcome	intel
You are about to install the following product:	
Intel® Management Engine Components 2044.15.0.1941	
It is strongly recommended that you exit all programs before cont Click Next to continue, or click Cancel to exit the setup program.	tinuing.
Intel Corporation	Back Next > Cancel

Step 1. Click Next to continue setup.



Step 2. Click Next.

Setup		×
Intel® Management Engine Componen Destination Folder	ts (in	tel
Click Next to install to the default folder, or click Cha	nge to choose another destina	tion folder.
C:\Program Files (x86)\Intel\Intel(R) Management	Engine Components	
		Change
ntel Corporation	< Back Next >	Cancel

Setup X Intel® Management Engine Components Completion You have successfully installed the following components: - Intel® Management Engine Interface - Serial Over LAN - Intel® Wireless Manageability Driver - Local Management Service - Intel® Dynamic Application Loader Click Terre to open log file location. Intel Corporation Ket Service Ket

Step 4. Click Finish to complete setup.

4.4 Install Audio Driver (For Realtek ALC897 and ALC888S HD Audio)

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.



Step1. Click Next to Install.



Step 2. Click Finish to complete setup.

4.5 Install LAN Driver

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.

📕 Intel® Network Connections		×
(intel) Network	Connections	
	Install Drivers and Software	
	View User Guides	
	View Release Notes	
Networking at Intel.com		Version: 25.2.0.0
Networking at Intel.com		version: 25.2.0.0

Step 1. Click Next to continue installation.



Step 2. Click Next.

	(inte	1
Please read the following license agre	eement carefully.	2
		1
SOFTWAR	RE LICENSE AGREEMENT	ļ
DO NOT DOWNLOAD, INSTALL, ACCESS UNTIL YOU HAVE READ AND ACCEPTEI AGREEMENT. BY INSTALLING, COPYING AGREE TO BE LEGALLY BOUND BY TH	S, COPY, OR USE ANY PORTION OF THE SOFTWARE D THE TERMS AND CONDITIONS OF THIS 3, ACCESSING, OR USING THE SOFTWARE, YOU 5 TERMS AND CONDITIONS OF THIS ACREEMENT IF	
You do not agree to be bound by, or the You to accept, these terms and condition and destroy all copies of the Software in	entity for whose benefit You act has not authorized ns, do not install, access, copy, or use the Software n Your possession.	
You do not agree to be bound by, or the You to accept, these terms and conditio and destroy all copies of the Software in This SOFTWARE LICENSE AGREEMENT Corporation, a Delaware corporation ("In or other entity for whose benefit you ac conditions of this Agreement on behalf or conditions of this Agreement on behalf or the soft of the soft on the soft of the soft on the soft of th	entity for whose benefit You act has not authorized ans, do not install, access, copy, or use the Software n Your possession. (this "Agreement") is entered into between Intel Itel") and You. "You" refers to you or your employer 4, as applicable. If you are agreeing to the terms and of a company or other legal entity. you represent and	
You do not agree to be bound by, or the You to accept, these terms and condition and destroy all copies of the Software in This SOFTWARE LICENSE AGREEMENT Corporation, a Delaware corporation ("Im or other entity for whose benefit you ac conditions of this Agreement on behalf of I accept the terms in the license agree	entity for whose benefit You act has not authorized ns, do not install, access, copy, or use the Software n Your possession. (this "Agreement") is entered into between Intel tief) and You. "You" refers to you or your employer it, as applicable. If you are agreeing to the terms and of a company or other legal entity. you encessent and ement Print	

Step 3. Click Next.

Intel(R) Network Connections Install Wizard	>
Setup Options	(intol)
Select the program features you want installe	
Install:	
Device drivers	
Intel® PROSet	
Intel® Advanced Network Services	
East ve Description	
reature bescription	
	Back Next > Cancel

Step 4. Click Yes.

🛃 Intel(R) Network Connections Install	Wizard		>
Ready to Install the Program			
The wizard is ready to begin installation	ı.		Intel
Click Install to begin the installation.			
If you want to review or change any o exit the wizard.	f your installation s	ettings, click Back. (Click Cancel to
			0.1





Step 6. Click Finish to complete setup.

4.6 Install RST for RAID Driver

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.



Step 1. Click Next to continue installation.

	want to install win	ndows?		
Name		Total size	Free space	Туре
Drive 2 Unallocated Space		74.5 GB	74.5 GB	
12 22 20 20 20 20 20 20 20 20 20 20 20 20	Delete	- Eormat	* New	
<u>Refresh</u> <u>Load driver</u>	Extend			

Step 2. Click Next.

4.7 Ascending Network Adapter

All drivers can be found on the Avalue Official Website:

http://www.avalue.com.tw.



Note: The installation procedures and screen shots in this section are based on Windows 10 operation system. If the warning message appears while the installation process, click Continue to go on.

→ * ↑ ₺ > 1	This PC > Local Disk (C:) マ じ	Search Local Disk (C:)		
+ Ould array	Name	Date modified	Туре	Size
Desiton :	Intel	8/11/2021 4:33 PM	File folder	
Desetop -	PerfLogs	12/7/2019 5:14 PM	File folder	
Downloads	Program Files	8/2/2021 9:31 AM	File folder	
Documents 2	Program Files (x86)	6/9/2021 4:31 PM	File folder	
Pictures 3	Sleep Test_Avalue	5/25/2021 5:58 AM	File folder	
EMX-TGLP	Users	6/8/2021 4:22 PM	File folder	
LAN .	Windows	7/29/2021 3:56 PM	File folder	
New folder	AscendingSortNetworkAdapterByMac	7/29/2021 3:27 PM	Compressed (zipp	321 KI
💄 軍曲				
OneDrive				
This PC	I			
Network				

Step 1. Copy file:

"AscendingSortNetworkAdapterByMac.zip"
to C:\

» 🕑 📕 🖬		Extract	Local Di	sk (C:)		-	
File Home Share	View O	ompressed Folder Tools					· · · · ·
– → × ↑ 🕹 > This	PC > Local D	Disk (C:) >	~	υ	, Search Local Disk (C:)	
^	Name	~			Date modified	Туре	Size
Desktop *	Ascend	ingSortNetworkAdante	rBvMac		7/29/2021 3:27 PM	Compressed (zipp	321 K
Downloads *	Windov Users	Open Open in new win	dow		2021 3:56 PM 021 4:22 PM	File folder File folder	
 Documents # Pictures # 	📕 Sleep T 📕 Program	Extract All Pin to Start			2021 5:58 AM 021 4:31 PM	File folder File folder	
EMX-TGLP	Program PerfLog	Scan with Micros	oft Defenc	ler	021 9:31 AM 2019 5:14 PM	File folder File folder	
New folder	📕 Intel	Open with			2021 4:33 PM	File folder	
 OneDrive 		Send to	versions		>		
interview State St		Cut					
UsbStorage (D:) .android_secure		Create shortcut					
3 items 1 item selected 3	320 KB	Rename					
		Properties					

Step 2. Unzip file:

"AscendingSortNetworkAdapterByMac.zip"

Extract View Compressed Fold	T 👉 🦉 Extend Connected (Tennel) Folders)
C > Local Disk (C:)	Extract Compressed (Zipped) Folders	
Name	Select a Destination and Extract Files	
AscendingSortNetwo	6 Files will be extracted to this folder: C:\ Browse Browse	
Users Sleep Test_Avalue	Show extracted files when complete	
Program Files		
Intel		
	Extract Cano	el
:0 KB		

Step 3.

change path to C:\ and execute the file

File Home Share View					\ \
$\leftarrow \rightarrow \cdot \uparrow \underset{\bullet}{\bullet} \rightarrow$ This PC \rightarrow L	.ocal Disk (C:) > V	U	, ○ Search Local Disk (C:)		
A Name	scendingSortNetworkAdapterByMac		Date modified 7/29/2021 3:27 PM	Type Compressed (zipp	Size 321 K
Downloads # U Documents #	findows sers		7/29/2021 3:56 PM 6/8/2021 4:22 PM	File folder File folder	
E Pictures A Pr	eep iest_Avalue ogram Files (x86) ogram Files		6/9/2021 5:38 AM 6/9/2021 4:31 PM 8/2/2021 9:31 AM	File folder File folder File folder	
New folder Pe	rfLogs tel		12/7/2019 5:14 PM 8/11/2021 4:33 PM	File folder File folder	
夏曲 And	value		8/11/2021 4:39 PM	File folder	
S This PC					
🥪 UsbStorage (D:) 📜 .android_secure					
.Trash-1000					

Step 4. it will generate Avalue folder.

P M = Avalue				- U
File Home Share View				`
← → × ↑ 🖡 « Local Disk (C:) » Avalue »	ن v	∠ Search Avalue		
Name	^	Date modified	Туре	Size
Deskton * EMX-TGLP		8/11/2021 4:39 PM	File folder	
Downloads *				
Documents 🖈				
Fictures 🖈				
LAN				
E LENIX				
New folder				
New folder				
New folder New folder 美 率曲				
■ New folder ■ New folder ■ Tethen ■ Tethen ● OneDrive				
New folder New folder ↓ 筆曲 ● OneDrive				
New folder New folder © The PC © The PC ↓ UbStorage (D)				
New folder New folder 第二章 中世 下his PC UbDSonage (D) android secure				

Step 5.

Click and enter C:\Avalue\EMX-TGLP folder, execute administratoramode

"ExecuteAscendingSortNetworkAdaptersX64.bat".





Step 6. After execute

"ExecuteAscendingSortNetworkAdaptersX64.bat", it will auto Restart.

Step 7.

Ethernet1=>INTEL I219LM Ethernet2=>INTEL I225IT Ethernet3=>INTEL I210 Ethernet4=>INTEL I210



Note:

If customer would like to patch LAN order sequence, please refer to Avalue website for EMX-TGLP Sort Network

Adapter By Mac Address.

e	val	ue F	Products	Solutions	Serv	ices	My Avalue	Cor	ntact Us	соч	D-19 INFO
	Other										
	No. Release Date		Model		Description			Download			
	1 2021-08-12		EMX-TGLP		SortNetwork Tool Device:Other			U			

5. Development Resource

Here you can find development resource for OFP-15W38

Datasheet

LCD Datasheet(eDP)

Touch Screen Datasheet

Adapter Datasheet

CE/FCC test Report (Product Design Verification Report)

Here you can find information for Software development

How to flash Android image file



Note: If you need more information, please visit our website: http://www.avalue.com.tw