elVP-TGU-Al-D0000

11th Gen. Intel[®] Core[™] i7/i5/i3/Celeron[®] AI Box

User's Manual





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elVP-TGU-AI-D0000 11th Gen. Intel[®] Core[™] i7/i5/i3/Celeron[®] AI Box

User's Manual

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Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references.

- > All cautions and warnings on the device should be noted.
- All cables and adapters supplied by EverFocus are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by EverFocus to prevent system malfunction or fires.
- > Make sure the power source matches the power rating of the device.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- > Always completely disconnect the power before working on the system's hardware.
- No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
- If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
- > Always disconnect this device from any AC supply before cleaning.
- > While cleaning, use a damp cloth instead of liquid or spray detergents.
- > Make sure the device is installed near a power outlet and is easily accessible.
- Keep this device away from humidity.
- Place the device on a solid surface during installation to prevent falls.
- > Do not cover the openings on the device to ensure optimal heat dissipation.
- > Watch out for high temperatures when the system is running.
- > Do not touch the heat sink or heat spreader when the system is running.
- > Never pour any liquid into the openings. This could cause fire or electric shock.
- As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
- If any of the following situations arises, please contact our service personnel (ts@everfocus.com.tw):
 - Damaged power cord or plug
 - Liquid intrusion to the device
 - Exposure to moisture
 - Device is not working as expected or in a manner as described in this manual
 - The device is dropped or damaged
 - Any obvious signs of damage displayed on the device
- DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE SPECIFICATION) TO PREVENT DAMAGE.

FCC Statement



This device complies with Part 15 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.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.

Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

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Chapter

1

1. Introduction

The eIVP-TGU-AI-D0000 is an AI Box adopting Intel[®] 11th Gen Core[™] i7/i5/i3 U-series processor. The small footprint makes it suitable to fit on any desk or rear monitors by using the VESA hole patterns.

This model comes with dual channel DDR4 SO-DIMM memory slots, supporting up to 64GB memory. For storage, it has a SATA3.0 bay and a M.2 key M (2242/2260/2280) slot, which supports PCIe x4 and SATA3 for SSD.

Connectivity-wise, the eIVP-TGU-AI-D0000 supports additional M.2 (key E 2230) slot for wireless connection; one RS-232 COM port; and four USB 3.2 Gen 2 Type-A ports, two USB 3.2 Gen 2 type-C ports and two USB 2.0 ports. For audio and video, the model provides an audio jack and display outputs including HDMI and DP ports.

1.1 Features

- Fanless AI box
- 11th Gen. Intel[®] Core[™] i7/i5/i3/Celeron[®] U-series
- DDR4 3200 MHz 260-pin SO-DIMM x 2, up to 64GB
- USB 3.2 Gen2 x 6, USB 2.0 x 2
- M.2 Key M (2242/2260/2280) x 1, M.2 Key E (2230) x 1
- COM (RS232) x 1, SATA3 x 1
- GbE LAN x 1, 2.5GbE LAN x 1
- Quad displays: HDMI 2.0a x 1, DP 1.4 (2 from Type C) x 3
- TPM onboard
- 19V/90W power adapter
- CE, FCC certified



1.2 Dimensions



1.3 Packing List

- System x 1
- DC19V/90W power adapter x 1
- M.2 screw x 2
- M.2 (2280) bracket with screw x 1 (installed on MB)
- VESA mount kit x 1

Note:

- 1. Equipment configurations and supplied accessories vary by country. Please consult your local EverFocus office or agents for more information. Please also keep the shipping carton for possible future use.
- 2. Contact the shipper if any items appear to have been damaged in the shipping process.



1.4 Product Specifications

System	
Processor	11th Gen. Intel [®] Core™ i7/i5/i3/Celeron [®] U-series
Main Memory	DDR4 3200 MHz 260-pin SO-DIMM x 2, up to 64GB
Video	
Format	H.264 / H.265
Video Input	Based on the installed software EverFocus AiO NVR: up to 8ch
Video Output	HDMI 2.0a x 1; DP 1.4 x 1
Audio	
Audio Jack	Audio jack x 1 (Mic-in, Line-out)
Recording	
Format	H.264 / H.265
Resolution	1920 x 1080 at 30fps (NTSC) / 25fps (PAL)
Storage	
SATA	SATA3.0 (6Gbps) x 1
mSATA	n/a
RAID	n/a
Others	M.2 x 1 (KEY M, 2242/2260/2280) with PCIe x4 and SATA3 for SSD
Network	
Ethernet	LAN1: Intel [®] I219LM with 10/100/1000 Mbps LAN2: Intel [®] I225LM with 10/100/1000/2500 Mbps
Wi-Fi / 3G / 4G	Supported (optional)
GPS / CANBus	n/a
I/O	
Digital I/O	n/a
Interface	
Front I/O Panel	Audio jack (Mic x 1, Line-out) x 1 USB 3.2 Gen2 (Type C, supports DP 1.4) x 2 USB 3.2 Gen2 (Type A) x 2 USB 2.0 (Type A) x 2



Rear & Right- Side I/O Panel	Power button x 1 LED indicator (HDD, power) x 2 COM (RS232) x 1 DC power input x 1 USB 3.2 Gen2 (Type A) x 2 HDMI 2.0a x 1; DP 1.4 x 1 GbE LAN x 1; 2.5GbE LAN x 1 Antenna port x 2 Security slot x 1
Expansion Slot	M.2 Key E socket (2230) x 1 (with PCIe x1, USB 2.0 and CNVi for wireless)
Software Suppor	't
NVR Software	EverFocus AiO NVR
General	
Power Supply	DC 19V, 90W (power adapter provided)
Dimensions	6.76" x 1.97" x 4.31" / 171.8 x 50.05 x 109.45 mm (without bracket)
Gross Weight	3.53lb (1.6kg)
Operating	32°F ~ 122°F (0°C ~ 50°C)
Storage Temp.	-40°F ~ 185°F (-40°C ~ 85°C)
Storage	5%~90%, non-condensing
Certification	CE, FCC Class A



1.5 Front Panel



No.	Description
1	Audio (Mic-in, Line-out)
2	2 x USB 3.2 Gen2 Ports (Type C, supports DP1.4 display output)
3	USB 3.2 Gen2 (Type A)
4	USB 2.0 (Type A)

1.1 Rear Panel



No.	Description	No.	Description
1	COM Port	5	RJ-45 (2.5G LAN)*
2	Power Button	6	DC-IN
3	2 x USB 3.2 Gen2 (Type A)	7	DisplayPort
4	HDMI	8	RJ-45 (1G LAN)*

* There are two LEDs on the LAN ports. Please refer to the table below for LAN port LED indications.



ACT/LINK LED

SPEED LED



LAN Port

Activity / Link LED			Speed L	.ED
Status	Description	Status	De	escription
	1G/2.5G LAN	Status	1G LAN	2.5G LAN
Off	No Link	Off	10Mbps connection	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection	100Mbps /1Gbps connection
On	Link	Green	1Gbps connection	2.5Gbps connection



Chapter



2. Hardware Installation

- 2.1 How to Remove the Bottom Case
- 1. Remove the four screws on the bottom case.
- 2. Then lift up and remove the bottom panel.



- 2.2 How to Install the WiFi Module
- 1. Locate the WiFi Module slot on the motherboard.



2. Carefully insert the WiFi Module into the slot.



3. Tighten the screw to secure the WiFi Module to the motherboard.





- 2.3 How to Remove the M.2 SSD and the Bracket
- 1. Release the screw and carefully remove the M.2 SSD.



2. Release the screw and remove the bracket from the motherboard.





- 2.4 How to Install the M.2 SSD
- 1. Locate the M.2 slot on the motherboard.



2. Carefully insert the M.2 SSD into the slot.



3. Tighten the screw to secure the M.2 SSD to the motherboard.

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- 2.5 How to Install the 2.5-inch Hard Drive
- 1. Remove the four screws on the bottom case. Then lift up and remove the bottom panel.



2. Attach the HDD cage to the bottom panel and secure it using the four screws.



3. Connect the SATA Data and Power Cable to the HDD.





4. Connect the SATA Cable to the connector.



5. Then reinstall the bottom panel.





- 2.6 How to Install the Memory Modules (DDR4)
- 1. Carefully insert the SO-DIMM memory modules into the slot at a 30-degree angle.



2. Push down until the modules snap into place.



Note:

- 1. The system requires DDR4 SO-DIMM.
- 2. For dual channel configuration, you always need to install identical (the same brand, speed, size and chip-type) DDR4 SO-DIMM pairs.
- 3. The SO-DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.



Chapter



3. Motherboard

3.1 Motherboard Layout



No.	Description	No	Description
1	M.2 Key-M Socket (M2_M1)	5	Clear CMOS Header (CLRCMOS1)
2	M.2 Key-E Socket (M2_E1)	6	SATA3 Port (SATA3_0)
3	USB2.0 Connector (USB2_7_8)	7	SIO_AT1
4	COM Port Header (RS232)	8	System Panel Header (PANEL1)

Back Side		
Power Button (PWR_BTN1	Battery Connector (BAT1)	
FAN Connector (FAN1)	ESPI Connector (ESPI)	



3.2 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is "Short". If no jumper cap is placed on pins, the jumper is "Open". The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when jumper cap is placed on these 2 pins.



Note:

CLRCMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, user default profile and MAC address will be cleared only if the CMOS battery is removed.

CLRCMOS1 allows you to clear the data in CMOS automatically when AC power on. The data in CMOS includes system setup information such as system password, date, time, and system setup parameters. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord, then use a jumper cap to short the pins on CLRCMOS1.



3.3 Onboard Headers and Connectors

Please note that the onboard headers and connectors are **NOT** jumpers. Do NOT place jumper caps over these headers and connectors, otherwise, it will cause permanent damage to the motherboard.





Note: Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

PWRBTN (Power Switch):

Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

PLED (System Power LED)

Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

HDLED (Hard Drive Activity LED):

Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

Back Side

Power Button Header	Fan Connector
(PWR_BTN1)	(FAN1)
Battery Connector	ESPI Connector
(BAT1)	(ESPI1)



3.4 Installation of ROM Socket



- * Do not apply force to the actuator cover after IC inserted.
- * Do not apply force to actuator cover when it is opening over 120 degree, otherwise, the actuator cover may be broken.



- * The yellow dot (Pin1) on the ROM must be installed at pin1 position of the socket.
- * Make sure the white dot on the ROM is installed outwards of the socket.

Warning: If the installation does not follow as the picture, then it may cause severe damage to chipset & MB.

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3.5 Expansion Slot (M.2 Slots)

There are 2 M.2 slots on this motherboard.

M.2 for SSD: 1 x M.2 (KEY M, 2242/2260/2280) with PCIe Gen4 x4 and SATA3 for SSD. * M.2 Key M 2280(Supported by bracket)

M.2 for Wi-Fi: 1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless.

Pin	Signal	Signal	Pin
1	GND	+3.3V	2
3	GND	+3.3V	4
5	PERn3	NC	6
7	PERp3	NC	8
9	GND	SATA_LED	10
11	PETn3	+3.3V	12
13	PETp3	+3.3V	14
15	GND	+3.3V	16
17	PERn2	+3.3V	18
19	PERp2	NA	20
21	GND	NA	22
23	PETn2	NA	24
25	PETp2	NA	26
27	GND	NA	28
29	PERn1	NA	30
31	PERp1	NA	32
33	GND	NA	34
35	PETn1	NA	36
37	PETp1		38
39	GND	SMB_CLK	40
41	PERn0/SATA-B+	SMB_DATA	42
43	PERp0/SATA-B-	NA	44
45	GND	NA	46
47	PETn0/SATA-A-	NA	48
49	PETPO/ SATA-A+	PERST#	50
51	GND	CLKREQ#	52
53	PEFCLKn	WAKE#	54
55	PEFCLKp	NA	56
57	GND	NA	58
67	NA	NA	68
69	PEDET	+3.3V	70
71	GND	+3.3V	72
73	GND	+3.3V	74
75	GND		

M.2 Key-M Socket (M2_M1)

Pin	Signal	Signal	Pin
1	GND	+3.3V	2
3	USB_D+	+3.3V	4
5	USB_D-	NA	6
7	GND	NA	8
9	CNV_WGR_D1-	CNV_RF_RESET	10
11	CNV_WGR_D1+	NA	12
13	GND	MODEM_CLKREQ	14
15	CNV_WGR_D0-	NA	16
17	CNV_WGR_D0+	GND	18
19	GND	NA	20
21	CNV_WGR_CLK-	CNV_BRI_RSP	22
23	CNV_WGR_CLK+		
33	GND	CNV_BGI_DT	32
35	РЕТр	CNV_RGI_RSP	34
37	PETn	CNV_BRI_DT	36
39	GND	NA	38
41	PERp	NA	40
43	PERn	NA	42
45	GND	NA	44
47	PEFCLKp	NA	46
49	PEFCLKn	NA	48
51	GND	SUSCLK	50
53	CLKREQ#	PERSTO#	52
55	WAKE#	W_DISABLE1#	54
57	GND	W_DISABLE2#	56
59	CNV_WT_D1-	SMB_DATA	58
61	CNV_WT_D1+	SMB_CLK	60
63	GND	NA	62
65	CNV_WT_D0-		64
67	CNV_WT_D0+	NA	66
69	GND	NA	68
71	CNV_WT_CLK-	NA	70
73	CNV_WT_CLK+	+3.3V	72
75	GND	+3.3V	74

M.2 Key-E Socket (M2_E1)



eIVP-CFS-AI-D0000 AI Box

Chapter



4. UEFI Setup Utility

4.1 Introduction

This section explains how to use the UEFI SETUP UTILITY to configure your system. The UEFI chip on the motherboard stores the UEFI SETUP UTILITY. You may run the UEFI SETUP UTILITY when you start up the computer. Please press <F2> or during the Power-On-Self-Test (POST) to enter the UEFI SETUP UTILITY, otherwise, POST will continue with its test routines.

If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.

Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

4.1.1 UEFI Menu Bar

The top of the screen has a menu bar with the following selections:

Main: To set up the system time/date information
Advanced: To set up the advanced UEFI features
H/W Monitor: To display current hardware status
Security: To set up the security features
Boot: To set up the default system device to locate and load the Operating System
Exit: To exit the current screen or the UEFI SETUP UTILITY

Use < +> key or < -> key to choose among the selections on the menu bar, and then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.



4.1.2 Navigation Keys

Please check the following table for the function description of each navigation key.

Navigation Key(s)	Function Description
✓ / →	Moves cursor left or right to select Screens
↑/↓	Moves cursor up or down to select items
+ / -	To change option for the selected items
<enter></enter>	To bring up the selected screen
<f1></f1>	To display the General Help Screen
<f7></f7>	Discard changes
<f9></f9>	To load optimal default values for all the settings
<f10></f10>	To save changes and exit the UEFI SETUP UTILITY
<f12></f12>	Print screen
<esc></esc>	To jump to the Exit Screen or exit the current screen



4.2 Main Screen

When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.

Main Advance	Aptio Setup Utility – Copyright (C) 2020 American d H/W Monitor Security Boot Exit	Megatrends, Inc.
System Date System Time	[Mon 08/31/2020] [16:40:50]	Set the Time. Use Tab to switch between Time elements.
UEFI Version Processor Type	: 4X4–V2000 L0.07 : AMD Ryzen 7 4700U with Radeon Graphics	
Processor Spee Microcode Upda	d : 2000MHz te: 860F01/8600103	
Cach L1 Instruction L1 Data	e per core Cache: 32 KB/8-way Cache: 32 KB/8-way Cache: 512 KB/8-way	
Total L3 Cach	e per Socket: 8 MB	↔: Select Screen †∔: Select Item
Total Memory	: 8GB with 512MB Shared Memory Single-Channel Memory Mode	Enter: Select +/-: Change Option F1: General Help
DDR4_A1 DDR4_B1	: 8GB (DDR4–2400) : None	F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit
	Version 2.20.1275. Copyright (C) 2020 American M	egatrends, Inc.



4.3 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, Storage Configuration, Super IO Configuration, ACPI Configuration, USB Configuration, Trusted Computing, MCTP Configuration and Serial Port Console Redirection.

Aptio Setup Uti Main Advanced H/W Monitor	l <mark>ity – Copyright (C</mark> Security Boot Ex) 2021 American Megatrends, Inc. it
 CPU Configuration Chipset Configuration Storage Configuration Super IO Configuration ACPI Configuration USB Configuration Trusted Computing 		CPU Configuration Parameters
DASH Support UEFI Update Utility • Instant Flash	[Disabled]	<pre> +→: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.20.1	275.Copyright (C) (2021 American Megatrends, Inc.

Setting wrong values in this section may cause the system to malfunction.

DASH Support

Enable or disable Realtek Lan DASH Function.

Instant Flash

Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update system UEFI without entering operating systems first like MS-DOS or Windows[®]. Just launch this tool and save the new UEFI file to your USB flash drive, floppy disk or hard drive, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI update process completes.



4.3.1 CPU Configuration

Aptio Advanced) Setup Utility – Copyright (C)	2020 American Megatrends, Inc.
ıl'n'Quiet ⊓e Performance Bo ∣Mode	[Enabled] host [Enabled] [Enabled]	Enabled/Disable Core Performance Boost
		<pre> +→: Select Screen f↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Vens	ion 2.20.1275. Copyright (C) 2	020 American Megatrends, Inc.

Cool 'n' Quiet

Use this item to enable or disable AMD's Cool 'n' QuietTM technology. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows[®] OS and want to enable this function, please set this item to [Enabled]. Please note that enabling this function may reduce CPU voltage and memory frequency, and lead to system stability or compatibility issue with some memory modules or power supplies. Please set this item to [Disable] if above issue occurs.

Core Performance Boost

Core Performance Boost controls whether the processor transitions to a higher frequency than the processor's rated speed if the processor has available power and is within temperature specifications. The default value is [Enabled].

SVM Mode

When this is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by AMD-V. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled].



4.3.2 Chipset Configuration

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Share Memory [Auto] Verb Table Select Onboard HD Audio [Enabled] [Combo Jack] Onboard LAN1 [Enabled] [Enabled] Onboard LAN2 [Enabled] [Enabled] Restore on AC/Power Loss [Power Off] [Power Off] Deep S5 [Disabled] ++: Select Screen 11: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit ESC: Exit	Aptio Setup Uti Advanced	lity – Copyright (C) 2020 f	American Megatrends, Inc.
Onboard HD Audio Verb Table Select [Enabled] [Combo Jack] Onboard LAN1 Onboard LAN2 [Enabled] [Enabled] Restore on AC/Power Loss [Power Off] Deep S5 [Disabled] **: Select Screen 11: Select Item Enter: Select */-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit	Share Memory	[Auto]	Verb Table Select
Onboard LAN1 [Enabled] Restore on AC/Power Loss [Power Off] Deep S5 [Disabled] **: Select Screen 11: Select Item Enter: Select */-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit	Onboard HD Audio Verb Table Select	[Enabled] [Combo Jack]	
Restore on AC/Power Loss [Power Off] Deep S5 [Disabled] ++: Select Screen +1: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit	Onboard LAN1 Onboard LAN2	[Enabled] [Enabled]	
Deep S5 [Disabled] ++: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit	Restore on AC/Power Loss	[Power Off]	
++: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit	Deep S5	[Disabled]	
Varaina 2.00.4275, Carvaight (0) 2020, American Marstranda, Tas			<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>

Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

Onboard HD Audio

Select [Enabled] or [Disabled] for the onboard HD Audio feature.

Verb Table Select

The default value is [Combo Jack].

Onboard LAN 1

This allows you to enable or disable the Onboard LAN 1.

Onboard LAN 2

This allows you to enable or disable the Onboard LAN 2.

Share Memory

Select the power state after a power failure. If [Power Off] is selected, the power will remain off when the power recovers. If [Power On] is selected, the system will start to boot up when the power recovers.

Deep S5

[Auto] will disable the deep S5 configuration if RTC/LAN/USB device power on settings are enabled. The default value is [Disabled].





4.3.3 Storage Configuration

Aptio Setup Utility Advanced) – Copyright (C) 2020 America	n Megatrends, Inc.
SATA Controller(s) SATA Mode Selection Aggressive Link PM Capability Hard Disk S.M.A.R.T > SATA3_0: Not Detected > M2M_1: Not Detected	[Enabled] [AHCI Mode] [Auto] [Enabled]	Enable/disable the SATA controllers.
		<pre> ++: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.20.1275.	Copyright (C) 2020 American	Megatrends, Inc.

SATA Controller(s)

Use this item to enable or disable the SATA Controller feature.

SATA Mode Selection

Use this to select SATA mode. The default value is [AHCI Mode].

Warning: AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages.

Aggressive Link Power Management

Use this item to configure SATA Aggressive Link Power Management.

Hard Disk S.M.A.R.T.

Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled] and [Enabled].



4.3.4 Super IO Configuration

Aptio Setup Advanced	Utility – Copyright (C) 2020 (American Megatrends, Inc.
COM1 Type Select	[Enabled] [RS232]	Enable or Disable COM1 IO=3F8h; IRQ=4;
WDT Timeout Reset	[Disabled]	
		←+: Select Screen
		T4: Select Item Enter: Select +/-: Change Option
		F1: General Help F7: Discard Changes F9: Load UEFI Defaults
		F10: Save and Exit ESC: Exit
Version 2.	20.1275. Copyright (C) 2020 Am	erican Megatrends, Inc.

COM1 Configuration

Use this to set parameters of COM1.

Type Select

Use this to select COM1 port type: [RS232], [RS422] or [RS485].

WDT Timeout Reset

Use this to set the Watch Dog Timer.



4.3.5 **ACPI Configuration**

Apt Advanced	tio Setup Utility ·	- Copyright (C) 2020 American	Megatrends, Inc.
Suspend to RAM		[Auto]	It is recommended to select
Onboard LAN Power RTC Alarm Power C	• On Jn	[Disabled] [By OS]	
			<pre> +→: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Ve	ersion 2.20.1275. (Copyright (C) 2020American Me	egatrends, Inc.

Suspend to RAM

Use this item to select whether to auto-detect or disable the Suspend-to- RAM feature. Select [Auto] will enable this feature if the OS supports it.

Onboard LAN Power On

Use this item to enable or disable onboard LAN to turn on the system from the power-soft-off mode.

RTC Alarm Power On

Use this item to enable or disable RTC (Real Time Clock) to power on the system.



4.3.6 USB Configuration

Advance	Aptio Setup Utility ed	– Copyright (C) 2020American	Megatrends, Inc.
Legacy USB Sup USB Power Cont	oport trol	[Enabled] [Default Setting]	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected.
			<pre>↔: Select Screen ↑↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
	Version 2.20.1275.	Copyright (C) 2020 American Me	gatrends, Inc.

Legacy USB Support

Use this option to select legacy support for USB devices. There are two configuration options: [Enabled] and [UEFI Setup Only]. The default value is [Enabled]. Please refer to below descriptions for the details of these two options:

[Enabled] - Enables support for legacy USB.

[UEFI Setup Only] - USB devices are allowed to use only under UEFI setup and Windows / Linux OS.

USB Power Control

Use this to control USB power. The default value is [Default Setting].



4.3.7 Trusted Computing

Aptio Setup Utility Advanced	– Copyright (C) 2020 American	Megatrends, Inc.
TPM 2.0 Device Found Firmware Version: Vendor:	7.85 IFX	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and
Security Device Support Active PCR banks Available PCR banks	[Enable] SHA-1,SHA256 SHA-1,SHA256	INT1A interface will not be available.
SHA-1 PCR Bank SHA256 PCR Bank	[Enabled] [Enabled]	
Pending operation	[None]	
Flattorm Hierarchy Storage Hierarchy Endorsement Hierarchy TPM 2.0 UEFI Spec Version Physical Presence Spec Version TPM 2.0 InterfaceType	[Enabled] [Enabled] [TCG_2] [1.3] [TIS]	<pre>↔: Select Screen f↓: Select Item Enter: Select +/-: Change Option F1: General Help</pre>
Device Select	[Auto]	F7: Discard Changes F9: Load UEFI Defaults
Onboard TPM	[Enabled]	F10: Save and Exit ESC: Exit
Version 2.20.1275.	Copyright (C) 2020 American Me	gatrends, Inc.

Security Device Support

Enable or disable BIOS support for security device.



4.4 Hardware Health Event Monitoring Screen

In this section, it allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, CPU fan speed, chassis fan speed, and the critical voltage.

Aptio Setup Utility Main Advanced H/W Monitor Secu	<mark>– Copyright (C) 2020 American</mark> rity Boot Exit	Megatrends, Inc.
Hardware Health Event Monitoring		Quiet Fan Function Control
CPU Temperature M/B Temperature	: +30.5 °C : +29.5 °C	
CPU_FAN1 Speed	: 4313 RPM	
+3V +3VSB VBAT DC_IN +5V	: +3.392 V : +3.296 V : +3.040 V : +12.008 V : +5.120 V	
CPU_FAN1 Setting	[Full On]	<pre>↔: Select Screen f↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.20.1275.	Copyright (C) 2020 American Me	gatrends, Inc.

CPU_FAN1 Setting

This allows you to set CPU_FAN1's speed. Configuration options: [Full On], [Manual] and [Automatic Mode]. The default value is [Automatic Mode].



4.5 Security Screen

In this section, you may set, change or clear the supervisor/user password for the system.

Aptio Setup Uti Main Advanced H/W Monitor	ility – Copyright (C) 2020 Ame Security Boot Exit	erican Megatrends, Inc.
Supervisor Password User Password	Not Installed Not Installed	Set or change the password for the administrator account. Only the
Supervisor Password User Password		administrator has authority to change the settings in the UFET Setun Utility, Leave it
► Secure Boot		blank and press enter to remove the password.
		↔: Select Screen
		T∔: Select Item Enter: Select +/−: Change Option
		F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit
		ESC: Exit
Version 2.20.1	1275. Copyright (C) 2020 Ameri	ican Megatrends, Inc.

Supervisor Password

Set or change the password for the administrator account. Only the administrator has authority to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

User Password

Set or change the password for the user account. Users are unable to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

Secure Boot

Enable to support Windows 8.1 / 8 Secure Boot.



4.6 Boot Screen

In this section, it will display the available devices on your system for you to configure the boot settings and the boot priority.

Aptio Setup Utility Main Advanced H/W Monitor Secu	– Copyright (C) 2020 American rity <mark>Boot</mark> Exit	Megatrends, Inc.	
Boot Option Priorities Boot Option #1	[UEFI: SanDisk, Partition 1]	Sets the system boot order	
Boot From Onboard LAN	[Disabled]		
Setup Prompt Timeout Bootup Num–Lock Full Screen Logo CSM(Compatibility Support Module)	1 [On] [Enabled]		
		<pre>↔: Select Screen f1: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>	
Version 2.20.1275. Copyright (C) 2020 American Megatrends, Inc.			

English Boot From Onboard LAN

Use this item to enable or disable the Boot From Onboard LAN feature.

Setup Prompt Timeout

This shows the number of seconds to wait for setup activation key. 65535(0XFFFF) means indefinite waiting.

Bootup Num-Lock

If this item is set to [On], it will automatically activate the Numeric Lock function after boot-up.

Full Screen Logo

Use this item to enable or disable OEM Logo. The default value is [Enabled].



CSM (Compatibility Support Module)

	Aptio Setup Utility	- Copyright (C Boot) 2020 Ameri	can Megatrends, Inc.	
CSM		[Disabled]		Enable to launch the Compatibility Support Module. If you are using Windows 8 or later versions 64-bit UEFI and all of your devices support UEFI, you may also disable CSM for faster boot speed.	
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CSM

Enable to launch the Compatibility Support Module. Please do not disable unless you're running a WHCK test. If you are using Windows 8.1 64-bit and all of your devices support UEFI, you may also disable CSM for faster boot speed.

Launch PXE OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

Launch Storage OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

Launch Video OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.



4.7 Exit Screen

Aptio Setup Utility – Copyright (C) 2020 American Main Advanced H/W Monitor Security Boot <mark>Exit</mark>	Megatrends, Inc.
Save Changes and Exit Discard Changes and Exit Discard Changes Load UEFI Defaults Launch EFI Shell from filesystem device	Exit system setup after saving the changes. F10 key can be used for this operation.
	<pre>↔: Select Screen f↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2 20 1275 Converget (C) 2020 American Ma	dataanda Taa

Save Changes and Exit

When you select this option, it will pop-out the following message, "Save configuration changes and exit setup?" Select [OK] to save the changes and exit the UEFI SETUP UTILITY.

Discard Changes and Exit

When you select this option, it will pop-out the following message, "Discard changes and exit setup?" Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

Discard Changes

When you select this option, it will pop-out the following message, "Discard changes?" Select [OK] to discard all changes.

Load UEFI Defaults

Load UEFI default values for all the setup questions. F9 key can be used for this operation.

Launch EFI Shell from filesystem device

Attempts to Launch EFI Shell application (Shell64.efi) from one of the available filesystem devices.



EverFocus Electronics Corp.

EverFocus Taiwan:

2F., No.12, Ln. 270, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City 222, Taiwan TEL: +886 2 2662 2338 FAX: +886 2 2662 3632 www.everfocus.com.tw marketing@everfocus.com.tw

EverFocus USA - California:

324 W Blueridge Avenue, Orange, CA 92865, USA TEL: +1 626 844 8888 FAX: +1 714 792 0481 www.everfocus.com sales@everfocus.com

EverFocus China - Shenzhen:

2F, No.9, Baoke Industrial Park, Langkou Industrial Zone, Langkou Community, Dalang Street, Longhua, Shenzhen 518109, Guangdong, China TEL: +86 755 2765 1313 FAX: +86 755 2765 0337 www.everfocus.com.cn <u>marketing@everfocus.com.cn</u>

EverFocus Japan:

4F, Maruei Building, 2-19-9 Iwamotocho, Chiyodaku, Tokyo, Japan TEL: +81 3 5821-8579 FAX: +81 3 5820-1018 www.everfocus.co.jp info@everfocus.co.jp



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