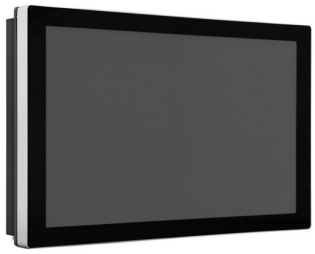
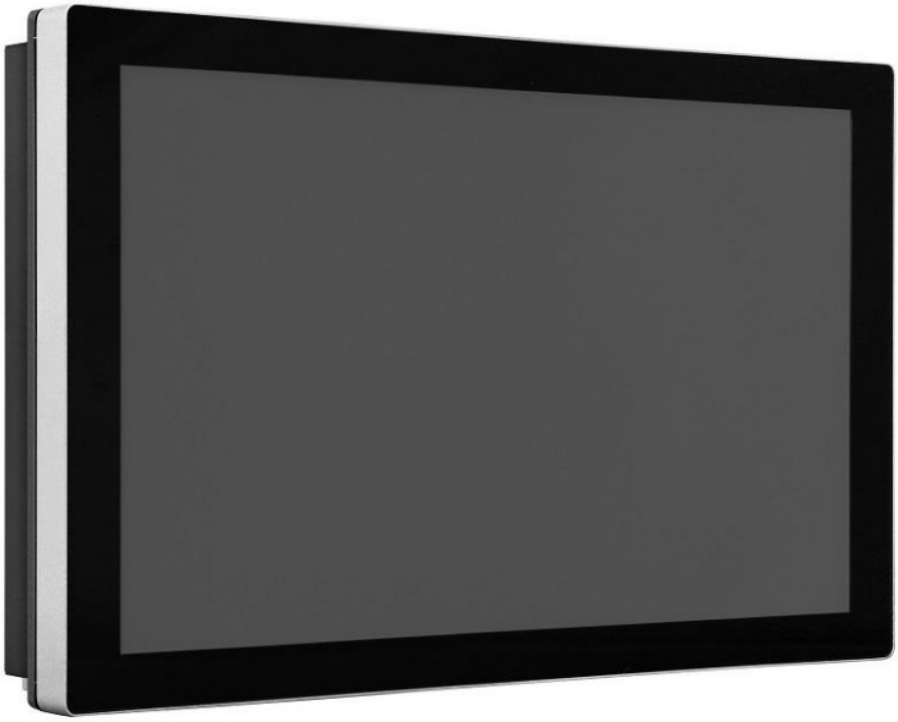


ELGENS LPC-1E Series P-cap Panel PC With Celeron J6412 Processor User Manual

LPC-1E Series P-cap Panel PC
With Celeron J6412 Processor
User Manual



Published in Taiwan
Release Date: Jan. 2024
Revision: V0.1

Contents

Warning!

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction's manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

Disclaimer
This information in this document is subject to change without notice. In no event shall ELGENS Co., Ltd. be liable for damages of any kind, whether incidental or consequential, arising from either the use or misuse of information in this document or in any related materials.

Packing List

Accessories (as ticked) included in this package are:

□ Panel Mounting Kits
□ 3 Pin Male Terminal Block
□ Optional Adapter
□ Other._____(please specify)

Safety Precautions
Follow the messages below to avoid your systems from damage:
◆ Avoid your system from static electricity on all occasions.
◆ Prevent electric shock. Don't touch any components of this card when the card is power-on.
Always disconnect power when the system is not in use.
◆ Disconnect power when you change any hardware devices. For instance, when you connect a jumper or install any cards, a surge of power may damage the electronic components or the whole system.

Chapter 1 Getting Started

1.1 Brief Description of LPC P-cap Series

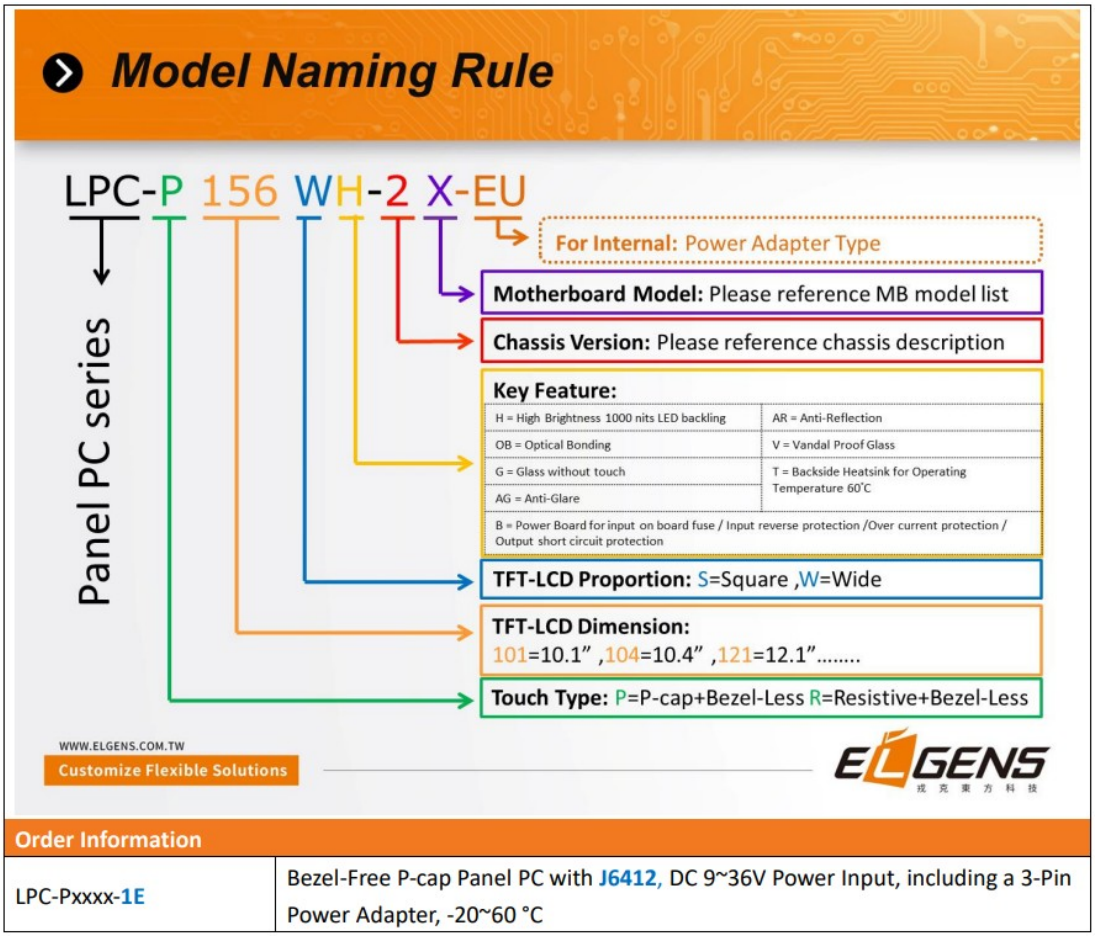
The LPC P-cap 1E series is an entry and robust embedded HMI, powered by an Intel Celeron J6412 processor. It comes with a Bezel-Free design, M.2 slot and an Internal SATA 2.5-inch storage bay, up to 32GB DDR4 memory, audio jack, 2 Ethernet, 4 USB 3.0 ports and -20~60°C operation temperature. The unit supports Windows 10 / Windows 11 operation system.
The Elgens' 1E series solution also provides optional features such as high brightness, Anti-Glare. The Elgens' fanless touch panel computer is ideal for use as Web Browser, Terminal, HMI at all levels of automation control or a high-performance system that working on rash environment.

1.2 System Specifications

Model Number	**LPC-P101W-1E**	**LPC-P150S-1E**	**LPC-P156W-1E**
Max Resolution	1280*800	1024*768	1920*1080
Color	16.2M	16.2M	16.2M
Luminance	350 nits	350 nits	450 nits
View Angle (H/V)	170/170	160/140	170/170
Contrast Ratio	600	700	800
Model Number	**LPC-P185W-1E**	**LPC-P215W-1E**	**LPC-P240W-1E**
Max Resolution	1920*1080	1920*1080	1920*1080
Color	16.7M	16.7M	16.7M
Luminance	350 nits	350 nits	300 nits
View Angle (H/V)	170/170	178/178	178/178
Contrast Ratio	1200	1000	5000
Computing			
Processor	Intel® Celeron® J6412 Processor		
System Memory	1 x SO-DIMM, up to 32GB DDR4		
Storage	1 x Internal 2.5” storage bay (for 1E series) 1 x External 2.5” storage trays as option 1 x M.2 2280 M-key slot (SATA signal)		
External I/O Port	4 x USB 3.0 2 x RJ45 (LAN1: Intel® I225V, LAN2: Intel® I210/I211) 1 x Display Port 1.4a 1 x HDMI 2.0b 1 x RS-232/422/485, (COM1, adjustable in BIOS) 3 x RS-232 (COM2/3/4) 2 x Audio jack (LINE-out & MIC-IN) 1 x Power button 1 x 3-Pin Power Input		
Expansion Slots	1 x M.2 3042/52 B-Key slot (SIM card, PCIe x1 and USB3 signal) 1 x M.2 2230 E-KEY slot (PCIe x1 and USB2 signal)		

OS support	Windows 10/11 IoT LTSC Linux (by request)
Touch Screen	
Type	USB P-cap Touch
Light Transmission	90%
Power Supply	
Power Input	■ DC9~36V Wide Range Power Input ■ 3-Pin Terminal Block
Mechanical	
Construction	Aluminum Front Bezel with Metal Case
IP Rating	Front Panel compliant IP64 for 1E series Front Panel compliant IP65 as option
Mounting	Panel/VESA Mount
Environmental	
Operating Temperature	-20~60 °C for 1E series
Storage Temperature	-30~70 °C
Storage Humidity	10~90% @40 °C non-condensing

1.3 Naming Rule



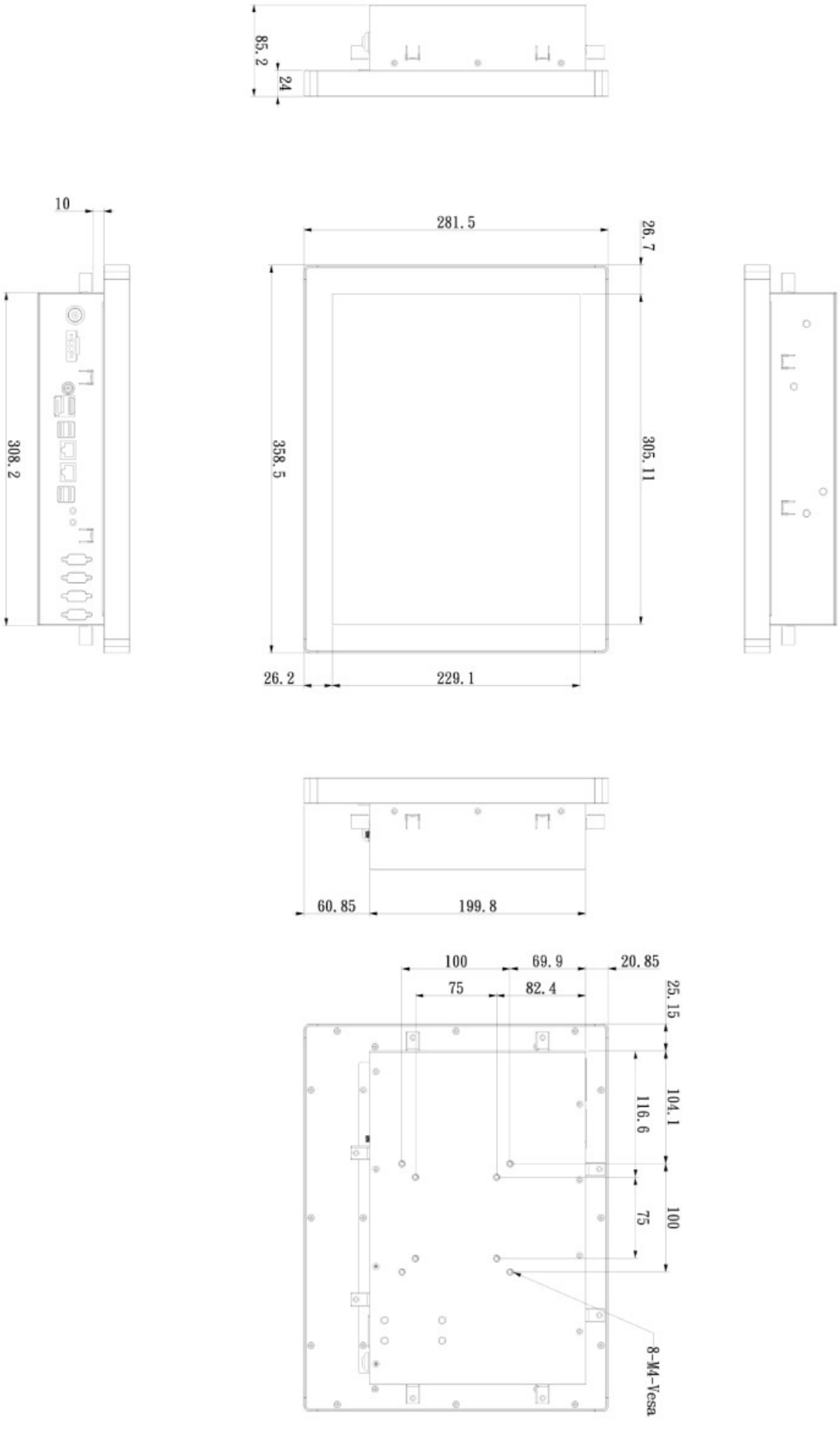
Order Code

LPC-PxxxS/W
-H / -OB / -AG / -AR / -B / -V

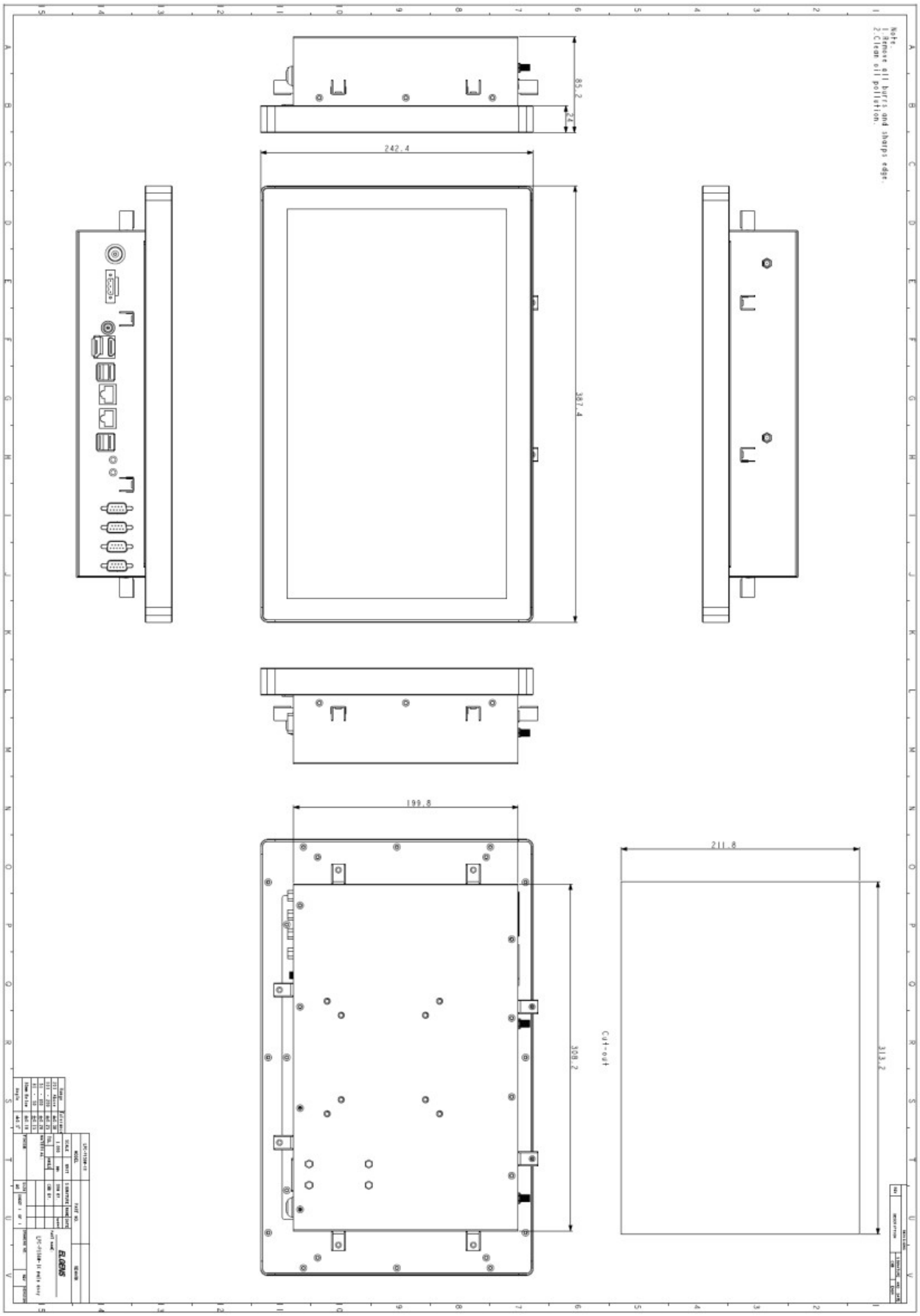
P = P-Cap touch
B = Glass without touch
xxx = size, For example, 10.1" = 101
S = Dimension Ratio Square = 4:3 or 5:4
W= Dimension Ration Wide = 16:9 or 16:10
H = High Brightness 1000 nits LED backlight (Optional, up to 1600 nits backlight)
OB = Optical Bonding (Optional)
AG = Anti-Glare (Optional)
AR = Anti-Reflection (Optional)
V = Vandal Proof Glass (Optional)

1.4 Dimension

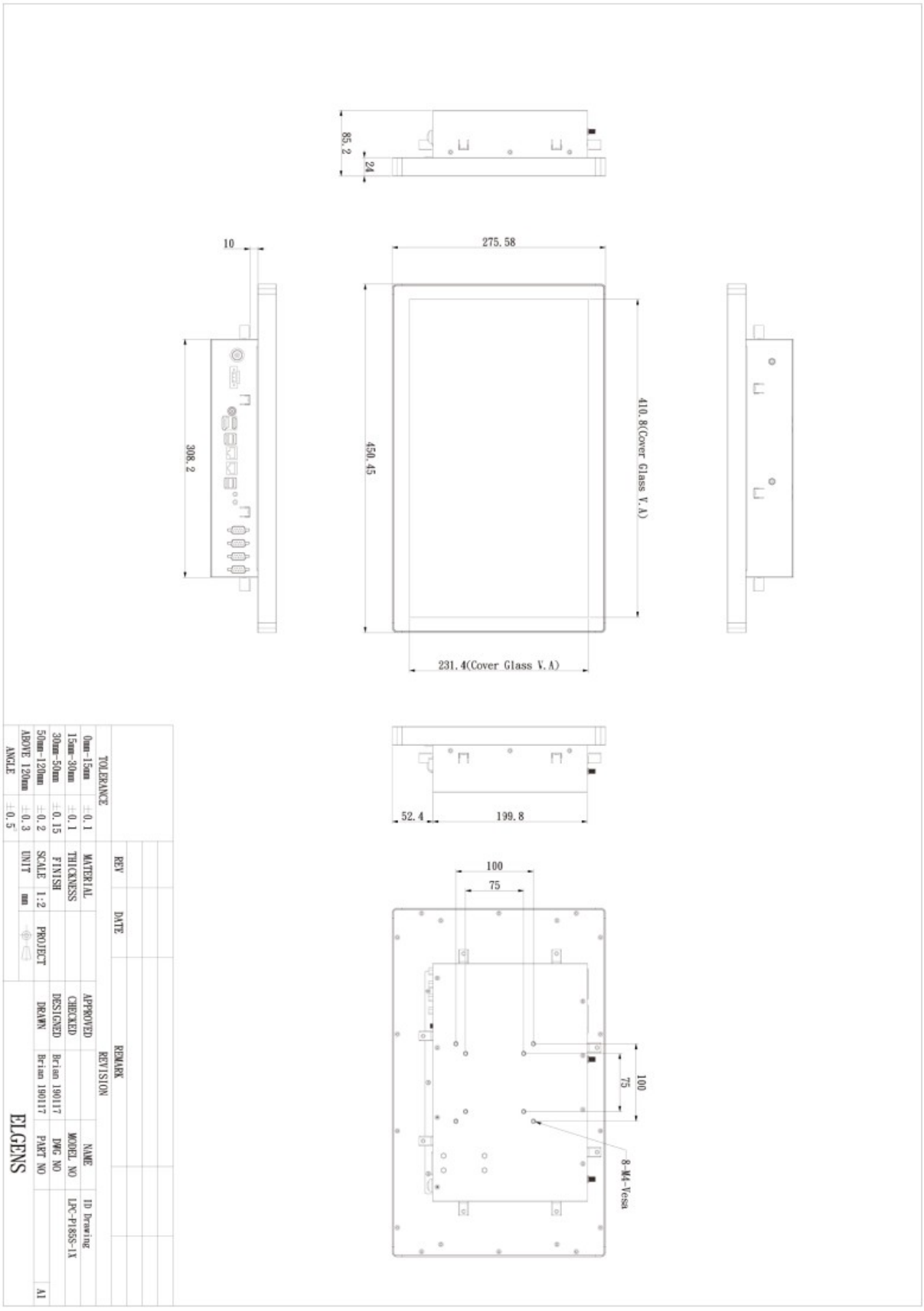
LPC-P150S-1E Drawing



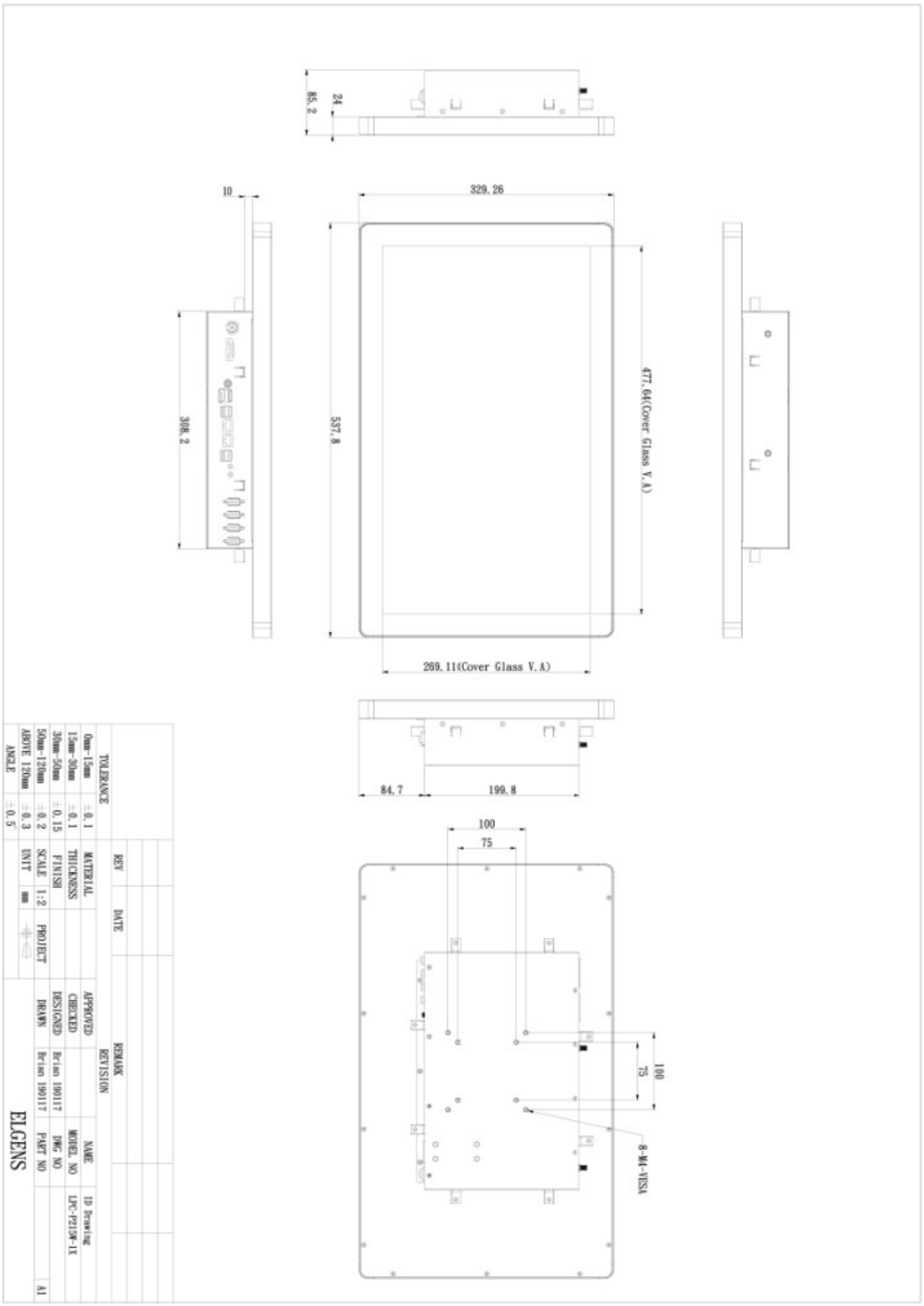
LPC-P156W-1E Drawing



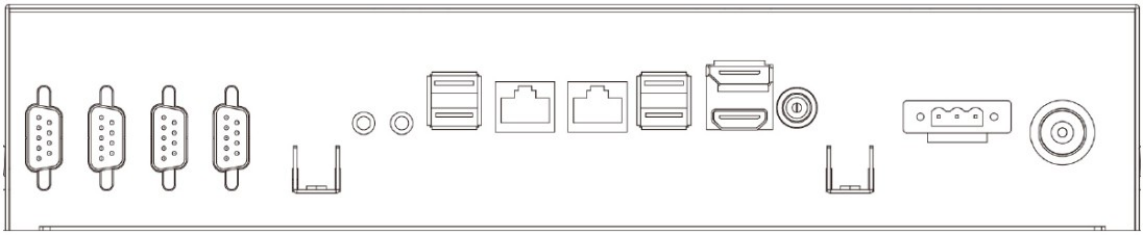
LPC-P185W-1E Drawing



LPC-P215W-1E Drawing

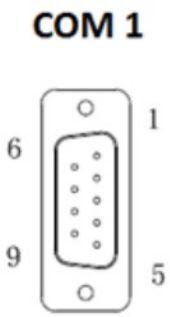


1.5 General Rear IO Placement

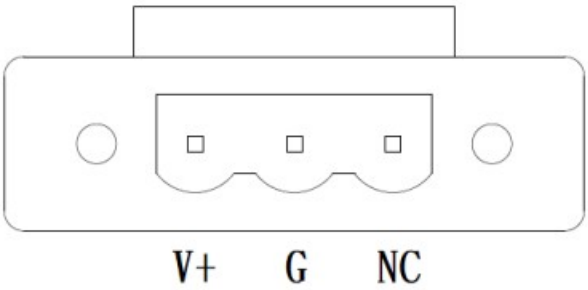


COM1 is default RS-232 as below pin definition, adjustable to RS-485/422 by BIOS.

Pin	Pin Define by Mode		
	RS232	RS485	RS422
1	DCD	D-	TX-
2	RXD	D+	TX+
3	TXD		RX+
4	DTR		RX-
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS		
9	RI		



Power input terminal block pin definition is as below.

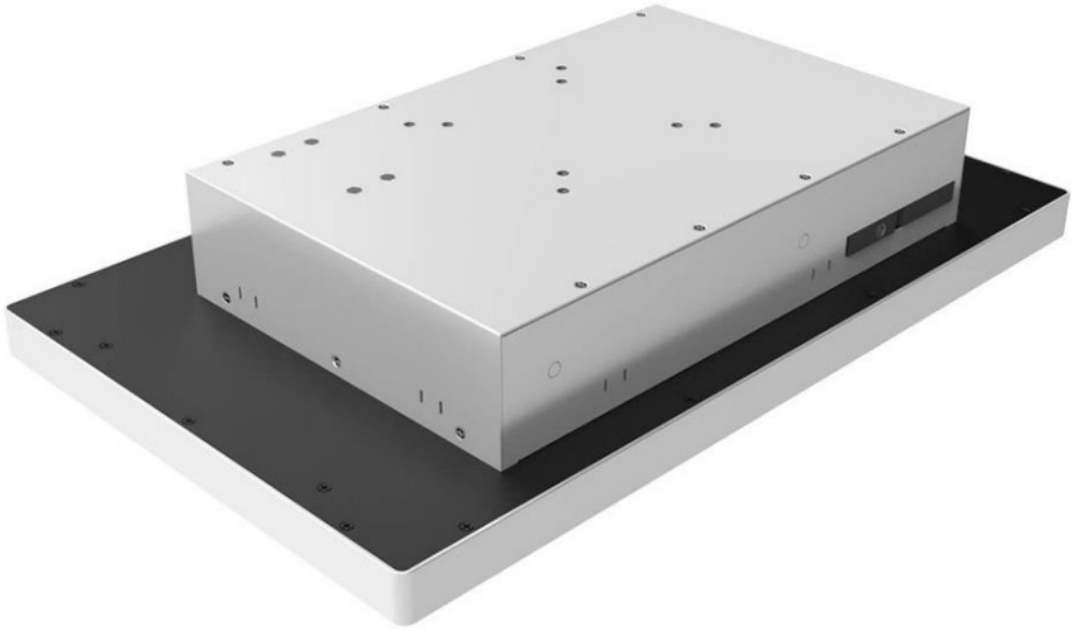


1.6 Front View of LPC- 1E Series

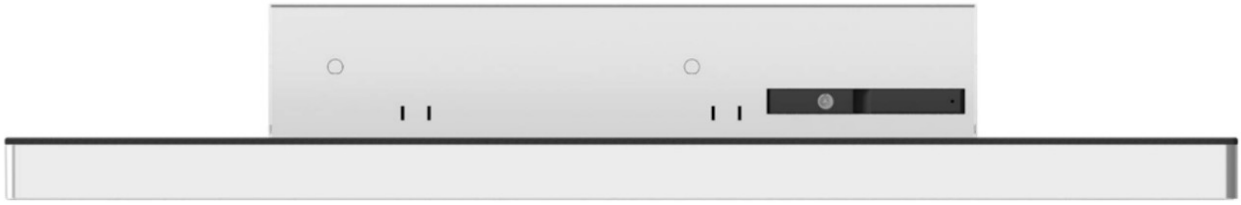
Reference by LPC-P150S-1E

1.7 Rear View of LPC- 1E Series

Reference by LPC-P150S-1E



1.8 Top / Bottom IO View



Top View (Reference by LPC-P215W-1ET)

Bottom View (Reference by LPC-P215W-1E)

1.9 Installation of 2.5” Storage for 1E series

Chapter 2 BIOS Setup

This chapter provides information on the BIOS Setup program and allows users to configure the system for optimal use.
Users may need to run the Setup program when:

- An error message appears on the screen at system startup and requests users to run SETUP.
- Users want to change the default settings for customized features.

Important

- Please note that BIOS update assumes technician-level experience.
- As the system BIOS is under continuous update for better system performance, the illustrations in this chapter should be held for reference only.

2.1 Entering Setup

Power on the computer and the system will start POST (Power On Self Test) process.
When the message below appears on the screen, press <F2> key to enter Setup.
Press <F2> to enter SETUP

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

Important
The items under each BIOS category described in this chapter are under continuous update for better system performance. Therefore, the description may be slightly different from the latest BIOS and should be held for reference only.

Control Keys

← →	Select Screen
↑ ↓	Select Item
Enter	Select
+ −	Change Option
F1	General Help
F3	Previous Values
F9	Optimized Defaults
F10	Save & Reset
Esc	Exit

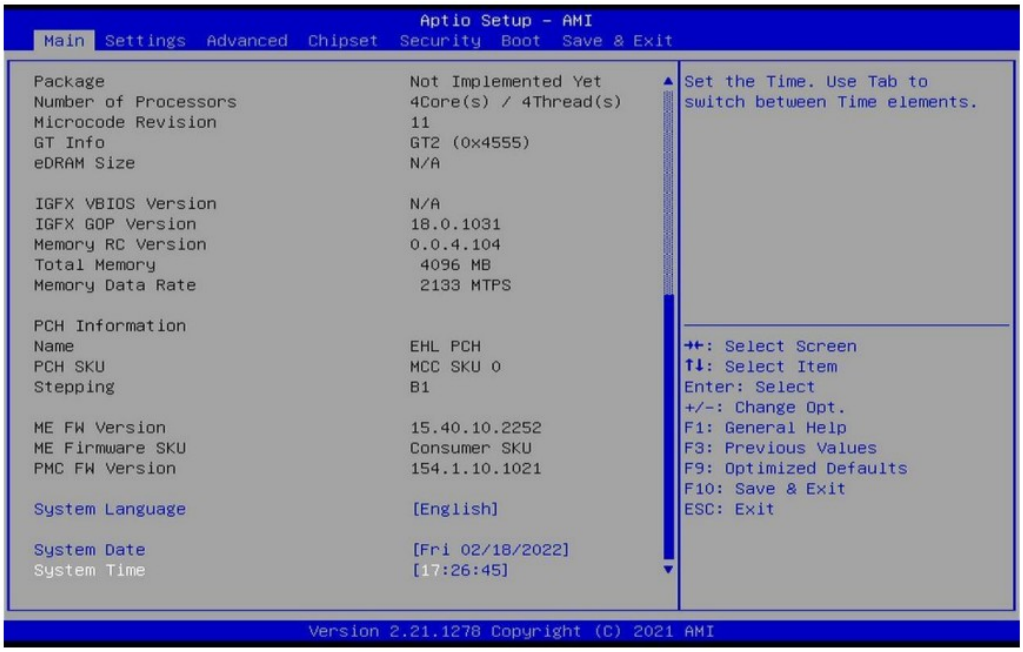
Getting Help
After entering the Setup menu, the first menu you will see is the Main Menu.

Main Menu
The main menu lists the setup functions you can make changes to. You can use the arrow keys (↑↓) to select the item. The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Sub-Menu
If you find a right pointer symbol appears to the left of certain fields that means a sub-menu can be launched from this field. A sub-menu contains additional options for a field parameter. You can use arrow keys (↑↓) to highlight the field and press <Enter> to call up the sub-menu. Then you can use the control keys to enter values and move from field to field within a sub-menu. If you want to return to the main menu, just press the <Esc >.

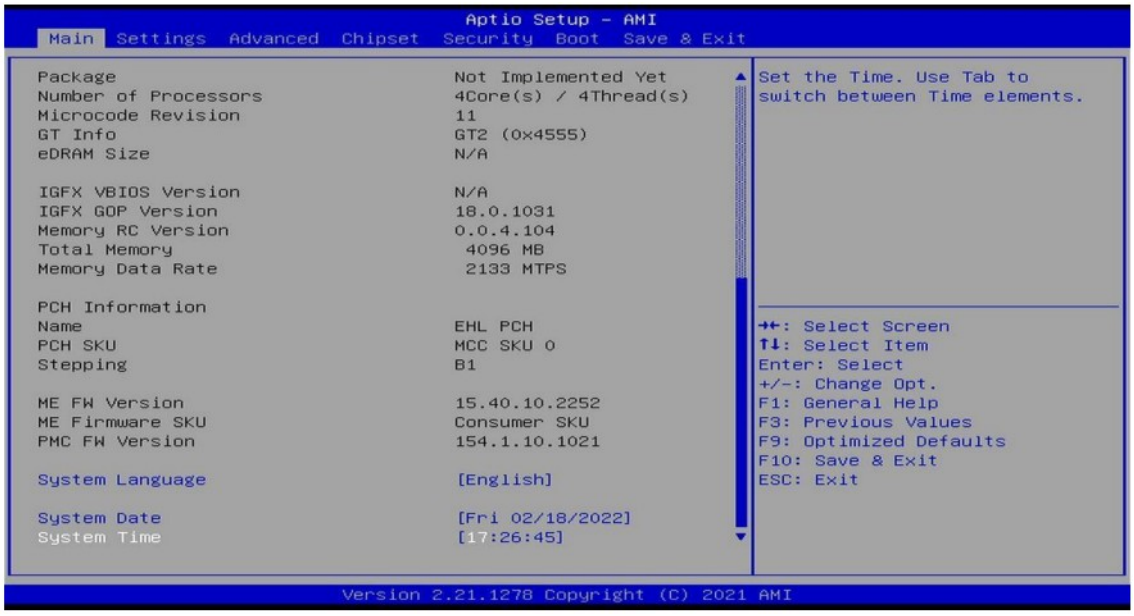
General Help <F1>
The BIOS setup program provides a General Help screen. You can call up this screen from any menu by simply pressing <F1>. The Help screen lists the appropriate keys to use and the possible selections for the highlighted item. Press <Esc> to exit the Help screen.

2.2 The Menu Bar



▶ Main
Use this menu for basic system configurations, such as time, date, etc.
▶ Setting
Use this menu to set up the items of enhanced features.
▶ Advanced
Use this menu to set up the items of special enhanced features.
▶ Chipset
This menu controls the advanced features of the onboard chipsets.
▶ Security
Use this menu to set supervisor and user passwords.
▶ Boot
Use this menu to specify the priority of boot devices.
▶ Save & Exit
This menu allows you to load the BIOS default values or factory default settings into the BIOS and exit the BIOS setup utility with or without changes.

2.3 Main



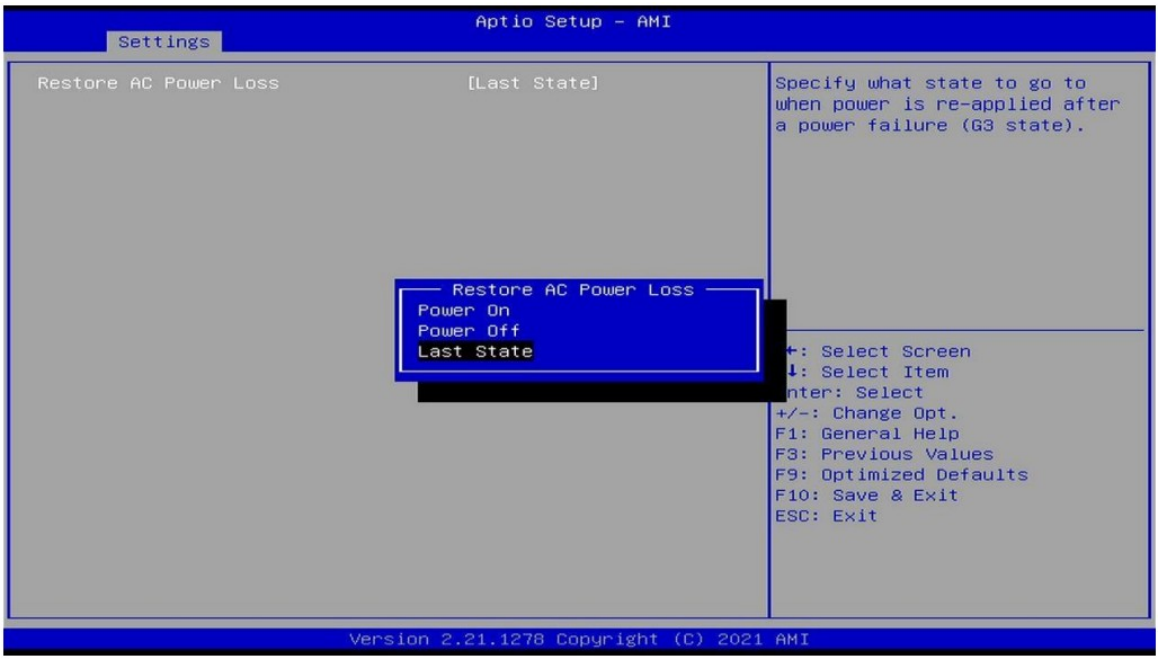
▶ Language
English only
▶ System Date
This setting allows you to set the system date. The date format is <Day>, <Month>, <Date>, <Year>. It may be updated automatically if you connect internet.
▶ System Time
This setting allows you to set the system time. The time format is <Hour>, <Minute>, <Second>. It may be updated automatically if you connect internet.

2.4 BIOS Settings

2.4.1 Setting\AC Power Loss Setting

This setting specifies whether your system will reboot after a power failure or interrupt occurs. Available settings are:

[Power Off]	Leaves the computer in the power off state.
[Power On]	Leaves the computer in the power on state.
[Last State]	Restores the system to the previous status before power failure or interrupt occurred.



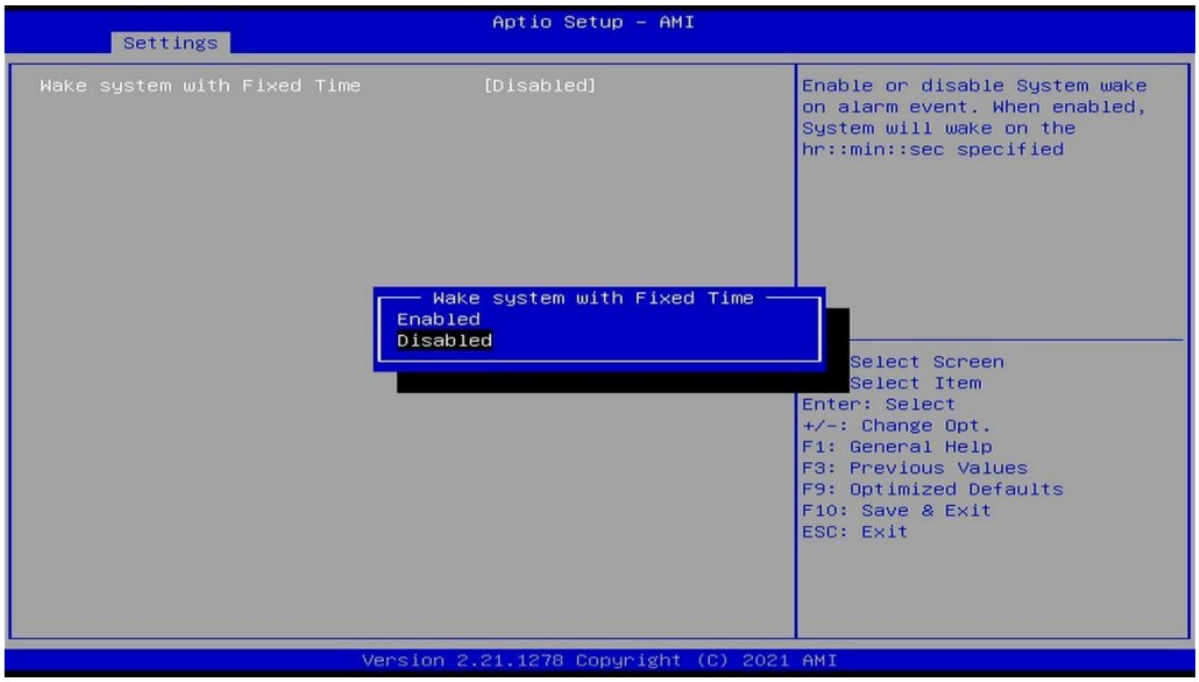
2.4.2 Setting\Watchdog Setting

You can enable the system watch-dog timer, a hardware timer that generates a reset when the software that it monitors does not respond as expected each time the watch dog polls it.

Value : 0~255

2.4.3 Setting\ S5 RTC Wake Setting\ Wake system with Fixed Time

You can enable the system auto boo-up in specific times.

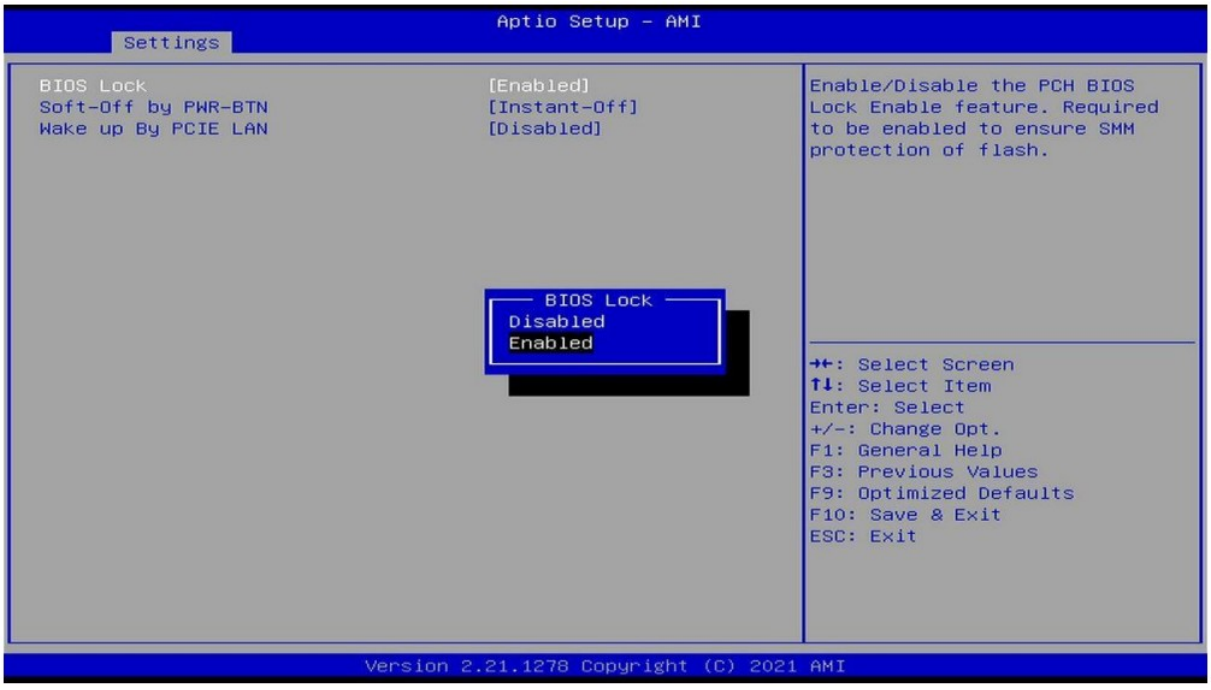


Setting the hour/minutes/second that what you plan to boot-up time.

The system will boot-up automatically everyday.

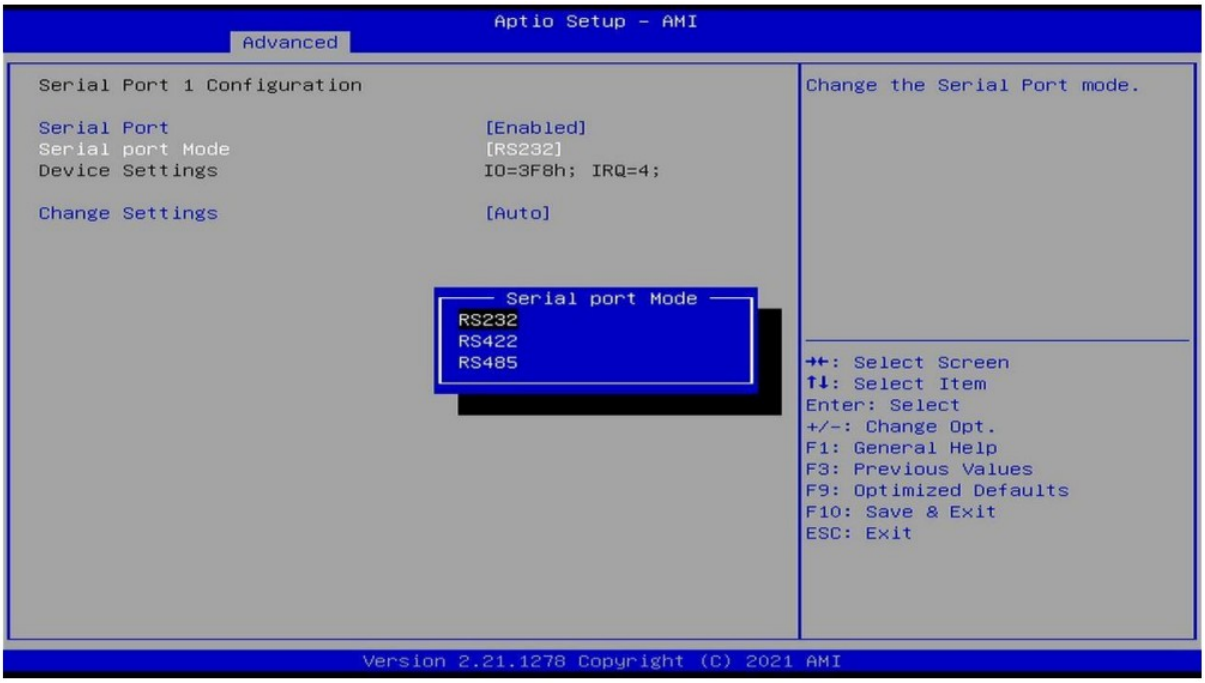
2.4.4 BIOS Update

You have to disable the BIOS protect before update BIOS.
In Settings\Special Setting\ BIOS Lock, and change the value to “Disabled”



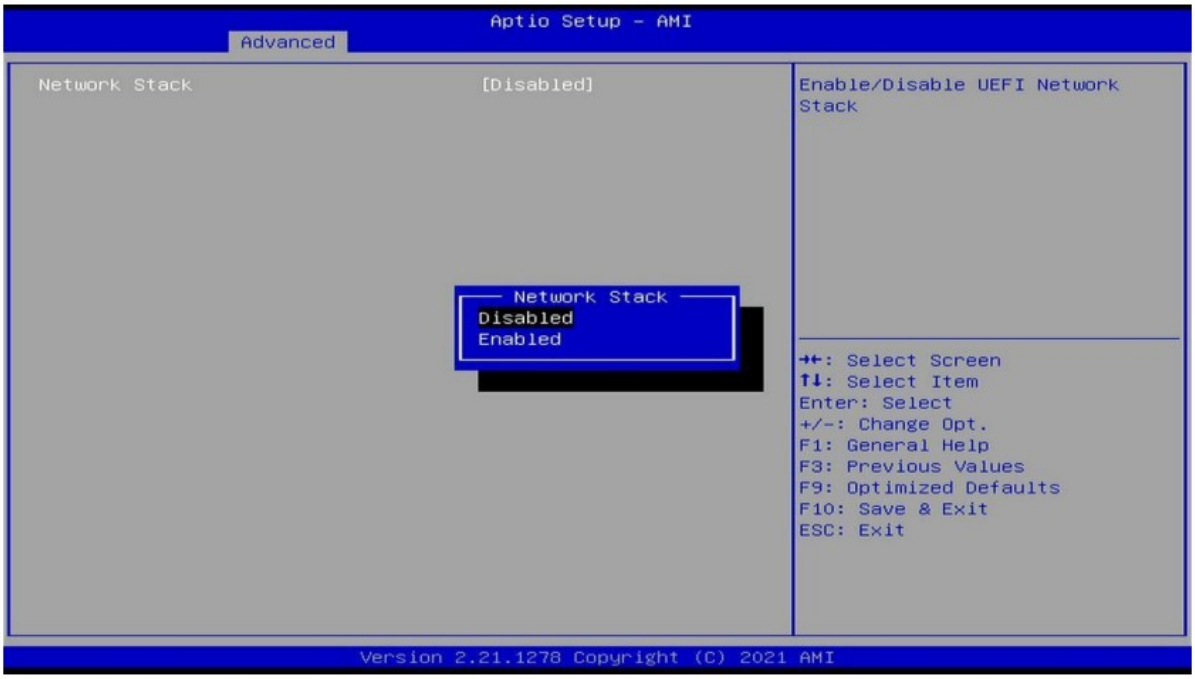
2.4.5 COM1 Select RS232/422/485

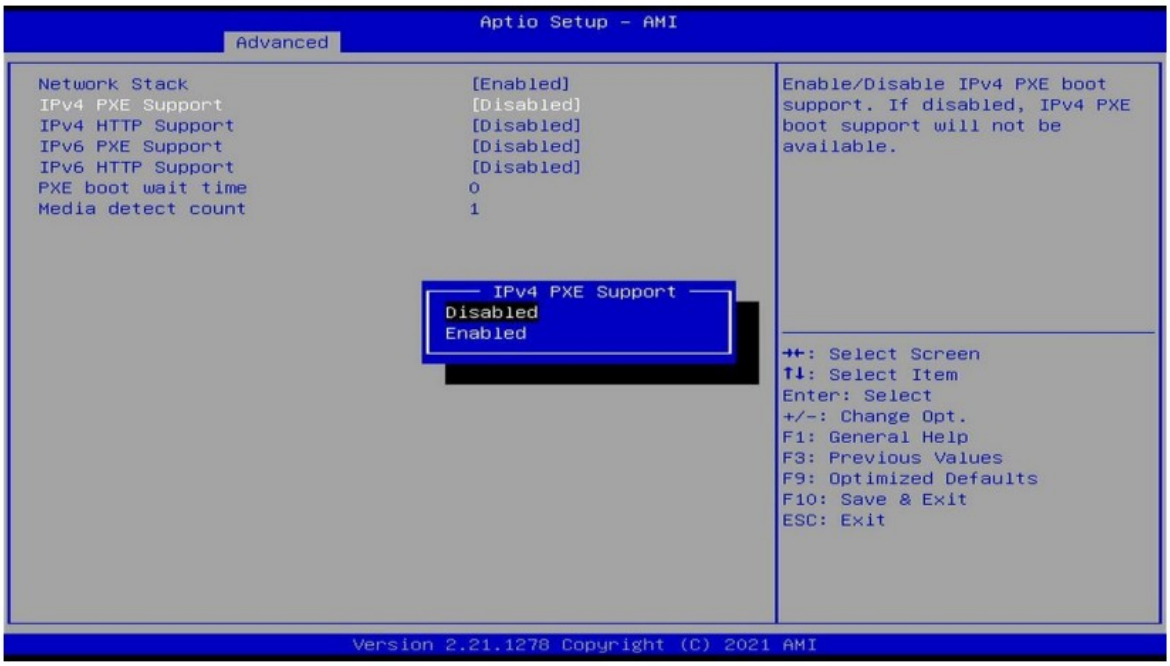
In Advanced\ IT8786 Super IO Configuration\Serial Port 1 Configuration to change COM1 Mode



2.4.6 Advanced\ Network Stack

Change the value to “Enabled”



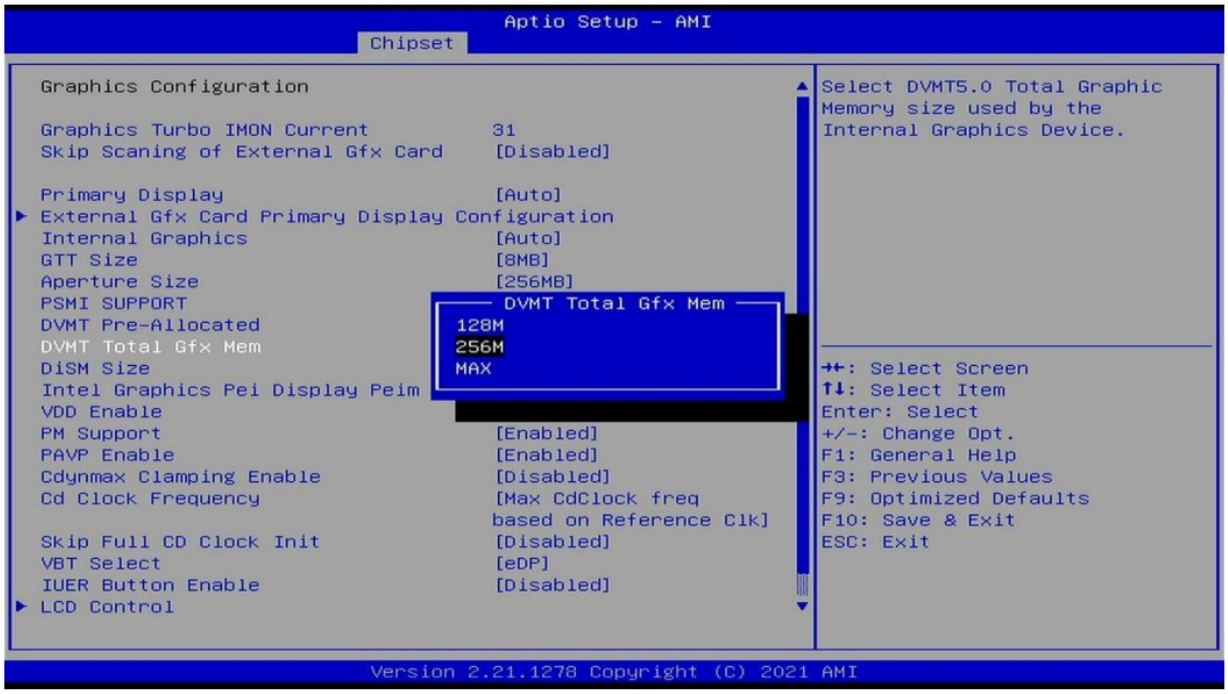


2.4.7 Graphics Share Memory

You can change the shared memory size by following steps.

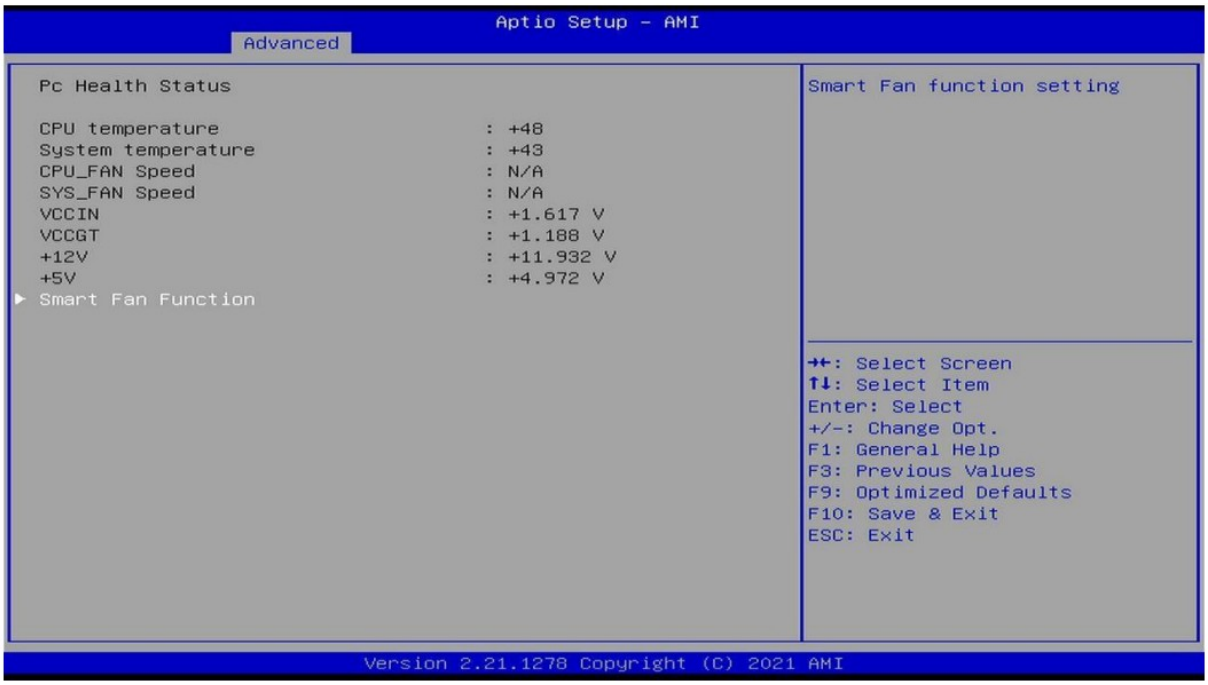
In Chipset\Systems Agent Configuration\ Graphics Configuration \DVMT Total Gfx Mem, and select the memory size.

Note: It can to use up to 1GB if the “MAX” been choose.



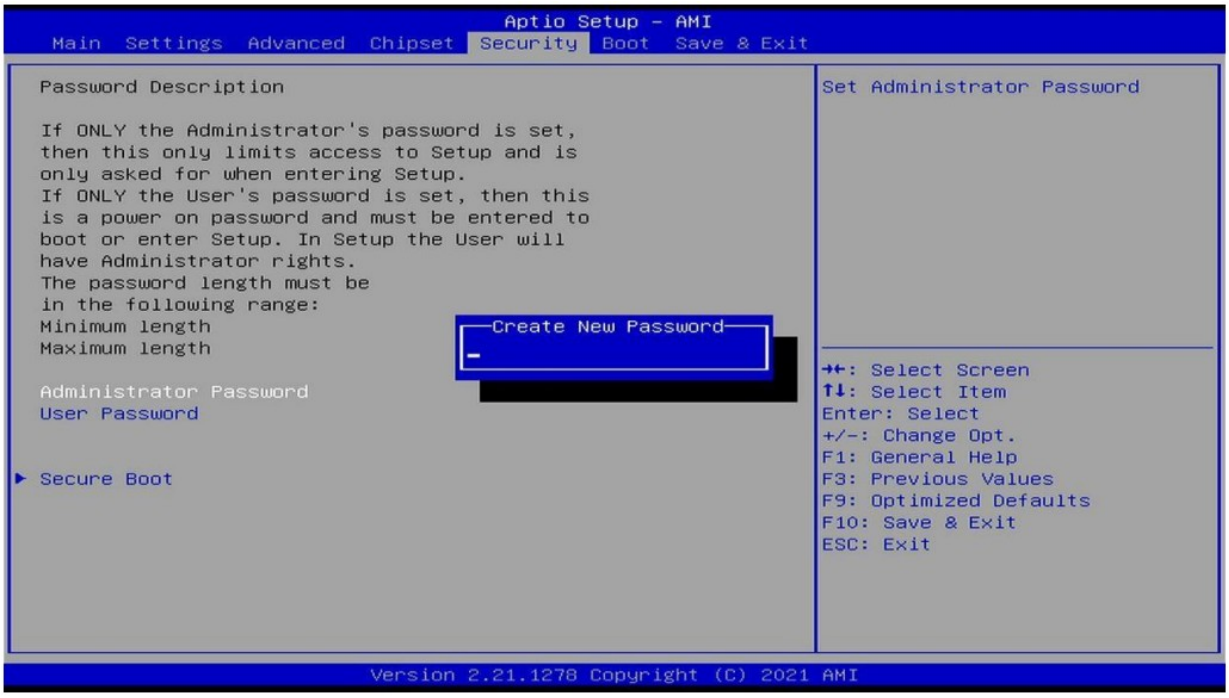
2.4.8 Hardware Monitor

You can get the system status such as Temperatures, Voltages and Fan Speed by following steps.
In Advanced\ Hardware Monitor\
Notes: The CPU temperature value is not real CPU temperature, the value means the gap to the CPU maximum temperature.



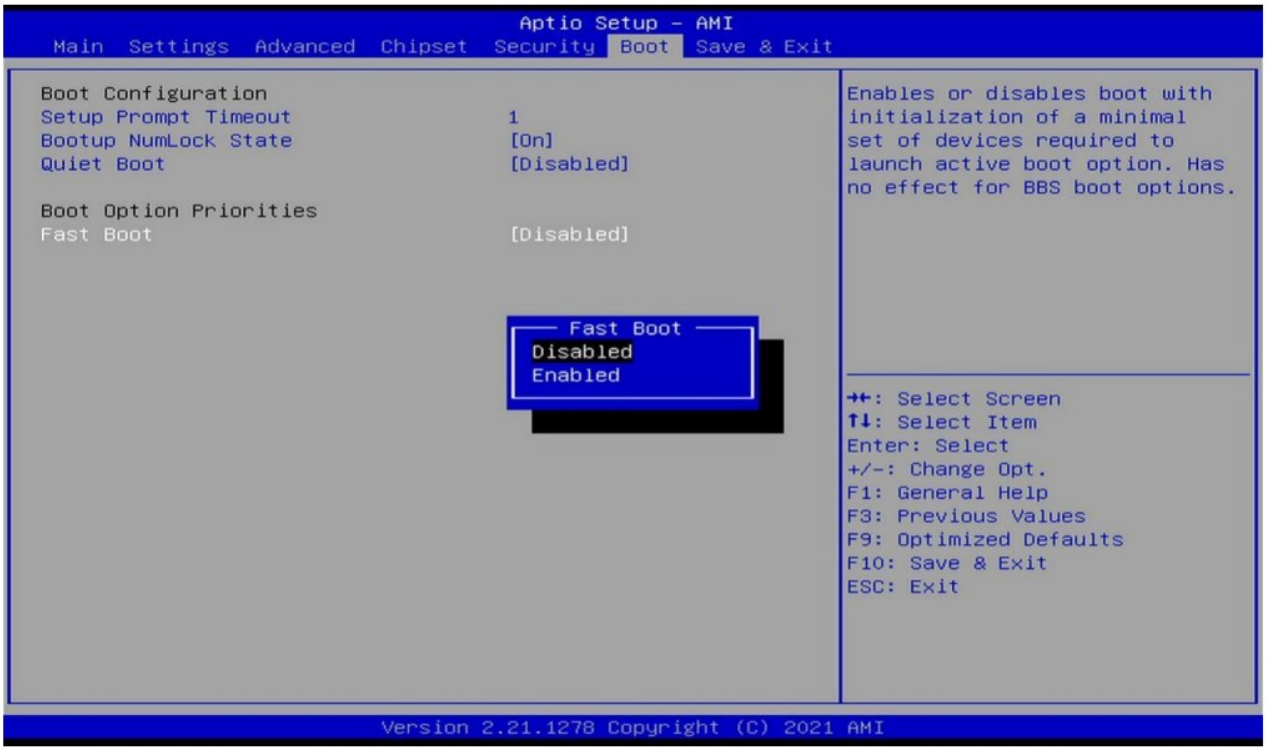
2.4.9 Password

You can set the password of system in Security sheet.

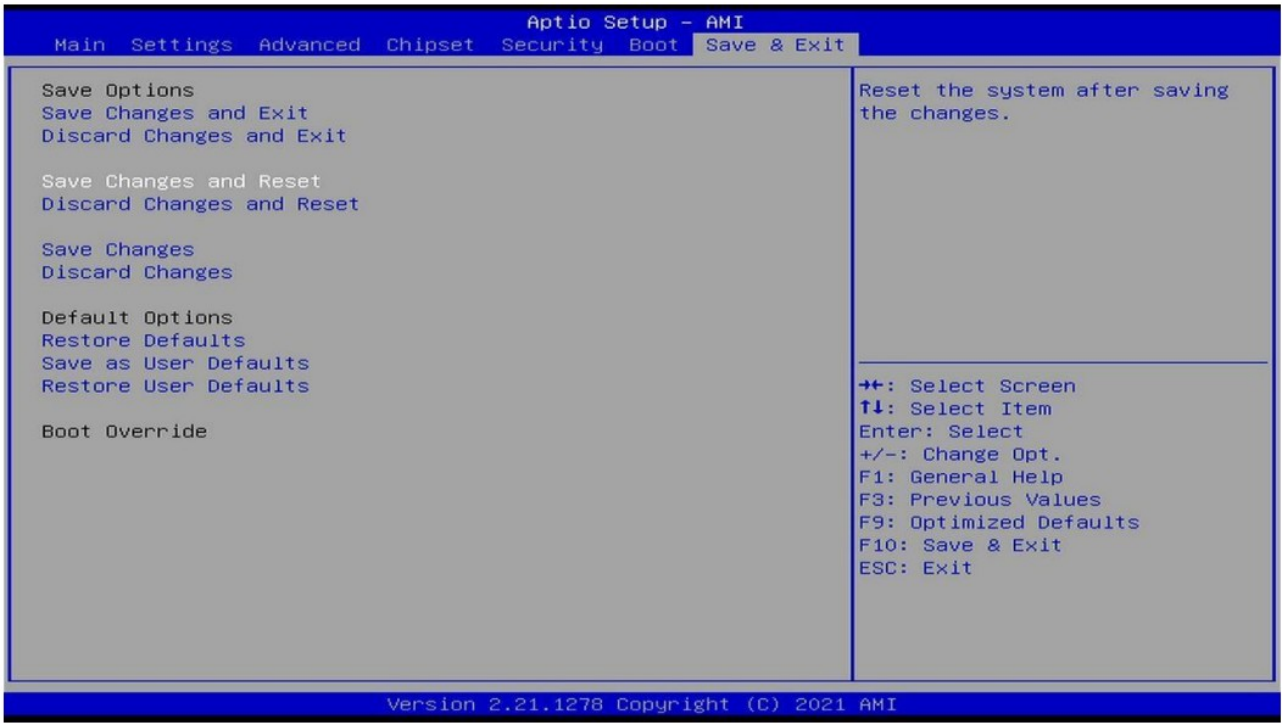


2.4.10 Boot Sequency

You can change the boot device sequency by following steps.
In Boot\Boot Option Priorities\Boot Option #1, and select the deices that what you like to boo-up.



2.4.11 Save & Exit



▶ Save Changes and Reset
Save changes to CMOS and reset the system.
▶ Discard Changes and Exit
Abandon all changes and exit the Setup Utility.
▶ Discard Changes
Abandon all changes.
▶ Load Optimized Defaults
Use this menu to load the default values set by the motherboard manufacturer specifically for optimal performance of the motherboard.
▶ Save as User Defaults
Save changes as the user's default profile.
▶ Restore User Defaults
Restore the user's default profile.
▶ Launch EFI Shell from filesystem device
This setting helps to launch the EFI Shell application from one of the available file system devices.

History

Revision	Date	Modification	Note
0.1	2024.01.04	1st Release	

Documents / Resources

	**ELGENS LPC-1E Series P-cap Panel PC With Celeron J6412 Processor** [pdf] User Manual LPC-1E Series P-cap Panel PC With Celeron J6412 Processor, LPC-1E Series, P-cap Panel PC With Celeron J6412 Processor, PC With Celeron J6412 Processor, Celeron J6412 Processor, J6412 Processor, Processor

References

- **User Manual**