YENTEK
EUROPE

USER MANUAL

P1031Z-C2

The same for the Marine

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Catalog

Chapter 1 Product Introduction

1.1 Product Photo

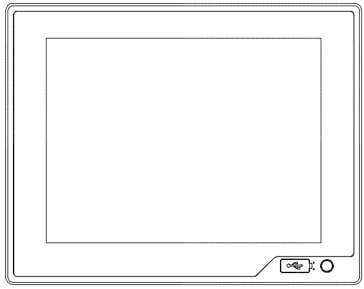


Image 1：P1031Z-C2 Front I/O View

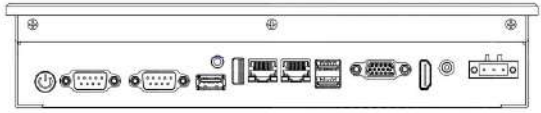


Image 2：P1031Z-C2 Bottom IO View

1.2 Front I/O View

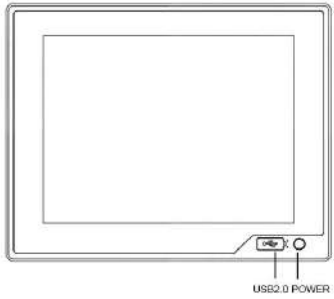


Image 1： Front IO View

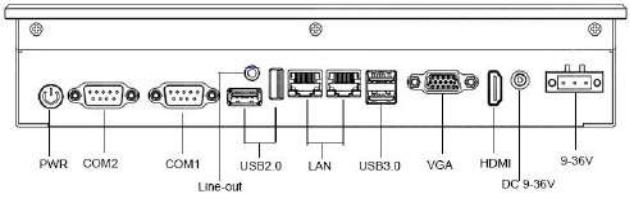
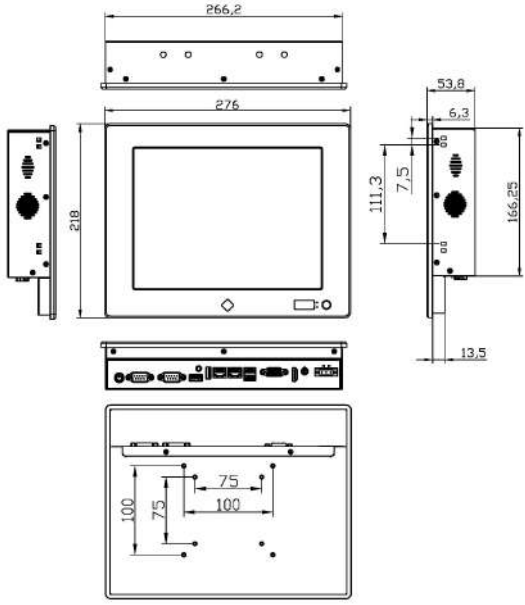


Image 2： Bottom IO View

1.3 Dimension



P1031Z-C2 Dimension

1.4 Specification

- Processor

  Onboard Intel®J1900/2.0GHz quad cores 4 thread processor, TDP 10W

- Chipset

  Intel®SOC

- Memory

  1*DDR3L 1333MHz SODIMM RAM slot, up to 8GB

- LCD Screen

  10.4” LCD, resolution 1024 * 768

- Touch Screen

  Capacitive

- LAN

  2*Realtek 8111H Gigabit LAN port, support Wake On LAN

- Audio

  1*Line out

- COM port

  2* DB9 RS232；COM1 support pin9 (5V/12V)；COM2 RS232/485/422

- Expansion Slot

  1*MiniPCIE, support WiFi/4G module

- Storage

  1*2.5” SATA port

  1*MSATA SSD slot

- Front IO port

  1*power button，1*AC LOSS switch(electric auto power ON/OFF)

  1*Power LED，1* HDD LED

  1*USB2.0

- Rear IO Port

1*VGA

1*HDMI

2*USB3.0，2*USB2.0

1*MIC，1*Line out

2*RS232：COM1~2 support pin9 (5V/12V)；COM2 RS232/485/422

2*Reatek 8111H, support Wake On LAN

1*DC_In Jack, 1*3pin power connector, support DC 9-36V power input

- Cooling System

  Fanless cooling design

- Watchdog

  Support hardware reset function (L256, 0~255 seconds)

- Power Connector

  1*DC_In Jack, 1*3pin power connector, support DC 9-36V power input

- Chassis

  Dimension：L276mm x W218mm x H53.8mm

  Installation: VESA mount / embedded

- Working Environment

  Operating Temp.：-10℃～50℃

  Relative Humidity：5～90% relative humidity, non-condensing

  Storage Temp.：-20℃～60℃

1.5 Packing Information

- Dimension：L450mm x W400mm x H130mm
- Net Weight： 1.87KG
- Gross Weight：2.98KG
- Accessory List：

Name	Qty	Remark
Power Adaptor	1pcs	Optional
AC cord	1pcs	Optional

1.6 Order Information

No.	Model	CPU	Memory	MSATA	HDMI	VGA	LAN	COM	USB	power
1	P1031Z-C2 V1.0(J1900)	J1900/2.00G	1*SODDR3	1	1	1	2	6	6	9-36V
2	P1031Z-C2 V1.0(J4125)	J4125/2.00G	2*SODDR4	1	1	1	2	6	6	9-36V

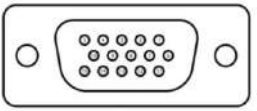
Above order information just for reference, more details please contact : gary@hanzsung.com

Chapter 2 Interface Definition

2.1 Interface Definition

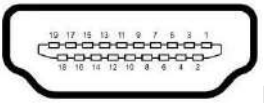
2.1.1 Display (VGA/HDMI)

1*VGA, 1*HDMI dual independent display.



VGA Signal Definition

Pin	Signal Name	Pin	Signal Name
1	RED	2	GREEN
3	BLUE	4	ID2
5	GND	6	RGND
7	GGND	8	BGND
9	KEY	10	GND
11	ID0	11	ID1
13	HSYNC	14	VSYNC
15	ID3		

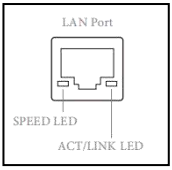


HDMI Signal Definition

Pin	Signal Name	Pin	Signal Name
1	TMDS Data2+	2	TMDS Data2 Shield
3	TMDS Data2-	4	TMDS Data1+
5	TMDS Data1 Shield	6	TMDS Data1-
7	TMDS Data0+	8	TMDS Data0 Shield
9	TMDS Data0-	10	TMDS Clock+
11	TMDS Clock Shield	12	TMDS Clock-
13	CEC	14	HRC Data-
15	SCL	16	SDA
17	GND	18	+5V
19	Hot Plug Detect		

2.1.2 Network (LAN1-2)

2* Realtek 8111H Gigabit Ethernet



Network LED Definition

Active/Link LED		SPEED LED	
State	Description	State	Description
Off	No Link	Off	10Mbs Connection
Blinking	Data Activity	Orange	100Mbs Connection
On	Link	Green	1Gbps Connection

2.1.3 Audio (Line-out)

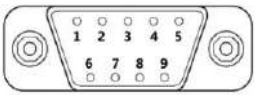
1*Line-out audio port

2.1.4 Power Button (POWER)

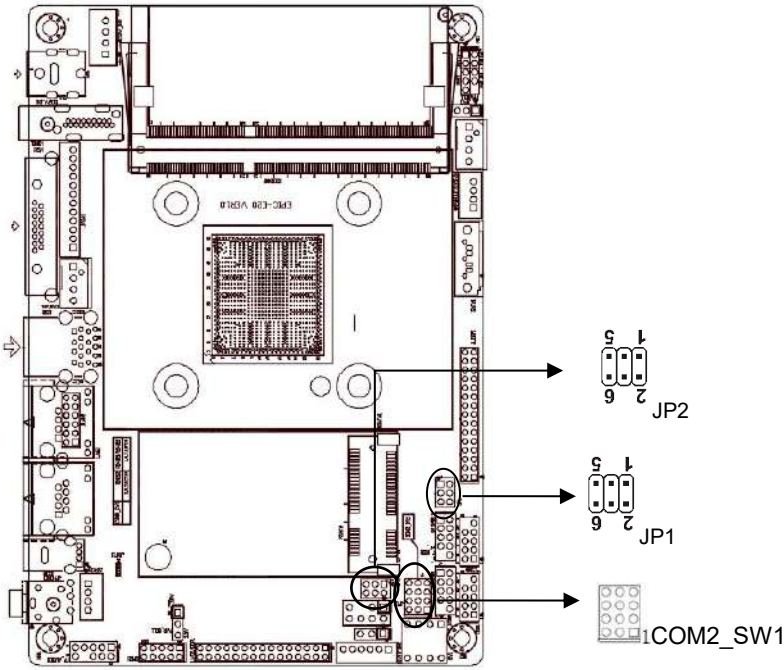
2* power button PWR(one at front，one at bottom)，1*Power LED (PWRLED)，1* HDDLED

2.1.5 COM Port (COM1-2)

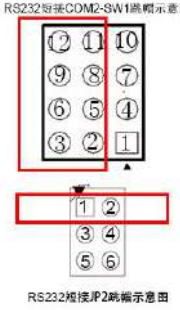
COM1 RS232, support pin9 charged function, COM2 RS232/485/422



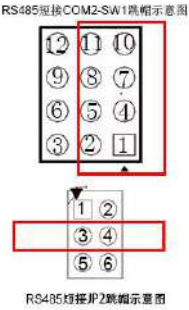
(DB9 COM Port)



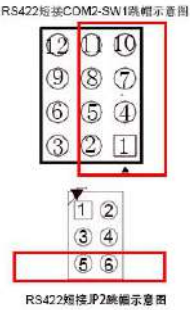
COM2-SW RS232/RS485/RS422 Jumper Setting:



(RS232)



(RS485)



(RS422)

COM 1~2 RS232 Signal Definition

Pin	Signal Name	Pin	Signal Name
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	NC

COM2-SW1/JP2(COM2 RS485/232) Setting

	COM2-SW1	JP2
RS232	Short 2-3,5-6,8-9,11-12 pin	short 1-2 pin
RS485	Short 1-2,4-5,7-8,10-11 pin	short 3-4 pin
RS422	Short 1-2,4-5,7-8,10-11 pin	short 5-6 pin

JP1(COM1 5V/12V) Setting

Setting	Function (JP1)	
short 1-2 pin	RS232	COM1
short 3-4 pin	+5V	
Short 5-6 pin	+12V	

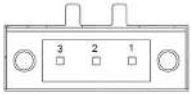
COM2 RS485 Signal Definition

Pin	Signal Name	Pin	Signal Name
1	DATA+	2	DATA-
3	NC	4	NC
5	GND	6	NC
7	NC	8	NC
9	NC	10	NC

COM2 RS422 Signal Definition

Pin	Signal Name	Pin	Signal Name
1	T/R+	2	T/R-
3	RXD+	4	RXD-
5	GND	6	NC
7	NC	8	NC
9	NC	10	NC

2.1.6 Phoenix Connector (9-36V)



1*3pin Phoenix connector definition

Pin	Signal Name	Pin	Signal Name
1	GND	2	GND
3	9-36V		

2.1.7 Power (DC9-36V)

1*DC_In Jack, 1*3pin Phoenix connector, support 9-36V power input

2.1.8 Expansion Slot (MiniPCIE/USB2.0)

1* MiniPCIE slot, support WiFi/4G module

1* USB2.0，horizontal，can install USB dangle

Tips：

Please use a dedicated power adapter. After confirming that the interface is connected correctly, press the POWER button on the front panel of the computer to turn on the device. How to identify the alarm sound: (a long beep is system memory error; a short beep" is boot sound).

Chapter 3 BIOS Setting

3.1. BIOS Description

BIOS（Basic Input an Output System）, through CMOS chip on motherboard, it recorded parameter settings of each hardware of the system. BIOS contains the BIOS setup program, for users to set system parameters according to their own needs, to make the motherboard work normal or execute specific function.

Through BIOS setup program to modify the settings (except date and time), which are stored in the flash memory of system, the power required to memorize CMOS data are supplied by the battery on board, so when the system power off, the data will not lost, when next time re-open the power, system will read the set data. If needed to restore factory setting at the circumstance when can not enter the Setup interface due to misconduct, please short circuit JBA12,3 pin to clear CMOS data.

Note! BIOS settings directly affect the performance of the computer, wrong set parameters will cause damage to the computer, or even can not boot, please use the

BIOS built-in default values to restore the normal operation of the system.

Due to the company's different product, the interface will be slightly different, the flowing image for reference only, it may be not exactly the same with your current using BIOS setup program.

3.2 BIOS Basic Function Setting

3.2.1 Enter Into BIOS Interface

Following below steps to enter into BIOS interface

1、 Power on, the display screen will appear POST interface.

2、When the screen display "click <DEL>or<ESC> to enter setup" tips, please click <DEL>or <ESC>, and you can enter the BIOS setup program

3、 Move the arrow key < ↑ ><↓ >< ← >< → > to the options which you want to modify, click <Enter>, and you can enter the sub-screen of the option

4、Use the arrow keys and the <Enter> key to modify the value of the selected items, click the Enter key to select BIOS option and modify.

5、Use the <ESC> key to return to the last picture

6、 <Page Up/+> Add numeric value or change

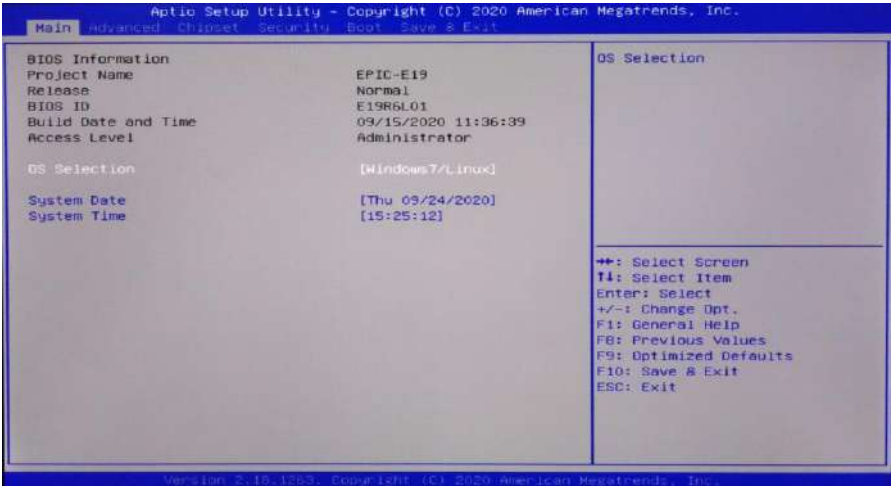
<Page Down/-> Reduce numeric value or change

<F1> Set sub menu help

<F9> Set default values (optimize to factory settings)

<F10> Save BIOS settings

3.2.2 Main Menu（BIOS Information and Time/Date）



BIOS Vendor ： American Megatrends

Bios ID ：

Build Date and Time ：

OS Selection ：

System language：

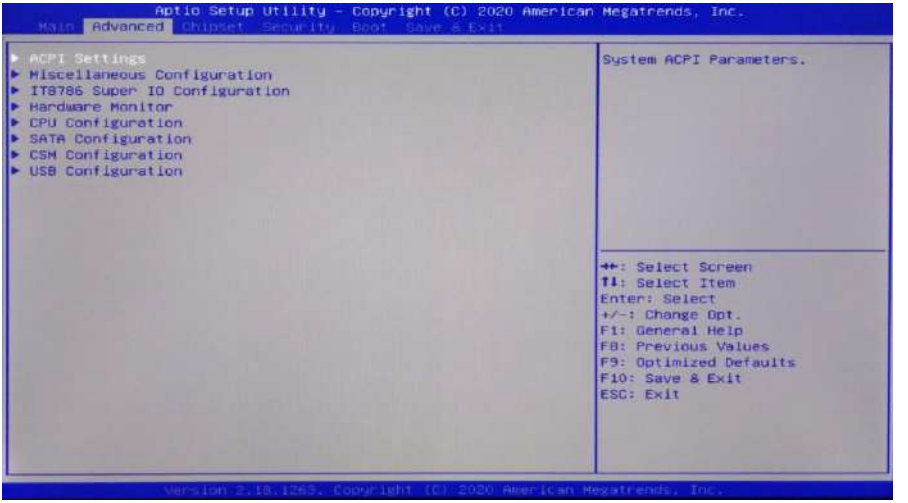
Set the current date. In the form of month / day / year. The setting range is:

Month (Jan.-Dec.)，Date(01-31)，Year(Max to 2099)，Week(Mon.～Sun.).

System Time ：

Set the current time, In the form of time/minute/second, The setting range is: Hour(00-23), Minute(00-59), Second(00-59).

3.2.3 Advance



CPU Configuration:

ACPI Settings：Advanced configuration and power management interface settings

Hardware Monitor：system monitoring, hardware monitoring, hardware monitor

Miscellaneous Configuration：include timing start up, AC power loss (auto power on), etc

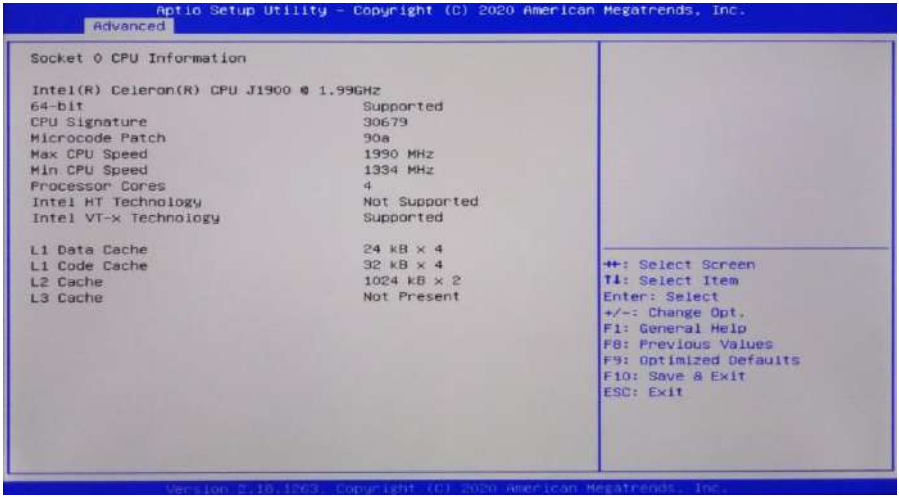
SATA Configuration:

IT8786 Super IO Configuration: include COM port interrupt code and address setting.

USB Configuration:

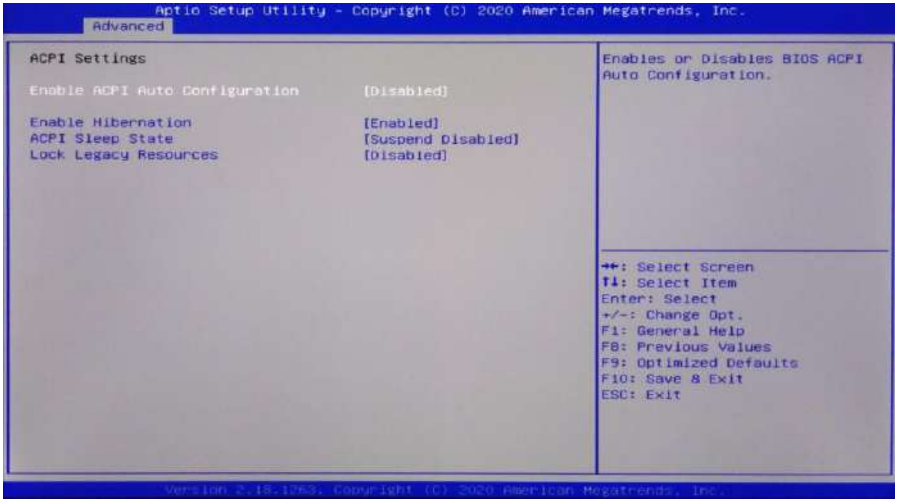
CSM Configuration:

3.2.4 CPU Configuration



Read only items contain details of the CPU, including the CPU manufacturers, models, frequency, the first level cache size, the second level cache size and other information.

3.2.5 ACPI Settings



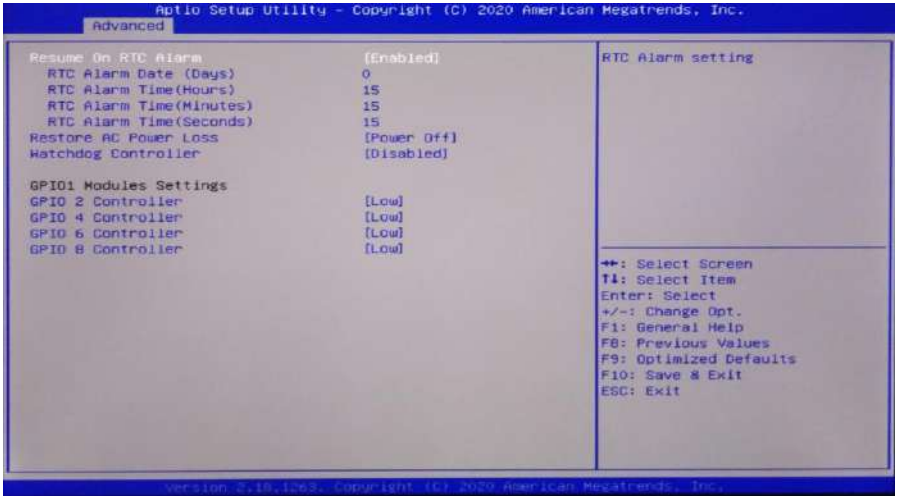
Enable ACPI Auto Configuration ： This item is ACPI auto configuration, support （Enabled）or（Disabled）BIOS ACPI auto configuration, defaulted（Disabled）.

Enable Hibernation： Enabled or Disabled system sleep function（OS/S4 sleep state). This option does not take effect under some OS. Default is (Enabled).

ACPI Sleep State： This item is used to select the power saving mode that the system enters during sleep，If the mode is different, the system power consumption will be different, Suspend Disabled: disable the sleep mode; S1(CPU Stop Clock)：CPU stops working, other devices still supply power normally; S3(Suspend to Ram).

Lock Legacy Resources ：Resource latch，(Enabled) or (Disabled) resource latch function.

3.2.6 Miscellaneous Configuration



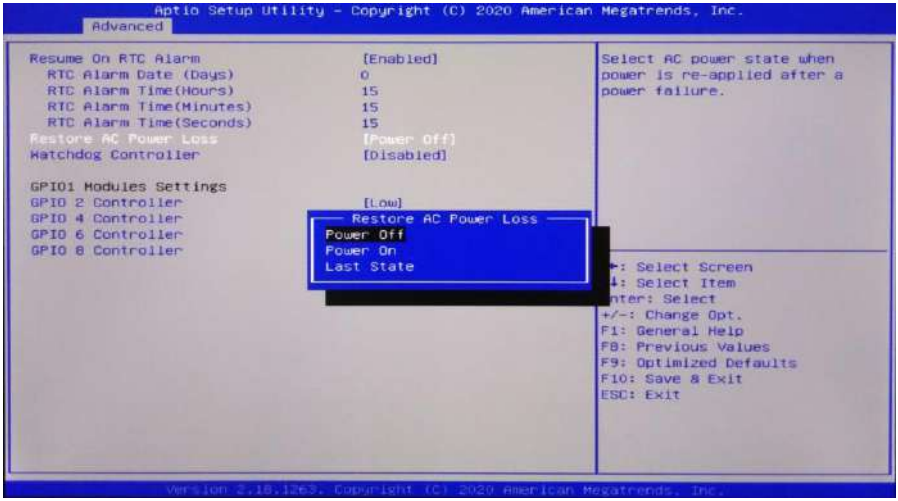
Resume On RTC Alarm: Set timing boot，Enabled / Disabled.

RTC Alarm Date(Days):Set the scheduled auto start up date, “0” means every day

RTC Alarm Time(Hours):wake-up time unit in hours

RTC Alarm Time(Minutes):wake-up time unit in minutes

RTC Alarm Time(Seconds）:wake-up time unit in seconds.



Restore AC Power Loss: option used to set the power on condition after connecting electric. Power Off: need to press power button to power on after connecting to

electric; Power On: Power on directly after connecting to electric; Last State: keep previous state after connecting to electric.

Watch dog Controller: Set watch dog，[Disabled] / [Second mode] / [Minute Mode]

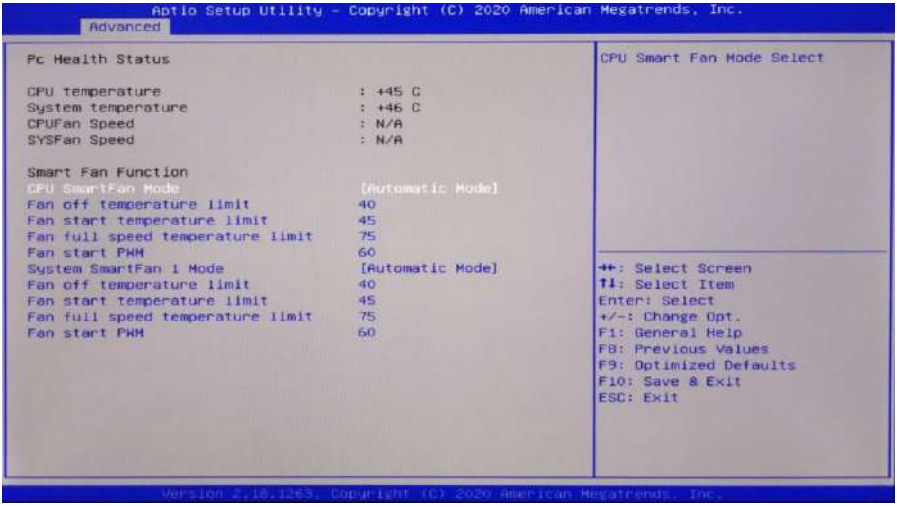
GPIO 2 Controller： GPIO 2 output mode (low voltage level or high voltage level)

GPIO 4 Controller： GPIO 4 output mode (low voltage level or high voltage level)

GPIO 6 Controller： GPIO 6 output mode (low voltage level or high voltage level)

GPIO 8 Controller： GPIO 8 output mode (low voltage level or high voltage level)

3.2.7 PC Health Status



PC Health Status ：

shows the current system temperature, CPU temperature, fan speed, and other relevant voltage value. The above parameters have a certain range, system cannot operate beyond the scope.

Smart Fan 1 Mode：This option is for whether or not open the CPU automatic fan control function, used to adjust CPU fan speed automatically according to the real-time detected CPU temperature, to achieve the purpose of saving energy.

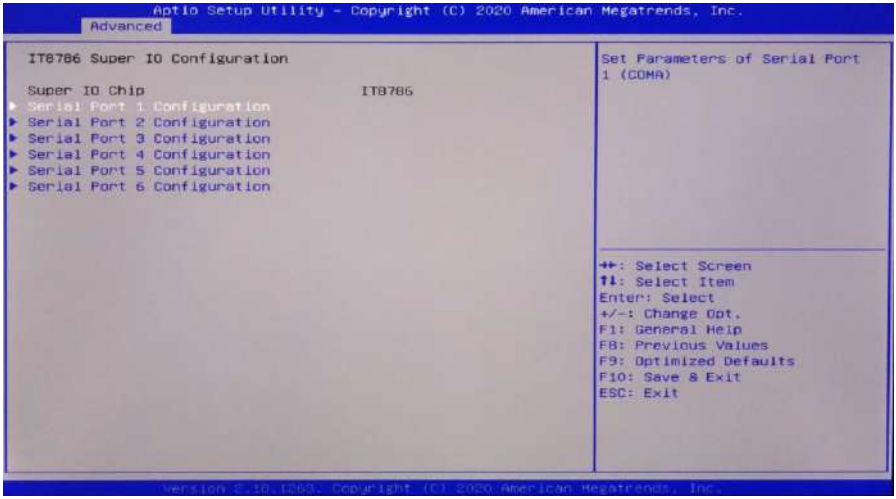
Fan off temperature limit：Fan stop minimum temperature setting.

Fan start temperature limit ：Fan start minimum temperature setting.

Fan start PWM：Fan start PWM value setting.

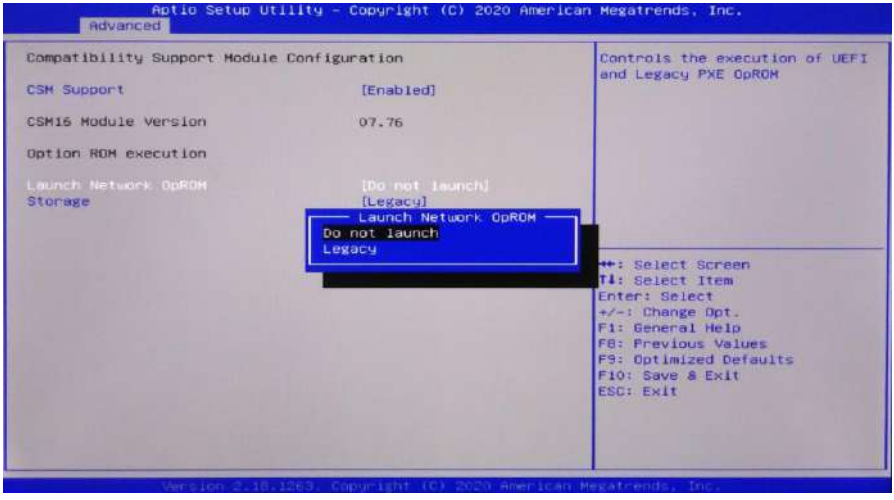
PWM slope setting：

3.2.8 Super IO Configuration



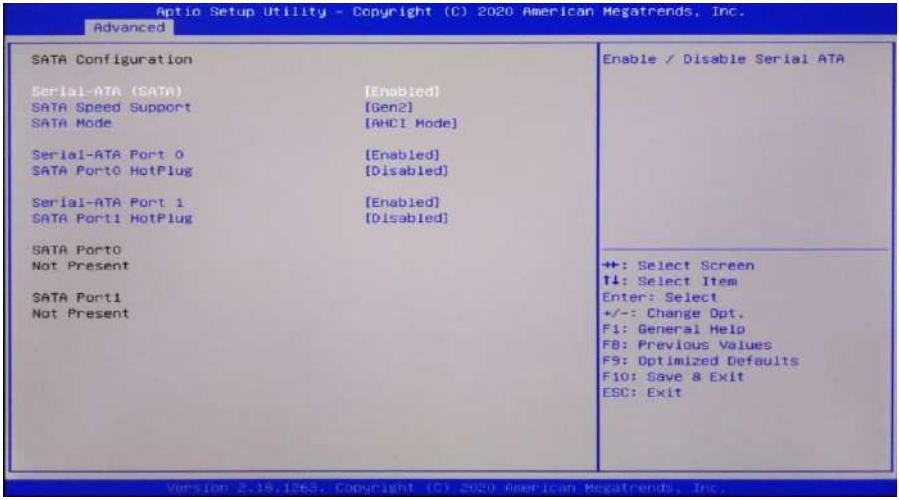
IT8786 Super IO Configuration : this option is serial port configuration, include COM port interrupt signal and address setting.

3.2.9 CSM Configuration



Network: set diskless booting, Do not launch: disable diskless booting, Legacy: set diskless booting as Legacy mode.

3.2.10 SATA Configuration



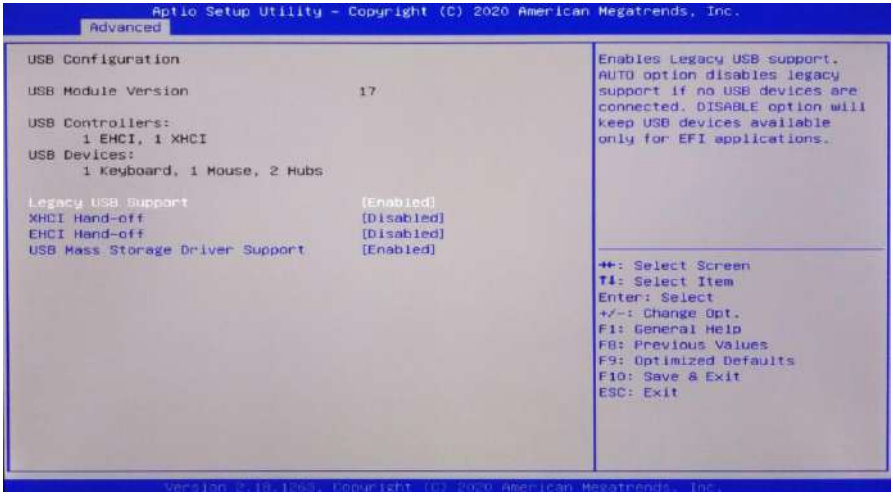
SATA Mode Selection：（AHCI or IDE）

SATA Test Mode：

SATA Interface speed:

SATA Port 0: serial port 1（Enable or Disable）.

3.2.11 USB Configuration



Legacy USB Support ： This is used for old version USB setting, if need to support USB devices in DOS, such as U disk, USB keyboard, etc, set this option as

[Enabled] or [Auto]. Otherwise, choose [Disabled].

XHCI Hand-off ： When operating system does not support XHCI, whether to allow BIOS to take over XHCI control

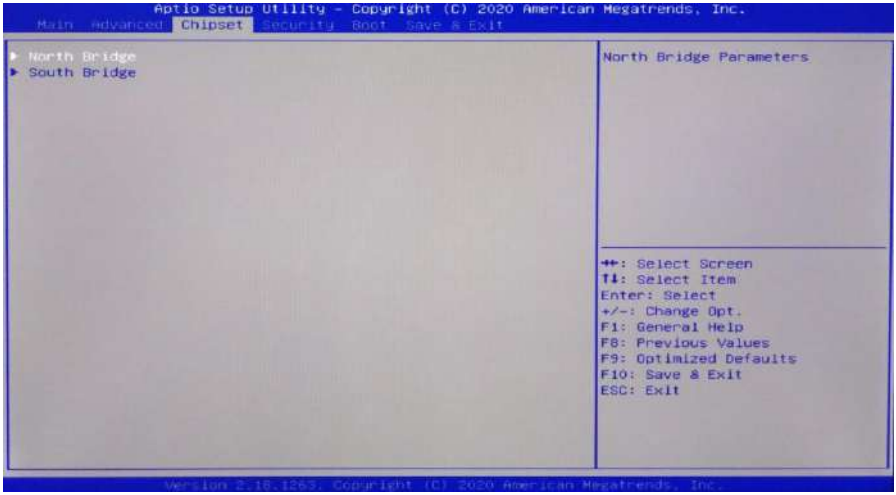
USB Mass Storage Driver Support ：

USB Transfer time-out ： Set timeout for control, batch, and interrupt transmissions. The default is 20 seconds.

Device reset time-out ： Set the timeout time for the boot command of the large-capacity USB disk. The default is 20 seconds.

Device Power-up Delay ： Set the maximum delay time for the USB device to report to the host controller.

3.2.12 Chipset

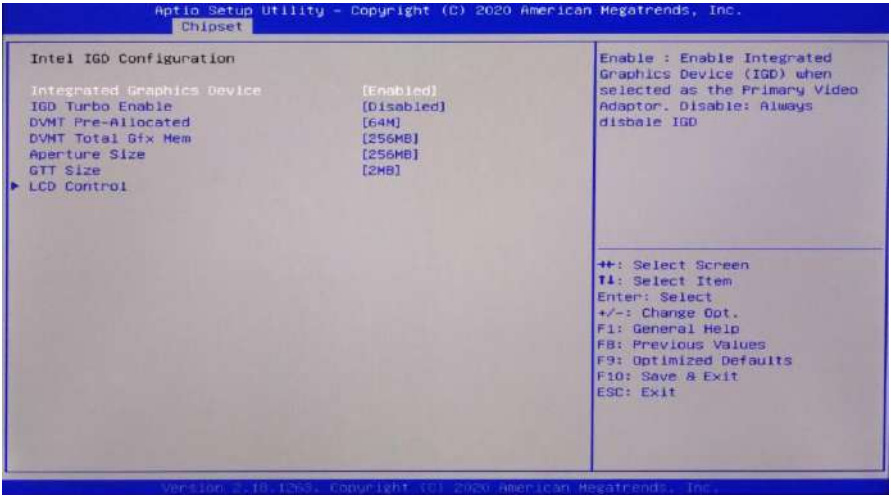


North Bridge ：

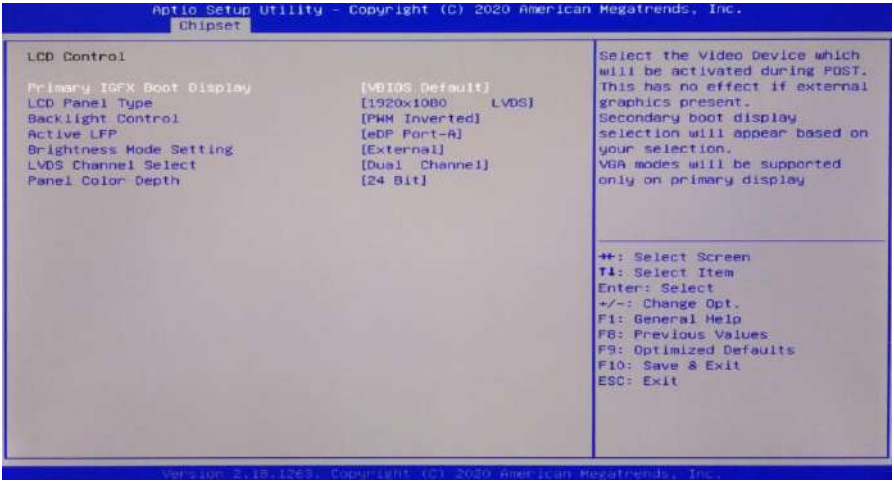
Include videl memory, display device, LVDS, etc

South Bridge ：

include audio card, LAN card, auto power on, etc



LCD Control: Including setting the main display, backlight control settings, LVDS channel selection



Primary IGFX Boot Display:

LCD Panel Type:

Backlight Control:

3.2.13 Boot

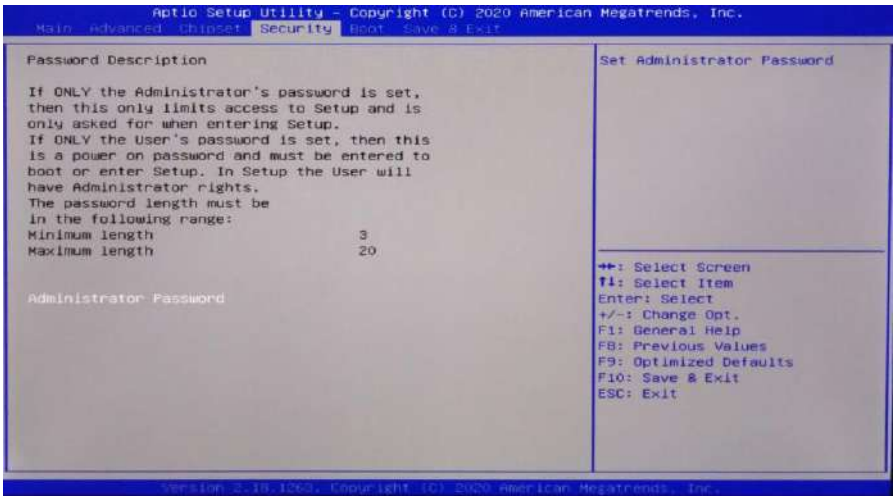
Setup Prompt Timeout：click the Setup shortcut key to wait time. If have not click the setup shortcut key in the setup time it will continue to startup.

Quiet Boot：(Disabled or, enabled)

Fast Boot ：(Disabled or, enabled)

Boot Option Priorities：system will inspect device in accordance with the set procedure, until find a device that can be boot, and then boot from this device. Boot option #1 is the most preferred boot device.

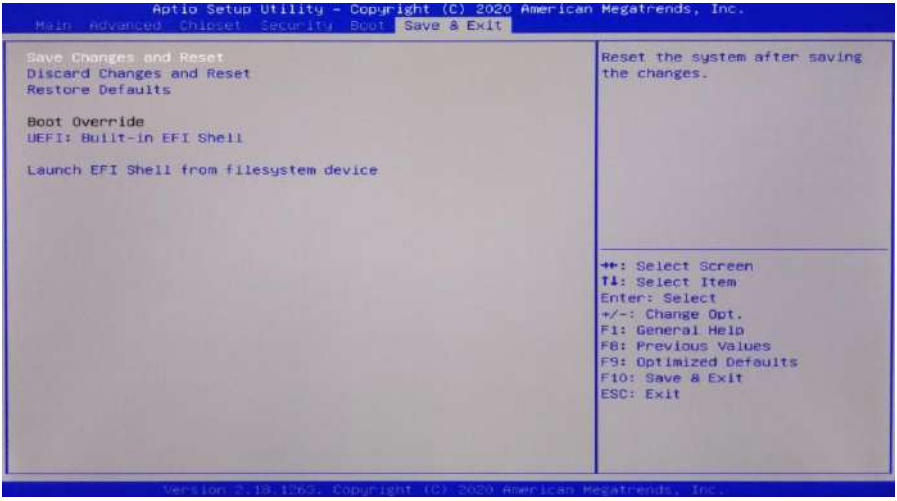
3.2.14 Security



Password character length: the minimum length is 3, the maximum length is 20.

Administrator Password ： used to set the supervisor password.

3.2.15 Save&Exit



Save Changes and Reset ： Save the BIOS settings, and exit the settings interface, continue to start the computer

Discard Changes and Reset ： Discard changes and exit setup interface, restart the

computer.

Restore Defaults：Load optimization settings, if choose this, the system will be set according to the factory's optimal value.

Boot Override ： Select the specified Boot device, such as SATA hard disk, U disk, EFI Shell, PXE, etc, boot directly, do not save and exit, press F11 to select the specified device Boot.

Appendix

Appendix one: Glossary of terms

ACPI

Advanced configuration and power management. The ACPI specification allows the operating system to control most of the power of the computer and its additional equipment.

BIOS

Basic input / output system. It's a software that contains all the input/output control code interface in PC When the system starts, it carries out the hardware detection., began to the operation of the operating system, between the operating system and hardware to provide an interface. BIOS is stored in a read-only memory chip.

BUS

in a computer system, the exchange of data between the different parts of the channel, is a set of hardware lines. We refer to the BUS is usually CPU and main memory components within the local circuit.

Chipset

Chipset Is designed to perform one or more functions integrated chip. We refer to is composed of South Bridge and North Bridge System on chip group, It determines the structure and main function of the motherboard.

CMOS

Complementary metal oxide semiconductor. Is a widely used semiconductor type. It has the characteristics of high-speed, low power consumption. We refer to CMOS is on the motherboard CMOS ram reserved space, used to save the date, time, system
information and system parameter setting information.

COM

Serial port, a universal serial communication interface, generally use the standard DB9 common interface connection mode.

DIMM

Dual in-line memory module. A memory chip group of small circuit board. The memory bus width of 64bit.

DRAM

Dynamic random access memory. A normal computer general memory types. A transistor and a capacitor is usually used to store a single bit. With the development of technology, type and specification of DRAM has in computer application becomes
more and more diverse. For example, are now commonly used are: SDRAM, DDR SDRAM and RDRAM.

LAN

Local area network interface. A small region mutual association of computer is composed of a computer network is generally in a business unit or building. LAN is generally by the server, workstations, some communication links, a terminal can anywhere through the wire access to data and equipment. Many users can be expensive equipment and resource sharing.

LED

Light emitting diode, a semiconductor device, when the current flows through it will be lit, usually used to represent the information very intuitive, such as the power supply has been turned on or the hard drive is working.

PnP

Plug and play. Allows the PC external devices to be automatically configured, users can not manually operate the system can work on their own specifications. To achieve this feature, BIOS support PnP and a PnP expansion cards are required.

POST

During the start up system, BIOS will perform a continuous testing on the system, including the detection of RAM, keyboard, hard drives, etc., to see whether they are properly connected and whether the normal work.

PS/2

The IBM development of a keyboard and mouse interface specification.PS/2 is a DIN only 6PIN interface can also be used to connect to other devices such as a modem.

USB

Universal serial bus. A suitable for low-speed peripherals hardware interface, typically used to connect the keyboard, mouse, and so on. A PC up to 127 USB devices connected to provide a 12mbit / s transmission bandwidth; USB support hot swap and multiple data stream function, namely in the system can plug in a USB device, the system can automatically identify and allow the insertion of the device normal.

Appendix Two：Common issue analysis and solution

Common Faults	Check Points
No start up after connecting power	1. Make sure the power cable is connected properly 2. Please confirm all the power supply can meet the requirements of the motherboard 3. Try to re-plug the memory 4. Try to change the memory 5. Try to clear the CMOS according to motherboard manual 6. Please confirm whether there is an external card, remove the card and check again
VGA no display after power on	1 To check whether the monitor is open 2 Check whether the power cable is properly connected to the monitor and system unit 3 Check whether the display cable is properly connected to the system unit and the display

	4 Check whether the display brightness control is set to the dark state, can improve brightness through the brightness control. 5 Display in the "power save" mode, press any key on the keyboard
BIOS Setup can not be saved	1. Please check whether the CMOS battery voltage is lower than 2.8V, if so, please replace a new battery, set again and save 2. BIOS settings are not correct, according to the boot screen prompt button (DEL), adjust the time and date in the Setup BIOS
Prompt message cannot find bootable device	1. Please check whether the hard drive power cord, data cable is connected normally 2. Please check whether the hard disk has physical damage 3. Please check whether the operating system is normally installed on the hard disk
Blue screen or crash when enter into OS	1. Please check whether the memory card and the card is loose 2. Try to remove the newly installed hardware, uninstall the driver or software 3. Try to replace the memory
Slow speed to enter into OS	1. Try to use third party software to check whether the hard disk has bad sectors 2. Please check whether the hard disk remaining space is too small for operating system. 3. Please check whether the CPU cooling fan is rotating normally
System restart automatically	1. Please check whether the CPU cooling fan is rotating normally 2. Please check whether triggered reset button wrongly 3. Please use anti-virus software to confirm whether the system is infected with the virus 4. Please check whether the memory card and the card is loose 5. Please confirm that the power capacity is sufficient, can try to replace the power supply
Can not detect USB device	1. Please check whether the USB device needs separate power supply 2. Please check whether the USB interface has bad contact 3. Please check whether the USB controller is open in BIOS Setup