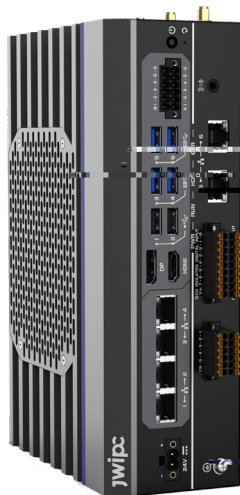
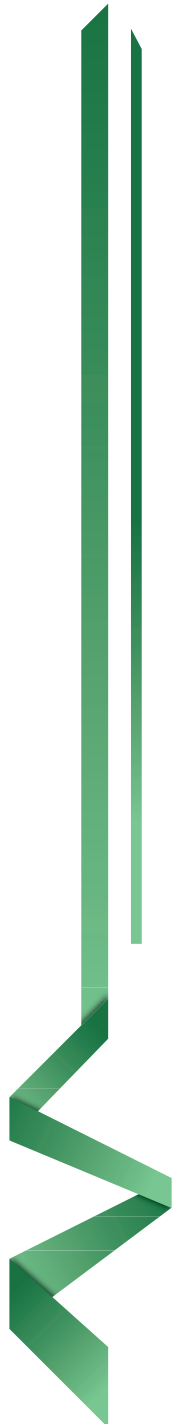


PAS-7512



Veuvlrq 1.0






A





ESD

(ESD, electrostatic sensitive devices)



- ESD
- ESD
- ESD
- ESD
- ESD

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9.1 30



1

1.1

PAS-7512
└ Intel LGA1700 12&13 i9/i7/i5/i3/G CPU TDP 65W
└ 2 DDR5-SODIMM 64GB
└ DP+HDMI
└ 4 USB3.0 2 USB2.0 USB3.0 1.5A HUB
└ 12pin 485/232 1 3 CAN
└ 4 :2 Intel i226-V 2.5Gb RJ45 1 Intel i219LM RJ45 1 Intel
i210-AT RJ45 POE
└ 1 M.2 NVME X4 2242/2280 1 M.2 USB+PCIEx1 3042/3052
└ SLB9670 TPM2.0
└ 1 4*COM 16GPIO 1*AUDIO 1*CAN M.2 2230 2242/2280
└ PAS-7512 POE , PoE

	- PAS-7512

2	COM	-	2	RS232/485/422	2
	PSE	-	POE+	4	
	GPIO	-	16	I/O	8 8
		-	2	Intel i226-V 2.5Gb R45	
		-		Mic-in,Line-out)	
		-	1	M.2 Key-E 2230	Wif BT
		-	M.2 2280/2242 NVME	PCIE X1)	
	USB	-		USB2.0 Type A	
		-	255	/	
		-	DC 24V 2Pin		
BIOS		-	AMI UEFI BIOS		
		-	Win10 x64 Win11 x64 Linux Ubuntu 21.04		
L*W*H		-	230mm(L)*165mm(W)*71.5mm(H)		

2

2.1

2.2

20% 85% 0 40
10cm
50cm



12

2.3

2.3.1

-
-
-
-

2.4

-
-
-
-
-
-
-

(50mm 100mm
I/O 0.5V

3

3.1

□ 19"

■

☐ VESA

DIN

☐

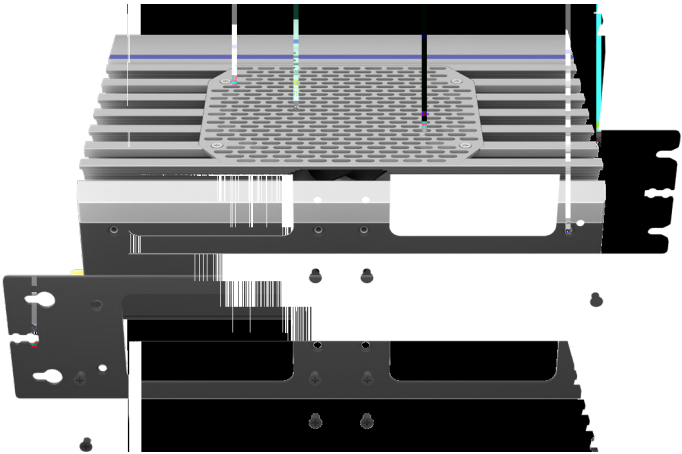
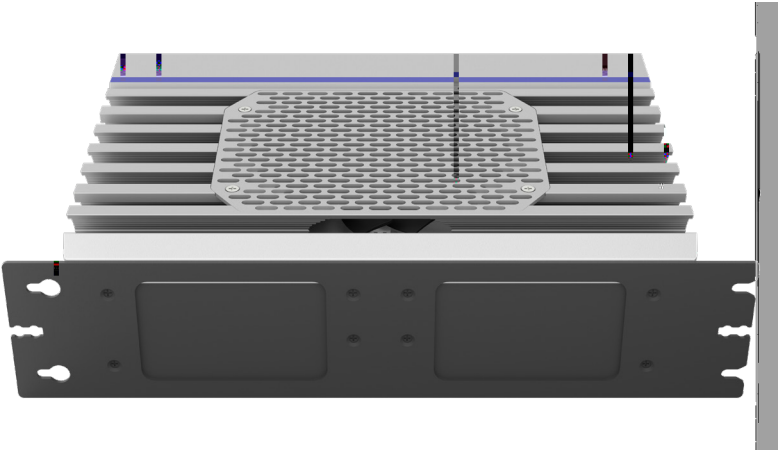
9

3.2 PAS-7512

mm

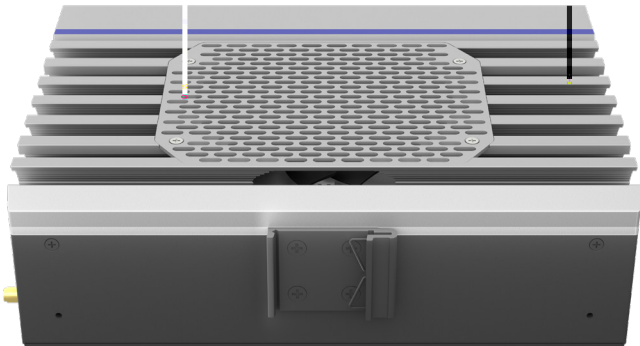


3.3 PAS-7512



2 , M3x5.6

3.4 PAS-7512



3.5 PAS-7512



4

4.1

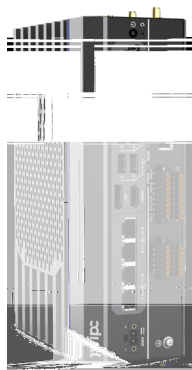
I/O	I/O	USB

4.2

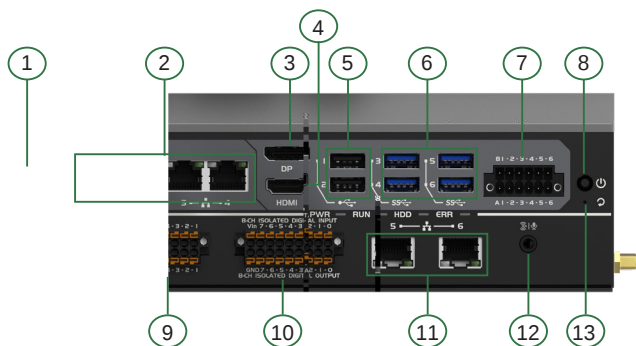
DCIN	

5

5.1 PAS-7512



5.2 PAS-7512 IO



- 1.DC_IN DC
- 2.LAN RJ45
- 3.DP DP
- 4.HDMI
- 5.USB2.0 USB2.0
- 6.USB3.0 USB3.0
- 7.COM_CAN RS232+ RS485+CAN
- 8.Power Button
- 9.COM RS232+ RS422+ RS485
- 10.DIO /
- 11.LAN RJ45
- 12.Combo jack Combo
- 13.RECOVER

5

CMOS

5.3

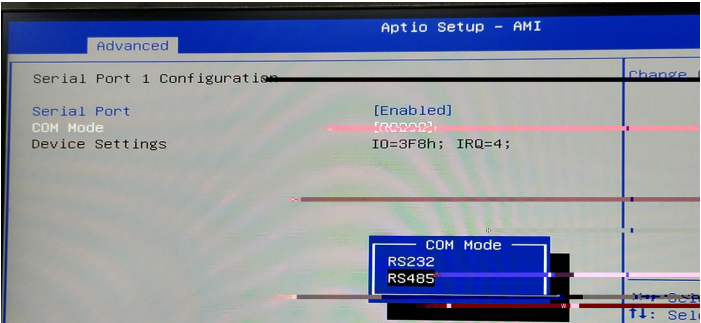
		
	1	DC-
	2	DC+

5.4 COM_CAN

						
	PIN	RS232	RS422	RS485	CAN	
	A1	COM1_DCD	/	COM1_485-	/	/
	A2	COM1_SIN	/	COM1_485+	/	/
	A3	COM1_SOUT	/	/	/	/
	A4	/	/	/	/	GND
	A5	/	/	/	/	GND
	A6	/	/	/	/	PWRBTN#
	B1	COM2_DCD	/	COM2_485-	/	/
	B2	COM2_SIN	/	COM2_485+	/	/
	B3	COM2_SOUT	/	/	/	/
	B4	/	/	/	GND	/
	B5	/	/	/	CAN1_H	/
	B6	/	/	/	CAN1_L	/

COM1/2 RS232/485

BIOS

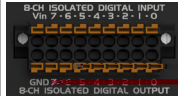


5.5 COM3_4

	PIN	RS232	RS422	RS485	
	C1	COM3_DCD	COM3_422TX-	COM3_485-	/
	C2	COM3_SIN	COM3_422TX+	COM3_485+	/
	C3	COM3_SOUT	COM3_422RX+	/	/
	C4	COM3_DTR	COM3_422RX-	/	/
	C5	/	/	/	GND
	C6	/	/	/	/
	D1	COM4_DCD	COM4_422TX-	COM4_485-	/
	D2	COM4_SIN	COM4_422TX+	COM4_485+	/
	D3	COM4_SOUT	COM4_422RX+	/	/
	D4	COM4_DTR	COM4_422RX-	/	/
	D5	/	/	/	GND
	D6	/	/	/	/

COM3/4 RS232/RS422/RS485

5.6 DIO



	1	DI_0	2	DO_0
	3	DI_1	4	DO_1
	5	DI_2	6	DO_2
	7	DI_3	8	DO_3
	9	DI_4	10	DO_4
	11	DI_5	12	DO_5
	13	DI_6	14	DO_6
	15	DI_7	16	DO_7
	17	VCC	18	GND

5.7

5.7.1 ATX-M1

1-2	ATX Mode
2-3	AT Mode

5.7.2 FAN

1	GND
2	+5V
3	PWM_IN
4	PWM_OUT

5.7.3 BAT

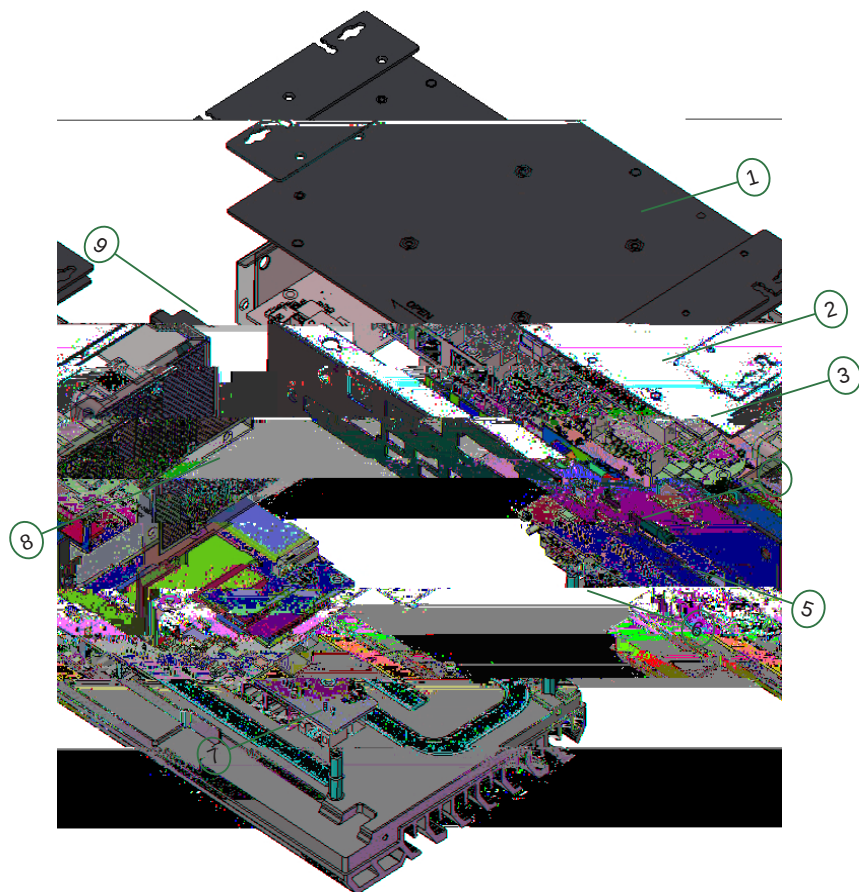
1	BAT+
2	BAT-

5.7.4 PWRBTN

1	+
2	GND

6

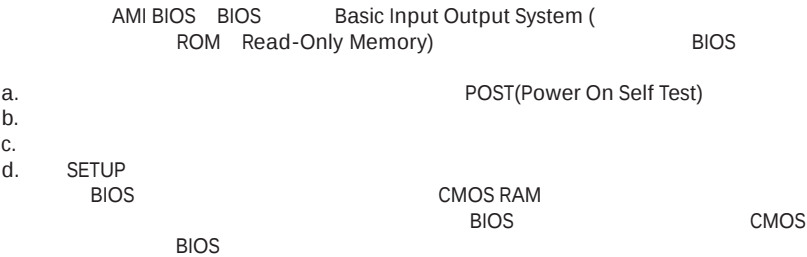
6.1 PAS-7512



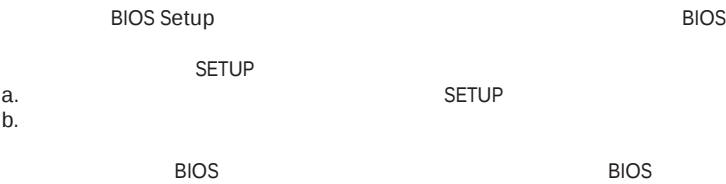
1		2		3	
4		5		6	
7		8	IO	9	

7 BIOS

7.1 BIOS



7.2 BIOS



7.2.1 BIOS

 BIOS

Push <Delete> to enter SETUP

Push <F11> to enter BIOS

7.2.2

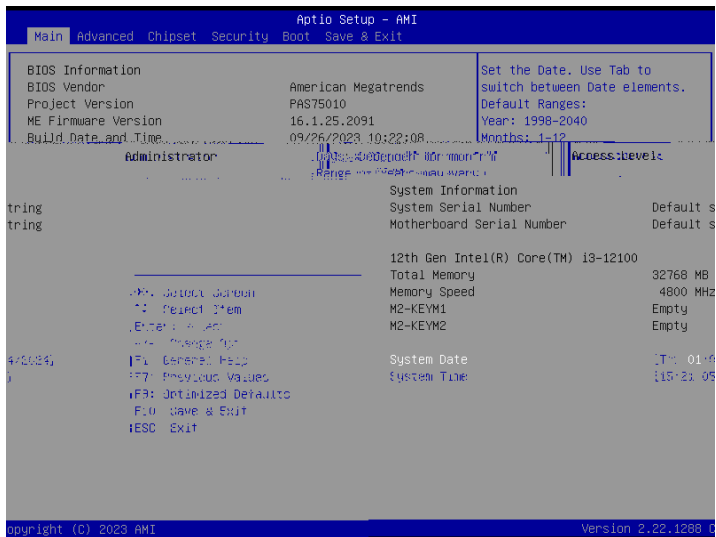
<Enter> <F1> <Esc>

/	
/	
+/-	/
<Enter>	
<ESC>	CMOS SETUP
<F1>	
<F7>	
<F9>	
<F10>	CMOS

7.3 BIOS

Main		BIOS
Advanced		BIOS
Chipset		
Security		
Boot		
Save & Exit		BIOS

7.4 Malq

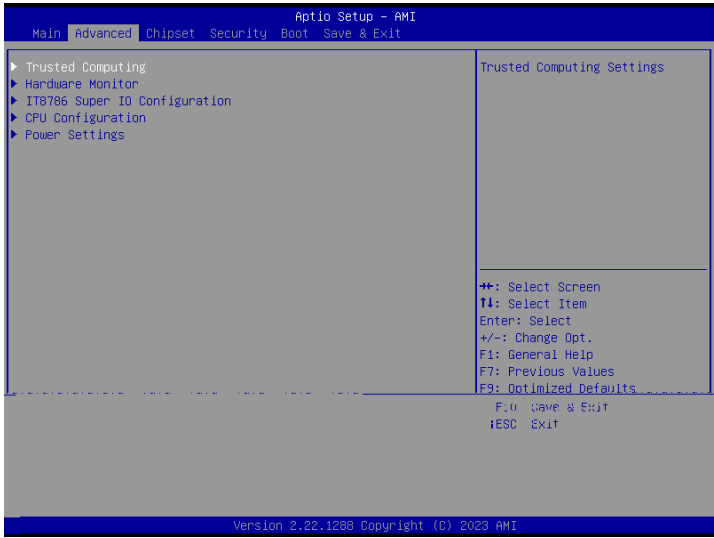


```

Sweep Date (          )
           ,         " , / / "
Sweep Type
      < > > >

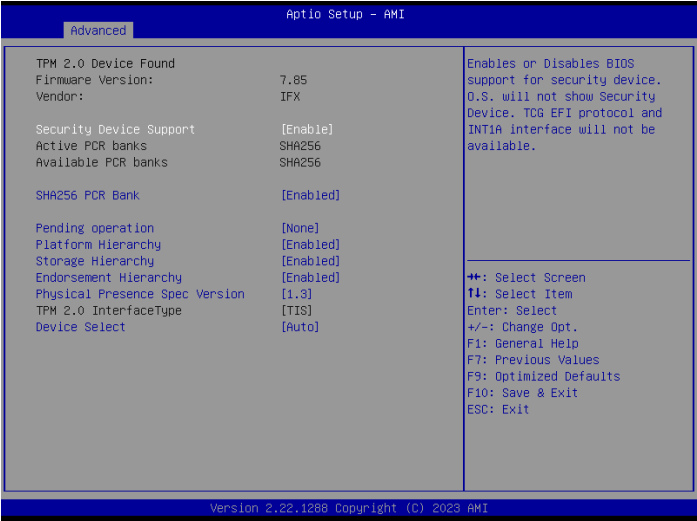
```

7.5 Adyaqced



Tuxvmed Cr p sxwllq j		
Haud zaue Mrqlwru		
IT8786 Sxseu IO Crq j xuawllrq	Super IO	
CPU Crq j xuawllrq	CPU	
Pr zeu Sewllq jv		

► Trusted Configuration <Enter>



Secxulw| Deylce Sxss ruw

BIOS

Disable,Enable.

SHA256 PCR Baqn

SHA256 PCR Bank

Enabled,Disabled.

Peqdlqj r seuawlrq

None, TPM Clear.

Poawfrup Hleuauck|

Enabled,Disabled.

Swrua je Hleuauck|

Enabled,Disabled.

Eqd ruve peqw Hleuauck|

Enabled,Disabled.

Pk|vlcao Pueveqce Ssec Veuvlrq

1.2, 1.3.

Deylce Seuecw

TPM 1.2 ,TPM 2.0 ,Auto.

► Hardware Monitor <Enter>



CPU Smart Fan

CPU

Full on Mode, Automatic Mode, Manual Mode.

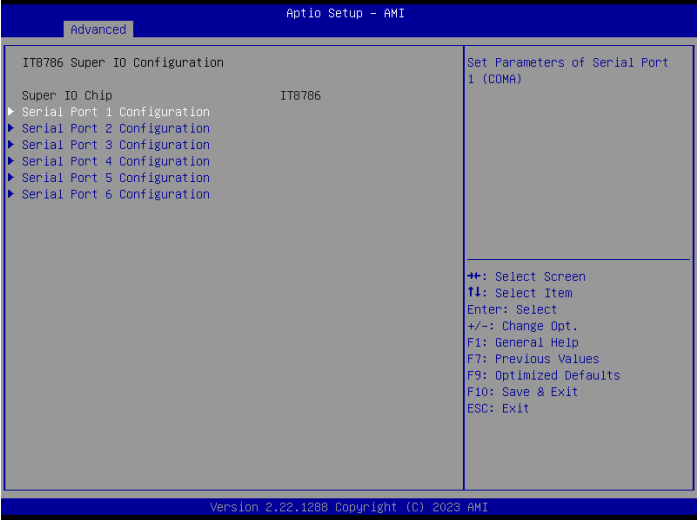
SYS Smart Fan2/1

Full on Mode, Automatic Mode, Manual Mode.

Temperature via vcore voltage

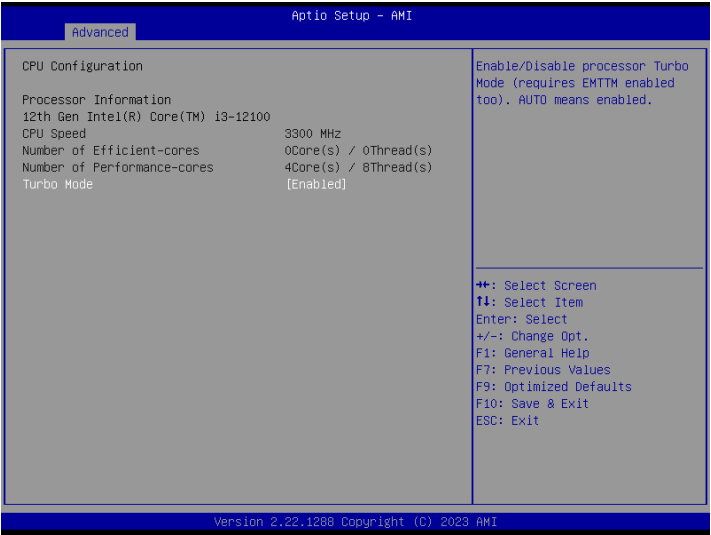
CPU Temp, SYS Temperature.

► IT8786 Super IO Configuration <Enter>



Seulaø Pruw 1/2/3/4/5/6 Crq j xuawlrq

► CPU Configuration <Enter>

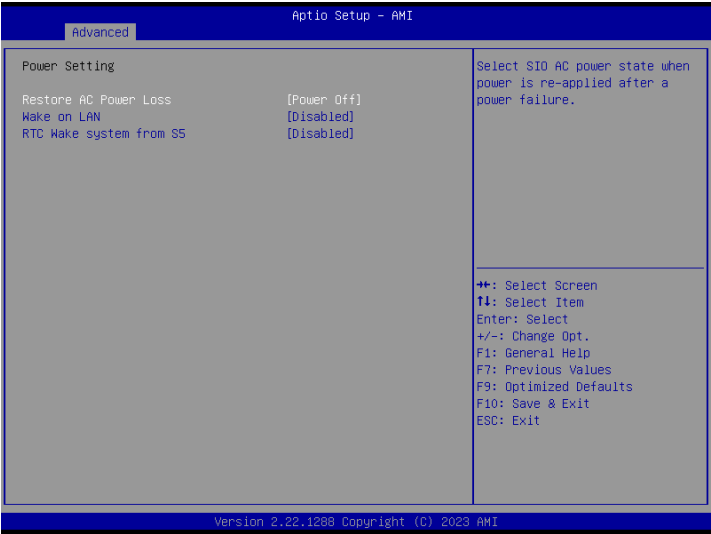


Txubr Mrde

Turbo

Enabled,Disabled.

► Power Configuration <Enter>



Restore AC Power Loss

Power Off,Power On,Last State.

Wake on LAN

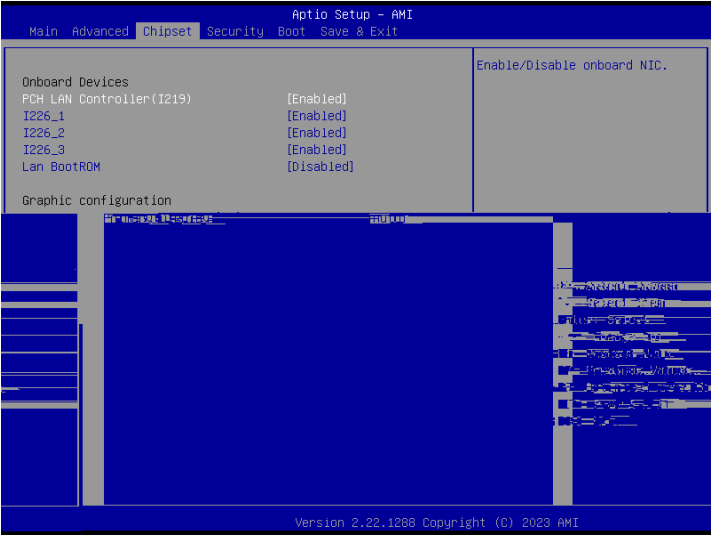
Disable,Enable.

RTC Wake up from S5

RTC

Disable,Enable.

7.6 CklsveW



PCH LAN Cr qwu r 00eu(I219)

Enabled,Disabled.

I226_1/2/3

Disable,Enable.

Laq Br r wROM

ROM

Disable,Enable.

Pul p au | Dlvs0a |

Auto,Enabled,Disabled.

7.7 Secxulw|



Ad p lqlwua wru Pavv z rud

1.

Administrator Password

<Enter>
2.

" Create New Password "

3~20
- <Enter>

" Con frm Password "
- " Invalid Password! "

" Administrator Password "

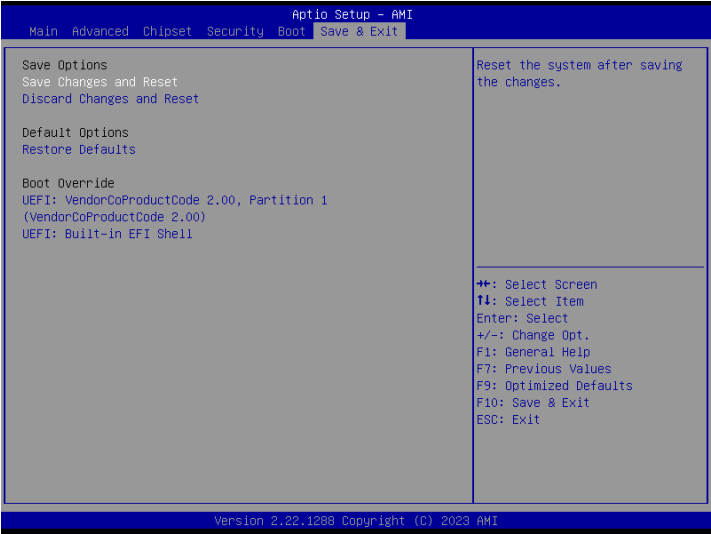
" Enter Current Password "
- " Create New Password "

<Enter>
- Pavv z rud ckecn

BIOS

Setup,Setup&Post

7.9 Save & Exit



Save & Exit

Default & Exit

Reset & Exit

8

8.1 WDT

WDT	SIO	LDN DEV7,	0X72 BIT7	1	0
0XF3	0X72 BIT7	1 0XF3	0X20	32	

8.1.1

```
//enter ite conf g
    IoWrite8(SioIndexPort,0x87);
    IoWrite8(SioIndexPort,0x01);
    IoWrite8(SioIndexPort,0x55);
    IoWrite8(SioIndexPort,0x55);

//select watchdog device
    IoWrite8(SioIndexPort,0x07);
    IoWrite8(SioDataPort,0x07);
    IoWrite8(SioIndexPort, 0xF1);
    temp_data = IoRead8(SioDataPort);
    temp_data &= 0xBB;
    temp_data |= 0x44;
    IoWrite8(SioIndexPort, 0xF1);
    IoWrite8(SioDataPort, temp_data);

//MAP to GP10
    IoWrite8(SioIndexPort, 0xF4);
    temp_data = IoRead8(SioDataPort);
    temp_data &= 0xC0;
    temp_data |= 0x08;
    IoWrite8(SioIndexPort, 0xF4);

//wdt start
if(ite_watch_dog_element->wdt_operator==START_WDT){

//clear status
IoWrite8(SioIndexPort, 0x71);
temp_data = IoRead8(SioDataPort);
temp_data &= 0xfe;
IoWrite8(SioIndexPort, 0x71);
IoWrite8(SioDataPort, temp_data);

IoWrite8(SioIndexPort, 0x72);
temp_data = IoRead8(SioDataPort);

temp_data &= 0x1f;
temp_data |= 0xC0;
//minute or second BIT7 1->second 0->minute
if(ite_watch_dog_element->wdt_unit == 1){
temp_data &= 0x7f;
}

}

IoWrite8(SioIndexPort, 0x72);
IoWrite8(SioDataPort, temp_data);
```

```

//Clear Status
IoWrite8(SioIndexPort, 0x71);
temp_data = IoRead8(SioDataPort);
temp_data &= 0xfe;
IoWrite8(SioIndexPort, 0x71);
IoWrite8(SioDataPort, temp_data);

//Count
IoWrite8(SioIndexPort, 0x74);
IoWrite8(SioDataPort, 0x0);
IoWrite8(SioIndexPort, 0x73);
IoWrite8(SioDataPort, ite_watch_dog_element_index); //io_el M M M M M M M M W r t e
//printf("wdt start:%x\n",IoRead8(data));
}

```

8.1.2

```

//wdt stop
if(ite_w

```

8.10.7 Watch Dog Timer Configuration Register (Index=72h, Default=001s0000b)

Bit	Description
7	WDT Time-out Value Select 1 1: Second 0: Minute
6	WDT Output through KRST (pulse) Enable 1: Enable 0: Disable
5	WDT Time-out Value Extra Select 1: 62.5ms x WDT Time-out value (default = 3.5s) 0: Determined by WDT Time-out value select.1 (bit 7 of this register)
4	Reserved
3-0	Interrupt Level Select for WDT Please refer to Table 8-15. Interrupt Level Mapping Table on page 83.

8.10.8 Watch Dog Timer Time-out Value (LSB) Register (Index=73h, Default=00000000b)

Bit	Description
7-0	WDT Time-out Value 7-0

8.10.9 Watch Dog Timer Time-out Value (MSB) Register (Index=74h, Default=00000000b)

Bit	Description
7-0	WDT Time-out Value 15-8

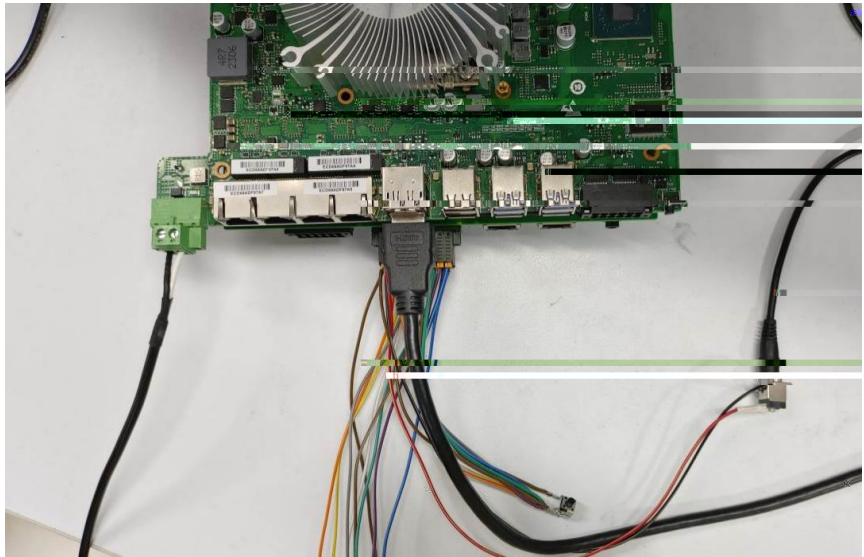
8.2 GPIO

1

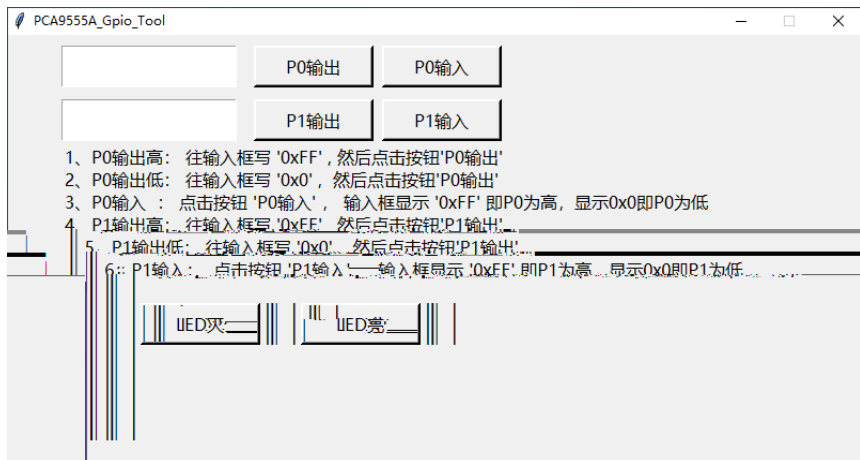
5V

LED

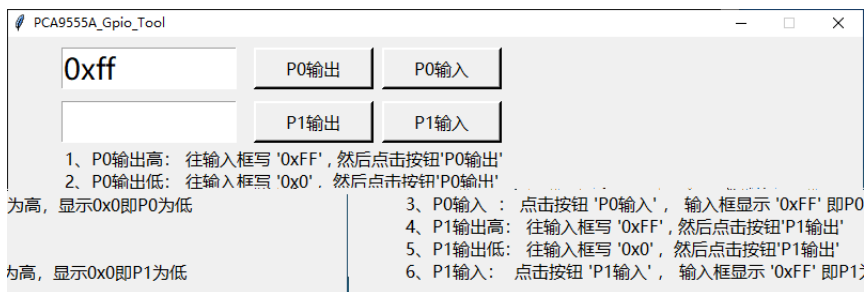
5V 12V 24V



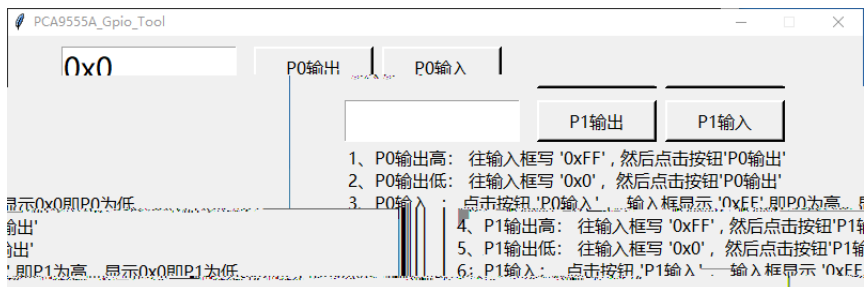
2 PCA9555A_Gpio_Tool



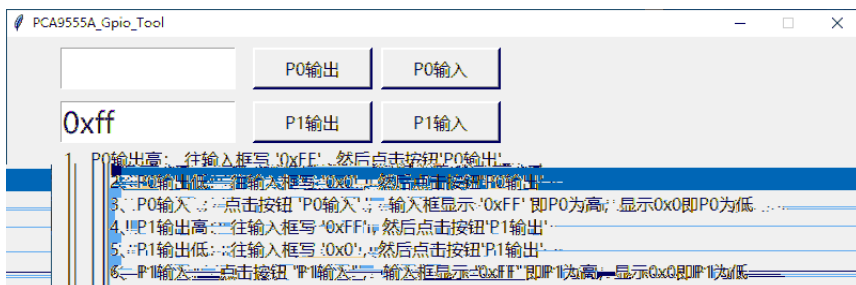
3 “ P0 ” 0xf



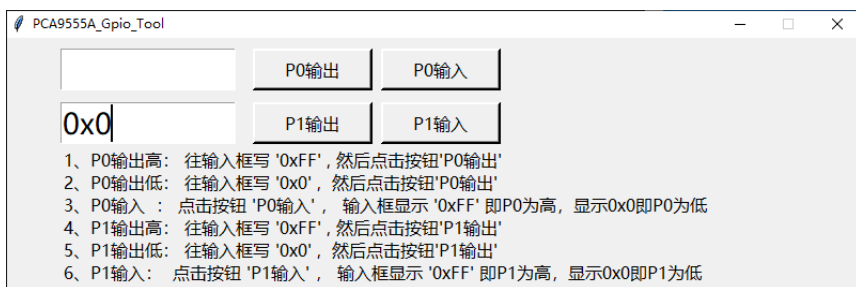
4 “ P0 ” 0x0



5 “ P1 ” 0xf “ P1 ” 0xf “ P1 ”



6 “ P1 ” 0x0 “ P1 ”



Sample code PCA9555A_Gpio_Tool_LED_Program_source_code

9

9.1

		/
		1 2 12
	“ ”	
		1 2 3
		Winpe
I O		PCI ISA
	BIOS	Setup BIOS Setup BIOS
BIOS		
Boot device not found	BIOS	BIOS “ ” (Boot)
USB	USB 2.0 USB 2.0	USB 2.0
	USB	1 Support USB Legacy 2 USB