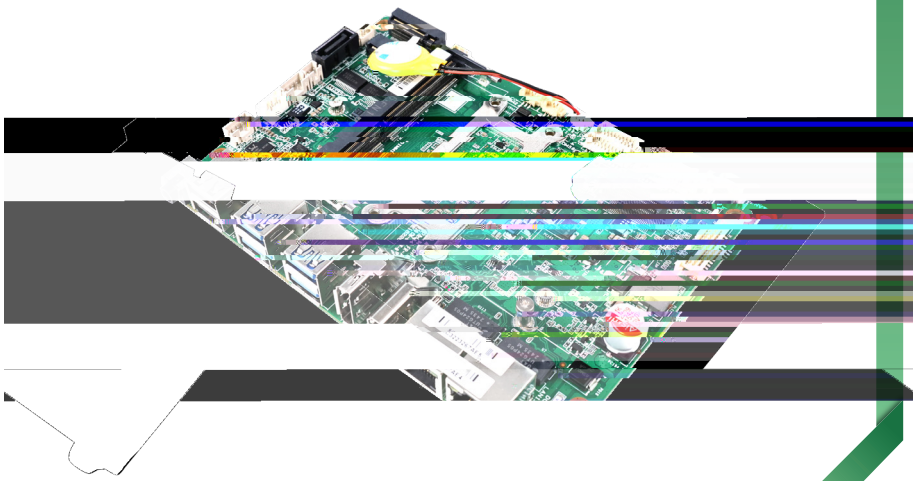
SIM3-3510

户手册



Version 1.0

免　声明

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Hυ　Hυ　G

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权声明

G

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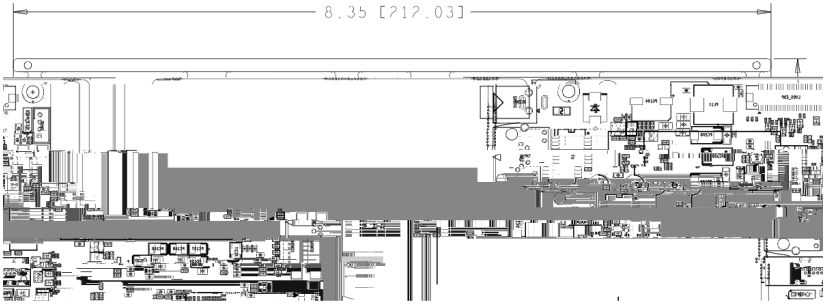
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7 GPIO 指导 ····· 33
7.1 GPIO ····· 33
录1 信息 ····· 34
录2 产品有毒有害 或元 标 ····· 35

1

1.1 包　清单

1.2 主板　格

处　器	- Intel® Alder Lake-N N95/up to 3.4GHz+4C/4T/6MB/15W - Intel® Alder Lake-N N97/up to 3.6GHz+4C/6MB/12W - Intel® Alder Lake-N N100/up to 3.4GHz+4C/4T/6MB/6W - Intel® Alder Lake-N i3-N305/up to 3.8GHz+8C/8T/6MB/15W
片	- Intel Alder lake N SOC
内存	- 1× DDR4 SODIMM　　DDR4-3200　　16GB
显　控制器	- Intel UHD Graphics Ÿ　　CPU ÿ
显　接口	-　　HDMI+DP+eDP/LVDS - 1　HDMI 2.0 max resolution up to 4096*2160 - 1　DP　max resolution up to 4096*2160 - 1*eDP/LVDS　eDP　max resolution up to 4096*2160@60Hz 　　LVDS　max resolution up to 1920*1200@60Hz
存储	- 1　SATA3.0+PWR 2pin 2.0mm - 1　M.2 2280 Key-M　　SATA/nVME
音频	-　　Mic-in+Line-out Ÿ 2x5Pin Wafer ÿ -　　Ÿ 3W　4Pin wafer ÿ
	- 2　　: REALTEK8111K Ÿ 4KV　　ÿ
USB	- 4*USB 3.2 GEN1 5Gbps, 5*USB 2.0 Ÿ 3　　ÿ
I²C/I²S接口	- 1　4Pin I²C　, 1　4Pin SMBus　, Wafer
串口	- COM1　COM2　RS485 Ц COM3　COM4　RS232 - COM5　COM6　RS232/TTL
数字I/O	- 8　I/O　Ÿ 1x10Pin wafer ÿ
源	- DC 12V~24V　DC-Jack (　2Pin　) -　Hu　Hu
扩展总	- 1*M.2 3042/3052 Key-B　4G/5G　Ÿ USB3.0 ÿ - 1*M.2 2230　Key-E　WiFi/BT　Ÿ CNVI　PCIe　USB ÿ
工作　境大气条件	-　0uᵋ　60uᵋ　10%ᵋ　85%　85~105kPa
储存　境大气条件	-　-40uᵋ　85uᵋ　5%ᵋ　95% Ÿ 40uᵋ ÿ　85~105kPa
Watch Dog	- 255　/
BIOS	- AMI UEFI/Legacy BIOS
操作	- Windows10　Windows11　Linux Ubuntu 21.04
PCB 尺寸	- 3.5　146mm Ÿ W ÿ ×105mm Ÿ D ÿ

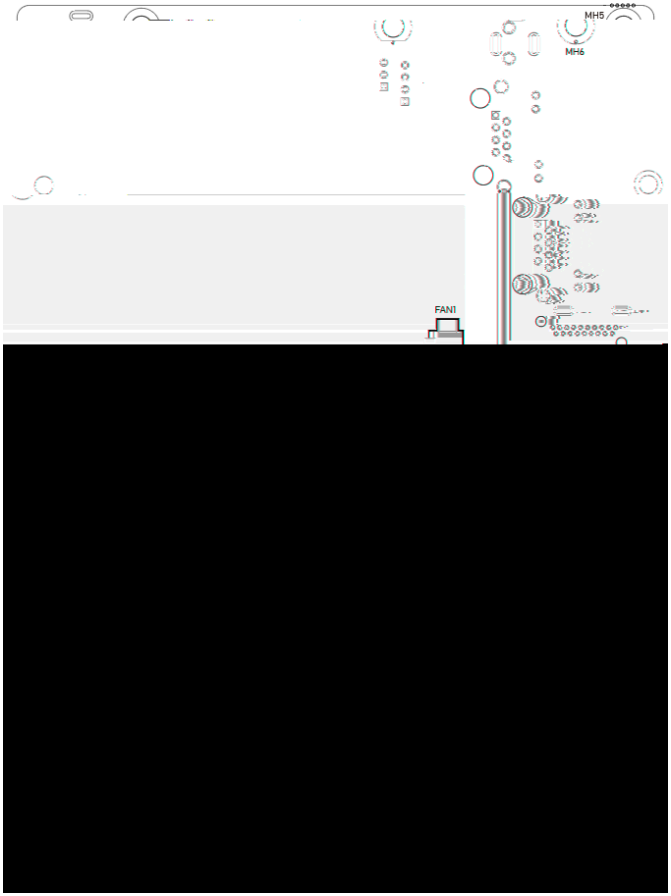

8.35 [212.03]

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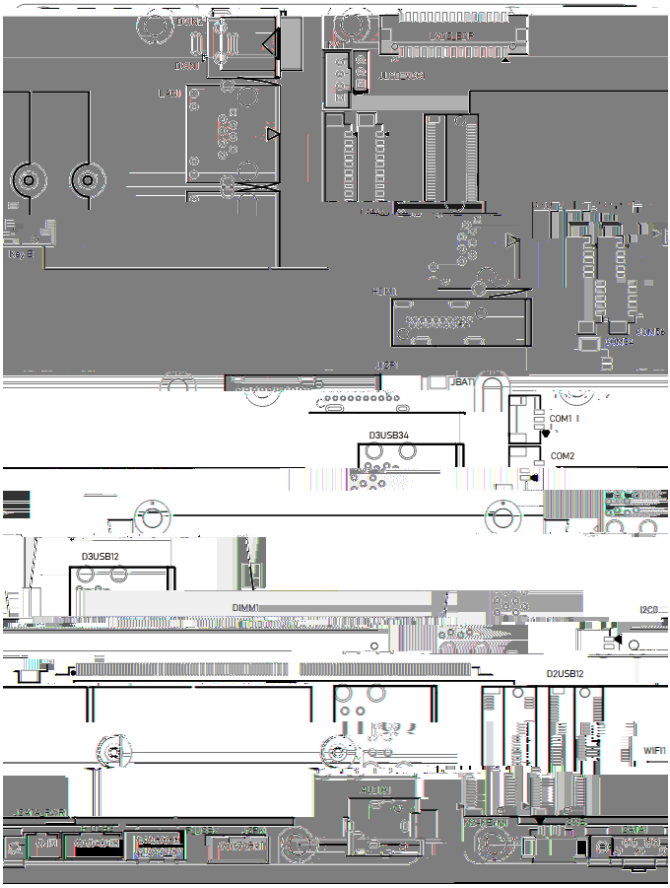
1.4 主板IO接口　构图



1.5 主板布局图

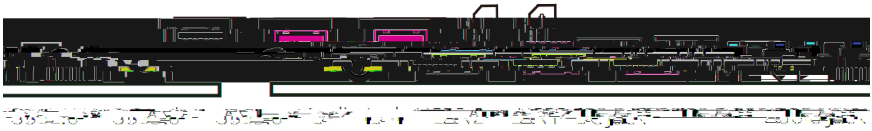


(　　)


JBAT1
COM1
D3USB34
COM2
D3USB12
DIMM1
I2C9
D2USB12
WIFI1

( )

1.6 面板接口



( )

- Audio Jack:
- USB2.0: USB2.0
- USB3.0: USB 3.0
- DP: DP
- HDMI: HDMI
- LAN: RJ45
- DC Jack: DC

2 件安

2.1 安 内存

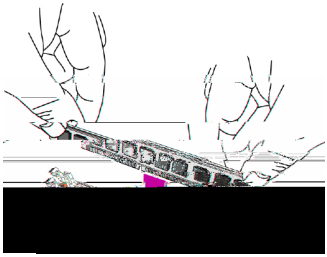
1. G
2. G
3. G

:

1. AC G
2. G
3. Ԋ
4. 30 ԁ d ,
   G ÿ ÿ
5. DIMM G

ÿ ÿ







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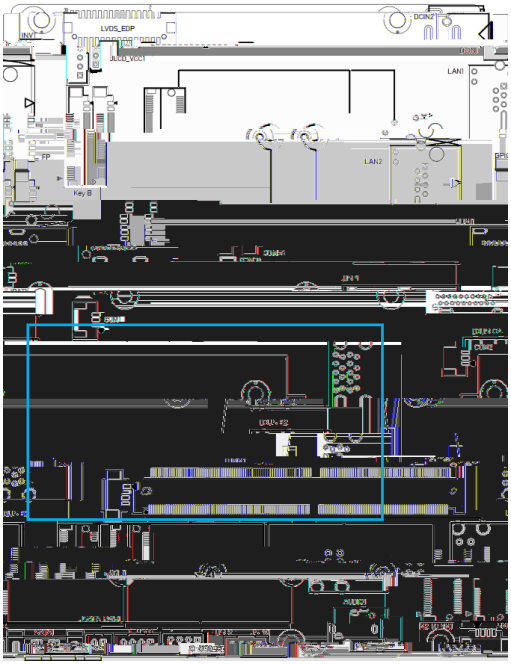
G

2.2 接外部設備

2.2.1 Serial ATA 接口設備

Serial ATA
Serial ATA
Serial ATA G

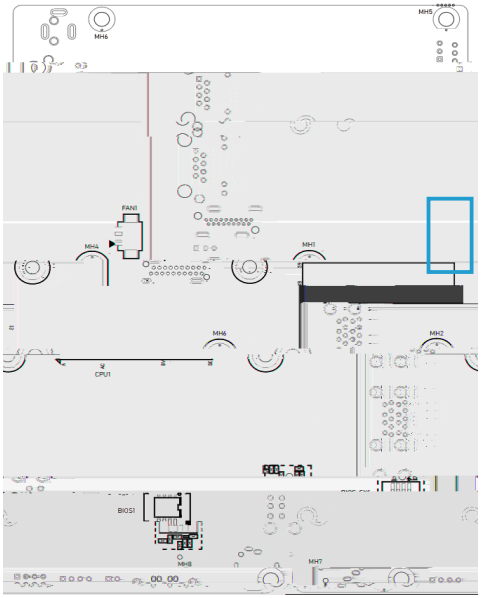
2.3.3 DIMM1 插槽



1 DDR4 SODIMM
DDR4-3200
16GB

3 接头安 与

3.1 FAN1 插 接口



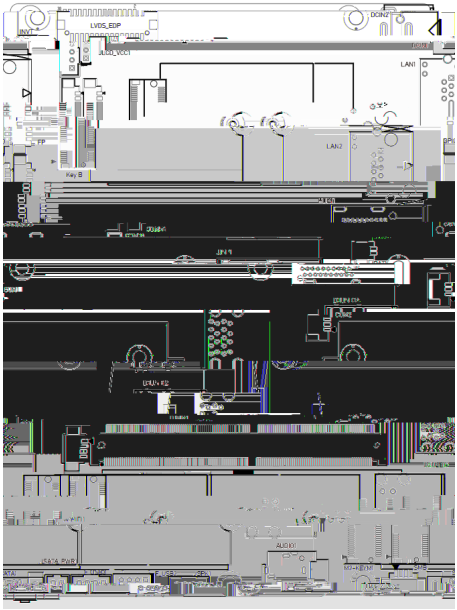
接	接 定义
1	GND
3	+5V
5	FAN_TAC
7	FAN_CTL

3.2 GPIO 插 接口

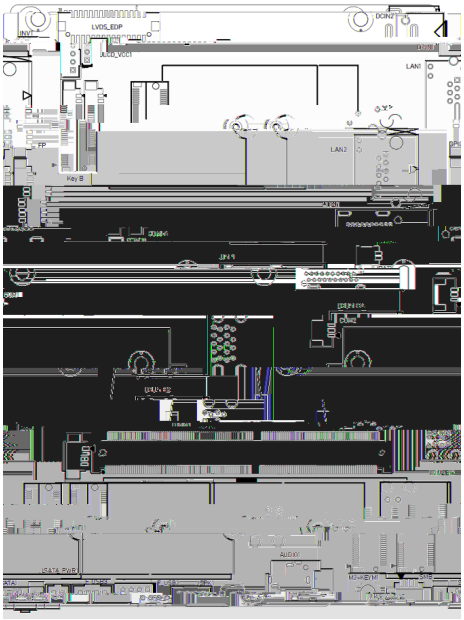


接	接 定义
1	GND
2	GPIO1
3	GPIO2
4	GPIO3
5	GPIO4
6	GPIO5
7	GPIO6
8	GPIO7
9	GPIO8
10	+V5

3.3 FP 插　接口

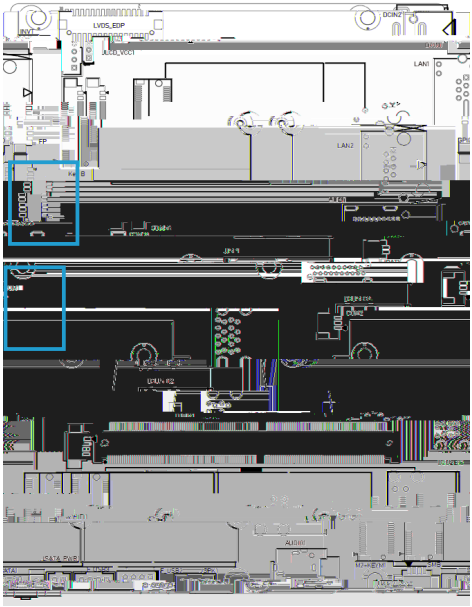


3.4 SMB 插　接口



接	接　定义
1	GND
2	

3.7 COM 插　接口



COM1、COM2:

接	接　定义
1	GND
2	RS485+
3	RS485-

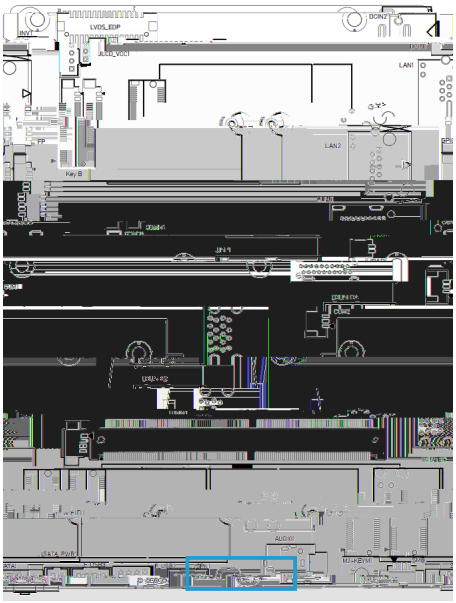
COM3/4:

接	接　定义
1	SOUT3
2	RTS3
3	SIN3
4	CTS3
5	GND
6	SOUT4
7	RTS4
8	SIN4
9	CTS4
10	GND

COM5/6:

接	接　定义
1	SOUT5
2	RTS5
3	SIN5
4	CTS5
5	GND
6	SOUT6
7	RTS6
8	SIN6
9	CTS6
10	GND

3.8 F_USB 插　接口



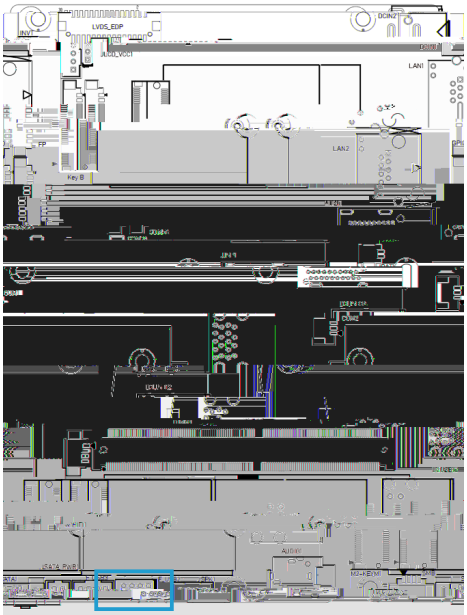
F_USB2

接	接　定义	接	接　定义
1	USB2.0 PWR	2	USB2.0 PWR
3	USB_P8_D-	4	USB2_P4_D-
5	USB_P8_D+	6	USB2_P4_D+
7	GND	8	GND

F_USB3

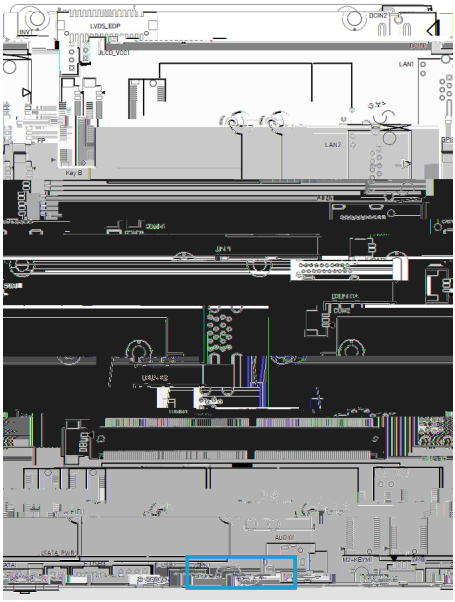
接	接　定义
1	USB2.0 PWR
3	USB_P8_D-
5	USB_P8_D+
7	GND

3.9 SATA1 插　接口



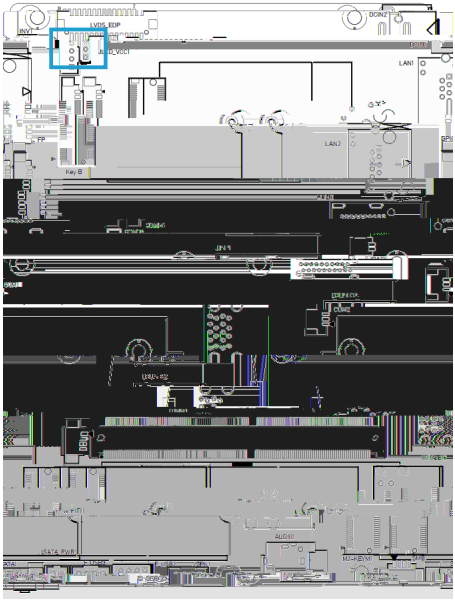
接	接　定义
1	GND
2	SATA_TX_P
3	SATA_TX_N
4	GND
5	SATA_RX_N

3.10 JSATA_PWR1 插　接口



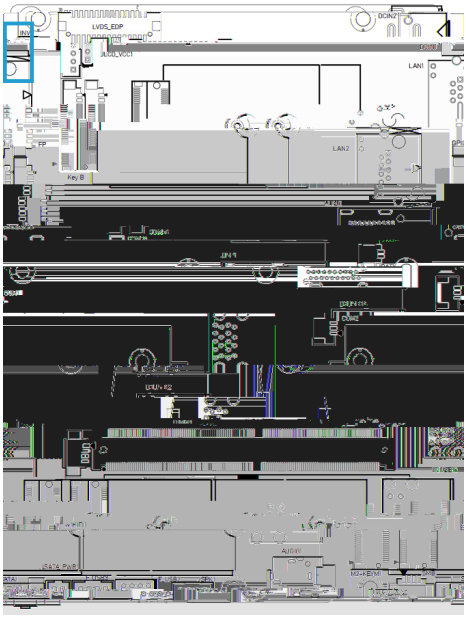
接	接　定义
1	+V5
3	GND

3.11 JLCD_VCC1 插　接口



接	接　定义
1	+3.3V
2	EDP_LVDS_LCD_VCC
3	+5V

3.12 INVT 插　接口



接	接　定义
1	+V12
2	ENABLE
3	PWM
4	GND

3.13 LVDS_eDP 插　接口



LVDS:

接	接　定义	接	接　定义
1	+V3.3	2	+V3.3
3	+V3.3	4	NC
5	GND	6	GND
7	LVDS_D0N	8	LVDS_D0P
9	LVDS_D1N	10	LVDS_D1P
11	LVDS_D2N	12	LVDS_D2P
13	GND	14	GND
15	LVDS_CLK1N	16	LVDS_CLK1P
17	LVDS_D0		

4 BIOS

4.1 BIOS 明

AMI BIOS G BIOS Basic Input Output System(ÿ G
ROM Ÿ Read-Only Memory) G BIOS

a. POST(Power On Self Test) G
b. G
c. Hυ G
d. SETUP G
BIOS CMOS RAM
G BIOS G CMOS
BIOS G

4.2 BIOS 定

BIOS Setup G BIOS
G
SETUP
a. SETUP H
b. G

BIOS BIOS G
G

4.2.1 入BIOS 定 序

<DEL> BIOS G

Press <Delete> to enter SETUP

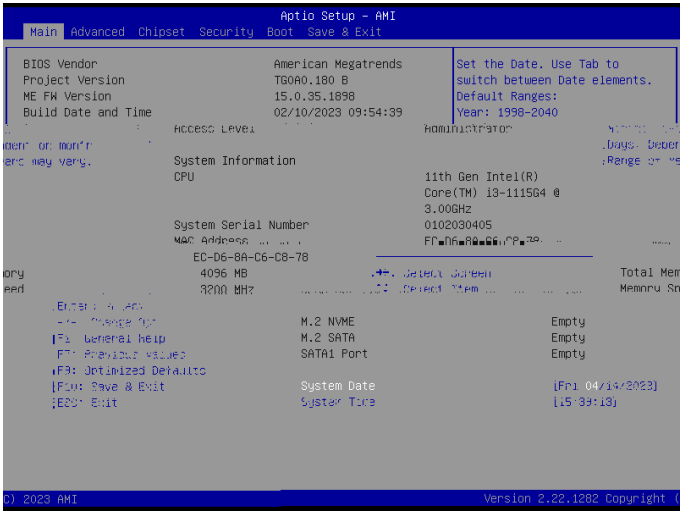
Press <F11> to enter Boot Menu

4.2.2 控制 位

<Enter> <F1> <Esc>
G G

控制	功 描
← / →	
↑ / ↓	
+/ -	/
<Enter>	
<ESC>	CMOS SETUP
<F1>	
<F7>	
<F9>	
<F10>	CMOS

4.3 Main

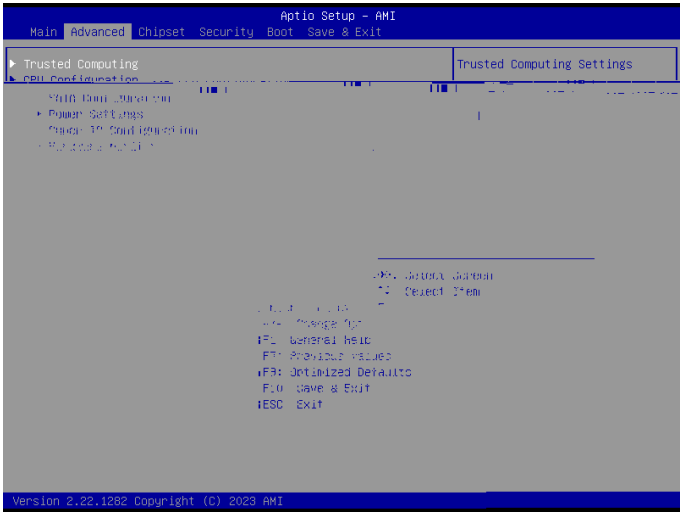


- BIOS Information(BIOS 关信息)
- System Date(日期)

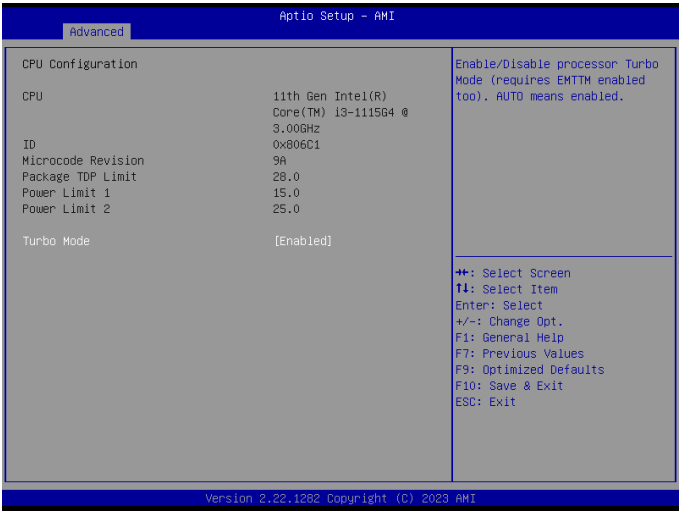
  , d / / d G
- System Time(时间)

  < >< >< > G

4.4 Advanced



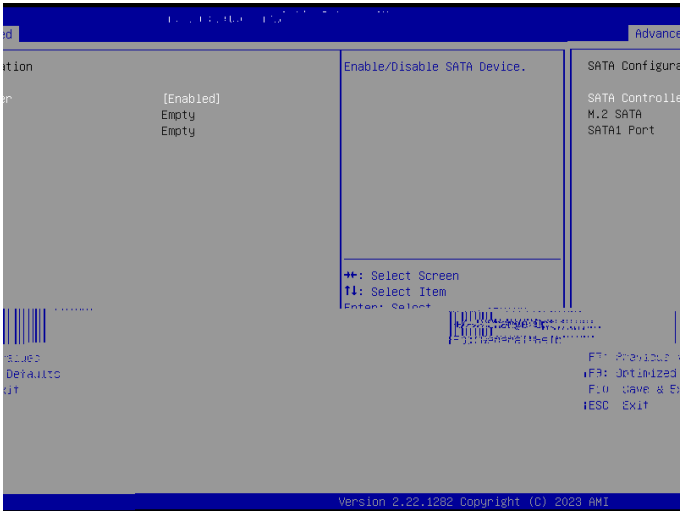
CPU Configuration 按<Enter>　　入子　单



- Turbo Mode
  Turbo　　ɢ
  Enabled,Disabled.

- <Esc>　　ɗ Advanced ɗ

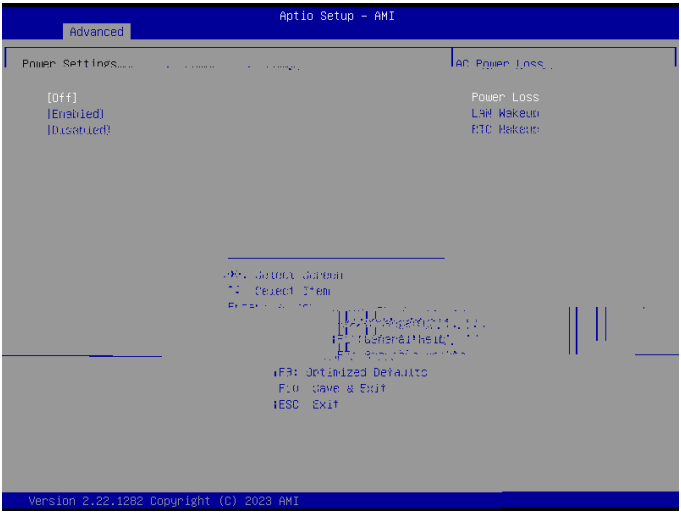
SATA Configuration 按<Enter>　　入子　单



- SATA Controller
  SATA　　G
  Enabled,Disabled.

- <Esc>　　d Advanced d

Power Settings 按<Enter> 入子 单。



- Wake on LAN

  G

  Enabled,Disabled.
- LAN Wakeup

  G

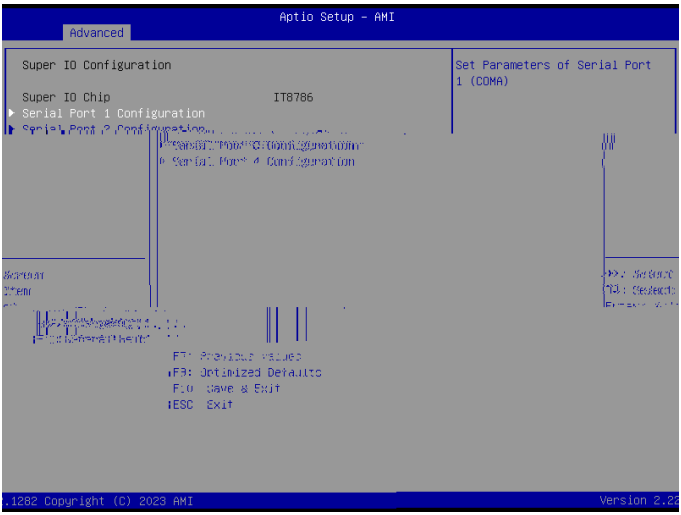
  Enabled,Disabled.
- RTC Wakeup

  RTC G

  Disabled, Fixed Time,Dynamic Time.

- <Esc> d Advanced d

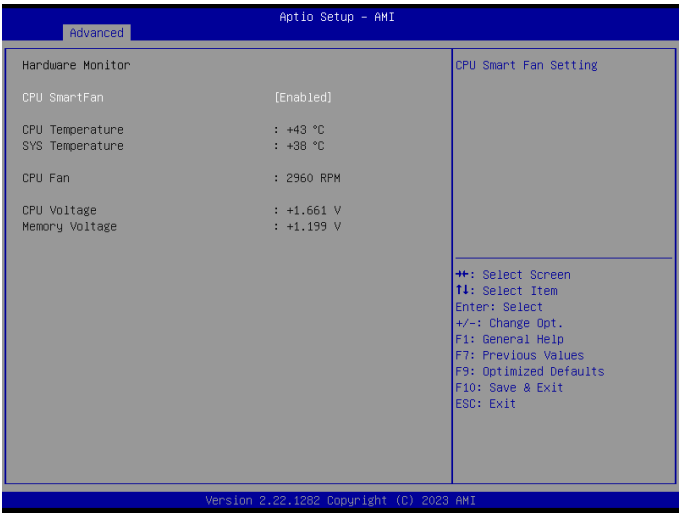
Super IO Configuration 按<Enter> 入子 单。



- Serial Port 1/2/3/4 Configuration
  G

- <Esc> d Advanced d

Hardware Monitor 按<Enter> 入子 单。



- CPU SmartFan
  CPU G
  Disable,Enable.

- <Esc> d Advanced d

4.5 Chipset

WIFI

WIFI G

Disable,Enable.

BlueTooth

G

Disable,Enable.

Lan BootROM

ROM G

Disable,Enable.

LVDS Switch

LVDS G

Disable,Enable

Backlight Control

G

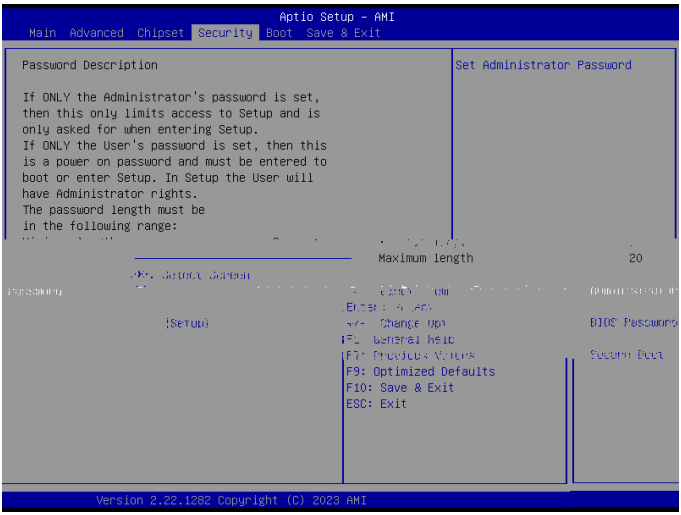
PWM Inverted,PWM Normal.

Panel Type

G

800x600 Single 24Bit,1e,Enable

4.6 Security



Administrator Password

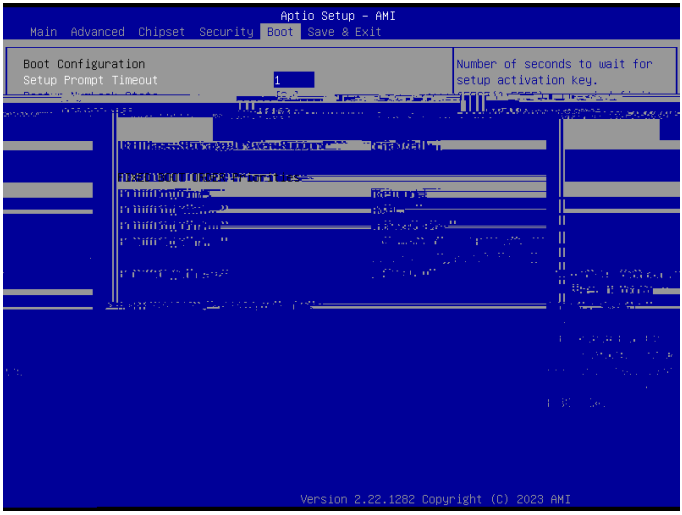
1. Administrator Password <Enter> G
2. d Create New Password d 3~20
<Enter> d Confrm Password d G
d Invalid Password! d G
d Administrator Password d d Enter Current Password d
d Create New Password d <Enter> G

BIOS Password

G

Setup,Setup&Post.

4.7 Boot



Setup Prompt Timeout

G

Bootup NumLock State

Numlock G On NumLock

G Of Numlock

On,Of.

Full Screen Logo

G

Enabled,Disabled.

USB Mass Storage Driver Support

USB G

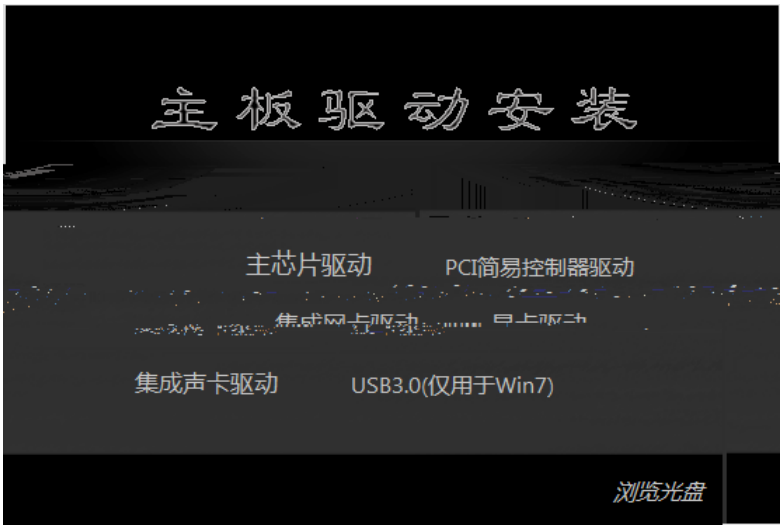
Enabled,Disabled.

Boot Option #1/2/4/5

G

NVMe,Hard Disk,CD/DVD,USB Hard Disk,USB Key,USB CD/DVD,Net work,UEFI AP.

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<Ö(pC¹ 7! %4Qu l]i W- CÛ ¬#8

]i(š W |F¾hÔ! <“B+#m2 3²hrZó,ûZ7Gökã$ l9«4à5BJ¬aMY¾,ûZ7$å%a ¾

6 WDT 指导

6.1 wdt控制

```
//enter cfgmode
IoWrite8(NCT6126D_CONFIG_INDEX,0x87);
IoWrite8(NCT6126D_CONFIG_INDEX,0x87);

//select watchdog device
IoWrite8(NCT6126D_CONFIG_INDEX,0x07);
IoWrite8(NCT6126D_CONFIG_DATA,0x08);

//enable watchdog,CR30 bit0
IoWrite8(NCT6126D_CONFIG_INDEX,0x30);
TempData = IoRead8(NCT6126D_CONFIG_DATA);
IoWrite8(NCT6126D_CONFIG_DATA,(TempData | 1));

//Stop WDT device for configuration
IoWrite8(NCT6126D_CONFIG_INDEX,0xF1);
IoWrite8(NCT6126D_CONFIG_DATA,0x00);

IoWrite8(NCT6126D_CONFIG_INDEX,0xF2);
IoWrite8(NCT6126D_CONFIG_DATA,0x00);

//start to config watchdog setup option items
//mode fill to CRF0 bit 3
IoWrite8(NCT6126D_CONFIG_INDEX,0xF0);
TempData = (IoRead8(NCT6126D_CONFIG_DATA) & 0xF7) | (0 << 3); // second
IoWrite8(NCT6126D_CONFIG_DATA,TempData);

//timeout value fill to CRF1
IoWrite8(NCT6126D_CONFIG_INDEX,0xF1);
IoWrite8(NCT6126D_CONFIG_DATA,20);    // 20S
```

7 GPIO 指导

7.1 GPIO控制

JEC-1303LG DO1

(1) GP30/GP31/GP32/GP33/GP34/GP35/GP36/GP37H

(2) GPIO Group GP3x/4x/6x Logical Device 7H

(3) GP3x(30~37) Logical Device 7 CR 0xED Bit0~Bit7H

(4) GP33 /

```
#define SuperIo_Index_Port  0x2E
#define SuperIo_Data_Port   0x2F
#define GPIO_LDN7_DEVICE    0x07
#define GPIO_GROUP_3_IO_REGISTER    0xEC
#define GPIO_GROUP_3_DATA_REGISTER  0xED

//a.        Super IO    Configuration Mode
IoWrite8(SuperIo_Index_Port, 0x87);
IoWrite8(SuperIo_Index_Port, 0x87);
//b.                    GPIO, LDN 7
IoWrite8(SuperIo_Index_Port, 0x07);
IoWrite8(SuperIo_Data_Port, GPIO_LDN7_DEVICE);
//c.        GPIO Group 3            GP33
UINT8 BitOffset = 3;
UINT8 Data8H

IoWrite8(SuperIo_Index_Port, GPIO_GROUP_3_DATA_REGISTER);
Data8 = IoRead8(SuperIo_Data_Port);
Data8 = Data8 >> BitOffset;
Data8 = Data8 & 0x1;
if (Data8){
return 1;//        GPIO
}else{
  return 0;//       GPIO
}
//d.        Super IO    Configuration Mode
IoWrite8(SuperIo_Index_Port, 0xAA);  //       Super IO Configuration Mode       SuperIO
                        ,                   Configuration Mode
```

信息

产品型号	片	内存	显	存储	USB3	USB2	COM	LAN	PCI	PCIe
SIM3-3510	N SOC	1 DDR4	3(3)	1SATA	4	5	6	2	1	1
