h G h

G h

HU HU G

h G

h h G

h h

G

h

G

h G

h G

⚠
h G

⚠
A G h G h G

G h G

G

⚠
G

G G h G

⚠
h G

ESD

(ESD, electrostatic sensitive devices) ч



ESD h ч

- ESD h Ў h ў G
- G
- ESD h G
- ESD G
- ESD G

目录

1 1
1.1 1
1.2 1
2 3
2.1 3
2.2 3
2.3 3
2.3.1 3
2.4 3
3 4
3.1 4
3.2 JMC-7300E1 4
4 5
4.1 5
4.2 5
5 6
5.1 JMC-7300E1 6
5.1.1 JMC-7300E1W IO 6
5.1.2 JMC-7300E1H IO 7
5.2 9
5.3 COM1/2 9
5.4 10
5.8.1 JDP1 10
5.8.2 JDP2 10
5.8.3 CLR_CMOS1 11
5.8.4 SATA0/1_POWER 11
5.8.5 SATA0/1/2/5 11
5.8.6 GPIO0 11
5.8.7 GPIO1 12
5.8.8 LPC1 12
5.8.9 KBMS1 12
5.8.10 COM3 13
5.8.11 COM4 13
5.8.12 COM5 13
5.8.13 COM6 13
5.8.14 JBUT1 14
5.8.15 RST_BUT1 14
5.8.16 5VPWR 14
5.8.17 PSON1 14
5.8.18 USB2H1 14

5.8.19 JSPI1 15
6 16
6.1 JMC-7300E1 16
6.2 JMC-7300E1

1

1.1

JMC-7300E1 2.75 350W 3 GPU G
GPU G AI HU3D G
Intel® LGA1200 10th&11th Core H i9/i7/i5/i3/Pentium®/ Celeron®/Xeon Processor with W480E/H420E PCH
2 64GB DDR4 2666/2933 MHz SO-DIMM(W480E SKU ECC)
VGA/HDMI
2xGbE LAN,8xUSB,2xRS232/422/485 4xRS232( )
2 2.5 "
GPU h 350W h 2.75 h 334.6mm GPU
24V h h 750W

	- JMC-7300E1
CPU	- LGA1200 Gen 10th&11th Core H i3/i5/i7/i9 Pentium®/Celeron®/ ® Processor
	- W480E/H420E

	- ч 24V - ч ч 448W Ў 350W GPU 65W CPU ÿ - 750W Ў 350W GPU ÿ - 2 8-pin h GPU Ў 12VDC h 17A ÿ - 1 x 4-pin h Ў 12VDC h 5A ÿ
	- W480E ч 2x Mini-PCIe (SIM , 4G Ђ 1 mSATA), 1PClex16 h 1PClex4 - H420E ч 1x Mini-PCIe, 1x mSATA, 1PClex16 h 1PClex4
	- / ч 65WCPU ч -10ue~50ue Ў ÿ 35WCPU ч -10ue~60ue Ў ÿ ;95%@40ue - / ч -40ue~85ue h 95%@40ue
	- With SSD: 2 Grms @ 5 ~ 500 Hz, random, 1 hr/axis - With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
	- 255 / h
BIOS	- AMI UEFI BIOS
	- Windows 10(64 bit), Linux OS, Ubuntu 20.04
(W{D{H)	- 385(L) mmx192(W)mmx223(H)mm

2

2.1

h h
h h Ң Ң
ÿ ÿ h Ң ɢ

2.2

h 0œ‘ 40œ h
20%‘ 85% ɢ Ң Ң h
Ң ɢ 10cm h Ң Ң Ң
50cm ɢ

⚠

h ɢ h
ÿ ÿ ɢ h 12 ɢ

2.3

2.3.1

ч
ɪ ɢ ɢ
ɪ ɢ h ɢ
ɪ h ɢ
ɪ ɢ h
ɢ

2.4

h ч
ɪ ɢ
ɪ h Ң ɢ
ɪ ɢ
ɪ 50mm 100mm ɢ
ɪ (ÿ ɢ
ɪ ɢ
ɪ I/O 0.5V ɢ

3

3.1

ל 19| כ ÿ ÿ ל
כ ל VESA ל
ל

3.2 JMC-7300E1

ч mm

4

4.1

⚠
G

⚠
G G

⚠
G

G h I/O ŸUSBÿ G I/O G

4.2

h DCIN G



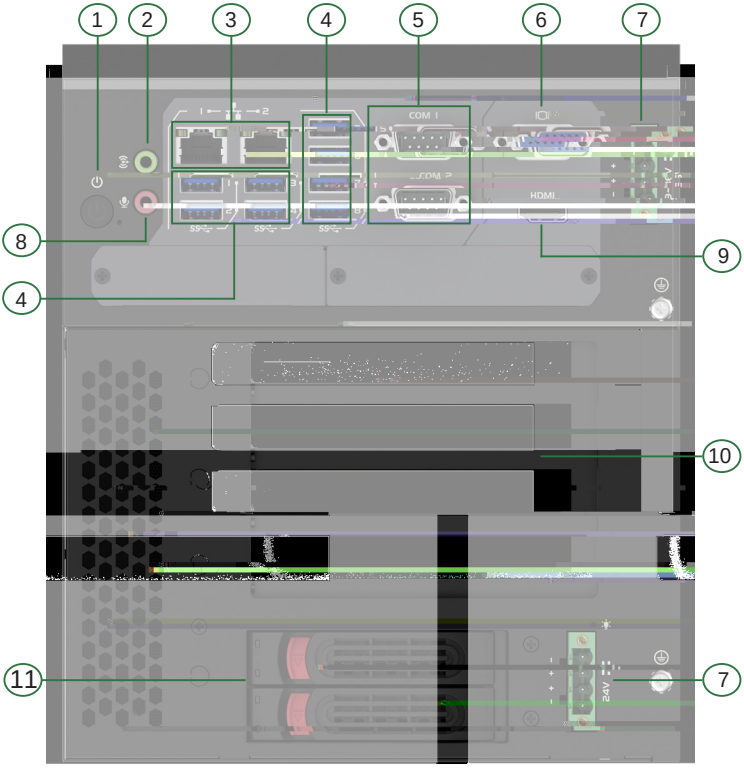
⚠

5

5.1 JMC-7300E1

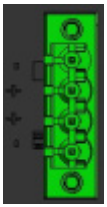


5.1.1 JMC-7300E1W IO



1.Power Button ч
2. Line out ч
3. LAN ч R‚45
4. USB2.0 ч USB2.0
5. COM ч COM
6. VGA ч VGA
7. DC_IN ч DC
8. Mic in ч
9. USB3.0 ч USB3.0
10. HDMI ч HDMI
11. ч 1PCIex16 h 1PCIex4
12. SATA ч SATA

5.2



1	GND
2	DCIN
3	DCIN
4	GND

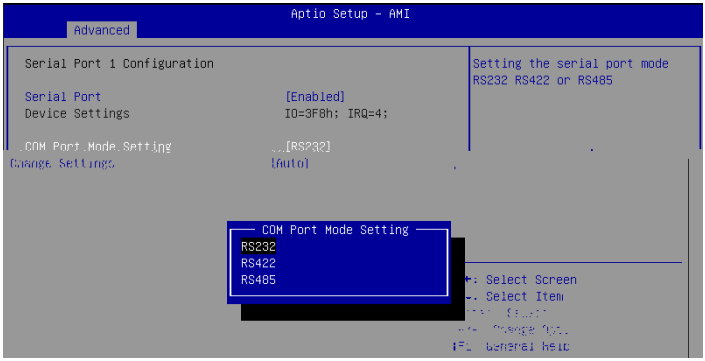
4pin Ÿ Ч3.5mm ÿ h ч

5.3 COM1/2



PIN	RS232	RS422	RS485
1	DCD	422TX-	485-
2	SIN	422TX+	485+
3	SOUT	422RX+	/
4	DTR	422RX-	/
5	GND	/	/
6	DSR	/	/
7	RTS	/	/
8	CTS	/	/
9	RI	/	/

ч COM1/2 RS232/422/485 h BIOS h ч



5.4.3 CLR_CMOS1

	1	NC
	2	PCH_RTCRST_N
	3	GND

5.44 SATA0/1_POWER

	1	+V5
	2	GND
	3	+V12
	4	GND

5.4.5 SATA0/1/2/5

	1	GND
	2	SATA_TX_P
	3	SATA_TX_N
	4	GND
	5	SATA_RX_N
	6	SATA_RX_P
	7	GND

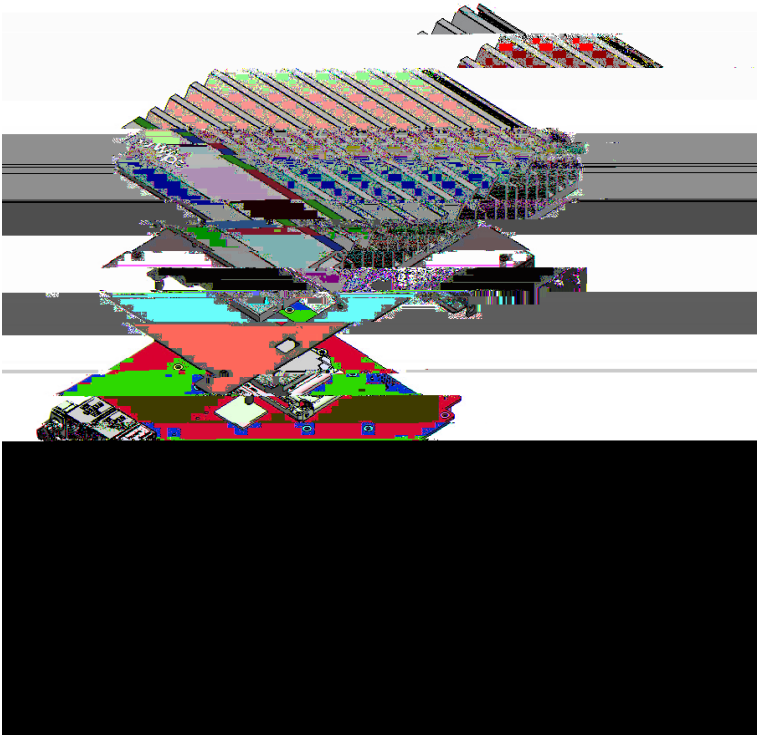
	1	GPIO0_0	2	GPIO0_4
	3	GPIO0_1	4	GPIO0_5
	5			

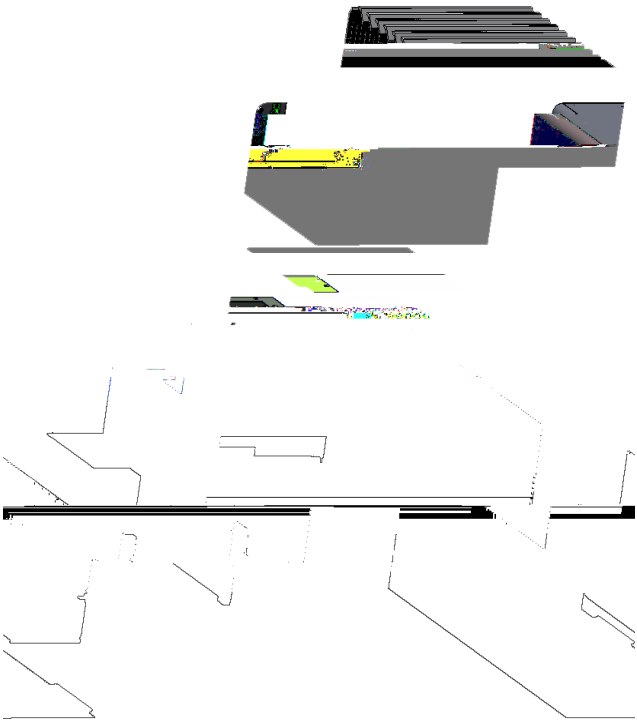
5.4.19 JSPI1

	1	+V3.3	2	+V3.3
	3	SPI_MISO	4	SPI_MOSI
	5	SPI_CS	6	SPI_CLK
	7	GND	8	SPI_WP
	9	SPI_HOLD	10	NC

6

6.1 JMC-7300E1





1	JMC-7300E1	2		3	
4		5			

7 BIOS

7.1 BIOS

AMI BIOS ɢ BIOS Basic Input Output System (ÿ ɢ
ROM Ÿ Read-Only Memory) ɢ h BIOS
h ч
a. h POST(Power On Self Test) ɢ
b. ɢ
c. Hʊ ɢ
d. SETUP ɢ
BIOS CMOS RAM h
ɢ h h BIOS ɢ CMOS
h BIOS ɢ

7.2 BIOS

BIOS Setup h ɢ BIOS
h h h ɢ
SETUP ч
a. h SETUP Ꮒ
b. ɢ

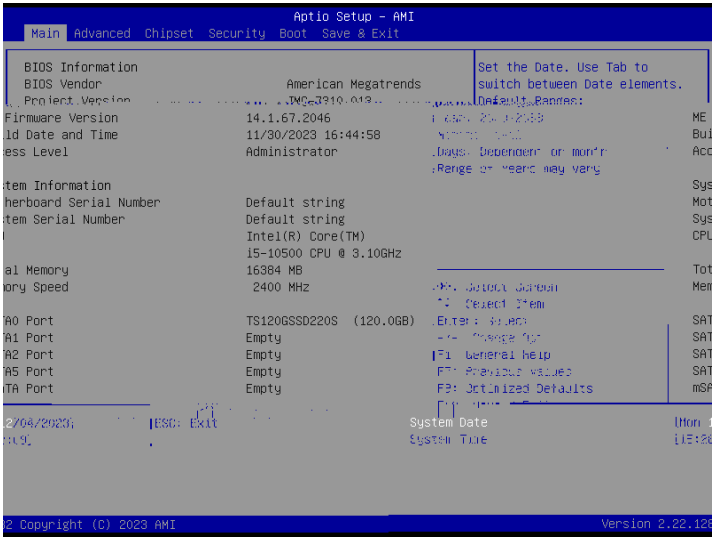
ч BIOS h h BIOS ɢ
ɢ

7 ᵕ ᎒ ◓ ɣ t & ɢ

7.3 BIOS

Main		BIOS
Advanced		BIOS
Chipset		
Security		
Boot		
Save & Exit		BIOS

7.4 Malq



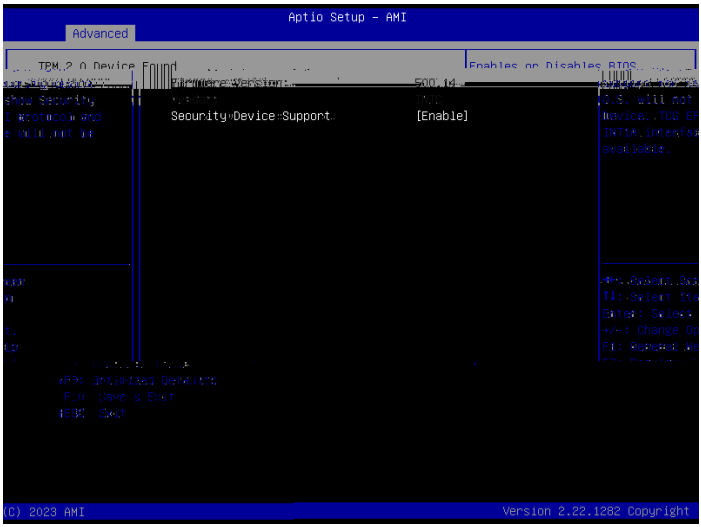
S|vwhp Dawh ( )

, d , / / d G

S|vwhp Tlph

< >< >< > G

Trusted Conžguration <Enter> G

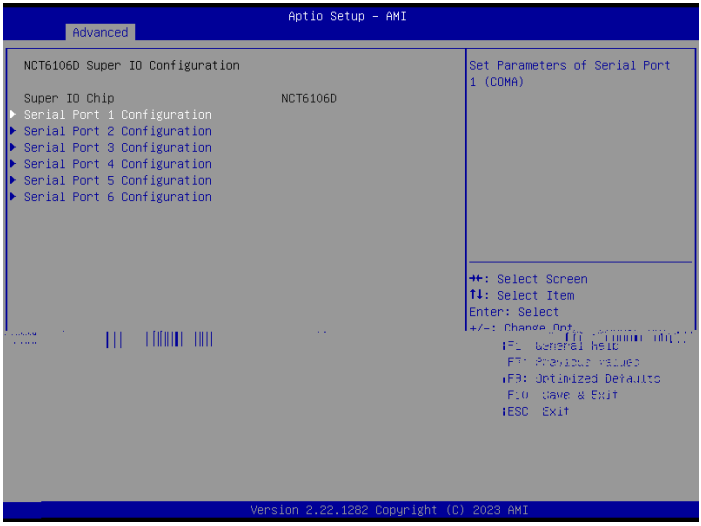


Shfxulw| Dhylfh Sxssruw

BIOS G

ч Disable,Enable.

NCT6106D Super IO Conžguration <Enter> G



Shula0 Pruw 1/2/3/4/5/6 Crq jxuawlrq

G

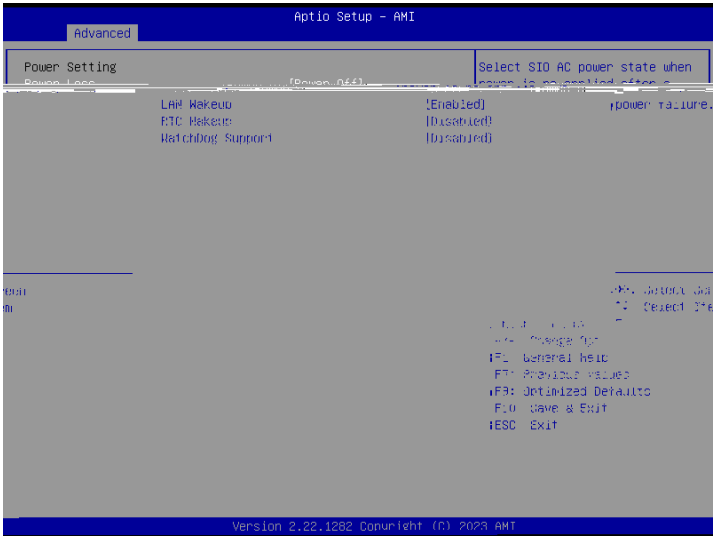
CPU Conžguration <Enter> G

Txubr Mrgh

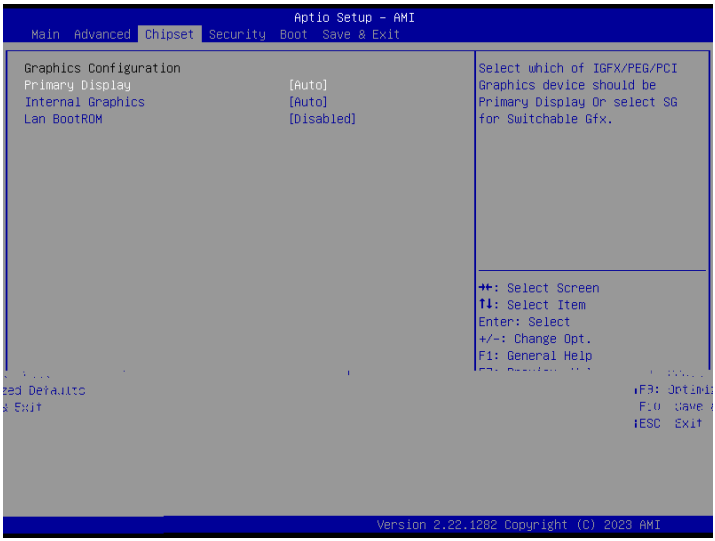
Turbo G

ч Enabled,Disabled.

Power Conżguration <Enter> G



7.6 CkIsvhW



Pul p au| Dlvs0a|

HU G

ч Auto,Enabled,Disabled.

Iqwhuqa0 GuaskIfv

G

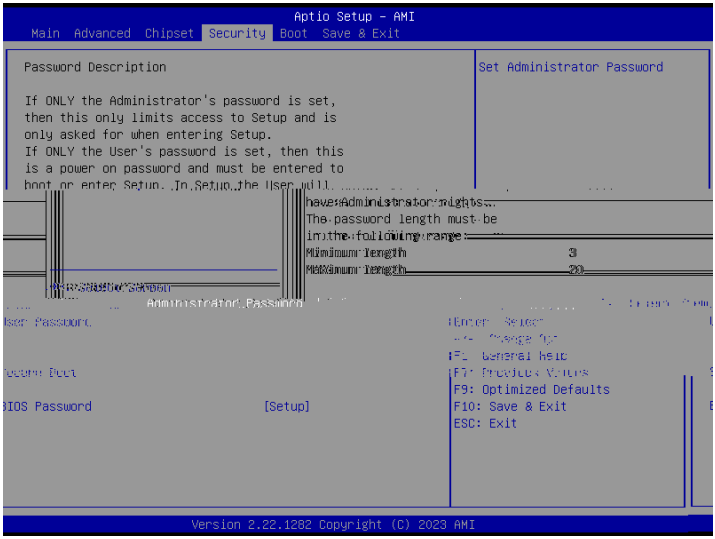
ч Auto,Disable,Enable.

Laq Br rwROM

ROM G

ч Disable,Enable.

7.7 Shfxulw|



Ag p lqlvwudwru Pavvz rug

h ч

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

h d Administrator Password d h d Enter Current Password d h d Create New Password d <Enter> G

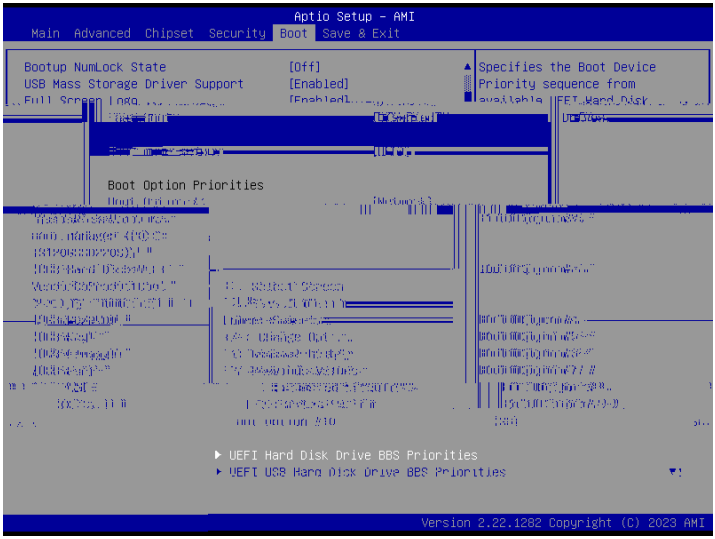
Uvhu Pavvz rug

h d Administrator Password d G

BIOS Pavvz rug

BIOS ч Setup,Setup&Post G

7.8 Br rw



Br rw Nx p Lr fn Swawh

NumLock G

↳ On,Oƀ.

USB Mavv Swrua j h Dulyhu Sxss ruw

USB G

↳ Disable,Enable.

Fxoo Sfuhhq Lr j r

Logo G

↳ Disable,Enable.

Favw Br rw

G

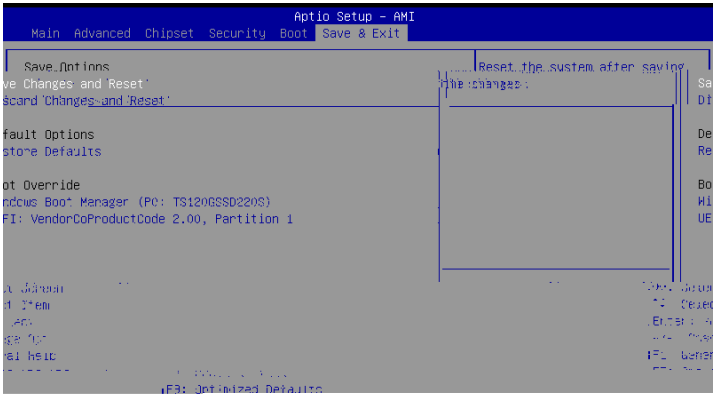
↳ Disable,Enable.

Br rw Oswlrq #1-10

G

↳ NVME,Hard Disk,USB Hard Disk,USB key,USB CD/ ð ˎ ʎ

7.9 Sayh&E{lW



Sayh Ckaqjhv aqg RhvhW

G

Dlvfaug Ckaqjhv aqg RhvhW

G

RhvwruhDhiaxOWv

G

8

JMC-7310 GPIO G

8.1 GPIO

JMC-7310 GPIO
Ÿ 1 ÿ GPIO0 GP30/31/32/33/34/35/36/37 h / Ҍ
Ÿ 2 ÿ GPIO1 GP40/41/42/43/44/45/46/47 h / Ҍ
Ÿ 3 ÿ GPIO Group GP3x/4x Logical Device 7 Ҍ
Ÿ 4 ÿ GP3x(30~37) / ч Logical Device 7 CR 0xEC Bit0~Bit7 h 0: Output Pin / 1:Input Pin Ҍ
GP4x(40~47) / ч Logical Device 7 CR 0xF0 Bit0~Bit7 h 0: Output Pin / 1:Input Pin Ҍ
GP3x(30~37) Logical Device 7 CR 0xED Bit0~Bit7 Ҍ
GP4x(40~47) Logical Device 7 CR 0xF1 Bit0~Bit7 Ҍ
Ÿ 5 ÿ GPIO Group3 h Ҍ GPIO Group4 h GPIO_GROUP_3_IO_REGISTER/GPIO_GROUP_3_DATA_REGISTER GPIO Group4 Ҍ 0x30/0x37 0x40/0x47 Ҍ

```
#dežne SuperIo_Index_Port 0x2E
#dežne SuperIo_Data_Port 0x2F
#dežne GPIO_LDN7_DEVICE 0x07
#dežne GPIO_GROUP_3_IO_REGISTER 0xEC
#dežne GPIO_GROUP_4_IO_REGISTER 0xF0
#dežne GPIO_GROUP_3_DATA_REGISTER 0xED
#dežne GPIO_GROUP_4_DATA_REGISTER 0xF1

GPIO Gurxs 3 Ш
//a. Sxshu IO Crq jxuawlrq Mrgh
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);

//f. GPIO GP3{(30¢37) Iqsxw Plq
IoWrite8(SuperIo_Index_Port, GPIO_GROUP_3_IO_REGISTER);
IoWrite8(SuperIo_Data_Port, 0xFF); //0xFF GPIO GP3x(30~37) Input Pin

//g. GPIO Gurxs 3 GP33
UINT8 BitOhset = 3;
UINT8 Data8 Ҍ
IoWrite8(SuperIo_Index_Port, GPIO_GROUP_3_DATA_REGISTER);
Data8 = IoRead8(SuperIo_Data_Port);
Data8 = Data8 >> BitOhset;
Data8 = Data8 & 0x1;
if (Data8){
return 1;// GPIO
```

```
}else{
  return 0;//       GPIO
}

//h.      GPIO GP3{(30¢37)    Oxwsxw Plq
IoWrite8(SuperIo_Index_Port, GPIO_GROUP_3_IO_REGISTER);
IoWrite8(SuperIo_Data_Port, 0x00); //0x00       GPIO GP3x(30~37)              Output Pin

//i.    GPIO Gurxs 3                    GPO              GPIO              GPI              Щ
for(GpioNumber=0x30; GpioNumber <= 0x37; GpioNumber++)
{
BitObset = GpioNumber - 0x30;
IoWrite8(SuperIo_Index_Port, GPIO_GROUP_3_DATA_REGISTER);
Data8 = IoRead8(SuperIo_Data_Port);
Data8 &=~(0x1 << BitObset);//       bit       0 h       GPIO
//Data8 |= (0x1 << BitObset); /*       bit          1  h       GPIO              */
IoWrite8(SuperIo_Data_Port, Data8);//
}
//g.       Super IO    Conžguration Mode
 IoWrite8(SuperIo_Index_Port, 0xAA); //       Super IO Conžguration Mode     h SuperIO
                        ,                  Conžguration Mode ɢ
```

8.2 WDT

```
#dežne SuperIo_Index_Port 0x2E
#dežne SuperIo_Data_Port 0x2F
#dežne GPIO_LDN8_DEVICE 0x08
UINT8 Data8Ꮒ

//a.       SxshuIO    Crq   jxuawIrq Mrgh
IoWrite8(SuperIo_Index_Port, 0x87);
IoWrite8(SuperIo_Index_Port, 0x87);

//b.                    GPIO, LDN 8
IoWrite8(SuperIo_Index_Port, 0x07);
IoWrite8(SuperIo_Data_Port, GPIO_LDN8_DEVICE);

//f. Eqabohg WDT
IoWrite8(SuperIo_Index_Port, 0x30);
IoWrite8(SuperIo_Data_Port, IoRead8(SuperIo_Data_Port) | 0x01);

//g.       WDT                          Rhjlvwhu 0{F0    Blw3          1                    0
IoWrite8(SuperIo_Index_Port, 0xF0);

//
IoWrite8(SuperIo_Data_Port, IoRead8(SuperIo_Data_Port) | 0x08);

//
// IoWrite8(SuperIo_Data_Port, IoRead8(SuperIo_Data_Port) & 0xF7);
```

```
//h.      WDT              5   /
 IoWrite8(SuperIo_Index_Port, 0xF1);
 IoWrite8(SuperIo_Data_Port, 0x5);

 //i.      Sxshu IO  Crq  jxuawlrq Mrgh
 IoWrite8(SuperIo_Index_Port, 0xAA);

 //      Sxshu IO Crq  jxuawlrq Mrgh      SxshuIO                    ,
Crq  jxuawlrq MrghЩ
```

9

9.1

		/
		1Ң 2Ң 12
	ԁ d	
		G h
		1Ң 2Ң 3Ң h
		ÿ ÿ Ң
		ÿ Winpe ÿ h h
lҢO h		PCI ISA Ң Ң h
	BIOS	h BIOS Setup h BIOS Setup
BIOS h		
Boot device not found	BIOS h h	BIOS ԁ d (Boot) h
USB	USB 2.0 h USB 2.0	USB 2.0
	USB	1Ң USB Legacy Support ÿ USB ÿ 2Ң h USB