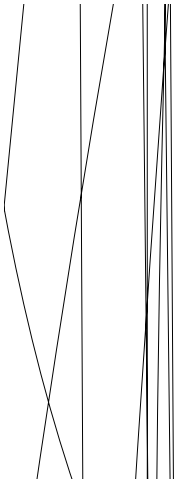
AIOT7-H610

Version 1.0

2.2

2.2.1 Serial ATA



ial ATA

Serial AT

Serial ATA G

2.3.2 M2-KEYM1

M.2 SSD Ђ
30

G

M.2-KEYM1 1 M.2 2242/2280
Key-M nVMESSDЂ
M.2-KEYB1 1 M.2 Key-B3042
4G/5G Ў PCIe x1
USB2.0 ў g

3 &

3.1

2 Ÿ ÿ G

Ÿ ÿ G

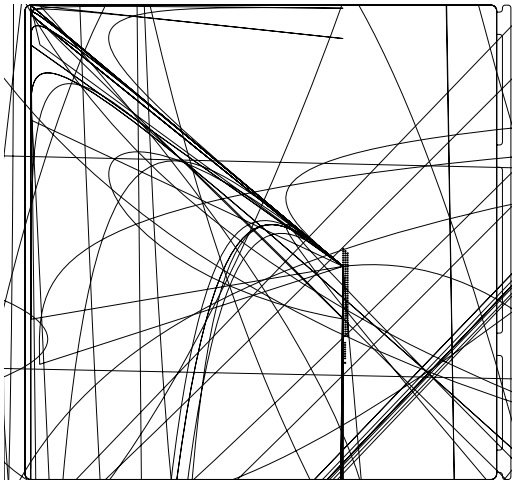
3 1‘ 2 2‘ 3 Ÿ ÿ G

SHORT OPEN OPEN Pin1~2 SHORT Pin2~3 SHORT

1 Ƀ

1. "1" 1 G
2. G

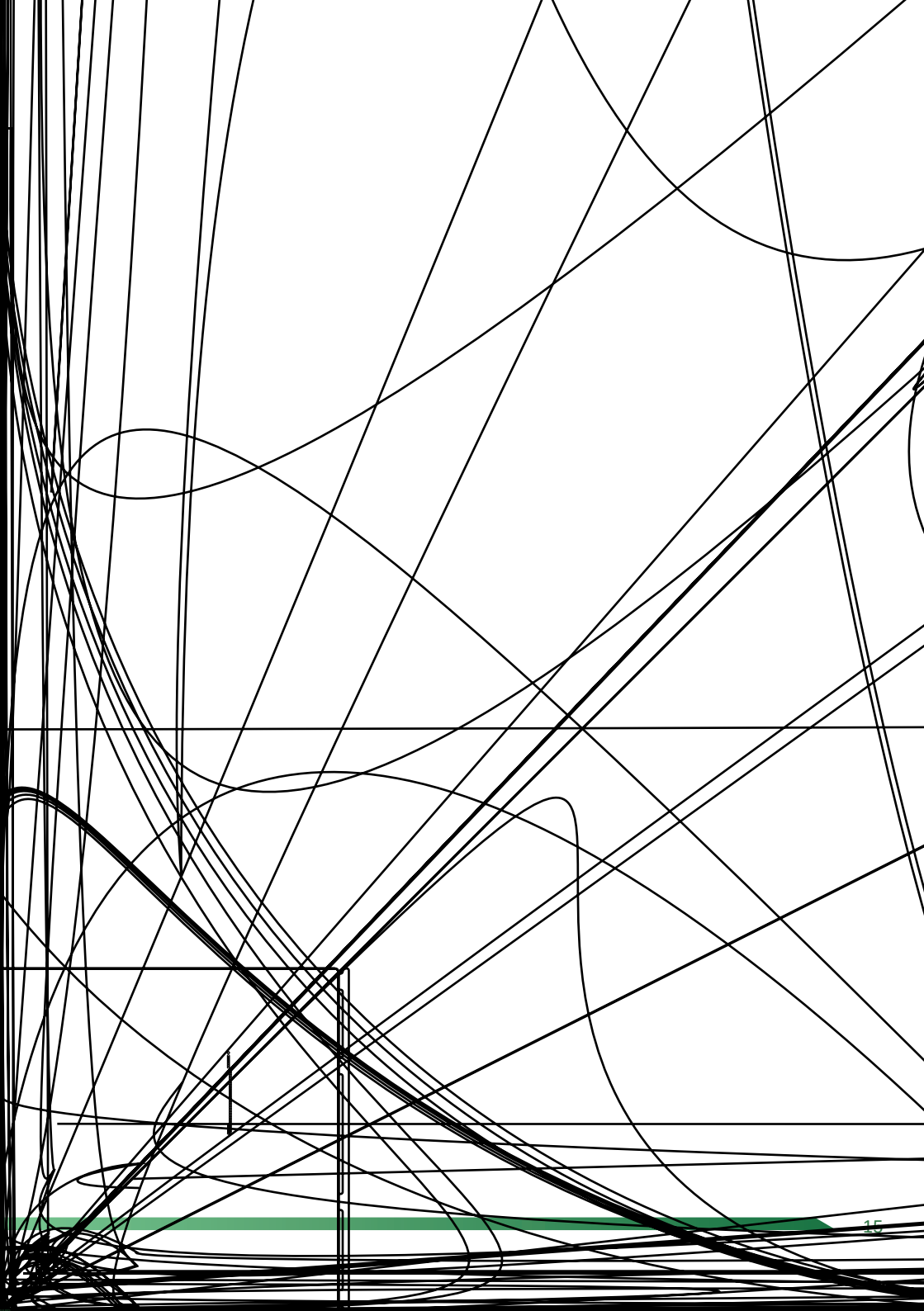
3.2



1-2	Disable ME
2-3	NORMAL

1-2	NORMAL
2-3	CLEAR_COMS

JC31 FOR COM3 JC2 FOR COM2	
3-4	NORMAL
1-2	PIN9=5V
5-6	PIN9=12V



4 BIOS

4.1 BIOS

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

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

4.2 BIOS

BIOS Setup BIOS
SETUP
a. SETUP H
b.

BIOS BIOS

4.2.1 BIOS

<DEL> BIOS

Press <Delete> to enter SETUP

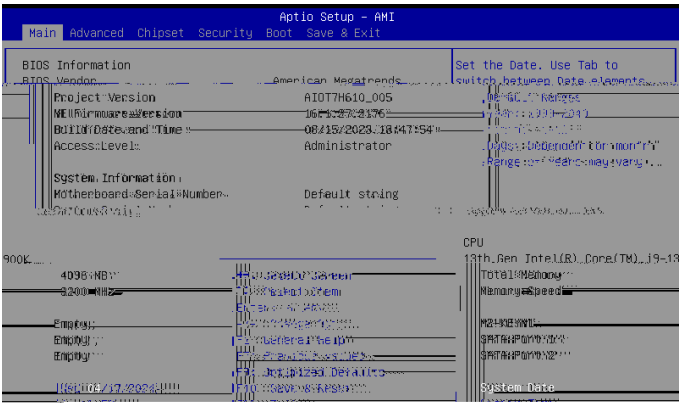
Press <F11> to enter Boot Menu

4.2.2

<Enter> <F1> <Esc>

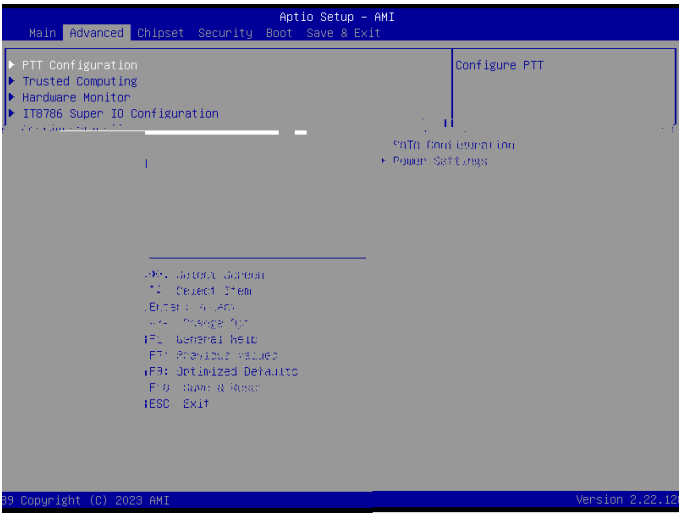
← →	
↑ ↓	
	/
	CMOS SETUP
	CMOS

4.3 Main



- BIOS Information(BIOS
- System Date ( )
  , d / / d G
- System Time
  < >< >< > G

4.4 Advanced



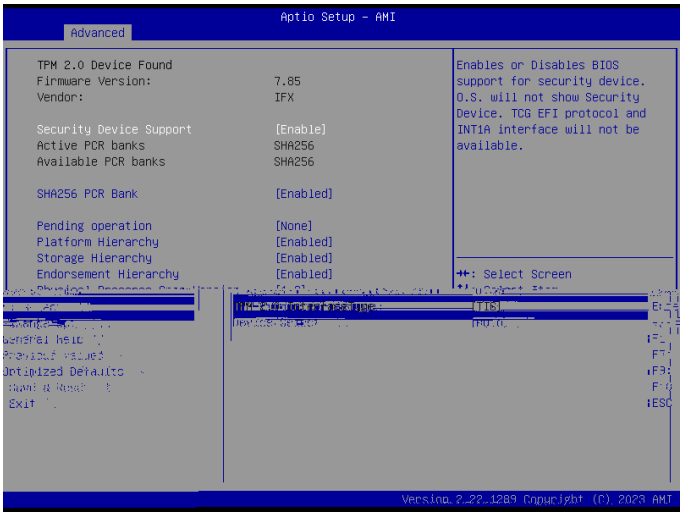
PTT Configuration <Enter>

- TPM Device Selection

  TPM G

  Auto,dTPM,PTT.

Trusted Computing <Enter>



- Security Device Support

  BIOS G

  Enabled,Disabled.
- SHA256 PCR Bank

  SHA256 PCR Bank G

  Enabled,Disabled.
- Pending operation

  G

  None, TPM Clear.
- Platform Hierarchy

  G

  Enabled,Disabled.
- Storage Hierarchy

  G

  Enabled,Disabled.
- Endorsement Hierarchy

  G

  Enabled,Disabled.
- Physical Presence Spec Version

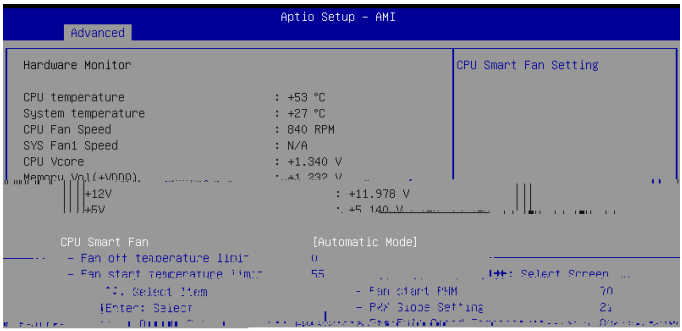
  G

  1.2, 1.3.
- Device Select

  G

  TPM 1.2 ,TPM 2.0 ,Auto.

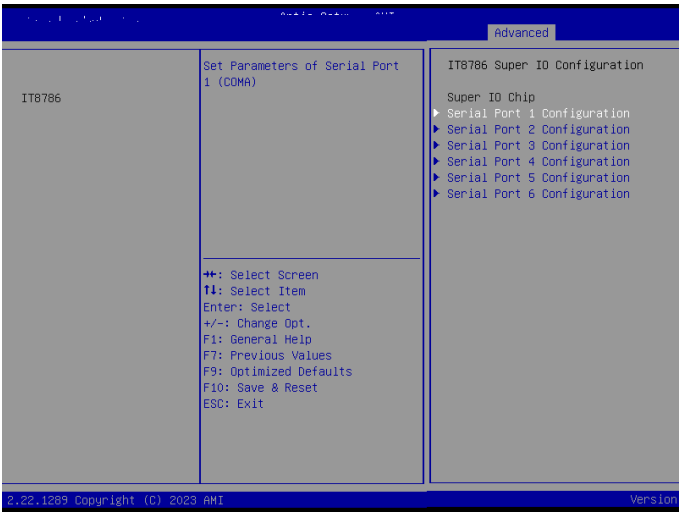
3 Hardware Monitor <Enter>



- CPU Smart Fan
  CPU G
  Enabled,Disabled.
- SYS Smart Fan
  G
  Enabled,Disabled.

- <Esc> d Advanced d

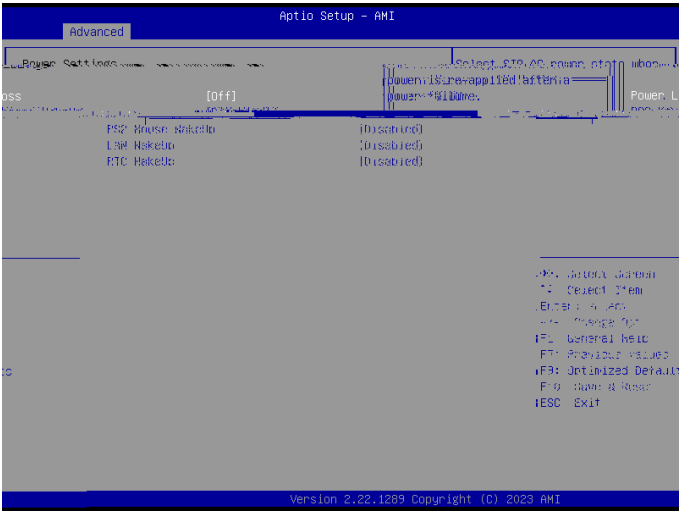
3 IT8786 Super IO Con f guration <Enter>



- Serial Port 1/2/3/4/5/6 Con f guration
  G

- <Esc> d Advanced d

Power Settings <Enter>



- Power Loss

  SIO AC G

  Of ,On.
- PS2 Keyboard WakeUp

  G

  Enabled,Disabled.
- PS2 Mouse WakeUp

  G

  Enabled,Disabled.
- LAN Wakeup

  G

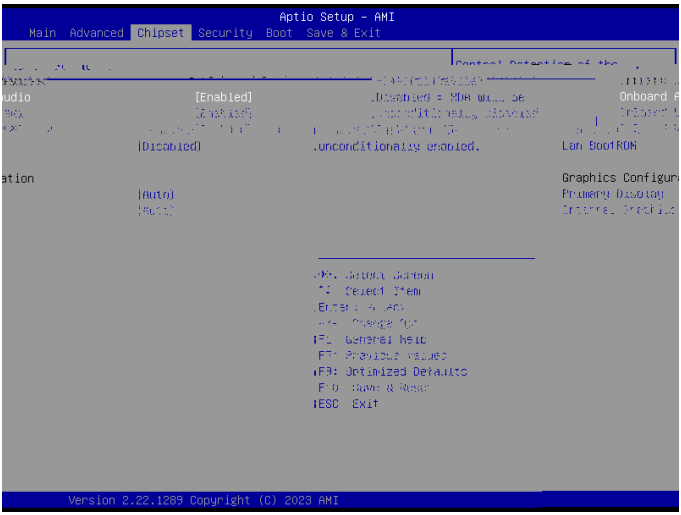
  Enabled,Disabled.
- RTC Wakeup

  G

  Enabled,Disabled.

- <Esc> d Advanced d

4.5 Chipset



- Onboard Audio

  WiFi G

  Disable,Enable.
- OnBoard LAN1

  OnBoard LAN1 G

  Disable,Enable.
- OnBoard LAN2

  OnBoard LAN2 G

  Disable,Enable.
- Lan BootROM

  Lan BootROM G

  Disable,Enable.
- Primary Display

  igfx G

  Auto,Disable,Enable.
- Internal Graphics

  G

  Auto,Disable,Enable.

4.6 Security

- Administrator Password

1. Administrator Password <Enter> G
2. d Create New Password d 3~20

<Enter> d Con f rm Password d G

d Invalid Password! d G

d Administrator Password d d Enter Current Password d

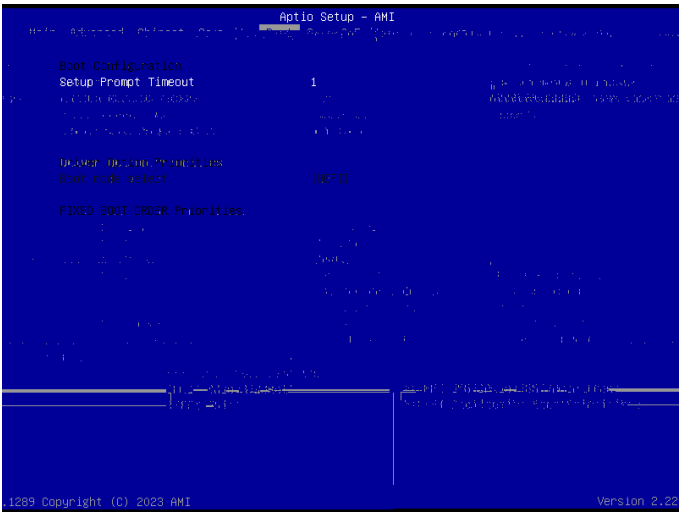
d Create New Password d <Enter> G

- Password check

G

Setup,Setup&Post.

4.7 Boot



- Setup Prompt Timeout

  G

- Bootup NumLock State

  Numlock G On NumLock

  G Of Numlock G

  On,Of.

- Full Screen Logo

  G

  Enabled,Disabled.

- USB Mass Stroage Driver Support

  USB Mass Storage G

  Enabled,Disabled.

- Boot Option #1/2/3/4/5/6

  G

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

4.8 Save & Exit

Save Changes and Reset

G

Discard Changes and Reset

G

Restore Defaults

G

5

G

X \AUTORUN.EXE Ÿ X ÿ G

( )

G

6 WDT

WDT SIO GPIO40 , LDN07 0x72 BIT7 0 1
0 x 73 0 x 74 ,
68s

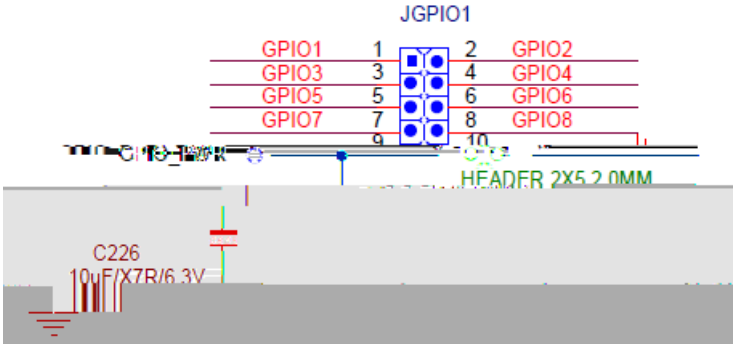
```
#de f ne SioIndexPort  0x2e
#de f ne SioDataPort   0x2f

UINT8 Data8=0;
UINT8 Bu f erx=0;
UINT8 WdtTimeOut = 68;
//       SIO
loWrite8(SioIndexPort, 0x87);
loWrite8(SioIndexPort, 0x01);
loWrite8(SioIndexPort, 0x55);
loWrite8(SioIndexPort, 0x55);

//       LDN 07
loWrite8(SioIndexPort, 0x07);
loWrite8(SioDataPort, 0x07);

//        GP40 to GPIO
loWrite8(SioIndexPort, 0x28);
Bu f erx = loRead8(SioDataPort);
Bu f erx |= BIT0;
loWrite8(SioDataPort, Bu f erx);

//GP40 non invert
loWrite8(SioIndexPort, 0xB3);
Bu f erx = loRead8(SioDataPort);
Bu f erx &= (~BIT0);
loWrite8(SioDataPort, Bu f erx);

//set to Alternate function
loWrite8(SioIndexPort, 0xC3);
Bu f erx = loRead8(SioDataPort);
Bu f erx &= (~BIT0);
loWrite8(SioDataPort, Bu f erx);

//Level WDT
loWrite8(SioIndexPort, 0xF1);
```

```
loWrite8(SioIndexPort, 0x55);

//      LDN 07
loWrite8(SioIndexPort, 0x07);
loWrite8(SioDataPort, 0x07);

loWrite8(SioIndexPort, 0x74);
loWrite8(SioDataPort, 0x0);
loWrite8(SioIndexPort, 0x73);
loWrite8(SioDataPort, 0);

//      SIO
loWrite8(SioIndexPort, 0x02);
loWrite8(SioDataPort, 0x02);
```

7 GPIO

1GPIO

11GPIO PIN



1.2.

GPIO MMIO

#define MEM_BASE 0xE06A0000

Offset

GPIO1=0X9E0 GPIO2=0X9F0 GPIO3=0XA00 GPIO4=0XA10

GPIO5=0XA20 GPIO6=0XA30 GPIO7=0XA40 GPIO8=0XA50

GPIO2

UINT16 OFFSET = 0X9F0;

UINT16 Value = 0;

GPIO2 low

MmioWrite16(MEM_BASE + OFFSET, (MmioRead16(MEM_BASE + OFFSET) & (~(BIT0 + BIT8 + BIT9)) | BIT9));

BIT0 1 0

GPIO2

MmioWrite16(MEM_BASE + OFFSET, (MmioRead16(MEM_BASE + OFFSET) & (~(BIT8 + BIT9)) | BIT8));

Value= MmioRead16(MEM_BASE + OFFSET) | BIT1 H

Bit1 1 0

					USB3	USB2	COM	LAN	M.2	PCIe
AIoT7-H610	H610	2 DDR4	4	2	4	6	6	2	1	1