3I610NX

Intel Skylake-U / Kaby Lake-U Core i CPU, DDR4 2133 MHz SODIMM, 4 x PoE, 1 x LAN / HDMI / USB / COM / PCIe mini card

All-In-One
Intel Skylake-U / Kaby Lake-U Core i CPU,
4 x PoE, 1 x Intel GbE LAN, 2 x PCIe mini card slots, HDMI, VGA,
2 x USB 3.0, 6 x USB 2.0, 2 x COM, Wide Range DC-IN

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

NO. 3I610NX
Release date: Aug. 24. 2018

Contents

User Manual edition 0.1, Aug. 24. 2018

Warning !

1. Battery
   Batteries on board are consumables.
   The life time of them are not guaranteed.

2. Fless solution with HDD
   The specification & limitation of HDD should be considered carefully when the fanless solution is implemented.

3. We will not give further notification in case of changes of product information and manual.

4. SATA interface does not support Hot SWAP function.

5. There might be a 20% inaccuracy of WDT at room temperature.

6. Please make sure the voltage specification meets the requirement of equipment before plugging in.

7. There are two types of SSD, commercial grade and industrial grade, which provide different read / write speed performance, operation temperature and life cycle. Please contact sales for further information before making orders.

8. Caution! Please notice that the heat dissipation problem could cause the MB system unstable. Please deal with heat dissipation properly when buying single MB set.

9. Please avoid approaching the heat sink area to prevent users from being scalded with fanless products.

10. If users repair, modify or destroy any component of product unauthorizedly, We will not take responsibility or provide warranty anymore.

11. DO NOT apply any other material which may reduce cooling performance onto the thermal pad.

12. It is important to install a system fan toward the CPU to decrease the possibility of overheating / system hanging up issues, or customer is suggested to have a fine cooling system to dissipate heat from CPU.

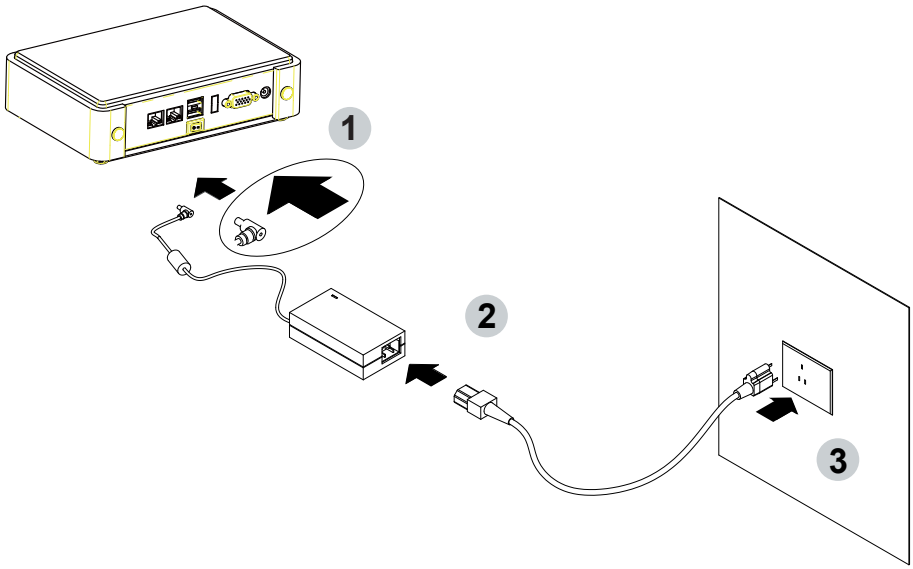
✻ Hardware Notice Guide

1. Before linking power supply with the motherboard, please attach DC-in adapter to the motherboard first. Then plug the adapter power to AC outlet.
   Always shut down the computer normally before you move the system unit or remove the power supply from the motherboard. Please unplug the DC-in adapter first and then unplug the adapter from the AC outlet.
   Please refer photo 1 as standard procedures.
2. In case of using DIRECT DC-in (without adapter), please check the allowed range for voltage & current of cables. And make sure you have the safety protection for outer issues such as short/broken circuit, overvoltage, surge, lightning strike.
3. In case of using DC-out to an external device, please make sure its voltage and current comply with the motherboard specification.
4. The total power consumption is determined by various conditions (CPU/motherboard type, device, application, etc.). Be cautious to the power cable you use for the system, one with UL standard will be highly recommended.
5. It's highly possible to burn out the CPU if you change/ modify any parts of the CPU cooler.
6. Please wear wrist strap and attach it to a metal part of the system unit before handling a component. You can also touch an object which is ground connected or attached with metal surface if you don't have wrist strap.
7. Please be careful to handle & don't touch the sharp-pointed components on the bottom of PCBA.
8. Remove or change any components form the motherboard will VOID the warranty of the motherboard.
9. Before you install/remove any components or even make any jumper setting on the motherboard, please make sure to disconnect the power supply first. (follow the aforementioned instruction guide)
10. "POWERON after PWR-Fair" function must be used carefully as below:
    When the DC power adaptor runs out of power, unplug it from the DC current;
    Once power returns, plug it back after 5 seconds.
    If there is a power outage, unplug it from the AC current, once power returns, plug it back after 30 seconds. Otherwise it will cause system locked or made a severe damage.

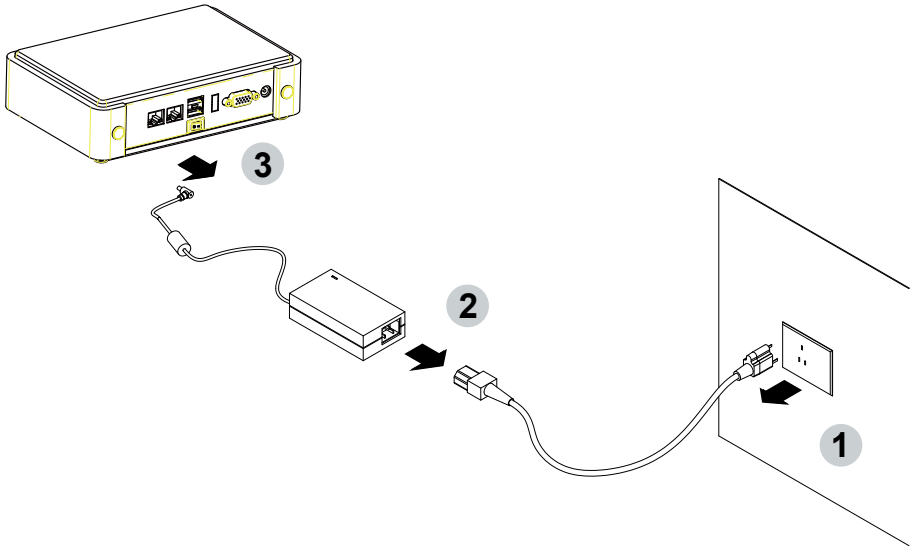
Remark 1:
Always insert / unplug the DC-in horizontally & directly to / from the motherboard. DO NOT twist, it is designed to fit snugly.
Moreover, erratic pull / push action might cause an unpredictable damage to the component & system unit.

Photo 1

Insert



Unplug



Chapter-1

General Information

The 3I610NX is a 3.5" (146 x 102 mm) motherboard with Intel® Skylake-U SoC processor to give users fast, convenient and simplified solutions for industrial and embedded applications. 3I610NX is built to be all-in-one Power over Ethernet solution with combination of all necessary embedded I/O functions, which makes it to be an ideal PoE solution for supplying the power through PoE device such as IP camera, IP phone, Wireless Access Points, Automation Control, Transportation, ATM machines, medical / hospital station and warehouse solution. The embedded motherboard 3I610NX is specially designed for advanced embedded networking applications where the economical use of power is in high demand. 3I610NX ensures the high performance level required of today's most popular networking applications.

The 3I610NX supports high-speed data transfer interfaces such as PCIe gen3, USB 3.0, and SATA 6 Gb/s (SATA III), with two-channels DDR4 2133 MHz memory up to 32 GB SODIMM slot and supports two serial ports RS232 / RS485 / RS422 jumper free auto selected by BIOS and +5V/12V selectable by jumper. It supports 2 ports of USB 3.0, 6 ports of USB 2.0. The expandable interfaces include 1 full-size PCIe Mini card for PCIe x 1 or mSATA (auto-detection) and USB interface, and 1 full-size PCIe Mini card for PCIe x 1 and USB 3.0 interface and two SATA III ports, as well as graphics interface for HDMI & VGA displays.

3I610NX is specially designed with wide-Range Voltage DC in (9~36V) for widely varying input voltage requirement. It supports with one 10/100/1000 Mbps Ethernet for seamless broadband connectivity. Its greatest features are the 4 set of PoE gigabit LAN which follows the IEEE 802.3af standard to supply the necessary power to PoE devices. With Wake-On LAN function and the PXE function in BIOS, these are perfect control board for networking and automation control purpose.

The All-In-One motherboard 3I610NX is fully compatible with industry standards, plus technical enhancements and thousands of software applications developed for IBM PC/AT compatible computers. These control logic provides high-speed performance for the most advanced multi user and multitasking applications available today.

1-1 Major Feature

1. Intel® Celeron 3955U Processor 2.0GHz, (Dual core), Intel® Core i5-6200U Processor 2.3GHz / 2.8GHz (Dual core), Intel® Core i7-6600U Processor 2.6GHz / 3.4GHz (Dual core)
2. Intel 9th generation (Gen 9) LP graphics and media encode/decode engine, Intel® Celeron 3955U 300MHz / 900MHz, Intel® Core i5-6200U 300MHz / 1GHz, Intel® Core i7-6600U 300MHz / 1.05GHz
3. Support 1 HDMI 1.4b up to 3840 x 2160, VGA up to 1920 x 1200
4. DDR4 SODIMM slot x 2, up to 32GB
5. Support 5 x 10/100/1000 Mbps Intel LAN ports, 1 port GbE LAN, 4 ports PoE
6. Support 2 x RS232 auto selected to RS485 / RS422 by BIOS
7. 2 x USB 3.0 and 6 x USB 2.0
8. Support extended 1 x full-size Mini PCIe card for PCIe x 1 / mSATA (auto-detect) and USB interface, 1 x full-size Mini PCIe card for PCIe x 1 and USB 3.0 interface.
9. Support 2 SATA port
10. Hardware digital Input & Output, 16 x DI / 16 x DO, Hardware Watch Dog Timer, 0~255 sec programmable
11. Support TPM 2.0 (Optional)
12. Wide Range DC IN +9V~36V
13. PCB Dimension: 146 x 102 mm

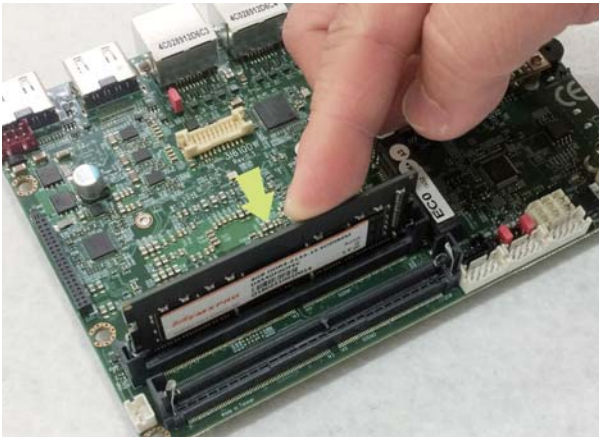
1-2 Specification

1. **SOC:** Intel® Celeron 3955U Processor 2.0GHz, (Dual core), Intel® Core i5-6200U Processor 2.3GHz / 2.8GHz (Dual core), Intel® Core i7-6600U Processor 2.6GHz / 3.4GHz (Dual core)
2. **Memory:** DDR4 SODIMM slot x 2, up to 32GB
3. **Graphics:** Intel 9th generation (Gen 9) LP graphics and media encode/decode engine, Intel® Celeron 3955U 300MHz / 900MHz, Intel® Core i5-6200U 300MHz / 1GHz, Intel® Core i7-6600U 300MHz / 1.05GHz. Support LVDS 2 Channels 48bits, Max up to 1920 x 1080 resolution, HDMI 1.4b up to 3840 x 2160, VGA up to 1920 x 1200
4. **SATA:** Integrated Serial ATA Host Controller 2 SATA port, SATA Gen3 Data transfer rates up to 6.0 Gb/s (600 MB/s).
5. **LAN:** 1 Intel I219LM Giga Phy & 4 Intel I210-IT LAN chipset with 10 / 100 / 1000 Mbps for PCIe x 1 V2.1
6. **I/O Chip:** F81804 I/O chipset for 2 ports RS232 / RS422 / RS485 auto selected by BIOS
7. **USB:** 2 type A USB 3.0, 6 USB 2.0
8. **WDT/DIO:** Hardware digital Input & Output, 16 x DI / 16 x DO (Option) / Hardware Watch Dog Timer, 0~255 sec programmable
9. **Expansion interface:** one full-size PCIe Mini card for PCIe x 1 / mSATA (auto-detect) and USB interface, one full-size Mini PCIe card for PCIe x 1 and USB 3.0 interface
10. **TPM:** SLB 9665 TT 2.0 Trusted Platform Module (Optional)
11. **BIOS:** Insyde UEFI BIOS
12. **Dimension:** 146 x 102 mm (3.5 inch)
13. **Power:** On board DC +9~36V

1-3 Installing the SO-DIMM

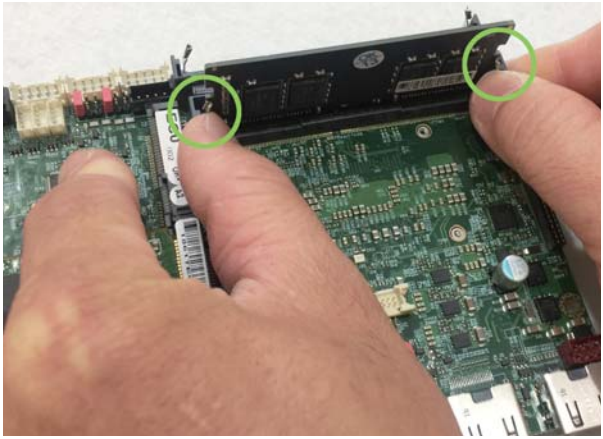
1. Insert the memory into the SODIMM slot diagonally.

2. Press the memory into the SODIMM slot.



1-3-1 Removing the SO-DIMM

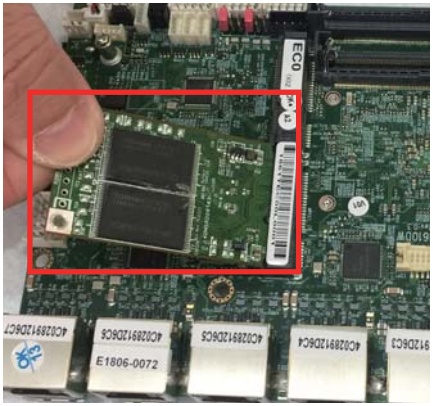
1. Pull down two sides of fixed flat- springs out of the memory



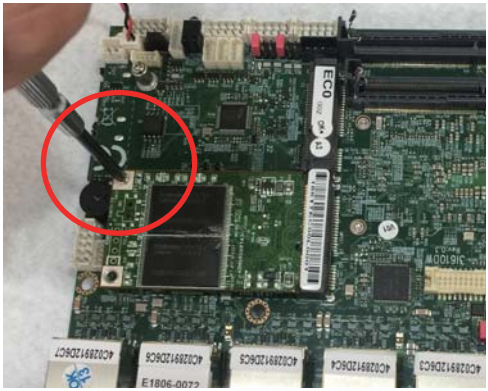
1-4 Installing the Mini PCI-e Card (Full Size)

1. Unscrew the screw on the board

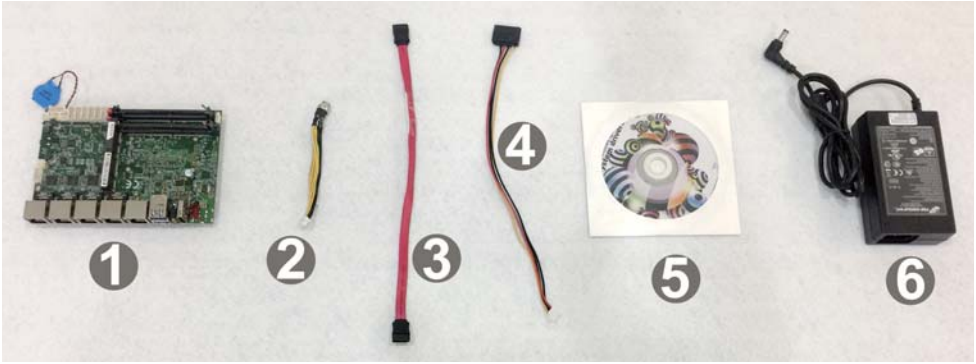
2. Plug in the Mini Card in a 45 angle



3. Gently push down the Mini Card and screw the screw back.



1-5 Packing List



	Material Code	Description	Detail Specification	Quantity
1	7G1901-1740S0003	MB-3I610NX-E2-EC0	LF	1
2	6G6003-7350-0100	Power Cable	LF, 2.0 2*4/DC JK,L=9cm	1
3	6G6001-2203-0100	SATA DATA Cable (Red)	LF,L=25cm	1
4	6G6003-1009-0100	SATA Power Cable	LF,L=25cm,1*4/2.0 to 180° SATA 15p	1
5	6G8006-2350-0100	DVD	LF,supper Apollo Lake/Skylake	1
6	6G5212-0805-0100	84W Power Adapter,12V/7A	LF, /L Type,FSP084-DIBAN2,FSP	1

*The packing list above is for the users who purchase single motherboard. The users who purchase the board with chassis may refer to the packing list in the Assembly Guide.

Please contact with your dealer if any of these items is missing or damaged on delivery. And please keep all parts of the delivery package with packing materials in case if you need to deliver or store the product in the future.

Chapter-2

Hardware Installation

2-1 Unpacking Precaution

This chapter provides the information how to install the hardware of 3I610NX.
2-1 and 2-2 to check the delivery package and unpack
carefully. Please follow the jumper setting procedure.

NOTE!

1. Do not touch the board or any other sensitive components without all necessary anti-static protection.
2. Please pay attention to the voltage limitation of DC-IN 12V 5%.
   Overuse of DC-IN voltage limitation or change to another power adapter (not provided with this system) will VOID warranty.

You should follow these
steps to protect the board from the static electric
discharge whenever you handle the board:

1. Ground yourself by a grounded wrist strap at all times when you handle the 3I610NX.
   Well secure the ALLIGATOR clip of the strap to the end of the shielded wire lead from a grounded object. Please put on and connect the strap before handling the 3I610NX for harmlessly discharge any static electricity through the strap.

2. Please use anti-static pad to put any components, parts, or tools on the pad whenever you work on them outside the computer. You may also use the anti-static bag instead of the pad. Please ask your local supplier for necessary parts on anti-static requirement.

3. Do not plug any connector or set any jumper when the power is on.

2-2 Unpacking checkup

First of all, please follow all necessary steps of section 2-1 to protect 3I610NX from electricity discharge. With reference to section 1-5 please check the delivery package again with following steps:

1. Unpack the 3I610NX board and keep all packing material, manual and driver disc etc, do not dispose !

2. Is there any components lose or drops from the board?
   DO NOT CONTINUE TO INSTALL THIS BOARD!
   CONTACT THE DEALER YOU PURCHASED
   THIS BOARD FROM, IMMEDIATELY.

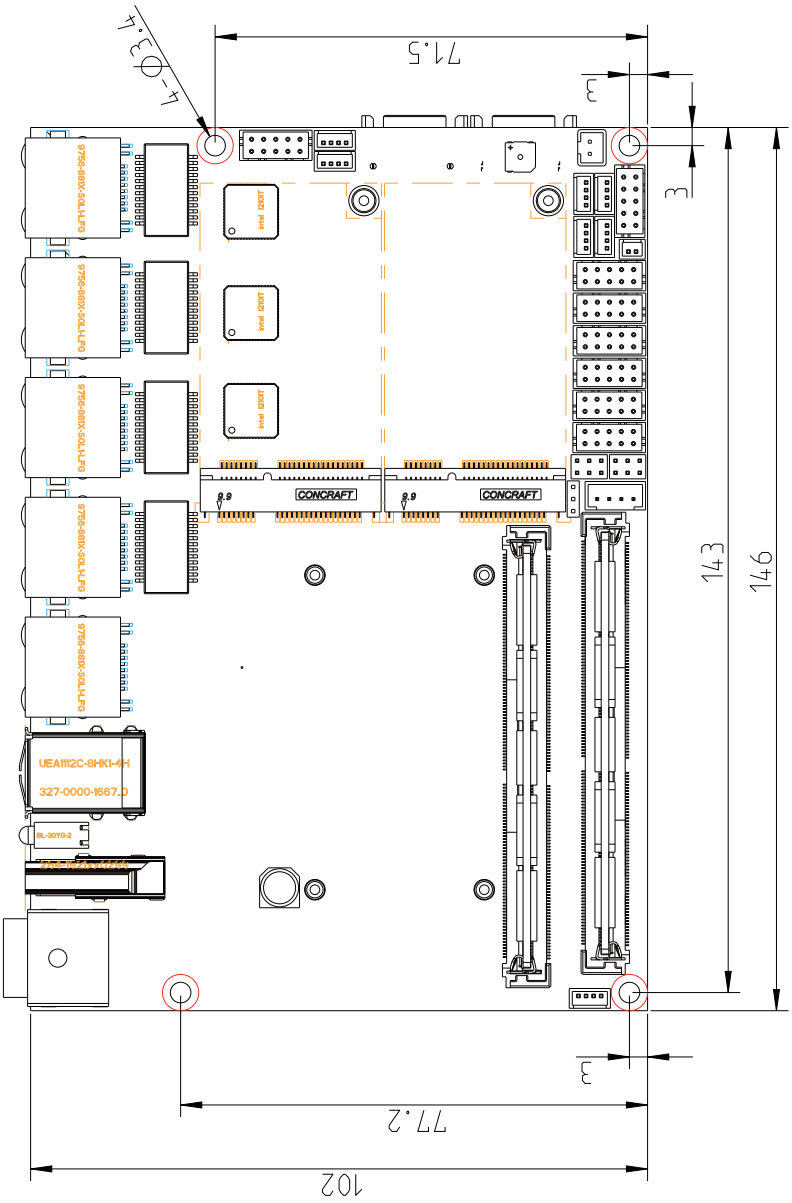
3. Is there any visible damage on the board?
   DO NOT CONTINUE TO INSTALL THIS BOARD!CONTACT
   THE DEALER YOU PURCHASED THIS BOARD FROM, IMMEDIATELY.

4. Check your optional parts (i.e. DDR, CF etc.), all necessary jumpers setting to jumper pin-set, and CMOS setup correctly.
   Please also refer to all information of jumper settings in this manual.

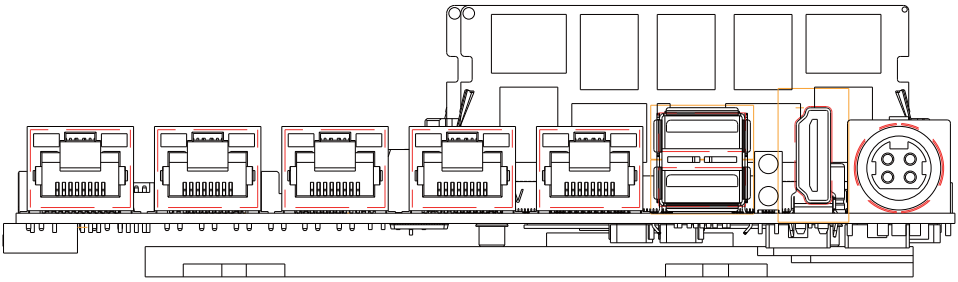
5. Check your external devices (i.e. Add-On-Card, Driver Type etc.) for complete add-in or connection and CMOS setup correctly.
   Please also refer to all information of connector connection in this manual.

6. Please keep all necessary manual and driver disc in a good condition for future re-installation if you change your Operating System.

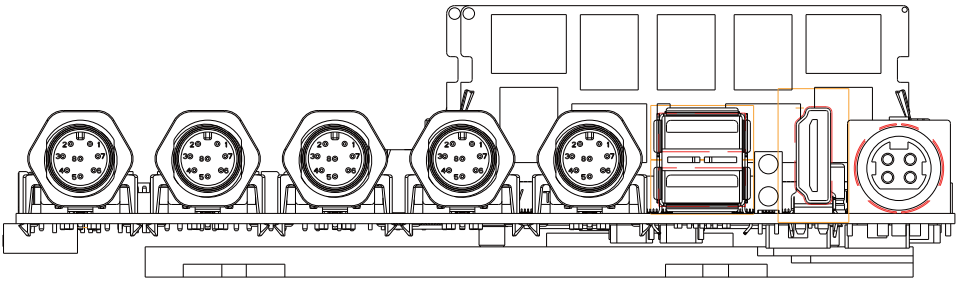
2-3 Dimension-3I610NX



2-3-1 Dimension-3I610NX-BACK



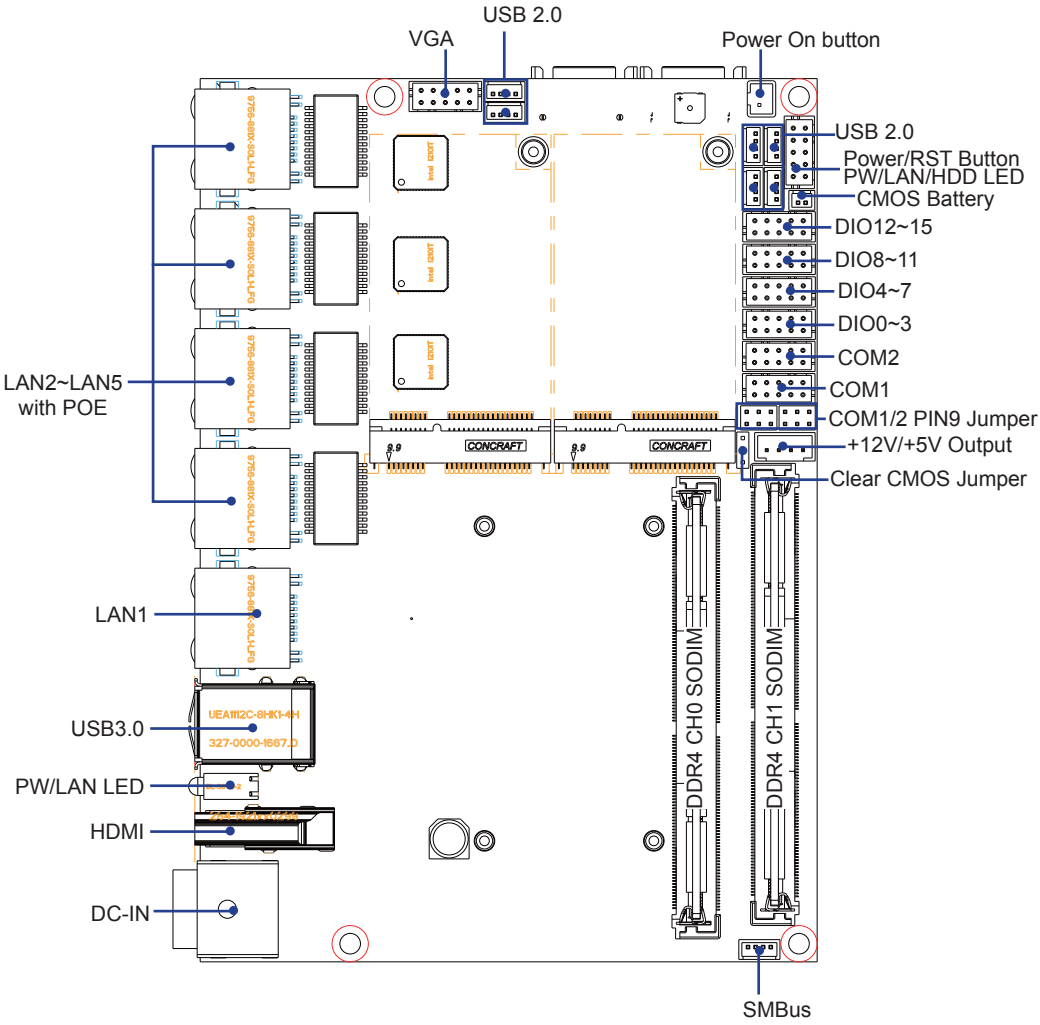
3I610NX-RJ45



3I610NX-M12

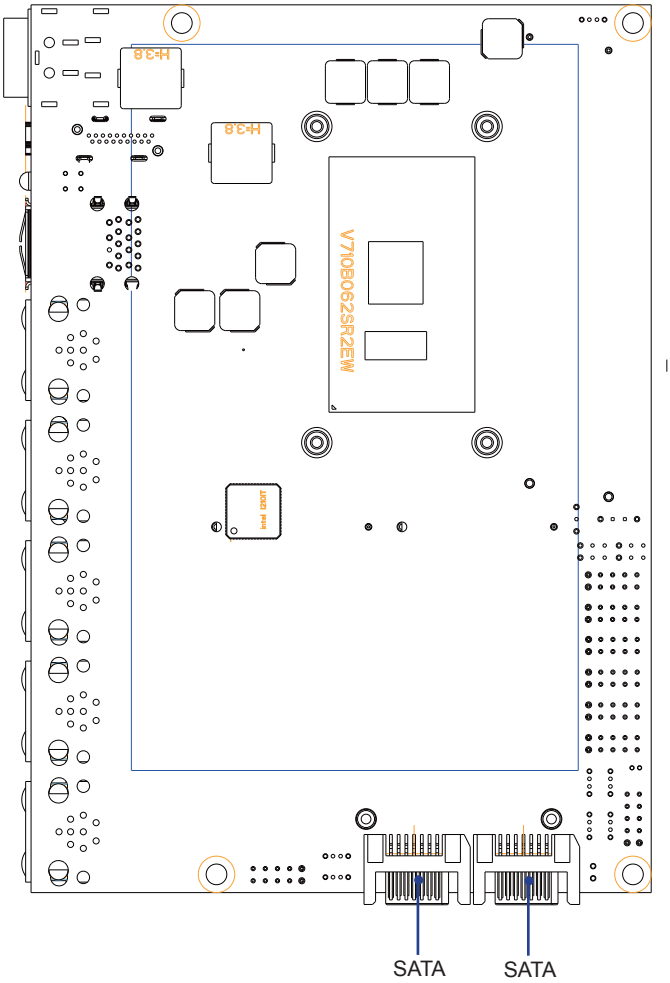
2-4 Layout-3I610NX-Function Map

TOP

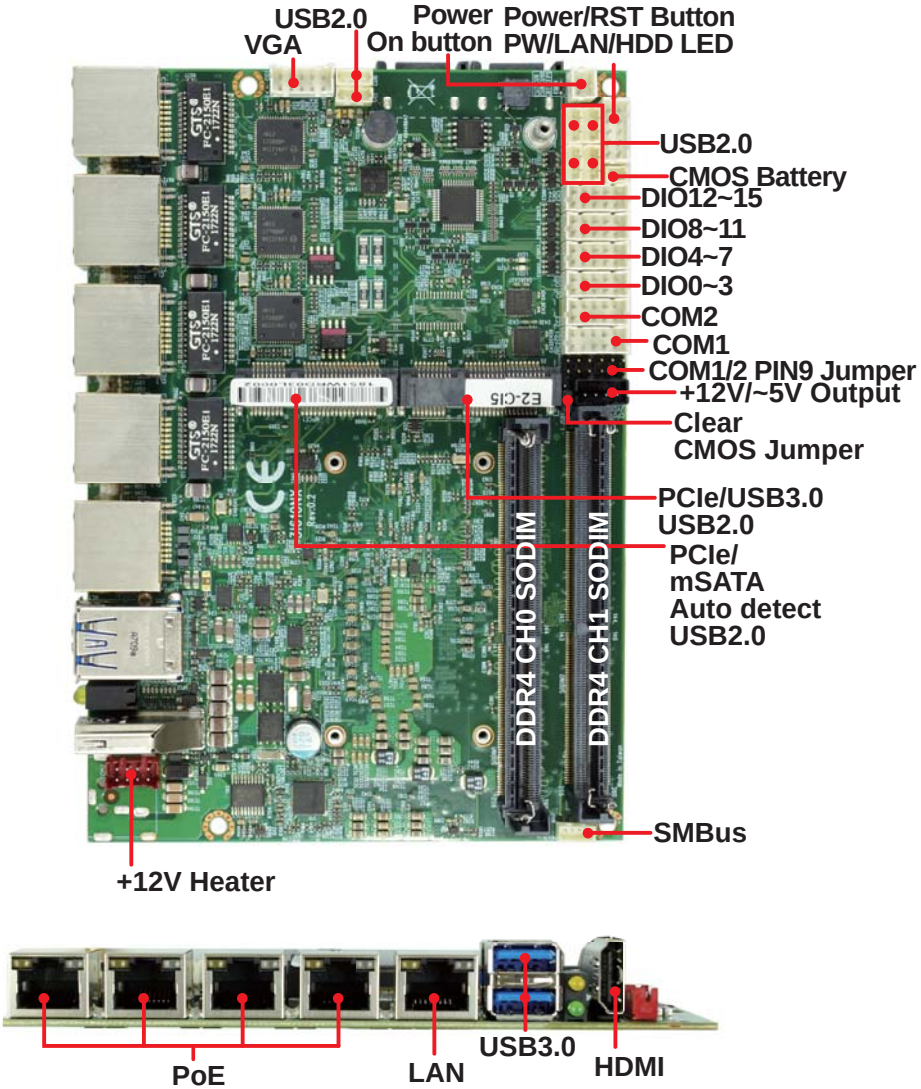


2-4-1 Layout-3I610NX-Function Map

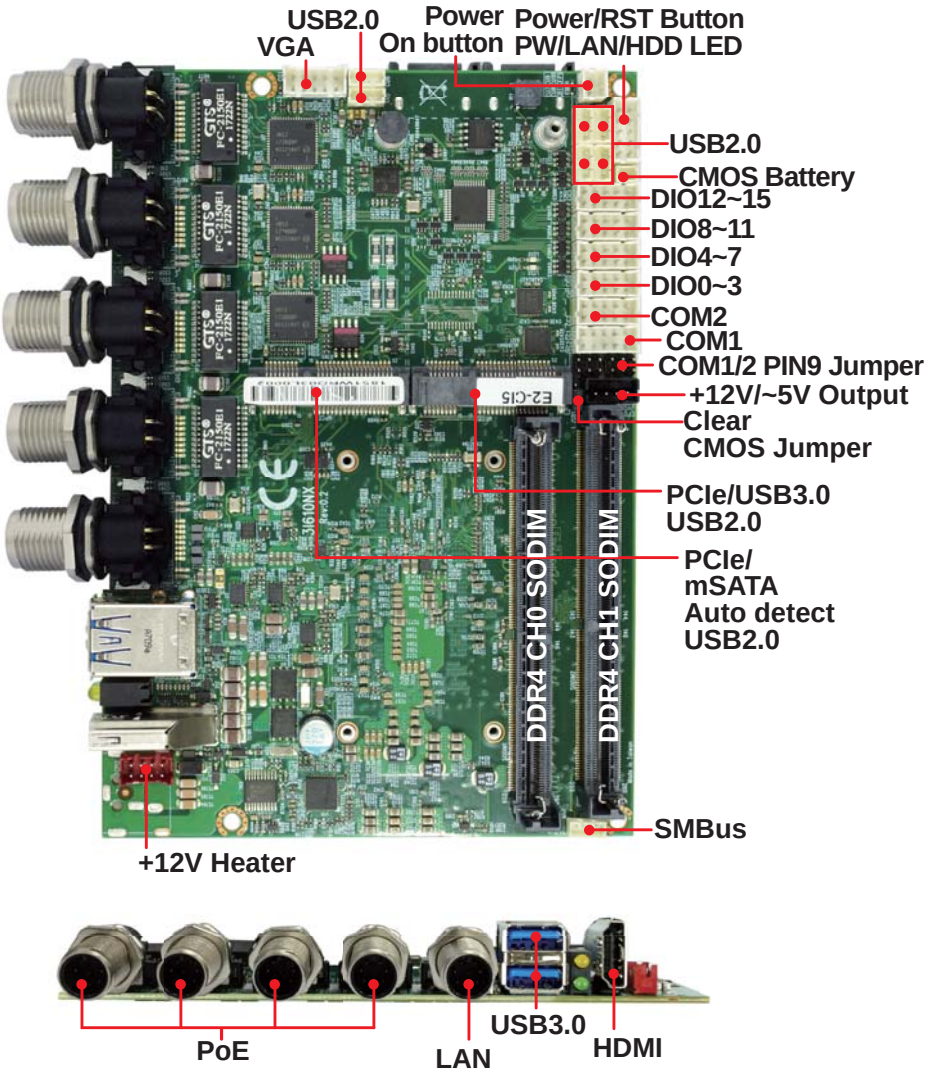
BOT



2-5 Function Map-3I610NX-RJ45

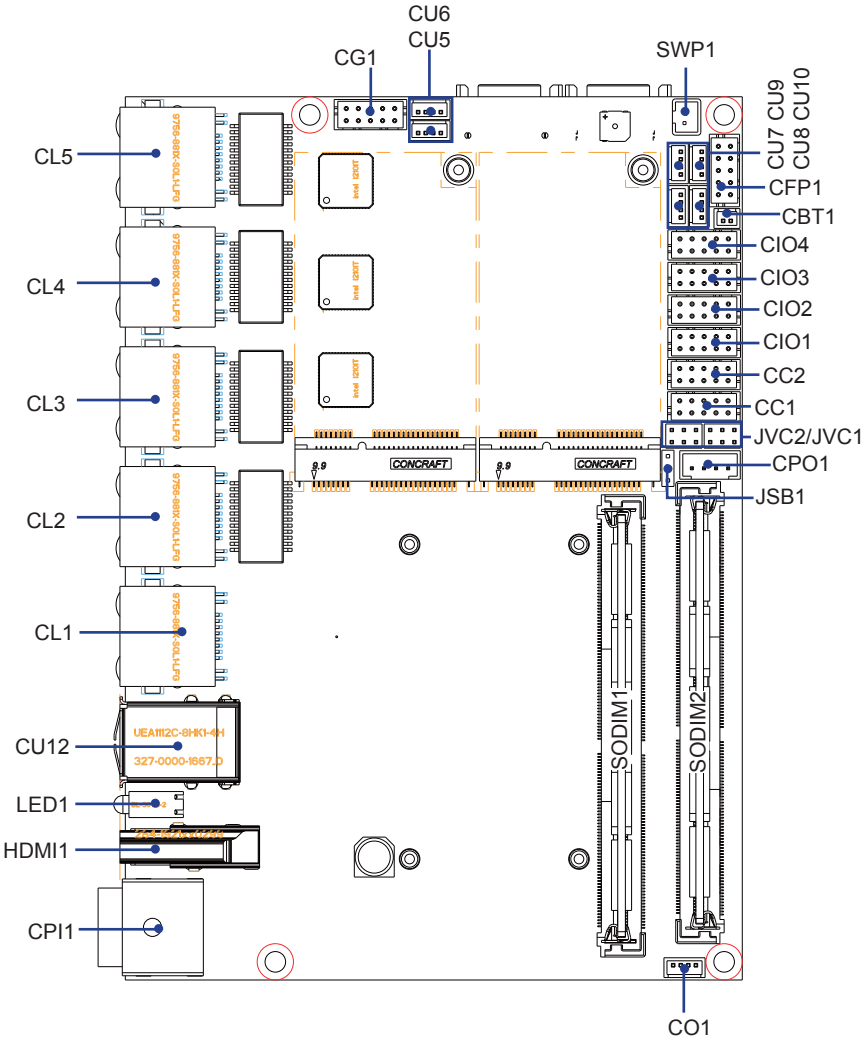


2-5-1 Function Map-3I610NX-M12



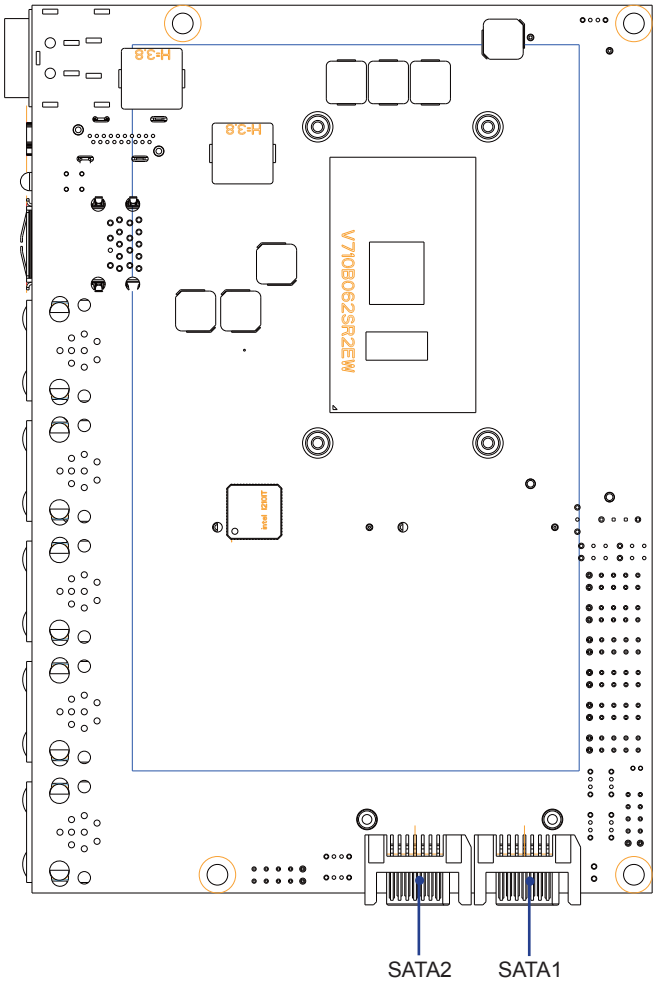
2-6 Connector MAP-3I610NX

TOP



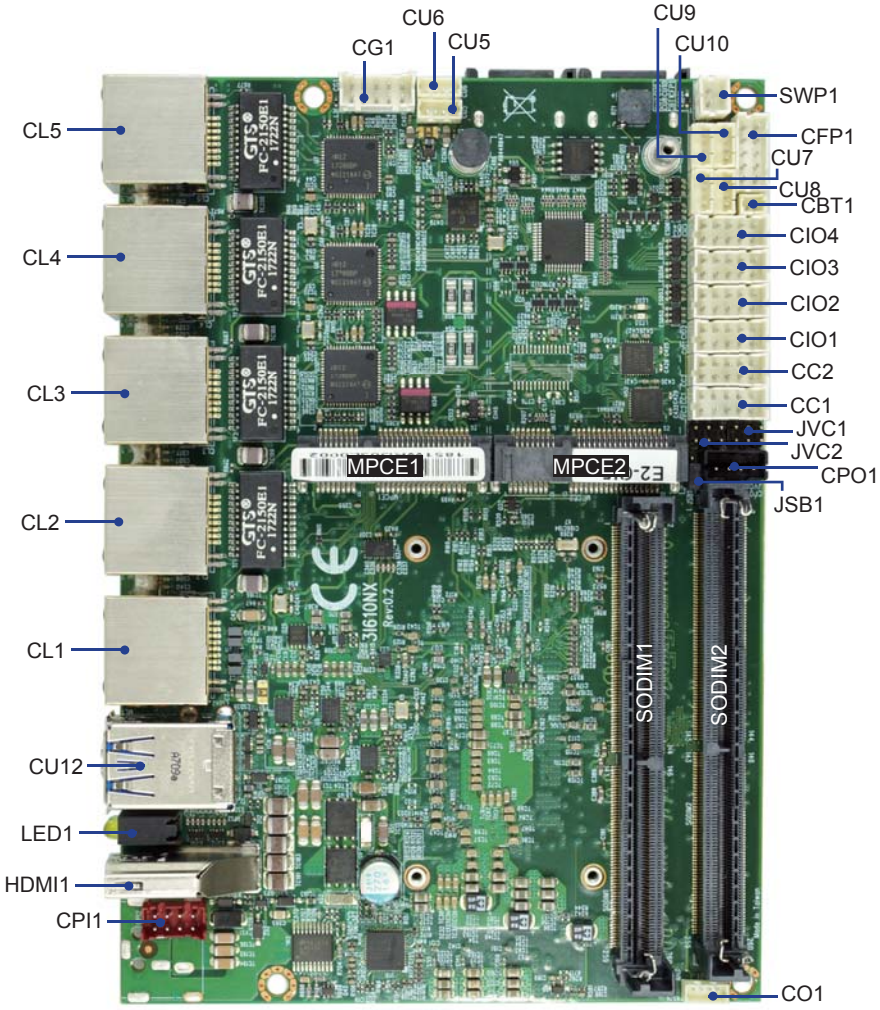
2-6-1 Connector MAP-3I610NX

BOT



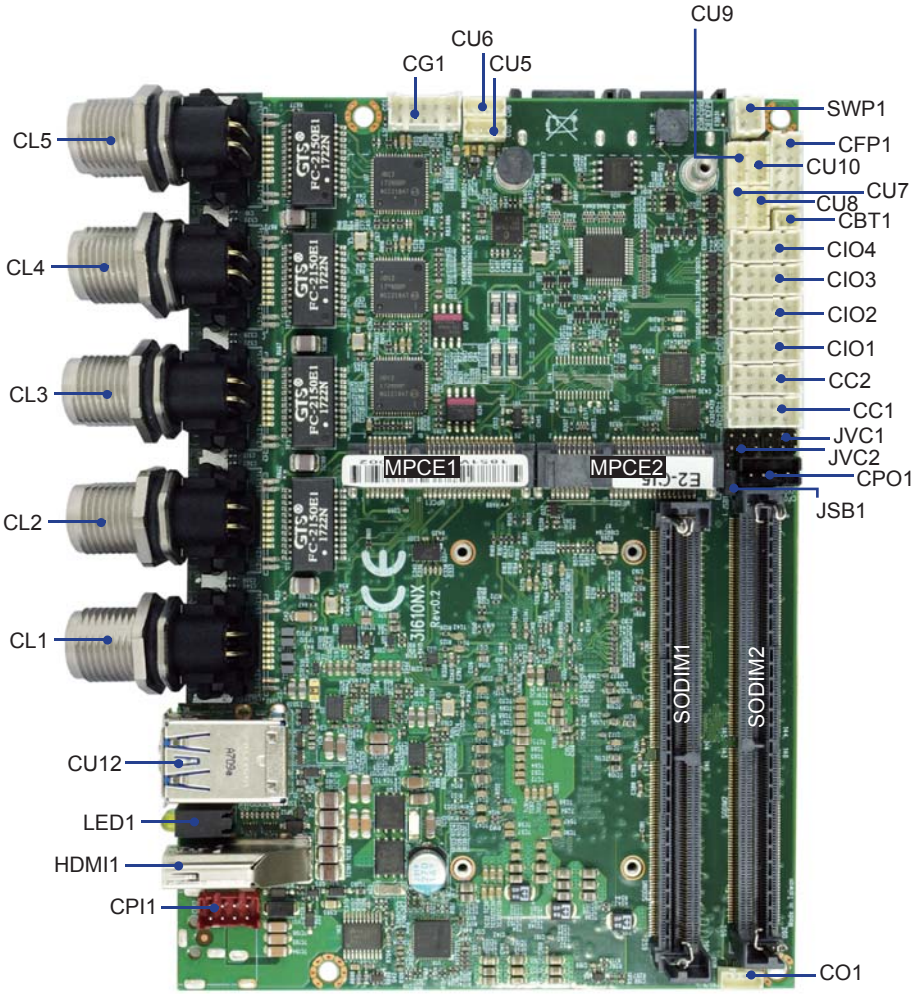
2-7 Diagram- 3I610NX-RJ45

TOP



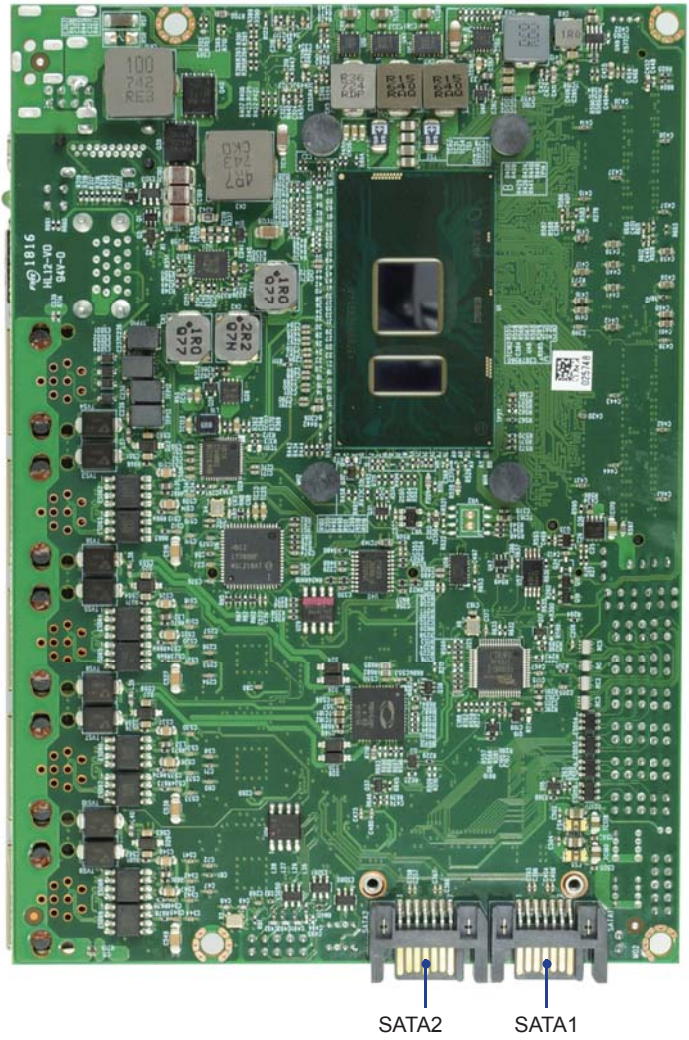
2-7-1 Diagram- 3I610NX-M12

TOP



2-7-2 Diagram- 3I610NX

BOT



2-8 List of Jumpers

JSB1: CMOS DATA Clear

JVC1/2: COM1/2 PIN9 RI / +12V / +5V Select

2-9 Jumper Setting Description

A jumper is ON as a closed circuit with a plastic cap covering two pins. A jumper is OFF as an open circuit without the plastic cap. Some jumpers have three pins, labeled 1, 2, and 3. You could connect either pin 1 and 2 or 2 and 3.The below figure 2.2 shows the examples of different jumper settings in this manual.

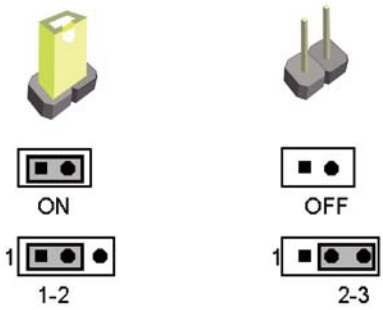


Figure 2.2

All jumpers already have its default setting with the plastic cap inserted as ON, or without the plastic cap as OFF. The default setting may be referred in this manual with a " * " symbol .

2-10 JSB1: CMOS DATA Clear

A battery must be used to retain the motherboard configuration in CMOS RAM.
Close Pin1 and pin 2 of JSB2 to store the CMOS data.

To clear the CMOS, follow the procedures below:

1. Turn off the system and unplug teh AC power
2. Remove DC IN power cable from DC IN power connector
3. Locate JSB2 and close pin 1-2 for few seconds
4. Return to default setting by Close pin 1-2
5. Connect DC IN power cable back to DC IN Power connector

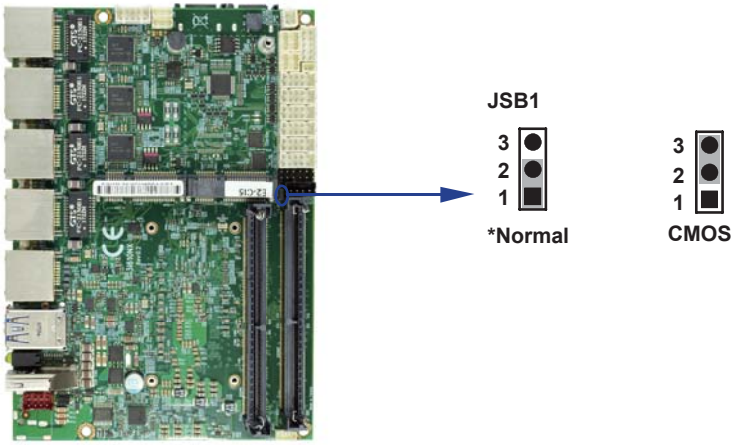
JSB1	DESCRIPTION
*1-2	Normal Set
2-3	CMOS / ME data clear

Note: Do not clear CMOS unless

1. Troubleshooting

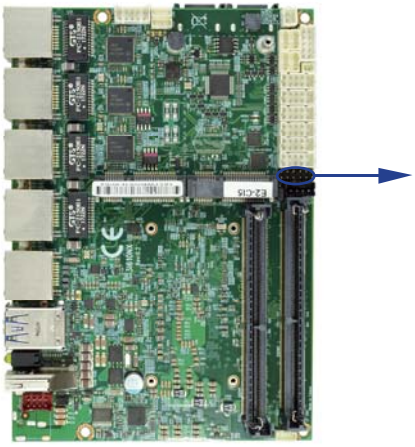
2. Forget password

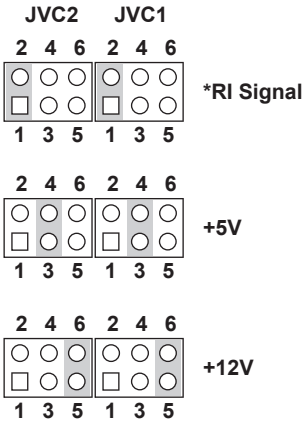
3. You fail over-clocking system



2-11 JVC1/JVC2: COM1/2 PIN9 RI / +12V / +5V Select

JVC1/JVC2	DESCRIPTION
*1-2	COM port pin9 use RI signal
3-4	COM port pin9 use +5V voltage
5-6	COM port pin9 use +12V voltage





Chapter-3

Connection

This chapter provides all necessary information of the peripheral's connections, switches and indicators. Always power off the board before you install the peripherals.

3-1 List of Connectors

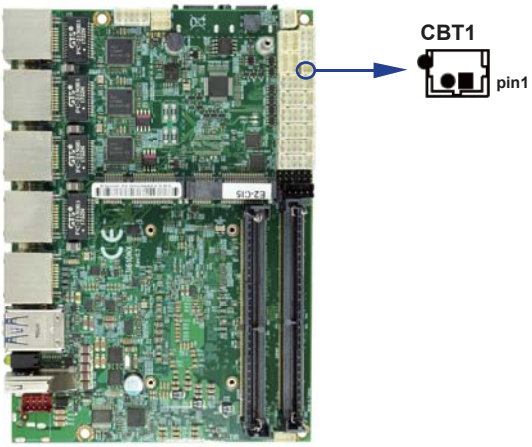
CBT1:	COMS battery 1x2 pin (1.25mm)wafer
CC1 :	COM1 2x5pin (2.0mm) wafer
CC2 :	COM2 2x5pin (2.0mm) wafer
CFP1:	Front Panel connector 2x5pin (2.0mm) wafer
CG1:	VGA 2x5pin (2.0mm) wafer
CIO1:	4DI/4DO 2x5 pin (2.0mm) Wafer
CIO2:	4DI/4DO 2x5 pin (2.0mm) Wafer
CIO3:	4DI/4DO 2x5 pin (2.0mm) Wafer
CIO4:	4DI/4DO 2x5 pin (2.0mm) Wafer
CU12:	Dual USB 3.0 Type A connector
CU5:	USB 2.0 port 4pin (1.25mm) Wafer
CU6:	USB 2.0 port 4pin (1.25mm) Wafer
CU7:	USB 2.0 port 4pin (1.25mm) Wafer
CU8:	USB 2.0 port 4pin (1.25mm) Wafer
CU9:	USB 2.0 port 4pin (1.25mm) Wafer
CU10:	USB 2.0 port 4pin (1.25mm) Wafer
CL1 :	LAN port 1 RJ45 Connector
CL2 :	LAN port 2 RJ45 Connector
CL3 :	LAN port 3 RJ45 Connector
CL4 :	LAN port 4 RJ45 Connector
CL5 :	LAN port 5 RJ45 Connector
CO1:	I2C Bus 4pin (1.25mm) Wafer
CPI1:	DC 12V-IN 2x4 pin (2.0mm) Red wafer (option)
CPO1:	+12V / +5V power output 4 pin (2.0mm) Black wafer
HDMI1:	HDMI Type A connector
SATA1:	SATA connector 7pin
SATA2:	SATA connector 7pin
SODIMM1:	DDR4 Channel 0 SODIMM H: 5.2mm
SODIMM2:	DDR4 Channel 1 SODIMM H: 9.2mm
SWP1:	Power On-Off 1x2 pin Wafer
MPCE1:	Full size mini card port 1 sockets 52pin
MPCE2:	Full size mini card port 2 sockets 52pin

3-2 CMOS battery connector

● CBT1: CMOS Battery 1x2pin (1.25mm) Wafer

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	+3V

Note:
1. When the board without Adaptor plug in, this board power RTC consumption about 2.7uA
2. If adaptor always plug in RTC power consumption about 0.1uA



3-3 CC1/CC2 COM1/2 2x5pin (2.0mm) wafer

● (RS232 Mode)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI
5	GND	10	+5V

● (RS485 Mode)

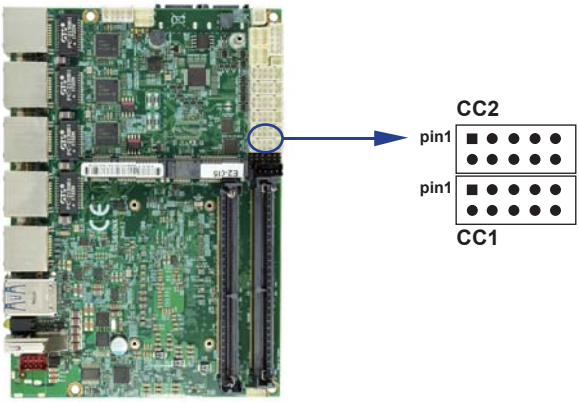
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	Data -	6	NC
2	Data +	7	NC
3	NC	8	NC
4	NC	9	NC
5	GND	10	+5V

● (RS422 Mode)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	TX -	6	NC
2	TX +	7	NC
3	RX +	8	NC
4	RX -	9	NC
5	GND	10	+5V

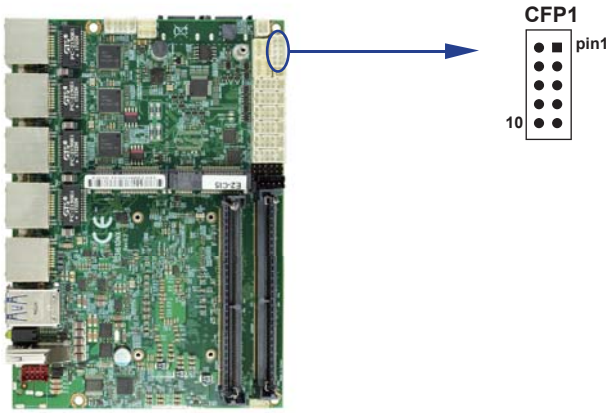
Note:

1. Pin 9 RI and Voltage setting only for COM 1/2 ports, JVC1 for COM1, JVC2 for COM2
2. Default support RS232 / RS422 / RS485 by BIOS selected



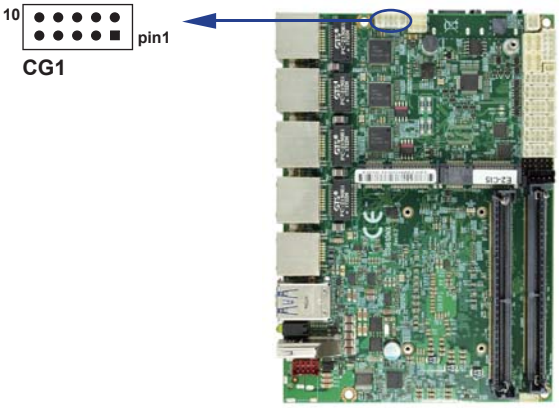
3-4 CFP1 Front Panel connector 2x5pin (2.0mm) wafer

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	Power button pin	2	Power button GND
3	Reset pin	4	Reset GND
5	Power LED-	6	Power LED+
7	HDD LED-	8	HDD LED+
9	LAN LED-	10	LAN LED+



3-5 CG1: VGA 2x5pin (2.0mm) wafer

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	BULE	2	GND
3	GND	4	DDC CLOCK
5	GREEN	6	V-SYNC
7	GND	8	H-SYNC
9	RED	10	DDC DATA



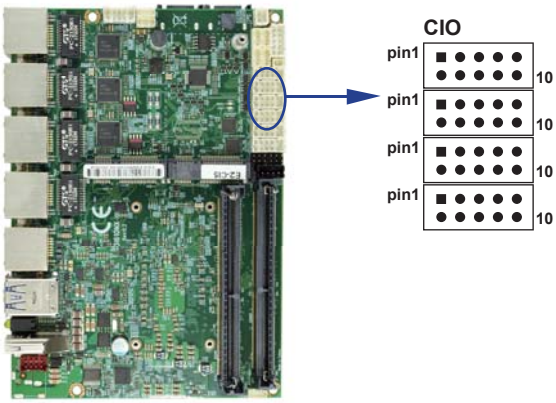
3-6 CIO1/2/3/4 DIO 0--15 (2x5pin 2.0mm wafer)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DI-0,4,8,12	2	DO-3,7,11,15
3	DI-1,5,9,13	4	DO-2,7,11,15
5	DI-2,6,10,14	6	DO-1,5,9,13
7	DI-3,7,11,15	8	DO-0,4,8,12
9	GND	10	+5V

Note:
1. DI pin default pull up 10KΩ to +5V
2. If use need isolate circuit to control external device
3. CIO1 DIO0~3, CIO2 DIO4~7, CIO3 DIO8~11, CIO4 DIO 12~15.

3-6-1 IO Device: F75113 LPC under Windows (64bit)

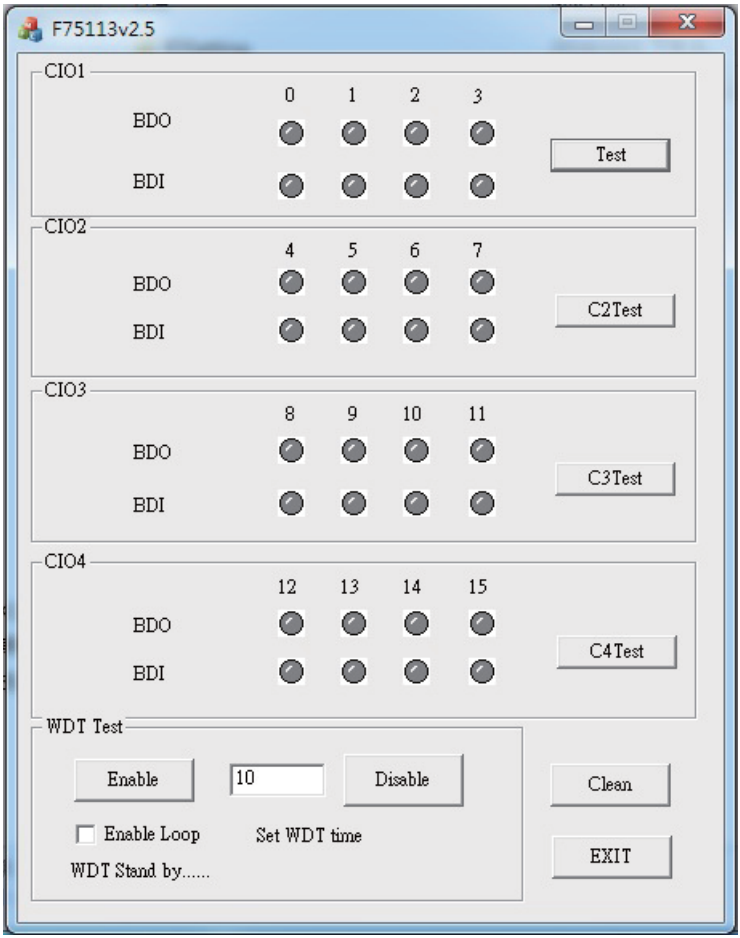
Contents [hide]



The Sample code source you can download from

Source file: F75113v2.5W_src.zip
Binary file: F75113v2.5W_bin_x64.zip
We do the demo test with a test tool which DIx connect to DOx with Relay.

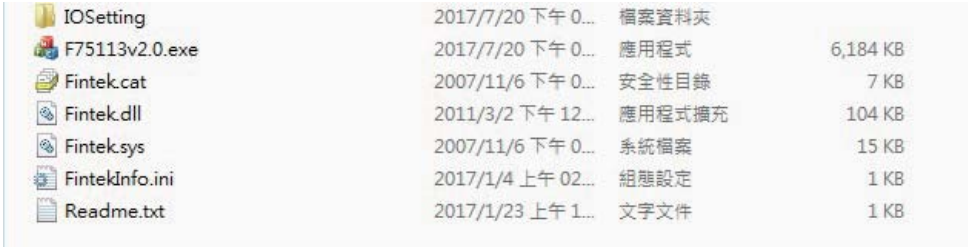
How to use this Demo Application



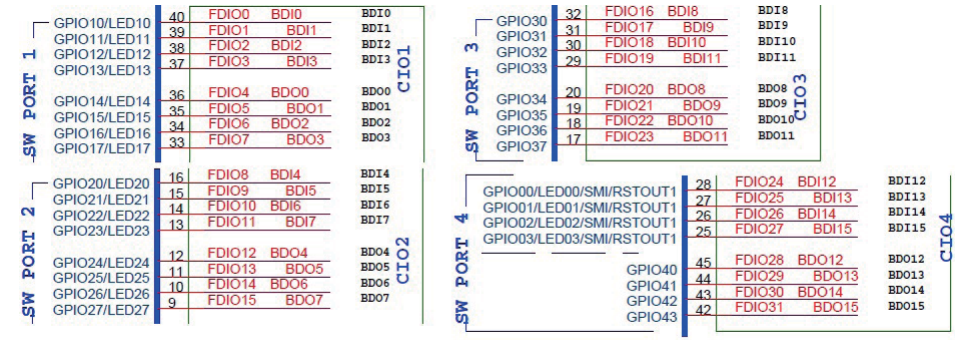
1. Press the "Test" button to test CIO1 function
2. Press the "C2test" button to test CIO2 function
3. Press the "C3test" button to test CIO3 function
4. Press the "C4test" button to test CIO4 function

If the next picture appears

MB no LPC or the drive placement is wrong
Drive the location for the next picture



F75113 GPIO Picture



Introduction

F75113 driver connection

```
hinstLib = LoadLibrary(L"Fintek.dll");
 if (hinstLib == NULL)
 {
    if(Application->MessageBoxW(L"Load fail Fintek.dll,Continued?",L"Error",16+4)==IDNO)
    {
      Application->Terminate();
    }
      return;
}
```

GPIO Status Register Write

```
SETINT2PROC ProcAdd;
 char *endptr;
 char Numbers[] = "0x20";
 char Value[] =   "0xF0";
 ProcAdd = (SETINT2PROC) GetProcAddress(hinstLib, "GPIO_LPC_W");
 if (NULL != ProcAdd)
 {
   if (! (*ProcAdd)( strtol(Numbers, &endptr, 16), strtol(Value, &endptr, 16)))
   {
     ShowMessage("Write Fail");
   }
 }
```

GPIO Status Register Read

```
GETINT2PROC ProcAdd1;
 int datatest;
 char NRtest[] = "0x22";
 ProcAdd1 = (GETINT2PROC) GetProcAddress(hinstLib, "GPIO_LPC_R");
 if (NULL != ProcAdd1)
 {
   if (! (*ProcAdd1)( strtol(NRtest, &endptr, 16), &datatest))
   {
     ShowMessage("Read Fail");
   }
 }
```

GPIO Comparison

```
if( data == 0xF0 )
 {
  ((CStatic *)GetDlgItem(IDC_LED_DO0))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEIN
TRESOURCE(IDB_BITMAP_Green)));
  ((CStatic *)GetDlgItem(IDC_LED_DO1))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEIN
TRESOURCE(IDB_BITMAP_Green)));
  ((CStatic *)GetDlgItem(IDC_LED_DO2))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEIN
TRESOURCE(IDB_BITMAP_Green)));
  ((CStatic *)GetDlgItem(IDC_LED_DO3))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEIN
TRESOURCE(IDB_BITMAP_Green)));
   if( data2 == 0x01 )
   {
      ((CStatic *)GetDlgItem(IDC_LED_DI0))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEI
NTRESOURCE(IDB_BITMAP_Green)));
      ((CStatic *)GetDlgItem(IDC_LED_DI1))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEI
NTRESOURCE(IDB_BITMAP_Red)));
      ((CStatic *)GetDlgItem(IDC_LED_DI2))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEI
NTRESOURCE(IDB_BITMAP_Red)));
      ((CStatic *)GetDlgItem(IDC_LED_DI4))->SetBitmap(::LoadBitmap(AfxGetInstanceHandle(),MAKEI
NTRESOURCE(IDB_BITMAP_Red)));
   }
    .....
 }
```

F75113 driver delete

```
 char N9[] = "0x10";
 char V9[] = "0x00";
 ProcAdd = (SETINT2PROC) GetProcAddress(hinstLib, "GPIO_LPC_W");
  if (NULL != ProcAdd)
   {
    if (! (*ProcAdd)( strtol(N9, &endptr, 16), strtol(V9, &endptr, 16)))
     {
      ShowMessage("Write Fail");
     }
   }
   if (hinstLib != NULL)
   {
    FreeLibrary(hinstLib);
   }
```

Version update details

Version 2.1 update code removes default naming change to wafer name and write comment

Category: AllowPages
AllowPages > AllowPages

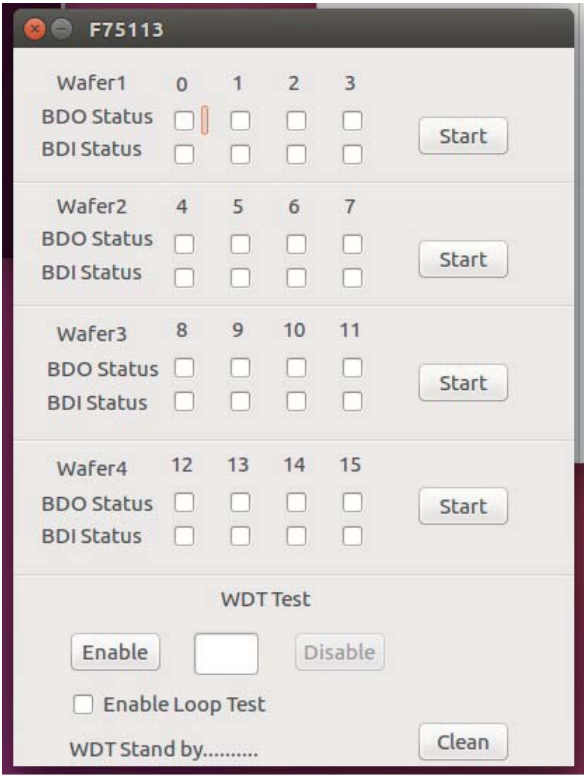
3-6-2 IO Device:F75113 LPC under Linux(64bit)

Contents [hide]

The Sample code source you can download from

Source file: F75113v2.5_linux_src.tar.gz
Binary file: Linux_F75113v2.5_bin.tar.gz
We do the demo test with a test tool which DIx connect to DOx with Relay.

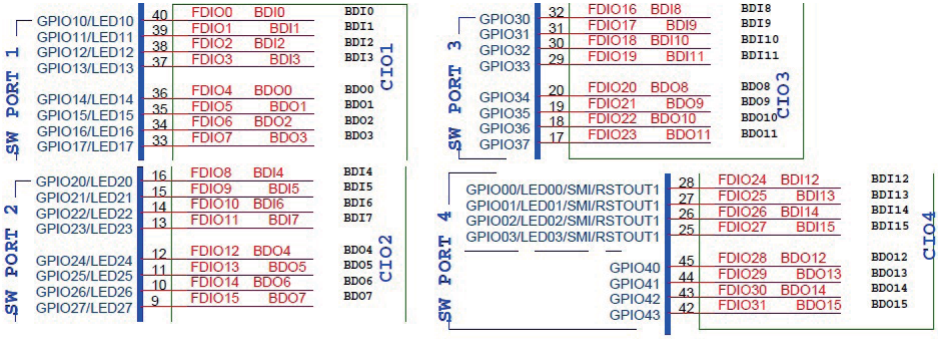
How to use this Demo Application



1. Press the "Start" button to test CIO1 function
2. Press the "Start" button to test CIO2 function
3. Press the "Start" button to test CIO3 function
4. Press the "Start" button to test CIO4 function
5. Press the "Enable" button to test WDT function

If you need to use the WDT,Please use "sh F75113set.sh"
He can help you set the WDT register for normal use WDT

F75113 GPIO Picture



Introduction

GPIO Status Register Write

```
init_fintek_sio(eSIO_TYPE_F81866, 0 ,&sio_data)
ActiveSIO(sio_data.ic_port, sio_data.key);
CHECK_RET(_EnableGPIO(0x06 , eGPIO_Mode_Enable));
CHECK_RET(_SetGpioOutputEnableIdx( 0x06 , eGPIO_Direction_Out));
CHECK_RET(_SetGpioDriveEnable( 0x06 , eGPIO_Drive_Mode_OpenDrain));
CHECK_RET(_SetGpioOutputDataIdx( 0x06 , 1));
DeactiveSIO(sio_data.ic_port);
```

GPIO Status Register Read

```
init_fintek_sio(eSIO_TYPE_F81866, 0 ,&sio_data)
ActiveSIO(sio_data.ic_port, sio_data.key);
CHECK_RET(_EnableGPIO(0x06 , eGPIO_Mode_Enable));
CHECK_RET(_SetGpioOutputEnableIdx( 0x06 , eGPIO_Direction_In));
CHECK_RET(_GetGpioInputDataIdx( 0x06 , &data));
DeactiveSIO(sio_data.ic_port);
```

GPIO Comparison

```
CHECK_RET(_GetGpioInputDataIdx (0x10,&BDIO_data));
 if((BDIO_data == 1) & (BDIO_startvalue_data == 0) )
 {
   gtk_toggle_button_set_active(GTK_TOGGLE_BUTTON(checkbutton2), TRUE);
 }
 CHECK_RET(_GetGpioInputDataIdx (0x11,&BDI1_data));
 if((BDI1_data == 1) & (BDI1_startvalue_data == 0) )
 {
   gtk_toggle_button_set_active(GTK_TOGGLE_BUTTON(checkbutton4), TRUE);
 }
 CHECK_RET(_GetGpioInputDataIdx (0x12,&BDI2_data));
 if((BDI2_data == 1) & (BDI2_startvalue_data == 0) )
 {
   gtk_toggle_button_set_active(GTK_TOGGLE_BUTTON(checkbutton6), TRUE);
 }
 CHECK_RET(_GetGpioInputDataIdx (0x13,&BDI3_data));
 if((BDI3_data == 1) & (BDI3_startvalue_data == 0) )
 {
   gtk_toggle_button_set_active(GTK_TOGGLE_BUTTON(checkbutton8), TRUE);
 }
```

F75113 driver delete

```
on_window1_destory        (GtKObject    *object,
                        gpointer      user_data)
{
  int nRet = 0;
  sFintek_sio_data sio_data;
  set_debug(1);
  if( nRet = init_fintek_sio(eSIO_TYPE_F75113,0, &sio_data))
  {
     fprintf(stderr,"init_fintek_sio error\n");
     exit(3);
  }
  ActiveSIO(sio_data.ic_port, sio_data.key);
  DeactiveSIO(sio_data.ic_port);
  gtk_main_quit();
}
```

Category: AllowPages
AllowPages > AllowPages

3-7 USB 2.0 Interface

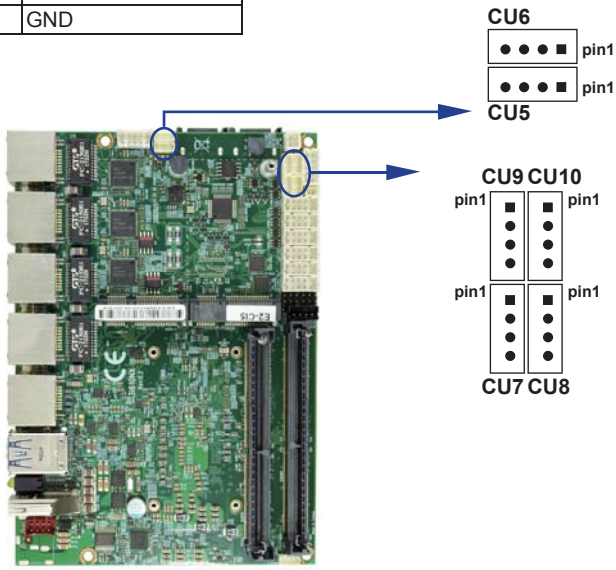
● CU12: USB3.0 Port 1/2 Type A Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VBUS	5	SS_RX-
2	D-	6	SS_RX+
3	D+	7	GND
4	GND	8	SS_TX-
		9	SS_TX+

Note: the power supply 0.9A for each USB3.0 respect specification.

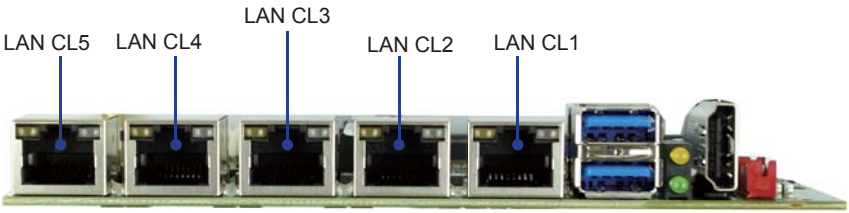
● CU5,6,7,8/9/10 USB2.0 port (1x4pin 1.25mm Wafer)

PIN NO	DESCRIPTION
1	+5V
2	DATA-
3	DATA+
4	GND



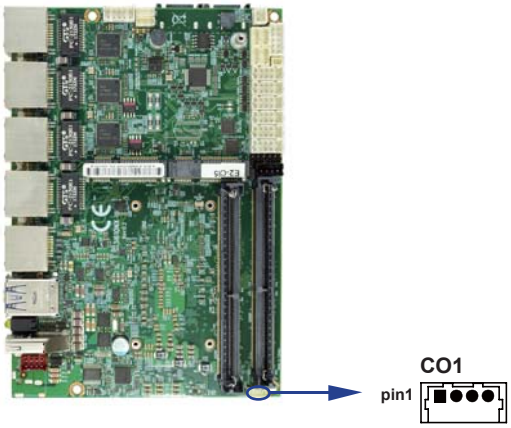
3-8 CL1/2/3/4/5: RJ45 LAN1/2/3/4/5 Connector

PIN NO	DESCRIPTION	PIN NO	DESCRIPTION
1	MDI0+	5	MDI2-
2	MDI0-	6	MDI1-
3	MDI1+	7	MDI3+
4	MID2+	8	MDI3-



3-9 CO1: I²C Bus 4pin (1.25mm) Wafer

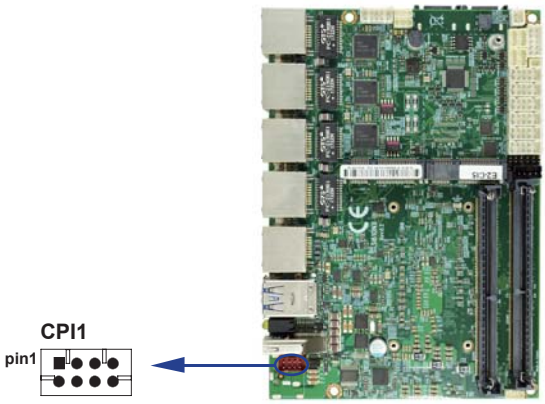
PIN NO	DESCRIPTION
1	+3.3V
2	GND
3	I²C Clock
4	I²C DATA



3-10 CPI1: DC Power input (2x4pin 2.0mm Wafer) (Red) (option)

PIN NO	DESCRIPTION
3,4,5,6	DC-IN
1,2,7,8	GND

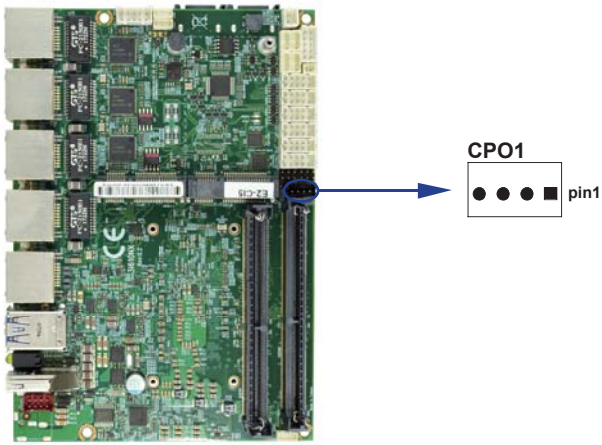
Note: Very important check DC-in Voltage



3-11 CPO1: +12V/+5V DC voltage output wafer connector (Black) (1x4pin 2.0mm)

PIN NO.	DESCRIPTION
1	+5V
2	GND
3	GND
4	+12V *

* Note: Attention! Check Device Power in spec



3-12 HDMI: HDMI connector

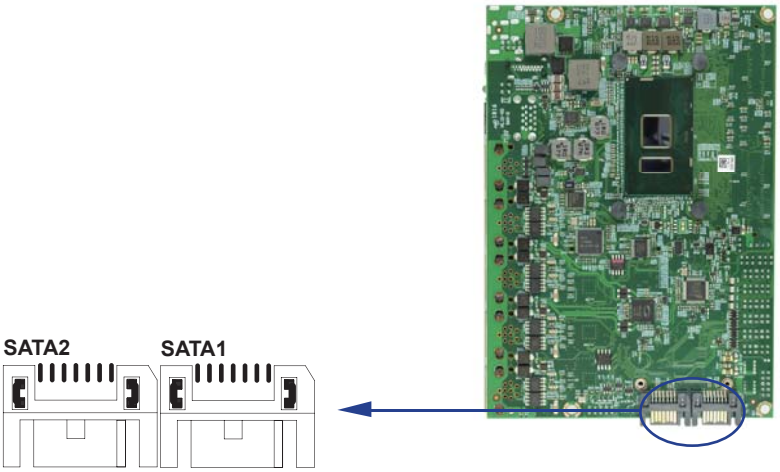
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	TMDS DATA2+	2	GND
3	TMDS DATA2-	4	TMDS DATA1+
5	GND	6	TMDS DATA1-
7	TMDS DATA0+	8	GND
9	TMDS DATA0-	10	TMDS CLK+
11	GND	12	TMDS CLK-
13	NC	14	NC
15	DDC CLOCK	16	DDC DATA
17	GND	18	+5V
19	H.P. Detect		

3-13 SATA interface

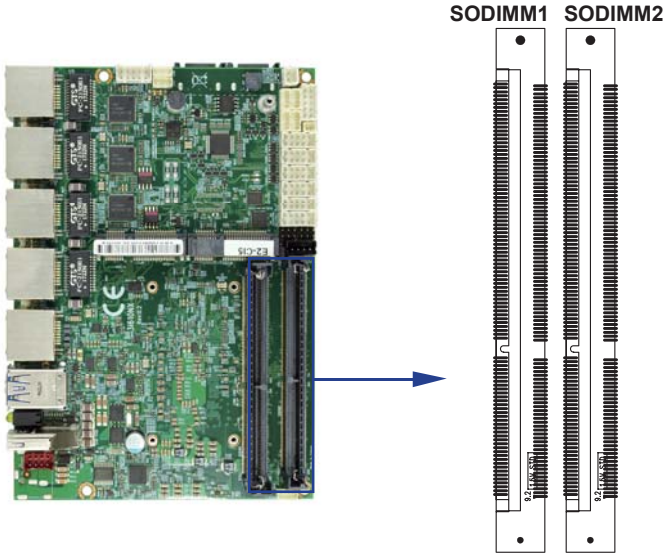
- **SATA1/2: SATA port 1x7pin Connector**

PIN NO.	DESCRIPTION
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

Note:
1. CPO1 provide SATA HDD power +12V, GND, +5V



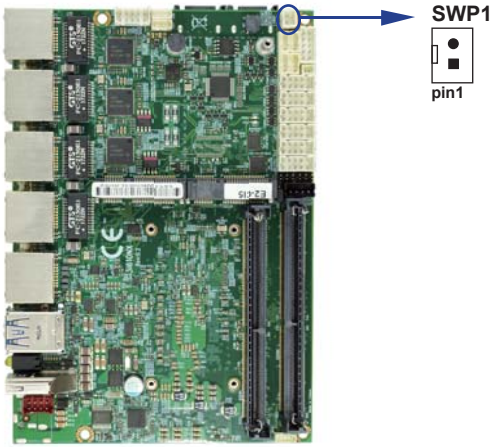
3-14 SODIMM1/2 socket



Note:
1. SODIM1 / SODIM2: SO-DIMM DDR4 1.2V DRAM Socket
2. Only Support un-buffer type module

3-15 SWP1 Power On/off switch Wafer (1x2 pin 2.00mm wafer)

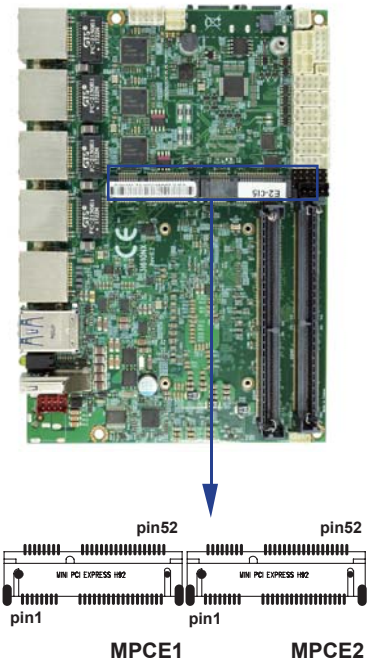
PIN NO.	DESCRIPTION
1	Power button pin
2	Power button GND



3-16 Module socket

● MPCE 1/2 PCI Express mini card

PIN NO.	Description	PIN NO.	Description
1	NC	2	+3.3V
3	NC	4	GND
5	NC	6	+1.5V
7	NC	8	NC
9	GND	10	NC
11	PCIe-CLK-	12	NC
13	PCIe-CLK+	14	NC
15	GND	16	NC
KEY			
17	NC	18	GND
19	NC	20	NC
21	GND	22	Reset
23	PCIe-RX-/mSATA-RX+	24	+3.3V
25	PCIe-RX+/mSATA-RX-	26	GND
27	GND	28	+1.5V
29	GND	30	SMB-CLK
31	PCIe-TX-/mSATA-TX-	32	SMB-DATA
33	PCIe-TX+/mSATA-TX+	34	GND
35	GND	36	USB-DATA-
37	GND	38	USB-DATA+
39	+3.3V	40	GND
41	+3.3V	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	+1.5V
49	NC	50	GND
51	mSATA/PCIe detect	52	+3.3V



Note:

1. MPCE1 Pin51 mSATA / PCIe auto detect function
2. MPCE2 PCIe / USB3.0 function selected by BIOS. Thus, PIN51 is NC.
3. MPCE1 USB is port 3, MPCE2 USB is port 4.

3-17 Connector wafer of Compatible Brand and part number list

Location	CKTS	PITCH	Brand Name	Mating connector	Cable housing
CA1	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CC1	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CC2	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CG1	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CFP1	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CIO1	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CIO2	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CIO3	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CIO4	2x5 10Pin	2.00mm	JST	B10B-PHDSS	PHDR-10VS
CO1	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
CPI1	1x4 4Pin	2.00mm	JST	B8B-PHDSS	PHDR-08VS
CPO1	1x4 4Pin	2.00mm	JST	B4B-PH-KL	PHR-4
CU5	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
CU6	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
CU7	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
CU8	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
CU9	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
CU10	1x4 4Pin	1.25mm	MOLEX	53047-0410	51021-0400
SWP1	1x2 2Pin	2.00mm	JST	B2B-PH-KL	PHR-2

Chapter-4

Introduction of BIOS

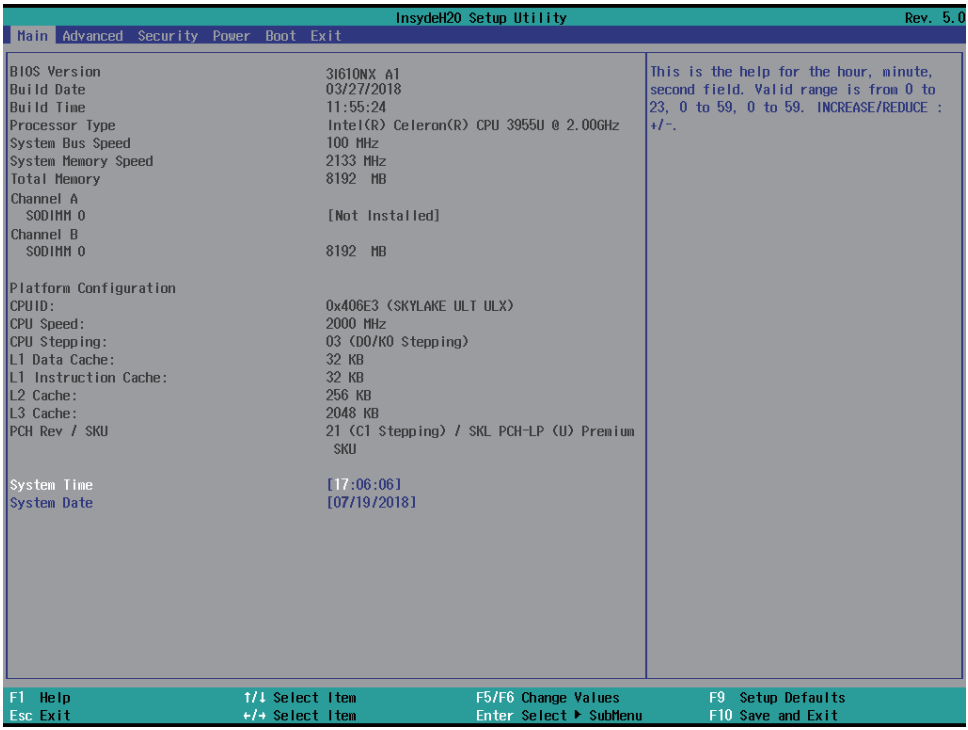
The BIOS is a program located in the Flash Memory on the motherboard.
This program is a bridge between motherboard and operating system.
When you start the computer, the BIOS program gains control.
The BIOS first operates an auto-diagnostic test called POST (Power on Self Test) for all the
necessary hardware, it detects the entire hardware devices and configures the parameters of the hardware synchronization. After these tasks are completed, BIOS will give control of the computer back to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate with, it is the key factor of system stability and of ensuring your system performance at best.
In the BIOS Setup main menu, you can see several options. We will explain these options in the following pages. First, let us see the function keys you may use here:

Press <Esc> to quit the BIOS Setup.
Press ↑↓←→(up, down, left, right) to choose the option you want to confirm or modify.
Press <F10> to save these parameters and to exit the BIOS Setup menu after you complete the setup of BIOS parameters.
Press Page Up/Page Down or +/- keys to modify the BIOS parameters for the active option.

4-1 Enter Setup

Power on the computer and press <Del> key immediately to enter Setup.
If the message disappears before your respond but you still wish to enter Setup, restart the system by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart the system by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys.

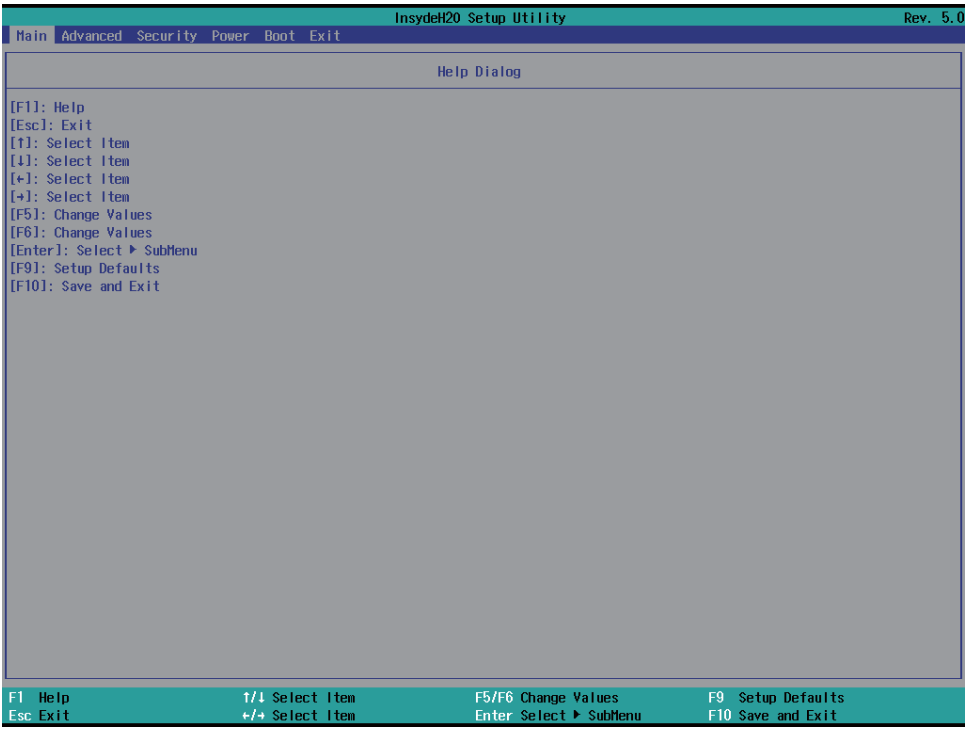
4-2 BIOS Menu Screen & Function Keys



In the above BIOS Setup main menu of, you can see several options.
We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press ←→ (left, right) to select screen;
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press <Enter> to select.
- Press <+>/<–> or <F5>/<F6> keys when you want to modify the BIOS parameters for the active option.
- [F1]: General help.
- [F9]: Optimized defaults.
- [F10]: Save & Exit.
- Press <Esc> to quit the BIOS Setup.

4-3 General Help



Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <Esc>.

4-4 Menu Bars

There are six menu bars on top of BIOS screen:

Main To change system basic configuration

Advanced To change system advanced configuration

Security Password settings

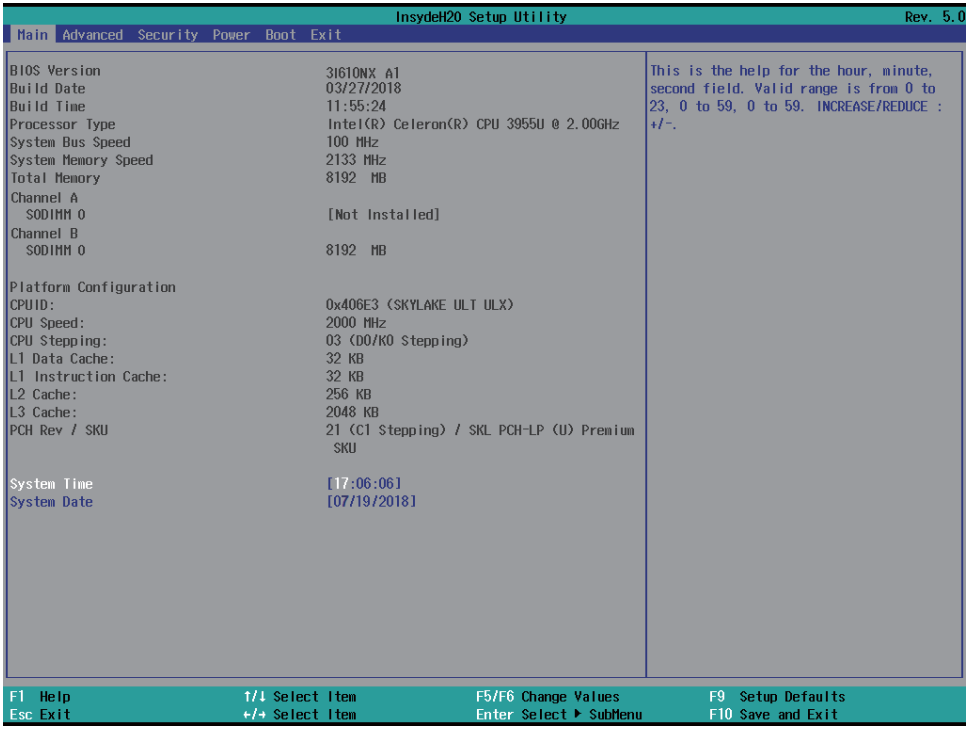
Power PME & Power button settings

Boot Exit Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar.

The selected one is highlighted.

4-5 Main



Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.

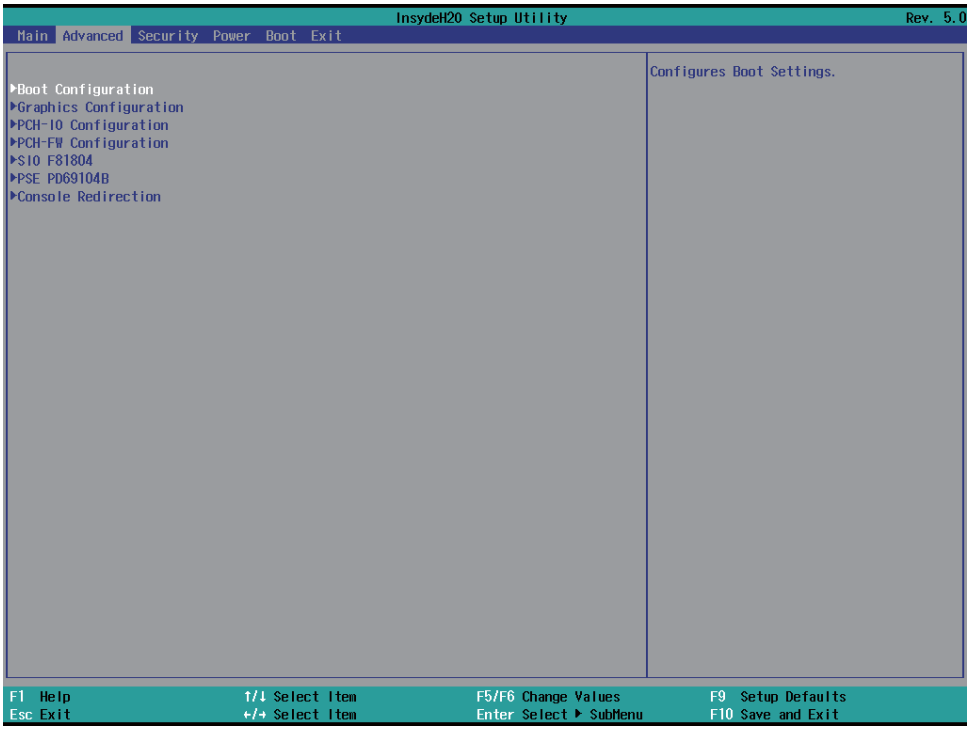
System Date

Set the Date. Please use [Tab] to switch between data elements.

System Time

Set the Time. Please use [Tab] to switch between data elements.

4-6 Advanced



Boot Configuration

Please refer section 4-6-1

Graphics Configuration

Please refer section 4-6-2

PCH-IO Configuration

Please refer section 4-6-3

PCH-FW Configuration

Please refer section 4-6-4

SIO F81804

Please refer section 4-6-5

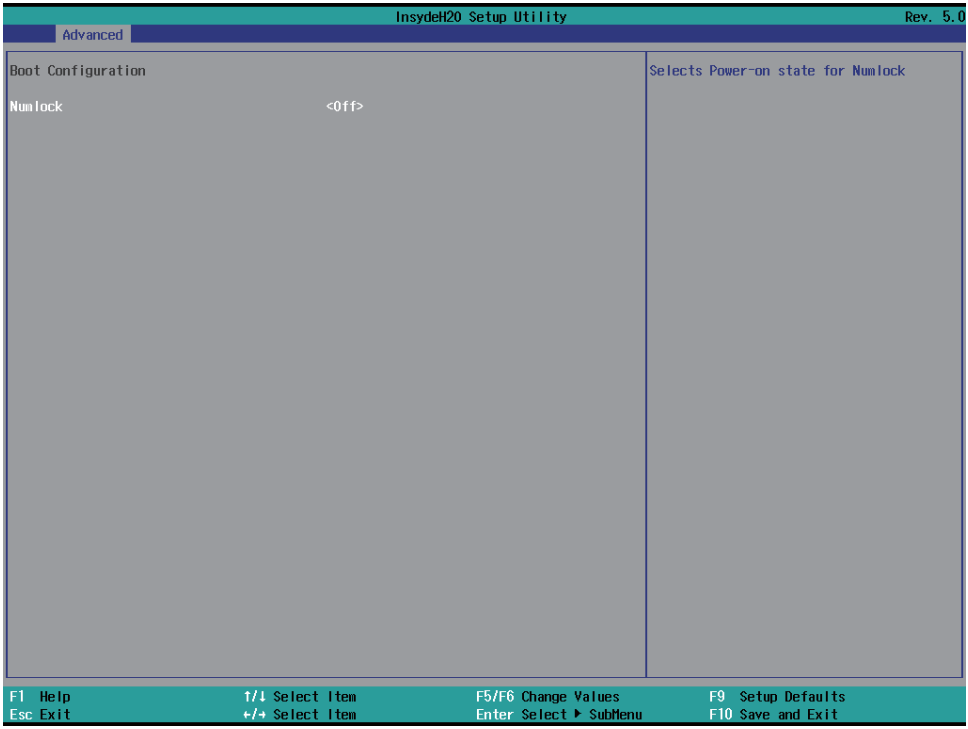
PSE PD69104B

Please refer section 4-6-6

Console Redirection

Please refer section 4-6-7

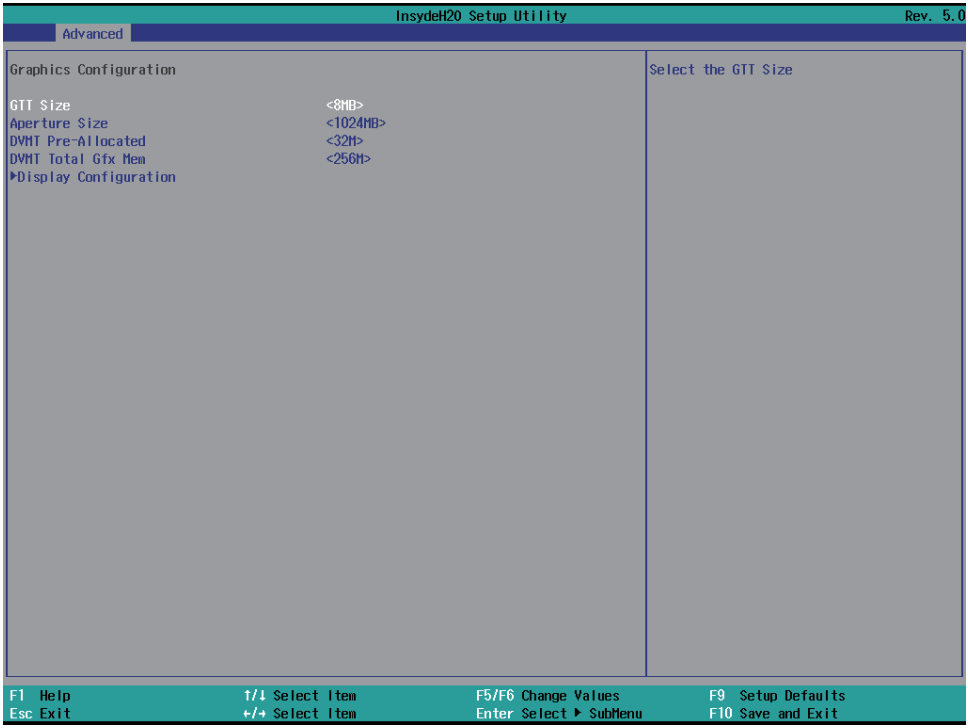
4-6-1 Boot Configuration



Numlock

Select Power-on state for Numlock, default is <Off>

4-6-2 Graphics Configuration



GTT Size
Graphics Translation Table Size. The optional settings are: 2MB, 4MB, 8MB (default)

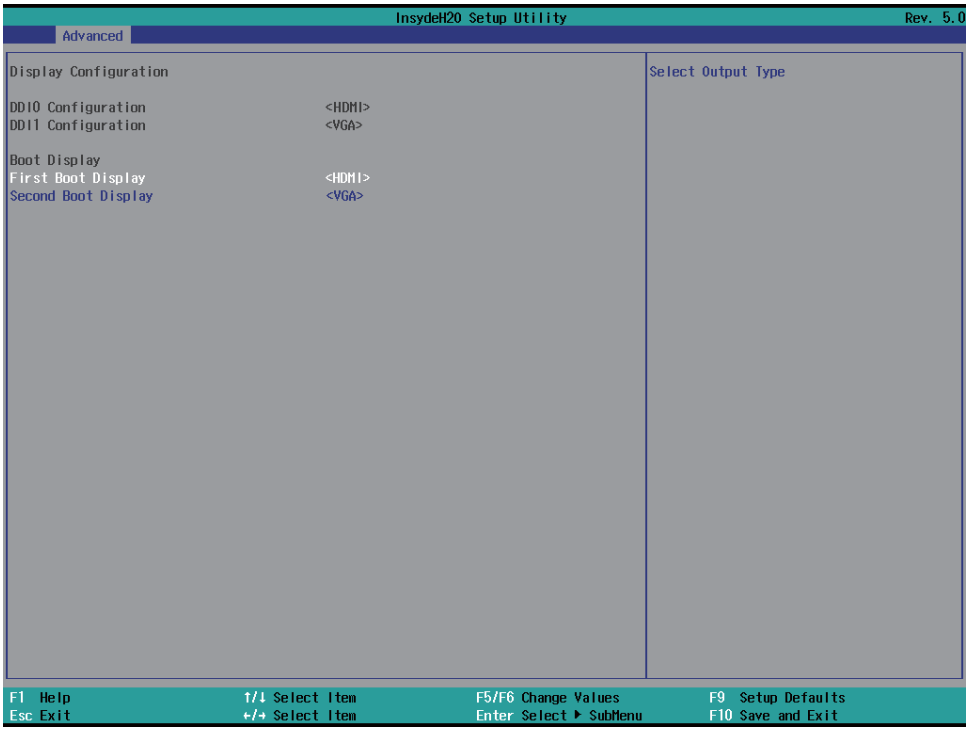
Aperture Size
The optional settings are: 128MB, 256MB, 512MB, 1024MB (default), 2048MB

DVMT Pre-Allocated
Use this item to select DVMT 5.0 pre-allocated (fixed) graphics memory size used by the internal graphics device.
The optional settings are: 16MB, 32MB (default), 64MB

DVMT Total Gfx Mem
Use this item to select DVMT 5.0 total graphics memory size used by the internal graphics device
The optional settings are: 256MB (default), 128MB, MAX.

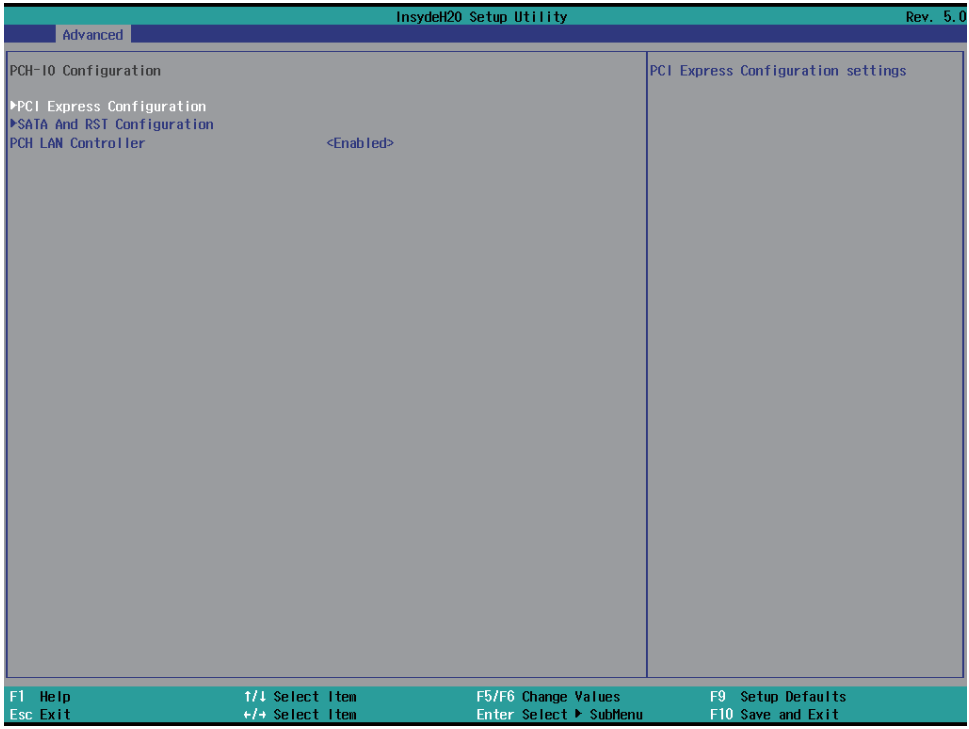
Display Configuration
Please refer section 4-6-2-1

4-6-2-1 ► Display Configuration



Boot Display
To select the displays priority to HDMI or VGA

4-6-3 PCH-IO Configuration



PCI Express Configuration

Please refer section 4-6-3-1

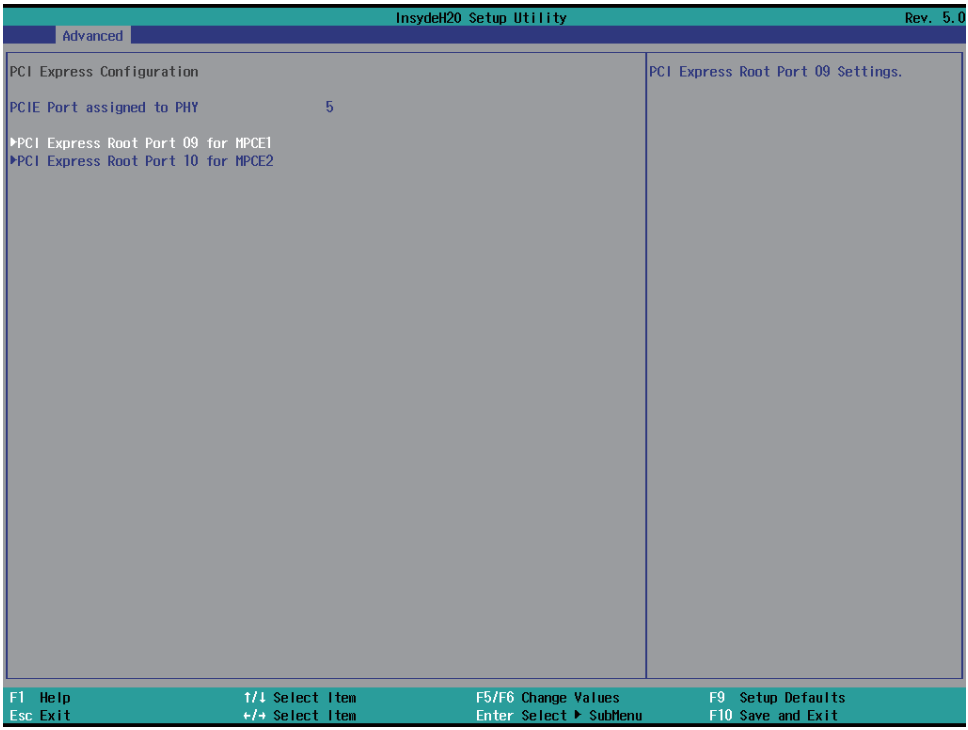
SATA And RST Configuration

Please refer section 4-6-3-2

PCH LAN Controller

To enable/disable onboard NICs.

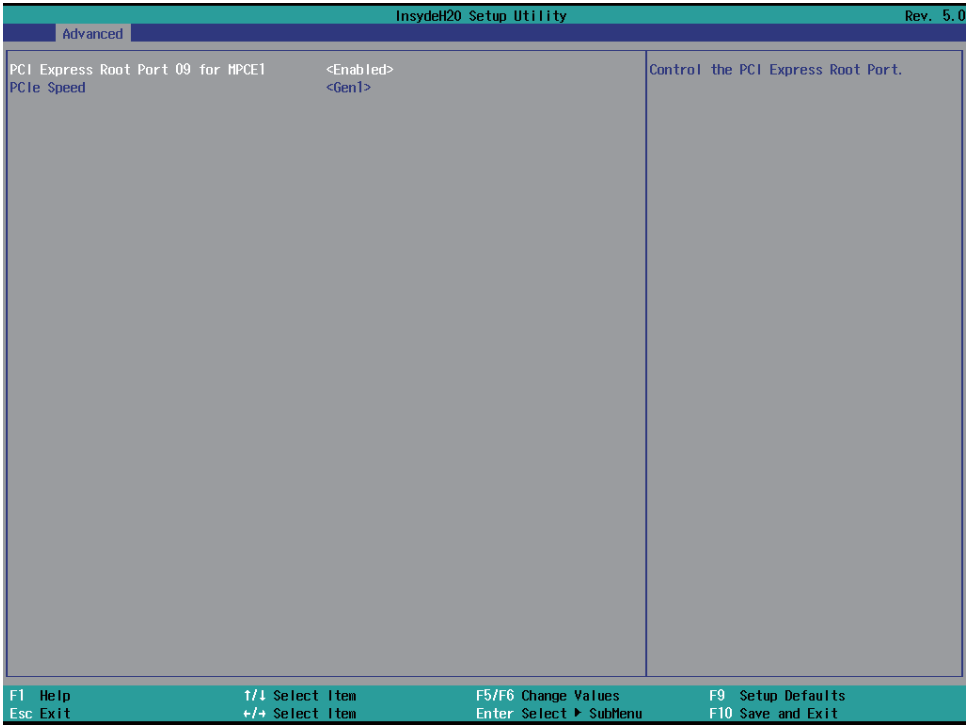
4-6-3-1 ► PCI Express Configuration



PCI Express Root Port 09 for MPCE1
Please refer section 4-6-3-1-1

PCI Express Root Port 10 for MPCE2
Please refer section 4-6-3-1-2

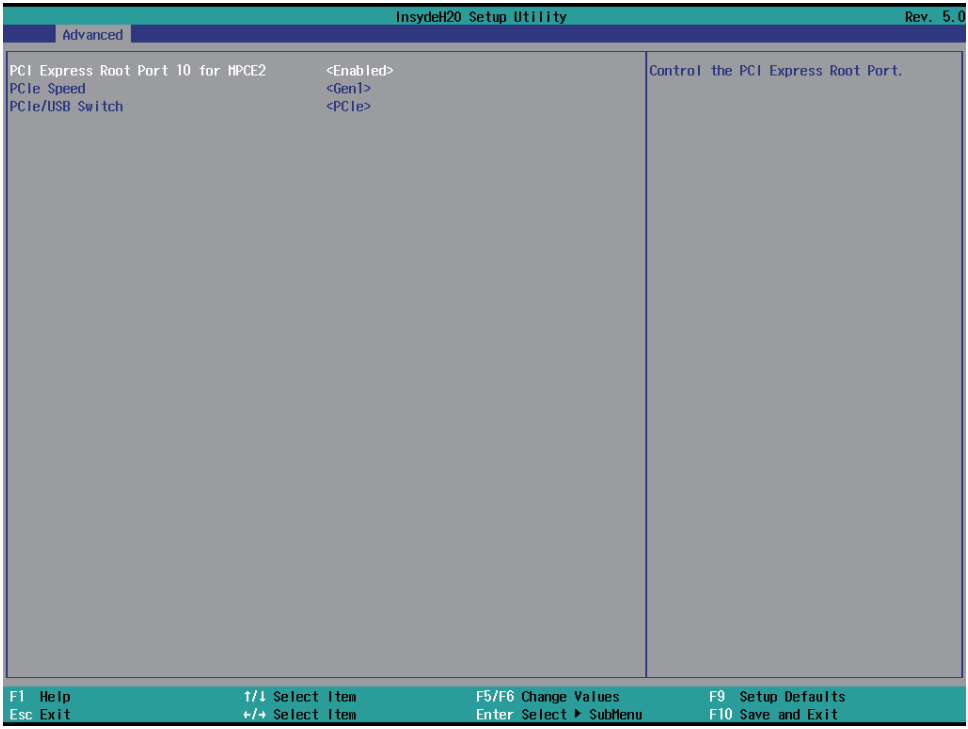
4-6-3-1-1 ► PCI Express Root Port 09 for MPCE1



PCI Express Root Port 09 for MPCE1
The optional settings are: Enabled(default), Disabled.

Select PCI Express port speed.
The optional settings are: Auto, Gen1(default), Gen2, Gen3

4-6-3-1-2 ► PCI Express Root Port 10 for MPCE2

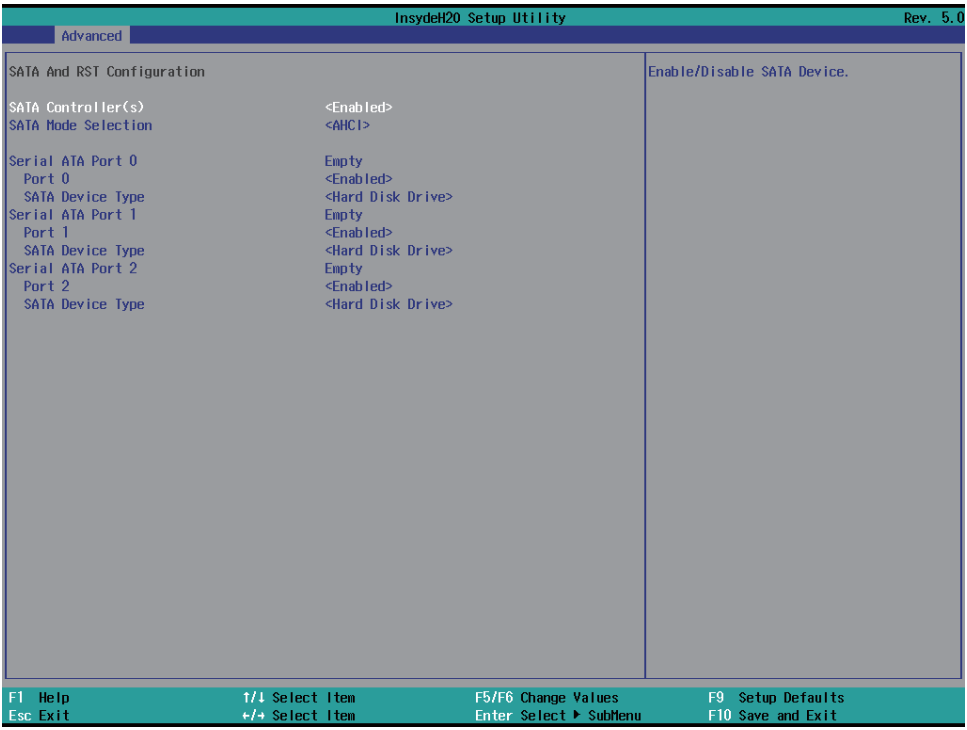


PCI Express Root Port 10 for MPCE2
The optional settings are: Enabled(default), Disabled.

Select PCI Express port speed.
The optional settings are: Auto, Gen1(default), Gen2, Gen3

Select PCI Express & USB 3.0
The optional settings are: PCIe(default), USB3.0

4-6-3-2 ► SATA And RST Configuration



SATA Controller

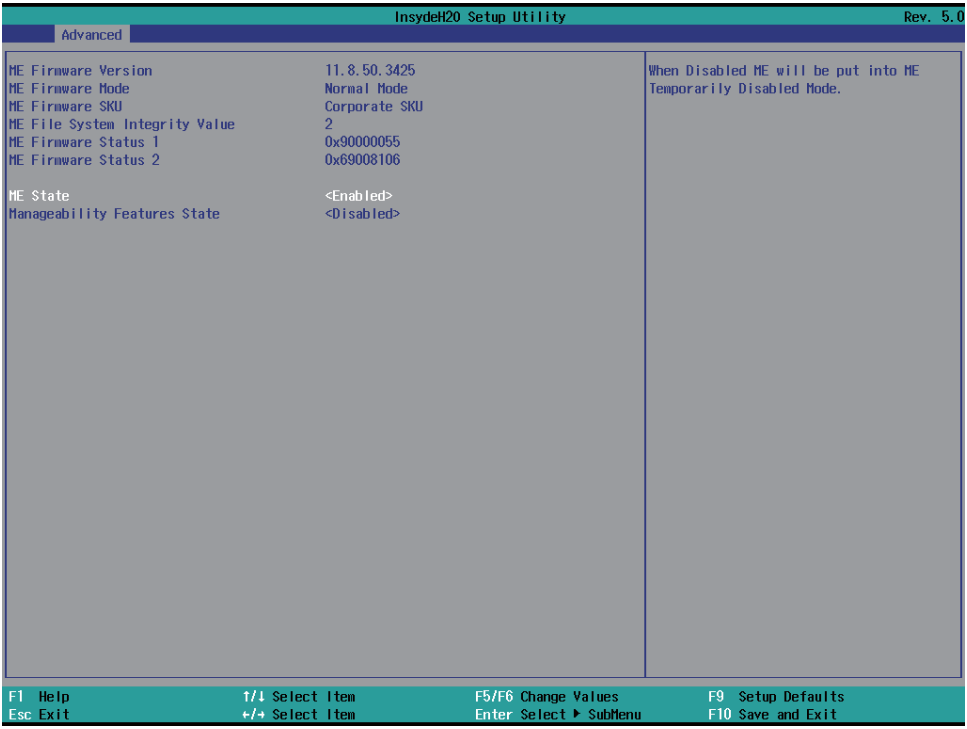
Use this item to Enable or Disable SATA Device.

The optional settings are: Enabled(default) or Disabled

SATA Mode Selection

Support AHCI Mode only.

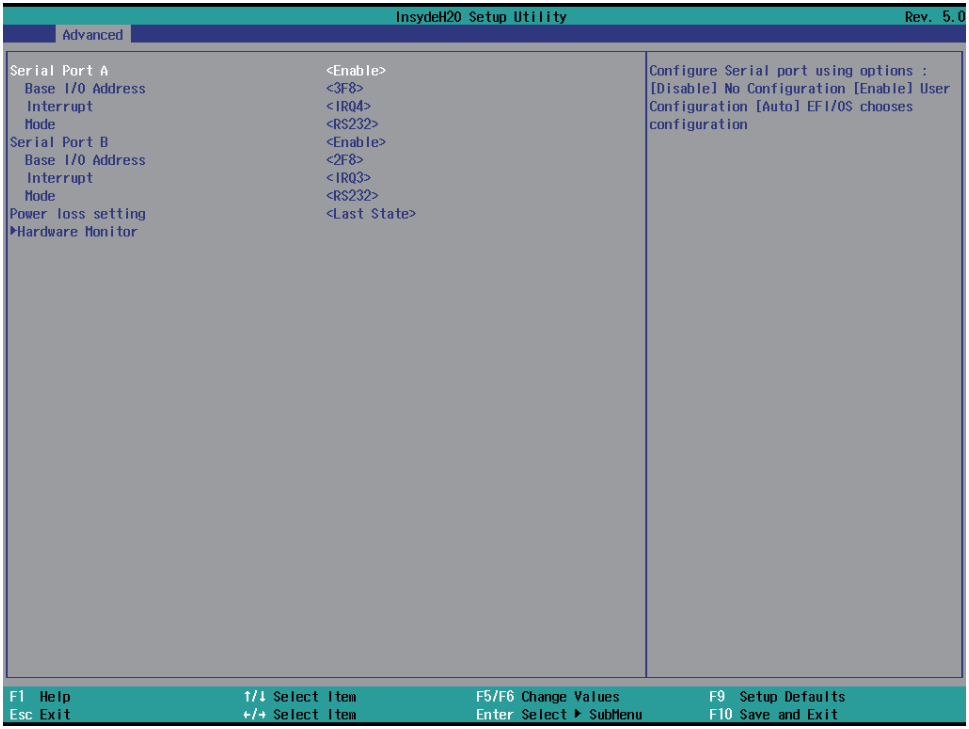
4-6-4 PCH-FW Configuration



ME State
The optional settings are: Enabled(default) or Disabled

Manageability Features State
The optional settings are: Enabled or Disabled(default)

4-6-5 SIO F81804



Serial Port 1/2
Use this item to enable or disable serial port.
The optional settings are: Enabled(default), Disabled.

Serial Port A Base IO Address / Interrupt / Serial Mode
Use this item to select an optimal setting for super IO device.
The optional settings are:
IO=3F8h; IRQ=4 (default)
IO=3E8h; IRQ=3,4
IO=2E8h; IRQ=3,4
IO=2F8h; IRQ=3,4

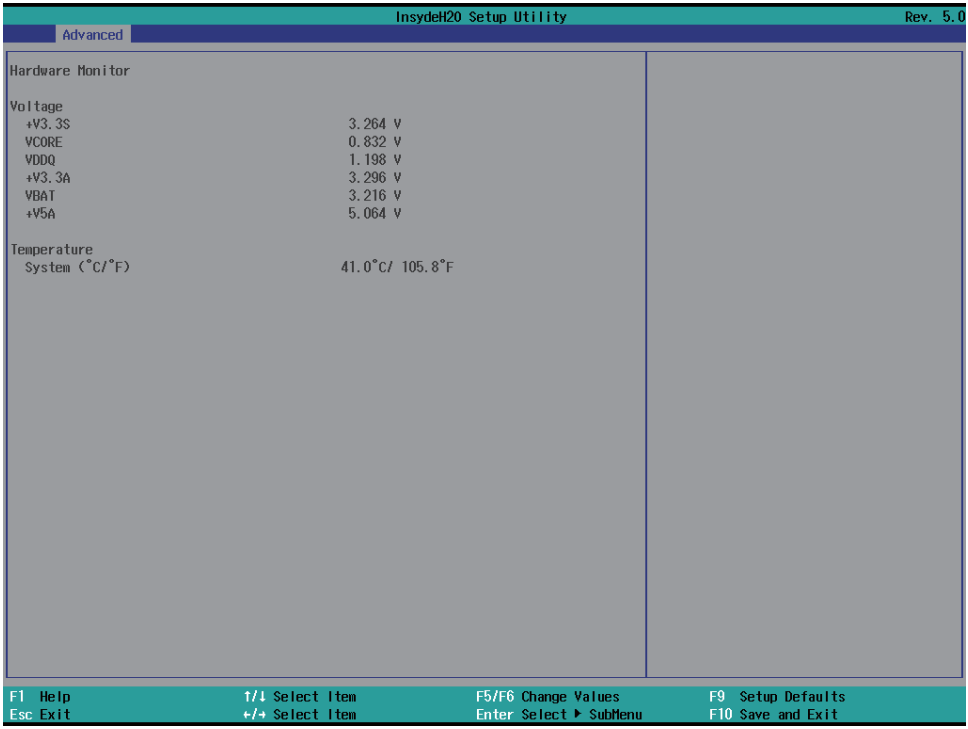
Serial Port B Base IO Address / Interrupt / Serial Mode
Use this item to select an optimal setting for super IO device.
The optional settings are:
IO=2F8h; IRQ=3(default)
IO=2E8h; IRQ=3,4
IO=3E8h; IRQ=3,4
IO=3F8h; IRQ=3,4

Mode
RS232(default) / RS485 / RS422

Power Loss setting
This item specifies whether your system will reboot after a power failure or interrupt occurs.
[Keep Last state] Restores the system to the status before power failure or interrupt occurred.
[Always on] Leaves the computer in the power on state.
[Always off] Leaves the computer in the power off state.

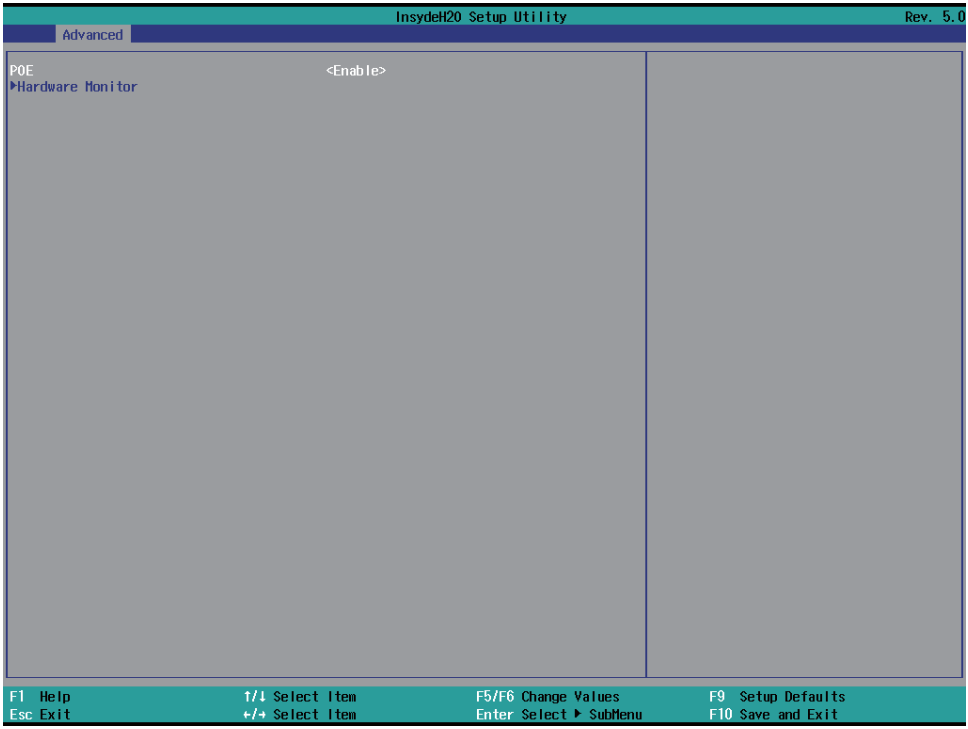
Hardware Monitor
Please refer section 4-6-5-1

4-6-5-1 ► Hardware Monitor



Press [Enter] to view PC health status.
This section shows the status of your CPU, Fan, and overall system.
This is only available when there is Hardware Monitor function onboard.

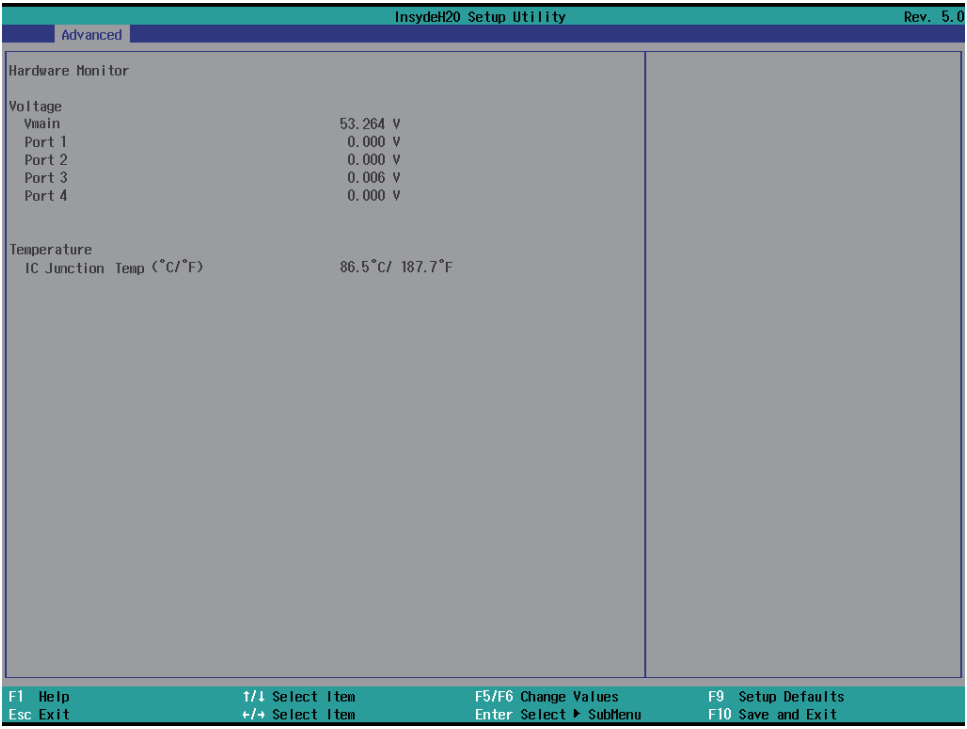
4-6-6 PSE PD69104B



PoE
The optional settings are: Enabled(default) or Disabled

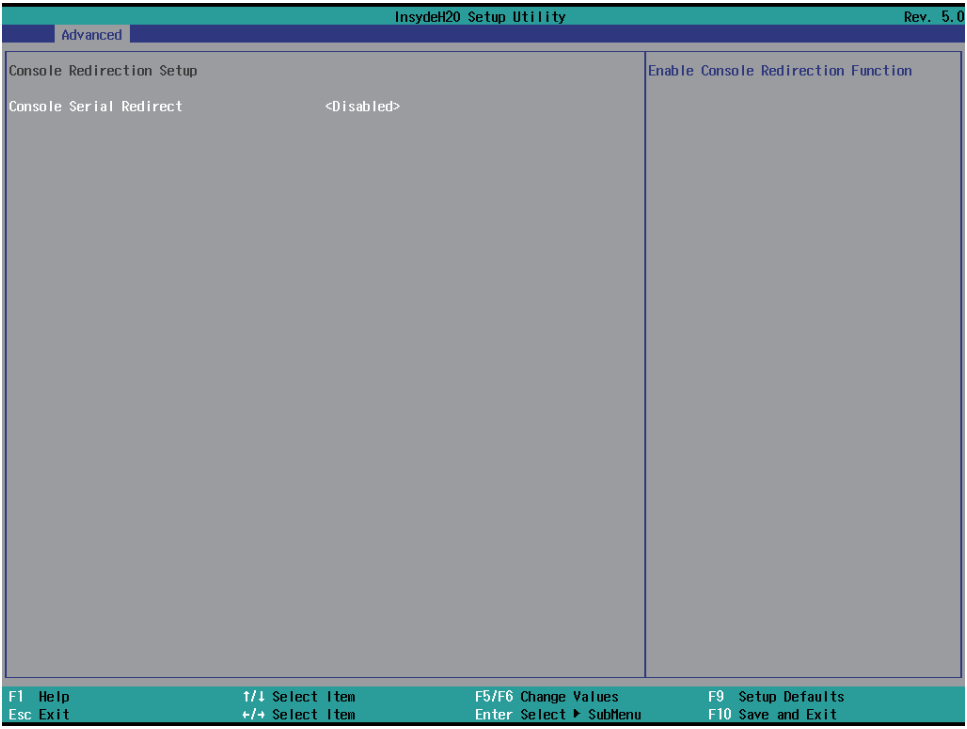
Hardware Monitor
Please refer section 4-6-6-1

4-6-6-1 ► Hardware Monitor



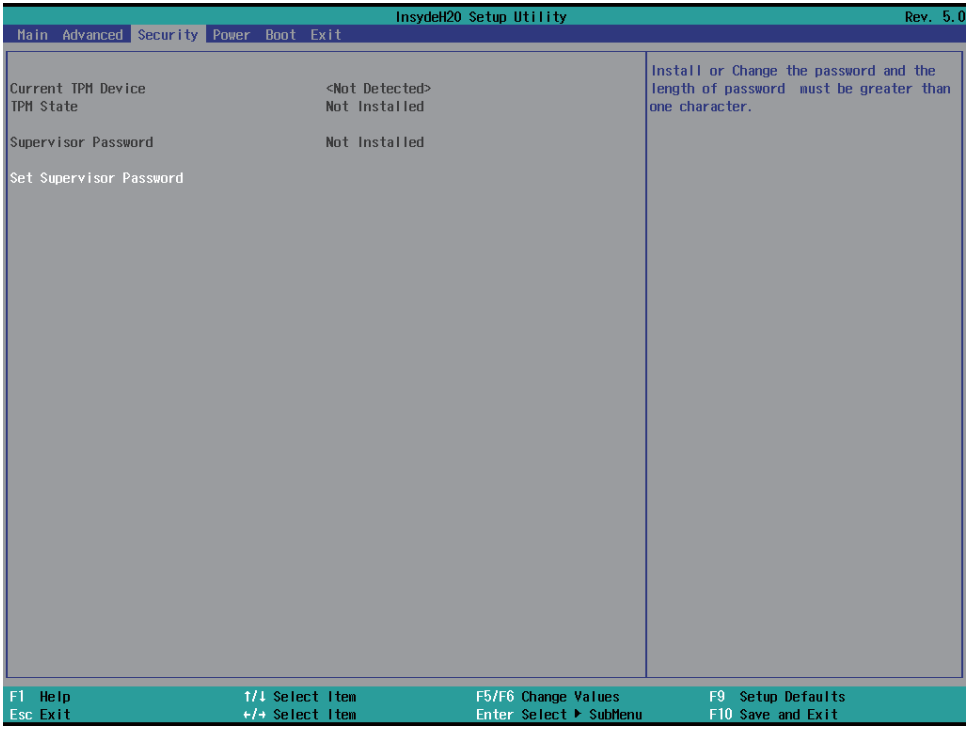
Press [Enter] to view PoE LAN Port health status.
This section shows the status of the PoE management IC and LAN Port.
This is only available when there is Hardware Monitor function onboard.

4-6-7 Console Redirection



Console Serial Redirect
Use this item to enable or disable Console Redirection.
The optional settings are: Enabled, Disabled(default).

4-7 Security

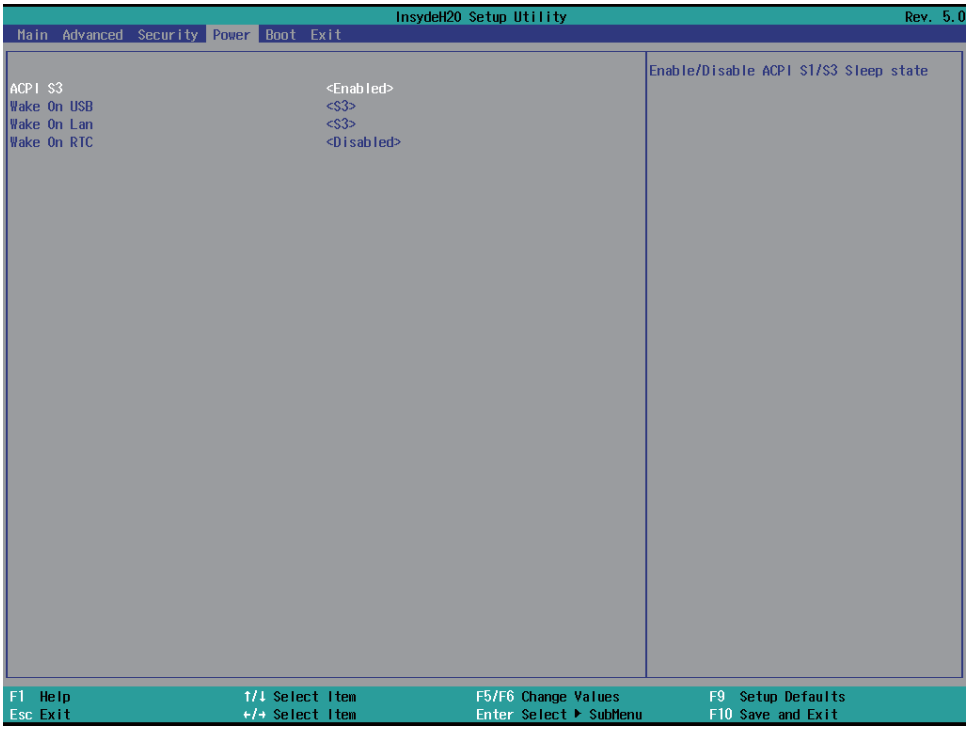


Supervisor Password

To set up an Supervisor password

1. Select Supervisor Password.
   The screen then pops up an Create New Password dialog.
2. Enter your desired password that is no less than 3 characters and no more than 10 characters.
3. Hit [Enter] key to submit.

4-8 Power



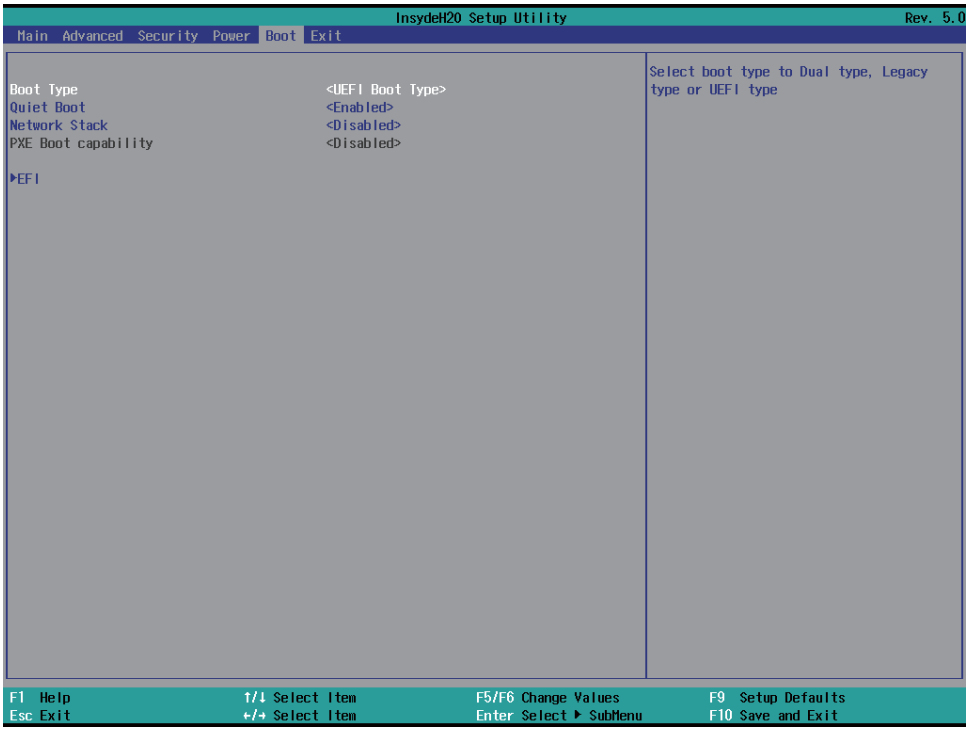
ACPI S3
Select ACPI sleep state (S3) supported
The optional settings: Enabled, Disabled(default)

Wake On USB
Wake on USB from Mouse or Keyboard interrupt signal when system in S3 state
The optional settings: S3(default), Disabled

Wake On LAN
Wake on LAN from LAN1 when system in S3 S5, or both of them state
The optional settings: S3(default), S5, S3/S5, Disabled

Wake On RTC
To select an alarm event to wake on a specific day/hour/min./sec.
The optional settings: Disabled(default), By Every Day, By Day of Month

4-9 Boot



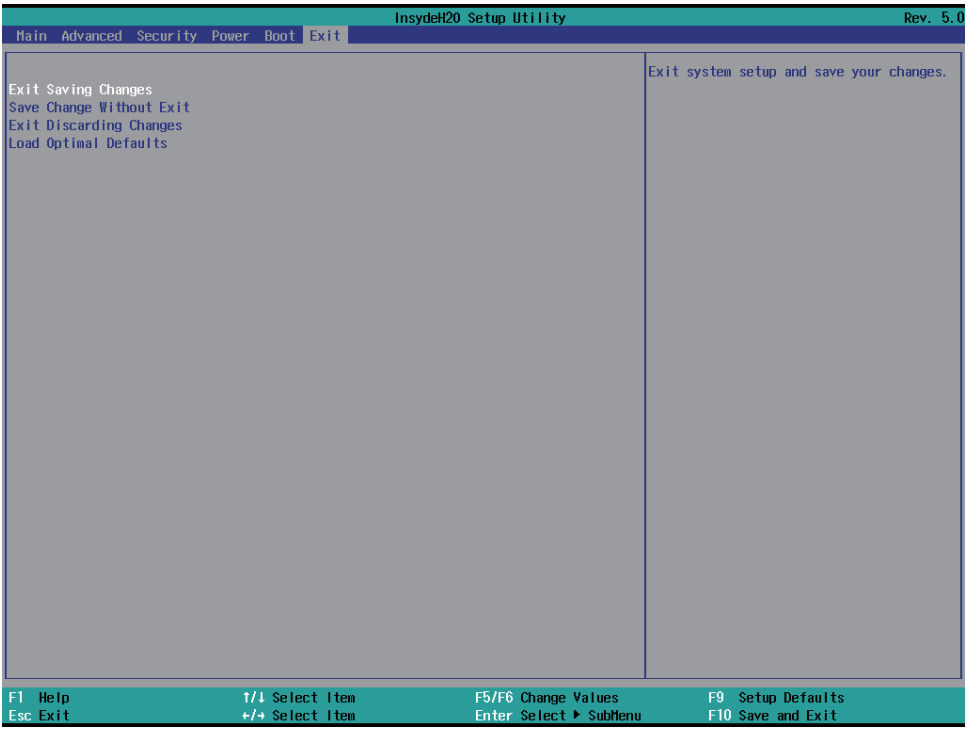
Boot type
Select boot type for Dual type, Legacy boot type or UEFI boot type, default is UEFI boot type

Quiet Boot
The optional settings are: Enabled (default), Disabled.

Network Stack
Enabled for PXE function, default is disabled.

EFI
Determine which EFI storage device for booting, this item will not show on this page if there is no any storage device found.

4-10 EXIT



Exit Saving Changes
This item allows user to reset the system after saving the changes.

Save Change Without Exit
This item allows user to saving the changes but doesn't restart.

Exit Discard Changes
This item allows user restart the system but no saving the changes

Load Optimal Default
Use this item to restore the optimal default for all the setup options.

Chapter-5

DRIVER INSTALLATION

There is a system installation DVD in the package. This DVD does not only include all the drivers you need but also some other free application programs and utility programs.
In addition, this DVD also includes an auto detect software telling you which hardware is installed and which driver is needed so that your system can function properly. We call this auto detect software SYSTEM INSTALL.

SYSTEM INSTALL Supports Windows 10 (32bit / 64bit) / Windows 8 / 8.1(32bit / 64bit) / Windows 7(32bit / 64bit)

Insert the DVD into your DVD-ROM drive and the SYSTEM INSTALL menu should appear as below. If the menu does not appear, double-click MY COMPUTER and double-click DVD-ROM drive or click START, click RUN, and type X:\SETUP.EXE
(assuming your DVD-ROM drive is X).

Make your selection from SYSTEM INSTALL menu:

1. Auto Detect Main board and OS to AUTOMATIC DRIVER INSTALLATION menu
2. Browse DVD to view the contents of the DVD
3. Exit to exit SYSTEM INSTALL menu

AUTOMATIC DRIVER INSTALLATION menu

1. INF Install Intel Skylake or Kaby Lake chipset driver
2. VGA Install onboard VGA driver
3. HD Audio Install HD Audio Codec driver
4. ME Tool Install Intel Management Engine driver
5. LAN To the LAN driver Readme file
6. Items for Windows 7

6-1. KMDF Install windows update package (FOR Win 7 only)
6-2. ME Tool Install Intel Management Engine driver
6-3. USB 3.0 Install Intel USB 3.0 driver (FOR Win 7 only)
6-4. TPM 2.0 Install Intel TPM 2.0 driver (FOR Win 7 only) note 1

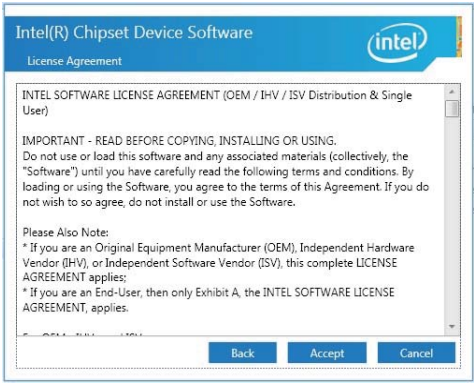
note 1: For Windows 7 Ultimate and i7 CPU only

Each selection is illustrated below:

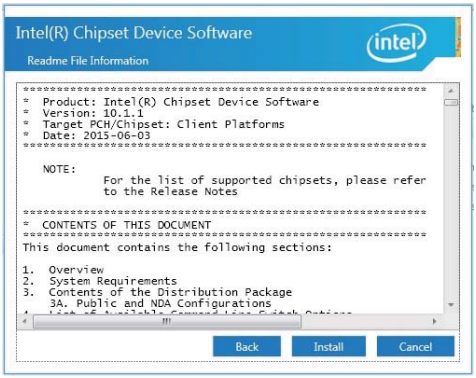
5-1 INF Install Intel Skylake Kaby Lake Chipset Driver (example for WIN10 64bit)

1. At the "AUTOMATIC DRIVER INSTALLATION menu"screen, click "INF".

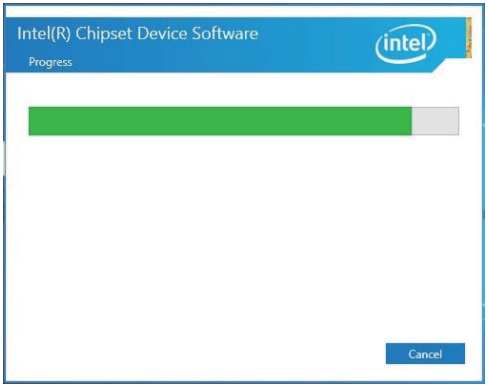
2. At the "Intel® Chipset Device Software" screen, click "Next".



3. At the "License Agreement" screen, click "Accept".



4. At the "Readme File Information" screen, click "Install".



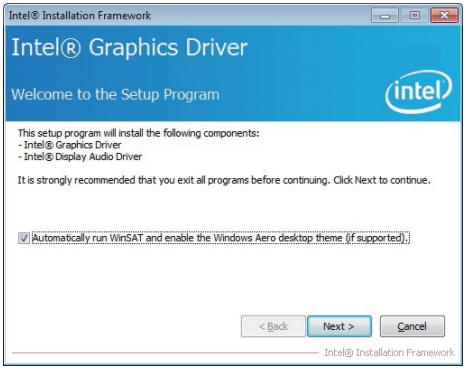
5. Progressing

6. Click "Restart Now" then to restart the computer.

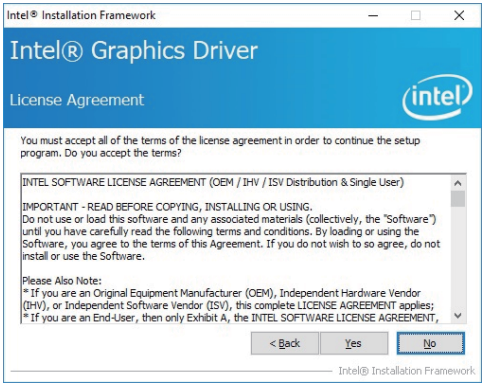
NOTE: SYSTEM INSTALL will auto detect file path X:\driver\sky_lake\INF\SetupChipset.exe

5-2 VGA Install Intel Skylake & Kaby Lake VGA Driver (example for WIN10 64bit)

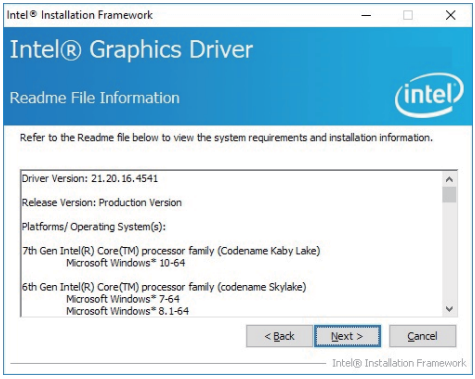
1. At the "AUTOMATIC DRIVER INSTALLATION menu" screen, click "VGA".



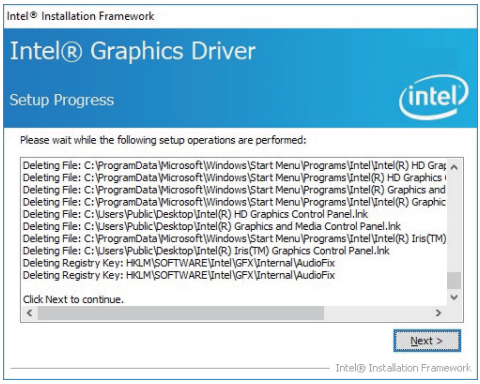
2. At the "Welcome to the Setup Programscreen, Click "Next".



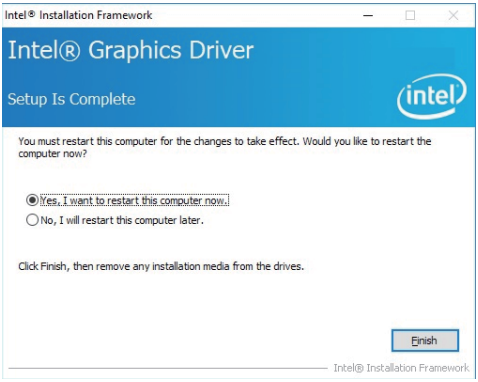
3. At the "License Agreement" screen, Click "Yes".



4. At the "Readme File Information" screen, Click "Next".



5. At the "Setup Progress" screen, Click "Next".

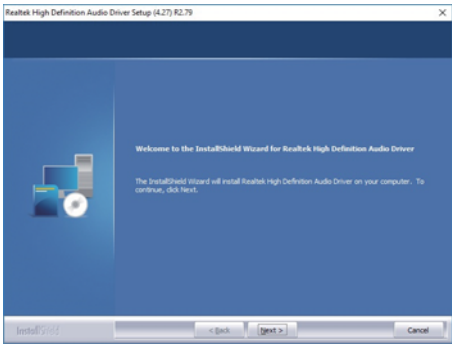


6. Click "Finish" to restart the computer.

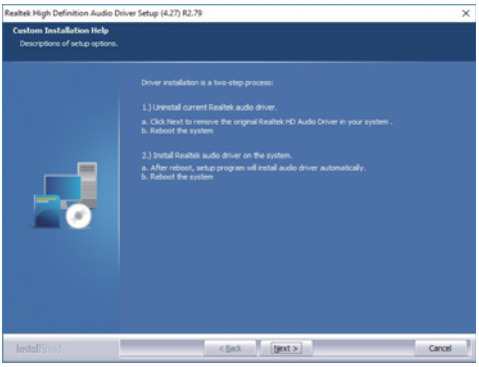
NOTE: SYSTEM INSTALL will auto detect file path
For Windows 64-bit
X: \driver\sky_lake\VGA\X64\Setup.exe
For Windows 32-bit
X:\driver\sky_lake\VGA\X86\Setup.exe

5-3 HD Audio Install High Definition Audio Driver (example for WIN10 64bit)

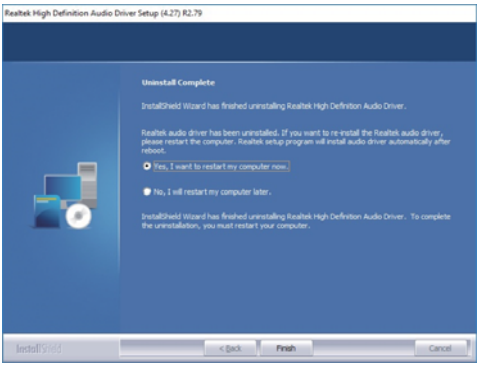
1. At the "AUTOMATIC DRIVER INSTALLATION menu" screen, click "HD Audio".



2. Click "Next".



3. Click "Next".

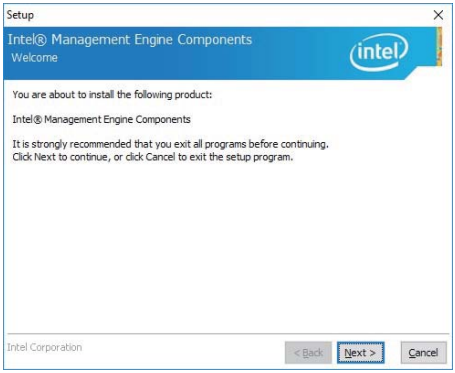


4. Click "Finish" then to restart the computer.

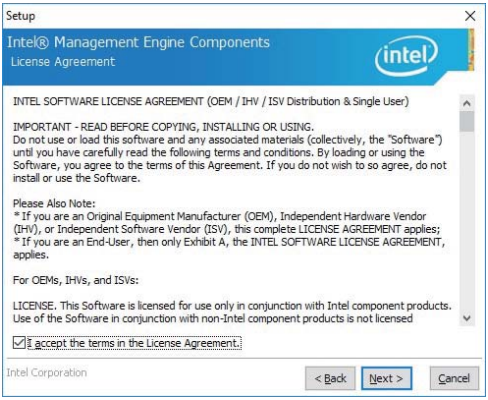
NOTE: SYSTEM INSTALL will auto detect file path
For Windows 64-bit,
X:\driver\sky_lake\Audio\0006-64bit_Win7_Win8_Win81_Win10_R279
For Windows 32-bit
X: \driver\sky_lake\Audio\Win7_Win8_Win81_R273

5-4 ME Tool Install Intel USB 3.0 ME Driver (example for WIN10 64bit)

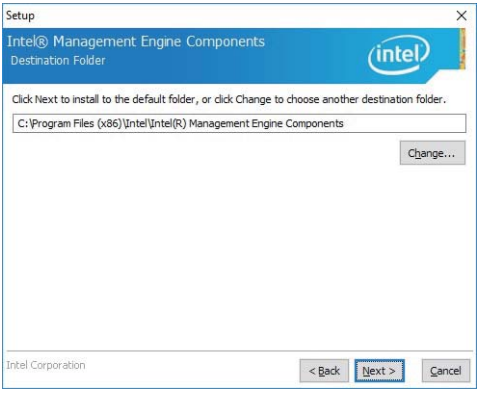
1. At the "AUTOMATIC DRIVER INSTALLATION menu" screen, click "ME Tool".



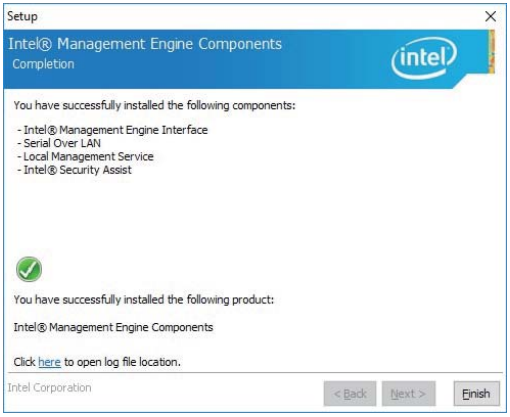
2. At the "Welcome to the Setup Program screen, Click "Next".



3. At the "License Agreement" screen, Click "☑" "Next".



4. At the "Destination Folder" screen, Click "Next".

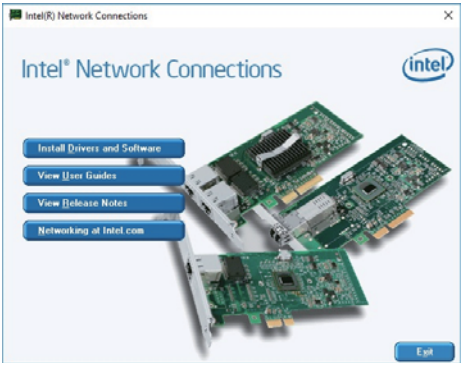


NOTE: SYSTEM INSTALL will auto detect file path
X: \driver\sky_lake\ME\SetupME

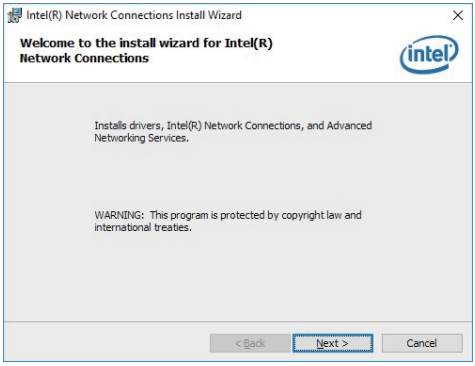
5. Click "Finish" to finish the setup.

5-5 LAN Install LAN Driver (example for WIN10 64bit)

1. At the "AUTOMATIC DRIVER INSTALLATION menu" screen, click "LAN".

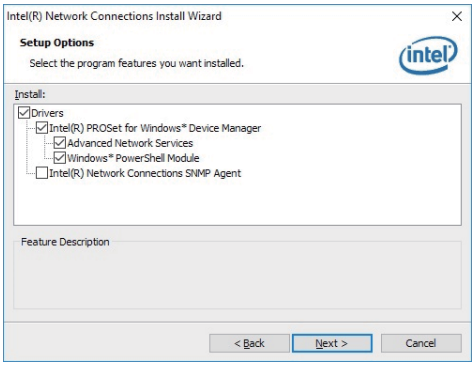


2. At the "Intel Network Connections" screen, Click "Install Drivers and Software".

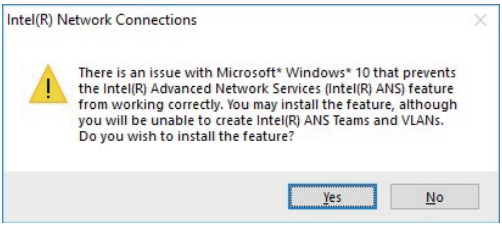


3. Click "Next".

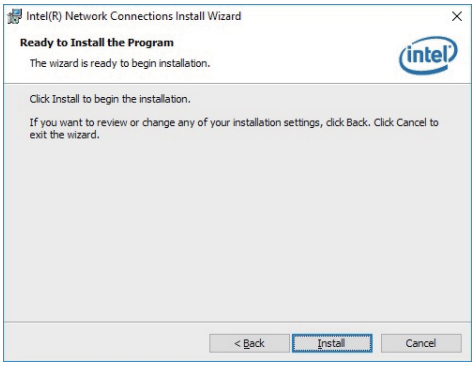
4. At the "License Agreement" screen, Click "☑" "Next".



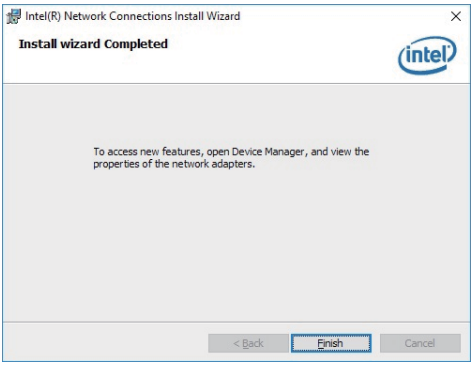
5. Click "Next".



6. Click "Yes".



7. Click "Install".



8. Click "Finish" to finish the setup.

NOTE: SYSTEM INSTALL will auto detect file path
X:\driver\sky_lake\LAN\Autorun.exe

5-6 Items for Windows 7 installation

Note : Before Windows 7 installation, USB 3.0 Driver MUST rebuild in a new DVD or in a pen-drive. Please following the steps as below

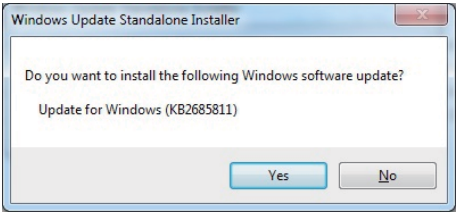
step1 Create a folder X:/win7/boot & X:/win7/install X:/win7/image
step2 unzip usb3.0 driver to X:/win7/usb3.0
step3 Copy the files on the disc D:\sources\install.wim D:\sources\boot.wim to X:/win7/image
step4 Open cmd as your system administrator
step5 Perform the following steps

```
==========================================================================
dism /Mount-Wim /Wimfile:C:\win7\image\boot.wim /index:2 /Mountdir:C:\win7\boot
dism /image:C:\win7\boot /add-driver /driver:C:\win7\usb3.0 /Recurse /ForceUnsigned
dism /unmount-wim /mountdir:C:\win7\boot /commit
dism /Mount-Wim /Wimfile:C:\win7\image\boot.wim /index:1 /Mountdir:C:\win7\boot
dism /image:C:\win7\boot /add-driver /driver:C:\win7\usb3.0 /Recurse /ForceUnsigned
dism /unmount-wim /mountdir:C:\win7\boot /commit
dism /Mount-Wim /Wimfile:C:\win7\image\install.wim /index:1 /Mountdir:C:\win7\install
dism /image:C:\win7\boot /add-driver /driver:C:\win7\usb3.0 /Recurse /ForceUnsigned
dism /unmount-wim /mountdir:C:\win7\install /commit
==========================================================================
```

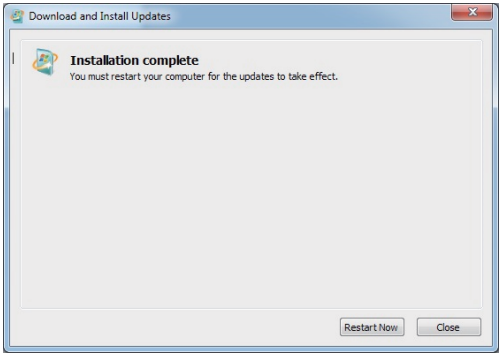
step6 copy X:/win7/image/install.wim X:/win7/image/boot.wim D:\sources\
step7 Reburn the disc

5-6-1 KMDF Install Windows Update package (FOR Win 7 only)

1. At the "AUTOMATIC DRIVER INSTALLATION menu", click "KMDF".



2. Click "Yes".

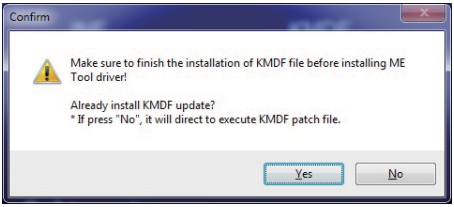


3. Click "Restart Now" to restart the computer.

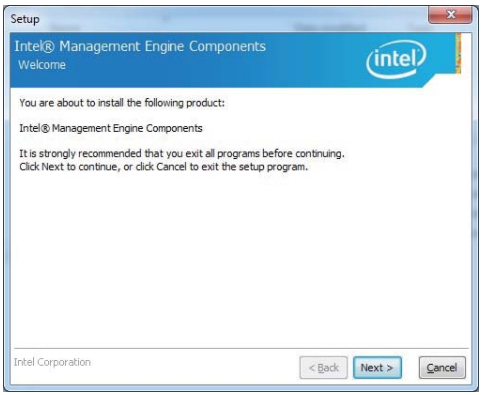
NOTE: SYSTEM INSTALL will auto detect file path
For Windows 7 64-bit,
X:\driver\sky_lake\ME\KMDF_Win7\kmdf-1.11-Win-6.1-x64
For Windows 7 32-bit,
X:\driver\sky_lake\ME\KMDF_Win7\kmdf-1.11-Win-6.1-x86

5-6-2 ME Tool Install Intel ME Tool driver for WIN7
Please install KMDF file first.

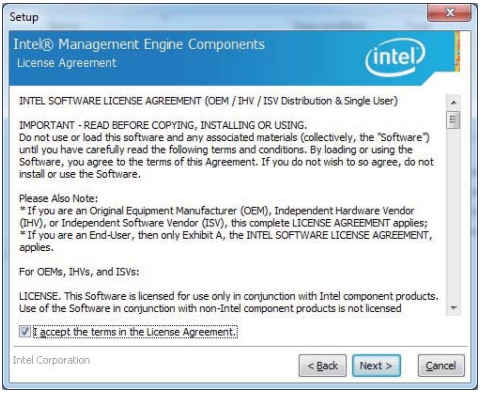
1. At the "AUTOMATIC DRIVER INSTALLATION menu", click "ME Tool".



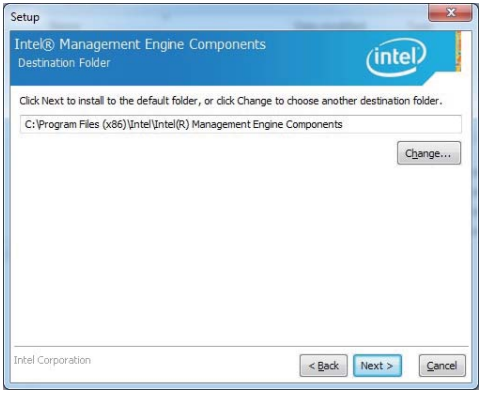
2. Click "Yes". KMDF file must being installed before ME Tool installation.



3. Click "Next".



4. Accept the terms and Click "Next".



5. Click "Next".

6. Click "Finish" to finish the setup.

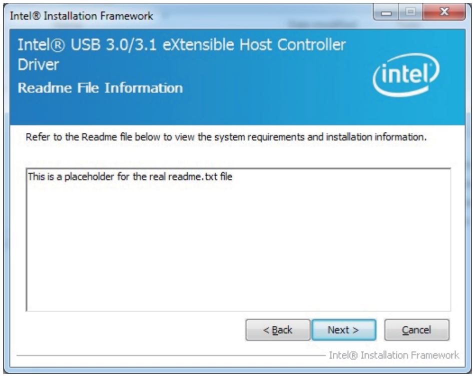
NOTE: SYSTEM INSTALL will auto detect file path
X: \driver\sky_lake\ME\SetupME

5-6-3 USB 3.0 Install for WIN7

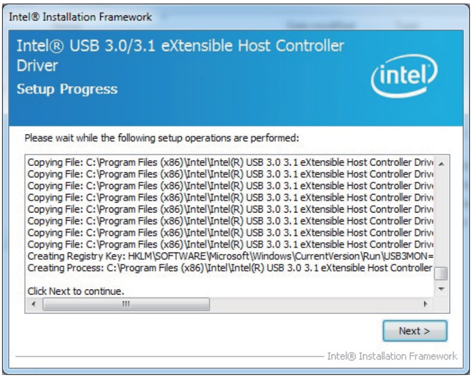
1. At the "AUTOMATIC DRIVER INSTALLATION menu", click "USB 3.0".

2. Click "Next".

3. Click "Yes".



4.Click "Next ".



5. Click "Next".

6. Click "Finish" to finish the setup.

NOTE: SYSTEM INSTALL will auto detect file path
For Windows 7 32 / 64-bit,
X:\driver\sky_lake\USB 3.0\Setup.exe

5-6-4 TPM 2.0

For Windows 7 Ultimate and i7 CPU only

5-11 How to update Insyde BIOS

Under DOS Mode

STEP 1. Prepare a bootable disc.
(Storage device could be USB FDD or USB pen drive.)

STEP 2. Copy utility program to your bootable disc. You may download it from our website.

STEP 3. Copy the latest BIOS for your LEX motherboard from our website to your bootable disc.

STEP 4. (Here take 3I610NX as an example, please enter your motherboard's name)
Insert your bootable disc into X: (X could be C:, A: or others.
It depends on which type of storage device you use.)

Start the computer and type

X:\: H2OFFT-D.EXE 3I610NX.ROM –BIOS -ALL

3I610NX.ROM is the file name of the latest BIOS.

It may be 3I610NX.ROM or 3I610NX.ROM, etc.

Please leave one space between .ROM & -BIOS -ALL

By Bay Trail series mainboard, please type

X:\: H2OFFT-D.EXE 3I610NX.ROM –BIOS -ALL

-BIOS : Flash BIOS region

-ALL : Flash all

STEP 5. Press ENTER and the BIOS will be updated,
Computer will restart automatically.

Appendix B: Resolution list

640 x 480 x (256 / 16bit / 32bit)
800 x 600 x (256 / 16bit / 32bit)
1024 x 768 x (256 / 16bit / 32bit)
1152 x 864 x (256 / 16bit / 32bit)
1280 x 600 x (256 / 16bit / 32bit)
1280 x 720 x (256 / 16bit / 32bit)
1280 x 768 x (256 / 16bit / 32bit)
1280 x 800 x (256 / 16bit / 32bit)
1280 x 960 x (256 / 16bit / 32bit)
1280 x 1024 x (256 / 16bit / 32bit)
1400 x 1050 x (256 / 16bit / 32bit)
1440 x 900 x (256 / 16bit / 32bit)
1600 x 900 x (256 / 16bit / 32bit)
1600 x 1200 x (256 / 16bit / 32bit)
1680 x 1050 x (256 / 16bit / 32bit)
1920 x 1080 x (256 / 16bit / 32bit)
1920 x 1200 x (256 / 16bit / 32bit)