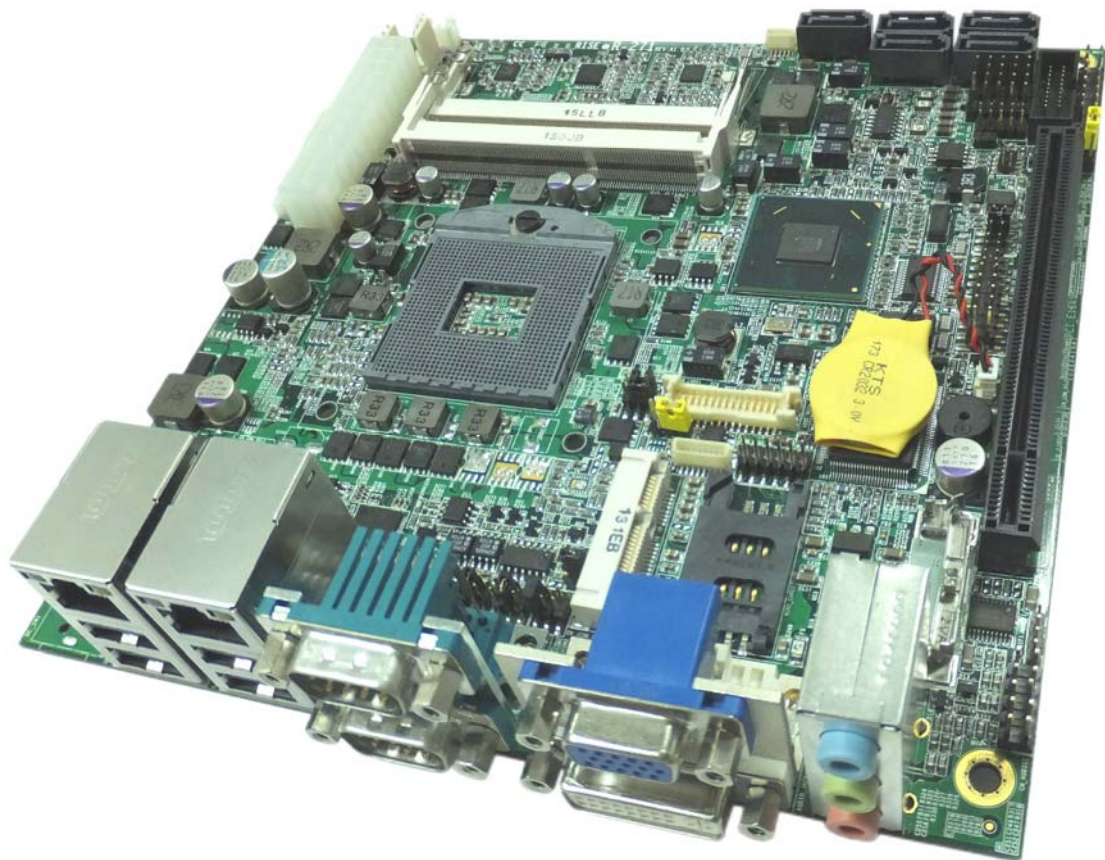


R-271A/AL/D/DL Series

Mini-ITX Motherboard Support Socket G2 for Intel® mobile core™ i3/i5/i7 CPU, VGA/LVDS/DVI, Dual GbE, Mini PCIe, CFAST socket, SATA 6Gb/s and Audio.



R-271A/AL/D/DL

USER'S MANUAL

Model No.	Description
R-271A	ATX power supply input, 2xLAN, 4xCOM (COM1/3/4 : RS232 ; COM2 : RS232/422/485)
R-271AL	ATX power supply input, 1xLAN, 2xCOM (COM1 : RS232 ; COM2 : RS232/422/485)
R-271D	DC-IN power adapter input (12~24V), 2xLAN, 4xCOM (COM1/3/4 : RS232 ; COM2 : RS232/422/485)
R-271DL	DC-IN power adapter input (12~24V), 1xLAN, 2xCOM (COM1 : RS232 ; COM2 : RS232/422/485)

Revision

Date	Version	Changes
February 14, 2012	A1.0	Initial release

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Introduction

Thanks for choosing the next generation high performance Socket G2 motherboard “R-271A/AL/D/DL series”. The uses the high performance Intel® QM67 chipset that will deliver superior performance to your computer.

About This User’s Guide

This User’s Guide is for assisting system manufactures and end user in setting up and installing the motherboard. Information in this guide has been carefully checked for reliability, however, there may still be inaccuracies and information in this document is subject to change without notice.

DISCLAIMER

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any inaccuracies that may still be contained in this manual. We reserve the right to make changes to this material at any time without notice.

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Chapter 1 : Unpacking

1.1 Anti-static Precautions

WARNING!

Static electricity can destroy certain electronics. Make sure to follow the ESD precautions to prevent damage to the product, and injury to the

Make sure to adhere to the following guidelines:

Wear an anti-static wristband: Wearing an anti-static wristband can prevent electrostatic discharge.

Self-grounding: Touch a grounded conductor every few minutes to discharge any excess static buildup.

Use an anti-static pad: When configuring any circuit board, place it on an anti-static mat.

Only handle the edges of the PCB: Don't touch the surface of the motherboard. Hold the motherboard by the edges when handling.

1.2 Unpacking Precautions

When the motherboard is unpacked, please do the following:

Follow the antistatic guidelines above.

Make sure the packing box is facing upwards when opening.

Make sure all the packing list items are present.

1.3 Packing List

If any of the components listed in the checklist below are missing, do not proceed with the installation. Contact the reseller or vendor.

The R-271 series is shipped with the following components:

Item and Part Number	Quantity
R-271 series Motherboard	1
SATA cable (CAB-N07330)	2
Dual RS-232 cable with bracket (NBS-COMBK0) (For R-271A / R-271D only)	1
ATX 24pin DC power cable (CAB-M24AD0) (For R-271D / R-271DL only) If you want use over 2x 3.5" HDD, please make sure the watts of power adapter is enough to support.	1
I/O Shielding (BKT-IR2717)	1
Utility CD	1
User Manual	1

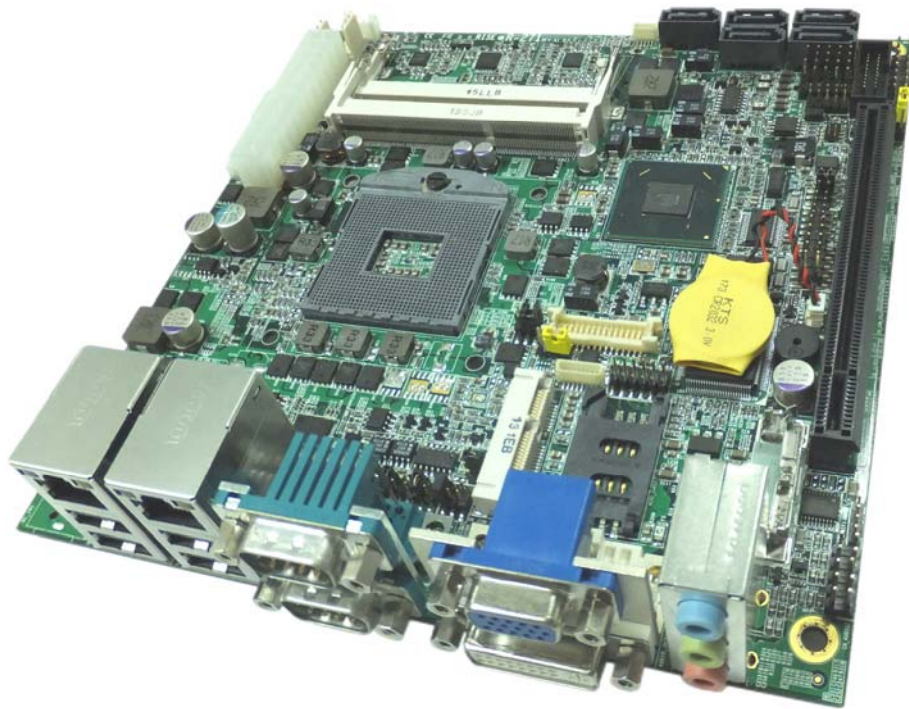
1.3.1 Optional Items

The following are optional components which may be separately purchased:

Item and Part Number	Quantity
Dual USB cable with bracket (CAB-M09U20)	1
KB/MS Y cable (CAB-N08B20)	1
CPU Cooler (FAN-53T70H)	1

Chapter 2 : Introduction

2.1 Introduction



The R-271 series Mini-ITX motherboard is a Socket G 32nm Intel® Core™ i3, i5 and Core™ i7 processor platform. Up to two 8.0 GB 1066/1333/1600 MHz DDR3 SDRAM SO-DIMM are supported by the Intel® processor. The processor also supports a PCIe x16 slot.

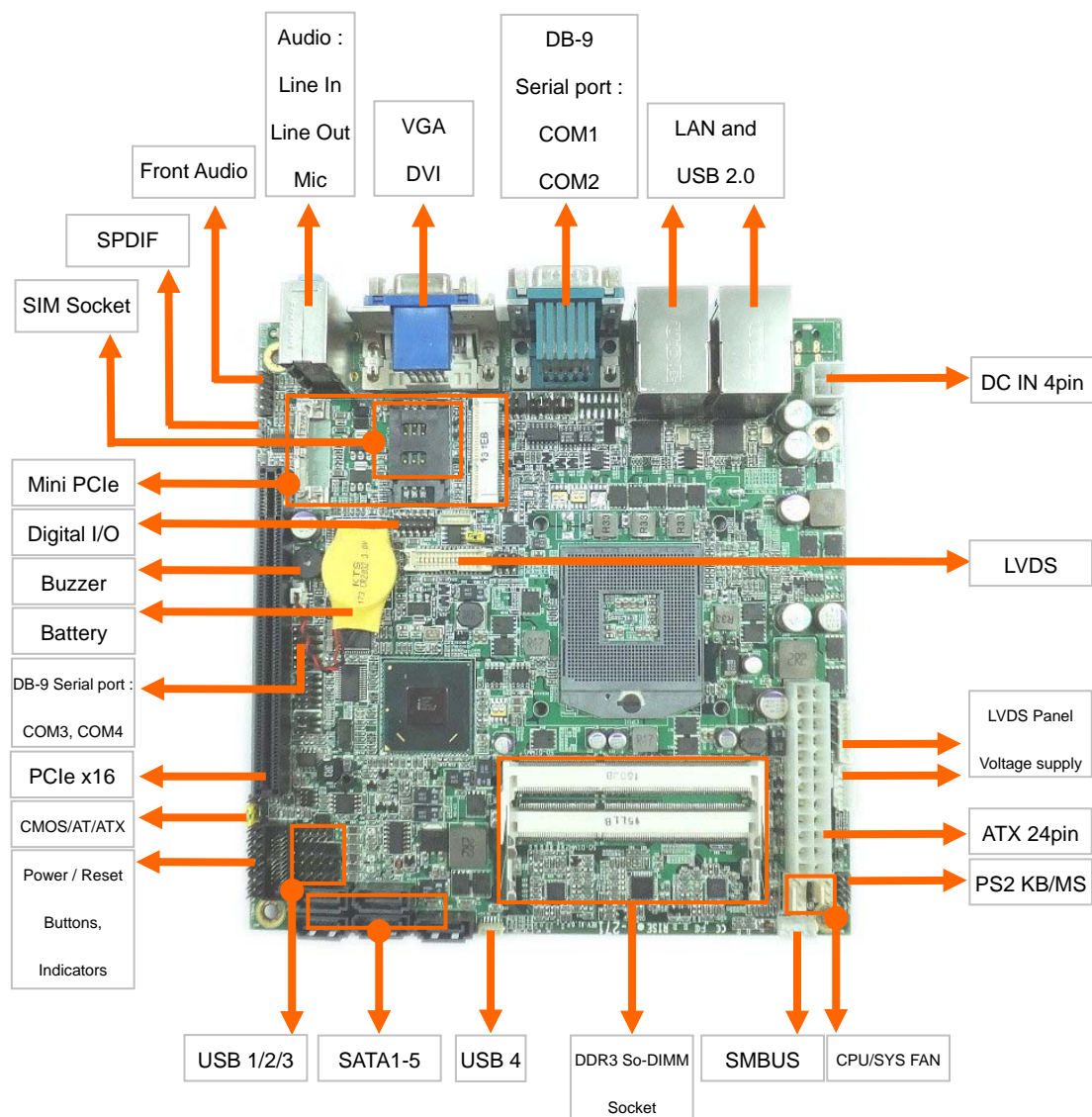
The integrated Intel® QM67 Express Chipset supports two GbE LAN: all through the Intel® 82574L Ethernet controller, Wake-on-LAN, PXE ready. The Intel® QM67 also supports three SATA 3Gb/s drives, two SATA 6Gb/s drives.

The R-271 series supports multiple display devices, including 18-bit or 24-bit dual-channel LVDS, analog CRT, and DVI. Six USB 2.0 channels, and one expansion PCIe mini socket, one expansion CFAST socket. High Definition Audio (HDA) support ensures HDA devices can be easily implemented on the R-271 series.

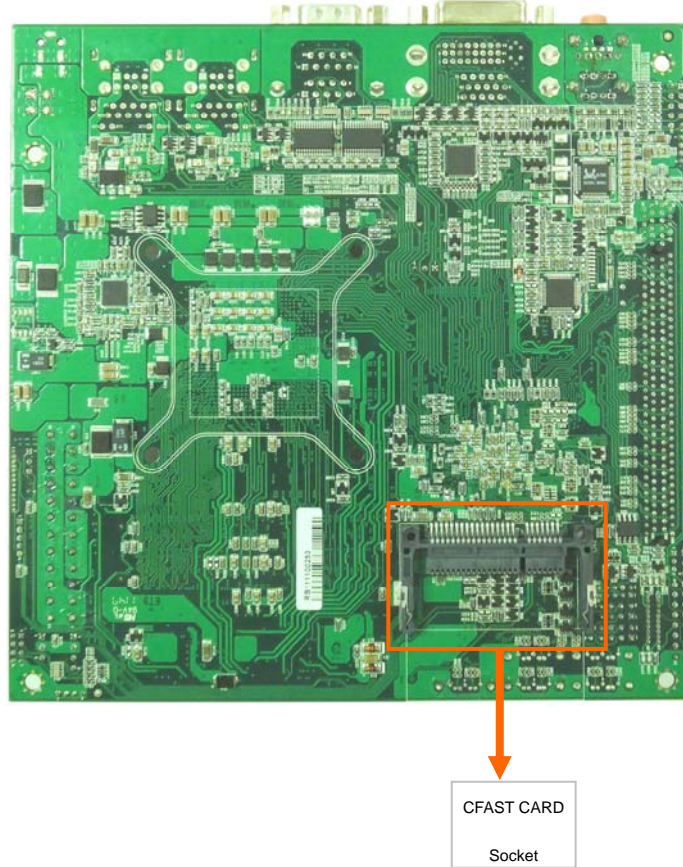
2.2 Connectors

The connectors on the R-271 series are shown in the figure below.

Front side :



Rear side :

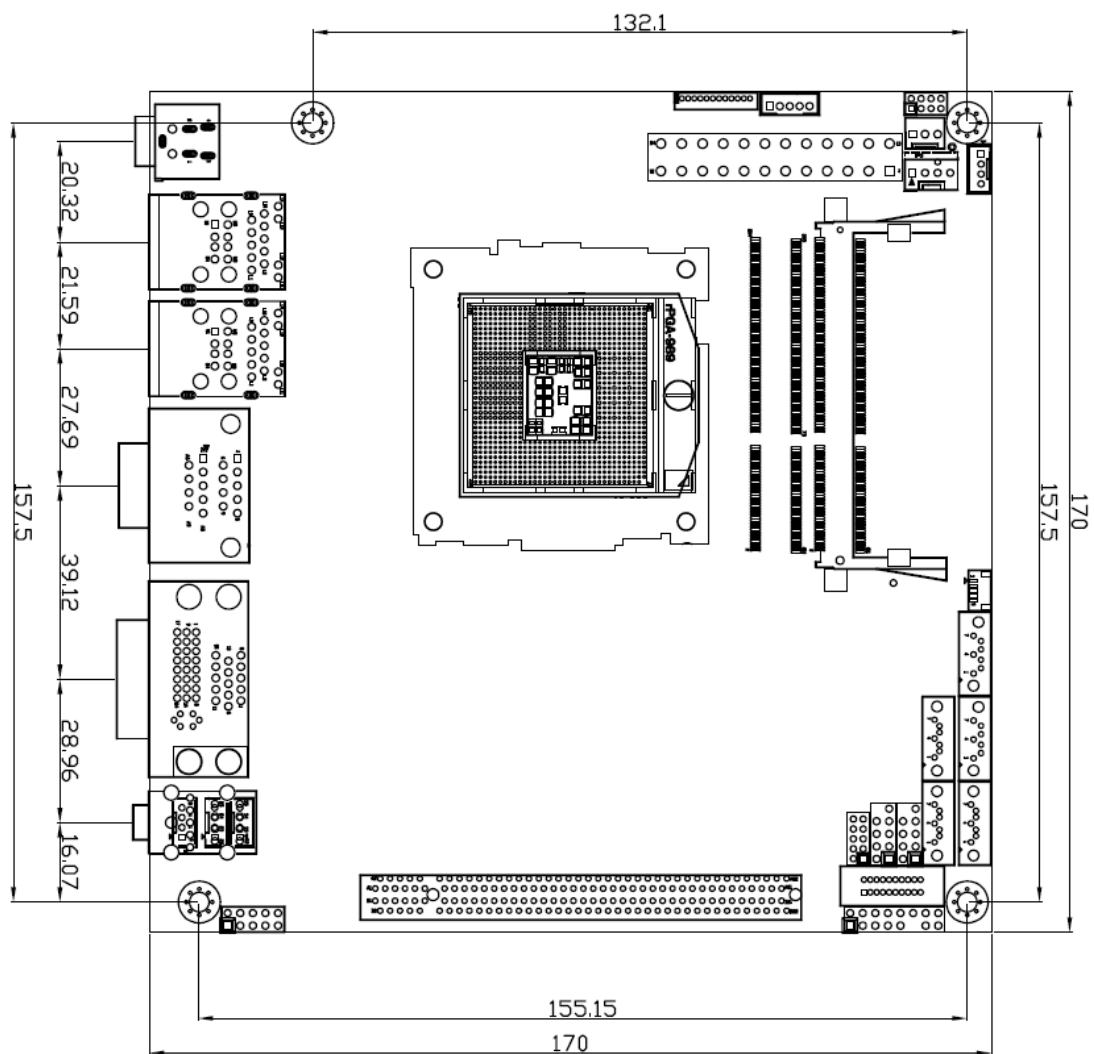


2.3 Dimensions

2.3.1 Board Dimensions

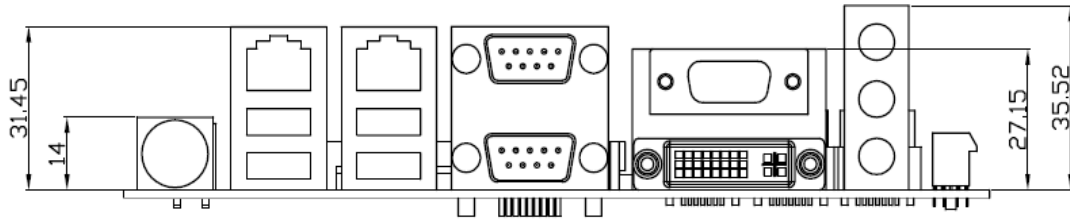
The dimensions of the board are listed below :

Length: 170 mm / Width: 170 mm



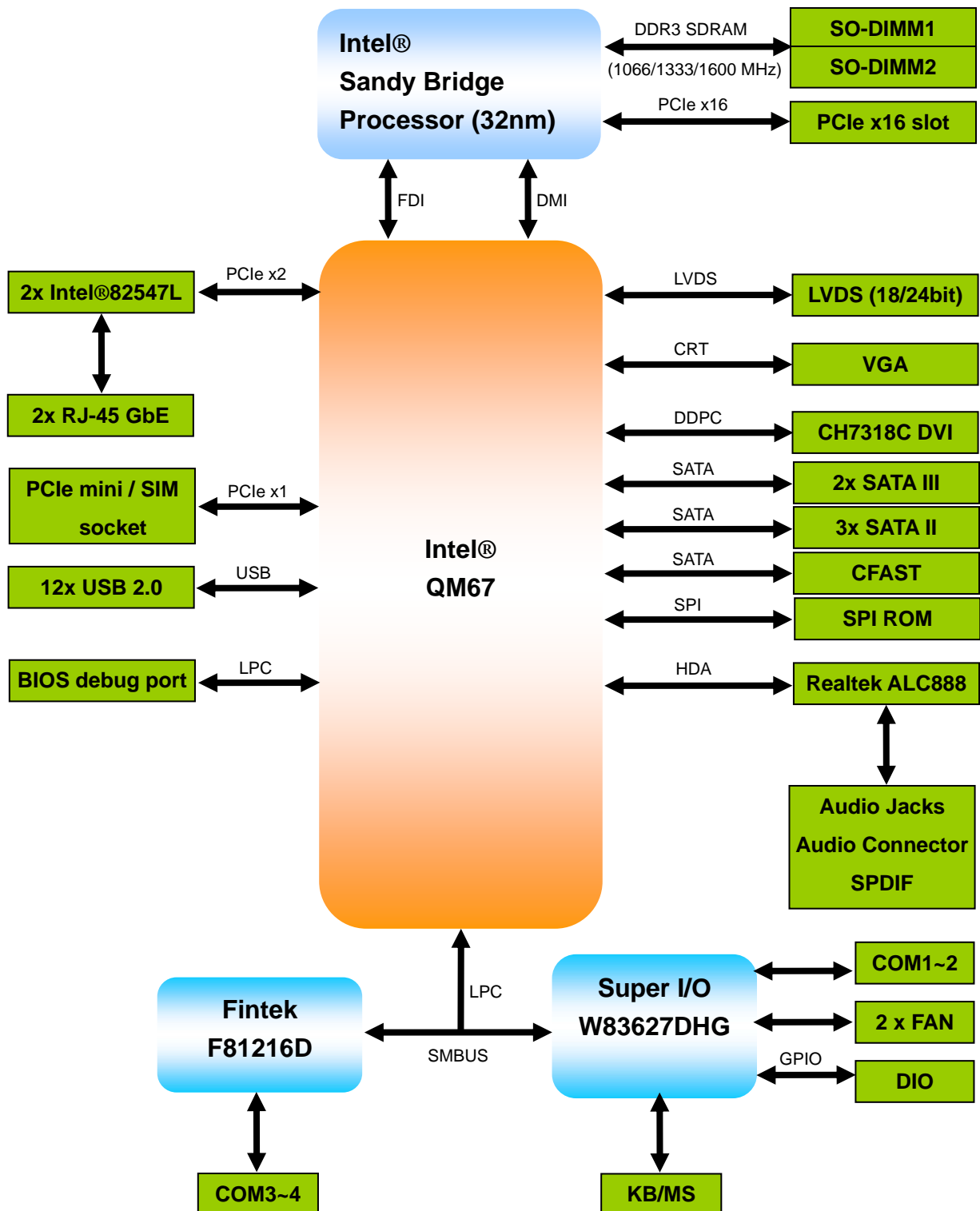
2.3.2 External Interface Panel Dimensions

External peripheral interface connector panel dimensions are shown below .:



2.4 Block Diagram Block Diagram

The data flow between the two on-board chipsets and other components installed on the motherboard and described in the following sections of this chapter.



2.5 Technical Specifications

R-271A/AL/D/DL technical specifications are listed in table below.

Processor	Intel Core™ i3 / i5 / i7 Mobile processor Package Type: Socket G2 rPGA988B
Chipset	Mobile Intel® QM67 PCH (Platform Controller Hub)
Memory	Two 204-pin DDR3 1066/1333/1600 SO-DIMM up to 16 GB dual channel.
Storage	2x SATAIII (6Gb/s), 3x SATAII (3Gb/s), with RAID 0/1/5/10 support 1x CFAST
Video	Intel CPU integrated Intel HD graphics 3000 graphic core (share memory up to 512MB), 1 x VGA, 1 x DVI, 1 x LVDS , 18/24bits dual channel with 3.3V/5V/12V Support
Audio	Realtek ALC888 HD 6-channel CODEC Line out / line in / microphone ports
Super I/O	W83627DHG
Interface ports	Rear side : 2x Serial, DB-9 connector : 1x RS232(COM1), 1x RS485/422/232(COM2) VGA(CRT) DVI 2x RJ45 LAN (R-271AL/DL only 1x RJ45) 4x USB 2.0 Line out / line in / microphone.
USB Port	External : 4x USB 2.0 ports. Internal : 8x USB 2.0 (6x jumper pin, 1x wafer, 1x Mini PCI-E slot share)

Expansion Slots	1x PCI-E 16x slot 1x Mini PCI-E slot 1x CFAST socket 1x SIM socket
Communications	Intel 82574L Gigabit LAN, Wake-on-LAN, PXE ready
Internal I/O port	1x PS2 KB/Mouse (8-pin header) 1x SMBus (4-pin header) 1x SPDIF/out (4-pin header) 1x GPIO (Onboard Programmable 8-bit Digital I/O interface(4 In+4 Out), 12-pin header) ; 2x RS232 (COM3/4, 10-pin header) (for R-271A/D only)
BIOS	UEFI BIOS label
Watchdog Timer	Software programmable supports 1~255 sec. system reset
Boot Up mode	ATX / AT
Power Connector	R-271A/AL : One internal 24-pin and One internal 4-pin power connector for power supply R-271D/DL : One external 4-pin DC input for power adapter (DC Input voltage range : 12~24V)
Operation Humidity	10% ~ 95% relative humidity, non-condensing
Temperature	Operating: 0°C ~ +60°C (32°F ~ 140°F), Storage: -20°C ~ +80°C (-4°F ~ +176°F)
Dimensions	Mini-ITX form factor, 170mm (L) x 170mm(W)
Weight GW/NW	900g/320g

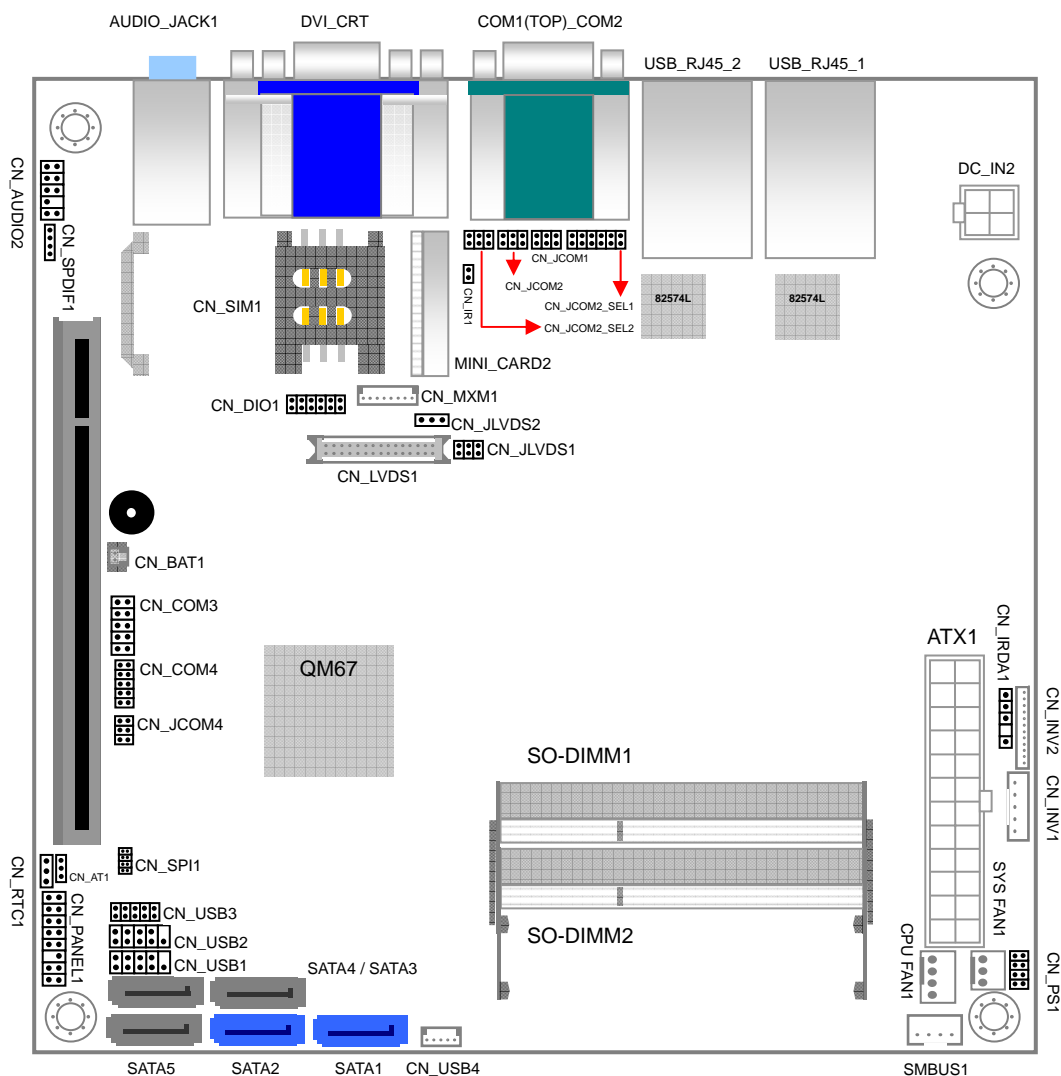
Chapter 3 : Connectors

3.1 Peripheral Interface Connectors

This chapter details all the jumpers and connectors.

3.1.1 R-271 Series Layout

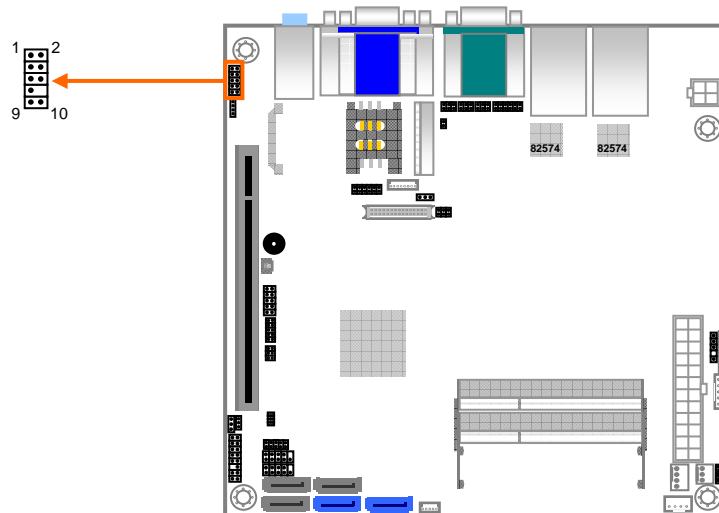
The figures below show all the connectors and jumpers.



3.2 Internal Peripheral Connectors/Jumpers

The section describes all of the connectors on the R-271 series.

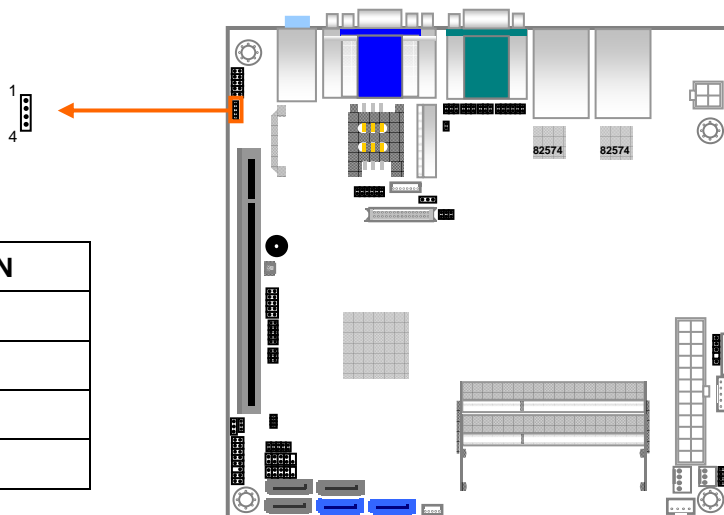
3.2.1 Audio Connector : CN_AUDIO2



PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	MIC2L	2	GND
3	MIC2R	4	ACZ_DET
5	LINE2R	6	MIC2_JD
7	FRONT_SENSE	8	NC
9	LINE2L	10	LINE2_JD

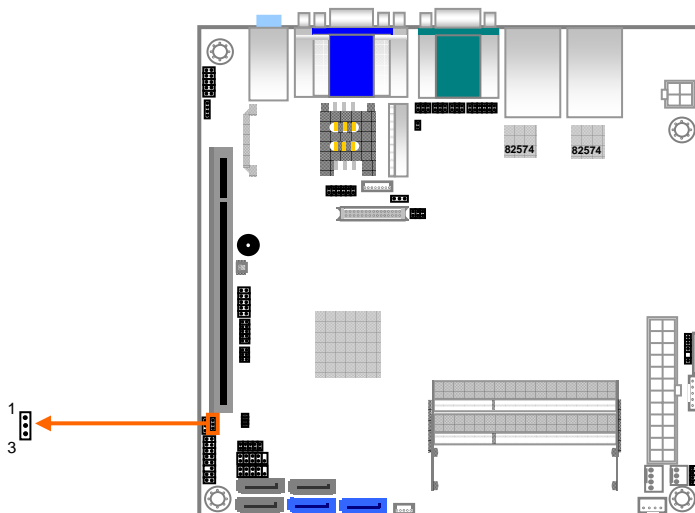
3.2.2 SPDIF Connector : CN_SPDIF1

PIN NO.	DESCRIPTION
1	V5S
2	NC
3	SPDIFO
4	GND

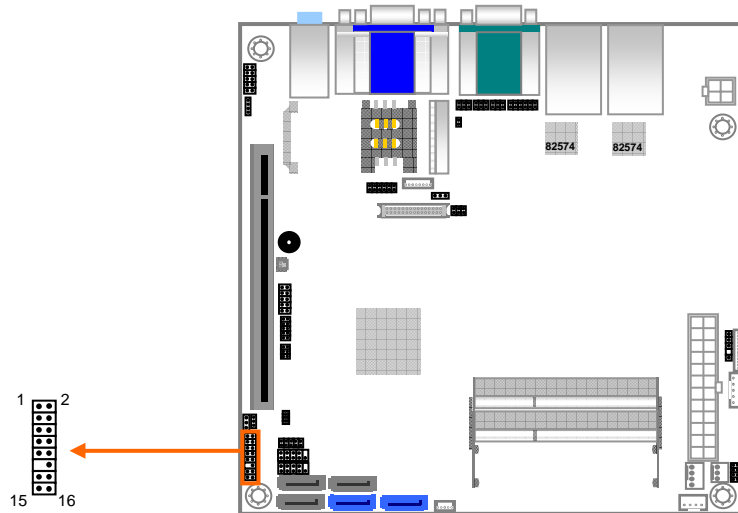


3.2.3 Boot Up Mode Jumper : CN_AT1

PIN NO.	DESCRIPTION
1-2	AT Mode
2-3	ATX Mode



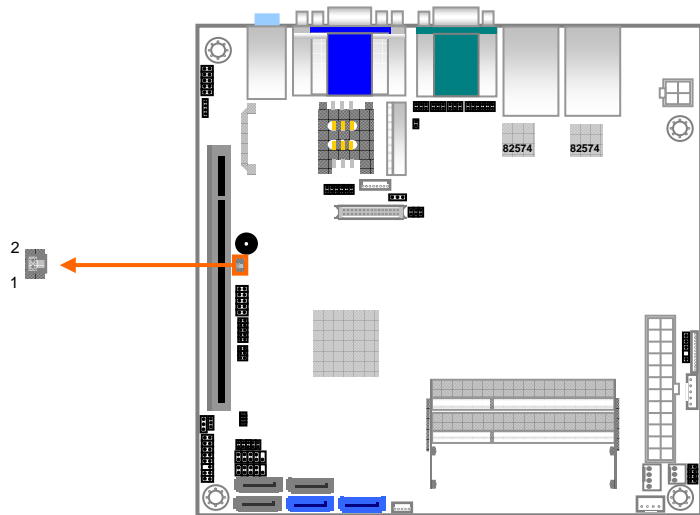
3.2.4 Front Panel Connector : CN_PANEL1



PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	HDD LED+	2	Power LED+
3	HDD LED-	4	NC
5	NC	6	GND
7	RST-	8	NC
9	GND	10	SPEAK+
11	NC	12	NC
13	PW_BN+	14	NC
15	PW_BN-	16	SPEAK-

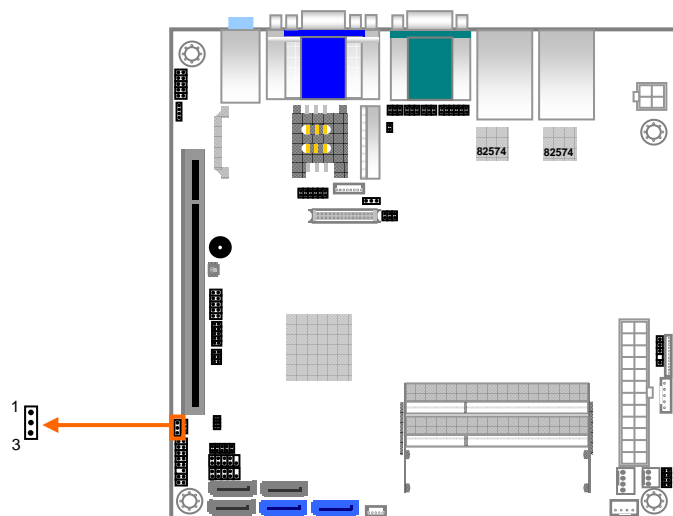
3.2.5 Battery Power Connector : CN_BAT1

PIN NO.	DESCRIPTION
1	V3.3A
2	GND



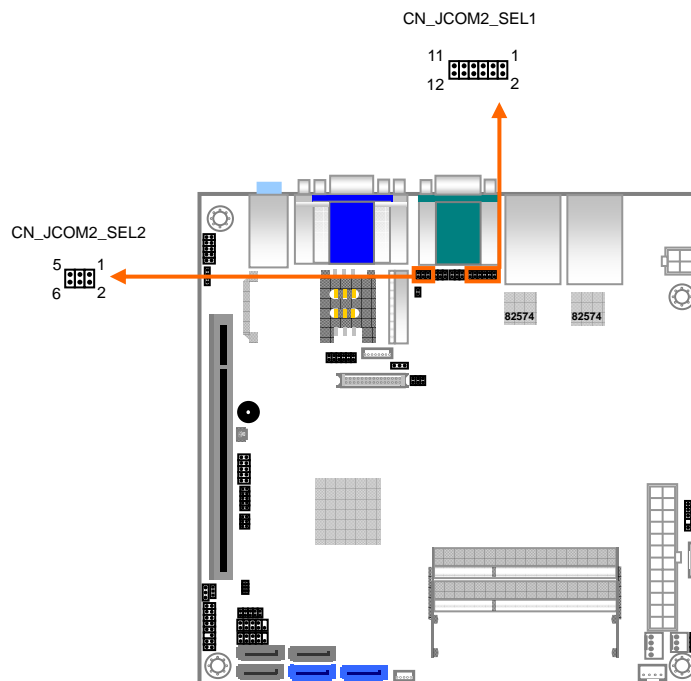
3.2.6 Clear CMOS Jumper : CN_RTC1

PIN NO.	DESCRIPTION
1-2	CLEAR CMOS
2-3	NORMAL



3.2.7 COM2 RS232/422/485 Jumper :

CN_JCOM2_SEL1 / CN_JCOM2_SEL2

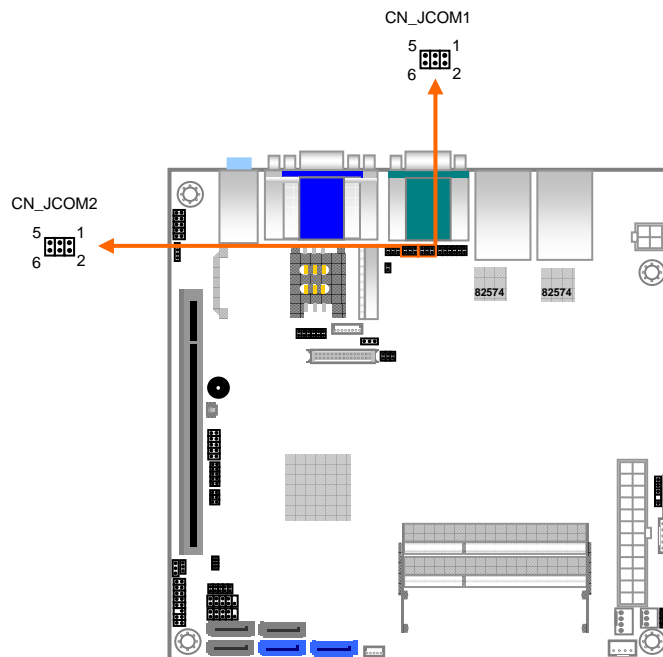


CN_JCOM2_SEL1		
RS232	RS485	RS422
1-3	3-5	3-5
2-4	4-6	4-6
7-9	9-11	9-11
8-10	10-12	10-12

CN_JCOM2_SEL2		
RS232	RS422	RS485
1-2	3-4	5-6

3.2.8 COM1 / COM2 Voltage Setting Jumper :

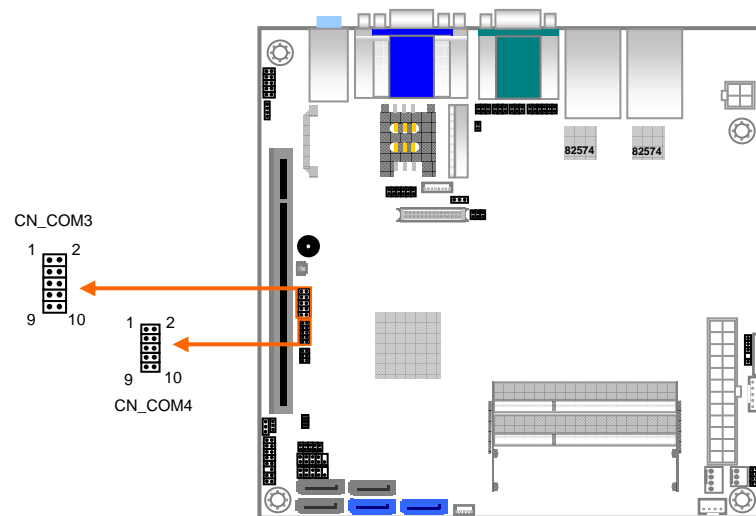
CN_JCOM1 / CN_JCOM2



CN_JCOM1	
1-2	+5V
3-4	RI
5-6	+12V

CN_JCOM2	
1-2	+5V
3-4	RI
5-6	+12V

3.2.9 COM3 / COM4 Connector : CN_COM3 / CN_COM4

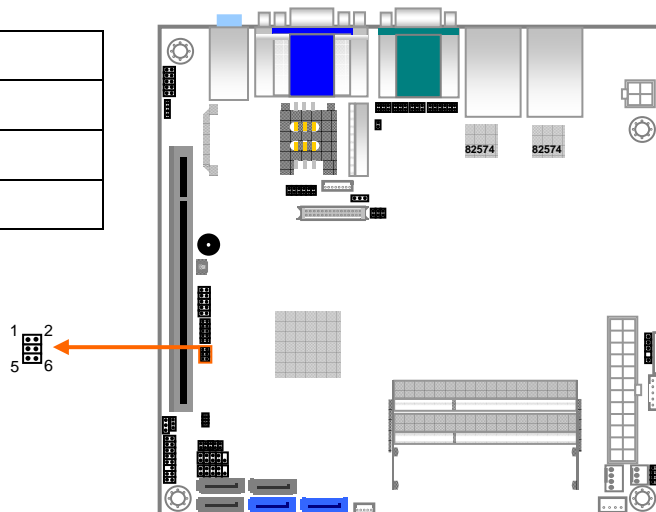


CN_COM3 (2.54mm)			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	HS_DCD1-	2	HS_RXD1
3	HS_TXD1	4	HS_DTR1-
5	GND	6	HS_DSR1-
7	HS_RTS1-	8	HS_CTS1-
9	HS_RI1-	10	V5S

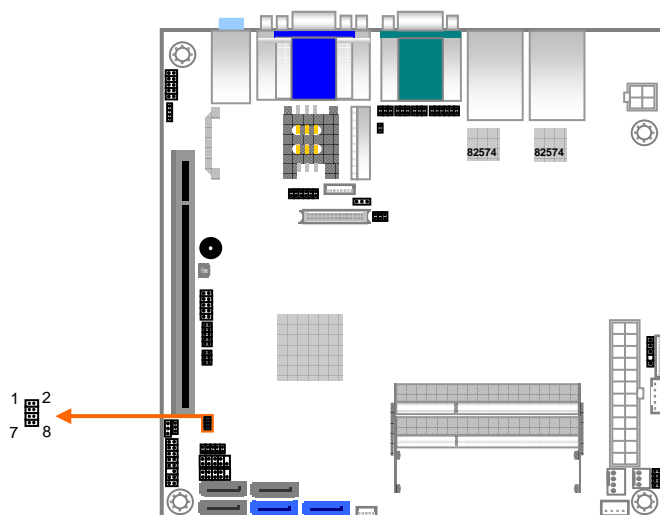
CN_COM4 (2.0mm)			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	HS_DCD2-	2	HS_RXD2
3	HS_TXD2	4	HS_DTR2-
5	GND	6	HS_DSR2-
7	HS_RTS2-	8	HS_CTS2-
9	HSRI2	10	NC

3.2.10 COM4 Voltage Setting Jumper : CN_JCOM4

CN_JCOM4	
1-2	+5V
3-4	RI
5-6	+12V

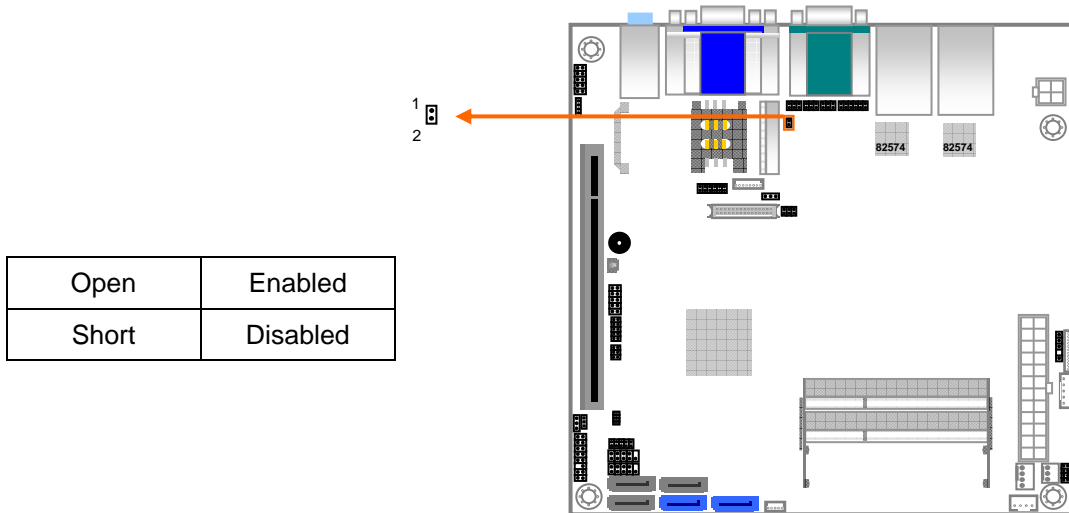


3.2.11 SPI Flash Connector : CN_SPI1 (1.27mm)

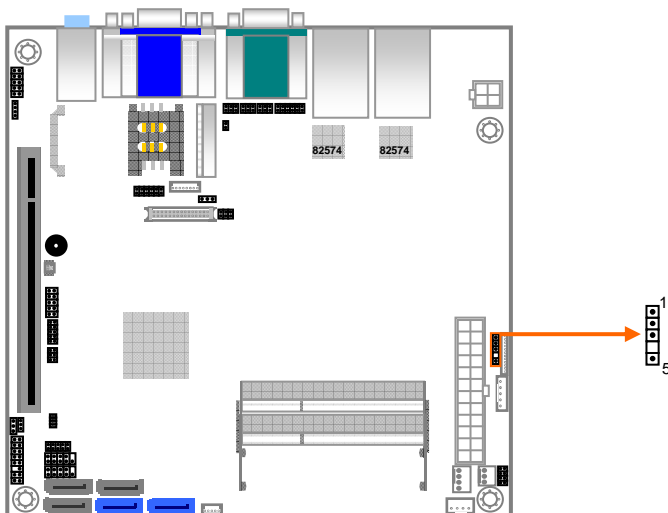


PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	CS-	2	V3.3SPI
3	SO+	4	-SPI HOLD0
5	NC	6	CLK+
7	GND	8	SI+

3.2.12 IRDA Switch Jumper : CN_IR1

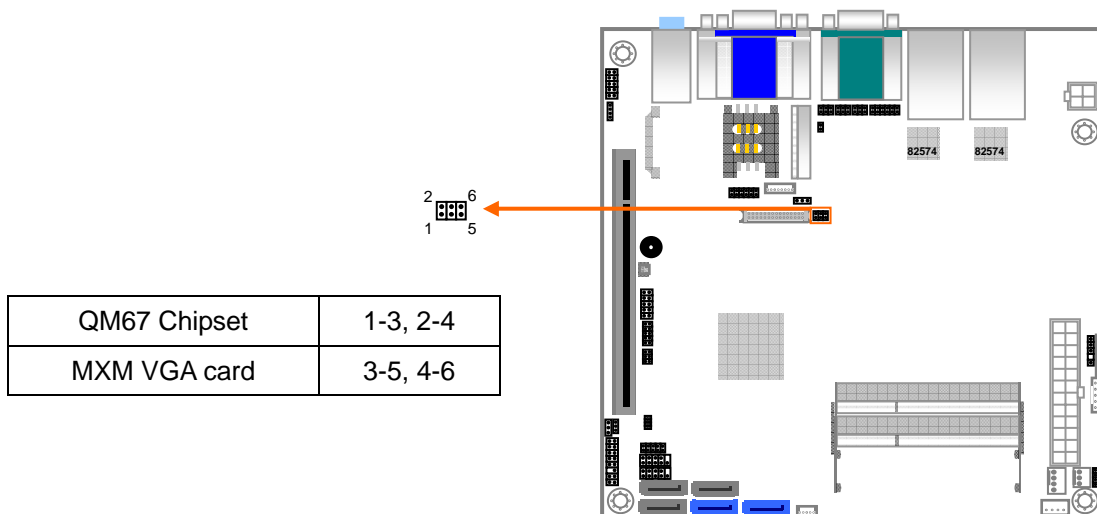


3.2.13 IRDA Connector : CN_IRDA1

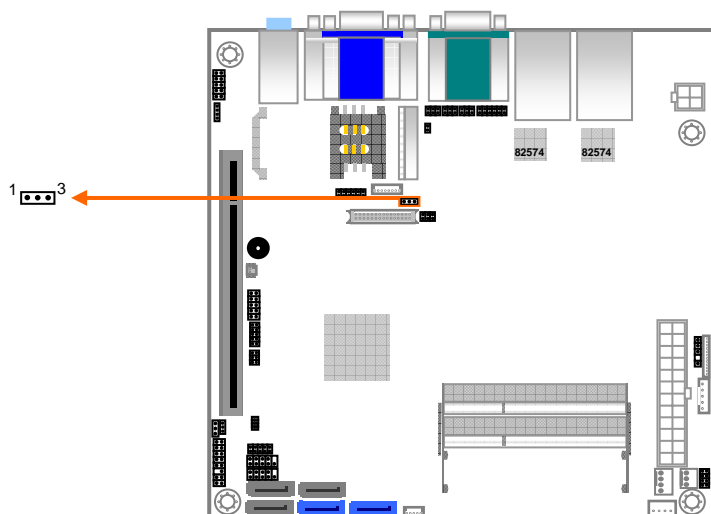


PIN NO.	DESCRIPTION
1	IRTXD
2	GND
3	IRRXD
4	NC
5	V5S

3.2.14 LVDS Signal Source Jumper : CN_JLVDS1



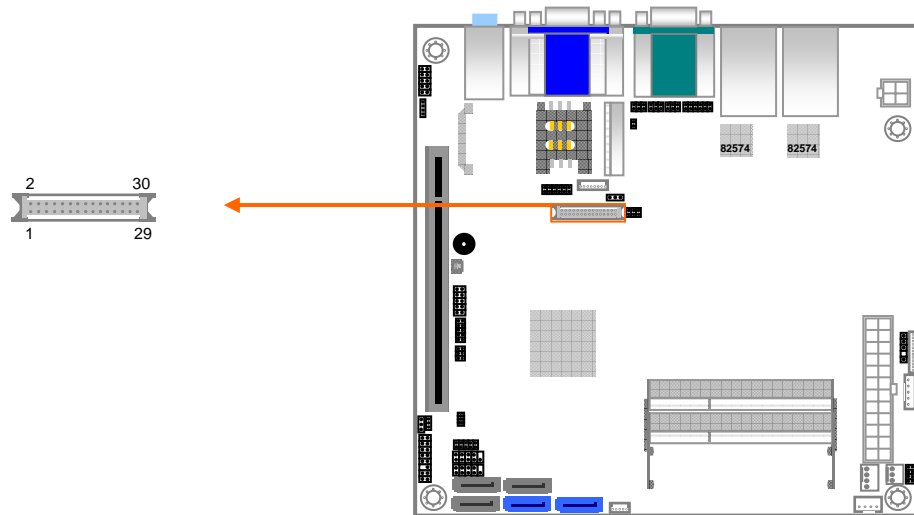
3.2.15 LVDS Voltage Jumper : CN_JLVDS2



Panel >=17"	+5V	1-2
Panel <=15"	+3.3V	2-3

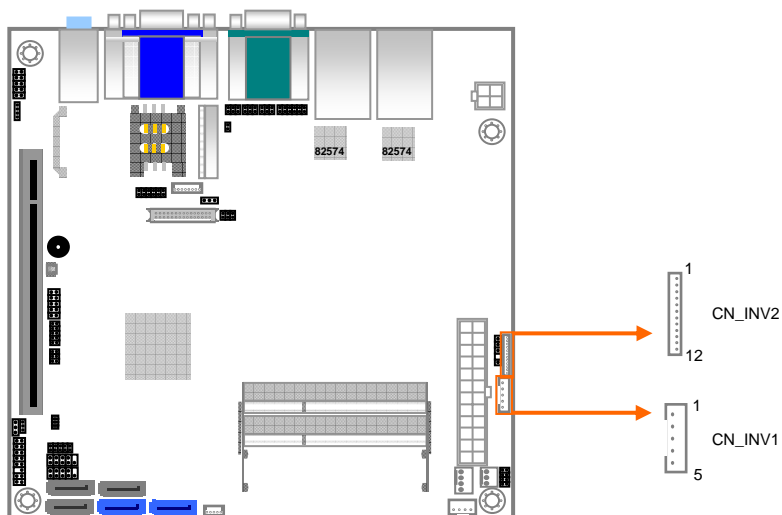
PS : +12V for large size panel : This request please tell us to modify before order.
 CN_JLVDS2 must open, RN7 use 0 ohm resistance to short.

3.2.16 LVDS Connector : CN_LVDS1



PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	LCDVCC	2	LCDVCC
3	LCDVCC	4	DDCPDATA
5	NC	6	DDCPCLK
7	GND	8	TXU3P
9	TXU3N	10	TXUCKP
11	TXUCKN	12	TXU2P
13	TXU2N	14	GND
15	TXU1P	16	TXU1N
17	GND	18	TXU0P
19	TXU0N	20	TXL3P
21	TXL3N	22	TXLCKP
23	TXLCKN	24	GND
25	TXL2P	26	TXL2N
27	TXL1P	28	TXL1N
29	TXL0P	30	TXL0N

3.2.17 Inverter Power Connector : CN_INV1 / CN_INV2

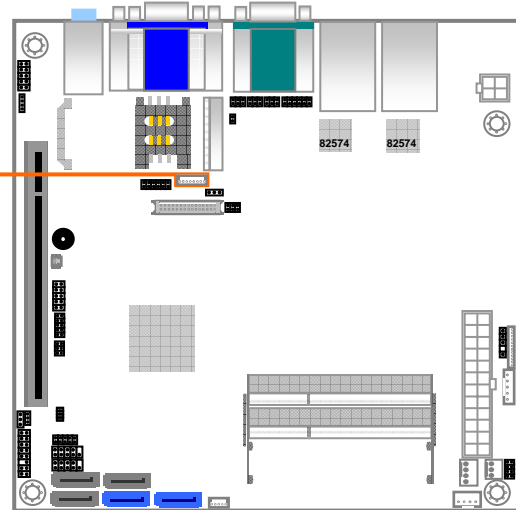


CN_INV1	
PIN NO.	DESCRIPTION
1	V12S
2	CTLBKL
3	GND
4	GND
5	V5S (INV_ON)

CN_INV2	
PIN NO.	DESCRIPTION
1	GND
2	BRIGHT
3	GND
4	INV_ON
5	GND
6	GND
7	NC
8	GND
9	GND
10	V12S
11	V12S
12	V12S

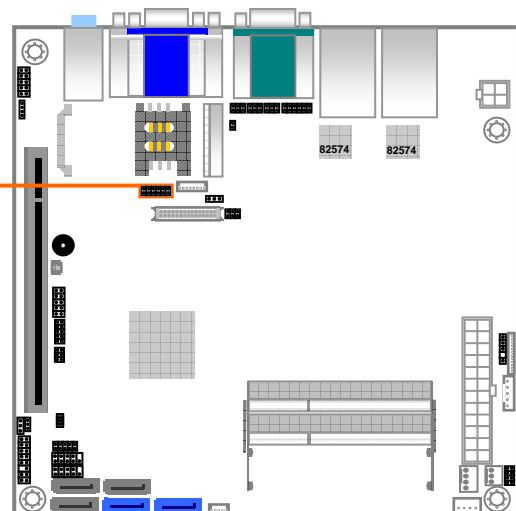
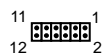
3.2.18 MXM Connector : CN_MXM1

PIN NO.	DESCRIPTION
1	ENVDD1
2	ENBLT1
3	GND
4	PWRGOD_MXM
5	PWR_EN_MXM
6	LCDVCC
7	LCDVCC
8	LCDVCC

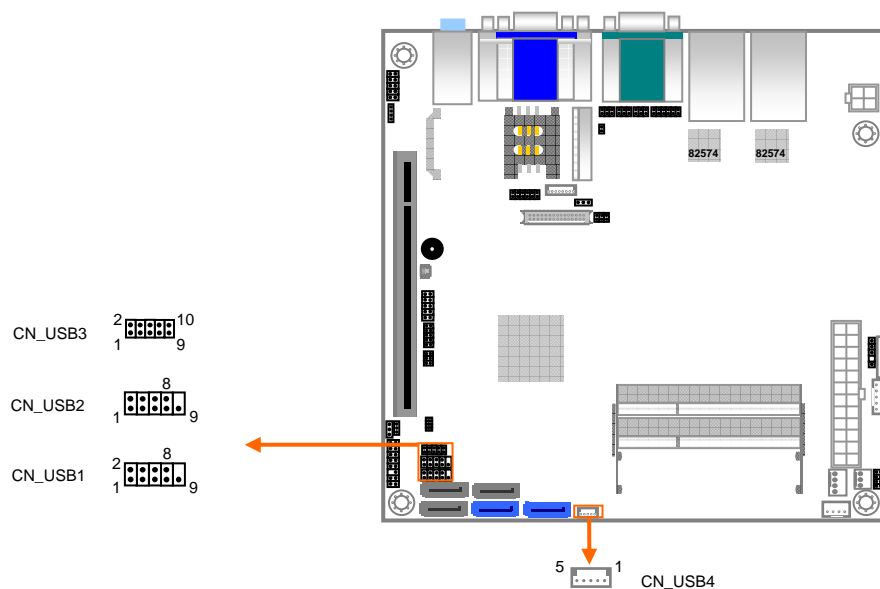


3.2.19 Digital I/O Connector : CN_DIO1

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	GND
3	GP10_IN0	4	GP14_OUT4
5	GP11_IN1	6	GP15_OUT5
7	GP12_IN2	8	GP16_OUT6
9	GP13_IN3	10	GP17_OUT7
11	V5S	12	V12S



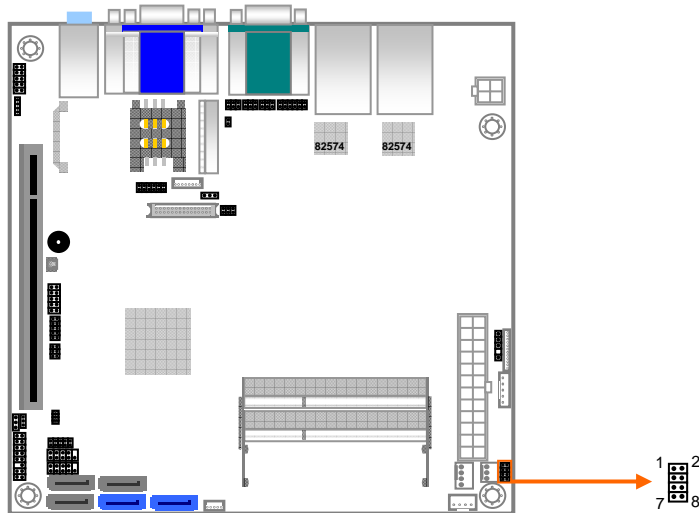
3.2.20 USB Connector : CN_USB1 / CN_USB2 / CN_USB3 / CN_USB4



CN_USB1 / CN_USB2 / CN_USB3			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC (5V SB)	2	VCC (5V SB)
3	DATA0-	4	DATA1-
5	DATA0+	6	DATA1+
7	GND	8	GND
9	GND	10	GND (CN_USB3)

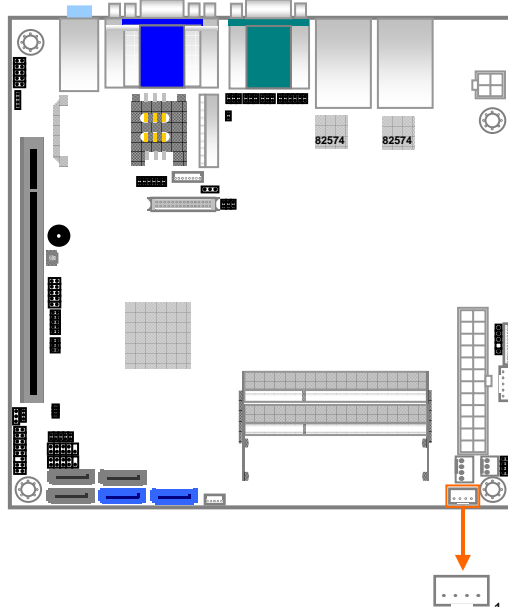
CN_USB4	
PIN NO.	DESCRIPTION
1	VCC (3.3V)
2	DATA0-
3	DATA0+
4	GND
5	GND

3.2.21 PS2 KB/Mouse Connector : CN_PS1



PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	BVCC	2	BVCC
3	MCL	4	KBCL
5	MDA	6	KBDA
7	GND	8	GND

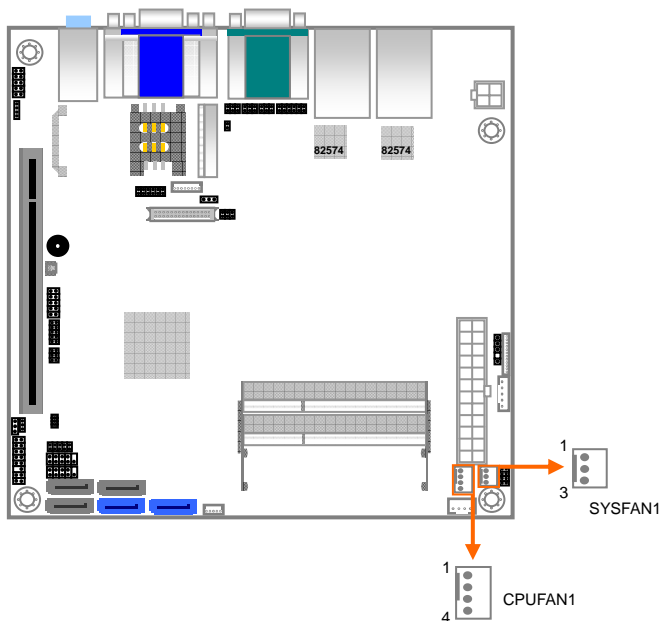
3.2.22 SMBUS Connector : CN_SMBUS1



PIN NO.	DESCRIPTION
1	V5S
2	SMBDATA
3	SMBCLK
4	GND

3.2.23 CPU / SYSTEM FAN Power Connector :

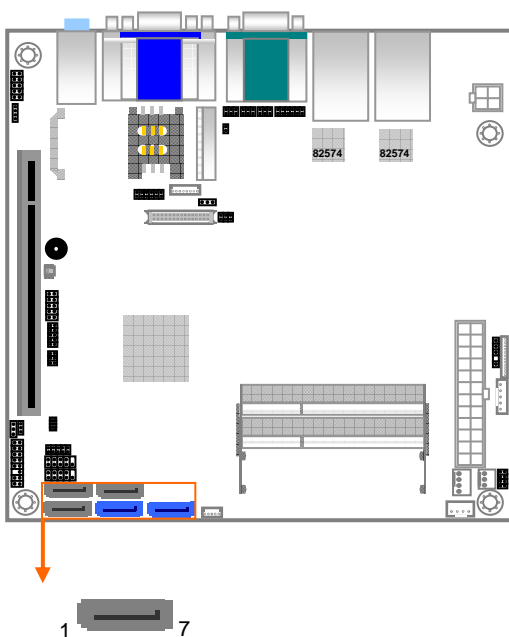
CPUFAN1 / SYSFAN1



CPUFAN1	
PIN NO.	DESCRIPTION
1	GND
2	V12S
3	P1FAN
4	FANOUT2

SYSFAN1	
PIN NO.	DESCRIPTION
1	GND
2	V12S
3	CSFAN

3.2.24 SATA Connector : SATA1~5

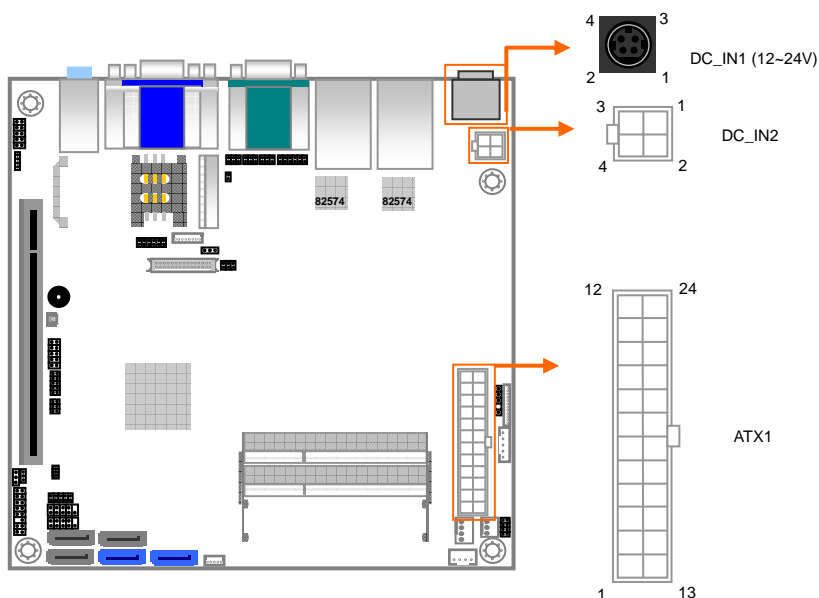


SATA1~5	
PIN NO.	DESCRIPTION
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

3.2.25 ATX / DC IN Power Connector : ATX1 / DC_IN2

ATX1 : It also can become output, when “DC_IN1” (for R-271D/R-271DL only) be used

DC_IN2 : For R-271A/R-271AL only

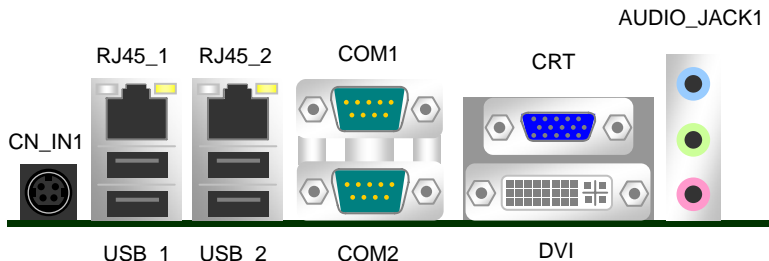


ATX1			
PIN NO	Definition	PIN NO	Definition
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	-PSON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	PW_OK	20	-5V
9	+5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	+3.3V

DC_IN1 (for R-271D/R-271DL)			
PIN NO	Definition	PIN NO	Definition
1	GND	3	VCC
2	GND	4	VCC

DC_IN2 (for R-271A/R-271AL)			
PIN NO	Definition	PIN NO	Definition
1	GND	3	+12V
2	GND	4	+12V

3.3 External Peripheral Interface Connector Panel



3.3.1 Ethernet and USB 2.0 Connector

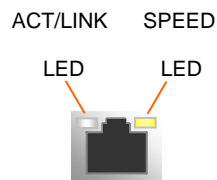
The R-271A/D is equipped with two built-in RJ-45 Ethernet controllers. Each controller can connect to the LAN through one RJ-45 LAN connector.

(R-271AL/DL : RJ45_1 only)

The RJ-45 Ethernet connector has two status LEDs, one green and one yellow. The green LED indicates activity on the port and the yellow LED indicates the speed.

RJ45_1 (R-271A/AL/D/DL)			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
L1	L18VSB	L2	MDI00+
L3	MDI00-	L4	MDI01+
L5	MDI01-	L6	MDI02+
L7	MDI02-	L8	MDI03+
L9	MDI03-	L10	LANGND
L11	RACTLED0-	L12	RLINK0
L13	RLINK1H0-	L14	RLINK1G0-

RJ45_2 (R-271A/D)			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
L1	L18VSB2	L2	MDI10+
L3	MDI10-	L4	MDI11+
L5	MDI11-	L6	MDI12+
L7	MDI12-	L8	MDI13+
L9	MDI13-	L10	LAN2GND
L11	RACTLED1-	L12	RLINK1
L13	RLINK1H1-	L14	RLINK1G1-

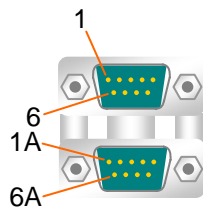


Activity/Link LED	
Status	Description
Off	No Link
Blinking	Data Activity
On	Link

SPEED LED	
Status	Description
Off	10Mbps connection
Orange	100Mbps connection
Green	1Gbps connection

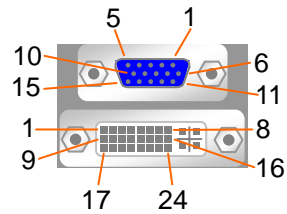
USB_1 / USB_2		
PIN NO.	DESCRIPTION	
U1	U5	VCC
U2	U6	DATA0-
U3	U7	DATA0+
U4	U8	GND

3.3.2 Serial Port Connector : COM1 / COM2



COM1 / COM2			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DATA CARRIER DETECT (DCD#)	2	RECEIVE DATA (RXD)
3	TRANSMIT DATA (TXD)	4	DATA TERMINAL READY (DTR#)
5	GND	6	DATA SET READY (DSR#)
7	REQUEST TO SEND (RTS#)	8	CLEAR TO SEND (CTS#)
9	RING INDICATOR (RI#)		

3.3.3 Display Connector : CRT / DVI



CRT			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	GND
7	GND	8	GND
9	V5S	10	GND
11	NC	12	5VCDA
13	5HSYNC	14	5VSYNC
15	5VCLK		

DVI			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	TMDS_TX2-	2	TMDS_TX2+
3	GND	4	NC
5	NC	6	DVI_SL
7	DVI_DA	8	NC
9	TMDS_TX1-	10	TMDS_TX1+
11	GND	12	NC
13	NC	14	V5S
15	GND	16	HPD
17	TMDS_TX0-	18	TMDS_TX0+
19	GND	20	NC
21	NC	22	GND
23	TMDS_TXC+	24	TMDS_TXC-

3.3.4 Audio Connector : AUDIO_JACK1



The audio jacks connect to external audio devices.

Line In port (Light Blue): Connects to a CD/DVD player or a musical instruments..

Line Out port (Lime): Connects to a headphone or a speaker. With multi-channel configurations, this port can also connect to front speakers.

Microphone (Pink): Connects a microphone.

Chapter 4 : Installation

4.1 Before Installation

For installation, you may need tool (screwdriver).

Users must follow these guidelines to ensure the motherboard is protected during installation.

Make sure your computer is powered-off whenever work in with inside components.

The motherboard, like all other electronic equipment, is sensitive to static. Please take the proper precautions when handling it. If possible, ground yourself by touching a metal table or desk. Keep the board in its conductive wrapping until it is configured and ready to be installed in your system.

Keep all magnets away from both your hard and CFAST card, especially magnetic screwdrivers. Keep both CFAST card and hard disks apart if disassembled.

Keep water and liquids away from your computer and its components

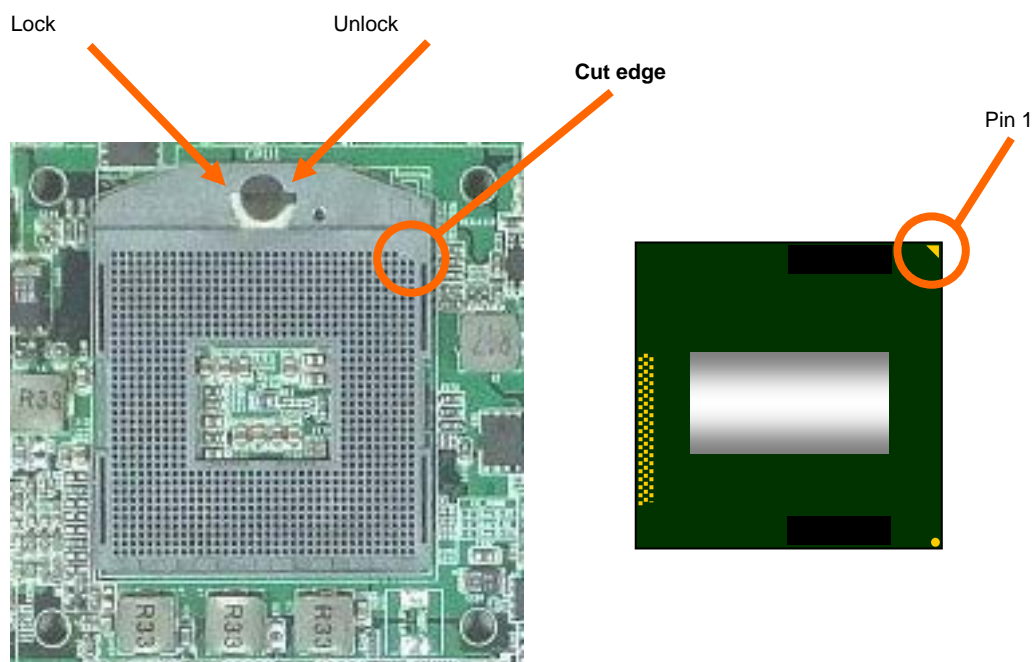
4.2 Install the Socket G2 CPU

The CPU should have a cooler attached to it to prevent overheating. If this is not the case, then purchase a cooler before you turn on your system.

Be sure that there is sufficient air circulation across the CPU's heat sink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the CPU and the motherboard. You may install an auxiliary fan, if necessary.

When handling the CPU, only hold it on the sides. DO NOT touch the pins at the bottom of the CPU.

Step 1 : Unlock the CPU retention screw. When shipped, the retention screw of the CPU socket should be in the unlocked position. If it is not in the unlocked position, use a screwdriver to unlock the screw.



Step 2 : Inspect the CPU socket. Make sure there are no bent pins and make sure the socket contacts are free of foreign material. If any debris is found, remove it with compressed air.

Step 3: Correctly position the CPU. Match the Pin 1 mark with the cut edge on the CPU socket.

Step 4: Align the CPU pins. Carefully align the CPU pins with the holes in the CPU socket.

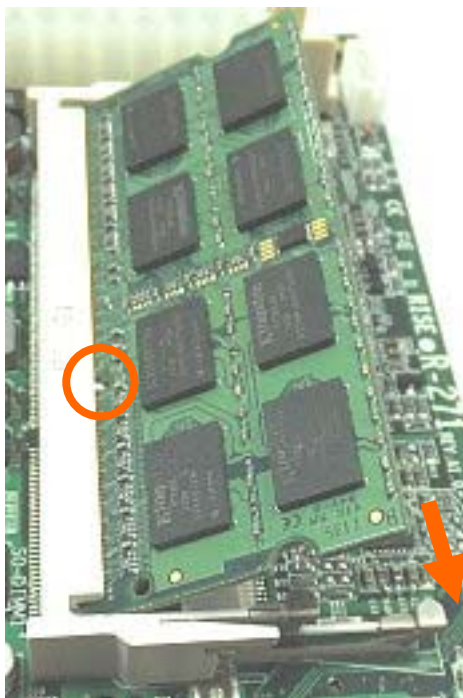
Step 5: Insert the CPU. Gently insert the CPU into the socket. If the CPU pins are properly aligned, the CPU should slide into the CPU socket smoothly.

Step 6: Lock the retention screw. Rotate the retention screw into the locked position.

4.3 Install the SO-DIMM DDR3 RAM

Step 1: Locate the SO-DIMM socket. Place the board on an anti-static mat.

Step 2: Align the SO-DIMM with the socket. Align the notch on the memory with the notch on the memory socket.



Step 3: Insert the SO-DIMM. Push the memory in at a 20° angle.

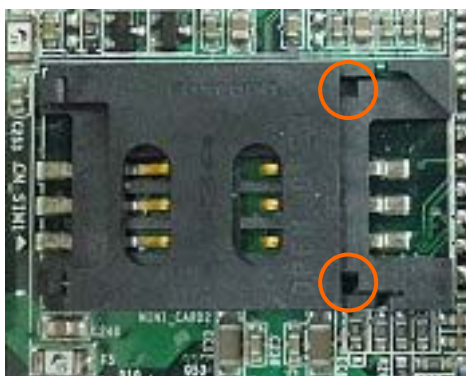
Step 4: Seat the SO-DIMM. Gently push downwards and the arms clip into place.

4.4 Install the SIM card

Step1 : Follow arrow direction, slide the cap toward OPEN.



Step2 : Make sure that the cap is now at the OPEN position.

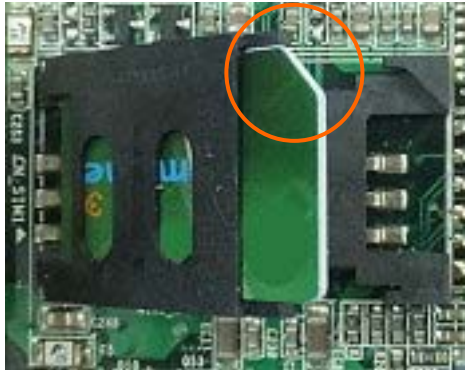


Step3 : Flip the cap up for inserting a SIM card into.

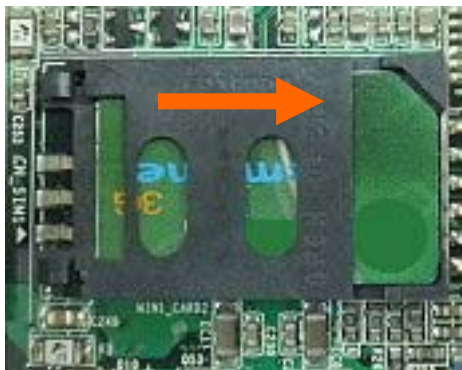


Step4 : Insert a SIM card as shown in the photo.

Be sure that the corner cut is on top and the golden pads are up.



Step5 : Flip down the cap, press down and slide the cap to the CLOSE position. Be sure that the cap is tightly held with the socket.



4.5 Install the CFAST card

Step 1: Align the CFAST card with the socket. Align the notch on the CFAST card with the notch on the CFAST card socket.



Step 2: Insert the CFAST card. Push the CFAST card in at a 180° angle.

Step 3: Seat the CFAST card. Gently push the arms clip into place.



4.6 Install the Mini PCI-E card

Step 1: Align the mini pci-e card with the socket.

Align the notch on the mini pci-e card with the notch on the mini pci-e socket.



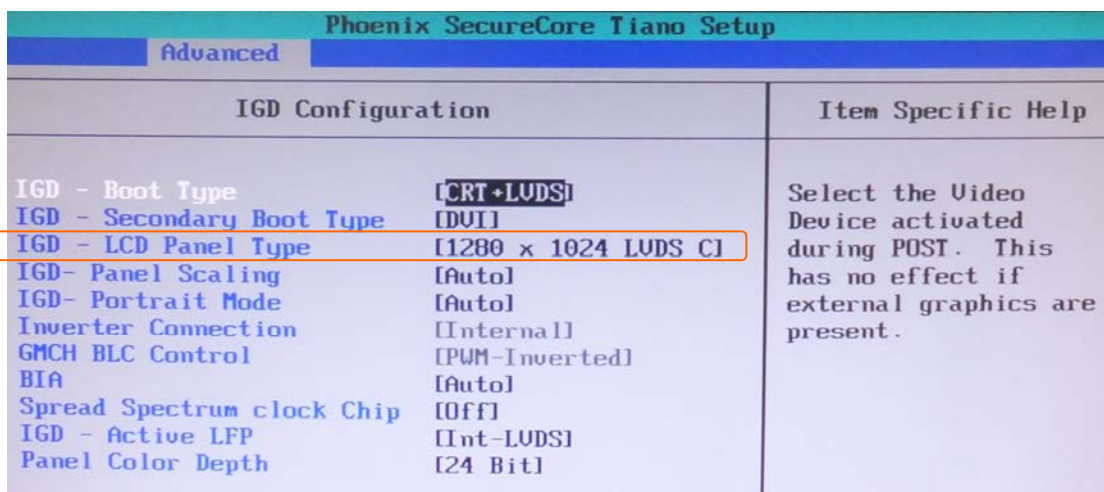
Step 2: Seat the MINI PCI-E card. Gently push downwards and the arms clip into place.



Chapter 5 : BIOS Setup

5.1 LCD Panel Type Select :

The LCD Panel Type is for different resolution of panel selection.
 When power on press < F2 > into Phoenix SecureCore Tiano setup.
 Move to [Advanced -> System Agent (SA) Configuration -> Graphics Configuration -> IGD Configuration. -> IGD – LCD Panel Type], press Enter.

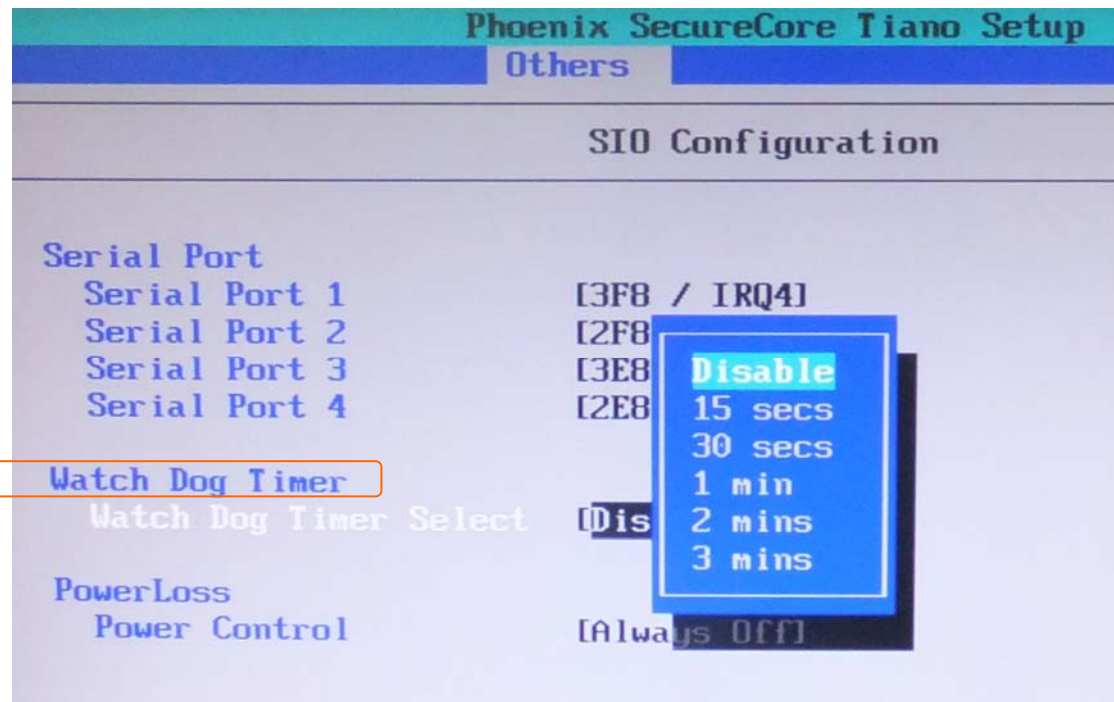


Panel Type Selection Form			
Single / Dual channel		Single / Dual channel	
1	640 x 480	9	1680 x 1050
2	800 x 600	10	1920 x 1200
3	1024 x 768	11	1440 x 900
4	1280 x 1024	12	1600 x 900
5	1400 x 1050 Reduced Blanking	13	OEM Keep
6	1400 x 1050 non-Reduced Blanking	14	1280 x 800
7	1680 x 1200	15	1920 x 1080
8	1366 x 768	16	2048 x 1536

5.2 Programming Watch Dog Timer :

The watchdog timer makes the system auto-reset while it stops to work for a period.

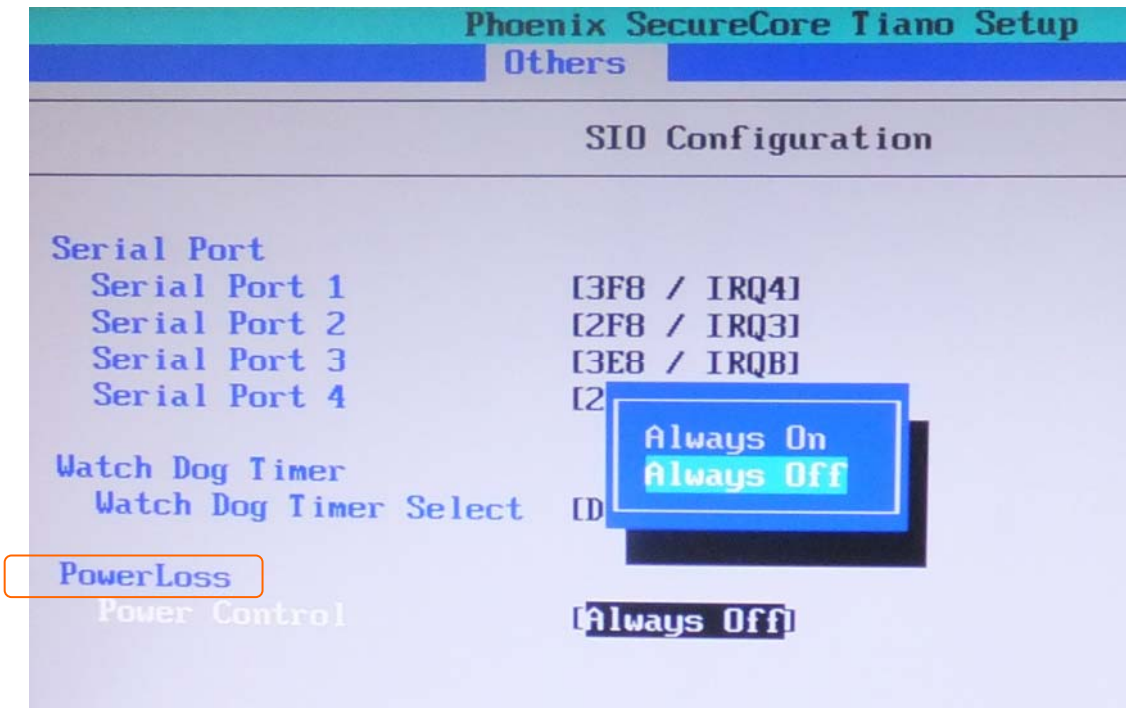
The integrated watchdog timer can be setup as system reset mode by program. Move to [Others -> Watch Dog Timer] , press Enter.



5.3 Power Loss :

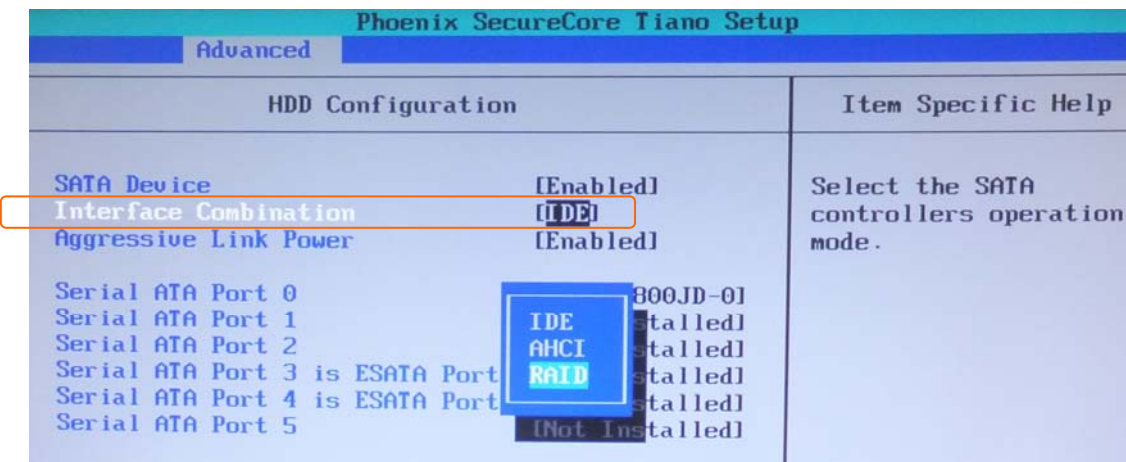
The power loss is boot up mode selection by firmware (Jumper CN_AT1 is hardware)

Always on = AT mode (auto boot up), Always off = ATX mode (boot up by power button). Move to [Others -> PowerLoss], press Enter.



5.4 Raid HDD Configuration :

The HDD configuration can select RAID mode for system. Chipset can support RAID 0/1/5/10. Move to [Advanced -> HDD Configuration -> Interface Combination], press Enter.



In OS system, install rapid storage driver for support raid function.

5.5 Flash BIOS :

5.5.1 Flash Tool

The board is based on Phoenix BIOS and can be updated easily by the BIOS auto flash tool.

File name of the tool is “fpt.exe”, it’s the utility that can write the data into the BIOS flash chip and update the BIOS.

5.5.2 Flash BIOS Procedure

1. Please make a bootable floppy disk.
2. Get the last .bin files you want to update and copy it into the disk.
3. Copy “fpt.exe” and “fparts.txt”, “fptcfg.ini” to the disk.
4. Power on the system and flash the BIOS.
(Example: C:/fpt -f xxx.bin)
5. Restart the system.

Any question about the BIOS re-flash please contact your distributors