

Chapter

**1**

**Quick  
Installation  
Guide**



## 1.1 Safety Precaution

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**Warning!**



*Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.*

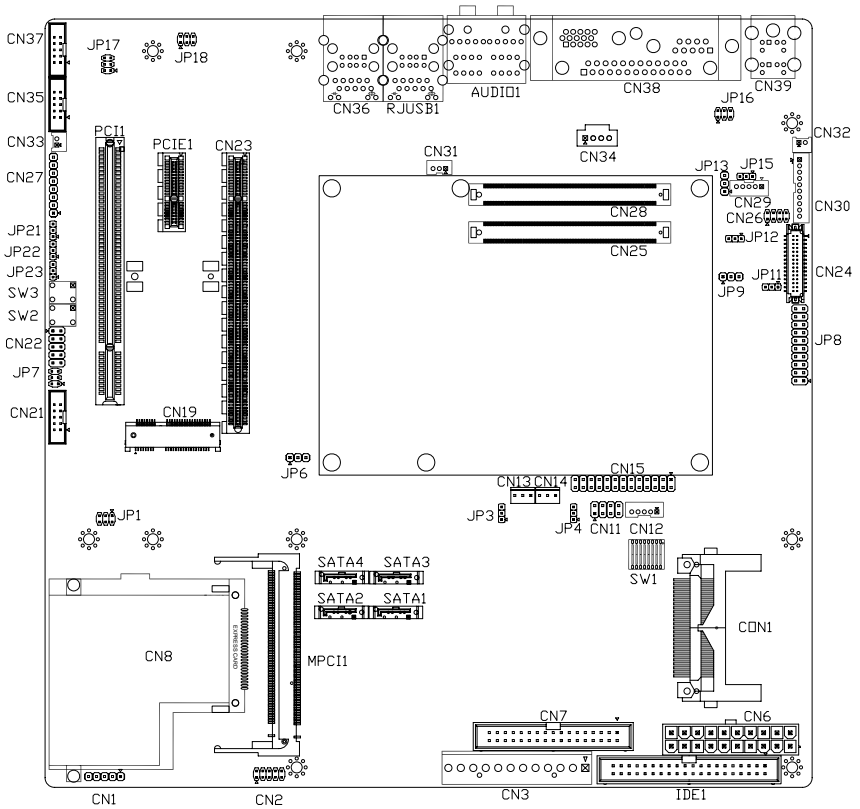
**Caution!**



*Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis*

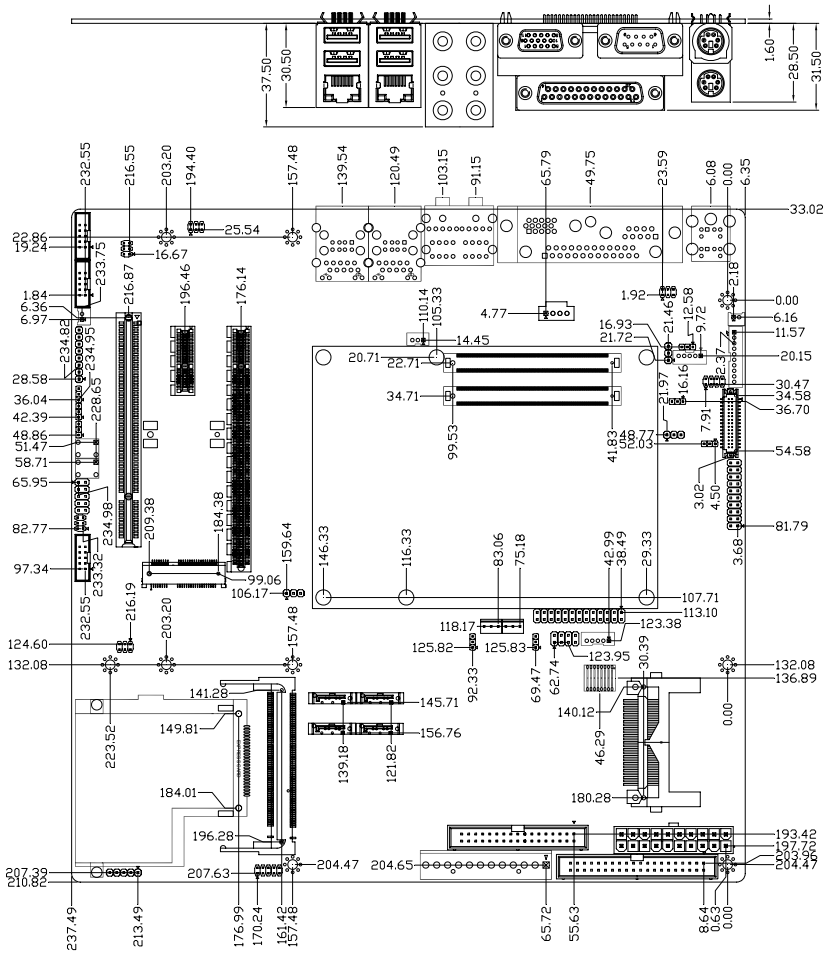
## 1.2 Location of Connectors and Jumpers

### Component Side



### 1.3 Mechanical Drawing

#### Component Side



## 1.4 List of Jumpers

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The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's jumpers:

<b>Label</b>	<b>Function</b>
JP1	Auto Power Button and Auto Reset Button Selection
JP3	FAN Power Selection
JP4	FAN Power Selection
JP6	BIOS Write Protection Selection
JP7	COM4 +12V/+5V/RING Selection
JP8	Jumper for Testing & Debug
JP9	CMOS Clear Selection
JP11	Backlight Enable Level Selection
JP12	LVDS Voltage Selection
JP13	BIOS Boot Selection
JP15	Backlight Power Selection
JP16	COM1 +12V/+5V/RING Selection
JP17	COM3 +12V/+5V/RING Selection
JP18	COM2 +12V/+5V/RING Selection
JP21	COM2 RS-232/RS422/RS485 Selection
JP22	COM2 RS-232/RS422/RS485 Selection
JP23	COM2 RS-232/RS422/RS485 Selection

## 1.5 List of Connectors

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The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each board's connectors:

<b>Label</b>	<b>Function</b>
CN1	IrDA Connector
CN2	Digital I/O Connector
CN3	AT Power Connector
CN6	ATX Power Connector
CN7	Floppy Connector
CN8	Express Card Slot
CN11	8-wire Touch Screen Connector
CN12	4/5-wire Touch Screen Connector
CN13	FAN Connector
CN14	FAN Connector
CN15	LPC Connector
CN19	Mini Card Connector
CN21	COM4 Connector
CN22	Front Panel Connector
CN23	PCI-Express [ x16 ] Graphic Slot
CN24	LVDS Connector
CN25	COM-Express Connector (Row C & D)
CN26	TV-out Connector

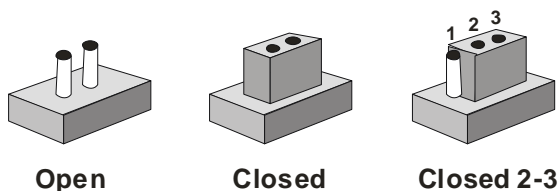
CN27	Lattice Download Connector
CN28	COM-Express Connector (Row A & B)
CN29	LCD Backlight Power Connector
CN30	Function Connector
CN31	SPDIF IN/OUT Header
CN32	Speaker Connector
CN33	Speaker Connector
CN34	CD-IN Connector
CN35	COM3 Connector
CN36	Dual USB Ports, LAN Connector
CN37	COM2 Connector
CN38	COM1, LPT1, VGA Connector
CN39	Keyboard (Down), Mouse (Up) Connector
AUDIO1	Audio Connector
RJUSB1	Dual USB Ports, LAN Connector
PCI1	PCI Slot
PCIE1	PCI-Express [ x1 ] Slot
MPCI1	Mini PCI Slot
SATA1, 2, 3, 4	SATA Connectors
CON1	Compact Flash Connector
IDE1	IDE Connector
SW1	Touch Panel Setting Switch
SW2	Power Button Switch
SW3	Hardware Reset Switch

## 1.6 Setting Jumpers

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You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip.

To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.



## 1.7 Auto Power Button and Auto Reset Button Selection (JP1)

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JP1	Function
2-4	Enable Auto Reset Button
4-6	Disable Auto Reset Button (Default)
1-3	Enable Auto Power Button
3-5	Disable Auto Power Button (Default)

## 1.8 FAN Power Selection (JP3, 4)

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JP3, 4	Function
1-2	+5V FAN power
2-3	+12V FAN power (Default)

## 1.9 BIOS Write Protection Selection (JP6)

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JP6	Function
1-2	Disable Write Protection (Default)
2-3	Enable Write Protection

## 1.10 COM4 +12V/+5V/Ring Selection (JP7)

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JP7	Function
1-2	+12V
3-4	+5V
5-6	Ring (Default)

### 1.11 Jumper for Testing & Debug (JP8)

Pin	Signal	Pin	Signal
1	SMB_ALERT#	2	NC
3	PM_THRM#	4	NC
5	PM_BATLOW#	6	NC
7	PM_THRMTRIP#	8	VCC3
9	PM_SLP_S4#	10	PM_SUS_STAT#
11	GPI7	12	GPI13
13	GPI12	14	GPIO24
15	I2C_CLK	16	I2C_DAT
17	PEG_ENABLE	18	GND
19	PEG_LANE_RV#	20	GND

### 1.12 Clear CMOS Selection (JP9)

JP9	Function
2-3	Clear CMOS
1-2	Normal (Default)

### 1.13 Backlight Enable Level Selection (JP11)

JP11	Function
1-2	+3.3V Control for Backlight (Default)
2-3	+5V Control for Backlight

### 1.14 LVDS Voltage Selection (JP12)

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JP12	Function
2-3	+3.3V Power for LVDS (Default)
1-2	+5V Power for LVDS

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### 1.15 BIOS Boot Selection (JP13)

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JP13	Function
1-2	CPU Module BIOS Boot (Default)
2-3	Carrier Board BIOS Boot

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### 1.16 Backlight Power Selection (JP15)

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JP15	Function
1-2	+5V Power for Backlight (Default)
2-3	+12V Power for Backlight

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### 1.17 COM1 +12V/+5V/Ring Selection (JP16)

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JP16	Function
1-2	+12V
3-4	+5V
5-6	Ring (Default)

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### 1.18 COM3 +12V/+5V/Ring Selection (JP17)

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JP17	Function
1-2	+12V
3-4	+5V

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5-6	Ring (Default)
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### 1.19 COM2 +12V/+5V/Ring Selection (JP18)

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JP18	Function
1-2	+12V
3-4	+5V
5-6	Ring (Default)

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### 1.20 COM2 RS-232/422/485 Selection (JP21, JP22, JP23)

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#### RS-232 (Default)

Label	Pin
JP21	1-2
JP22	1-2
JP23	1-2

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#### RS-422

Label	Pin
JP21	2-3
JP22	1-2
JP23	2-3

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#### RS-485

Label	Pin
JP21	2-3
JP22	2-3
JP23	1-2

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### 1.21 IrDA Connector (CN1)

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Pin	Signal
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX

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### 1.22 Digital I/O Connector (CN2)

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Pin	Signal	Pin	Signal
1	DIO_1	2	DIO_2
3	DIO_3	4	DIO_4
5	DIO_5	6	DIO_6
7	DIO_7	8	DIO_8
9	+5V	10	GND

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### 1.23 AT Power Connector (CN3)

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Pin	Signal
1	NC
2	+5V
3	+12V
4	-12V
5	GND
6	GND

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7	GND
8	GND
9	-5V
10	+5V
11	+5V
12	+5V

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### 1.24 ATX Power Connector (CN6)

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Pin	Signal	Pin	Signal
1	NC	11	NC
2	NC	12	-12V
3	GND	13	GND
4	5V	14	PSON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	POK	18	-5V
9	5VSB	19	5V
10	12V	20	5V

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### 1.25 Floppy Connector (CN7)

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Pin	Signal	Pin	Signal
1	GND	2	DELSEL#
3	GND	4	NC

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5	GND	6	NC
7	GND	8	INDEX#
9	GND	10	MOTEA#
11	GND	12	DRVB#
13	GND	14	DRVA#
15	GND	16	MOTEB#
17	GND	18	DIR#
19	GND	20	STEP#
21	GND	22	WD#
23	GND	24	WE#
25	GND	26	TRAK0#
27	GND	28	WPT#
29	NC	30	RDATA#
31	GND	32	HDSEL#
33	NC	34	DSKCHG#

### 1.26 Express Card Slot (CN8)

Pin	Signal	Pin	Signal
1	GND	2	USBD-
3	USBD+	4	CPUSB#
5	NC	6	NC
7	SMBCLK	8	SMBDAT
9	+1.5V	10	+1.5V
11	PCIE_WAKE#	12	+3.3VAUX

### 1.27 8-wire Touch Screen Connector (CN11)

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Pin	Signal
1	Left Sense
2	Left Excite
3	Bottom Sense
4	Bottom Excite
5	Right Sense
6	Right Excite
7	Top Sense
8	Top Excite

### 1.28 4/5-wire Touch Screen Connector (CN12)

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Pin	Signal
1	Left Sense
2	Bottom Sense
3	Wiper
4	Right Sense
5	Top Sense

### 1.29 FAN Connector (CN13, CN14)

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Pin	Signal
1	GND
2	FAN Power
3	FAN_TAC



### 1.30 LPC Connector (CN15)

Pin	Signal	Pin	Signal
1	PLT_RST#	2	+3.3V
3	SERIRQ	4	GND
5	LPC_AD3	6	GND
7	LPC_AD2	8	GND
9	LPC_AD1	10	GND
11	LPC_AD0	12	GND
13	LPC_FRAME#	14	GND
15	ICH_DRQ#0	16	GND
17	NC	18	GND
19	LPC_CLK	20	GND
21	PANSWH#	22	GND
23	HSYSNC_LPC	24	GND
25	NC	26	GND

### 1.31 Mini Card Connector (CN19)

Standard Mini Card Connector

### 1.32 COM4 Connector (CN21)

Pin	Signal	Pin	Signal
1	DCD4	2	RXD4
3	TXD4	4	DTR4
5	GND	6	DSR4

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7	RTS4	8	CTS4
9	RING4	10	NC

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### 1.33 Front Panel Connector (CN22)

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Pin	Signal	Pin	Signal
1	GND	2	Power Button
3	HD_LED	4	3.3V
5	BEEP	6	5V
7	GND	8	Power LED
9	GND	10	Reset

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### 1.34 PCI-Express [ x16 ] Graphic Slot (CN23)

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Standard PCI-Express [ x16 ] Graphic Slot

### 1.35 LVDS Connector (CN24)

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Pin	Signal	Pin	Signal
1	Backlight enable	2	NC
3	LVDS Power	4	GND
5	TX1CLK#	6	TX1CLK
7	LVDS Power	8	GND
9	TX1OUT#0	10	TX1OUT0
11	TX1OUT#1	12	TX1OUT1
13	TX1OUT#2	14	TX1OUT2
15	TX1OUT#3	16	TX1OUT3

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17	DDC_DAT	18	DDC_CLK
19	TX2OUT#0	20	TX2OUT0
21	TX2OUT#1	22	TX2OUT1
23	TX2OUT#2	24	TX2OUT2
25	TX2OUT#3	26	TX2OUT3
27	LVDS Power	28	GND
29	TX2CLK#	30	TX2CLK

### 1.36 COM-Express Connector (CN25)

Standard COM-Express Connector (Row C & D)

### 1.37 TV-out Connector (CN26)

Pin	Signal	Pin	Signal
1	Y	2	COMP
3	GND	4	TV GND
5	C	6	NC
7	GND	8	NC

### 1.38 Lattice Download Connector (CN27)

Pin	Signal
1	+3.3V
2	TDO
3	TDI
4	NC

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5	NC
6	TMS
7	GND
8	TCK

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### 1.39 COM-Express Connector (CN28)

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Standard COM-Express Connector (Row A & B)

### 1.40 LCD Backlight Power Connector (CN29)

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Pin	Signal
1	BLVCC
2	Brightness level
3	GND
4	GND
5	Backlight enable

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### 1.41 Function Connector (CN30)

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Pin	Signal
1	+5V
2	Power button
3	LCD brightness+
4	LCD brightness-
5	+3.3V
6	Volume+
7	Volume-

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8	GND
9	NC
10	NC

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#### 1.42 SPDIF IN/OUT Header (CN31)

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Pin	Signal
1	SPDIFO-N
2	GND
3	SPDIFI-N

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#### 1.43 Speaker Connector (CN32, CN33)

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Pin	Signal
1	Speaker +
2	Speaker -

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#### 1.44 CD-In Connector (CN34)

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Pin	Signal
1	CD_L
2	CD_GND
3	CD_GND
4	CD_R

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#### 1.45 COM3 Connector (CN35)

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Pin	Signal	Pin	Signal
1	DCD3	2	RXD3

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3	TXD3	4	DTR3
5	GND	6	DSR3
7	RTS3	8	CTS3
9	RING3	10	NC

#### 1.46 LAN, USB Connector (CN36)

##### LAN

Pin	Signal	Pin	Signal
1	NC	2	TD+
3	TD-	4	RD+
5	RD-	6	NC
7	NC	8	NC
9	NC	10	NC
11	LINK_LED#	12	ACT_LED#
13	GND	14	S100LED

##### USB

Pin	Signal	Pin	Signal
19	USB Power	23	USB Power
20	USBD0-	24	USBD1-
21	USBD0+	25	USBD1+
22	GND	26	GND

### 1.47 COM2 Connector (CN37)

Pin	Signal	Pin	Signal
1	DCD2	2	RXD2
3	TXD2	4	DTR2
5	GND	6	DSR2
7	RTS2	8	CTS2
9	+12V/+5V/RING	10	NC

### 1.48 COM1, LPT1, VGA Connector (CN38)

#### COM1

Pin	Signal	Pin	Signal
1	DCD1	2	RXD1
3	TXD1	4	DTR1
5	GND	6	DSR1
7	RTS1	8	CTS1
9	+12V/+5V/RING		

#### LPT1

Pin	Signal	Pin	Signal
1	STB-	2	PTD0
3	PTD1	4	PTD2
5	PTD3	6	PTD4
7	PTD5	8	PTD6
9	PTD7	10	ACKX

11	BUSY	12	PE
13	SLCT	14	AFDX
15	ERRX	16	PAR_INTX
17	SLINX	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GND		

**VGA**

Pin	Signal	Pin	Signal
1	R	2	G
3	B	4	NC
5	GND	6	GND
7	GND	8	GND
9	+5V with Fuse	10	GND
11	NC	12	DDC_DAT
13	HSYNC	14	VSYNC
15	DDC_CLK		

**1.49 Keyboard, Mouse Connector (CN39)**

Pin	Signal	Pin	Signal
1	KDAT	2	MDAT
3	GND	4	+5V with fuse
5	KCLK	6	MCLK



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7	MDAT	8	NC
9	GND	10	+5V with fuse
11	MCLK	12	NC

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### 1.50 Audio Connector (AUDIO1)

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Color	Signal
Blue	Line In
Green	Line Out
Pink	Mic In
Orange	CEN/LFE
Black	Surround
Gray	Surround Side

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### 1.51 LAN, USB Connector (RJUSB1)

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#### LAN

Pin	Signal	Pin	Signal
1	NC	2	TD+
3	TD-	4	RD+
5	RD-	6	NC
7	NC	8	NC
9	NC	10	NC
11	LINK_LED#	12	ACT_LED#
13	GND	14	S100LED

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**USB**

Pin	Signal	Pin	Signal
19	USB Power	23	USB Power
20	USBD0-	24	USBD1-
21	USBD0+	25	USBD1+
22	GND	26	GND

**1.52 PCI Slot (PCI1)**

Standard PCI Slot

**1.53 PCI-Express [ x1 ] Slot (PCIE1)**

Standard PCI-Express [ x1 ] Slot

**1.54 Mini PCI Slot (MPCI1)**

Standard Mini PCI Slot

**1.55 SATA Connector (SATA 1, 2, 3, 4)**

Standard SATA Connector

**1.56 CompactFlash Connector (CON1)**

Standard Compact Flash Connector

**1.57 IDE Connector (IDE1)**

Standard IDE Connector

### 1.58 Touch Panel Setting Switch (SW1)

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Switch Position	Signal	Note
1	NC	
2	NC	
3	Touch_5	On for 4/8 wire, Off for 5 wire
4	X+ Sense	On for 4/5 wire, Off for 8 wire
5	Y+ Sense	On for 4/5 wire, Off for 8 wire
6	X- Sense	On for 4/5 wire, Off for 8 wire
7	Y- Sense	On for 4/5 wire, Off for 8 wire
8	NC	

### 1.59 Power Button Switch (SW2)

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Power Button Switch

### 1.60 Hardware Reset Switch (SW3)

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Hardware Reset Switch

## Below Table for China RoHS Requirements

产品中有毒有害物质或元素名称及含量

## AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
<p><b>O:</b> 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。</p> <p><b>X:</b> 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。</p> <p>备注: 此产品所标示之环保使用期限, 系指在一般正常使用状况下。</p>						