

**ETX Carrier Board**

**ECB-902M**

Chapter

**1**

# **Quick Installation Guide**



Part No. 2007902M20 Printed in Taiwan June 2009

## 1.1 Safety Precaution

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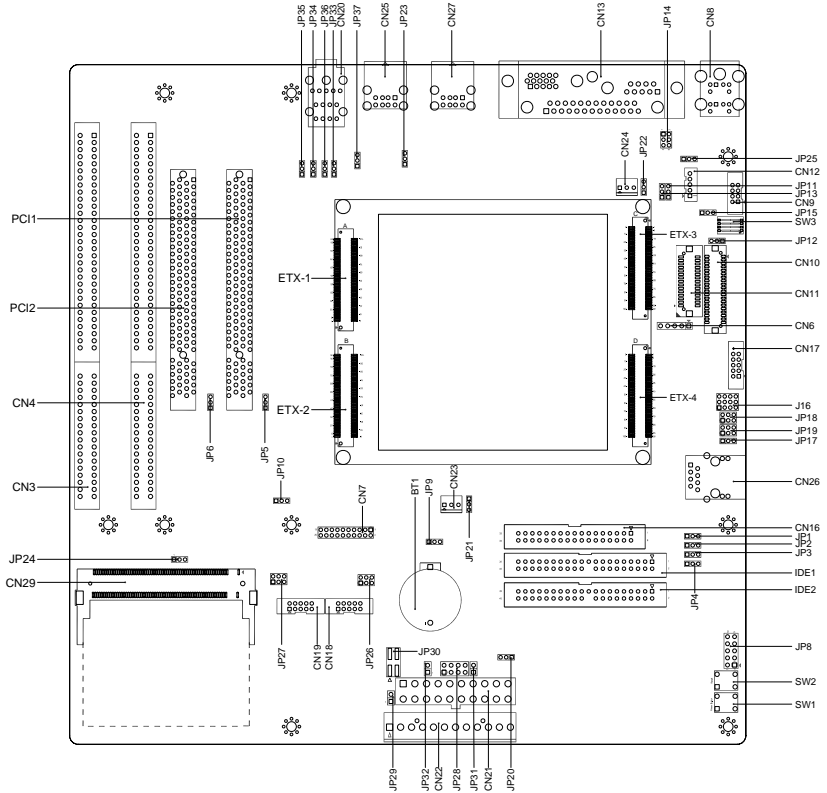
**Warning!**

*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.*

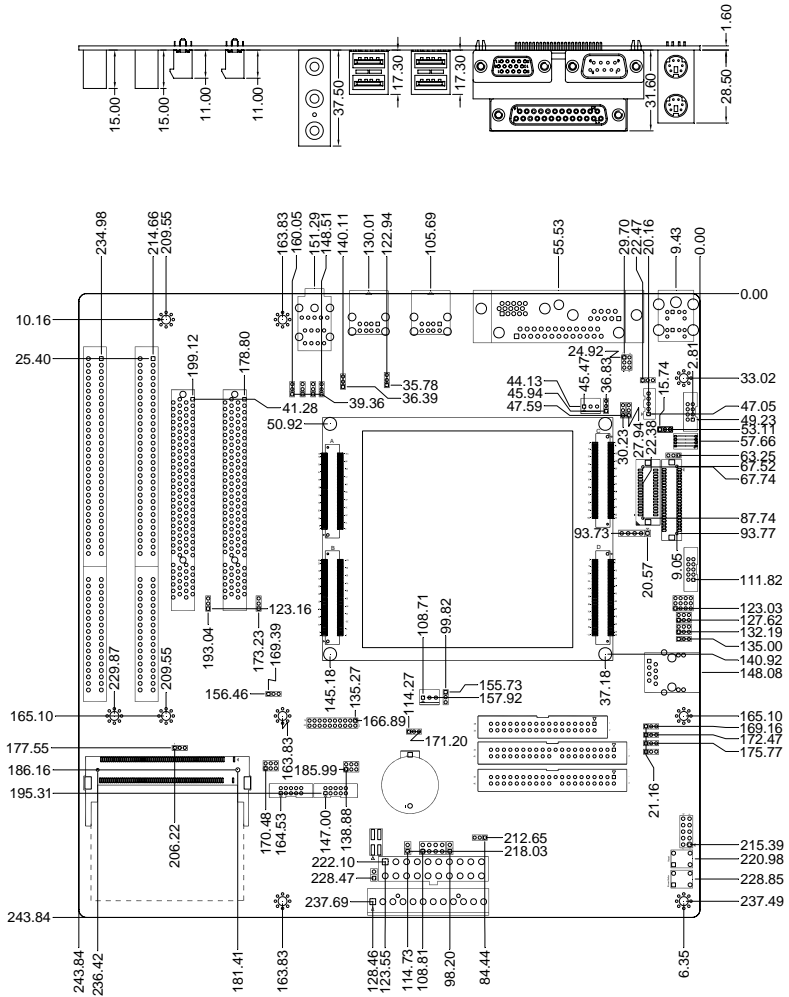
**Caution!**

*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 Jumpers and Connectors



### 1.3 Mechanical Drawing



## 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:

### Jumpers

<b>Label</b>	<b>Function</b>
JP1	ETX-4 Pin D9 Selection
JP2	ETX-4 Pin D26 Selection
JP3	ETX-4 Pin D35 Selection
JP4	ETX-4 Pin D90 Selection
JP5	PCI1 IDSEL Selection
JP6	PCI2 IDSEL Selection
JP9	Clear CMOS Selection
JP10	WDT Reset Selection
JP11	Backlight Enabled Voltage Selection
JP12	LCD Input Voltage Selection
JP13	Backlight Power Selection
JP14	COM 1 +12V/+5V/Ring Selection
JP15	LVDS, TTL or DVI Selection
J16	COM2 RS-232/422/485 Selection
JP17	PME and Ring Selection
JP18	COM2 RS-232/422/485 Selection
JP19	COM 2 +12V/+5V/Ring Selection
JP20	AT and ATX Type Power Supply Selection
JP21	CPU Fan Power Selection
JP22	System Fan Power Selection

JP23	USB Enable Selection
JP24	Mini PCI IDSEL Selection
JP25	LCD Backlight Enable Selection
JP26	COM 3 +12V/+5V/Ring Selection
JP27	COM 4 +12V/+5V/Ring Selection
JP28	+5V Power Consumption Measure
JP29	+12V Power Consumption Measure
JP30	+3.3V Power Consumption Measure
JP31	-5V Power Consumption Measure
JP32	-12V Power Consumption Measure
JP33	Audio Line-in (R) Input Cap Selection
JP34	Audio Line-in (L) Input Cap Selection
JP35	Audio Line-out (R) Output Cap Selection
JP36	Audio Line-out (L) Output Cap Selection
JP37	Audio MIC Input Cap 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>
CN3	ISA Slot
CN4	ISA Slot
CN6	IR Connector
CN7	DIGITAL I/O Connector
CN8	PS2 KB / MS Connector
CN9	TV-OUT Connector
CN10	TTL LCD Connector
CN11	LVDS Connector
CN12	LCD Inverter Power Connector
CN13	COM1 / Printer / VGA Connector
CN16	Floppy Connector
CN17	COM2 Connector
CN18	COM3 Connector
CN19	COM4 Connector
CN20	Audio Connector
CN21	ATX Power Connector
CN22	AT Power Connector
CN23	CPU FAN Connector
CN24	System FAN Connector
CN25	USB Connector
CN26	LAN Connector
CN27	USB Connector
CN29	Mini PCI Connector

PCI1	PCI Connector
PCI2	PCI Connector
IDE1	Primary IDE Connector
IDE2	Secondary IDE Connector
JP8	Front Panel Connector
SW1	Power Button Switch
SW2	Hardware Reset Switch
SW3	TV-OUT or TTL Selection Switch

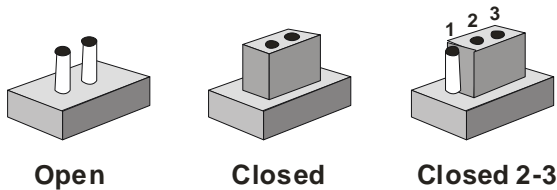


## 1.6 Setting Jumpers

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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 ETX-4 Pin D9 Selection (JP1)

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JP1	Function
1-2	CPU FAN (Default)
2-3	N.C.

### 1.8 ETX-4 Pin D26 Selection (JP2)

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JP2	Function
1-2	CPU FAN
2-3	N.C. (Default)

### 1.9 ETX-4 Pin D35 Selection (JP3)

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JP3	Function
1-2	Primary IDE ATA33/100 Detect (Default)
2-3	Secondary IDE ATA33/100 Detect

### 1.10 ETX-4 Pin D90 Selection (JP4)

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JP4	Function
1-2	RING#
2-3	Primary IDE ATA33/100 Detect (Default)

### 1.11 PCI1 IDSEL Selection (JP5)

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JP5	Function
1-2	AD19(Default)
2-3	AD28

### 1.12 PCI2 IDSEL Selection (JP6)

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JP6	Function
1-2	AD20(Default)

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2-3	AD29
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### 1.13 Clear CMOS Selection (JP9)

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

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### 1.14 WDT Reset Selection (JP10)

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JP10	Function
1-2	Normal (Default)
2-3	WDT Reset(For ETX-625)

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### 1.15 Backlight Enabled Voltage Selection (JP11)

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

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### 1.16 LCD Input Voltage Selection (JP12)

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

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### 1.17 Backlight Power Selection (JP13)

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JP13	Function
1-2	+12V
2-3	+5V (Default)

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### 1.18 COM1 +12V/+5V/Ring Selection (JP14)

JP14	Function
1-2	+12V
3-4	+5V
5-6	Ring (Default)

### 1.19 LVDS, TTL or DVI Selection (JP15)

JP15	Function
1-2	LVDS, TTL(Default)
2-3	DVI (For ETX-CX700M)

### 1.20 COM2 RS-232/422/485 Selection (J16/ JP18)

J16	JP18	Function
1-2,4-5,7-8,10-11	1-2	RS-232(Default)
2-3,5-6,8-9,11-12	3-4	RS-422
2-3,5-6,8-9,11-12	5-6	RS-485

### 1.21 PME and Ring Selection (JP17)

JP17	Function
1-2	RING#(Default)
2-3	PME#

### 1.22 COM 2 +12V/+5V/Ring Selection (JP19)

JP19	Function
1-2	+12V
3-4	+5V
5-6	Ring (Default)

### 1.23 AT and ATX Type Power Supply Selection (JP20)

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JP20	Function
1-2	AT
2-3	ATX (Default)

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### 1.24 CPU FAN Power Selection (JP21)

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JP21	Function
1-2	+12V
2-3	+5V(Default)

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### 1.25 System FAN Power Selection (JP22)

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JP22	Function
1-2	+12V
2-3	+5V(Default)

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### 1.26 USB Enable Selection (JP23)

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JP23	Function
1-2	For 852GM chipset(For ETX-821, ETX-855)
2-3	Normal(Default)

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### 1.27 Mini PCI IDSEL Selection (JP24)

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JP24	Function
1-2	AD21(Default)
2-3	AD30

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### 1.28 LCD Backlight Enable Selection (JP25)

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JP25	Function
1-2	BLON#

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2-3	BLON(Default)
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### 1.29 COM3 +12/+5V/Ring Selection (JP26)

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JP26	Function
1-2	+12V
3-4	+5V
5-6	Ring(Default)

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### 1.30 COM4 +12/+5V/Ring Selection (JP27)

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JP27	Function
1-2	+12V
3-4	+5V
5-6	Ring(Default)

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### 1.31 +5V Power Consumption Measure (JP28)

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JP28	Function
1-2	+5V
3-4	+5V
5-6	+5V
7-8	+5V

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### 1.32 +12V Power Consumption Measure (JP29)

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JP29	Function
1-2	+12V

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### 1.33 +3.3V Power Consumption Measure (JP30)

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JP30	Function
1-2	+3.3V

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3-4	+3.3V
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### 1.34 -5V Power Consumption Measure (JP31)

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JP31	Function
1-2	-5V

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### 1.35 -12V Power Consumption Measure (JP32)

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JP32	Function
1-2	-12V

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### 1.36 Audio Line-in (R) Input Cap Selection (JP33)

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JP33	Function
1-2	Input filter cap(Default)
2-3	No input filter cap

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### 1.37 Audio Line-in (L) Input Cap Selection (JP34)

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JP34	Function
1-2	Input filter cap(Default)
2-3	No input filter cap

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### 1.38 Audio Line-out (R) Output Cap Selection (JP35)

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JP35	Function
1-2	Output filter cap(Default)
2-3	No output filter cap

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### 1.39 Audio Line-out (L) Output Cap Selection (JP36)

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JP36	Function
1-2	Output filter cap(Default)

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2-3                      No output filter cap

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#### 1.40 Audio MIC Input Cap Selection (JP37)

JP37	Function
1-2	Input filter cap(Default)
2-3	No input filter cap

Note:

JP33-JP37(For ETX-625,ETX-821,ETX-855,ETX-700,ETX-700B, ETX-701, ETX-CX700M,please use Default.)

#### 1.41 ISA Connector (CN3, CN4)

Standard ISA Slot

#### 1.42 IR Connector (CN6)

Pin	Signal
1	+5V
2	N.C.
3	IRRX
4	GND
5	IRTX

#### 1.43 Digital I/O Connector (CN7)

Pin	Signal	Pin	Signal
1	OUT0	2	OUT1
3	OUT2	4	OUT3
5	OUT4	6	OUT5
7	OUT6	8	OUT7



9	GND	10	GND
11	IN0	12	IN1
13	IN2	14	IN3
15	IN4	16	IN5
17	IN6	18	IN7
19	+5V	20	+12V

Note: The interrupt address is 200H.

#### 1.44 PS2 KB / MS Connector (CN8)

Pin	Signal	Pin	Signal
1	KBDAT	2	MSDAT
3	GND	4	+5V
5	KBCLK	6	MSCLK
7	MSDAT	8	N.C.
9	GND	10	+5V
11	MSCLK	12	N.C.

#### 1.45 TV-OUT Connector (CN9)

Pin	Signal	Pin	Signal
1	Y	2	CVBS
3	GND	4	GND
5	C	6	N.C.
7	GND	8	CSYNC

#### 1.46 TTL LCD Connector (CN10)

Pin	Signal	Pin	Signal
1	+5V	2	+5V
3	GND	4	GND

5	+3.3V	6	+3.3V
7	Backlight enable	8	GND
9	B0	10	B1
11	B2	12	B3
13	B4	14	B5
15	B6	16	B7
17	G0	18	G1
19	G2	20	G3
21	G4	22	G5
23	G6	24	G7
25	R0	26	R1
27	R2	28	R3
29	R4	30	R5
31	R6	32	R7
33	GND	34	GND
35	LCD CLOCK	36	LCD VSYNC
37	LCD DE	38	LCD HSYNC
39	N.C.	40	N.C.

### 1.47 LVDS Connector (CN11)

Pin	Signal	Pin	Signal
1	Backlight enable	2	Backlight control
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

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

### 1.48 LCD Inverter Power Connector (CN12)

Pin	Signal
1	LCD Inverter Power
2	Backlight control
3	GND
4	GND
5	Backlight enable

### 1.49 COM1 / Printer / VGA Connector (CN13)

Pin	Signal	Pin	Signal
A1	#STROBE	A14	#AFD
A2	PTD0	A15	#ERROR
A3	PTD 1	A16	#INIT
A4	PTD 2	A17	#SLIN
A5	PTD 3	A18	GND
A6	PTD 4	A19	GND
A7	PTD 5	A20	GND
A8	PTD 6	A21	GND
A9	PTD 7	A22	GND
A10	#ACK	A23	GND
A11	BUSY	A24	GND

A12	PE	A25	GND
A13	SELECT		
B1	DCD	B2	RXD
B3	TXD	B4	DTR
B5	GND	B6	DSR
B7	RTS	B8	CTS
B9	RING		
C1	RED	C2	GREEN
C3	BLUE	C4	N.C.
C5	GND	C6	GND
C7	GND	C8	GND
C9	+5V	C10	CRT_PLUG#
C11	N.C.	C12	DDCDATA
C13	HSYNC	C14	VSYNC
C15	DDCCLK		

### 1.50 Floppy Connector (CN16)

Pin	Signal	Pin	Signal
1	GND	2	#AFD
3	GND	4	N.C.
5	GND	6	N.C.
7	GND	8	PRD0
9	GND	10	PRD6
11	GND	12	#ACK
13	GND	14	PRD 7
15	GND	16	BUSY
17	GND	18	#INIT
19	GND	20	#SLIN
21	GND	22	PE

23	GND	24	SELECT
25	GND	26	PRD1
27	GND	28	PRD2
29	GND	30	PRD3
31	GND	32	#ERROR
33	N.C.	34	PRD4

### 1.51 COM2 Connector (CN17)

#### RS-232 Mode

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RING/+5V/+12V	10	N.C.

#### RS-422 Mode

Pin	Signal	Pin	Signal
1	TXD-	2	RXD+
3	TXD+	4	RXD-
5	GND	6	N.C.
7	N.C.	8	N.C.
9	N.C. /+5V/+12V	10	N.C.

#### RS-485 Mode

Pin	Signal	Pin	Signal
1	TXD-	2	N.C.
3	TXD+	4	N.C.
5	GND	6	N.C.

7	N.C.	8	N.C.
9	N.C./+5V/+12V	10	N.C.

### 1.52 COM3 / COM4 Connector (CN18, CN19)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RING/+5V/+12V	10	N.C.

### 1.53 Audio Connector (CN20)

Pin	Signal	Pin	Signal
A1	LINL	A2	GNDAUD
A3	GNDAUD	A4	LINR
B1	LOUTL	B2	GNDAUD
B3	GNDAUD	B4	LOUTR
C0	GNDAUD	C1	N.C.
C2	GNDAUD	C3	GNDAUD
C4	MIC_IN		
H1	GNDAUD	H2	GNDAUD
H3	GNDAUD	H4	GNDAUD
H5	GNDAUD		

### 1.54 ATX Power Connector (CN21)

Pin	Signal	Pin	Signal
1	N.C.	11	N.C.
2	N.C.	12	-12V

3	GND	13	GND
4	+5V	14	PSON#
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	N.C.	18	-5V
9	5VSB	19	+5V
10	+12V	20	+5V

### 1.55 AT Power Connector (CN22)

Pin	Signal
1	N.C.
2	+5V
3	+12V
4	-12V
5	GND
6	GND
7	GND
8	GND
9	-5V
10	+5V
11	+5V
12	+5V

### 1.56 CPU FAN Connector (CN23)

Pin	Signal
1	GND
2	FAN Power
3	FAN Speed Sense

**1.57 System FAN Connector (CN24)**

Pin	Signal
1	GND
2	FAN Power
3	N.C.

**1.58 USB Connector (CN25)**

Pin	Signal	Pin	Signal
1	USB Power	2	USBD1-
3	USBD1+	4	GND
5	USB Power	6	USBD0-
7	USBD0+	8	GND
9	GND	10	GND
11	GND	12	GND

**1.59 LAN Connector (CN26)**

Pin	Signal	Pin	Signal
1	RXD-	2	RXD+
3	TCD1	4	N.C
5	N.C	6	N.C.
7	TXD-	8	TXD+
9	TXRX_LED	10	LILED
11	LINK100_LED	12	GND
13	GND	14	GND

**1.60 USB Connector (CN27)**

Pin	Signal	Pin	Signal
1	USB Power	2	USBD3-



3	USBD3+	4	GND
5	USB Power	6	USBD2-
7	USBD2+	8	GND
9	GND	10	GND
11	GND	12	GND

### 1.61 Mini PCI Connector (CN29)

Standard Mini PCI Slot

### 1.62 PCI Connector (PCI1,PCI2)

Standard PCI Slot

### 1.63 Primary IDE Connector (IDE1)

Pin	Signal	Pin	Signal
1	IDERST#	2	GND
3	PDD7	4	PDD8
5	PDD6	6	PDD9
7	PDD5	8	PDD10
9	PDD4	10	PDD11
11	PDD3	12	PDD12
13	PDD2	14	PDD13
15	PDD1	16	PDD14
17	PDD0	18	PDD15
19	GND	20	N.C.
21	PDDREQ	22	GND
23	PDIOW#	24	GND
25	PDIOR#	26	GND
27	PDRDY	28	PDCSEL
29	PDDACK#	30	GND

31	PIDEIRQ	32	N.C.
33	PDDA1	34	PD_80P
35	PDDA0	36	PDDA2
37	PDDCS1#	38	PDDCS#3
39	DASP#	40	GND

### 1.64 Secondary IDE Connector (IDE2)

Pin	Signal	Pin	Signal
1	IDERST#	2	GND
3	SDD7	4	SDD8
5	SDD6	6	SDD9
7	SDD5	8	SDD10
9	SDD4	10	SDD11
11	SDD3	12	SDD12
13	SDD2	14	SDD13
15	SDD1	16	SDD14
17	SDD0	18	PDD15
19	GND	20	N.C.
21	SDDREQ	22	GND
23	SDIOW#	24	GND
25	SDIOR#	26	GND
27	SDRDY	28	SDCSEL
29	SDDACK#	30	GND
31	SIDEIRQ	32	N.C.
33	SDDA1	34	SD_80P
35	SDDA0	36	SDDA2
37	SDDCS1#	38	SDDCS#3
39	DASP#	40	GND

### 1.65 Front Panel Connector (JP8)

Pin	Signal	Pin	Signal
1	PW-	2	PW+
3	IDE HDD LED-	4	IDE HDD LED+
5	Speaker-	6	Speaker+
7	Power LED-	8	Power LED+
9	RES-	10	RES+

### 1.66 SW1 Connector (SW1)

Power Button Switch

### 1.67 SW2 Connector (SW2)

Hardware Reset Switch

### 1.68 TV-OUT or TTL Selection Switch (SW3)

#### Switch Position Note

1	On for TV, Off for TTL
2	On for TV, Off for TTL
3	On for TV, Off for TTL
4	On for TV, Off for TTL

## 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>						