EPIC-HD07

AMD® G-series T56N/T44R/T40R Processor

Onboard DDR3 1066/1333 SODIMM

18/24-bit Single/Dual-channel LVDS LCD

8 USB 2.0, 6 COM, 1 SATA, 1 mSATA

2 GbE, PCI-104, Mini Card

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May 2012

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Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

- 1709070500 SATA Cable
- 1702150155 SATA Power Cable
- 9657666600 Jumper Cap
- Product DVD
- EPIC-HD07

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

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Chapter

1

General Information

1.1 Introduction

AAEON announces a brand new EPIC Board EPIC-HD07, designed to fit in diverse applications that demand for fitting in different space limitations and high performance.

EPIC-HD07 accommodates onboard AMD® G-series™ T56N/T44R/T40R Processor and features DDR3 SODIMM 1066/1333 system memory up to 4GB. Moreover, EPIC-HD07 adopts AMD® A55E chipset to achieve an excellent performance.

In addition, EPIC-HD07 deploys Realtek® 8111E Ethernet chip to feature two RJ-45 ports onboard to display the transcendent performance of network connections. The display chipset of EPIC-HD07 supports 18/24-bit dual/single channel LVDS LCD and optional DVI function.

In addition to the PCI-104 and Mini Card expansion, EPIC-HD07 also features one SATA, one mSATa for the storage and eight USB 2.0 ports, six COM ports, 16-bit Digital I/O co-lay with LPT function for flexible I/O expansion. EPIC-HD07 is an excellent choice for your vital applications.

1.2 Features

- AMD® G-series™ T56N/T44R/T40R Processor
- AMD® A55E
- DDR3 SOGIMM 1066/1333 (T56N) Memory Up to 4 GB
- Gigabit Ethernet x 2
- 18/24-bit Dual/Single Channel LVDS LCD, DVI (Optional)
- 2CH AC97 2.3 Codec Audio
- mSATA x 1, SATA x 1
- USB 2.0 x 8, COM x 6, 16-bit Digital I/O Co-lay With LPT
- PCI-104, Mini Card Expansions
- DC 12V
- CPU And PCH On The Solder Side for Better Heat Spreading
- PCB 1.8mm to Prevent PCB Bending When Assembly

1.3 Specifications

System

Form Factor	EPIC Board
Processor	AMD® G-series™ T56N/T44R/T40R Processor
System Memory	SODIMM DDR3 1066/1333 Up to 4GB
Chipset	AMD® A55E
I/O Chipset	Fintek 81866D
Ethernet	10/100/1000Base-TX (Realtek® 8111E), RJ-45 x 2
BIOS	AMI Plug & Play BIOS
Wake On LAN	Yes
Watchdog Timer	Generates a time-out system reset
H/W Status Monitoring	Supports power supply voltages, fan speed, and temperature monitoring
Expansion Interface	PCI-104, Mini Card connector
Battery	Lithium battery
Power Requirement	DC 12V
Power Consumption (Typical)	AMD G-series T56N 1.65GHz, DDR3 4GB
Board Size	4.5" x 6.5" (115mm x 165mm)
Gross Weight	1.1 lb (0.5KG)

- Operation Temperature 32°F ~ 140°F (0°C ~ 60°C)
- Storage Temperature -40°F ~ 176°F (-40°C ~ 80°C)
- Operation Humidity 0% ~ 90% relative humidity, non-condensing

Display: Supports CRT/LCD/DVI simultaneous/ dual view displays

- Chipset AMD® G-series CPU integrated
- Resolutions Up to 2560 x 1600 T56N(18W) 1920 x 1200 T44R/T40R (9W/5.5W) for CRT; Up to 1920x1200 for DVI; Up to 1400 x 1050 for single channel LVDS; Up to 1920 x 1200 for dual channel LVDS
- LCD Interface 18/24-bit dual/single channel LVDS

I/O

- Storage SATA x 1, mSATA x 1
- Serial Port RS-232 x 5, RS-232/422/485 x 1
- Parallel Port SPP/EPP/ECP Mode
- USB USB2.0 x 8
- PS/2 Port Keyboard x 1, Mouse x 1
- Digital I/O Supports 16-bit (programmable), Colay with LPT Port

● Audio	Line-in, Line-out, & Mic-in
● Touch Screen	Supports 4/5-wire resistive touch screen (optional)

Chapter

2

Quick Installation Guide

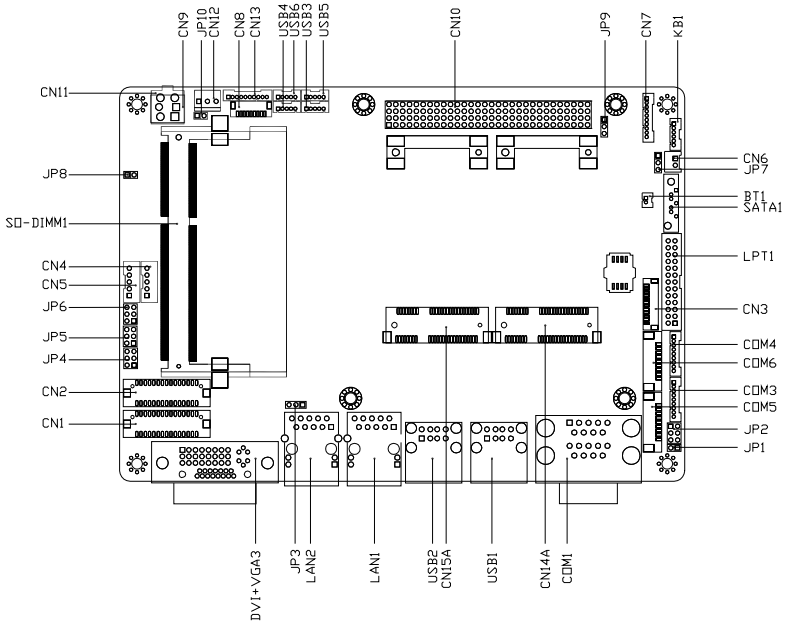
2.1 Safety Precautions

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.

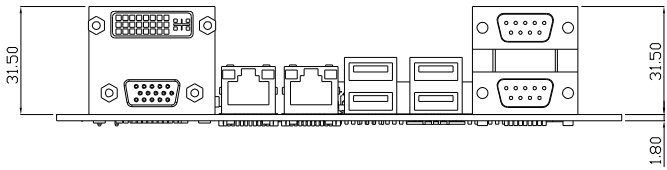
Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not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

2.2 Location of Connectors and Jumpers

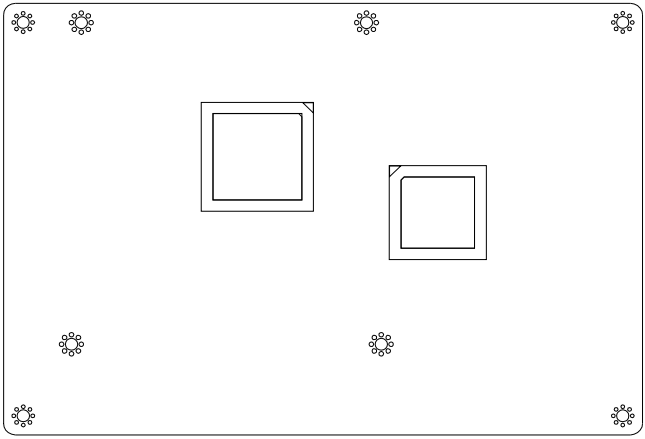
Component Side



Component Side

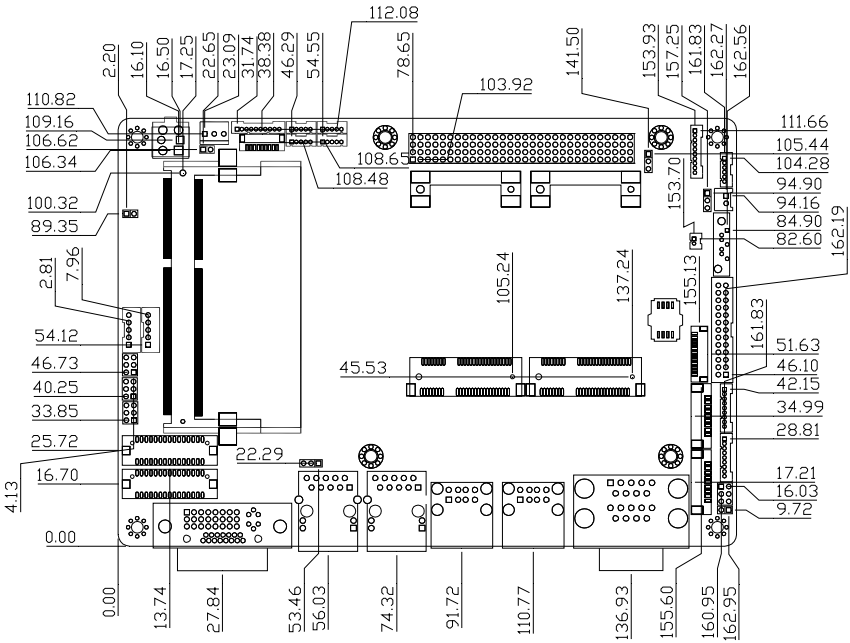


Solder Side

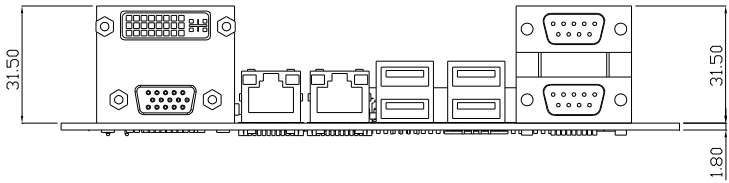


2.3 Mechanical Drawing

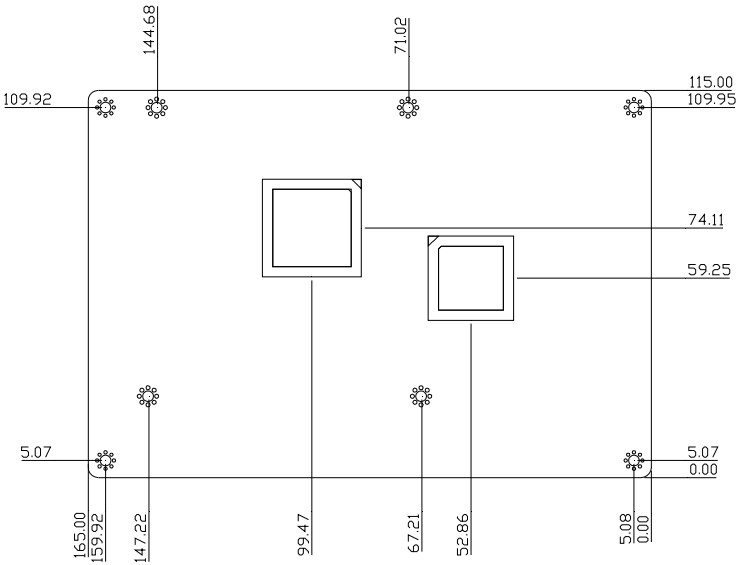
Component Side



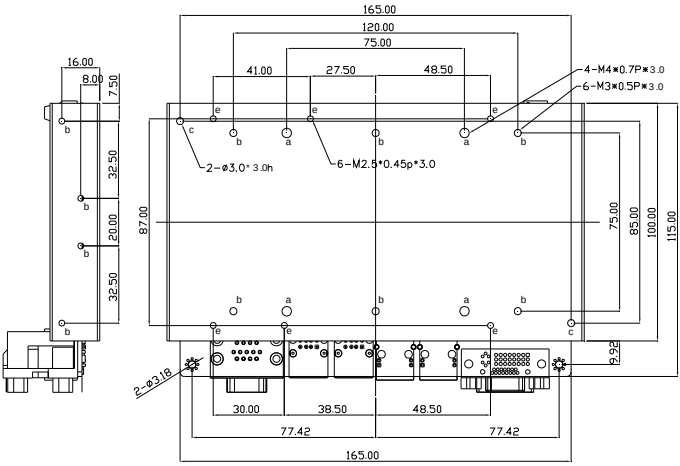
Component Side



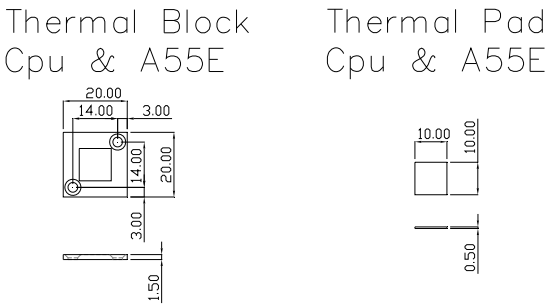
Solder Side


144.68
71.02
109.92
115.00
109.95
74.11
59.25
5.07
5.07
0.00
165.00
159.92
147.22
99.47
67.21
52.86
5.08
0.00

Heatsink



Thermal Block and Pad



2.4 List of Jumpers

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:

Label	Function
JP1	AT/ATX Function Selection
JP2	COM2 Ring/+5V/+12V Selection
JP3	2nd LVDS External Backlight Control
JP4	LCD Panel Voltage Selection
JP5	LCD Backlight Control Selection
JP6	LCD Backlight Voltage Selection
JP7	Clear CMOS
JP8	DDR3/DDR3L Voltage Selection
JP9	PC/104+(PCI-104) I/O Voltage Selection
JP10	Touch Screen Connector Selection

2.5 List of Connectors

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:

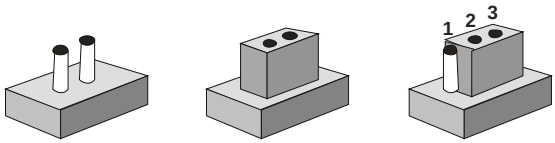
Label	Function
CN1	1st LVDS Connector
CN2	2nd LVDS Connector
CN3	LPC Connector
CN4	1st Backlight Connector
CN5	2nd Backlight Connector
CN6	SATA Power Connector
CN7	Audio Connector
CN8	Touch Panel Connector
CN9	2-Pin Power Connector(optional)
CN10	PCI-104 Connector
CN11	ATX 4-Pin Power Connector
CN12	FAN Connector
CN13	Front Panel Connector
CN14	Mini Card Port Connector
CN15	mSATA Slot
DVI+VGA3	DVI+VGA Connector
LAN1	1000Base-TX Ethernet Connector
LAN2	1000Base-TX Ethernet Connector
USB1	Dual USB Connector
USB2	Dual USB Connector

USB3	USB Connector
USB4	USB Connector
USB5	USB Connector
USB6	USB Connector
COM1 (Dual Port 1)	COM1 RS-232 Serial Port Connector
COM2 (Dual Port 2)	COM2 RS-232/422/485 Serial Port Connector
COM3	COM3 RS-232 Serial Port Connector
COM4	COM4 RS-232 Serial Port Connector
COM5	COM5 RS-232 Serial Port Connector
COM6	COM6 RS-232 Serial Port Connector
LPT1	LPT Port Connector
SATA1	SATA Connector
BT1	Battery Connector
KB1	PS/2 Keyboard/Mouse Connector

2.6 Setting Jumpers

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.



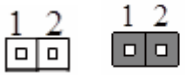
Open **Closed** **Closed 2-3**

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.

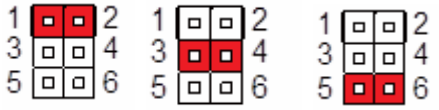
2.7 AT/ATX Selection (JP1)



ATX AT

JP1	Function
ATX	OFF (Default)
AT	ON

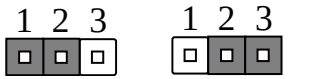
2.8 COM2 Ring/+5V/+12V Selection (JP2)



+12V RI2# +5V

JP2	Function
1-2	+12V
3-4	RI2#_SEL (Default)
5-6	+5V

2.9 2nd LVDS External Backlight Control (JP3)

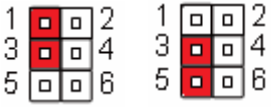


Backlight up Backlight down

JP3	Function
1-2	Backlight Up
2-3	Backlight Down

2.10 LCD Panel Voltage Selection (JP4)

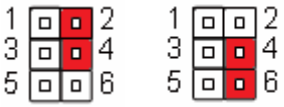
LVDS1



+5V

JP4	Function
1-3	+5V
3-5	+3.3V (Default)

LVDS2

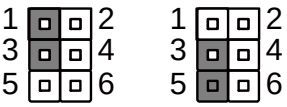


+5V **+3.3V**

JP4	Function
2-4	+5V
4-6	+3.3V (Default)

2.11 LCD Backlight Control Selection (JP5)

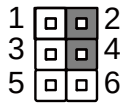
LVDS1



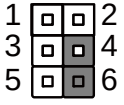
Voltage-mode **PWM-mode**

JP5	Function
1-3	Voltage Mode
3-5	PWM Mode(Default)

LVDS2



Voltage-mode

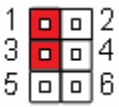


PWM-mode

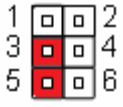
JP5	Function
2-4	Voltage Mode
4-6	PWM Mode(Default)

2.12 LCD Backlight Voltage Selection (JP6)

LVDS1



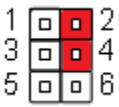
+5V



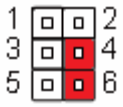
+12V

JP6	Function
1-3	+5V
3-5	+12V (Default)

LVDS2



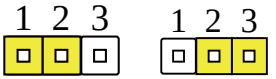
+5V



+12V

JP6	Function
2-4	+5V
4-6	+12V (Default)

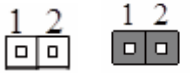
2.13 Clear CMOS (JP7)



Normal **Clear CMOS**

JP7	Function
1-2	Protected (Default)
2-3	Clear

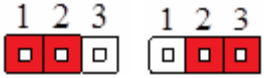
2.14 DDR3/DDR3L Voltage Control (JP8)



DDR3 **DDR3L**

JP8	Function
OFF	DDR3 (Default)
ON	DDR3L

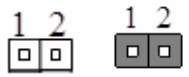
2.15 PC/104+ (PCI-104) I/O Voltage Selection (JP9)



+5V **+3.3V**

JP9	Function
1-2	+5V
2-3	+3.3V (Default)

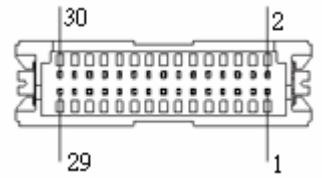
2.16 Touch Screen Connector Selection (JP10)



5-Wire **4-Wire**

JP10	Function
ON	4-Wire (Default)
OFF	5-Wire

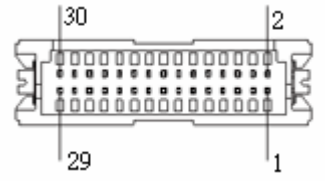
2.17 LVDS Connector (CN1)



Pin	Pin Name	Signal Type	Signal Level
1	LVDS_BKLEN	OUT	
2	LVDS_BKLCTL	OUT	
3	LCD_PWR	PWR	+3.3V/ 5V
4	GND	GND	
5	LVDS_TXLCLK#	OUT	
6	LVDS_TXLCLK	OUT	

7	LCD_PWR	PWR	+3.3V/ 5V
8	GND	GND	
9	LVDS_TXL0#	OUT	
10	LVDS_TXL0	OUT	
11	LVDS_TXL1#	OUT	
12	LVDS_TXL1	OUT	
13	LVDS_TXL2#	OUT	
14	LVDS_TXL2	OUT	
15	LVDS_TXL3#	OUT	
16	LVDS_TXL3	OUT	
17	LVDS_DDCPDATA	I/O	+3.3V
18	LVDS_DDCPCLK	I/O	+3.3V
19	N.C	-	
20	N.C	-	
21	N.C	-	
22	N.C	-	
23	N.C	-	
24	N.C	-	
25	N.C	-	
26	N.C	-	
27	LCD_PWR	PWR	+3.3V/ 5V
28	GND	GND	
29	N.C	-	
30	N.C	-	

2.18 LVDS Connector (CN2)

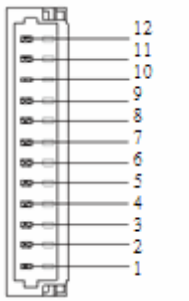


Pin	Pin Name	Signal Type	Signal Level
1	LVDS_BKLEN	OUT	
2	LVDS_BKLCTL	OUT	
3	LCD_PWR	PWR	+3.3V/ 5V
4	GND	GND	
5	LVDS_TXLCLK#	OUT	
6	LVDS_TXLCLK	OUT	
7	LCD_PWR	PWR	+3.3V/ 5V
8	GND	GND	
9	LVDS_TXL0#	OUT	
10	LVDS_TXL0	OUT	
11	LVDS_TXL1#	OUT	
12	LVDS_TXL1	OUT	
13	LVDS_TXL2#	OUT	
14	LVDS_TXL2	OUT	
15	LVDS_TXL3#	OUT	
16	LVDS_TXL3	OUT	
17	LVDS_DDCPDATA	I/O	+3.3V

18	LVDS_DDCPCLK	I/O	+3.3V
19	LVDS_TXU0#	OUT -	
20	LVDS_TXU0	OUT -	
21	LVDS_TXU1#	OUT -	
22	LVDS_TXU1	OUT -	
23	LVDS_TXU2#	OUT -	
24	LVDS_TXU2	OUT -	
25	LVDS_TXU3#	OUT -	
26	LVDS_TXU3	OUT -	
27	LCD_PWR	PWR	+3.3V/ 5V
28	GND	GND	
29	LVDS_TXUCLK#	OUT -	
30	LVDS_TXUCLK	OUT -	

2.19 LPC Connector (CN3)

LPC Mode



Pin	Pin Name	Signal Type	Signal Level
1	LAD0	I/O	
2	LAD1	I/O	
3	LAD2	I/O	
4	LAD3	I/O	
5	+3.3V	PWR	+3.3V
6	LFRAME#	OUT	
7	LPC_RST#	OUT	
8	GND	GND	
9	LPC_CLK33	OUT	
10	LDRQ#0	OUT	
11	LDRQ#1	OUT	
12	SERIRQ	OUT	

DIO Mode (DIO co-lay with LPT)

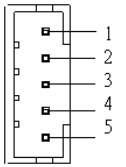
Pin	Pin Name	Signal type	Signal Level
1	GPIO15	I/O	
2	GPIO14	I/O	
3	GPIO0	I/O	
4	GPIO13	I/O	
5	GPIO1	I/O	
6	GPIO12	I/O	
7	GPIO2	I/O	
8	GPIO11	I/O	
9	GPIO3	I/O	

10	GND	GND
11	GPIO4	I/O
12	GND	GND
13	GPIO5	I/O
14	GND	GND
15	GPIO6	I/O
16	GND	GND
17	GPIO7	I/O
18	GPIO6	I/O
19	GPIO10	I/O
20	GND	GND
21	GPIO9	I/O
22	GND	GND
23	GPIO8	I/O
24	GND	GND
25	N.C	
26	N.C	

NO.	Pin Name	Pin Number	Access Address
1	GPIO0	3	
2	GPIO1	5	
3	GPIO2	7	
4	GPIO3	9	
5	GPIO4	11	

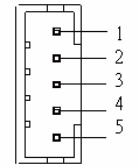
6	GPIO5	13
7	GPIO6	15
8	GPIO7	17
9	GPIO8	23
10	GPIO9	21
11	GPIO10	19
12	GPIO11	8
13	GPIO12	6
14	GPIO13	4
15	GPIO14	2
16	GPIO15	1

2.20 1st Backlight Connector (CN4)



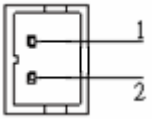
Pin	Pin Name	Signal Type	Signal Level
1	LVDS Backlight PWR	OUT	
2	LVDS Backlight control	OUT	
3	GND	GND	
4	GND	GND	
5	LVDS Backlight Enable	OUT	

2.21 2nd Backlight Connector (CN5)



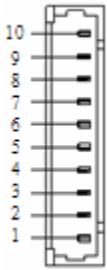
Pin	Pin Name	Signal Type	Signal Level
1	LVDS Backlight PWR	OUT	
2	LVDS Backlight control	OUT	
3	GND	GND	
4	GND	GND	
5	LVDS Backlight Enable	OUT	

2.22 SATA Power Connector (CN6)



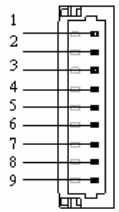
Pin	Pin Name	Signal Type	Signal Level
1	+5V	PWR	+5V
2	GND	GND	GND

2.23 Audio Connector (CN7)



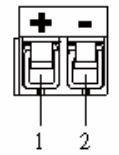
Pin	Pin Name	Signal Type	Signal Level
1	MIC_L	IN	
2	MIC_R	IN	
3	GND_AUDIO	GND	
4	LINEIN_L	IN	
5	LINEIN_R	IN	
6	GND_AUDIO	GND	
7	LINEOUT_L	OUT	
8	GND_AUDIO	GND	
9	LINEOUT_R	OUT	
10	+5V_AUDIO	PWR	+5V

2.24 Touch Screen Connector (CN8)



Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	Top Excite	IN	
3	Bottom Excite	IN	
4	Left Excite	IN	
5	Right Excite	IN	
6	Top Sense	IN	
7	Bottom Sense	IN	
8	Left Sense	IN	
9	Right Sense	IN	

2.25 2-Pin Power Connector (CN9)

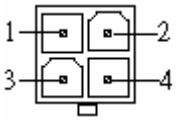


Pin	Pin Name	Signal Type	Signal Level
1	+12V	PWR	+12V
2	GND	GND	

2.26 PCI-104 Connector (CN10)

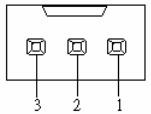
	A	B	C	D
1	GND	+5V_SB	+5V	AD00
2	VI/O	AD02	AD01	+5V
3	AD05	GND	AD04	AD03
4	C/BE0#	AD07	GND	AD06
5	GND	AD09	AD08	GND
6	AD11	VI/O	AD10	M66EN
7	AD14	AD13	GND	AD12
8	+3.3V	C/BE1#	AD15	+3.3V
9	SERR#	GND	PSON#	PAR
10	GND	PERR#	+3.3V	PME#
11	STOP#	+3.3V	LOCK#	GND
12	+3.3V	TRDY#	GND	DEVSEL#
13	FRAME#	GND	IRDY#	+3.3V
14	GND	AD16	+3.3V	C/BE2#
15	AD18	+3.3V	AD17	GND
16	AD21	AD20	GND	AD19
17	+3.3V	AD23	AD22	+3.3V
18	IDSEL0	GND	IDSEL1	IDSEL2
19	AD24	C/BE3#	VI/O	IDSEL3
20	GND	AD26	AD25	GND
21	AD29	+5V	AD28	AD27
22	+5V	AD30	GND	AD31
23	REQ0#	GND	REQ1#	VI/O
24	GND	REQ2#	+5V	GNT0#
25	GNT1#	VI/O	GNT2#	GND
26	+5V	CLK0	GND	CLK1
27	CLK2	+5V	CLK3	GND
28	GND	INTD#	+5V	RST#
29	+12V	INTA#	INTB#	INTC#
30	-12V	REQ3#	GNT3#	GND

2.27 ATX 4-Pin Power Connector (CN11)



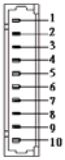
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	GND	GND	
3	+12V	PWR	+12V
4	+12V	PWR	+12V

2.28 Fan Connector (CN12)



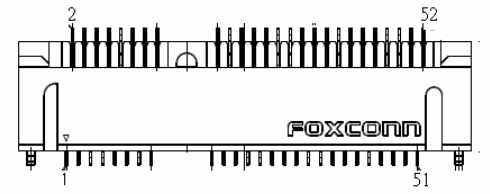
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	Fan Power Control	OUT	
3	Fan In	OUT	

2.29 Front Panel Connector (CN13)



Pin	Pin Name	Signal Type	Signal Level
1	Power Button(+)	IN	
2	Power Button(-)	IN	
3	External Buzzer(+)	OUT	
4	External Buzzer(-)	OUT	
5	IDE LED(+)	OUT	
6	IDE LED(-)	OUT	
7	Power LED(+)	OUT	
8	Power LED(-)	OUT	
9	Reset Switch(+)	IN	
10	Reset Switch(-)	IN	

2.30 PCI-Express Mini Card Connector (CN14)

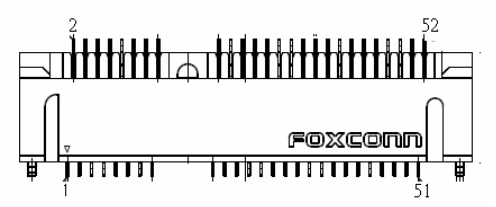


Pin	Pin Name	Signal Type	Signal Level
1	PCIE_WAKE_UP#	I/O	
2	MINI1_3.3V	PWR	3.3V
3	Reserved		
4	GND	GND	
5	Reserved		

6	1.5V	PWR	1.5V
7	PCIE_CLKREQ#	I/O	
8	Reserved		
9	GND	GND	
10	Reserved		
11	PCIE_MINI1_100M#	OUT	
12	Reserved		
13	PCIE_MINI1_100M	OUT	
14	Reserved		
15	GND	GND	
16	Reserved		
17	Reserved		
18	Reserved		
19	Reserved		
20	MINI_CARD_EN		
21	GND	GND	
22	MINI_RST#		
23	MINI_CARD1_RXN	DIFF	
24	MINI1_3.3V	PWR	
25	MINI_CARD1_RXP	DIFF	
26	GND	GND	
27	GND	GND	
28	1.5V	PWR	1.5V
29	GND	GND	

30	SMB_CLK	I/O	
31	MINI_CARD1_TXN	DIFF	
32	SMB_DATA	I/O	
33	MINI_CARD1_TXP	DIFF	
34	GND	GND	
35	GND	GND	
36	USBN2	DIFF	
37	GND	GND	
38	USBP2	DIFF	
39	MINI1_3.3V	PWR	3.3V
40	GND	GND	
41	MINI1_3.3V	PWR	3.3V
42	Reserved		
43	NC		
44	Reserved		
45	VENDOR	I/O	
46	Reserved		
47	Reserved	I/O	
48	1.5V	PWR	1.5V
49	DA/DSS	I/O	
50	GND	GND	
51	PRESENT DETECTION	I/O	
52	MINI1_3.3V	PWR	3.3V

2.31 mSATA Mini Card Connector (CN15)

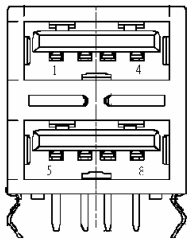


Pin	Pin Name	Signal Type	Signal Level
1	PCIE_WAKE_UP#	I/O	
2	MINI2_3.3V	PWR	3.3V
3	Reserved		
4	GND	GND	
5	Reserved		
6	1.5V	PWR	1.5V
7	PCIE_CLKREQ#	I/O	
8	Reserved		
9	GND	GND	
10	Reserved		
11	PCIE_MINI2_100M#	OUT	
12	Reserved		
13	PCIE_MINI2_100M	OUT	
14	Reserved		
15	GND	GND	
16	Reserved		

17	Reserved		
18	Reserved		
19	Reserved		
20	MINI_CARD_EN		
21	GND	GND	
22	MINI_RST#		
23	SATA_RX1_P	DIFF	
24	MINI2_3.3V	PWR	
25	SATA_RX1_N	DIFF	
26	GND	GND	
27	GND	GND	
28	1.5V	PWR	1.5V
29	GND	GND	
30	SMB_CLK	I/O	
31	SATA_TX1_N	DIFF	
32	SMB_DATA	I/O	
33	SATA_TX1_P	DIFF	
34	GND	GND	
35	GND	GND	
36	USBN6	DIFF	
37	GND	GND	
38	USBP6	DIFF	
39	MINI2_3.3V	PWR	3.3V
40	GND	GND	

41	MINI2_3.3V	PWR	3.3V
42	Reserved		
43	NC		
44	Reserved		
45	Reserved	I/O	
46	Reserved		
47	Reserved	I/O	
48	1.5V	PWR	1.5V
49	Reserved	I/O	
50	GND	GND	
51	Reserved	I/O	
52	MINI2_3.3V	PWR	3.3V

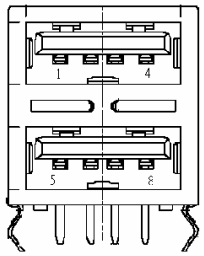
2.32 Dual USB Connector (USB1)



Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USBD1-	OUT	
3	USBD1+	OUT	

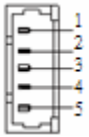
4	GND	GND	
5	+5VSB	PWR	+5V
6	USBD2-	OUT	
7	USBD2+	OUT	
8	GND	GND	

2.33 Dual USB Connector (USB2)



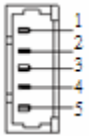
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USBD3-	OUT	
3	USBD3+	OUT	
4	GND	GND	
5	+5V	PWR	+5V
6	USBD4-	OUT	
7	USBD4+	OUT	
8	GND	GND	

2.34 USB Connector (USB5)



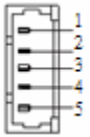
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USBD5-	OUT	
3	USBD5+	OUT	
4	GND	GND	
5	GND	GND	

2.35 USB Connector (USB6)



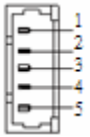
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USBD6-	OUT	
3	USBD6+	OUT	
4	GND	GND	
5	GND	GND	

2.36 USB Connector (USB7)



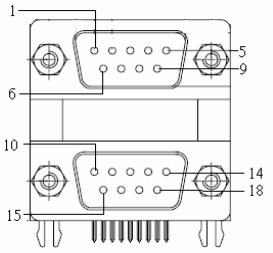
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USBD7-	OUT	
3	USBD7+	OUT	
4	GND	GND	
5	GND	GND	

2.37 USB Connector (USB8)



Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USBD8-	OUT	
3	USBD8+	OUT	
4	GND	GND	
5	GND	GND	

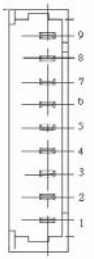
2.38 RS-232 Serial Port Dual Connector (COM1)



Pin	Pin Name	Signal Type	Signal Level
1	DCD#1	IN	
2	RXD#1	IN	
3	TXD1	OUT	
4	DTR#1	OUT	
5	GND	GND	
6	DSR#1	IN	
7	RTS#1	OUT	
8	CTS#1	IN	
9	RI#1	IN	
10	DCD#2 (485D-)(422TXD-)	IN	
11	RXD2(422RXD+)	IN	
12	TXD2 (485D+)(422TXD+)	OUT	
13	DTR#2(422RXD-)	OUT	
14	GND	OUT	
15	DSR#2	IN	

16	RTS#2	OUT
17	CTS#2	IN
18	RI#2	IN

2.39 RS-232 Serial Port Connector (COM3)

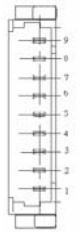


Pin	Pin Name	Signal Type	Signal Level
1	DCD#3	IN	
2	DSR#3	IN	
3	RXD3	IN	
4	RTS#3	OUT	
5	TXD3	OUT	
6	CTS#3	IN	
7	DTR#3	OUT	
8	RI#3	IN	
9	GND	GND	

2.40 RS-232 Serial Port Connector (COM4)

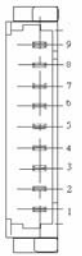
Pin	Pin Name	Signal Type	Signal Level
1	DCD#4	IN	
2	DSR#4	IN	
3	RXD4	IN	
4	RTS#4	OUT	
5	TXD4	OUT	
6	CTS#4	IN	
7	DTR#4	OUT	
8	RI#4	IN	
9	GND	GND	

2.41 RS-232 Serial Port Connector (COM5)



Pin	Pin Name	Signal Type	Signal Level
1	DCD#5	IN	
2	DSR#5	IN	
3	RXD5	IN	
4	RTS#5	OUT	
5	TXD5	OUT	
6	CTS#5	IN	
7	DTR#5	OUT	
8	RI#5	IN	
9	GND	GND	

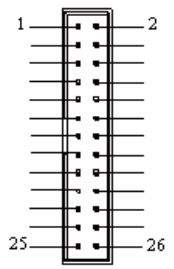
2.42 RS-232 Serial Port Connector (COM6)



Pin	Pin Name	Signal Type	Signal Level
1	DCD#6	IN	
2	DSR#6	IN	
3	RXD6	IN	
4	RTS#6	OUT	
5	TXD6	OUT	

6	CTS#6	IN
7	DTR#6	OUT
8	RI#6	IN
9	GND	GND

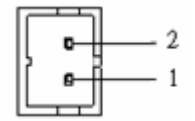
2.43 LPT Port Connector (LPT1)



Pin	Pin Name	Signal Type	Signal Level
1	#STROBE	I/O	
2	#AFD	I/O	
3	DATA0	I/O	
4	#ERROR	I/O	
5	DATA1	I/O	
6	#INIT	I/O	
7	DATA2	I/O	
8	#SLIN	I/O	
9	DATA3	I/O	
10	GND	GND	
11	DATA4	I/O	

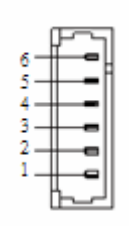
12	GND	GND
13	DATA5	I/O
14	GND	GND
15	DATA6	I/O
16	GND	GND
17	DATA7	I/O
18	GND	GND
19	#ACK	I/O
20	GND	GND
21	BUSY	I/O
22	GND	GND
23	PE	I/O
24	SELECT	I/O
25	GND	GND
26	N.C	

2.44 Battery Connector (BT1)



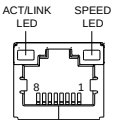
Pin	Pin Name	Signal Type	Signal Level
1	RTCBAT	IN	
2	GND	GND	

2.45 PS/2 Keyboard and Mouse Connector (KB1)



Pin	Pin Name	Signal Type	Signal Level
1	KBDATA	OUT	
2	KBCLK	OUT	
3	GND	GND	
4	+5V	PWR	+5V
5	MSDATA	OUT	
6	MSCLK	OUT	

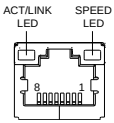
2.46 LAN Ethernet RJ-45 Connector (LAN1)



Pin	Pin Name	Signal type	Signal Level
1	LAN1_MDIP0	DIFF.	
2	LAN1_MDIN0	DIFF.	
3	LAN1_MDIP1	DIFF.	
4	LAN1_MDIN1	DIFF.	
5	LAN1_MDIP2	DIFF.	

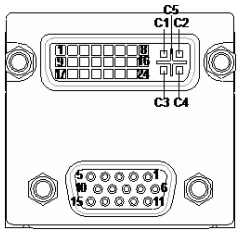
6	LAN1_MDIN2	DIFF.
7	LAN1_MDIP3	DIFF.
8	LAN1_MDIN3	DIFF.

2.47 LAN Ethernet RJ-45 Connector (LAN2)



Pin	Pin Name	Signal Type	Signal Level
1	LAN2_MDIP0	DIFF.	
2	LAN2_MDIN0	DIFF.	
3	LAN2_MDIP1	DIFF.	
4	LAN2_MDIN1	DIFF.	
5	LAN2_MDIP2	DIFF.	
6	LAN2_MDIN2	DIFF.	
7	LAN2_MDIP3	DIFF.	
8	LAN2_MDIN3	DIFF.	

2.48 VGA & DVI-I Connector (DVI+VGA3)



VGA

Pin	Pin Name	Signal Type	Signal Level
1	RED	I/O	
2	GREEN	I/O	
3	BLUE	I/O	
4	NC		
5	GND	GND	
6	GND	GND	
7	GND	GND	
8	GND	GND	
9	VGA_5V	PWR	5V
10	CRT_PLUG	IN	
11	NC		
12	DDC_SDA	I/O	
13	HSYNC	I/O	
14	VSYNC	I/O	
15	DDC_SCL	I/O	

DVI

Pin	Pin Name	Signal Type	Signal Level
1	DVI_TX2_N	I/O	
2	DVI_TX2_P	DVI_TX2_P	
3	GND	GND	
4	NC	NC	
5	NC	NC	

6	DVI_AUXP	DVI_AUXP	
7	DVI_AUXN	I/O	
8	VSYNC	VSYNC	
9	DVI_TX1_P	I/O	
10	DVI_TX1_N	DVI_TX1_N	
11	GND	GND	
12	NC	NC	
13	NC	NC	
14	VGA_5V	VGA_5V	5V
15	GND	GND	
16	DVI_HPD	DVI_HPD	
17	DVI_TX0_N	I/O	
18	DVI_TX0_P	DVI_TX0_P	
19	GND	GND	
20	NC	NC	
21	NC	NC	
22	GND	GND	
23	DVI_CLK_P	I/O	
24	DVI_CLK_N	DVI_CLK_N	
C1	RED	I/O	
C2	GREEN	GREEN	
C3	BLUE	I/O	
C4	HSYNC	HSYNC	
C5	GND	GND	

2.49 SATA Connector (SATA1)

Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	SATA_TX0_P	DIFF	
3	SATA_TX0_N	DIFF	
4	GND	GND	
5	SATA_RX0_N	DIFF	
6	SATA_RX0_P	DIFF	
7	GND	GND	

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	×	○	○	○	○	○

O：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。

X：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。

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。

Chapter

3

AMI BIOS Setup

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The CMOS memory has lost power and the configuration information has been erased.

The EPIC-HD07 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 AMI BIOS Setup

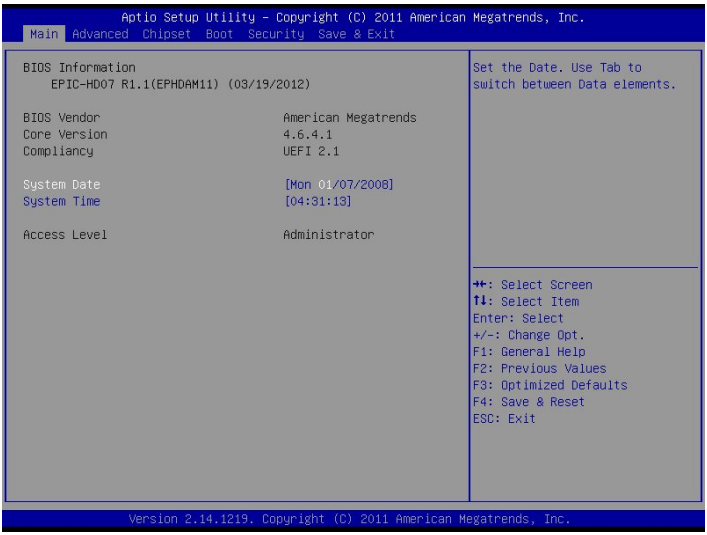
AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <Del> or <F2> immediately. This will allow you to enter Setup.

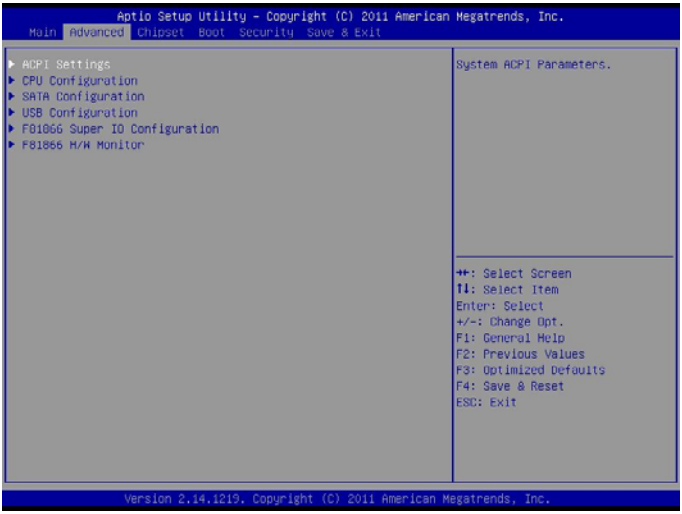
Main

Set the date, use tab to switch between date elements.



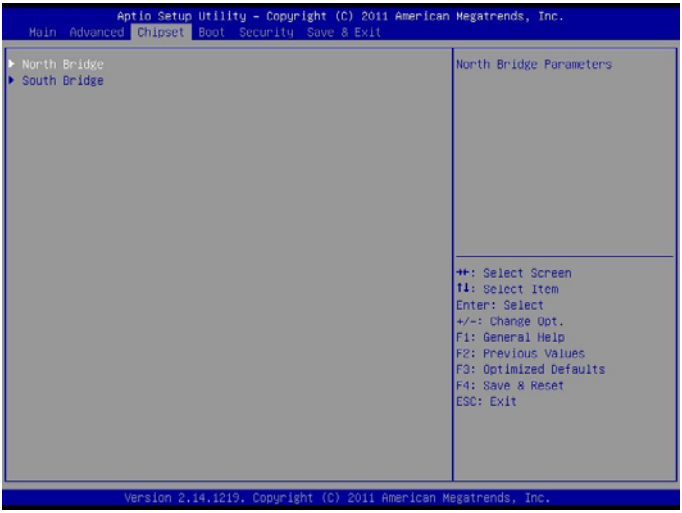
Advanced

Advanced BIOS Features Setup including TPM, ACPI, etc.



Chipset

Host bridge parameters.



Boot

Enables/disable quiet boot option.

Security

Set setup administrator password.

Save&Exit

Exit system setup after saving the changes.

Chapter

4

Driver Installation

The EPIC-HD07 comes with a DVD-ROM that contains all drivers and utilities that meet your needs.

Follow the sequence below to install the drivers:

Step 1 – Install Chipset Driver

Step 2 – Install Audio Driver

Step 3 – Install LAN Driver

Step 4 – Install AHCI Driver

Step 5 – Install Touch Driver

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the EPIC-HD07 DVD-ROM into the DVD-ROM Drive. And install the drivers from Step 1 to Step 5 in order.

Step 1 – Install Chipset Driver

1. Click on the ***STEP1-CHIPSET*** folder and select the OS folder your system is
2. Double click on the ***Setup.exe*** located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 2 – Install Audio Driver

1. Click on the ***STEP2-Audio*** folder and select the OS folder your system is
2. Double click on the ***.exe*** located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 3 – Install LAN Driver

1. Click on the ***STEP3-LAN*** folder and select the OS folder your system is
2. Double click on the ***setup.exe*** located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 4 – Install AHCI Driver

Please refer to the Appendix D AHCI Setting

Step 5 – Install Touch Driver

1. Click on the ***STEP5-TOUCH*** folder and double click on the ***Setup.exe***
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Appendix

A

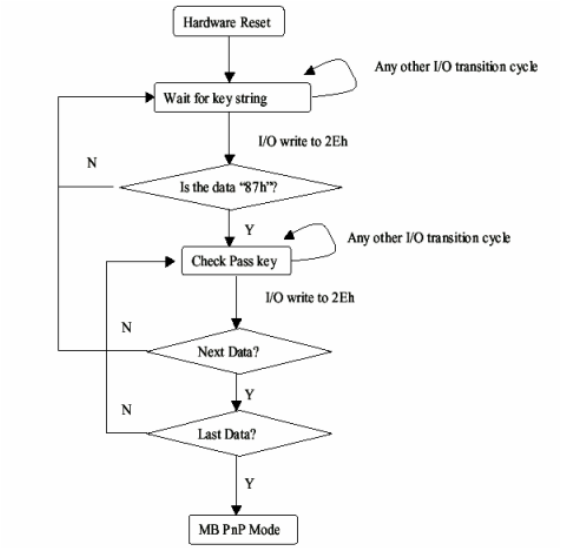
Programming the Watchdog Timer

A.1 Programming

EPIC-HD07 utilizes FINTEK 81866 chipset as its watchdog timer controller. Below are the procedures to complete its configuration and the AAEON initial watchdog timer program is also attached based on which you can develop customized program to fit your application.

Configuring Sequence Description

After the hardware reset or power-on reset, the FINTEK 81866 enters the normal mode with all logical devices disabled except KBC. The initial state (enable bit) of this logical device (KBC) is determined by the state of pin 121 (DTR1#) at the falling edge of the system reset during power-on reset.



There are three steps to complete the configuration setup: (1) Enter the MB PnP Mode; (2) Modify the data of configuration registers; (3) Exit the MB PnP Mode. Undesired result may occur if the MB PnP Mode is not exited normally.

(1) Enter the MB PnP Mode

To enter the MB PnP Mode, four special I/O write operations are to be performed during Wait for Key state. To ensure the initial state of the key-check logic, it is necessary to perform four write opera-tions to the Special Address port (2EH). Two different enter keys are provided to select configuration ports (2Eh/2Fh) of the next step.

```
-o 4e 87
-o 4e 87            ( enable configuration )
```

(2) Modify the Data of the Registers

All configuration registers can be accessed after entering the MB PnP Mode. Before accessing a selected register, the content of Index 07h must be changed to the LDN to which the register belongs, except some Global registers.

(3) Exit the MB PnP Mode

Write exit key 0xAA to the index port.

```
-o 4e aa            ( disable configuration )
```

Watch Dog Timer 1, 2, 3 Control Register (Index=F5h,F6h,FAh Default=00h)

7.8.4 Watchdog Control Configuration Register 1 — Index F5h

Bit	Name	R/W	Reset	Default	Description
7	Reserved	R	-	0	Reserved
6	WDTMOUT_STS	R/W	5VSB	0	If watchdog timeout event occurred, this bit will be set to 1. Write a 1 to this bit will clear it to 0.
5	WD_EN	R/W	5VSB	0	If this bit is set to 1, the counting of watchdog time is enabled.
4	WD_PULSE	R/W	5VSB	0	Select output mode (0: level, 1: pulse) of RSTOUT# by setting this bit.
3	WD_UNIT	R/W	5VSB	0	Select time unit (0: 1sec, 1: 60 sec) of watchdog timer by setting this bit.
2	WD_HACTIVE	R/W	5VSB	0	Select output polarity of RSTOUT# (1: high active, 0: low active) by setting this bit.
1-0	WD_PSWIDTH	R/W	5VSB	0	Select output pulse width of RSTOUT# 0: 1 ms 1: 25 ms 2: 125 ms 3: 5 sec

7.8.5 Watchdog Timer Configuration Register 2 — Index F6h

Bit	Name	R/W	Reset	Default	Description
7-0	WD_TIME	R/W	5VSB	0	Time of watchdog timer (0~255)

7.8.6 Watchdog PME Enable Configuration Register 2 — Index FAh

Bit	Name	R/W	Reset	Default	Description
7	WDT_PME	R	5VSB	0	0: No WDT PME occurred. 1: WDT PME occurred. The WDT PME is occurred one unit before WDT timeout.
6	WDT_PME_EN	R/W	5VSB	0	0: Disable Watchdog PME. 1: enable Watchdog PME.
5	Reserved	R	-	0	Reserved
4	WDT_CLK_SEL	R/W	5VSB	1	WDT Clock Source Select 0: Internal 1KHz clock. 1: 1KHZ clock driven by CLKIN.
3-1	Reserved	R	-	0	Reserved
0	WDOUT_EN	R/W	5VSB	0	0: disable Watchdog time out output via WDTRST#. 1: enable Watchdog time out output via WDTRST#.

A.2 F81866 Watchdog Timer Initial Program

Main(){

```
aaeonSuperIOOpen();
aaeonWdtSetCountMode(BOOL bMinute); // Set wdt count mode
aaeonWdtSetTimeoutCount(BYTE tTimeout); // Set wdt timer
aaeonWdtSetEnable(BOOL bEnable); // Enable wdt
aaeonSuperIOClose();
}

Void aaeonSuperIOOpen(){    // Config F81866 Entry key
        aaeonioWritePortByte(F81866_INDEX, 0x87);
        aaeonioWritePortByte(F81866_INDEX, 0x87);
}

Void aaeonWdtSetCountMode(BOOL bMinute){
   BYTE WDT_CONTROL = f81866ReadByte(F81866_WDT_CONTROL_REG);
   if(bMinute)
        f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_CONTROL | 0x08);
   else
        f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_CONTROL & 0xF7);
}
```

```
Void aaeonWdtSetTimeoutCount(BYTE tTimeout){
   f81866SetLdn(0x07);
   f81866WriteByte(F81866_WDT_TIME_REG, tTimeout);
}

Void aaeonWdtSetEnable(BOOL bEnable){
   f81866SetLdn(0x07);
   if(bEnable){
        f81866WriteByte(0x30, 0x01);
        WDT_BASE_ADDR =
        (f81866ReadByte(F81866_WDT_BASEADDR_REG_MSB) << 8)
        | f81866ReadByte(F81866_WDT_BASEADDR_REG_LSB);
        WDT_STATUS = f81866ReadByte(F81866_WDT_CONTROL_REG);
        f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_STATUS | 0x20);
        WDT_STATUS = f81866ReadByte(F81866_WDT_PME_REG);
        f81866WriteByte(F81866_WDT_PME_REG, WDT_STATUS | 0x01);
   }else{
        f81866WriteByte(0x30, 0x00);
        WDT_BASE_ADDR = 0;
        WDT_STATUS = f81866ReadByte(F81866_WDT_CONTROL_REG);
        f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_STATUS & 0xDF);
        WDT_STATUS = f81866ReadByte(F81866_WDT_PME_REG);
        f81866WriteByte(F81866_WDT_PME_REG, WDT_STATUS & 0xFE);
   }
}
```

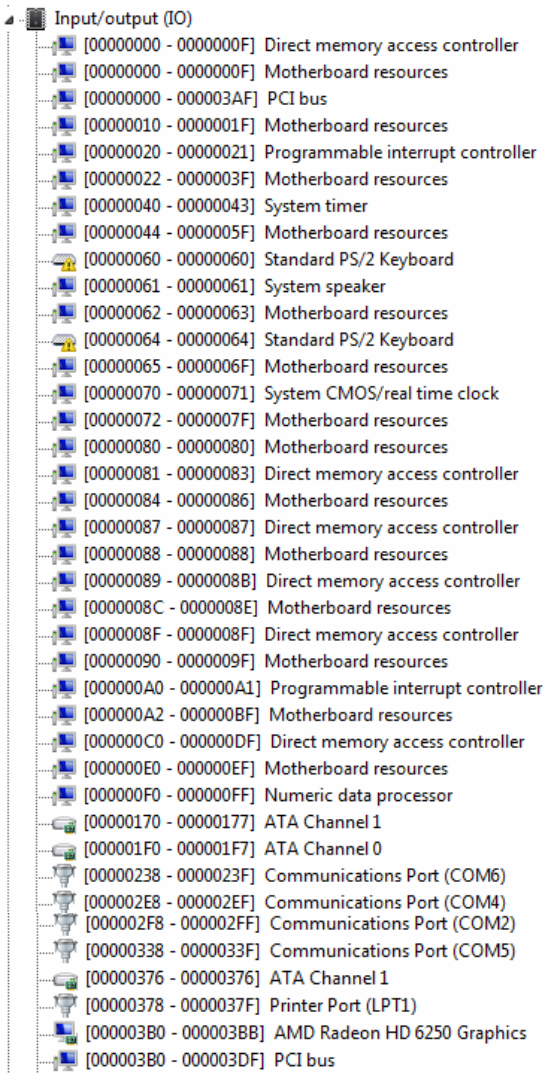
```
Void aaeonSuperIOClose(){
        aaeonioWritePortByte(F81866_INDEX, 0xaa);
}
```

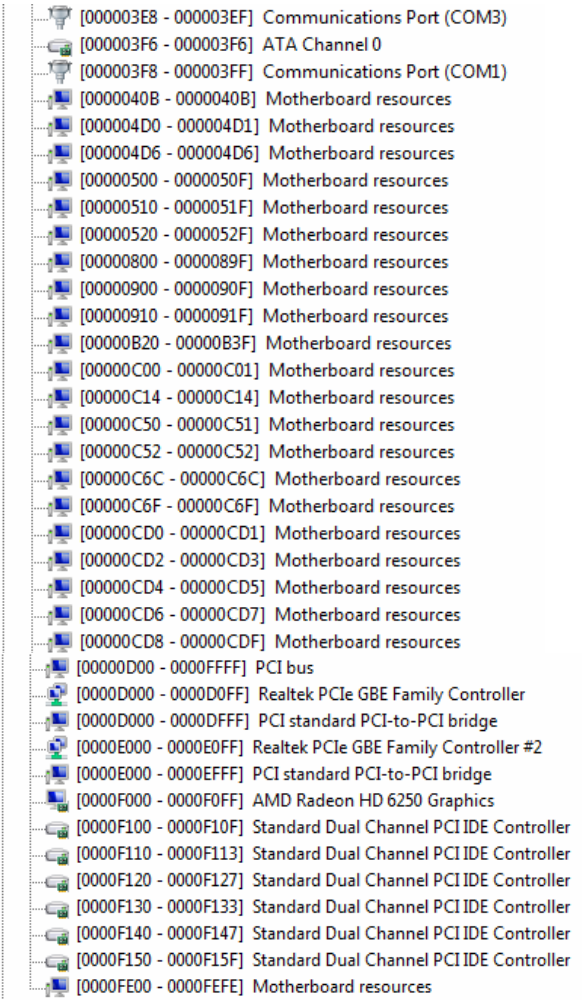
Appendix

B

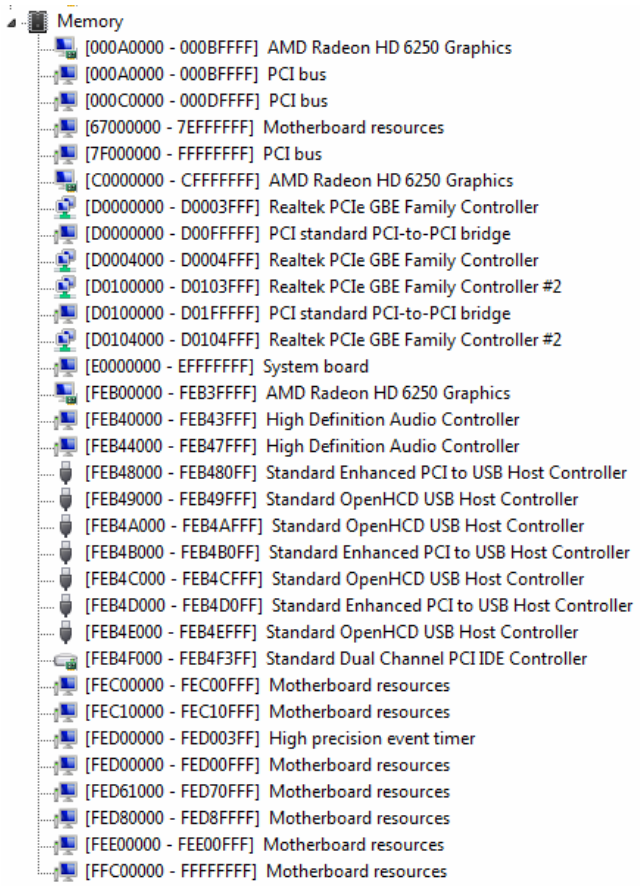
I/O Information

B.1 I/O Address Map

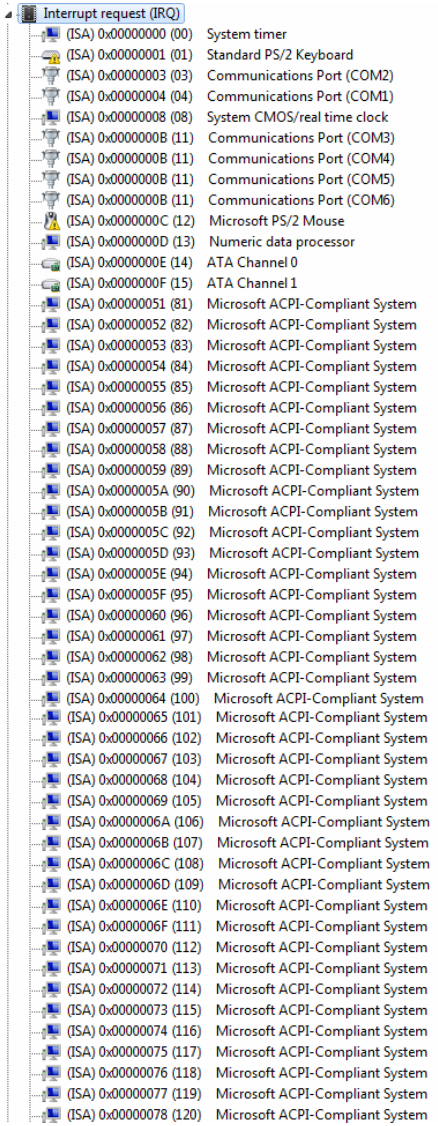



[000003E8 - 000003EF] Communications Port (COM3)
[000003F6 - 000003F6] ATA Channel 0
[000003F8 - 000003FF] Communications Port (COM1)
[0000040B - 0000040B] Motherboard resources
[000004D0 - 000004D1] Motherboard resources
[000004D6 - 000004D6] Motherboard resources
[00000500 - 0000050F] Motherboard resources
[00000510 - 0000051F] Motherboard resources
[00000520 - 0000052F] Motherboard resources
[00000800 - 0000089F] Motherboard resources
[00000900 - 0000090F] Motherboard resources
[00000910 - 0000091F] Motherboard resources
[00000B20 - 00000B3F] Motherboard resources
[00000C00 - 00000C01] Motherboard resources
[00000C14 - 00000C14] Motherboard resources
[00000C50 - 00000C51] Motherboard resources
[00000C52 - 00000C52] Motherboard resources
[00000C6C - 00000C6C] Motherboard resources
[00000C6F - 00000C6F] Motherboard resources
[00000CD0 - 00000CD1] Motherboard resources
[00000CD2 - 00000CD3] Motherboard resources
[00000CD4 - 00000CD5] Motherboard resources
[00000CD6 - 00000CD7] Motherboard resources
[00000CD8 - 00000CDF] Motherboard resources
[00000D00 - 0000FFFF] PCI bus
[0000D000 - 0000D0FF] Realtek PCIe GBE Family Controller
[0000D000 - 0000DFFF] PCI standard PCI-to-PCI bridge
[0000E000 - 0000E0FF] Realtek PCIe GBE Family Controller #2
[0000E000 - 0000EFFF] PCI standard PCI-to-PCI bridge
[0000F000 - 0000F0FF] AMD Radeon HD 6250 Graphics
[0000F100 - 0000F10F] Standard Dual Channel PCI IDE Controller
[0000F110 - 0000F113] Standard Dual Channel PCI IDE Controller
[0000F120 - 0000F127] Standard Dual Channel PCI IDE Controller
[0000F130 - 0000F133] Standard Dual Channel PCI IDE Controller
[0000F140 - 0000F147] Standard Dual Channel PCI IDE Controller
[0000F150 - 0000F15F] Standard Dual Channel PCI IDE Controller
[0000FE00 - 0000FEFE] Motherboard resources

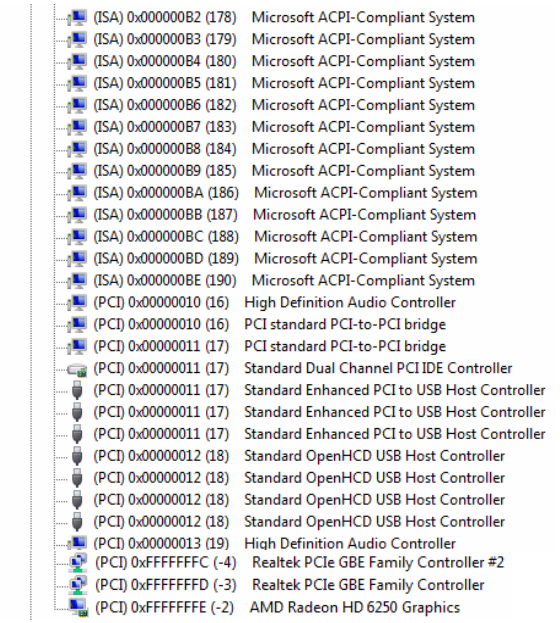
B.2 1st MB Memory Address Map



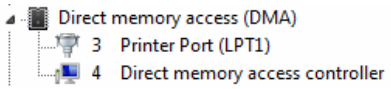
B.3 IRQ Mapping Chart



(ISA) 0x00000079 (121) Microsoft ACPI-Compliant System
(ISA) 0x0000007A (122) Microsoft ACPI-Compliant System
(ISA) 0x0000007B (123) Microsoft ACPI-Compliant System
(ISA) 0x0000007C (124) Microsoft ACPI-Compliant System
(ISA) 0x0000007D (125) Microsoft ACPI-Compliant System
(ISA) 0x0000007E (126) Microsoft ACPI-Compliant System
(ISA) 0x0000007F (127) Microsoft ACPI-Compliant System
(ISA) 0x00000080 (128) Microsoft ACPI-Compliant System
(ISA) 0x00000081 (129) Microsoft ACPI-Compliant System
(ISA) 0x00000082 (130) Microsoft ACPI-Compliant System
(ISA) 0x00000083 (131) Microsoft ACPI-Compliant System
(ISA) 0x00000084 (132) Microsoft ACPI-Compliant System
(ISA) 0x00000085 (133) Microsoft ACPI-Compliant System
(ISA) 0x00000086 (134) Microsoft ACPI-Compliant System
(ISA) 0x00000087 (135) Microsoft ACPI-Compliant System
(ISA) 0x00000088 (136) Microsoft ACPI-Compliant System
(ISA) 0x00000089 (137) Microsoft ACPI-Compliant System
(ISA) 0x0000008A (138) Microsoft ACPI-Compliant System
(ISA) 0x0000008B (139) Microsoft ACPI-Compliant System
(ISA) 0x0000008C (140) Microsoft ACPI-Compliant System
(ISA) 0x0000008D (141) Microsoft ACPI-Compliant System
(ISA) 0x0000008E (142) Microsoft ACPI-Compliant System
(ISA) 0x0000008F (143) Microsoft ACPI-Compliant System
(ISA) 0x00000090 (144) Microsoft ACPI-Compliant System
(ISA) 0x00000091 (145) Microsoft ACPI-Compliant System
(ISA) 0x00000092 (146) Microsoft ACPI-Compliant System
(ISA) 0x00000093 (147) Microsoft ACPI-Compliant System
(ISA) 0x00000094 (148) Microsoft ACPI-Compliant System
(ISA) 0x00000095 (149) Microsoft ACPI-Compliant System
(ISA) 0x00000096 (150) Microsoft ACPI-Compliant System
(ISA) 0x00000097 (151) Microsoft ACPI-Compliant System
(ISA) 0x00000098 (152) Microsoft ACPI-Compliant System
(ISA) 0x00000099 (153) Microsoft ACPI-Compliant System
(ISA) 0x0000009A (154) Microsoft ACPI-Compliant System
(ISA) 0x0000009B (155) Microsoft ACPI-Compliant System
(ISA) 0x0000009C (156) Microsoft ACPI-Compliant System
(ISA) 0x0000009D (157) Microsoft ACPI-Compliant System
(ISA) 0x0000009E (158) Microsoft ACPI-Compliant System
(ISA) 0x0000009F (159) Microsoft ACPI-Compliant System
(ISA) 0x000000A0 (160) Microsoft ACPI-Compliant System
(ISA) 0x000000A1 (161) Microsoft ACPI-Compliant System
(ISA) 0x000000A2 (162) Microsoft ACPI-Compliant System
(ISA) 0x000000A3 (163) Microsoft ACPI-Compliant System
(ISA) 0x000000A4 (164) Microsoft ACPI-Compliant System
(ISA) 0x000000A5 (165) Microsoft ACPI-Compliant System
(ISA) 0x000000A6 (166) Microsoft ACPI-Compliant System
(ISA) 0x000000A7 (167) Microsoft ACPI-Compliant System
(ISA) 0x000000A8 (168) Microsoft ACPI-Compliant System
(ISA) 0x000000A9 (169) Microsoft ACPI-Compliant System
(ISA) 0x000000AA (170) Microsoft ACPI-Compliant System
(ISA) 0x000000AB (171) Microsoft ACPI-Compliant System
(ISA) 0x000000AC (172) Microsoft ACPI-Compliant System
(ISA) 0x000000AD (173) Microsoft ACPI-Compliant System
(ISA) 0x000000AE (174) Microsoft ACPI-Compliant System
(ISA) 0x000000AF (175) Microsoft ACPI-Compliant System
(ISA) 0x000000B0 (176) Microsoft ACPI-Compliant System
(ISA) 0x000000B1 (177) Microsoft ACPI-Compliant System



B.4 DMA Channel Assignments



Appendix

C

Mating Connector

C.1 List of Mating Connectors and Cables

The table notes mating connectors and available cables.

Connector Label	Function	Mating Connector		Available Cable	Cable P/N
		Vendor	Model number		
CN1	LVDS1	CST Master	CSI-4585-300R-NH	N/A	N/A
CN2	LVDS2	CST Master	CSI-4585-300R-NH	N/A	N/A
CN3	LPC	CATCH	1204-700-12SMP	N/A	N/A
CN4	BACKLIGHT1 CN	CATCH	1192-700-05S	N/A	N/A
CN5	BACKLIGHT2 CN	CATCH	1192-700-05S	N/A	N/A
CN6	SATA POWER	CATCH	1192-700-02S	CATCH	1702150155
CN7	AUDIO	CATCH	1201-700-10S	CATCH	1709100254
CN8	TOUCH SCREEN	CATCH	1204-700-09SMR	N/A	N/A
CN9	2PIN PWR-IN(OPTION)	DINKLE	DT-126VP-S2016002P	CATCH	1702002010
CN10	PCI-104	CATCH	1243-111-120S	N/A	N/A
CN11	ATX 4PIN PWR-IN	CATCH	1121-700-04S	N/A	N/A
CN12	FAN	CATCH	1190-700-03S	N/A	N/A
CN13	FRONT	CATCH	1201-700-10S	CATCH	1701010150

	PANEL				
CN14	MINICARD	FOXCONN	AS0B226-S68K-7 F	N/A	N/A
CN15	mSATA	FOXCONN	AS0B226-S68K-7 F	N/A	N/A
DVI+VGA3	DVI/VGA	ASTRON	1860044-006-R	N/A	N/A
LAN1/LAN2	LAN	UDE	RT7-17FAAM1A	N/A	N/A
USB1/2	USB	TECHBEST	KS-002D-ANB(2.0)-L	N/A	N/A
USB3/4/5/6	USB	CATCH	1201-700-05S	CATCH	1700050207
COM1	COM PORT	TECHBEST	A20+9191-4208L	N/A	N/A
COM3/4/	COM PORT	CATCH	1201-700-09S	CATCH	1701090150
COM5/6/	COM PORT	CATCH	1201-700-09SM	CATCH	1701090150
LPT1	PRINT PORT	CATCH	1147-000-26SS	Ho-Base/CATCH	1701260200
SATA1	SATA	TECHBEST	161S01-025A	N/A	N/A
KB1	KB/MS	CATCH	1201-700-06S	CATCH	1700060155

Appendix

D

AHCI Setting

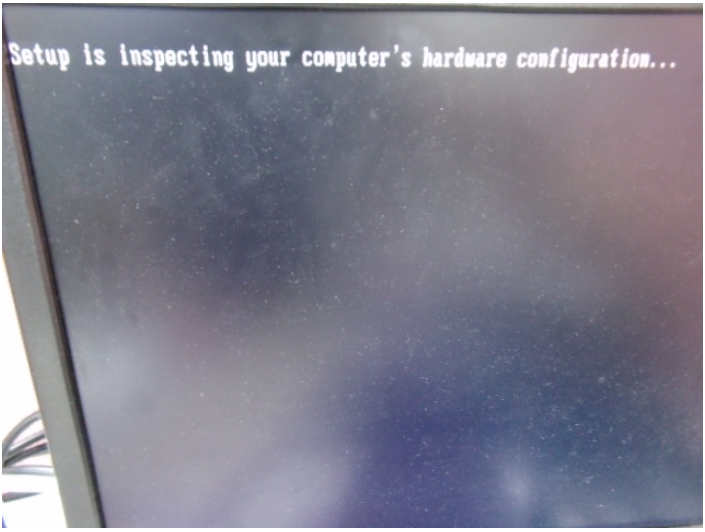
D.1 Setting AHCI

OS installation to setup AHCI Mode.

Step 1: Copy the files below from “Driver DVD -> STEP4-AHCI\WinXP\SB8xx_RAID_XP_3.2.1540.92” to Disk

Step 2: Connect the USB Floppy to the board (The board on the photo is just for reference)

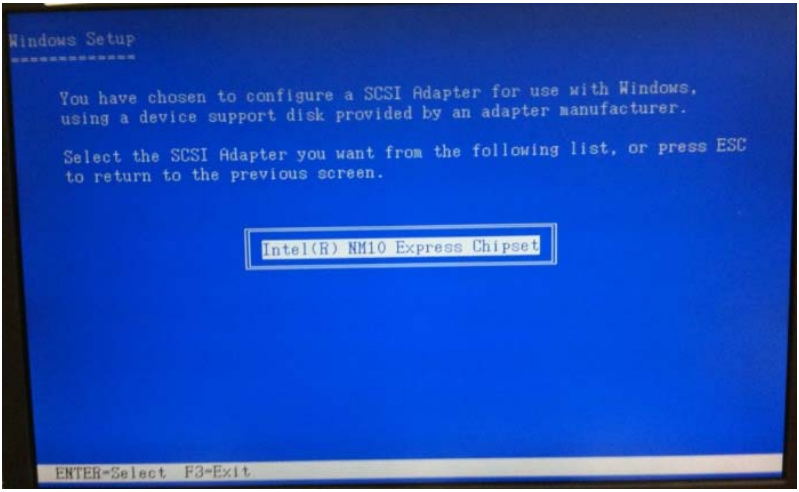
Step 3: Setup OS



Step 4: Press "**F6**"

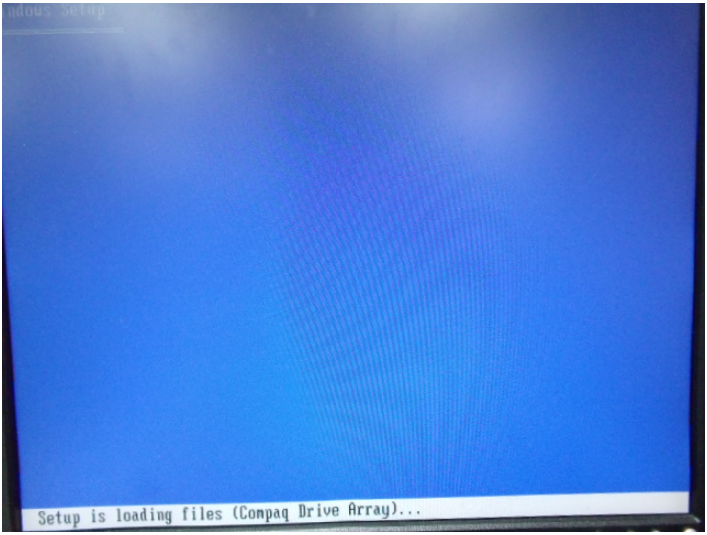
Step 5: Choose "**S**"

Step 6: Choose **"AMD (R) A55E Chipset**"



Step 7: It will show the model number you select and then press “**ENTER**

Step 8: Setup is loading files



Appendix

E

Electrical Specifications for I/O Ports

E.1 Electrical Specifications for I/O Ports

I/O	Reference	Signal Name	Rate Output
LVDS Port 1	CN1	VCC	+3.3V/1A or +5V/1A
LVDS Port 2	CN2	VCC	+3.3V/1A or +5V/1A
LPC Port	CN3	+3.3V	+3.3V/0.5A
LVDS Port 1 Inverter / Backlight Connector	CN4	VDD	+5V/2A or +12V/2A
LVDS Port 2 Inverter / Backlight Connector	CN5	VDD	+5V/2A or +12V/2A
+5V Output for SATA HDD	CN6	+5V	+5V/1A
Audio I/O Port	CN7	+5V	+5V/0.5A
2Pin PWRIN (Optional)	CN9	+12V	+12V/3A
ATX 4Pin PWRIN	CN11	+12V	+12V/6A
FAN	CN12	+5V	+5V/0.5A
Mini Card Slot	CN14	+3.3VSB +1.5V	+3.3V/1A +1.5V/0.375A
mSATA Slot	CN15	+3.3VSB +1.5V	+3.3V/1A +1.5V/0.375A
USB 2.0 Ports 1 and 2	USB1	+5VSB	+5V/0.5A (per channel)
USB 2.0 Ports 3 and 4	USB2	+5VSB	+5V/0.5A (per channel)
USB 2.0 Ports 5.6.7.8	USB3/USB4 USB5/USB6	+5VSB	+5V/0.5A (per channel)
COM Port 2	COM1B	+5V/+12V	+5V/1A or +12V/1A
Digital IO Port	LPT1	GPIO0~GPIO15	+5V (Ext. Pull Up)

VGA / DVI Ports	DVI+VGA	VGA: +5V DVI : +5V	+5V/0.5A