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Single Board Computer

EBC340

User's Manual

Apr.-01-2009 Build

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Preface

Copyright

Disclaimer

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Acknowledgements

The EBC 340 series is a trademark of NEXCOM international CO., LTD. All other product names mentioned herein are registered trademarks of their respective owners.

Regulatory Compliance Statements

This section provides the FCC compliance statement for Class A devices and describes how to keep the system CE compliant.

Federal Communications Commission (FCC) For Class A Device

This equipment has been tested and verified to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses,

and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE Certification

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

WARNINGS

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.

CAUTION

Electrostatic discharge (ESD) can damage NSA components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety Information

Before installing and using the EBC340, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a hearing device.

Table of Content

Chapter 1
General Information

1.1 Specification

CPU Support

- Intel® Atom™ Processor N270 1.6GHZ

Main Memory

- 1 x DDR2 SO-DIMM Socket (up to 1GB)

Chipset

- Intel 945GSE Express chipset
- Intel® 82801GBM (ICH7-M)

Graphic

- Intel® 945GSE integrated graphics
- Support Dual Independent Display:CRT+LVDS
- CRT: 1 x DB15 VGA CON
- LVDS: 1x DF13 20-pin connector

Storage

- Support 1x Type I/II Compact Flash socket

- uDOC mechanical dimension to support USB interface SSD
- 1x 7-pin SATA connector

Expansion

- 1x PCI-104

Audio

- Realtek ALC888 CODEC
- Mic-In x1 / Line out x1 Phone Jack

Network

- LAN Chip: Realtek RTL8111C-GR
- Support Boot From LAN (PXE)

I/O

- 1 x Parallel Port 26-pin Box header
- COM1 by DB9 Male CON
- COM2 support RS232/422/485 w/10pin Box header
- 2 x 10pin Box Header for COM3~COM4
- 1 x USB 2.0 Port
- 1 x 2.0mm Jst Connector for USB
- 1 x 10Pin Header for USB
- 1 x 10pin header for GPIO
- 1 x Power LED pin header
- 1 x HDD Active LED Pin header
- 1 x LAN Link-Active LED Pin header
- 1 x 3pin fan connector(Reserved)

Power Supply

- +12V/+5V AT/ATX mode
- 6pin Power CON

System Management

- Derived from Super I/O to support system monitor
- Monitoring of 5 voltages For +5V, Vcore,+12V, +3.3V, +1.5V5 voltage
- 2 Temperatures (CPU, System)

RTC

- On chip RTC with battery back up / External Li-ion Battery
- RTC Torrance less than 2sec (24 hours) under 25˚C

BIOS

- Award system BIOS
- 8M bits SPI ROM

Operating Systems

- Windows XP,XP Embedded, CE

Certification

- CE

- FCC Class A
- 100% RoHS competed

Environment

- Operating temperatures: 0°C to 60°C
- Storage temperatures:-20˚C to 85˚C
- Relative Humidity:

  Operating 10%~90%, non-condensing

1.2 Power Consumption Measurement

EBC340 Power Consumption

Power Type	+12V	+5v	+12v-to-Vcore DC/DC	+12v-to-1.8v DC/DC	+12v-to-0.9v DC/DC	5v-to-1.5v DC/DC	5v-to-1.05v DC/DC	+12v-to-3.3v DC/DC
Consumed watts	18W	34.75W	4.4W	5.544W	0.9W	5.79W	7.581W	19W
Consumed currents (Item A)	1.5A	6.95A	0.367A	0.462A	0.075A	1.158A	1.5162A	1.584A
Actually required currents (Item A/0.80)			0.46A	0.578A	0.01A	1.448A	1.896A	1.98A
12v needed	4.528A							
5v needed	10.294A							

• 1.3 Board Layout

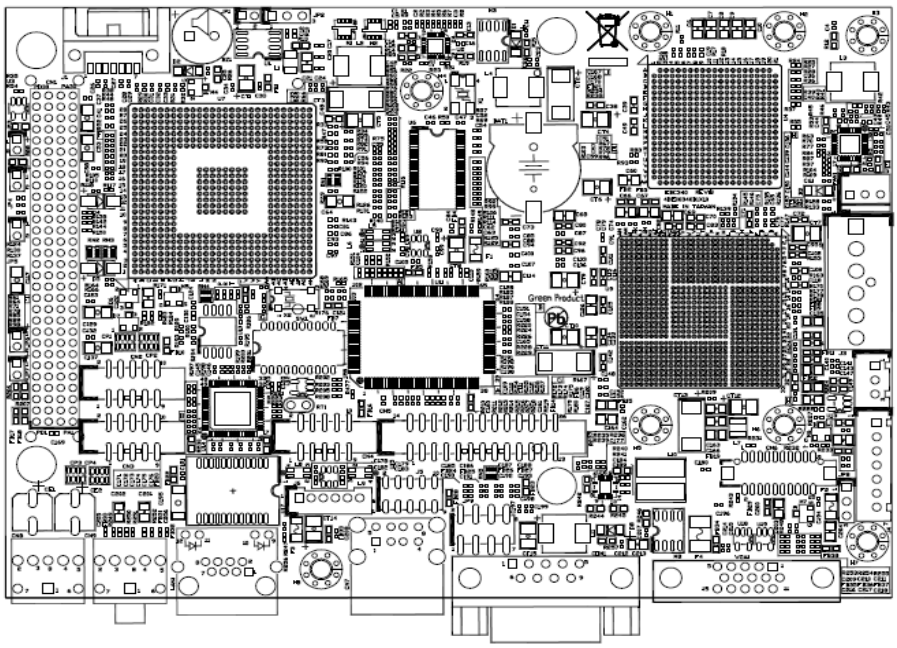


Figure 1.2: Overview of EBC 340

• 1.4 Board Dimensions

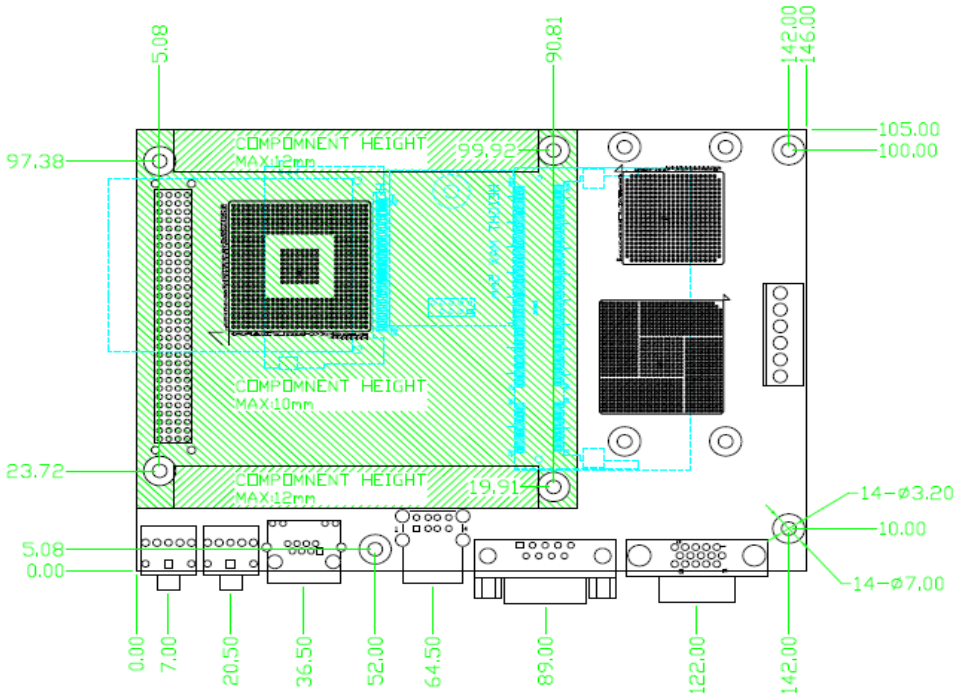


Figure 1.3: Mechanical Drawing of the EBC 340

Chapter 2
Jumper Setting

This chapter of the User's Manual describes how to set jumpers.

Note: The procedures that follow are generic for all EBC340.

2.1 Before You Begin

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- ♦ A Philips screwdriver
- ♦ A flat-tipped screwdriver
- ♦ A set of jewelers Screwdrivers
- ♦ A grounding strap
- ♦ An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nosed pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Before working on internal components, make sure that the power is off. Ground yourself before touching any internal components, by touching a metal object. Static electricity can damage many of the electronic components. Humid environment tend to have less static electricity than dry environments. A grounding strap is warranted whenever danger of static electricity exists.

2.2 Precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on the computers that are still connected to a power supply can be extremely dangerous. Follow the guidelines below to avoid damage to your computer or yourself:

- ♦ Always disconnect the unit from the power outlet whenever you are working inside the case.
- ♦ If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.
- ♦ Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Don't flex or stress the circuit board.
- ♦ Leave all components inside the static-proof packaging that they shipped with until they are ready for installation.
- ♦ Use correct screws and do not over tighten screws.

2.3 Setting Jumpers

A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN. Please see the following illustrations

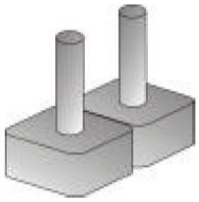
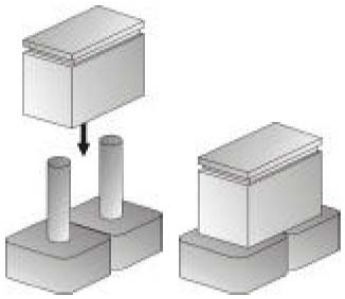
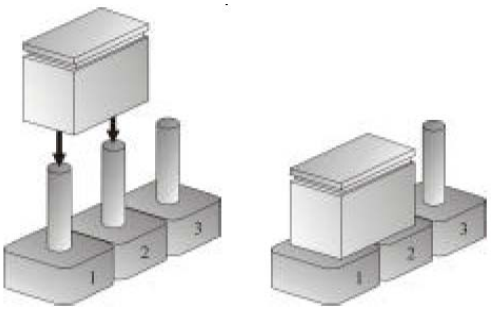
<table>
<tr><td rowspan="2">The illustrations on the right show a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN.</td><td>  </td><td>  </td></tr>
<tr><td>Open (Off)</td><td>Short (On)</td></tr>
<tr><td>These illustrations show a 3-pin jumper. Pins 1 and 2 are SHORT.</td><td colspan="2"> 
</td></tr>
</table>

Table 2-1: Setting Jumpers

2.4 Location of Jumpers

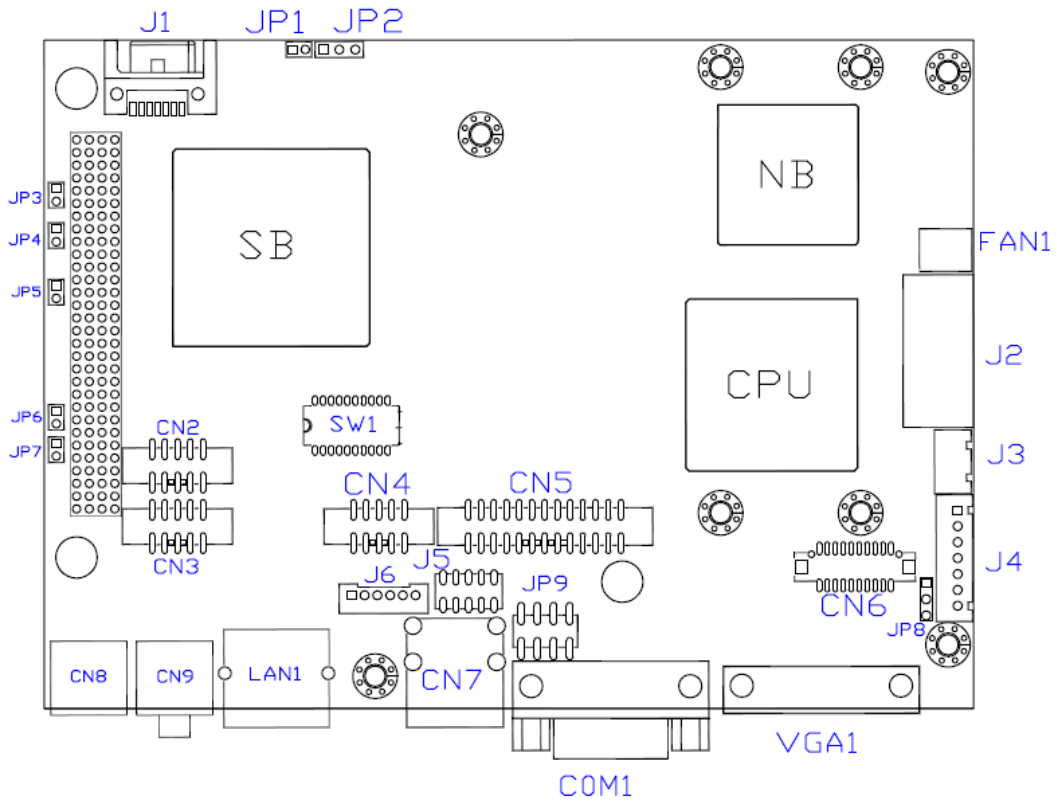
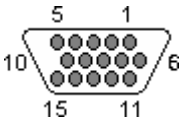


Figure 2-1: Jumper Location

2.5 Functions of Jumpers and Connectors

◎ **VGA Port**

VGA1 (D-Sub 15 pins)

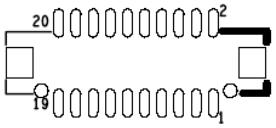


Pin Definition: VGA1

Pin NO.	Description	Pin NO.	Description
1	RED_VGA	9	VGA_VCC
2	GREEN_VGA	10	GND
3	BLUE_VGA	11	NC
4	NC	12	VGA_DDC_DATA
5	GND	13	G_HSYNC
6	GND	14	G_VSYNC
7	GND	15	VGA_DDC_CLK
8	GND		

◎ **LVDS CON**

CN6 (2 X10 2.0 Pitch)

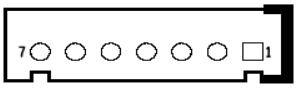


Pin Definition: CN6

Pin NO.	Description	Pin NO.	Description
1	DDCCLK	11	LB_CLK_P
2	DDC_DATA	12	LB_DATAN1
3	VDD	13	LB_CLK_N
4	LB_DATAP0	14	GND
5	PULL LOW	15	GND
6	LB_DATAN0	16	VCC12_INV
7	PULL LOW	17	LB_DATAP2
8	VDD	18	VCC12_INV
9	GND	19	LB_DATAN2
10	LB_DATAP1	20	GND

◎ **CCFL CON**

J4 (JST 7 Pins 2.54 Pitch)

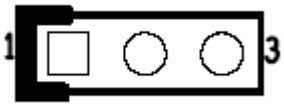


Pin Definition: J4

Pin NO.	Description	Pin NO.	Description
1	+5V	2	+12V
3	+12V	4	Brightness Ctrl
5	GND	6	GND
7	Backlight Enable		

◎**Panel Power selection:**

Pin header 1x3 2.54 Pitch.

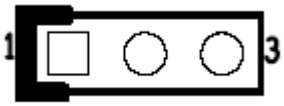


Pin Definition: JP8

Pin NO.	Description
1	VCC5
2	Panel power
3	VCC3

◎ **RTC Clear:**

Pin header 1x3 2.54 Pitch.

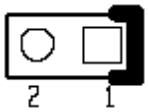


Pin Definition: JP2

Pin NO.	Description
1	Battery 3.3V
2	RTCRST#
3	GND

◎ **Reset Button:**

Pin header 1x2 2.0 Pitch.

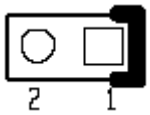


Pin Definition: JP1

Pin NO.	Description
1	RESET#
2	GND

◎ **HDD Active LED:**

Pin header 1x2 2.0 Pitch.

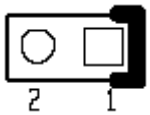


Pin Definition: JP3

Pin NO.	Description
1	VCC5
2	HD_LED#

◎**Power LED:**

Pin header 1x2 2.0 Pitch.

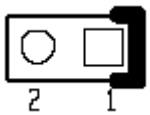


Pin Definition: JP4

Pin NO.	Description
1	VCC5
2	GND

◎ **SMBus:**

Pin header 1x2 2.0 Pitch.

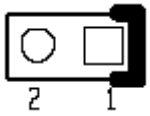


Pin Definition: JP5

Pin NO.	Description
1	SMB_DATA
2	SMB_CLK

◎ **LAN Active LED**

Pin header 1x2 2.0 Pitch.

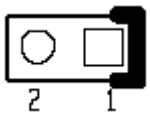


Pin Definition: JP6

Pin NO.	Description
1	VCC3
2	LAN1_ACTLED#

◎ **LAN Link LED**

Pin header 1x2 2.0 Pitch.

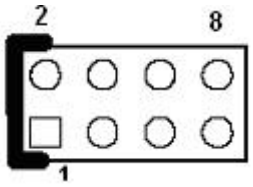


Pin Definition: JP7

Pin NO.	Description
1	VCC3
2	✓ LAN1_LINKLED#

◎**P/S 2 Keyboard / Mouse**

Pin header 2x4 2.54 Pitch.



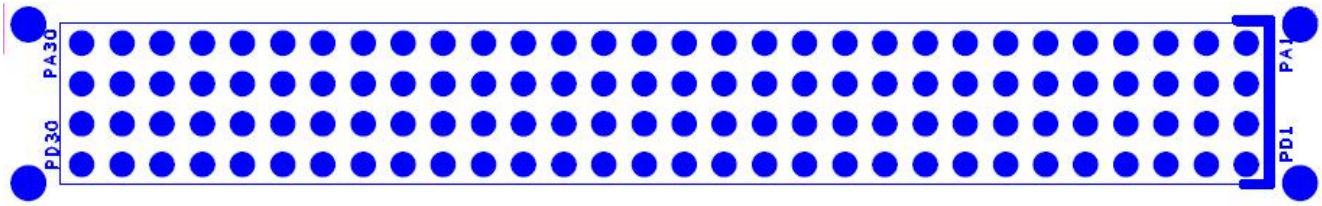
Pin Definition: JP9

KM1 FOR KEYBOARD/ MOUSE:			
Pin NO.	Description	Pin NO.	Description
1	VCC5	2	VCC5
3	KB_DATA	4	LM_DATA
5	KB_CLK	6	LM_CLK
7	GND	8	GND

◎ **PCI104 Connector**

A. Connector size: 4X30 pin

B. Connector location: CN1



C. Connector pin definition：

Pin	Signal	Pin	Signal
PA1	**GND**	**PC1**	**VCC5**
PA2	**VIO**	**PC2**	**PCI_AD1**
PA3	**PCI_AD5**	**PC3**	**PCI_AD4**
PA4	**PCI_CBE#0**	**PC4**	**GND**
PA5	**GND**	**PC5**	**PCI_AD8**
PA6	**PCI_AD11**	**PC6**	**PCI_AD10**
PA7	**PCI_AD14**	**PC7**	**GND**
PA8	**VCC3**	**PC8**	**PCI_AD15**
PA9	**PCI_SERR#**	**PC9**	**NC**
PA10	**GND**	**PC10**	**VCC3**
PA11	**PCI_STOP#**	**PC11**	**PCI_LOCK#**
PA12	**VCC3**	**PC12**	**GND**
PA13	**PCI_FRAME#**	**PC13**	**PCI_IRDY#**
PA14	**GND**	**PC14**	**VCC3**
PA15	**PCI_AD18**	**PC15**	**PCI_AD17**
PA16	**PCI_AD21**	**PC16**	**GND**
PA17	**VCC3**	**PC17**	**PCI_AD22**
PA18	**PCI_104_IDSEL0**	**PC18**	**PCI_104_IDSEL 1**
PA19	**PCI_AD24**	**PC19**	**VIO**
PA20	**GND**	**PC20**	**PCI_AD25**
PA21	**PCI_AD29**	**PC21**	**PCI_AD26**
PA22	**VCC5**	**PC22**	**GND**
PA23	**PCI_REQ#2**	**PC23**	**PCI_REQ#3**
PA24	**GND**	**PC24**	**VCC5**
PA25	**PCI_GNT#3**	**PC25**	**PCI_GNT#4**
PA26	**VCC5**	**PC26**	**GND**
PA27	**PCI_CLK2**	**PC27**	**PCI_CLK3**

PA28	**GND**	**PC28**	**VCC5**
PA29	**VCC12**	**PC29**	**PCI_IRQ#F**
PA30	**VCC12N**	**PC30**	**PCI_GNT#5**
PB1	**NC**	**PD1**	**PCI_AD0**
PB2	**PCI_AD2**	**PD2**	**VCC5**
PB3	**GND**	**PD3**	**PCI_AD3**
PB4	**PCI_AD7**	**PD4**	**PCI_AD6**
PB5	**PCI_AD9**	**PD5**	**GND**
PB6	**VIO**	**PD6**	**GND**
PB7	**PCI_AD13**	**PD7**	**PCI_AD12**
PB8	**PCI_CBE#1**	**PD8**	**VCC3**
PB9	**GND**	**PD9**	**PCI_PAR**
PB10	**PCI_PERR#**	**PD10**	**NC**
PB11	**VCC3**	**PD11**	**GND**
PB12	**PCI_TRDY#**	**PD12**	**PCI_DEVSEL#**
PB13	**GND**	**PD13**	**VCC3**
PB14	**PCI_AD16**	**PD14**	**PCI_CBE#2**
PB15	**VCC3**	**PD15**	**GND**
PB16	**PCI_AD20**	**PD16**	**PCI_AD19**
PB17	**PCI_AD23**	**PD17**	**VCC3**
PB18	**GND**	**PD18**	**PCI_104_IDSEL2**
PB19	**PCI_CBE#3**	**PD19**	**PCI_104_IDSEL3**
PB20	**PCI_AD26**	**PD20**	**GND**
PB21	**VCC5**	**PD21**	**PCI_AD27**
PB22	**PCI_AD30**	**PD22**	**PCI_AD31**
PB23	**GND**	**PD23**	**VIO**
PB24	**PCI_REQ#4**	**PD24**	**PCI_GNT#2**
PB25	**VIO**	**PD25**	**GND**
PB26	**PCI_CLK0**	**PD26**	**PCI_CLK1**
PB27	**VCC5**	**PD27**	**GND**
PB28	**PCI_IRQ#H**	**PD28**	**PCI_RST#**
PB29	**PCI_IRQ#E**	**PD29**	**PCI_IRQ#G**
PB30	**PCI_REQ#5**	**PD30**	**GND**

D. PCI routing :

AD20 : E F G H

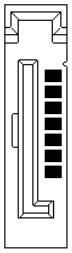
AD21 : H E F G

AD22 : G H E F

AD23 : F G H E

◎ **SATAII ports**

J1 Standard Serial ATAII 1.27mm connector



Pin definition：

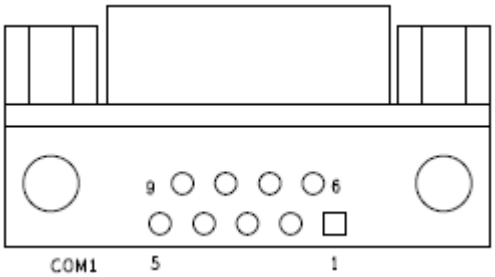
J1

Pin NO.	Description	Pin NO.	Description
1	GND	2	TXP0
4	GND	3	TXN0
7	GND	5	RXN0
		6	RXP0

◎**COM 1**

A. Connector size: 2 X 20 = 40 Pin

B. Connector location: JP1



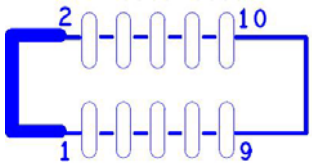
Connector pin definition

Pin	Signal
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

◎ **COM 2~4:**

Box header 2x10 2.0 Pitch

CN4 , CN2 , CN3



Connector pin definition

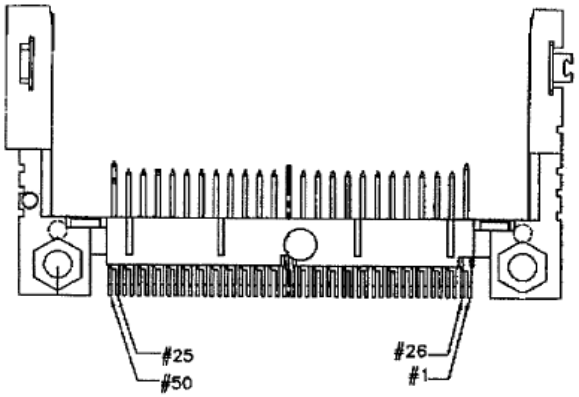
Pin	Signal
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	NC

◎COM2 selection:

SW1.	1-20	2-19	3-18	4-17	5-16	6-15	7-14	8-13	9-12	10-11
RS232	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
RS422	OFF	OFF	ON	OFF	ON	OFF	ON	ON	ON	ON
RS485	ON	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	ON

◎ Compact Flash

CN10 (Compact Flash TYPE 2)



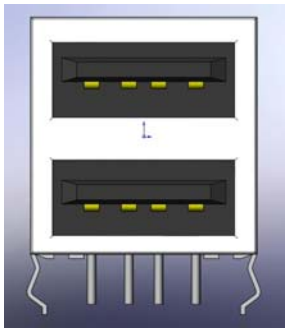
Pin Definition:

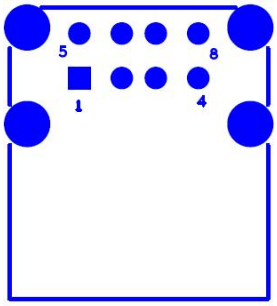
Pin NO.	Description	Pin NO.	Description
1	GND	2	SDD3A
3	SDD4A	4	SDD5A
5	SDD6A	6	SDD7A
7	SDCS#1	8	GND
9	GND	10	GND
11	GND	12	GND
13	VCC	14	GND
15	GND	16	GND
17	GND	18	SDA2A
19	SDA1A	20	SDA0A
21	SDD0A	22	SDD1A
23	SDD2A	24	NC
25	CF_CD2#	26	CF_CD1#
27	SDD11A	28	SDD12A
29	SDD13A	30	SDD14A
31	SDD15A	32	SDCS#3
33	NC	34	SDIOR#
35	SDIOW#	36	VCC
37	HDIRQ14	38	VCC
39	CF_SEL#	40	NC
41	IDERST#	42	SIORDY
43	SDREQ	44	SDDACK#
45	IDEACTP#	46	DIAG#
47	SDD8A	48	SDD9A

49	SDD10A	50	GND

◎ **USB Port**

CN7 Dual USB port.



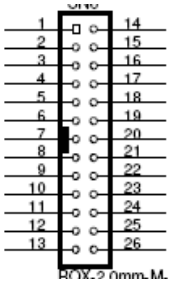


Pin Definition:

CN7:			
Pin NO.	Description	Pin NO.	Description
1	P5V_USB_P01	5	P5V_USB_P01
2	USB0-	6	USB1-
3	USB0+	7	USB1+
4	GND	8	GND

◎ **Parallel Interface**

CN5 (2.0mm Box Header)



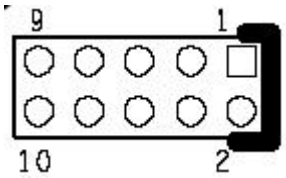
Pin Definition: CN5

Pin NO.	Description	Pin NO.	Description
1	STB#	14	AFD-
2	PD0	15	ERR-
3	PD1	16	INIT-
4	PD2	17	SLIN-
5	PD3	18	GND
6	PD4	19	GND
7	PD5	20	GND
8	PD6	21	GND
9	PD7	22	GND
10	ACK-	23	GND

11	BUSY	24	GND
12	PE	25	GND
13	SLCT	26	NC

◎**GPIO connector**

2 x 5 2.0mm Pin header

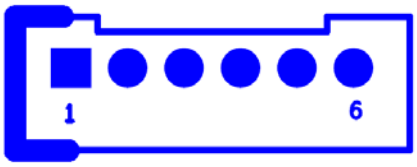


Pin Definition: J5

1	VCC5	2	GND
3	SIO_GPI54	4	SIO_GPO50
5	SIO_GPI55	6	SIO_GPO51
7	SIO_GPI56	8	SIO_GPO52
9	SIO_GPI57	10	SIO_GPO53

◎ **USB Jst Connector**

JST 6 Pins 2.0 Pitch

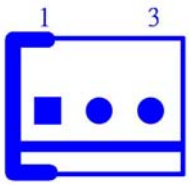


Pin Definition: J6

Pin NO.	Description
1	P5V_USB_P23
2	USB2-
3	USB2+
4	USB3-
5	USB3+
6	GND

◎ **SYSTEM FAN.**

FAN (Wafer-2.54mm Male 180)

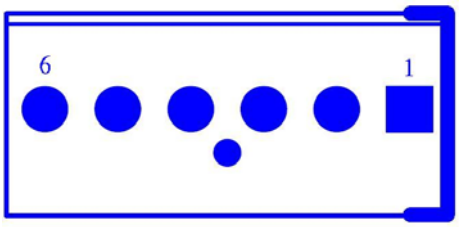


Pin Definition: FAN1

Pin NO.	Description
1	GND
2	12V
3	SENSE

◎ **DC Power input Connector:**

1x 6 Pin Power connector:

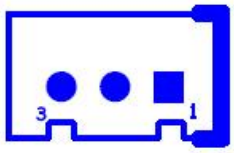


Pin Definition: J2

Pin NO.	Description
1	VCC12
2	GND
3	GND
4	GND
5	VCC5
6	VCC5

◎ **ATX power connector**

1X3 JST 2.5mm Connector



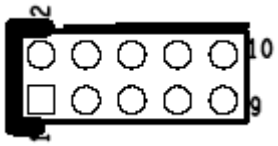
Pin Definition: J3

Pin NO.	Description

1	NC
2	GND
3	PS_ON#

◎**USB DOM Connector:**

Pin Headr 2x5 2.54mm Pitch

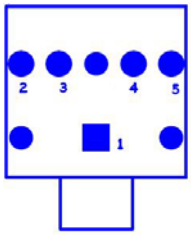


Pin Definition: J7

Pin	Signal	Pin	Signal
1	P5V_USB_P45	2	P5V_USB_P45
3	USB4-	4	USB5-
5	USB4+	6	USB5+
7	GND	8	GND
9	NC	10	uDOC_OC#

◎ **Line-Out Connector:**

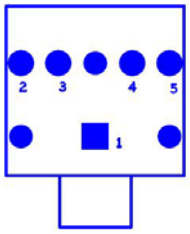
CN8 Phone Jack



Pin NO.	ON
1	GND
2	LOUT_R
3	NC
4	NC
5	LOUT_L

◎ **Mic-In Connector:**

CN9 Phone Jack

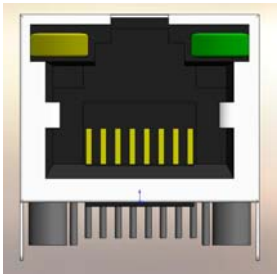


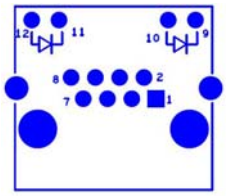
Pin NO.	ON
1	GND
2	MIC_R
3	NC
4	NC
5	MIC_L

◎ **LAN1 connector:**

A. Connector size: RJ45+LED

B. Connector location: CN8





C. Connector pin definition

Pin	Signal	Pin	Signal
1	**LAN1_TXD0P**	**2**	**LAN1_TXD0N**
3	**LAN1_TXD1P**	**4**	**LAN1_TXD2P**
5	**LAN1_TXD2N**	**6**	**LAN1_TXD1N**
7	**LAN1_TXD3P**	**8**	**LAN1_TXD3N**
9	**LAN1_LINKLED#**	**10**	**VCC3**
11	**LAN1_ACTLED#**	**12**	**VCC3**
MH1	**GND_CHASSIS**	**MH2**	**GND_CHASSIS**

◆ GPIO Programming Guide:

17.9 Logical Device 8 (WDTO#, PLED, GPIO5, 6 & GPIO Base Address)

CR 30h. (Default 02h)

BIT	READ / WRITE	DESCRIPTION
7~3	Reserved.	
2	R / W	0: GPIO6 is inactive. 1: GPIO6 is active.
1	R / W	0: GPIO5 is inactive. 1: GPIO5 is active.
0	R / W	0: WDTO# and PLED are inactive. 1: WDTO# and PLED are active.

CR 60h 61h. (Default 00h, 00h)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	These two registers select GPIO base address <100h: FF8h> on 4-byte boundary.

CR E0h. (GPIO5 I/O Register; Default FFh)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	GPIO5 I/O register 0: The respective GPIO5 PIN is programmed as an Output port 1: The respective GPIO5 PIN is programmed as an Input port.

CR E1h. (GPIO5 Data Register; Default 00h)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	GPIO5 Data register For Output ports, the respective bits can be read and written by the pins.
	Read Only	For Input ports, the respective bits can be read only from pins. Write accesses will be ignored.

CR E2h. (GPIO5 Inversion Register; Default 00h)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	GPIO5 Inversion register 0: The respective bit and the port value are the same. 1: The respective bit and the port value are inverted. (Both Input & Output ports)

CR E3h. (Status Register; Default 00h)

BIT	READ / WRITE	DESCRIPTION
7~0	Read Only Read-Clear	GPIO5 Event Status Bits 7-0 correspond to GP57-GP50, respectively. 0 : No active edge(rising/falling) has been detected 1 : An active edge(rising/falling) has been detected Reading the status bit clears it to 0.

CR E4h. (GPIO6 I/O Register; Default FFh)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	GPIO6 I/O register 0: The respective GPIO6 PIN is programmed as an Output port 1: The respective GPIO6 PIN is programmed as an Input port.

CR E5h. (GPIO6 Data Register; Default 1Fh)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	GPIO6 Data register For Output ports, the respective bits can be read and written by the pins.
	Read Only	For Input ports, the respective bits can be read only from pins. Write accesses will be ignored.

CR E6h. (GPIO6 Inversion Register; Default 00h)

BIT	READ / WRITE	DESCRIPTION
7~0	R / W	GPIO6 Inversion register 0: The respective bit and the port value are the same. 1: The respective bit and the port value are inverted. (Both Input & Output ports)

CR E7h. (Status Register; Default 00h)

BIT	READ / WRITE	DESCRIPTION
7~0	Read Only Read-Clear	GPIO6 Event Status Bits 7-0 correspond to GP67-GP60, respectively. 0 : No active edge(rising/falling) has been detected 1 : An active edge(rising/falling) has been detected Reading the status bit clears it to 0.

Chapter 3
Expansion

3.1 System Memory

EBC 340 incorporates Intel 945GSE Express chipset chipset supports up to 1GB un-buffered non-ECC DDR2 SDRAM.

Installing memory

1.To install a memory into socket,insert it to socket notches.

2.Then press the memory down until completely seated within the springs.

3.2 Installing Compact Flash

1. To install a Compact Flash memory card into EBC 320-JB, align the notches on the card with the Compact Flash socket in the EBC 320-JB. Then firmly insert the card into the socket until it is completely seated.

Figure 3-5: How to Install Compact Flash Memory (1)

2. To remove the Compact Flash memory card from EBC 340, pull out the memory card from the Compact Flash socket.

Figure 3-6: How to Uninstall Compact Flash Memory (2)

Chapter 4
BIOS Setting

AWARD BIOS Setup

Award's 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 RAM (CMOS RAM) so that it retains the Setup information when the power is turned off.

The Chapter shows the currently BIOS setup picture is for reference only, which may change by the BIOS modification in the future. Any Major updated items or re-version, user can download from NEXCOM web site http://www.nexcom.com.tw or any unclear message, can contact NEXCOM Customer Service people for help http://www.nexcom.com.tw/contact/contact.htm

✓ 4.1 Entering Setup

Power on the computer and press **<Del>** immediately will allow you to enter Setup. The other way to enter Setup is to power on the computer, when the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press **<Del>** key

TO ENTER SETUP BEFORE BOOT
PRESS <DEL> KEY

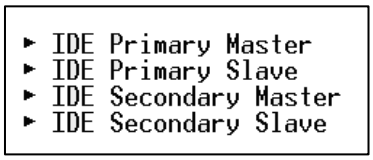
✓ 4.2 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Sub-Menu

If you find a right pointer symbol appears to the left of certain fields (as shown in the right view), that means a sub-menu containing additional options for the field can be launched from this field.



To enter the sub-menu, highlight the field and press <Enter>. Then you can use control keys to move between and change the settings of the sub-menu.

To return to the main menu, press <Esc> to trace back.

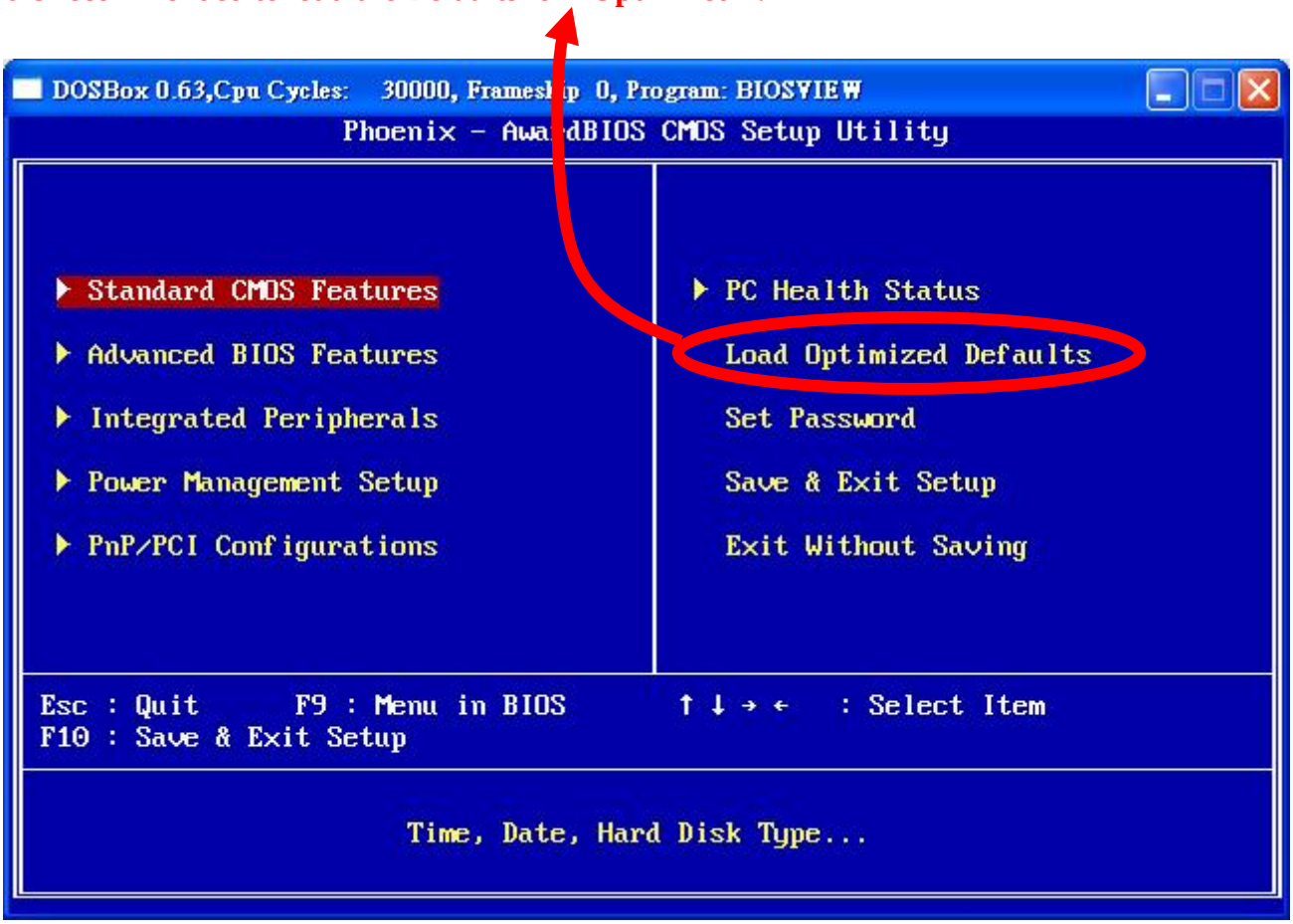
Status Page Setup Menu/Option Page Setup Menu

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

✓ 4.3 The Main Menu

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from ten setup functions and two exit choices. Use arrow keys to select among the items and press **<Enter>** to accept or enter the sub-menu.

It is recommended to load the Defaults for "Optimized" .



Standard CMOS Features

Use this menu for basic system configuration.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management setup

Use this menu to specify your settings for power management

PNP/PCI Configuration

This entry appears if your system supports PnP / PCI.

PC health Status

Display CPU/System Temperature, Fan speed.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal Uperformance system operations. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Password

Enter and change the options of the setup menus. If password error or disable, some read only INFO will be displayed on the menu.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.