



bematech

LC7100 Smart PC



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Manual Version 1.1
Part Number: LC7100

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical Power Supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

CE MARK



This device complies with the requirements of the EEC directive 2004/108/EC with regard to "Electromagnetic compatibility" and 2006/95/EC "Low Voltage Directive"

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.



Battery Caution

Risk of explosion if battery is replaced by an incorrectly type.

Dispose of used battery according to the local disposal instructions.



Safety Caution

Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 "Materials for fire enclosure" compliant.

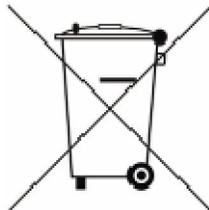
4.7.3.2 Materials for fire enclosures

For MOVABLE EQUIPMENT having a total mass not exceeding 18kg.the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

LEGISLATION AND WEEE SYMBOL

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Revision History

Changes to the original user manual are listed below:

Revision	Date	Description
V1.0	Jul 2012	Initial release
V1.1	Sep 2012	Content update

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1 Item Checklist

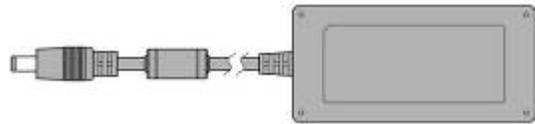
Take the system unit out of the carton. Remove the unit from the carton by holding it by the foam inserts. The following contents should be found in the carton:

1-1 Standard Items

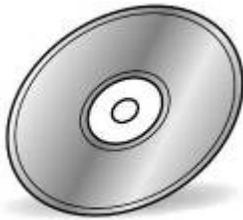
a.



c.



b.



d.



e.



- a. System
- b. Driver CD
- c. Power Adapter (65W)
- d. Power Cable
- e. COM-RJ45 Cable (x2)

2 System View

2-1 Front View



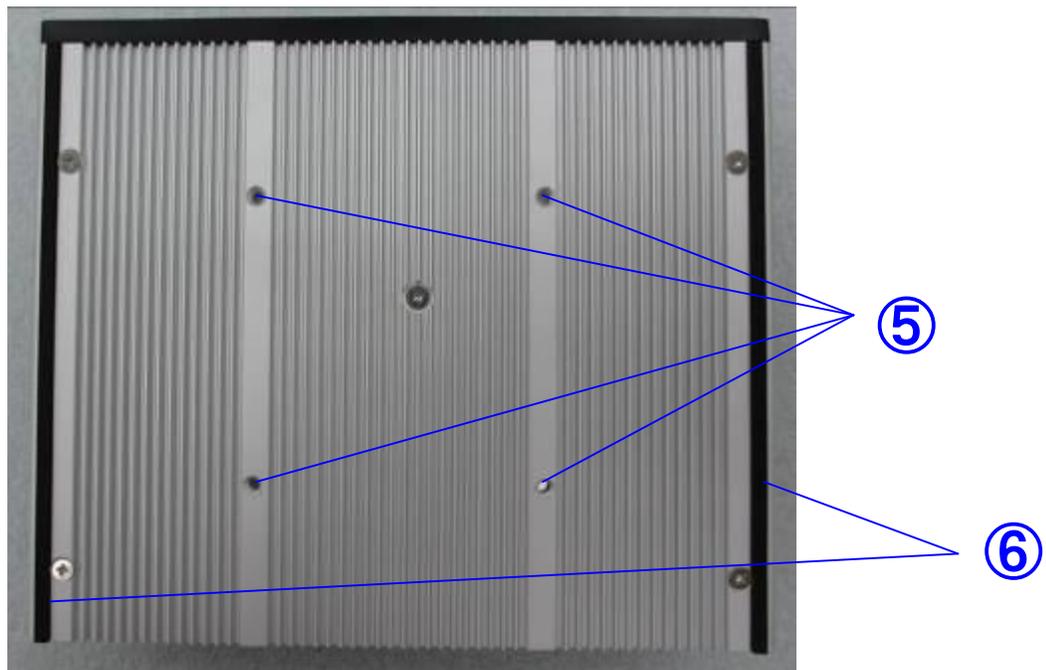
Number	Description
1	FRONT PLATE
2	CHASSIS COVER
3	CHASSIS

2-2 Rear View



Number	Description
4	I/O PLATE

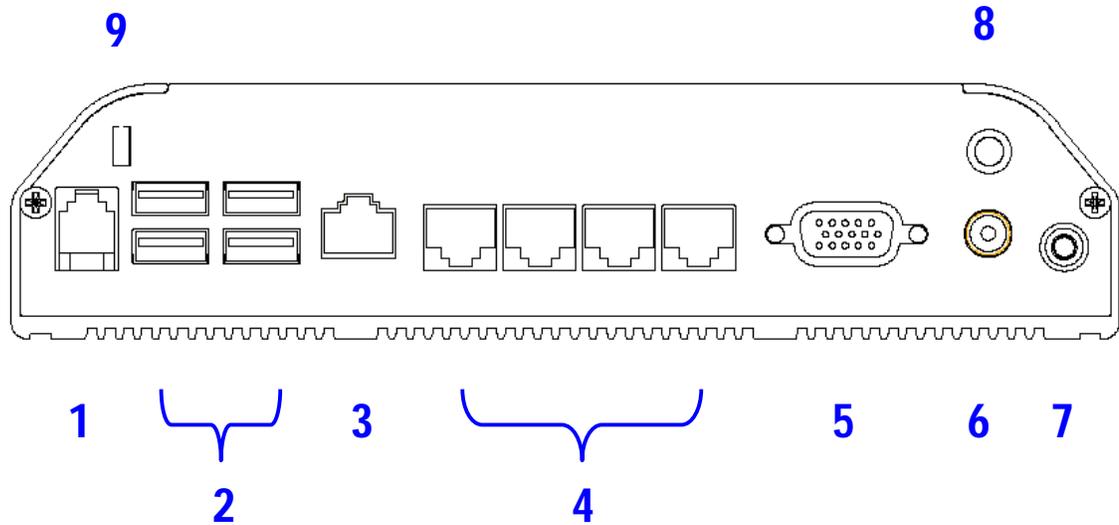
2-3 Bottom View



Number	Description
5	Wall Mount Kit Install Position
6	Rubber Pads

2-4 I/O View

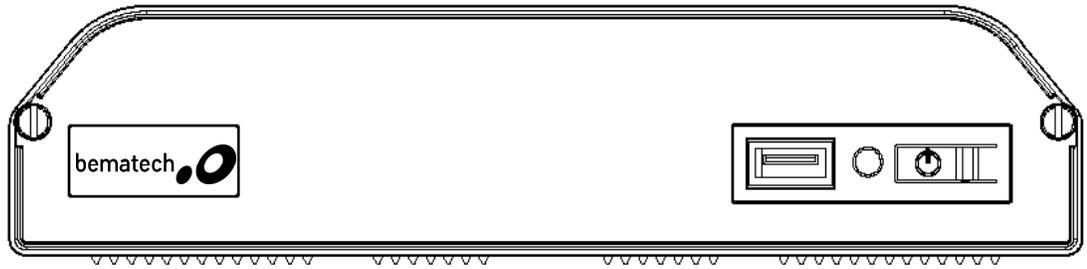
Rear View



Number	Description
1	Cash Drawer
2	USB x 4
3	LAN
4	COM1~4 (from left to right)
5	VGA
6	Power Jack for System
7	Power Button
8	Power LED
9	Kensington Lock

Note: The maximum current that can be drawn from each COM port is 500 mA.

Front View



10 11 12

Number	Description
10	USB
11	Power LED
12	Power Button

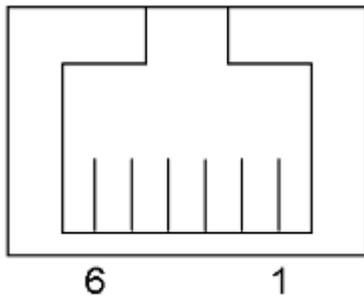
3 Peripheral Installation

3-1 Cash Drawer Port

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Check topic 6 “Jumper settings” to find out how to set the motherboard to work with 12V or 24V cash drawers.

Cash Drawer Pin Assignment



Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O address to control the Cash Drawer.

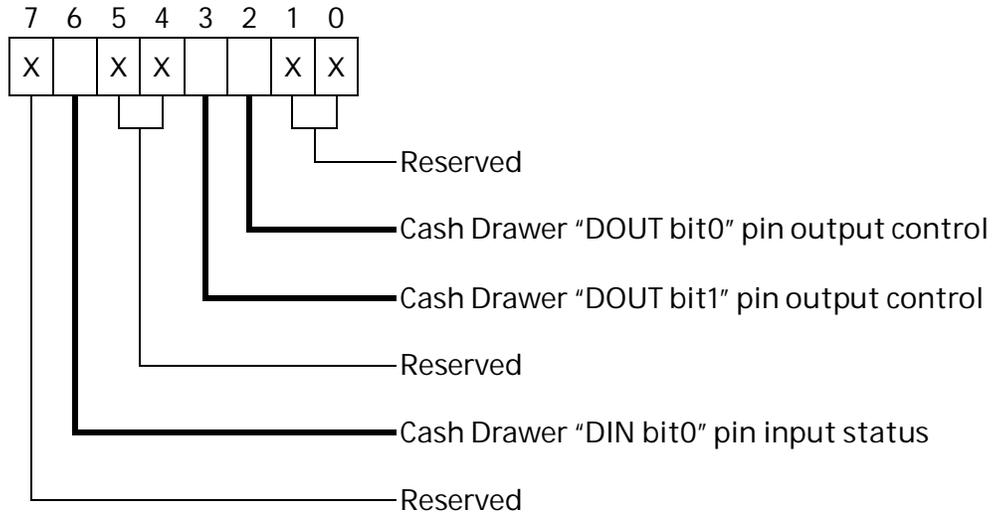
Register Location: 48Ch

Attribute: Read / Write

Size: 8bit

3-2

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved	Read	Reserved		Write		Reserved	



Bit 7: Reserved

Bit 6: Cash Drawer "DIN bit0" pin input status.

= 1: Cash drawer is opened or no cash drawer connected

= 0: Cash drawer is closed

Bit 5: Reserved

Bit 4: Reserved

Bit 3: Cash Drawer "DOUT bit1" pin output control.

= 1: Open the cash drawer

= 0: Allow closing the dash drawer

Bit 2: Cash Drawer "DOUT bit0" pin output control.

= 1: Open the cash drawer

= 0: Allow closing the cash drawer

Bit 1: Reserved

Bit 0: Reserved

Cash Drawer Control Command Example

Use Debug.exe program under DOS or Windows98

Command	Action
O 48C 04	Open cash drawer
O 48C 00	Reset cash drawer control pin
<ul style="list-style-type: none">➤ Set the I/O address 48Ch bit2 =1 to open cash drawer by "DOUT bit0" pin control.➤ Set the I/O address 48Ch bit2 = 0 to allow closing cash drawer.	

Command	Action
I 48C	Read cash drawer status
<ul style="list-style-type: none">➤ I/O address 48Ch bit6 =1 means the cash drawer is opened or not connected.➤ I/O address 48Ch bit6 =0 means the cash drawer is closed.	

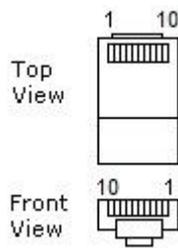
3-3 Serial Ports (COM 1 to COM 4)

Pin Assignment for COM Ports (RJ45, RS-232)

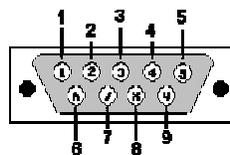
Pin No.	Signal Name
1	NULL
2	DCD
3	DSR
4	RX
5	RTS
6	TX
7	CTS
8	DTR
9	GND
10	NULL, or +5/+12 VDC

Pin Assignment for COM Cable (RS-232, RJ45 – DB9 male)

RJ45-10 Pin No.	Signal Name	DB9-M Pin No.	Signal Name
1	NULL	1	DCD
2	DCD	2	RX
3	DSR	3	TX
4	RX	4	DTR
5	RTS	5	GND
6	TX	6	DSR
7	CTS	7	RTS
8	DTR	8	CTS
9	GND	9	NULL, or +5/+12 VDC
10	NULL, or +5/+12 VDC		



DB9: male connector



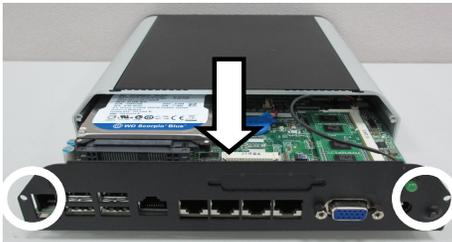
RJ45-10 connector

4 System Assembly & Disassembly

4-1 Replace the HDD



1. Remove the screws (x5) of bottom cover.



2. Remove the I/O cover screws (x2) and slide out the I/O cover.



3. Remove the HDD screws (x3).
Dismount the HDD from the metal bracket



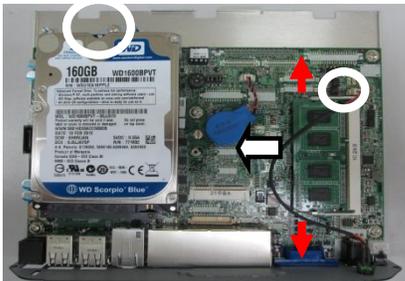
4-2 Replace the Motherboard



1. Remove the screws (x5) of bottom cover.



2. Remove the I/O cover screws (x2) and slide out the I/O cover.



3. Remove the HDD screw (x1) and remove the memory and LED cable.



4. Remove the screws (x5) on the Motherboard.



5. Remove the hex screws (x2) to release the I/O metal panel from the Motherboard.

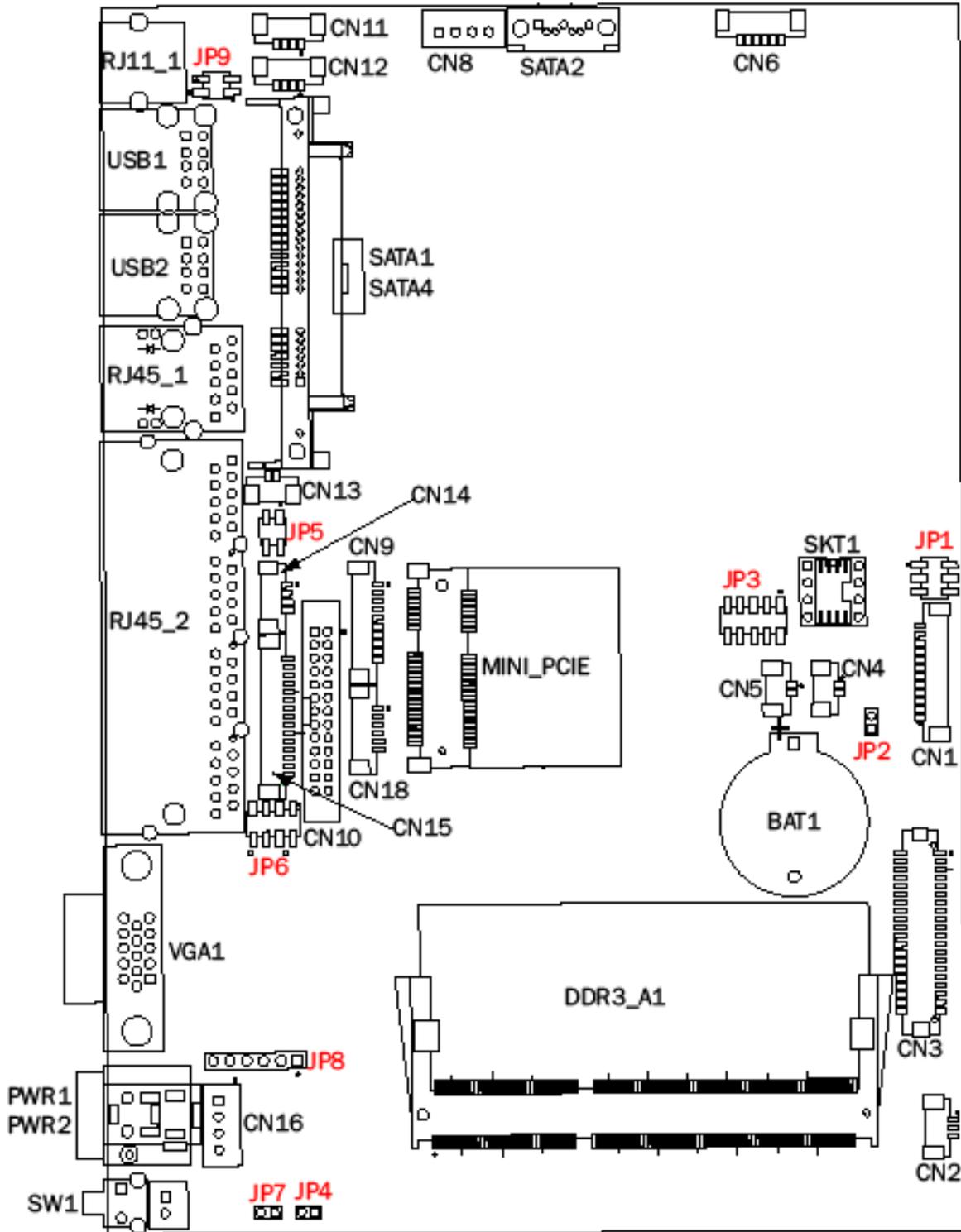
5 Specification

Model	LC7100
Motherboard	
CPU	Intel D2550 processor 1.86GHz 1MB Cache
Chipset	NM10
System Memory	1 x DDR3 SO-DIMM socket up to 4G, FSB 1066MHz
Graphic Memory	Intel GMA 3650 (Gfx frequency up to 640MHz), DX9
I/O ports	
USB	5 x USB Type A (1 x front, 4 x rear)
Serial/COM	4 x RJ45 (COM1/COM2/COM3/COM4): COM2/COM3/COM4 5V/12V powered COM; power enable/disable by BIOS setting; 2 x RJ45-DB9 adapter cables included
VGA	1 x DB15 (w/ +12V power, by BIOS setting); Max Resolution 1920x1200 : 60 Hz (HD videos capable)
LAN (10 /100/1000)	1 x RJ-45
Cash Drawer Port	1 x RJ-11 (12V or 19V by jumper selection)
Printer	1 x Parallel printer port DB25 (option)
Storage	
HDD	1 x 2.5" SATA II
Flash memory	SSD Solid State Disk (option)
Power	
Power Adapter	DC 18.5V / 65W
Certificate	
EMC & Safety	FCC Class A, CE, LVD
Environment	
Operating Temperature	0°C ~ 35°C (32°F ~ +95°F)
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Operating Humidity	20% - 85% RH non-condensing
Storage Humidity	5% - 85% RH non-condensing
Dimension (W x D x H)	195 x 165 x 45mm
Operating System	
OS Support	Windows 7 (32-bit), Windows XP, POS Ready 7, POS Ready 2009, , Linux

*Product specification is subject to change without prior notice

6 Jumper Settings

6-1 C56 Motherboard Layout



6-2 Connectors & Functions

Connector	Function
CN1	LVDS Inverter Connector
CN2	System FAN Connector
CN3	LVDS Connector
CN4	Power LED Connector
CN5	SATA LED Connector
CN6	Speaker & MIC Connector
CN8	SATA Power Connector
CN9	COM5(Touch) Connector
CN10	Printer Port Connector
CN11/12	USB Port(Internal)
CN13	LAN LED Connector
CN14	PS2 Keyboard Connector
CN15	Card Reader Connector(COM6)
CN16	+19V DC IN Connector
CN17	Power button(Internal)
CN18	Front I/O Connector(USB/power LED/ Power button)
PWR 1/2	+19V DC JACK
RJ11_1	Cash Drawer Connector
RJ45_1	LAN Connector
RJ45_2	COM1/ COM2/ COM3/ COM4
DDR3_A1	DDR3 SO-DIMM
SATA1/2/4	SATA Connector
SKT1	BIOS Connector
USB1	USB6 USB7
USB2	USB4 USB5
VGA1	VGA Connector
SW1	Power Button
JP1	Inverter Select
JP2	CMOS Operation Mode
JP3	LCD ID Setting
JP4	H/W Reset
JP5	COM2 Power Setting
JP6	COM3/COM4 Power Setting

JP7	Auto Button Setting
JP8	Touch Connector
JP9	CASH DRAWER Power Setting

6-3 Jumper Settings

Cash Drawer Power Setting

Function	JP9				
▲19V	<table border="1"> <tr> <td>1</td> <td>3</td> </tr> <tr> <td>2</td> <td>4</td> </tr> </table>	1	3	2	4
1	3				
2	4				
12V	<table border="1"> <tr> <td>1</td> <td>3</td> </tr> <tr> <td>2</td> <td>4</td> </tr> </table>	1	3	2	4
1	3				
2	4				

Inverter Selection

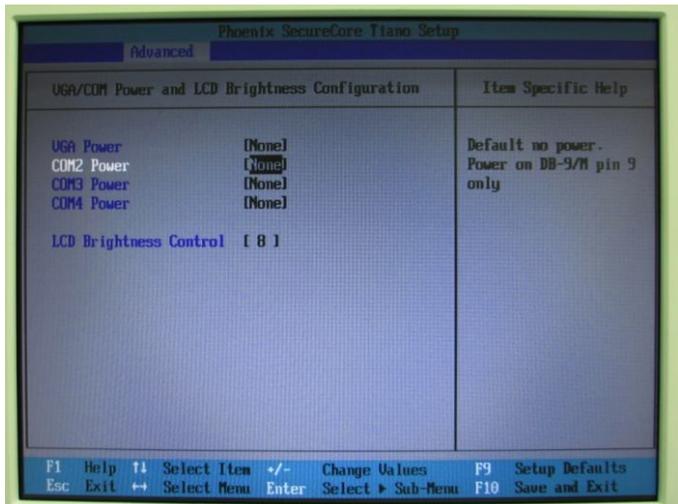
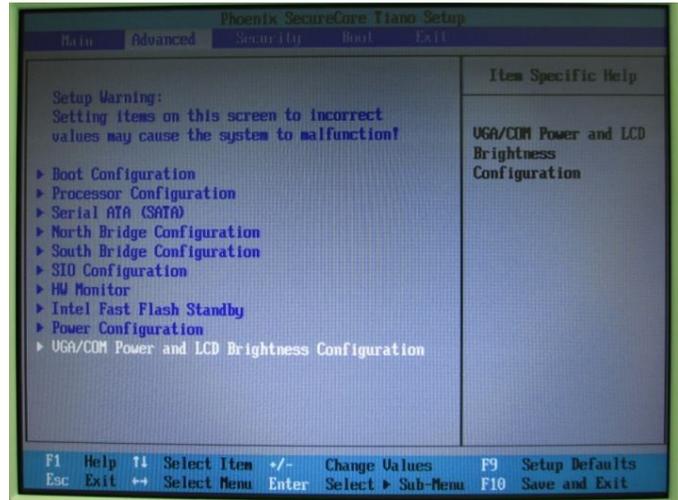
Function	JP1						
▲CCFL	<table border="1"> <tr> <td>1</td> <td>3</td> <td>5</td> </tr> <tr> <td>2</td> <td>4</td> <td>6</td> </tr> </table>	1	3	5	2	4	6
1	3	5					
2	4	6					
LED	<table border="1"> <tr> <td>1</td> <td>3</td> <td>5</td> </tr> <tr> <td>2</td> <td>4</td> <td>6</td> </tr> </table>	1	3	5	2	4	6
1	3	5					
2	4	6					

COM2/COM3/COM4 Power Setting

COM2, COM3 and COM4 can be set to provide power to your serial device. The voltage can be set to +5V or +12V by setting jumper JP5 and JP6 on the motherboard. When enabled, the power is available on pin 10 of the RJ45 serial connector. If you use the serial RJ45 to DB9 adapter cable, the power is on pin 9 of the DB9 connector. By default, the power option is disabled in the BIOS.

Enable COM2/ COM3/COM4 power in BIOS

1. Power on the system, and press the key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select **VGA/COM Power and LCD Brightness Configuration** Ports and press <Enter> to go to display the available options.
4. To enable the power, select COM2, COM3 or COM4 Power setting and press <Enter>. Save the change by pressing F10.



COM2 Power Setting

Function		JP5
No Power		1 3 2 4
COM2	5V	1 3 2 4
	12V	1 3 2 4

COM3/COM4 Power Setting

Function		JP6								
COM3	▲5V	<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td></tr> </table>	1	3	5	7	2	4	6	8
	1	3	5	7						
2	4	6	8							
12V	<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td></tr> </table>	1	3	5	7	2	4	6	8	
1	3	5	7							
2	4	6	8							
COM4	5V	<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td></tr> </table>	1	3	5	7	2	4	6	8
	1	3	5	7						
2	4	6	8							
▲12V	<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td></tr> </table>	1	3	5	7	2	4	6	8	
1	3	5	7							
2	4	6	8							

LCD ID Setting

Panel#	Resolution	LVDS		Output Interface	JP3										
		Bits	Channel												
1	800X600	18	Single		<table border="1"> <tr><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	3	5	7	9	4	6	8	10		
3	5	7	9												
4	6	8	10												
2	800X600	18	Single		<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
3	800X600	24	Single		<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
4	1024X600	18	Single		<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
5	1024X768	18	Single		<table border="1"> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											

6	1024X768	24	Single		<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
7	1280X1024	24	Dual	1 st : LCD Panel	<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
8	1366X768	18	Single		<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
9	1366X768	24	Single		<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
10	1440X900	24	Dual		<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
11	1920X1080	24	Dual		<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											
				CRT	<table> <tr><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9											
2	4	6	8	10											

1	Jumper open
2	

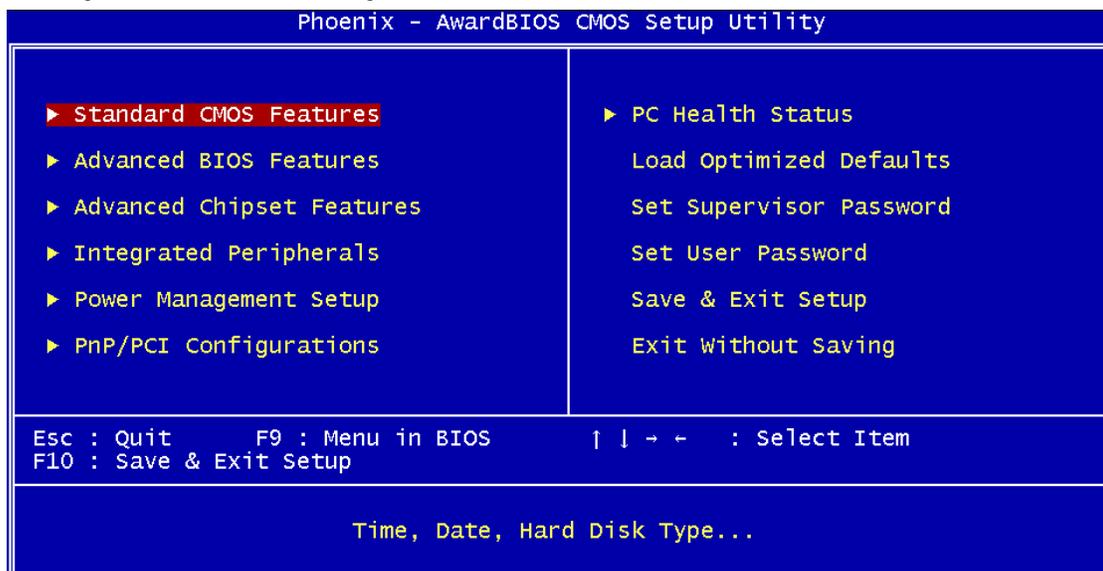
1	Jumper short
2	

7 BIOS Settings

BIOS Main Menu

When the BIOS Main Menu is displayed, the following items can be selected. Use the arrow keys to select items and the Enter key to accept and enter the sub-menu.

Note: The BIOS setup menus shown in this section are for reference only and may not exactly match the items of your BIOS version.



Standard CMOS Features

Use this menu for basic system configuration.

Advanced BIOS Features

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

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize the system's performance.

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 Configurations

This entry appears if your system supports Plug and Play and PCI Configuration.

PC health status

Displays CPU, System Temperature, Fan Speed, and System Voltages Value.

Load Optimized Defaults

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

Set Supervisor Password

Enables you to change, set, or disable the supervisor or user password.

Set Password

Change, set, or disable the password. It allows you to limit access to the system and to the setup, or just to the setup.

Save & exit setup

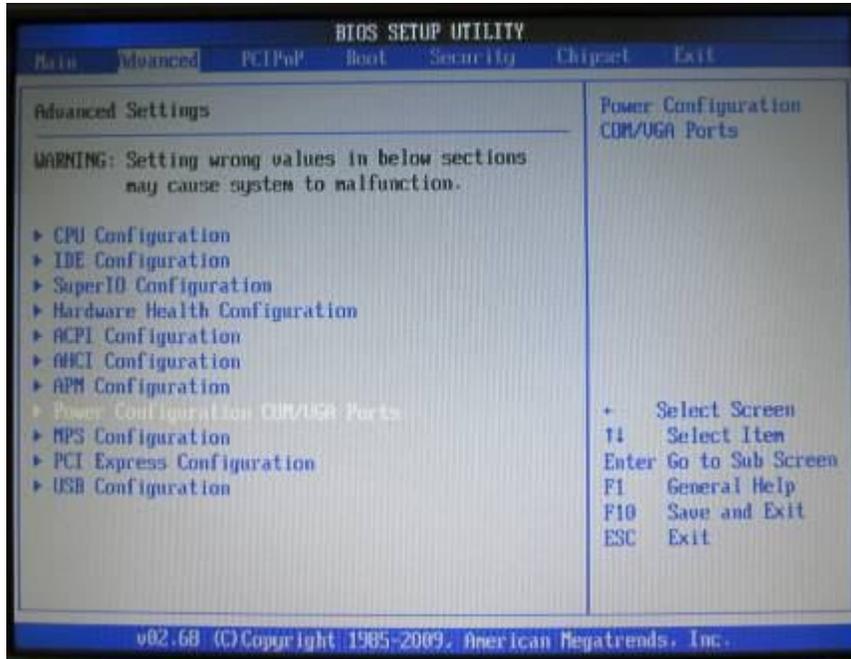
Save CMOS value changes to CMOS and exits setup.

Exit without saving

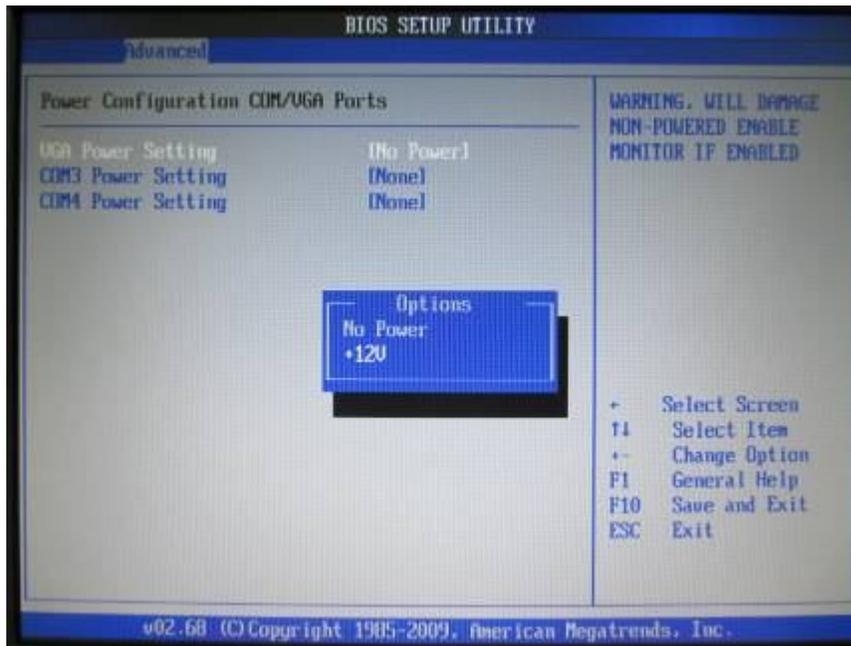
Ignores all CMOS value changes and exits setup.

7-1 VGA with 12V Setting

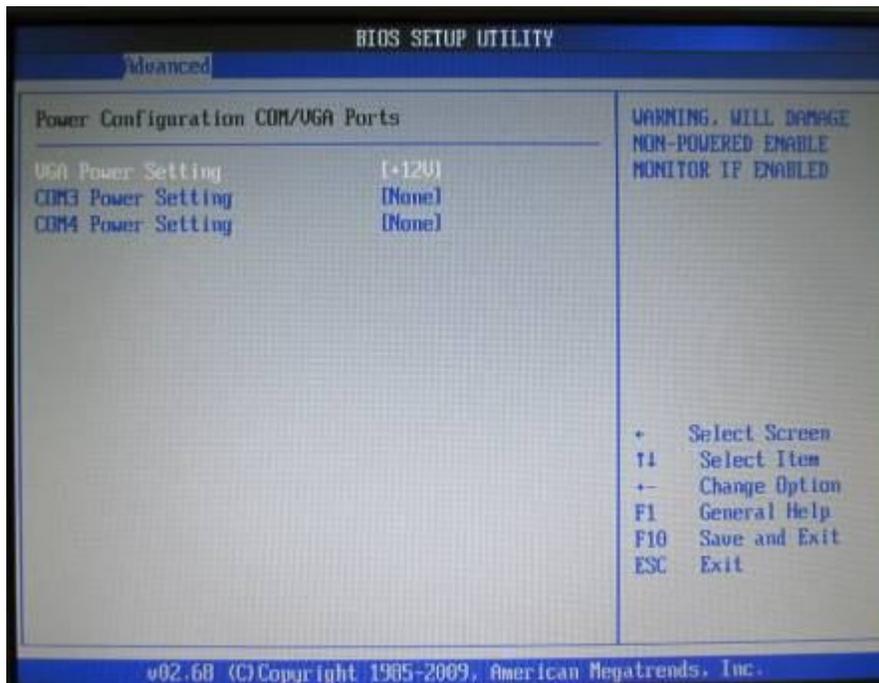
1. Turn on power than click "Del" for BIOS SETUP
2. Select Power Configuration COM/VGA Ports



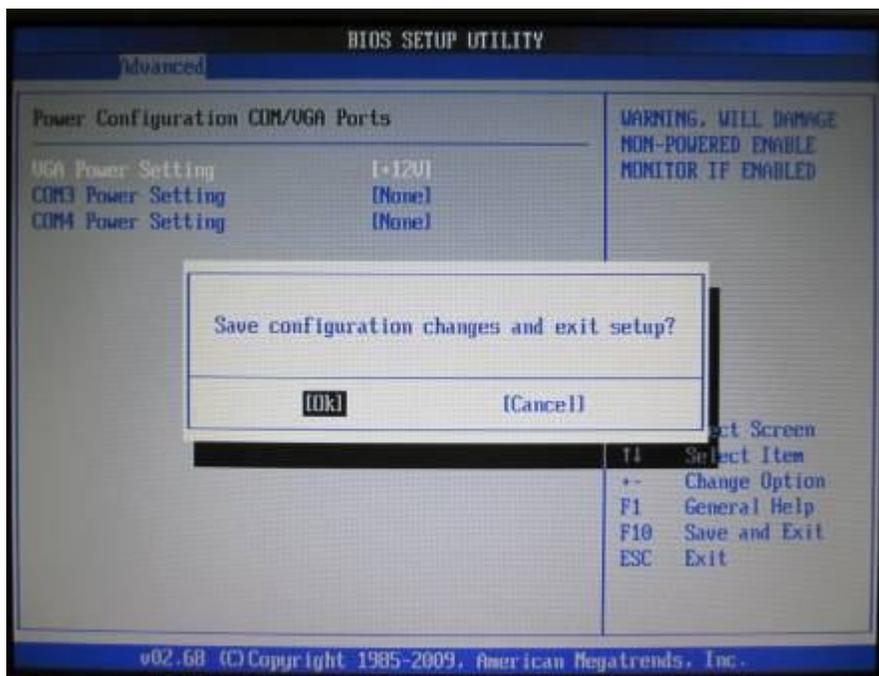
3. Select VGA Power Setting



4. Change No Power to +12V



5. Press F10 to save



Appendix

Drivers Installation:

The shipping package includes a Driver CD. You can find every individual driver and utility that enables you to install the drivers in the Driver CD.

Please insert the Driver CD into the drive and double click on the "index.htm" to pick up the models. You can refer to the drivers installation guide for each driver in the "Driver/Manual List".

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