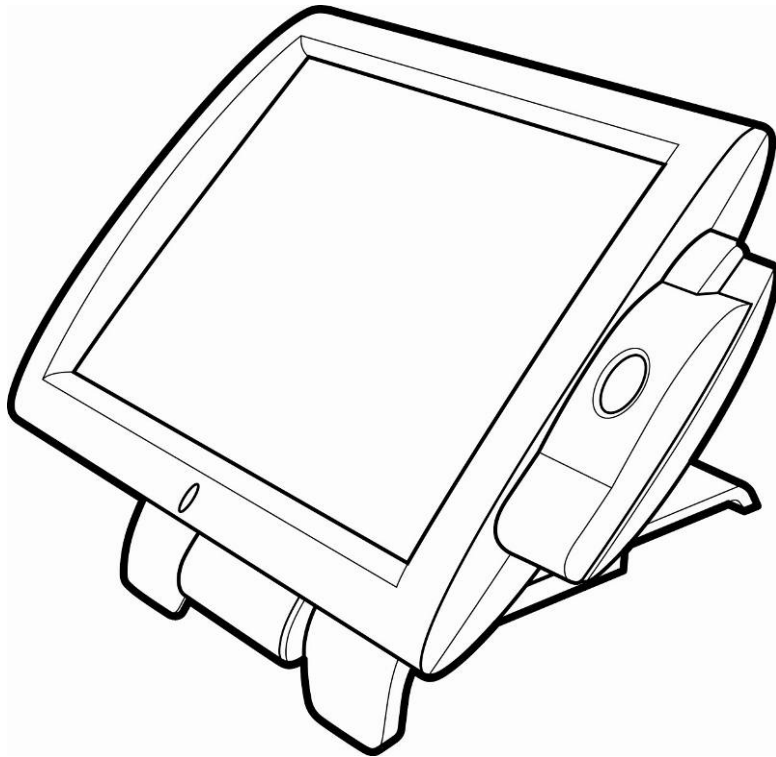


# User Manual

Version 1.0 May 2013

## ELIOS III G



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Manual Version 1.0

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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

2012/19/EU 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

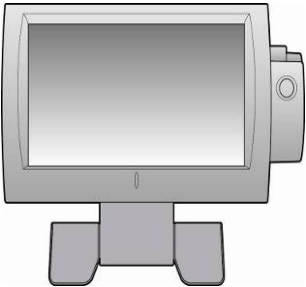
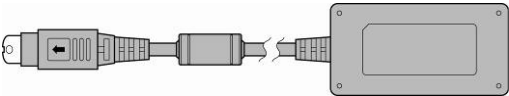
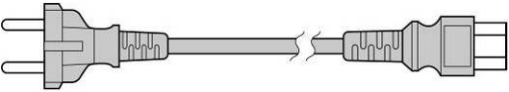

Version	Date	Description
1.0	May 2013	● Initial release

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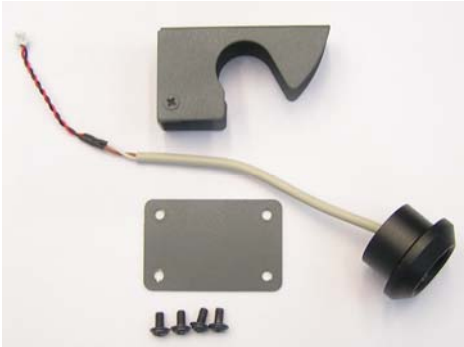

# 1 Packing Checklist

## 1-1 Standard Items

	
a. System	b. power adapter
	
c. power cord	d. RJ45 to DB9 cable x 4

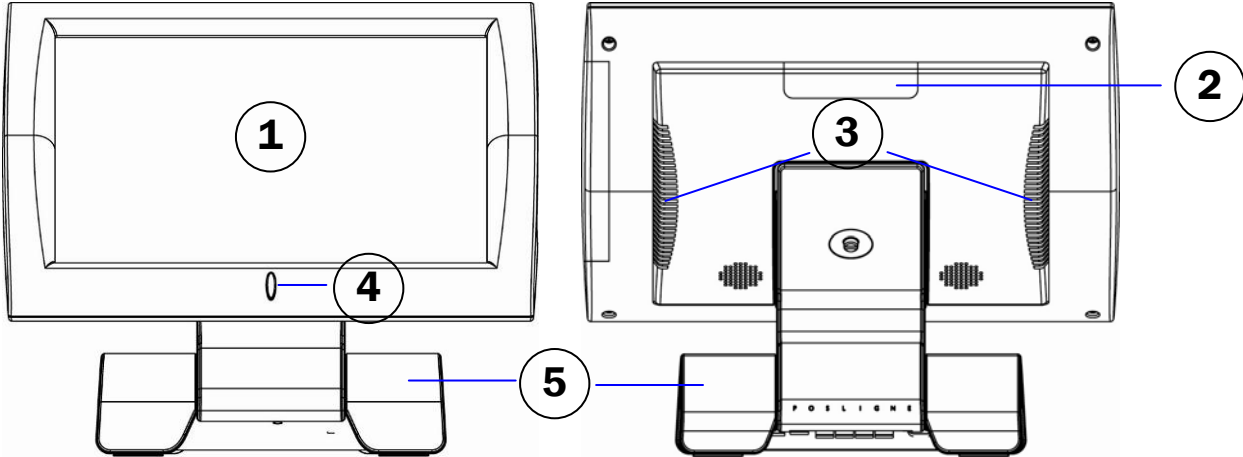


# 1-2 Optional Items

	
<p>a. Magnetic Card Reader</p>	<p>b. iButton Dallas Key Reader</p>
	
<p>c. Magnetic Card + iButton Dallas key Reader</p>	<p>d. RFID Reader</p>
	
<p>e. Magnetic Card Reader + Biometric Reader (fingerprint)</p>	<p>f. Addimat key reader</p>
	
<p>g. VFD</p>	

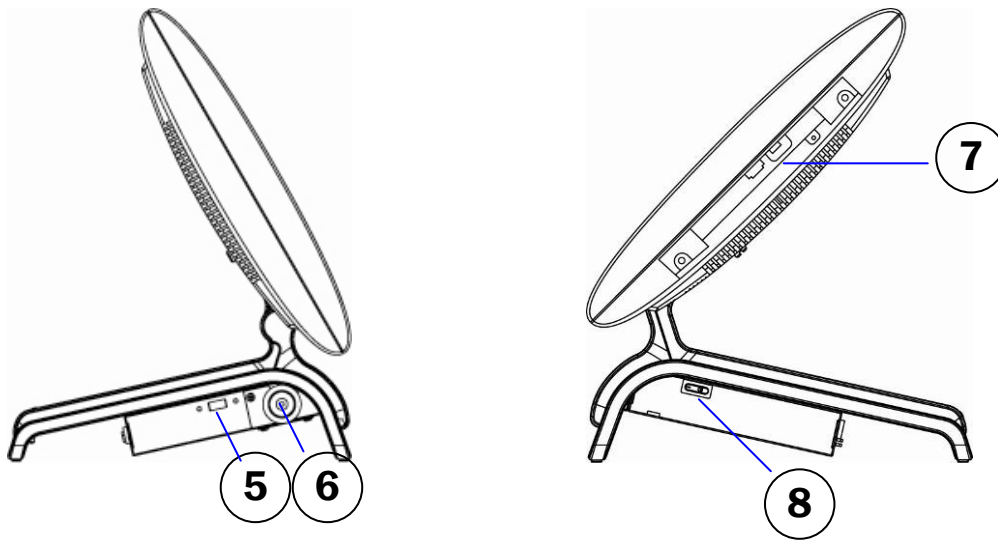
# 2 System View

## 2-1 Front View & Rear view



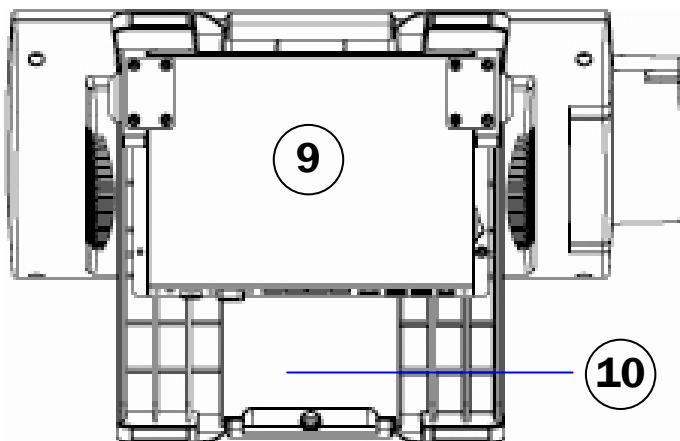
No.	Description
1	Touch Screen
2	VFD dummy cover
3	Ventilation
4	LED Light
5	Stand

## 2-2 Side View



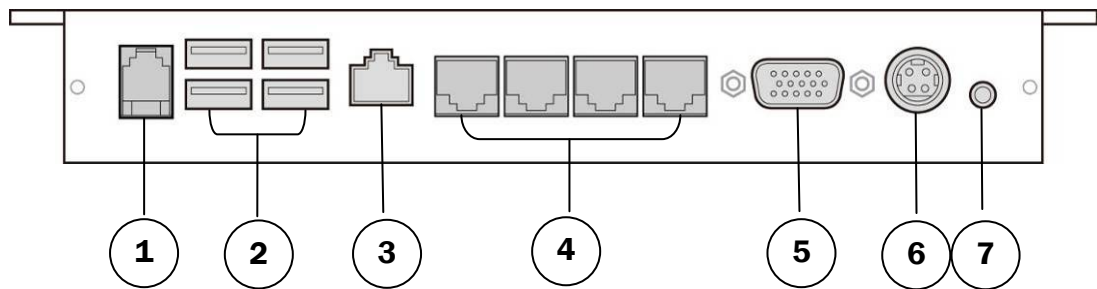
No.	Description
5	USB Connector
6	Addimat Key Kit
7	MSR Installation Slot (Remove cover to install)
8	Power Button

## 2-3 Bottom View



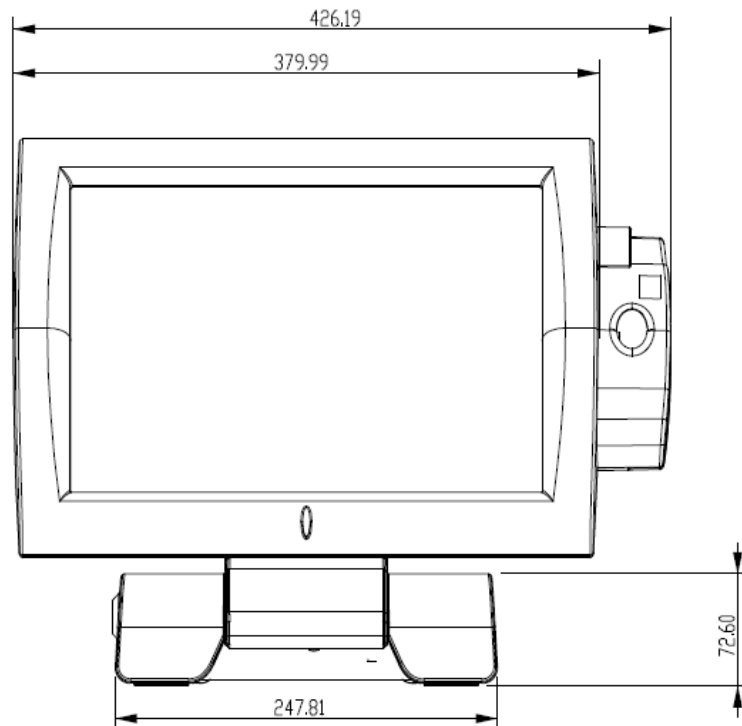
No.	Description
9	System Box (easy access to the Motherboard)
10	Thumb Screw of the System Box

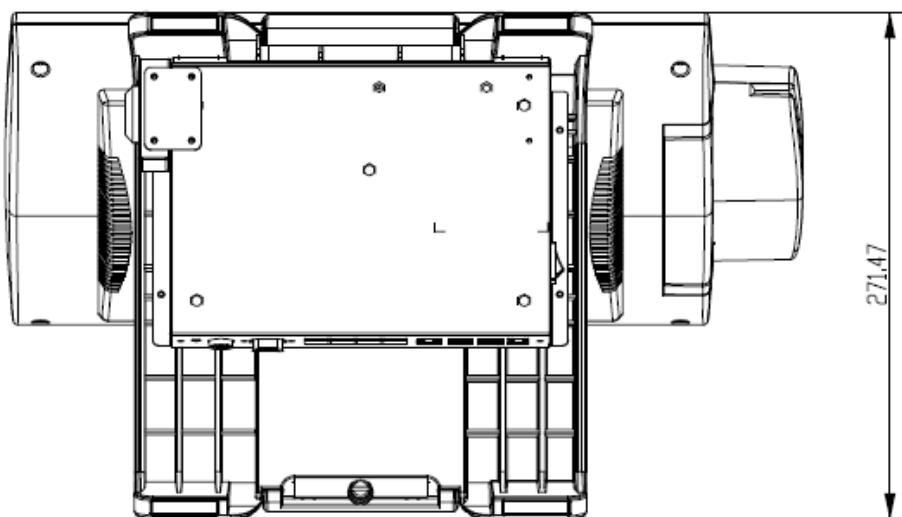
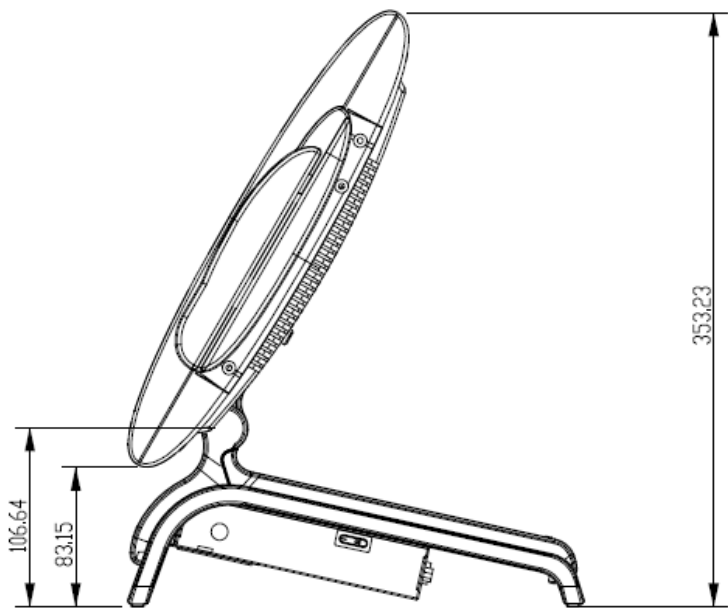
## 2-4 Rear I/O View



No.	Description
1	Cash drawer
2	USB (x4)
3	LAN (10 / 100/1000)
4	Serial COM (x4)
5	2nd VGA
6	DC Jack
7	Power button

## 2-5 Dimension



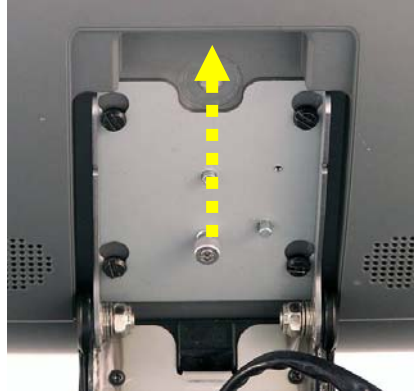
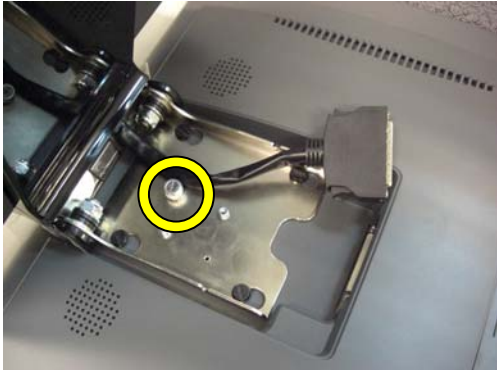


# 3 System Assembly & Disassembly

## 3-1 Remove the Stand



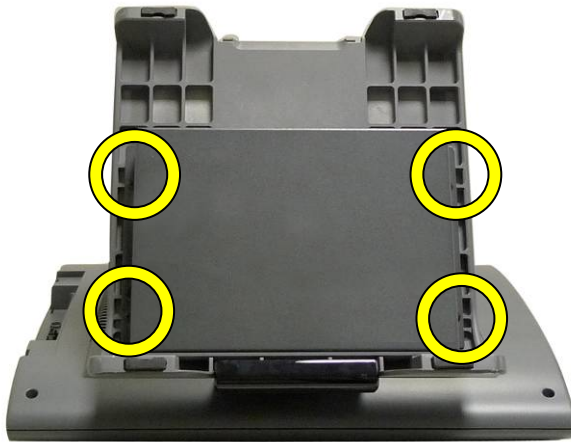
1. Place the system face down. Make sure not to scratch the screen.
2. Remove the screw (x1) to release the plastic cover.



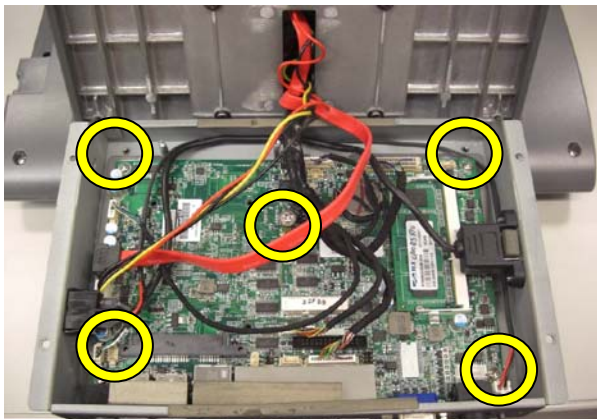
3. Disconnect the cable (x1) as shown.
4. Loosen the thumb screw (x1) fastening the metal bracket and the LCD rear cover.
5. Lift up the display module and separate it from the stand.

## 3-2 Remove the Motherboard

To access the motherboard, you need to open the system box which is located in the bottom of the system.



1. Remove the screws (x4) that fix the system box to the stand.
2. Gently flip down the system box due to various connectors connecting to the motherboard.



3. Disconnect all the connectors.
4. Remove the screws (x5) on the motherboard.
5. Remove the hex screws (x2) on the I/O Panel.

### 3-3 Remove the LCD Rear Cover

To remove the LCD rear cover in order to access the touch board. Please remove the stand first as steps described in Chapter 3-1.



1. To open the rear cover of the LCD, please remove the screws (x10) as shown in the picture.

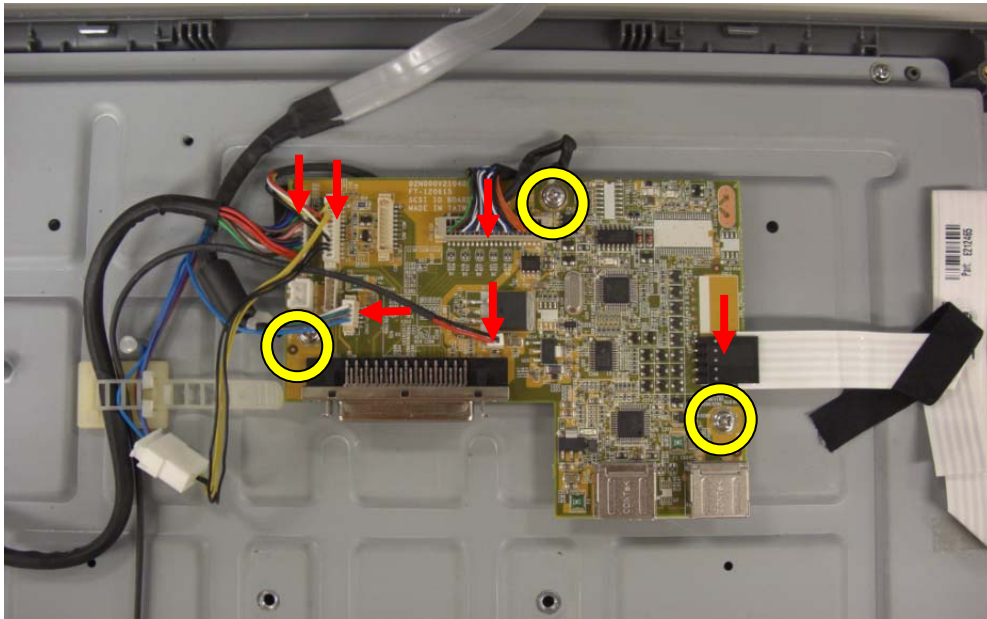


2. Remove the screws (x2) to open the MSR dummy cover and remove another screw (x1) of the rear cover.



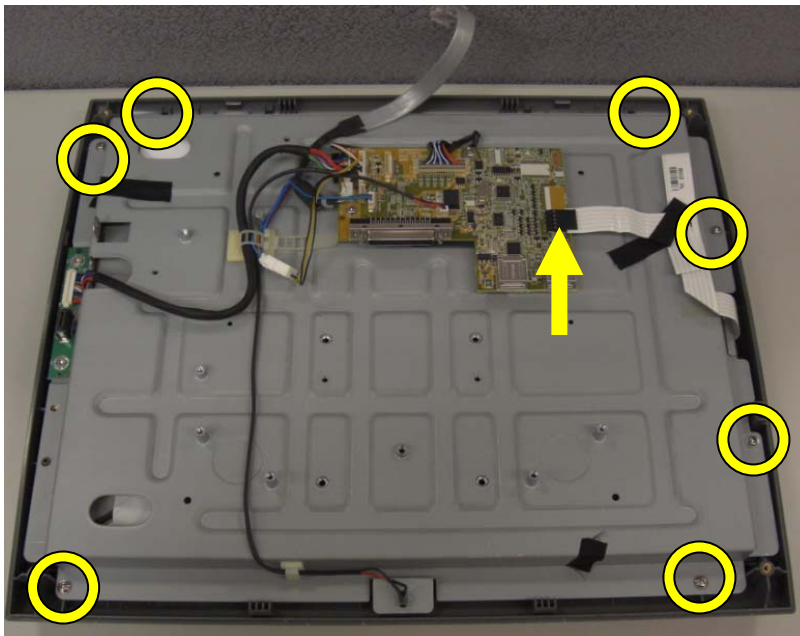


### 3-4 Replace the Touch Board



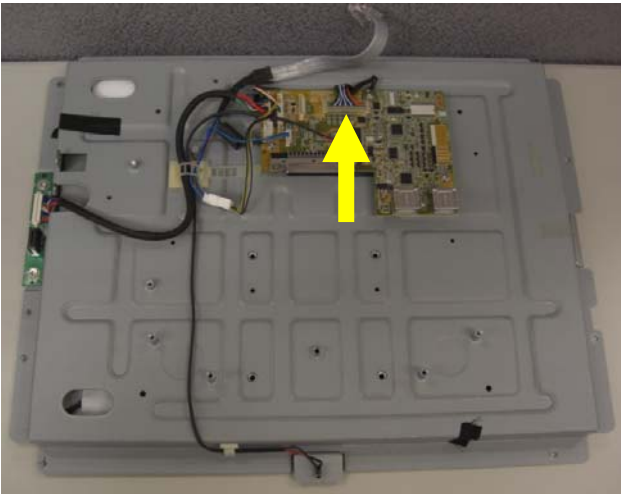
1. Remove the stand (Chapter 3-1).
2. Remove the rear cover (Chapter 3-3).
3. Disconnect the cables (x6).
4. Remove the screws (x3).

### 3-5 Replace the Touch Screen



1. Remove the stand (Chapter 3-1).
2. Remove the rear cover (Chapter 3-3).
3. Remove the screws (x7) and disconnect the touch cable (x1).
4. Gently separate the touch screen from the LCD panel.

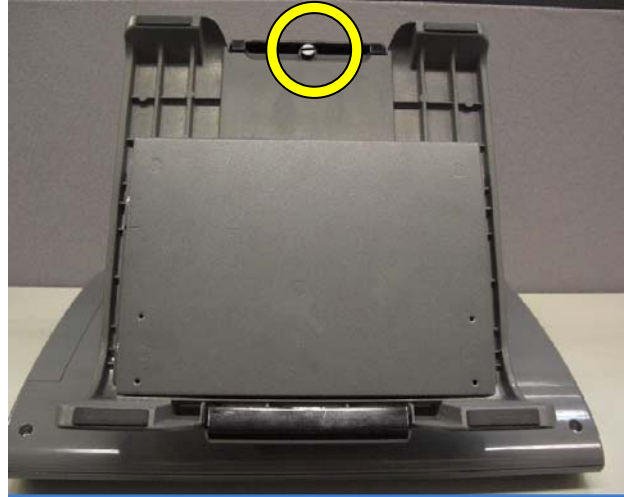
## 3-6 Replace the LCD Panel



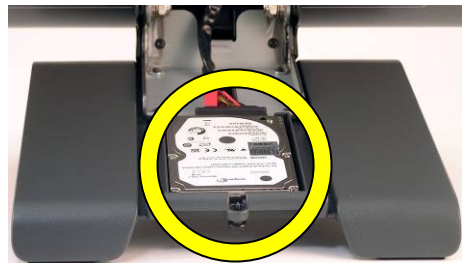
1. Remove the stand (Chapter 3-1).
2. Remove the rear cover (Chapter 3-3).
3. Remove the touch screen (Chapter 3-6).
4. Disconnect the cable (x1).
5. Remove the screws (x4) at both sides of the sheet metal LCD bracket and separate it from the LCD panel.

# 4 Peripherals Installation

## 4-1 HDD (Hard Drive Disk) Installation



1. Loosen the thumb screws (x2) on the rear side and bottom side of the system to release the HDD cover.



2. Slide out the top part and the bottom part of the HDD cover and disconnect the HDD cable (x1) to take out the HDD.

## 4-2 MSR and 2-in-1 MSR Installation

The installation procedure for the MSR module is also valid for RFID Reader, iButton Dallas Key Reader, 2-in-1 MSR + iButton Dallas Key Reader, Fingerprint Reader and 2-in-1 MSR + Fingerprint Reader modules.



1. Remove the screws (x2) to open the MSR dummy cover.
2. Align the MSR module connector and mechanism parts to the system.

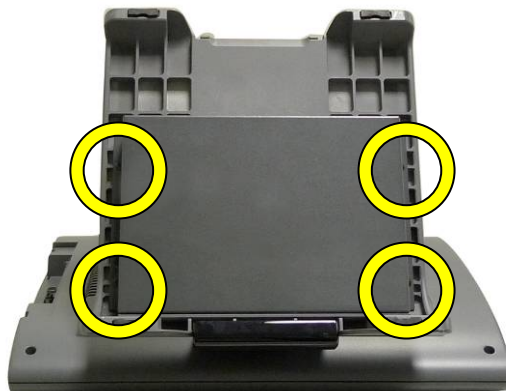


3. Fasten the screws (x2) to secure MSR module to the system.

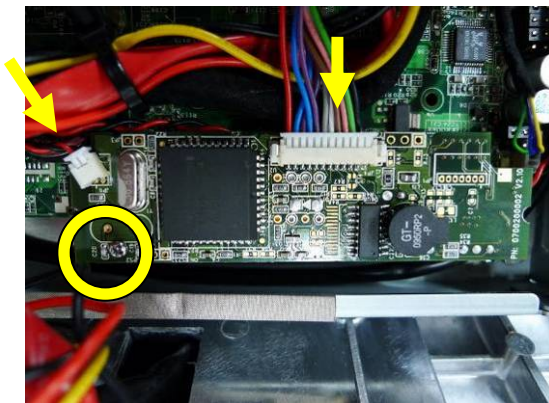
## 4-3 Addimat Key Kit Installation

### Accessories of addimat key kit:

- a. Addimat board + Y cable (connecting the Y cable to the addimat key board first)
- b. Addimat Key with cable module



1. Loosen the system box from the LCD module with stand by unfastening the screws (x4).
2. Open the blind hole on the side of the system box and thread the addimat key kit with cable module through the hole.



3. Install the addimat key board with the Y cable (accessory a) by fastening the screw (x1) onto the motherboard.

4. Connect the addimat key with cable module (accessory b) to accessory a.
5. Connect the other side of Y cable to the connector on the motherboard as the position as right picture shows.

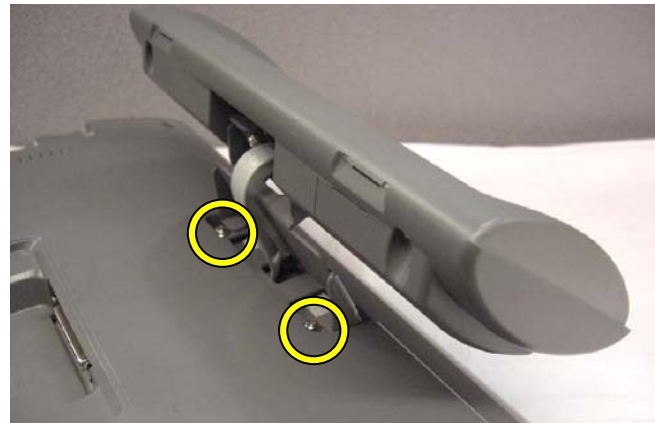


6. Fasten the screws (x4) of the system box again to fix the system box to the LCD module with stand.
7. Fasten the screws (x4) to fix the adimate key module with bracket to the system box.

## 4-4 VFD Installation



1. Open the VFD dummy cover and pull the VFD cable out.



2. Slide the VFD module and fasten the screws (x2) to secure it to the system.
3. Connect the VFD cable to the VFD module.

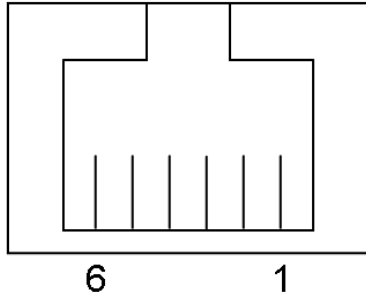


4. Finally attach the plastic cover as shown in the picture.

## 4-5 Cash Drawer Installation

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

### 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

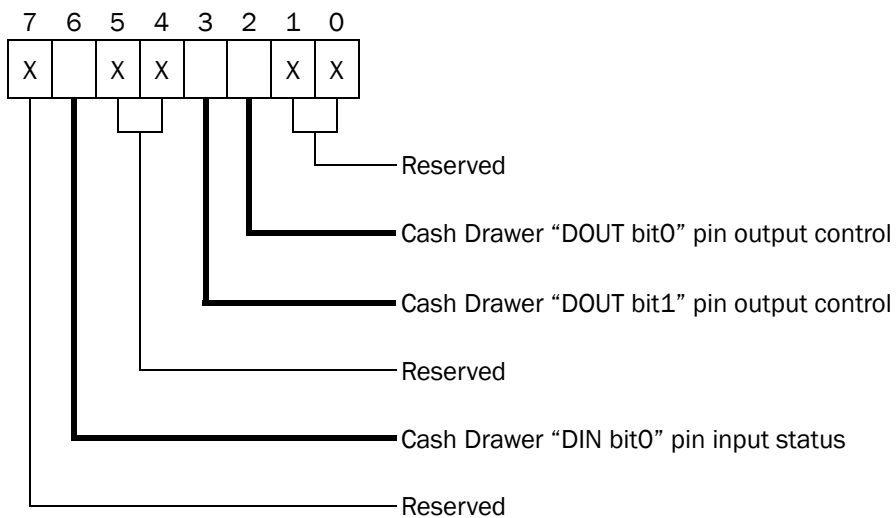
The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 48Ch

Attribute: Read / Write

Size: 8bit

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





Bit 7: Reserved

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

= 1: the Cash Drawer closed or no Cash Drawer

= 0: the Cash Drawer opened

Bit 5: Reserved

Bit 4: Reserved

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

= 1: Opening the Cash Drawer

= 0: Allow close the Cash Drawer

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

= 1: Opening the Cash Drawer

= 0: Allow close the Cash Drawer

Bit 1: Reserved

Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer.

### Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

Command	Cash Drawer
O 48C 04	Opening
O 48C 00	Allow to close
<p>➤ Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by "DOUT bit0" pin control.</p> <p>➤ Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.</p>	

Command	Cash Drawer
I 48C	Check status
<p>➤ The I/O address 48Ch bit6 =1 mean the Cash Drawer is opened or not exist.</p> <p>➤ The I/O address 48Ch bit6 =0 mean the Cash Drawer is closed.</p>	

# 5 Specification

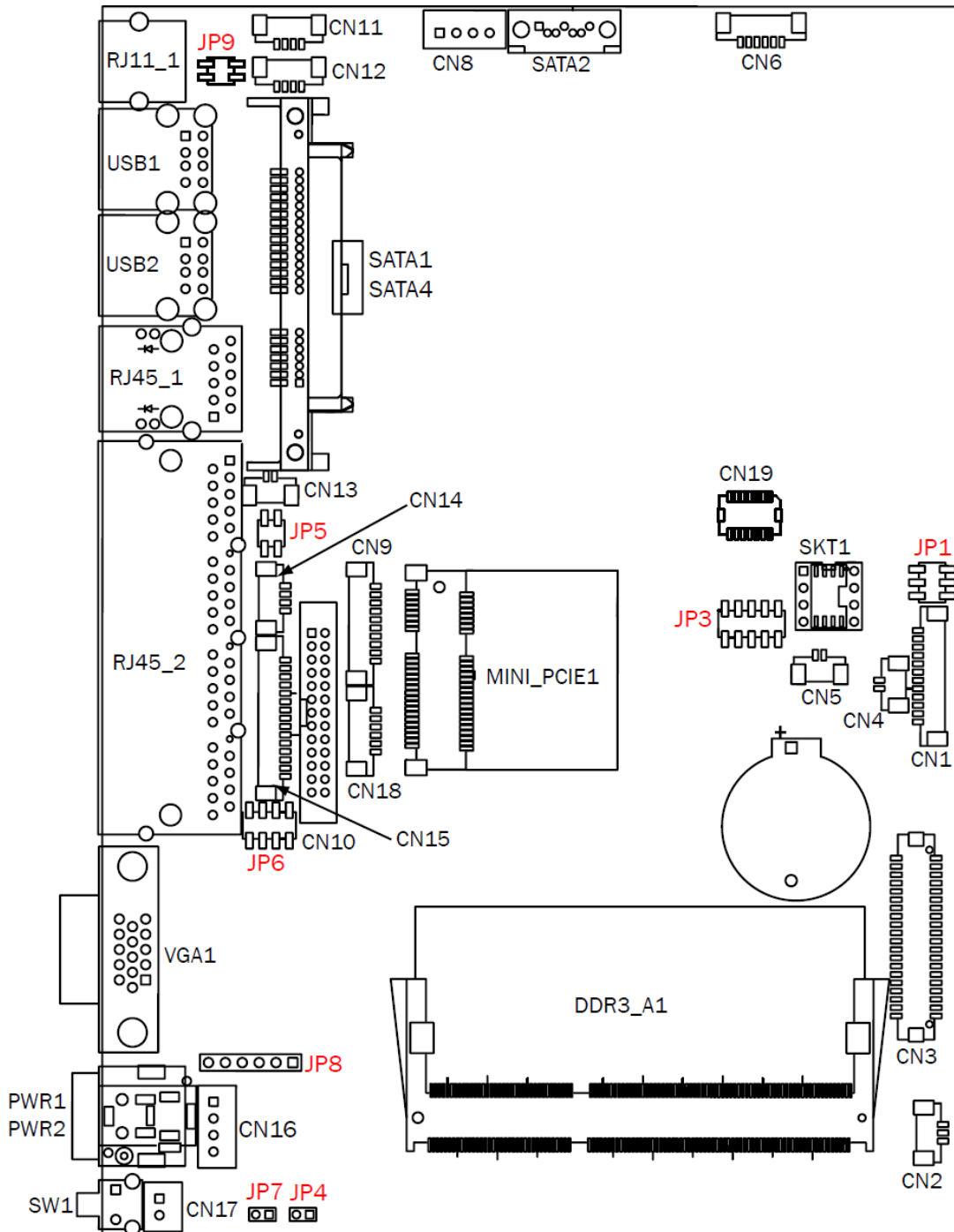
<b>Model</b>	<b>ELIOS III G</b>
<b>Motherboard</b>	<b>C56</b>
CPU Supports	Intel Cedarview D2550 1.8G, L2 1M (TDP 10W)
Chipset	Intel NM10
System Memory	1x S.O. DIMM socket, DDR3 FSB1067Mhz, 2G, (up to 4GB)
Graphic Memory	Intel GMA 3650 (Gfx frequency up to 640MHz), DX9
BIOS	Phoenix UEFI
Board Dimension	185 x 130mm
<b>LCD Panel</b>	
LCD Size	15"
Brightness (cd/m <sup>2</sup> )	250
Maximal Resolution	1024 x 768
Tilt angel	15° ~ 60°
<b>Storage</b>	
HDD	1 x slim HDD bay for SATA HDD
ODD	NA
Flash Memory	HDD Bay for HDD/ PSSD
<b>Expansion</b>	
miniPCI-E Socket	1
<b>Rear I/O</b>	
USB	4 ( USB 2.0)
Serial/COM	RJ45 x 4 (COM1/COM2/COM3/COM4): ( COM2/COM3/COM4 powered COM with power enable /disable by BIOS setting; COM2/COM3 0/5V; COM4 0/12V; default setting COM2/COM3 5V, COM4 12V, BIOS default w/o power)
LAN (10/100/1000)	1
2nd VGA	1 (12V enabled by BIOS)
Cash Drawer Port	1 (19V)
DC Jack	1
<b>Front I/O</b>	
Power button	1

<b>Model</b>	<b>ELIOS III G</b>
<b>Motherboard</b>	<b>C56</b>
<b>Peripherals</b>	
MSR	MSR ( PS2/COM)
MSR + Fingerprint	MSR (PS2/COM)/Fingerprint (USB)
MSR + iButton	MSR (PS2 )/ iButton (PS2 /COM) MSR (COM) / iButton (PS2)
iButton	iButton Reader (PS2/COM)
Customer Display	2x20 slim type VFD (USB)
<b>Power</b>	
Power Supply	Ext. 65W adapter 18.5V/ 3.51A
EMC & Safety	FCC /CE Class A, LVD
Operating Temperature	0°C ~ 35°C ( 41°F ~ 95°F )
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Humidity	20% - 85% RH non condensing
<b>Communication</b>	
Wireless LAN	PCI E wireless LAN card 802.11 b/g/n
<b>Dimension (WxDxH)</b>	380 x 321 x 271.5mm
<b>Weight (N.W. /G.W.)</b>	6kgs / 8kgs
<b>OS Support</b>	Windows® XP Professional, Windows Embedded, POSReady 2009, POSReady 7, Windows XP Embedded, Windows XP Professional for Embedded, Linux, Windows 7(32-bit)

\*The specification is subject to change without prior notice

# 6 Configuration

## 6-1 C56 Motherboard



## 6-2 Connectors & Functions

Connectors	Functions
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)
PWR2/3	+19V DC JACK
RJ11_1	Cash Drawer Connector
RJ45_1	LAN Connector
RJ45_2	COM1/ COM2/ COM3/ COM4
DDR3_A1/A2	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
JP3	LCD ID Setting
JP4	H/W Reset
JP5	COM2 Power Setting
JP6	COM3/COM4 Power Setting
JP9	CASH DRAWER Power Setting

## 6-3 Jumper Settings

### Cash Drawer Power Setting

Function	JP9 (1-2) (3-4)						
▲ +19V	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="border: 1px solid black; padding: 2px 5px;">3</td> <td style="padding: 0 5px;"></td> </tr> <tr> <td style="padding: 0 5px;">2</td> <td style="border: 1px solid black; padding: 2px 5px;">4</td> <td style="padding: 0 5px;"></td> </tr> </table>	1	3		2	4	
1	3						
2	4						
+12V	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="border: 1px solid black; padding: 2px 5px;">1</td> <td style="padding: 0 5px;">3</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px 5px;">2</td> <td style="padding: 0 5px;">4</td> </tr> </table>	1	3	2	4		
1	3						
2	4						

### Inverter Selection

Function	JP1 (1-2) (3-4) (5-6)						
▲ LED	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="border: 1px solid black; padding: 2px 5px;">3</td> <td style="padding: 0 5px;">5</td> </tr> <tr> <td style="padding: 0 5px;">2</td> <td style="border: 1px solid black; padding: 2px 5px;">4</td> <td style="padding: 0 5px;">6</td> </tr> </table>	1	3	5	2	4	6
1	3	5					
2	4	6					
CCFL	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">3</td> <td style="border: 1px solid black; padding: 2px 5px;">5</td> </tr> <tr> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">4</td> <td style="border: 1px solid black; padding: 2px 5px;">6</td> </tr> </table>	1	3	5	2	4	6
1	3	5					
2	4	6					

### COM2 Power Setting

Function	JP5 (1-2) (3-4)				
No Power	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">3</td> </tr> <tr> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">4</td> </tr> </table>	1	3	2	4
1	3				
2	4				
▲ COM2 +5V	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="border: 1px solid black; padding: 2px 5px;">1</td> <td style="padding: 0 5px;">3</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px 5px;">2</td> <td style="padding: 0 5px;">4</td> </tr> </table>	1	3	2	4
1	3				
2	4				
COM2 +12V	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="border: 1px solid black; padding: 2px 5px;">3</td> </tr> <tr> <td style="padding: 0 5px;">2</td> <td style="border: 1px solid black; padding: 2px 5px;">4</td> </tr> </table>	1	3	2	4
1	3				
2	4				

### LCD ID Setting

Resolution	LVDS		Output Interface	JP3										
	Bits	Channel		(1-2) (3-4) (5-6) (7-8) (9-10)										
1024 x 768	24	Single	LVDS Panel	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">5</td> <td style="border: 1px solid black; padding: 2px 5px;">7</td> <td style="padding: 0 5px;">9</td> </tr> <tr> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">6</td> <td style="border: 1px solid black; padding: 2px 5px;">8</td> <td style="padding: 0 5px;">10</td> </tr> </table>	1	3	5	7	9	2	4	6	8	10
1	3	5	7	9										
2	4	6	8	10										

▲ = Manufacturer Default Setting



OPEN



SHORT

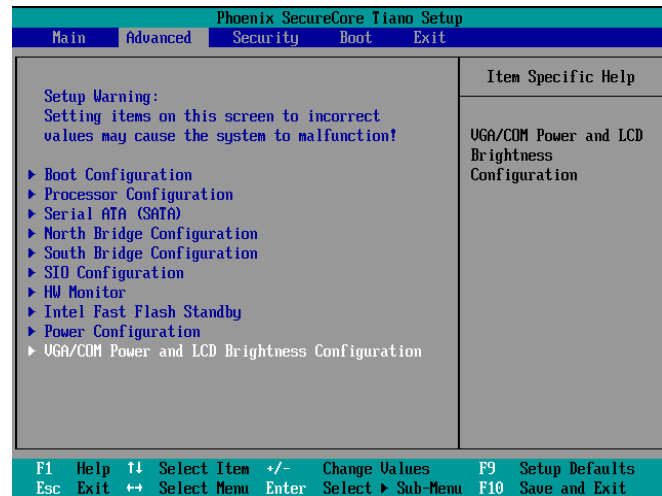
### COM 3 & COM4 Power Setting

Function	JP6 (1-2) (3-4) (5-6) (7-8)								
▲ 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						
COM3 +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						
COM4 +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						

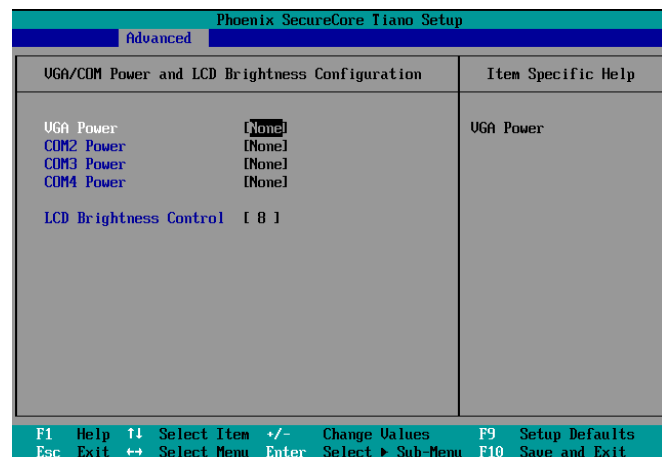
### COM2/COM3/COM4 Power Setting

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.

1. Power on the system, and press the <DEL> 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>. Select Power and press <Enter>. Save the change by pressing F10.



# 7 Appendix

## **Drivers Installation:**

To download the most recent drivers and utilities, and obtain advice regarding the installation of your equipment, please visit the AURES Technical Support Website:

[www.ares-support.fr](http://www.ares-support.fr) (French)

[www.ares-support.fr](http://www.ares-support.fr) /UK(English)

[www.ares-support.fr](http://www.ares-support.fr) /GE (German)