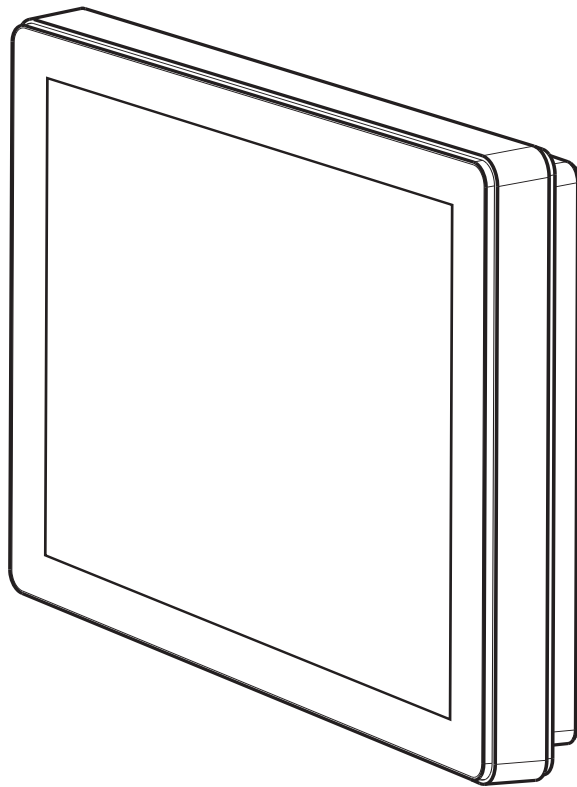


# USER MANUAL

VERSION 1.0 September 2011

## W-TOUCH



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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.



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”.



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.

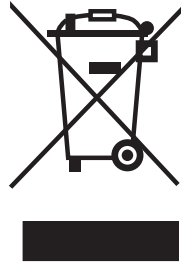
#### 4.7.3.2 Materials for fire enclosures

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 dust bin 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	Description	Date
1.0	<ul style="list-style-type: none"><li>Initial release</li></ul>	2011 September

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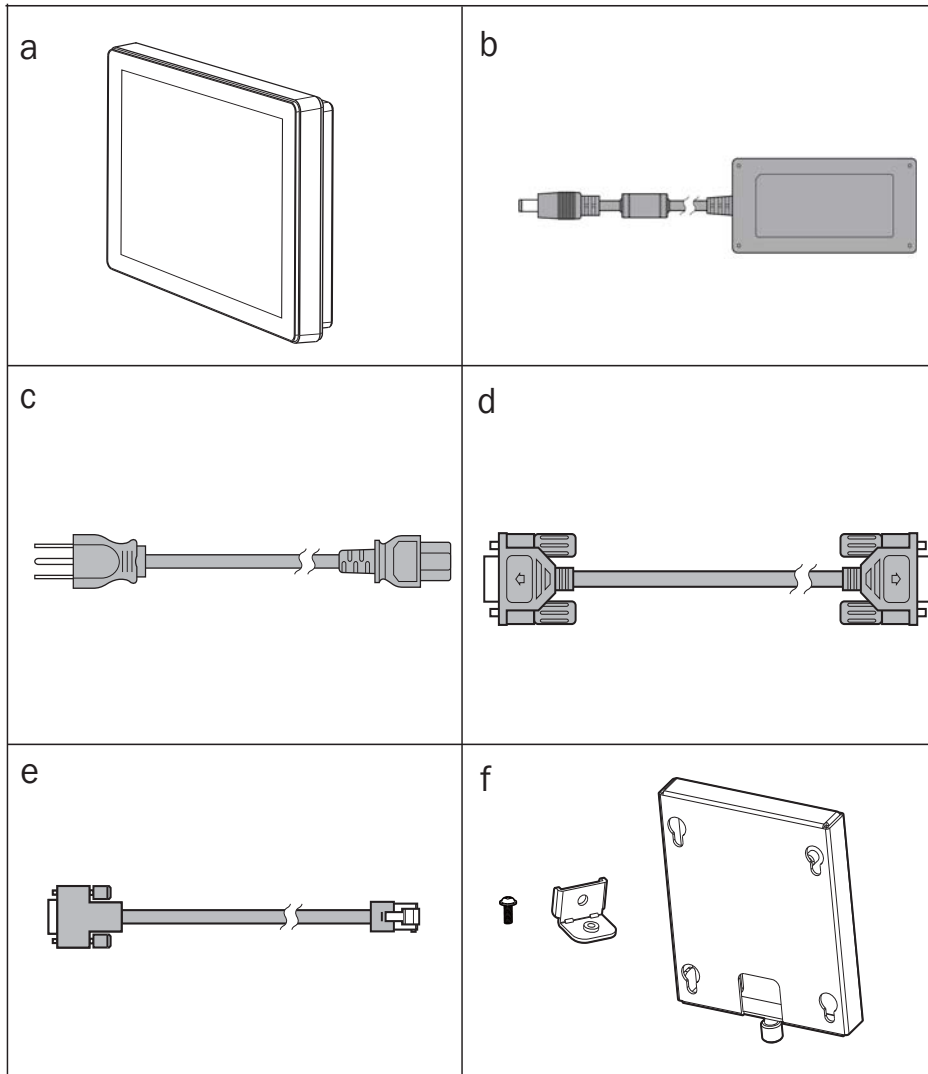
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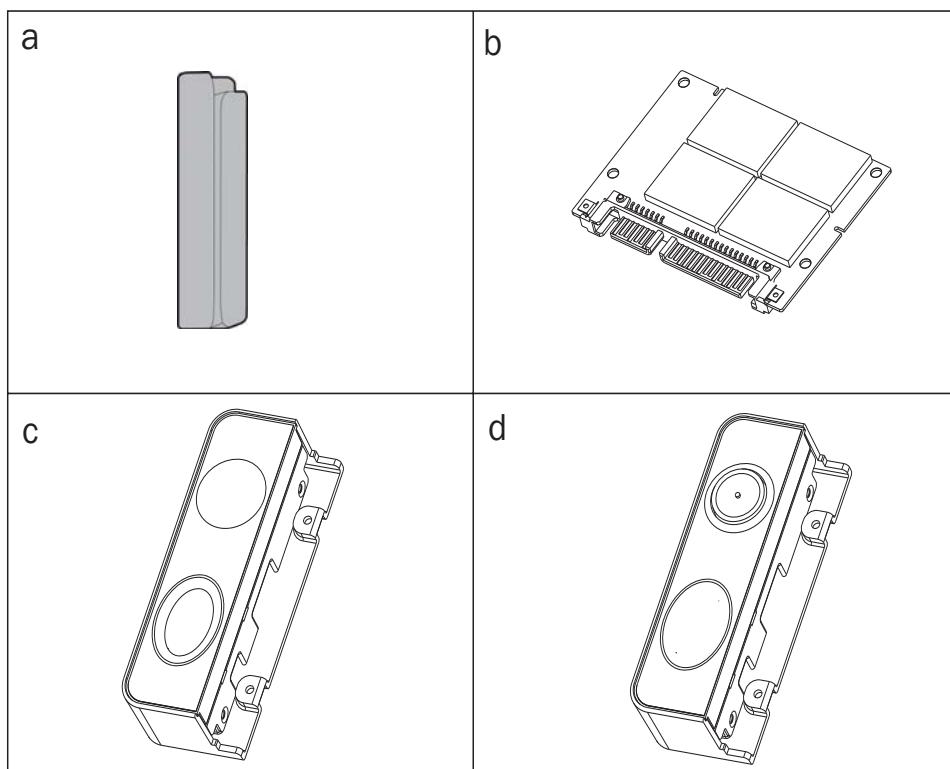
# 1. Packing List

## 1-1. Standard Accessories



- a. System
- b. Power adapter
- c. Power cord
- d. VGA cable
- e. RJ45-DB9 cable (x2)
- f. Wall mount kit

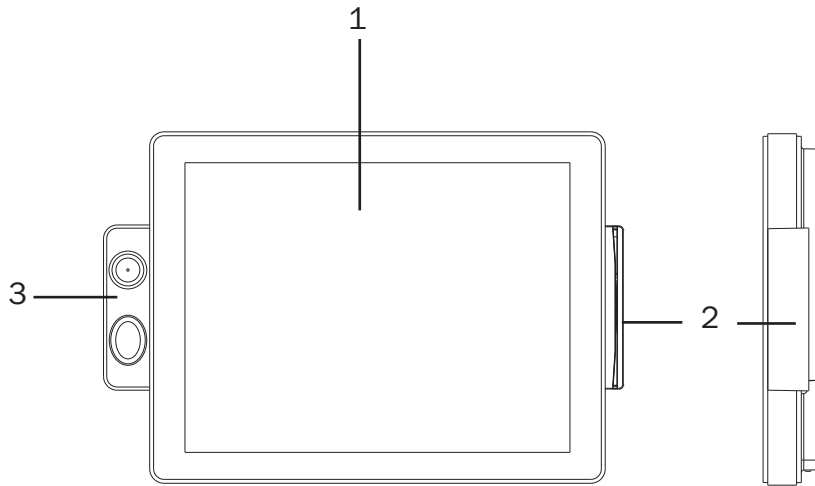
## 1-2. Optional Accessories



- a. MSR module
- b. SSD card
- c. Fingerprint module
- d. iButton module

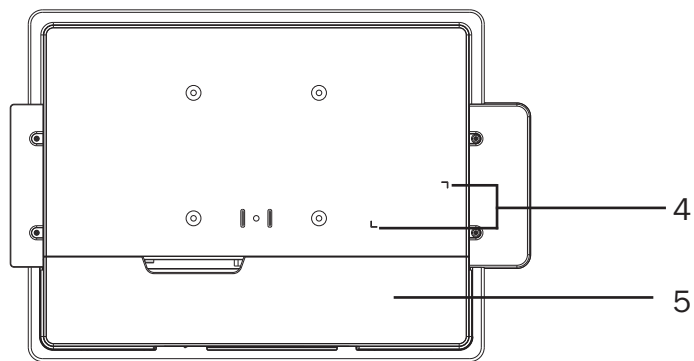
# 2. System View

## 2-1. Front & Side View



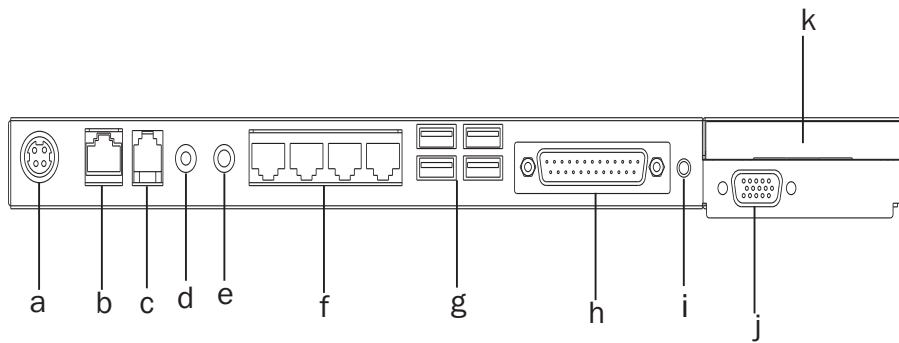
Item No.	Description
1	Touch screen
2	MSR module (optional)
3	Fingerprint or iButton module (optional)

## 2-2. Rear View with Stand



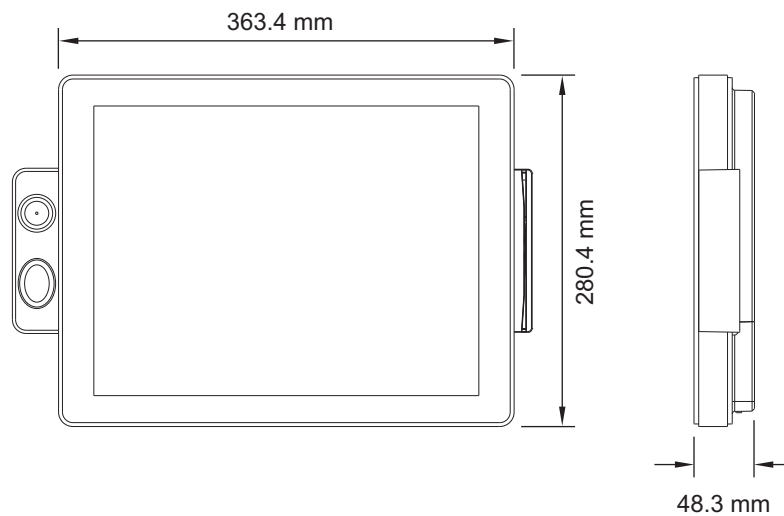
Item No.	Description
4	Safety label
5	Cable cover

## 2-3. I/O Ports View



Item No.	Description
a	DC IN
b	LAN
c	Cash drawer
d	MIC in
e	Line out
f	COM port 1, 2, 3, 4 (from left to right)
g	USB(x4)
h	Parallel
i	2nd power button
j	VGA
k	HDD slot

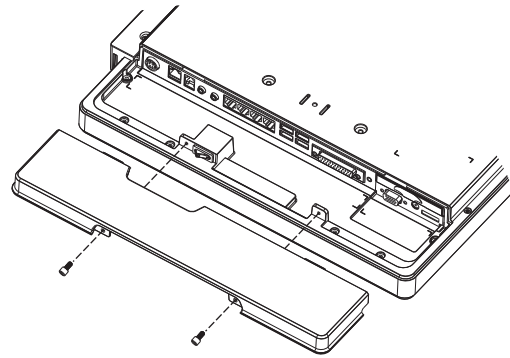
## 2-4. System Dimension



# 3. System Assembly & Disassembly

## 3-1. Open Cable Cover

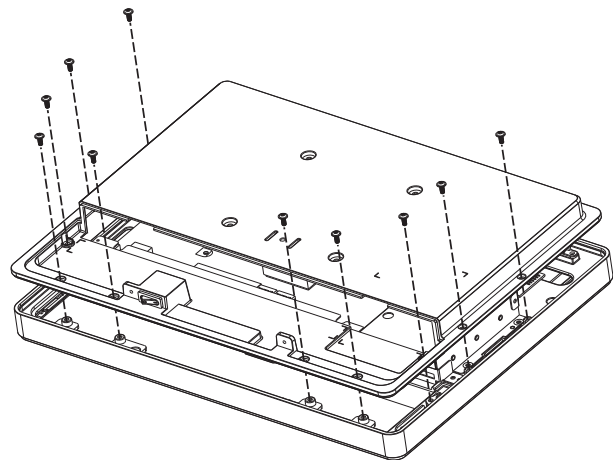
1. Place the system face down. Make sure not to scratch the screen.
2. Loosen the thumb screws(x2) to open the cable cover.



## 3-2. Open the System

To open the system, please open the cable cover firstly as steps described in chapter 3-1

1. Loosen the hex socket cap screws(M3x10) to open the rear rear cover of the system.

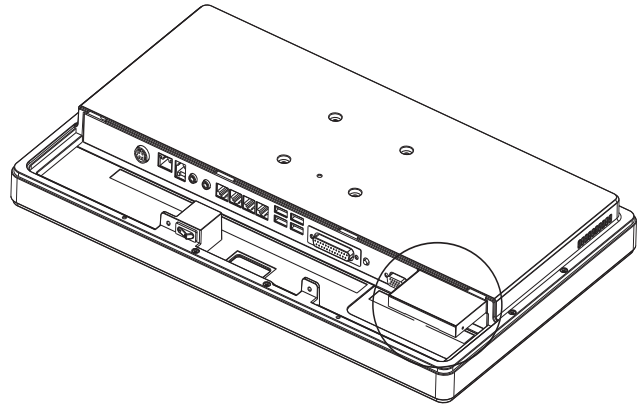


Note: If the system is equipped with MSR/ Fingerprint/ iButton, please remove them first.(refer to Chapter 4-1 and 4-2 and reverse the steps to remove the MSR/ Fingerprint / iButton)

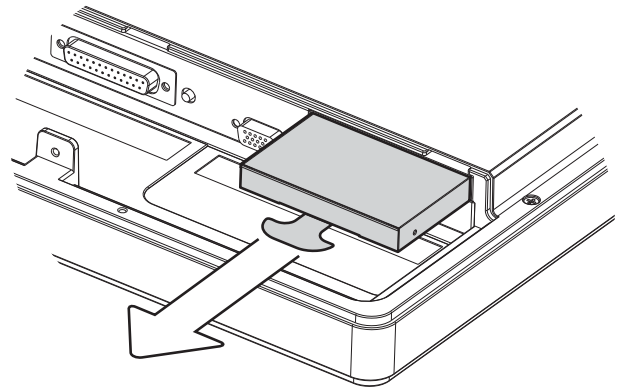
## 3-3. HDD Replacement

To remove and replace the HDD, please open the cable cover firstly as steps described in chapter 3-1

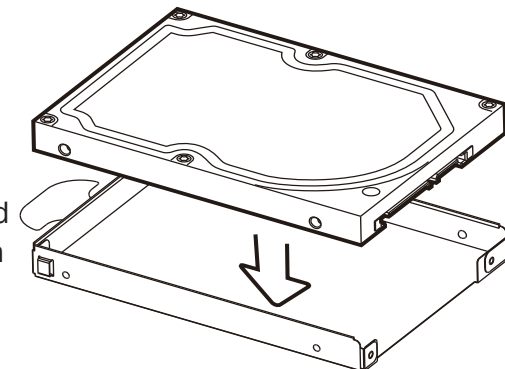
1. Power the system off. Find the HDD located at the right side.



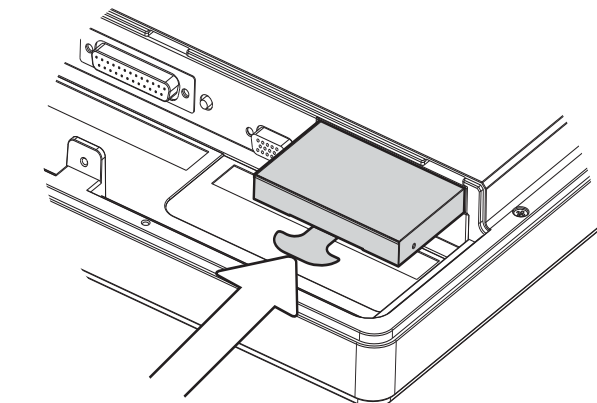
2. Pull the HDD tray from the system. For easier removal pull the plastic sheet (see picture) at the same time.



3. Attach the HDD to the HDD tray and slide it into the slot until it snaps in place.



- \* Please note the top of the HDD should be on the upper side.

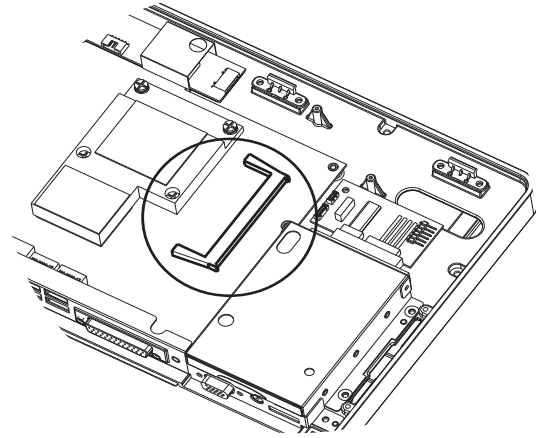


## 3-4. RAM Replacement

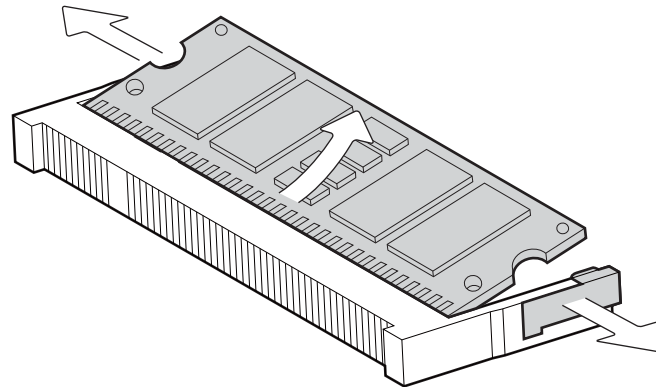
To remove and replace the RAM module, please open the rear cover firstly as steps dscribed in chapter 3-2.

### Removing a RAM module

1. Find the memory slot at the right side of the motherboard.

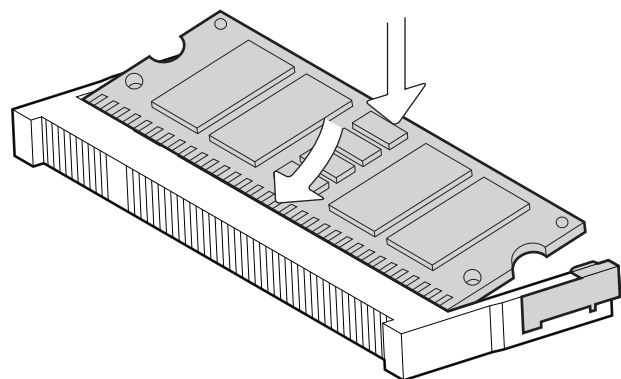


2. Flip the ejector clips outwards to remove the memory module from the memory slot.



### Installing a RAM module

3. Slide the memory module into the memory slot and press down until the ejector clips snaps in place.

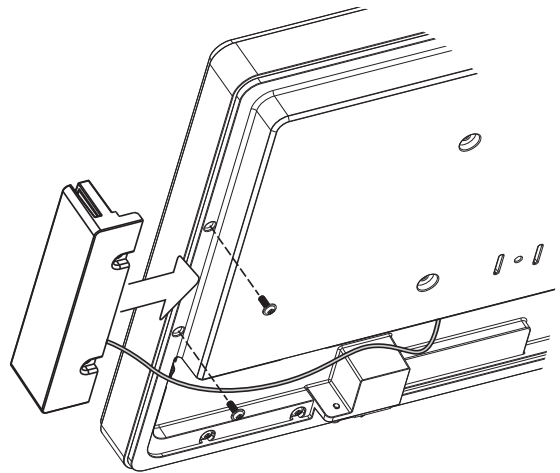


# 4. Peripheral Installation

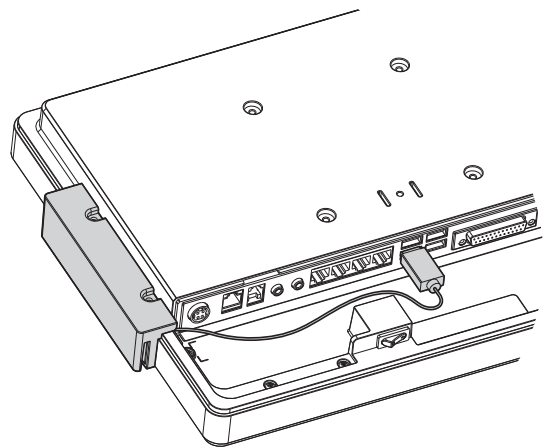
## 4-1. MSR Installation

MSR module can be installed to either side of the system. Choose one side and follow the steps below. Before the installation, please open the cable cover firstly as steps described in chapter 3-2

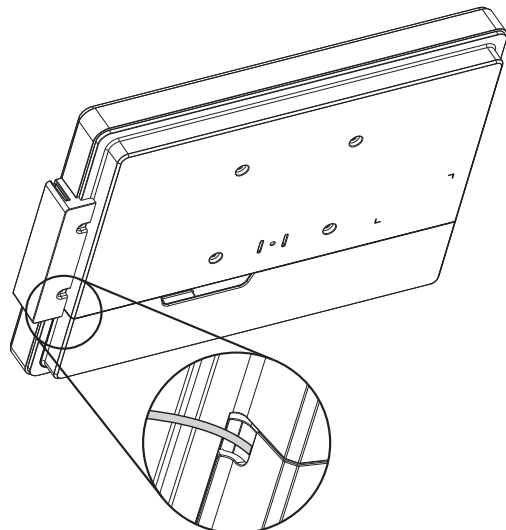
1. Insert MSR module in place and fasten the screws (M3x2) on the back to secure the module.



2. Connect MSR cable to the connector on system side.



3. Close the cable cover and fasten screws (x2). Make sure the MSR cable is threaded through the MSR cable hole on the system.

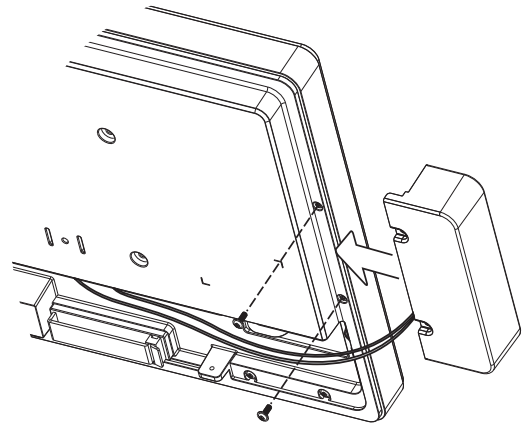




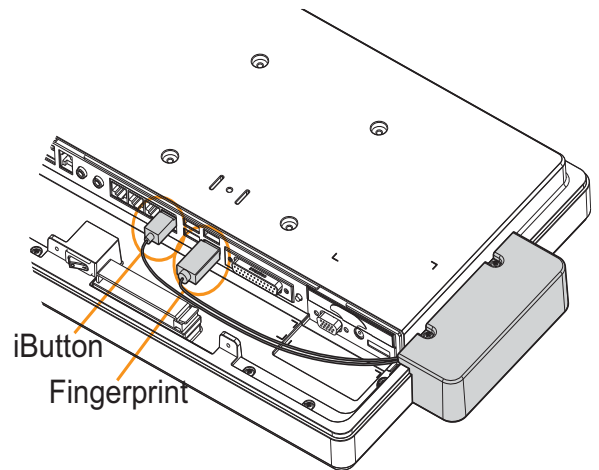
## 4-2. Fingerprint and iButton Installation

Fingerprint and iButton module can be installed to either side of the system. Choose one side and follow the steps below. Before the installation, please open the cable cover firstly as steps described in chapter 3-1

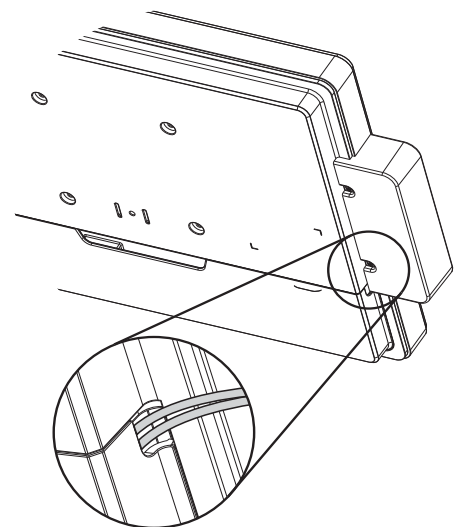
1. Insert Fingerprint and iButton module in place and fasten the screws (M3x2) on the back to secure the module.



2. Connect the iButton cable to the RJ45 COM port on the I/O panel, and connector the Fingerprint cable to the USB port.



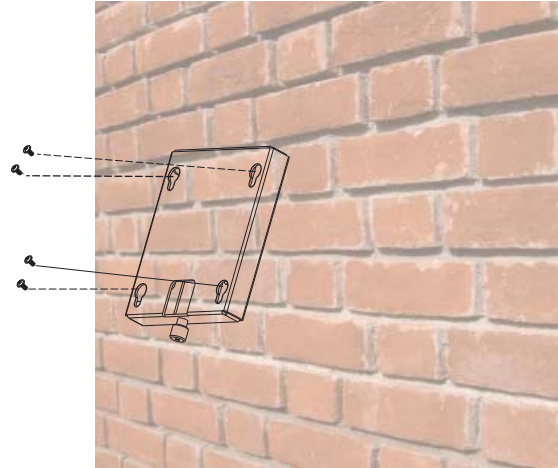
3. Close the cable cover and fasten screws (x2). Make sure the cables are threaded through the cable hole on the system.



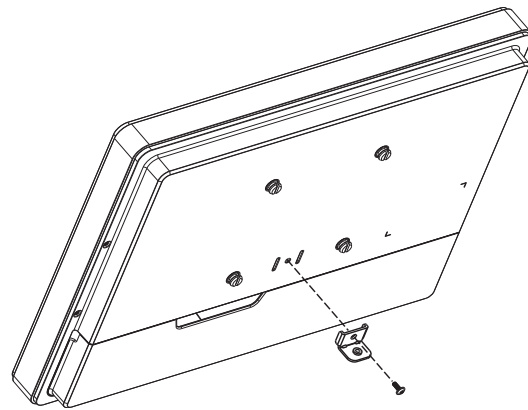
## 4-3. Wall Mount Kit Installation

The Wall Mount Kit includes a wall plate, a metal bracket, and one screw. (refer to Chapter 1-2 item c) Please follow the steps below for installation.

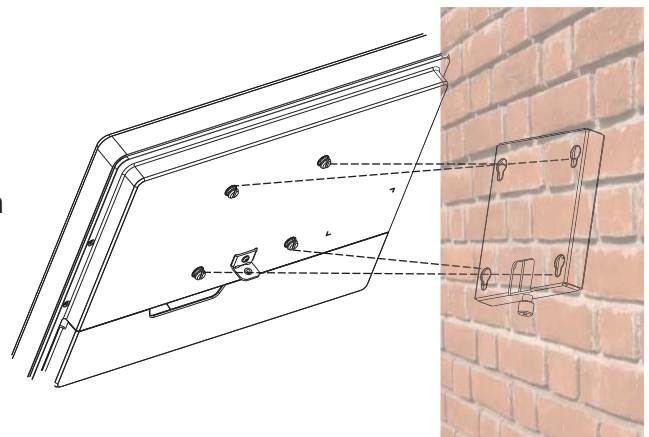
1. Secure the wall plate to the wall by fastening screws (M3x4)



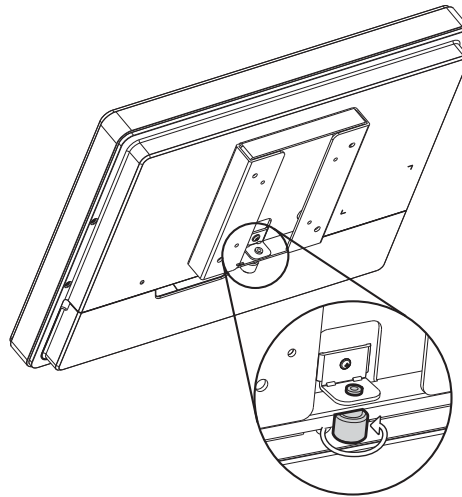
2. Attach the metal bracket to the back side of the system by fastening the screw (x1) as picture shown.



3. Align the large end of the teardrop mounting holes (x4) on the wall plate with the screws (x4) on the systems rear cover. Slide the wall plate until the screws are even with the narrow end.

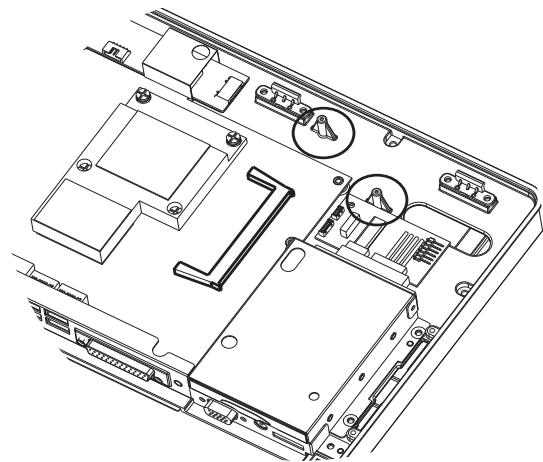


4. Fasten the screw (x1) through the metal bracket to secure the wall mount kit.

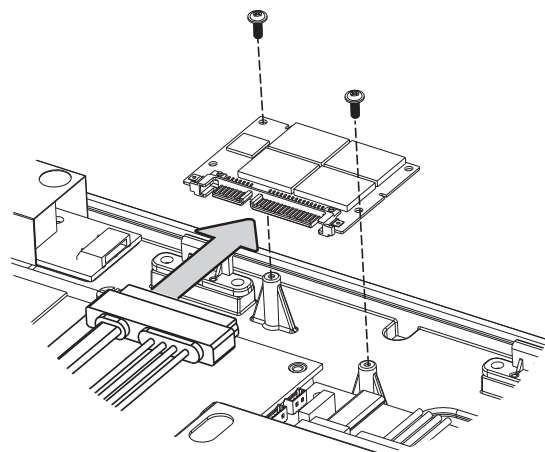


## 4-4. SSD Card Installation

1. Refer to Chapter 3-3 to open the system.
2. Find the two positioning pins on the system.



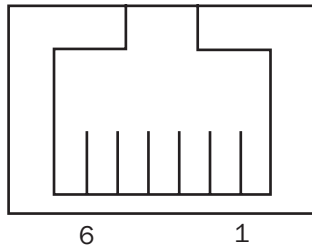
1. Insert the SSD card to the cable connector as shown by arrow.
2. Align the SSD card to the positioning pins and fasten the screws(x2) as picture shown.



# 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

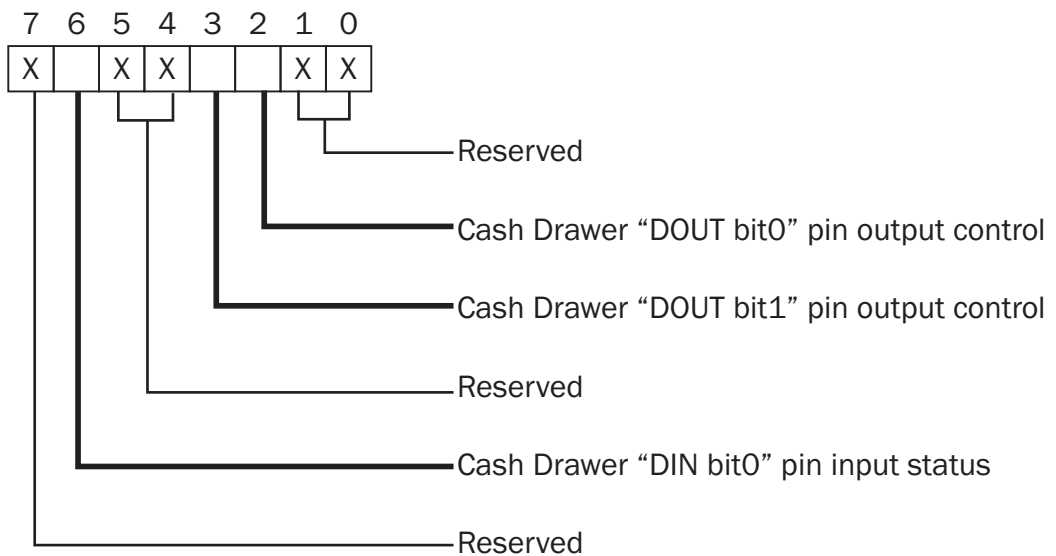
The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

**Register Location:** 48Ch

**Attribute:** Read / Write

**Size:** 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved	Read	Reserved		Write		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
<ul style="list-style-type: none"> <li>▶ Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by “DOUT bit0” pin control.</li> <li>▶ Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.</li> </ul>	

Command	Cash Drawer
I 48C	Check status
<ul style="list-style-type: none"> <li>▶ The I/O address 48Ch bit6 =1 mean the Cash Drawer is opened or not exist.</li> <li>▶ The I/O address 48Ch bit6 =0 mean the Cash Drawer is closed.</li> </ul>	

# 5. Specifications

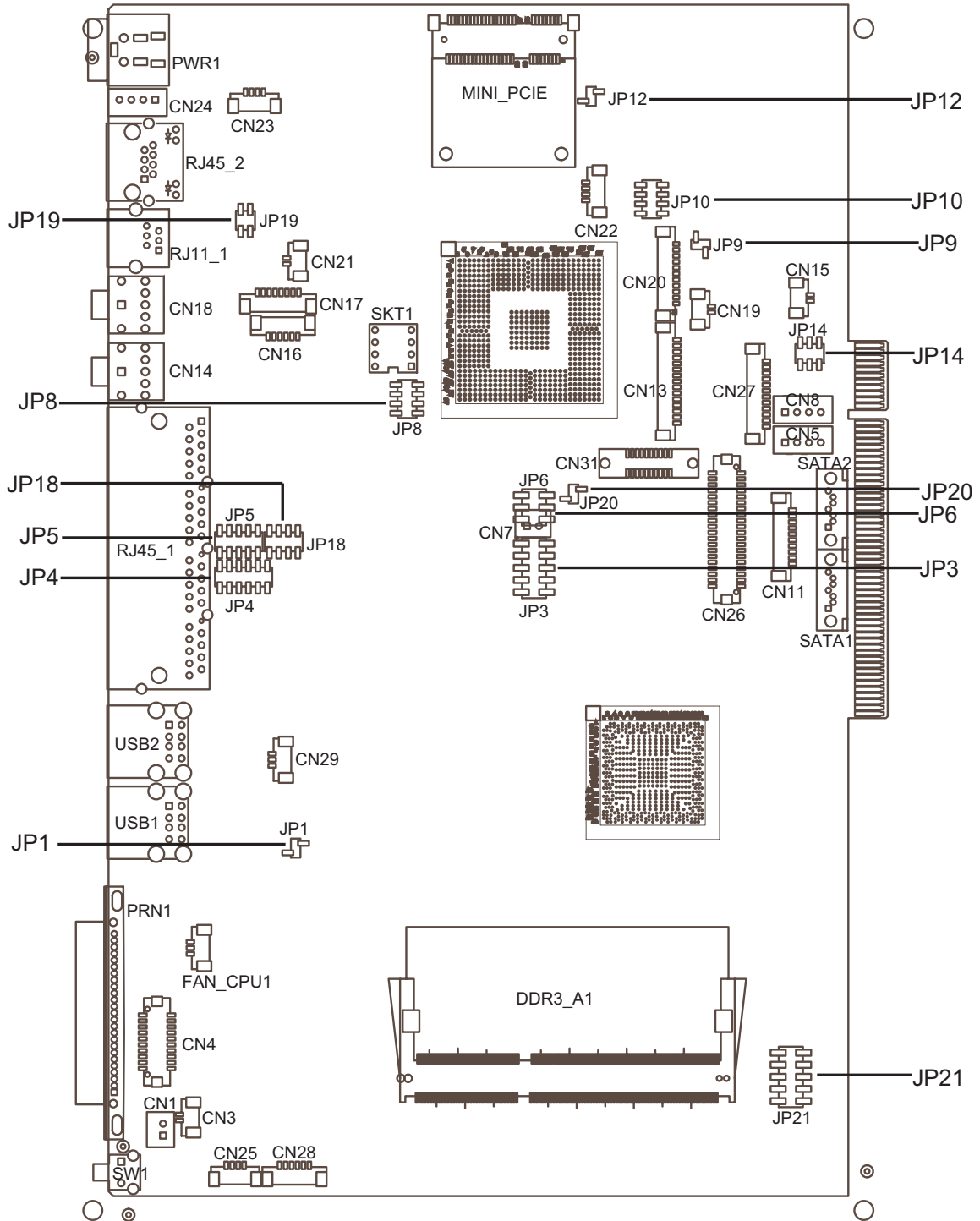
<b>Model</b>	<b>W-TOUCH</b>
<b>Motherboard</b>	<b>C48</b>
CPU Support	Intel PineTrail D525 1.8G L2 1M, Dual Core
Chipset	CPU with Graphic built-in + ICH 8M
System Memory	2 x DDR3 SO-DIMM up to 4GB FSB 800MHz
Graphic Memory	Shared system memory up to 256MB
<b>LCD Touch Panel</b>	
LCD Size	15" TFT LCD
Brightness	250nits
Maximal Resolution	1024 x 768
Touch Screen Type	Resistive
Tilt Angle	0° ~ 90°
<b>Storage</b>	
HDD	One 2.5" SATA HDD bay
Flash Memory	SATA SSD flash card (optional)
<b>Expansion</b>	
mini PCI-E	1
<b>External I/O Ports</b>	
USB	4 ports (V2.0)
Serial / COM	4 x RJ45 COM(COM1/COM2 standard RS-232 without power, COM3 /COM4 powered COM with power enable /disable by BIOS setting and +5V/+12V by MB setting.
Parallel	1
LAN (10 /100 / 1000)	1 x RJ45
DC Jack	1
2nd VGA	1 (Female)
Cash Drawer Port	1 x RJ 11 (12V /24V)
Audio Jack	1 x Line-out, 1 x Mic-in
<b>Power</b>	
Power Adapter	19V/90W
<b>Control / Indicator</b>	
Power Button	1
<b>Peripheral</b>	
MSR	3 Tracks MSR ( USB )
Fingerprint	Fingerprint (USB)
iButton	iButton (COM)
Second Display	8.4" / 15" 2nd display without touch (optional)
Customer Display	Flush mount VFD display 2 x 20 characters (COM)
<b>Environment</b>	
EMC & Safety	FCC, Class A, CE, LVD
Operating Temperature	5°C ~ 35°C (41°F ~ 95°F)
Storage Temperature	-20°C ~ 55°C (-4°F ~ 140°F)
Operating Humidity	20% ~ 80% RH non condensing
Storage Humidity	20% ~ 85% RH non condensing
Dimension (W x D x H)	363.4 x 280.4 x 48.3
Weight (N.W./G.W.)	7.4kgs / 8.4kgs
Mounting	100mm x100mm VESA mounting holes for Panel PC type
OS Support	Windows® XP Professional, Windows Embedded POSReady 2009, Windows XP Embedded, Windows XP Professional for Embedded, WinCE, Windows 2000 Professional for Embedded, Vista, Windows 7, Linux

\* This specification is subject to change without prior notice.

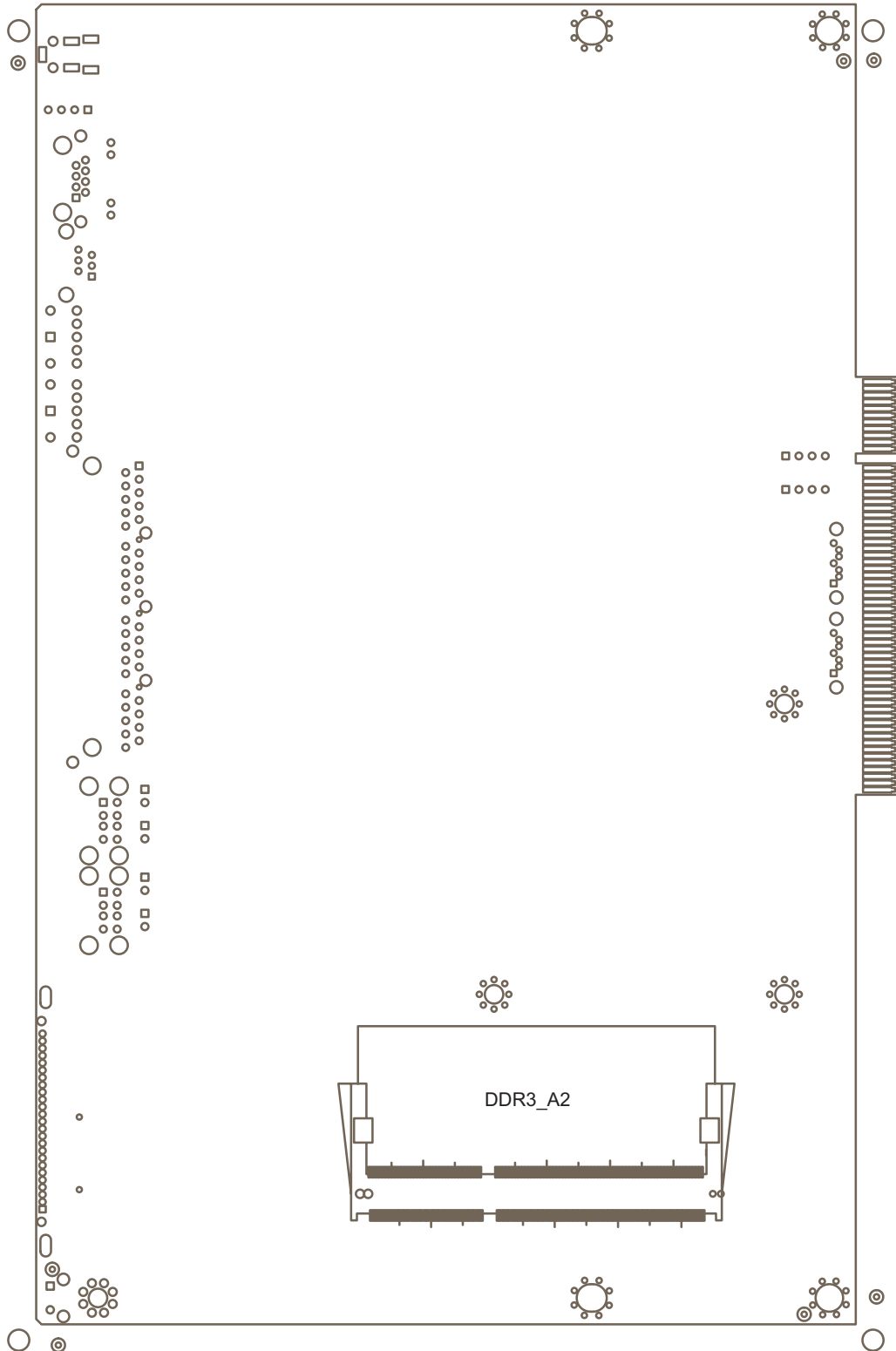
# 6. Jumper Setting

## 6-1. C48 Motherboard

### 6-1-1. Motherboard Layout



C48 V2.1 TOP LAYER



C48 V2.1 BOTTOM LAYER



## 6-1-2. Connectors & Functions

Connector	Purpose
CN1	Power Button Connector
CN3	Printer Port Reset
CN4	Printer Port
CN5/8	HDD Power
CN11	COM5 For Touch
CN13	Card Reader Connector
CN14	Line out
CN15	HDD LED
CN16	Speaker & MIC
CN18	MIC IN
CN20/JP10	System Indicator
CN22	USB Port
CN23	PS2 KEYBOARD
CN26	LVDS
CN27	Inverter Connector
CN29	System Fan
DDR3_A1	DDR3 SO-DIMM1
DDR3_A2	DDR3 SO-DIMM2
PRN1	Parallel Port
PWR1	+19V DC Jack
RJ11_1	Cash Drawer Connector
RJ45_1	COM1, COM2, COM3, COM4
RJ45_2	LAN
SATA1	SATA Connector
SATA2	SATA Connector
USB1	USB1, USB2
USB2	USB3, USB4
SW1	Power Button
JP1	CMOS Operation Mode
JP3/6	VGA Port
JP4/5	COM2 RS232/485/422 Setting
JP8	LCD ID Setting
JP9	Power Mode Setting
JP12	System Reset
JP14	Inverter Selection
JP18	COM3/4 Power Setting
JP19	Cash Drawer Power Setting

## 6-1-3. Jumper & BIOS/Utility Setting

### COM2 RS232/485/422 Setting

Function	JP5	JP4																						
▲ RS232	<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	<table border="1"> <tr> <td>1</td> <td>3</td> <td>5</td> <td>7</td> <td>9</td> <td>11</td> </tr> <tr> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> </tr> </table>	1	3	5	7	9	11	2	4	6	8	10	12
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RS485	<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	<table border="1"> <tr> <td>1</td> <td>3</td> <td>5</td> <td>7</td> <td>9</td> <td>11</td> </tr> <tr> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> </tr> </table>	1	3	5	7	9	11	2	4	6	8	10	12
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1	3	5	7	9	11																			
2	4	6	8	10	12																			
RS422	<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	<table border="1"> <tr> <td>1</td> <td>3</td> <td>5</td> <td>7</td> <td>9</td> <td>11</td> </tr> <tr> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> </tr> </table>	1	3	5	7	9	11	2	4	6	8	10	12
1	3	5	7	9																				
2	4	6	8	10																				
1	3	5	7	9	11																			
2	4	6	8	10	12																			

### COM3 & COM4 Power Setting

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 JP18 on the motherboard.

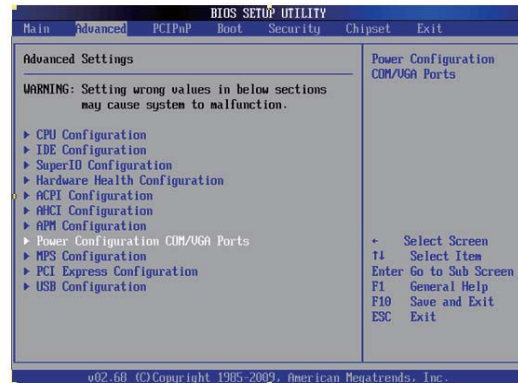
When enabled, the power is available on pin 10 of the RJ45 serial connector..

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.

### BIOS/Utility setup

1. Press <DEL> key to enter BIOS SETUP UTILITY when system boot up.
2. Find tab "Advanced".
3. Select "Power Configuration COM/ VGA Ports" and press <Enter> to go to sub screen.



4. To switch on the power, select "Power". Please save the change before exiting BIOS so as to go for physical jumper adjustment.



### COM3/COM4 Jumper setup

Function		JP18								
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							

Function	JP1		
▲ CMOS Normal	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> </table>	1	2
1			
2			
CMOS Reset	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> </table>	1	2
1			
2			

▲ = Manufacturer Default Setting

### Cash Drawer Power Setting

Function	JP19				
+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				

### Power Mode Setting

Function	JP9		
▲ ATX Power	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> </table>	1	2
1			
2			
AT Power	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> </table>	1	2
1			
2			

### System Indicator

Function	JP10								
▲ Disable	<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						
Enable	<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						

### Inverter Selection

Function	JP14						
▲ 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					



▲ = Manufacturer Default Setting

## CMOS Operation Mode

### CMOS Reset

To clear the CMOS,

1. Remove the power cable from the system.
2. Open the system, and set the 'CMOS Operation jumper' from 'CMOS Normal' to 'CMOS Reset'. (refer to the jumper shown below)
3. Connect the power cable to the system, and power on the system:  
in ATX mode: press the power button and it will fail power on  
in AT mode: turn on system power
4. Remove the power cable from the system.
5. Return the "CMOS Operation mode" jumper setting from "CMOS Reset" to "CMOS normal".
6. Connect the power cable and power on the system.

Function	JP1
▲ CMOS Normal	
CMOS Reset	

▲ = Manufacturer Default Setting

## LCD ID Setting

Several configurations are applied to different sizes of panel. Please refer to the followings to complete relevant settings.

Resolution	LVDS		Output Interface	JP8
	Bits	Channel		
800 x 600	24	Single	1st: LCD Panel 2nd: VGA port	1 3 5 7 2 4 6 8
1024 x 768	24	Single		1 3 5 7 2 4 6 8
1366 x 768	24	Single		1 3 5 7 2 4 6 8
800 x 600	18	Single		1 3 5 7 2 4 6 8
*800 x 600	18	Single		1 3 5 7 2 4 6 8
1024 x 768	18	Single		1 3 5 7 2 4 6 8
1280 x 1024	24	Dual	1st: VGA port	1 3 5 7 2 4 6 8

\*remark: specialized for Sharp 12.1" LQ121S1LG41/LQ121S1LG42 panel.

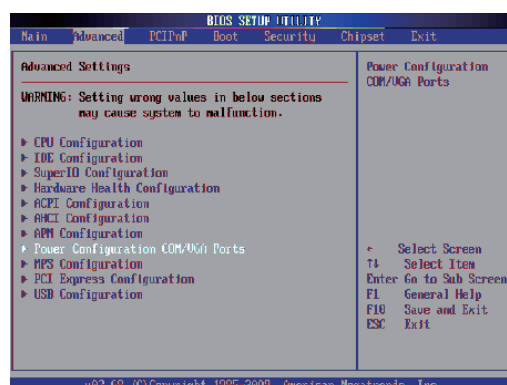
1 Jumper open      1 Jumper short  
2 Jumper short      2 Jumper open

## 2nd VGA Power Setting

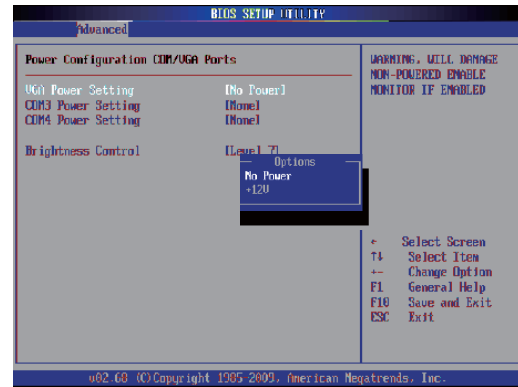
VGA port power must be on through BIOS/Utility for default is "No Power".

### BIOS/Utility setup

1. Press <DEL> key to enter BIOS SETUP UTILITY when system boot up.
2. Find tab "Advanced".
3. Select "Power Configuration COM/ VGA Ports" and press <Enter> to go to sub screen.



- To switch on the power, select "+12V". Please save the change before exiting BIOS to avoid data lost.



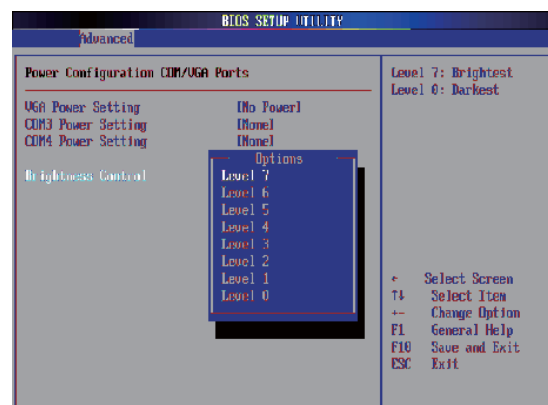
### LCD Brightness Control Setting

Please note Brightness Control can only be set by setting jumper JP14 for CCFL on the motherboard C48 V2.1. By default, the inverter is CCFL on the motherboard jumper setting.

- Power on the system, and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
- Select the Advanced tab.
- Select Power Configuration COM/ VGA Ports and press <Enter> to go to display the available options.



- To change the brightness, select "Brightness Control" and press <Enter>. Choose the desired brightness level (0~7) press <Enter>. Save the change by pressing F10.  
NOTE: the new brightness will take effect after the system has restarted.

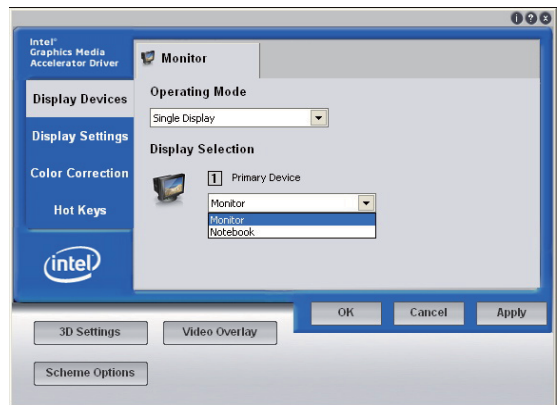


## Intel Graphics Driver Setting

1. Right click Desktop. Find "Graphics Properties" and enter the menu.



2. Make sure the Display Device is same as follows.



No.	Output Interface	Connector & Jumper	Intel Graphics Driver Device Name
1st	LCD Panel	CN26	Notebook
2nd	VGA Port	JP3/6	Monitor



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

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