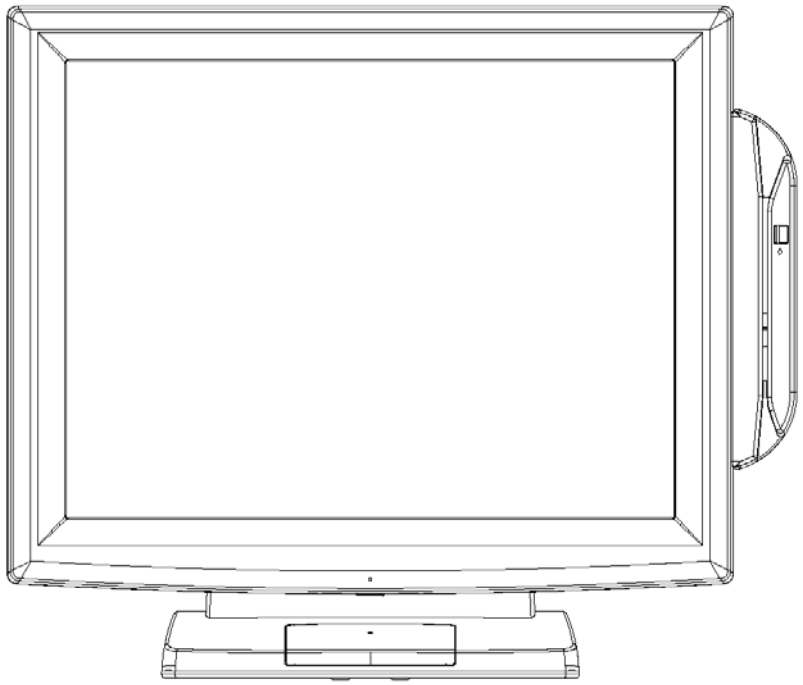
User Manual

Version 1.0 July 2011

Model No. OP15P

Point-of-Sale Hardware System



Copyright 2011
All Rights Reserved
Manual Version 1.0
Part Number:

The information contained in this document is subject to change without notice.
We make no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. We shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced or translated to another language without the prior written consent of the manufacturer.

TRADEMARK

Intel®, Pentium® and MMX are registered trademarks of Intel® Corporation. Microsoft® and Windows® are registered trademarks of Microsoft Corporation.
Other trademarks mentioned herein are the property of their respective owners.

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

CE

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.

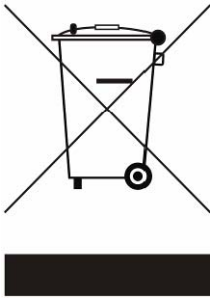
Safety Caution

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	July, 2011	● Release (C46 M/B)

Table Contents

1 Item Checklist 1

1-1 Standard Items 1
1-2 Optional Items 2

2 System View 3

2-1 Front View 3
2-2 Rear View 4
2-3 Bottom View 5
2-4 I/O View 6

3 Peripheral Installation 7

3-1 MSR 7
3-2 VFD 8
3-3 Second Display 10
3-4 Cash Drawer 12
3-5 Wall Mount Kit 14

4 System Assembly & Disassembly 15

4-1 Replace the HDD 15
4-2 Remove the System Stand 16
4-3 Remove the LCD Rear Cover & the System Box 17
4-4 Replace the Motherboard 18
4-5 Replace the Inverter Board 18
4-6 Replace the Touch Board 19
4-7 Replace the LCD Panel 20

5 Specification 21

6 Jumper Settings 23

6-1 C46 Motherboard 23

7 BIOS Settings 28

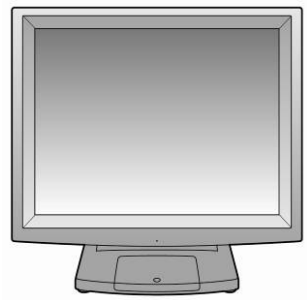
Appendix 30

1 Item Checklist

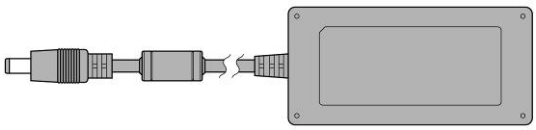
Take the system unit out of the carton. Remove the unit from the carton by holding it by the foam inserts. The following contents should be found in the carton:

1-1 Standard Items

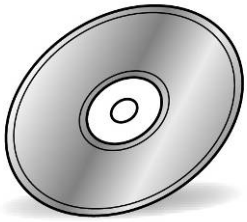
a.



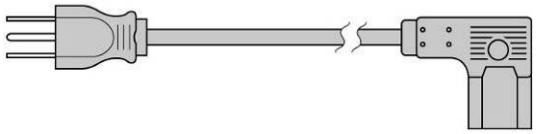
c.



b.



d.



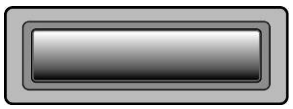
e.

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

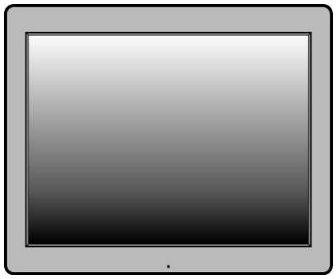
1-2 Optional Items

a.

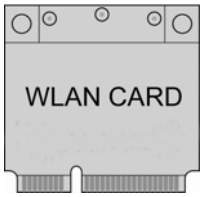
b.



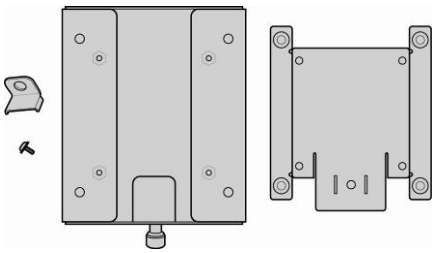
c.



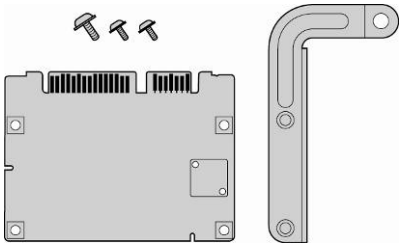
d.



e.



f.



a. MSR Module
b. VFD Module
c. Second Display
d. Wireless LAN Card
e. Wall Mount Kit
f. SSD Card Module

2 System View

2-1 Front View

Number	Description
1	Touch Screen
2	MSR Module (Option)
3	Hard Disk Drive Cover

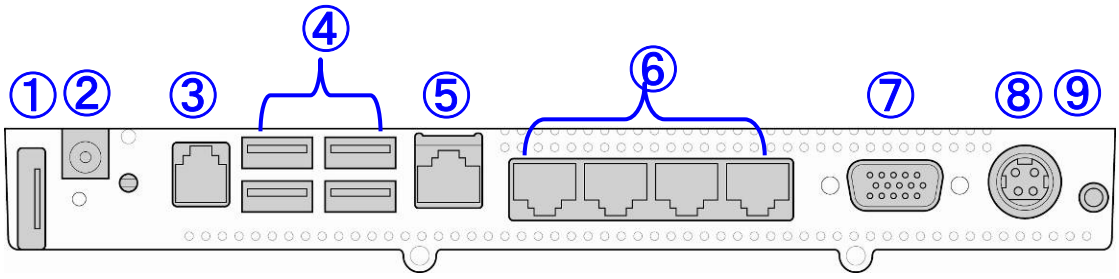
2-2 Rear View

Number	Description
4	VFD Cover (for VFD & Second Display installation)
5	Stand/Wall Mount Kit Installing Place
6	Stand
7	Cable Management Outlet

2-3 Bottom View

Number	Description
8	Stand Pad

2-4 I/O View



Number	Description
1	E-SATA connector
2	Power Jack for HDD
3	Cash Drawer
4	USB x 4
5	LAN
6	COM1~4 (from left to right)
7	VGA
8	Power Jack for System
9	Power Button

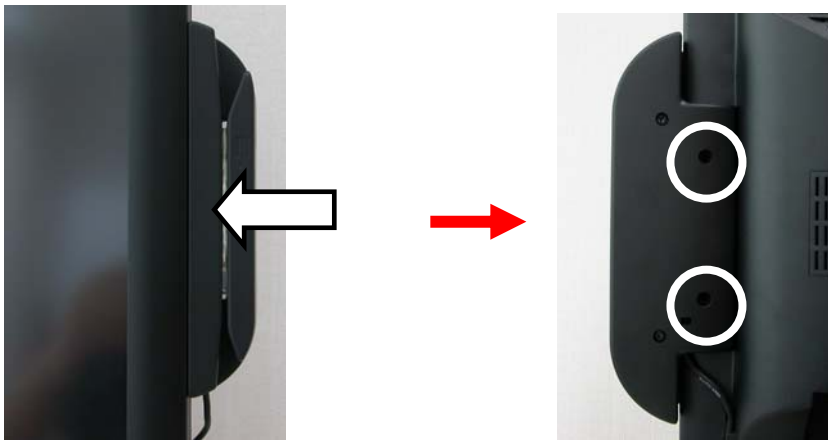
Note: The maximum current that can be drawn from each COM port is 500 mA.

3 Peripheral Installation

The peripheral and modules units provided are tested and can be supplied at your request. ⇦

3-1 MSR

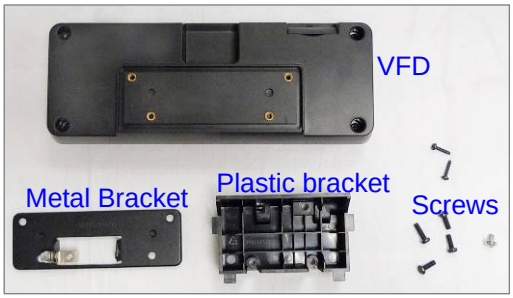
Components of MSR Kit:

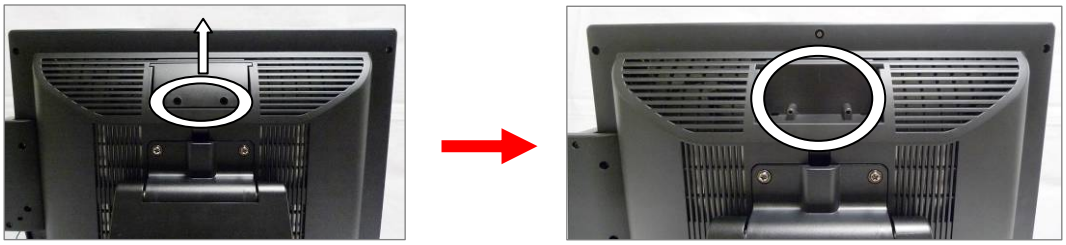


1. Slide the MSR into the right position of the System.
2. Fasten the screws (x2).

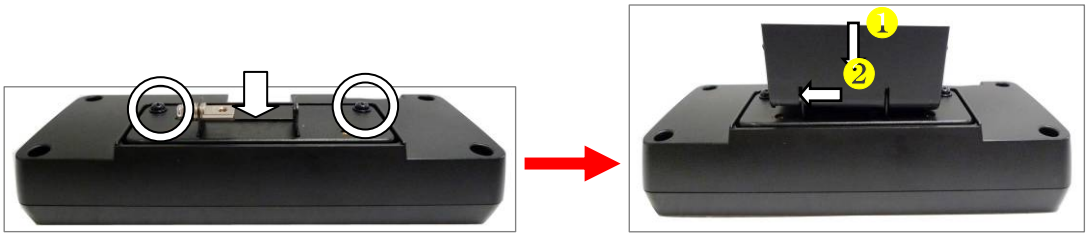
3-2 VFD

Components of VFD Kit:

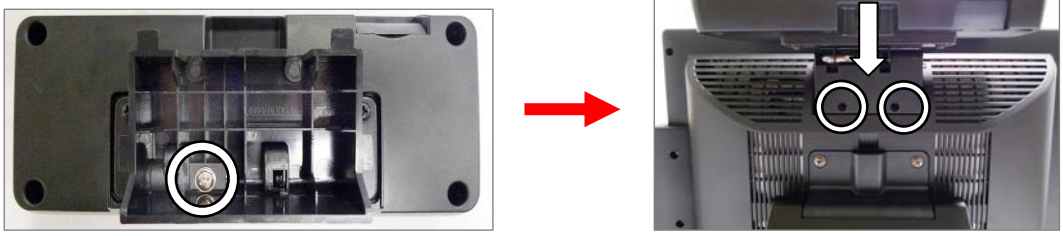




1. Remove the screws (x2) and slide the VFD Cover outward.

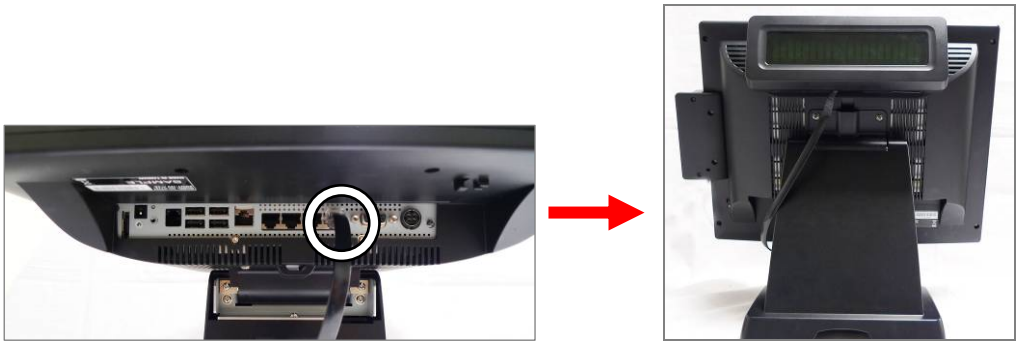


2. Positioning the VFD metal bracket onto the rear side of the VFD module and fasten the screws (x2).
3. Positioning the plastic bracket onto the metal bracket as the direction and steps of arrows show.



4. Fasten the screw (x1) to fix the plastic bracket to the metal bracket and VFD module.
5. Slide the MSR module with bracket into the VFD socket.
6. Fix the MSR module by fasten the screws (x2) as circles show.

7. Connect the VFD cable to the VFD Module.

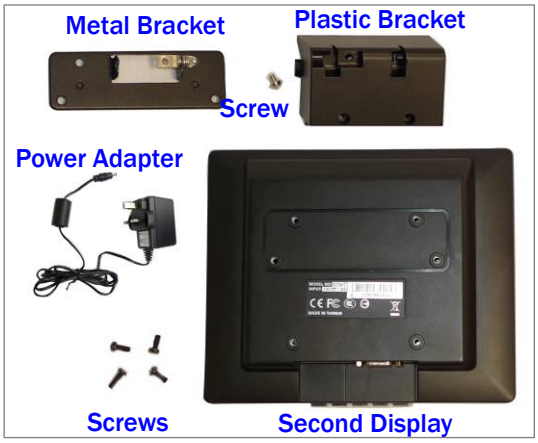


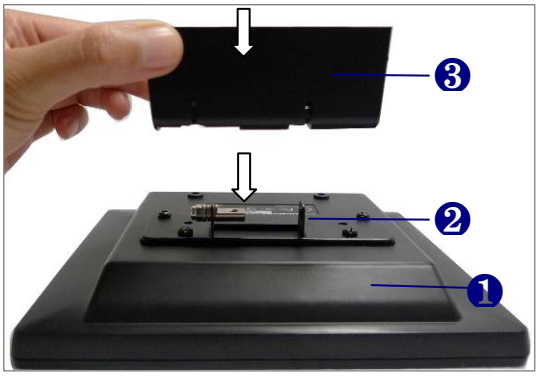
8. Connect to the COM4 port of the System.

3-3 Second Display

To install the Second Display, please open the VFD cover first (Chapter 3-2-1).

Components of Second Display Kit with power adapter:





Fix the parts of Second Display modules as steps ❶ → ❷ → ❸

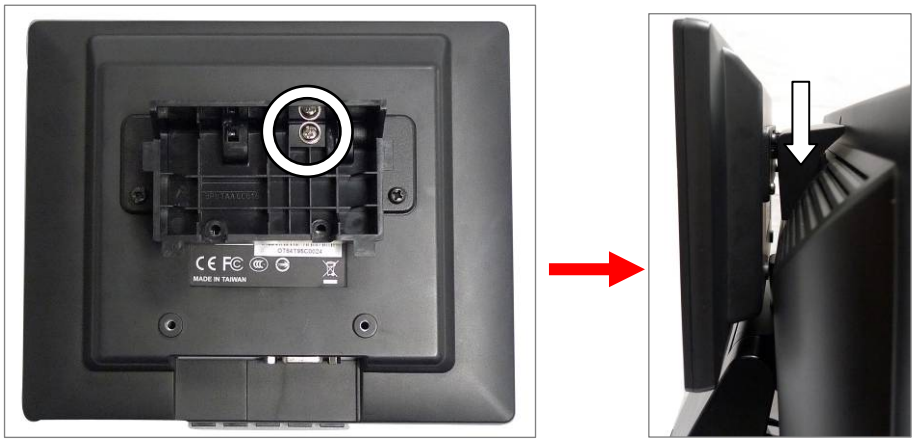
1. as above left picture shows. (detail steps as below)

❶ Put the second display upside down.

❷ Place the metal bracket onto the rear side of the second display and fasten the screws (x4) to fix metal bracket with the system.

❸ Align the plastic bracket into the right position of metal bracket.

(a) Align the plastic bracket onto the metal bracket.
(b) Push to left until the click sound appears.



2. Fasten the screw (x1) to fix the platic bracket and Second Display module with metal bracket.
3. Slide the Second Display Module into the slot.

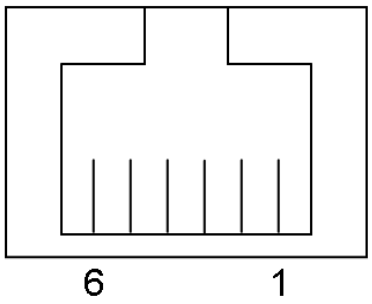
4. Fasten the scrws (x2) to fix the Second Display moudle with the System.
5. Connect the VGA cable to the Second Display Module and the System.

6. Finish.

3-4 Cash Drawer

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

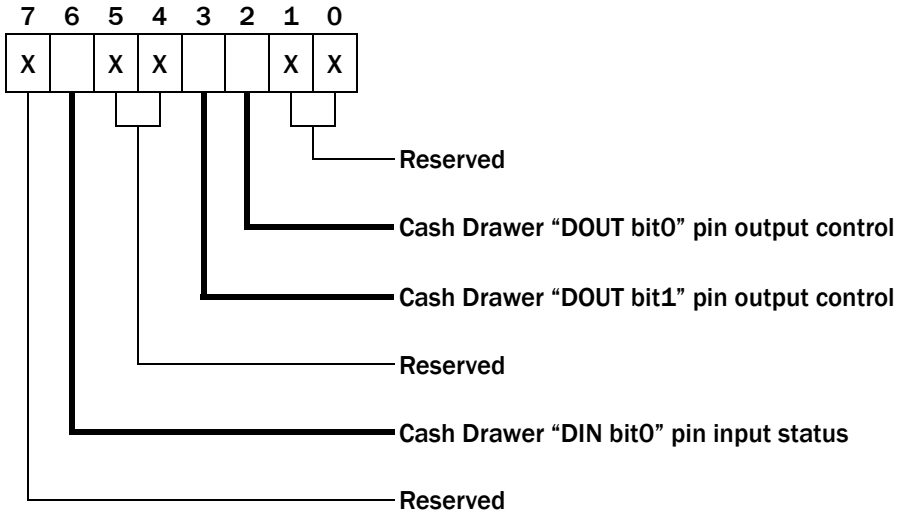
The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

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

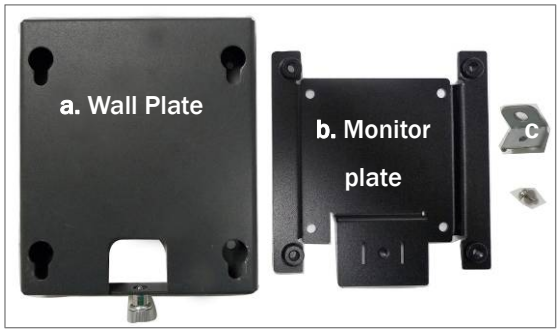
Command	Cash Drawer
O 48C 04	Opening
O 48C 00	Allow to close
➢ Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by “DOUT bit0” pin control. ➢ Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.	

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

3-5 Wall Mount Kit

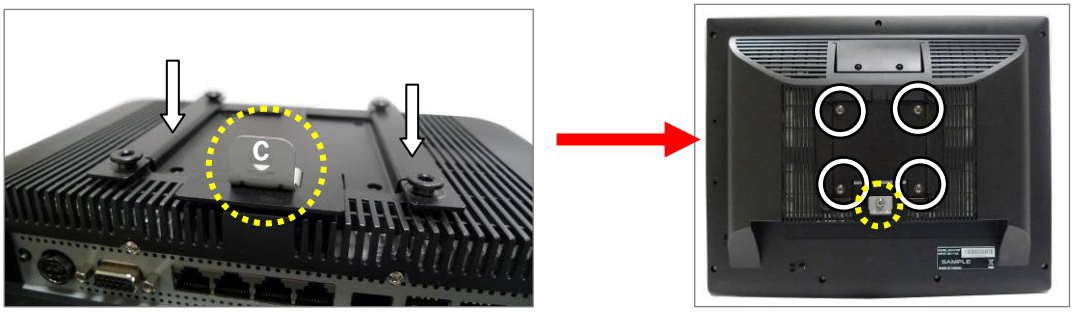
Before installing the Wall Mount Kit, please remove the stand first if needed. (See Chapter 4-3 for removing the stand)

(Parts of Wall Mount Kit)

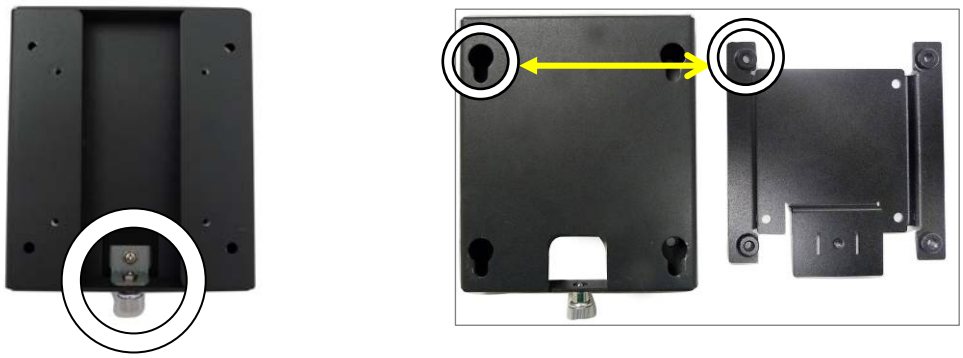


(Place to install)

1. Components of VESA-standard wall mount kit includes follows.
   a. Wall-mounting plate
   b. Monitor-mounting plate & screws
   c. Screw metal bracket
2. The wall mount Kit installing place is at the rear side of the system.



3. Place “b” which has 4 fixed hooks onto the rear side of the LCD rear cover.
4. Place “c” onto the hole of the monitor plate as the position as picture shows and fasten the screw (x1).
5. Fasten the screws (x4) to fix the monitor plate.

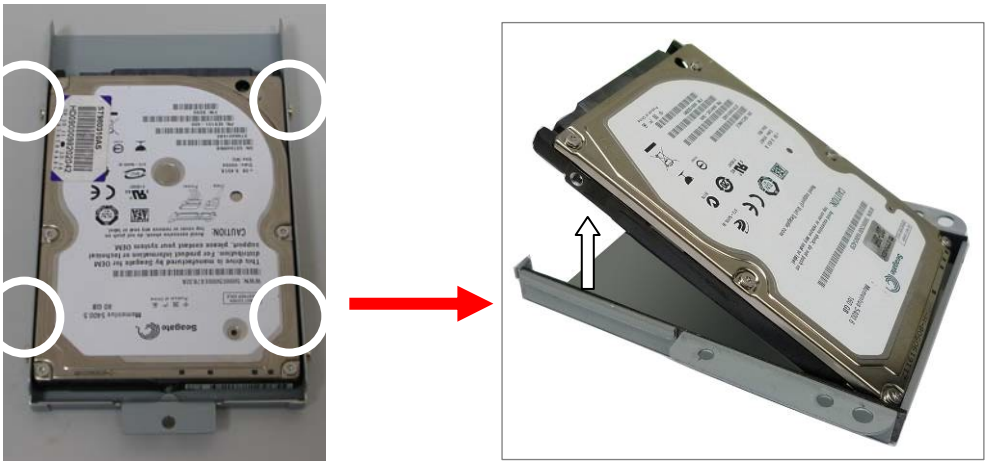


6. Fix “a” on the wall at your request.
7. Fasten the thumb screw (x1).
8. Align the hooks of “monitor plate” into the keyholes of the “wall plate”.

4 System Assembly & Disassembly

4-1 Replace the HDD

1. Unfasten the screw (x1).
2. Slide out the HDD Cover.



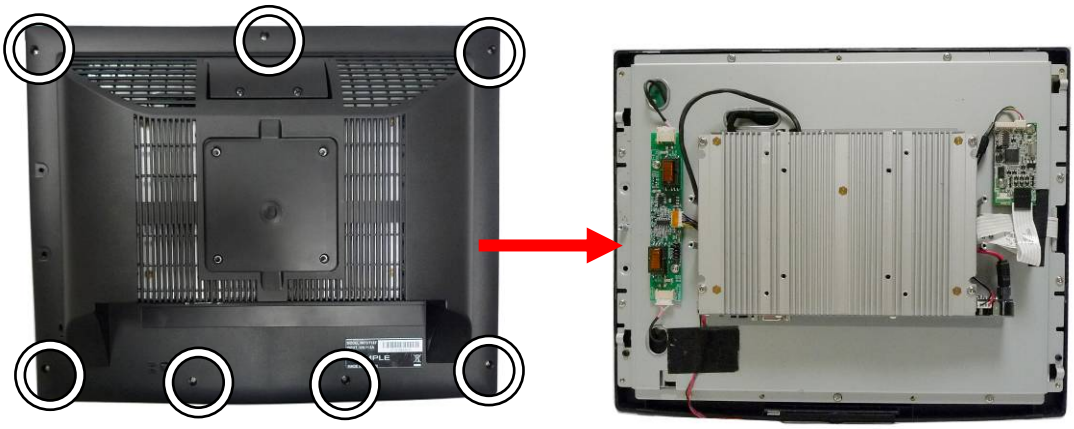
3. Unfasten the screws (x4)
4. Separate the HDD from the metal bracket.

4-2 Remove the System Stand

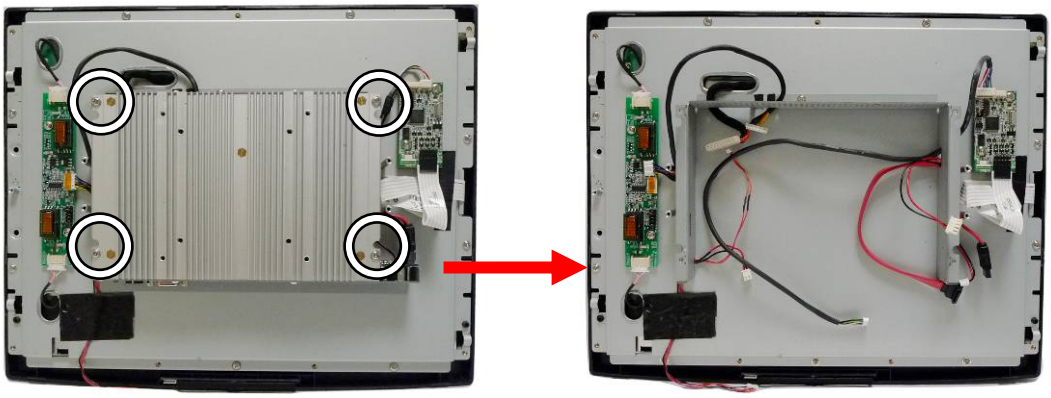
1. Release the screws (x2) that fasten the stand and the system.
2. Release the screws (x4) that fasten the plastic VESA mounting plate and the LCD rear cover.

3. Remove the VESA metal bracket,.

4-3 Remove the LCD Rear Cover & the System Box

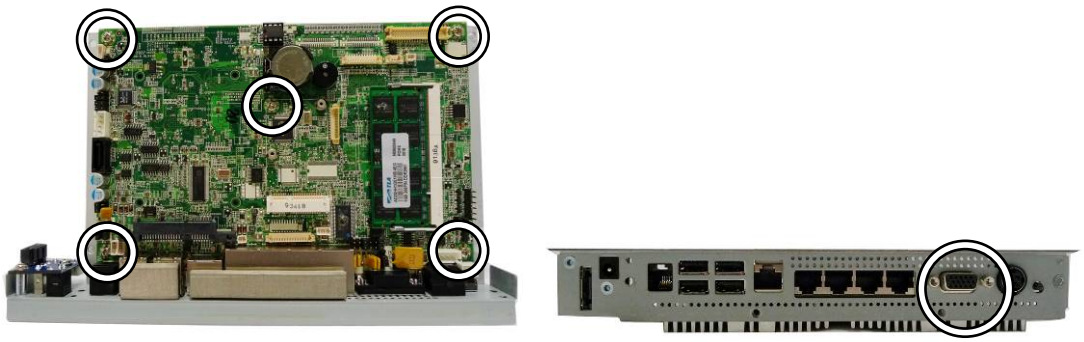


1. Remove the system stand (Chapter 4-3).
2. Unfasten the screws (x7) to separate the LCD Rear Cover.
3. After remove the LCD Rear Cover, you will see the “system box” inside. Inside of the system box is the motherboard place.



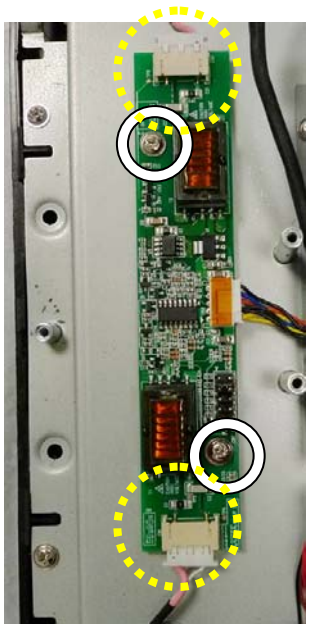
4. Unfasten the scrws (x4) at both sides of the system box to uncover the Motherboard.
5. **Gently** flip up the system box.
   Note: Please release all the connectors on the Motherboard before you completely open the system box.

4-4 Replace the Motherboard



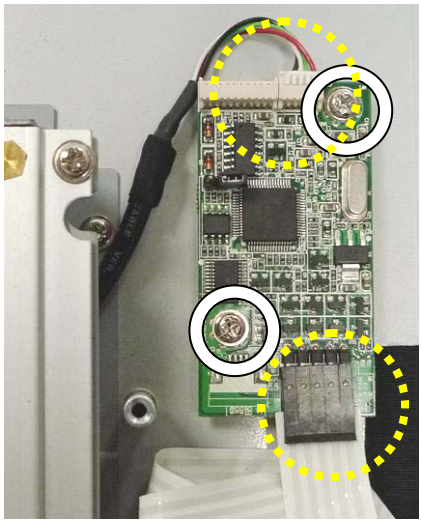
1. To open the LCD rear cover & system box first as steps in Chapter 4-3.
2. Unfasten the screws (x5) on the Motherboard.
3. Unfasten the hex screws (x2) to release the I/O metal panel from the Motherboard.

4-5 Replace the Inverter Board



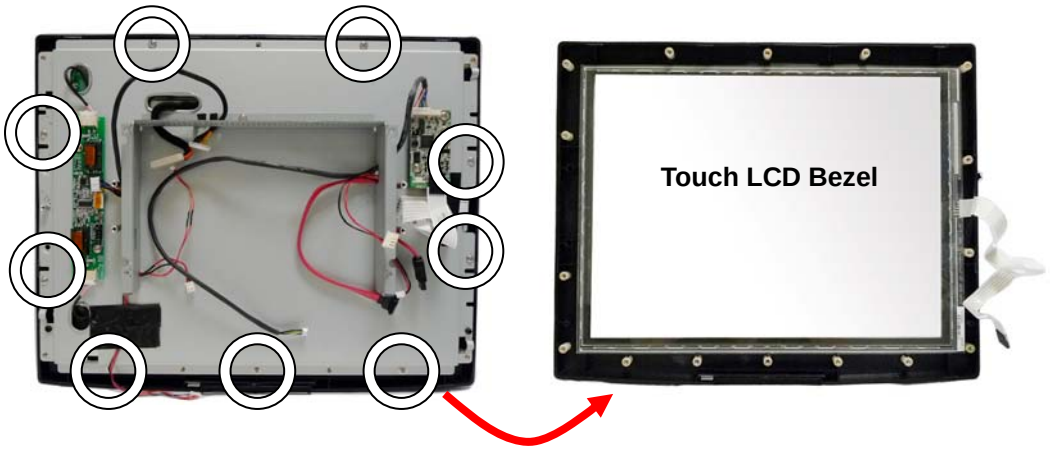
1. To open the LCD rear cover first (see Chapter 4-3).
2. Unfasten the screws (x2).
3. Release the backlight connectors (x2).

4-6 Replace the Touch Board



1. Open the LCD rear cover first (see Chapter 4-3).
2. Unfasten the screws (x2).
3. Release the connectors (x2).

4-7 Replace the LCD Panel



1. Remove the LCD rear Cover (Chapter 4-3)
2. Remove the system box and release all the connectors on the Motherboard (Chapter 4-3)
3. Release inverter cables & touch cables (Chapter 4-5 and 4-6)
4. Remove the screws (x9) to separate the Touch LCD bezel from the LCD Panel Module.

5. Release the screws (x4) that fix the sheet metal bracket to separate it from the LCD Panel.

5 Specification

Model Name	OP15P
Motherboard	C46
CPU Support	Intel Pine View D525 Duo Core 1.8G, L2 1M, FSB667 / 800MHz
Chipset	CPU integrated graphic + ICH8M
System Memory	1 x DDR3 SO-DIMM socket up to 2GB
Graphic Memory	Intel GMA 3150 share system memory up to 256MB
LCD Touch Panel	
LCD Size	15” TFT LCD
Brightness	250nits
Maximal Resolution	1024 x 768
Touch Screen Type	Resistive
Tilt Angle	4° ~ 84°
Storage	
HDD	One 2.5" SATA HDD bay
Flash Memory	SATA SSD flash card (Option)
Expansion	
PCI-E Socket	1
External I/O Ports	
USB	4 ports (V2.0)
Serial / COM	4 x RJ-45 COM connectors (COM1 & COM2 standard RS-232; COM3 & COM4 pin10 with 5V /12V power by BIOS)
LAN (10 /100 / 1000)	1 x RJ45
DC Jack	1
E-SATA interface	DC-OUT, E-SATA
2nd VGA	1 (DB-15 Femal, power by BIOS configuration)
Cash Drawer Port	1 (12V/24V cash drawer power by BIOS configuration)
Audio	
Speaker	2 x 2W speakers (Option)
Power	
Power Adapter	65W, 19V/3.4A
Control / Indicator	
Power Button	1
Indicator LED	1
Peripheral	

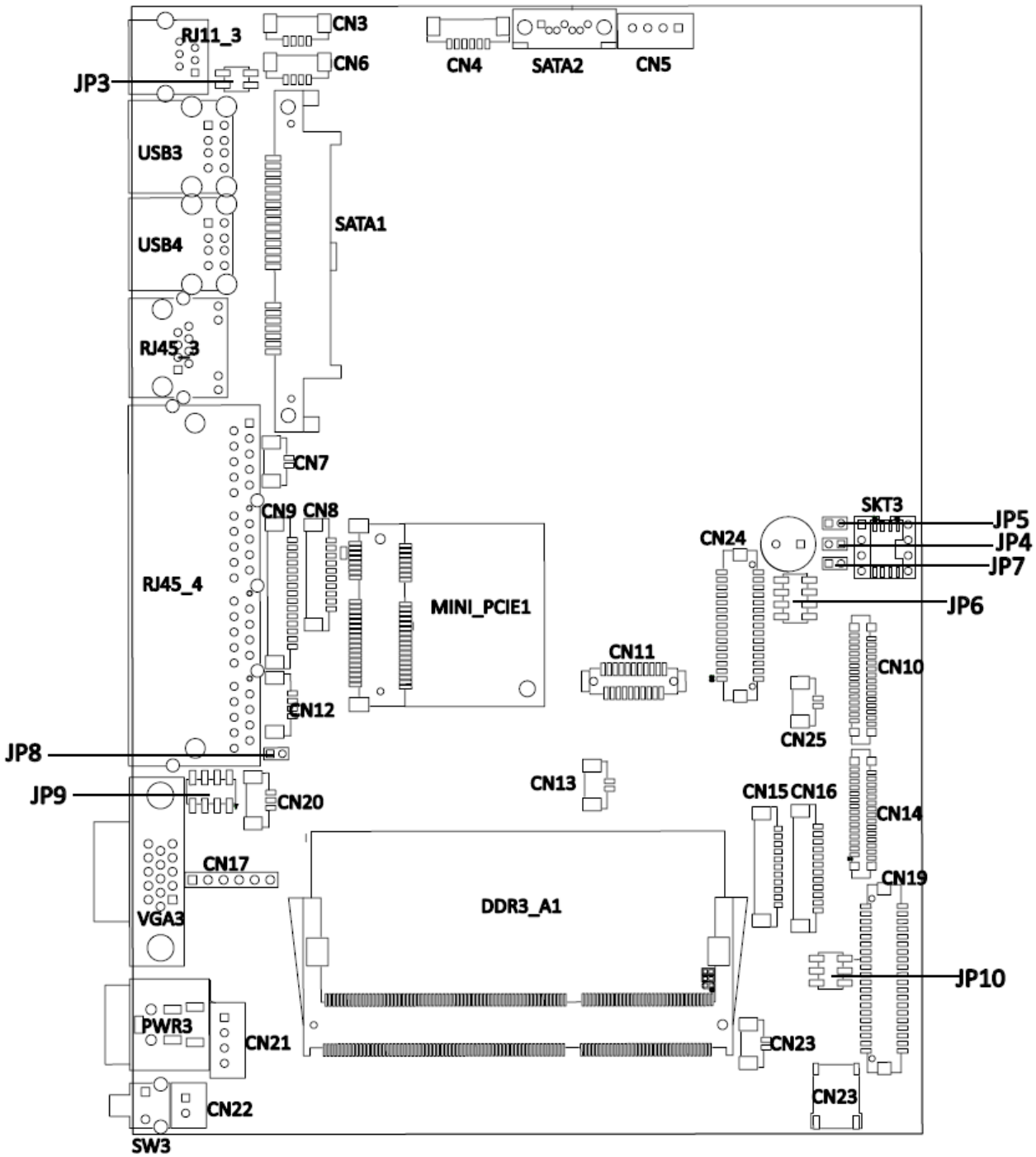
MSR module (option)	MSR (USB)
Customer display (option)	2 x 20 VFD customer display (COM)
Second display (option)	8.4" 2nd display without touch
Communication	
Wireless LAN	802.11 b/g/n wireless LAN card & antenna (Option)
Environment	
EMC & Safety	FCC/CE Class A, LVD
Operating Temperature	5℃ ~ 35℃ (41℉ ~ 104℉)
Storage Temperature	-20℃ ~ 55℃ (-4℉ ~ 131℉)
Operating Humidity	20% ~ 80% RH non condensing
Storage Humidity	20% ~ 85% RH non condensing
Dimension (W x D x H)	LCD 4 degree : 365.2 x 296.2 x 282.2 mm
	LCD 84 degree : 365.2 x 217.76 x 343.1 mm
Weight (N.W./G.W.)	5.8kgs / 6.8kgs
Mounting	100mm x100mm VESA Standard holes
OS Support	Windows® XP Professional, Windows Embedded, POSReady 2009, Windows XP Embedded, Windows XP Professional for Embedded, WinCE, Windows 7, Linux

* This specification is subject to change without prior notice.

6 Jumper Settings

6-1 C46 Motherboard

6-1-1 Motherboard Layout



6-1-2 Connectors & Functions

Connector	Function
CN3	USB
CN4	Speaker & MIC CONN
CN5	SATA Power
CN6	USB
CN7	LAN LED CONN
CN8	For external Touch
CN9	Card reader
CN10/14	T-COM CONN
CN11	RF CONN
CN12	PS2 Keyboard
CN13	HDD LED CONN
CN15	FT STATUS INTERFACE
CN16	Inverter
CN17	TUOCH
CN18	Power LED CONN
CN19	LVDS (24bit)
CN20	SYSTEM FAN
CN21	DC-JACK
CN22	POWER BOTTOM CONN
CN23	T-COM Power
CN24	LVDS (18bit)
CN25	Battery CONN
PWR3	DDR3 SO-DIMM1
RJ11_3	SATA Connector
RJ45_3	SATA Connector
RJ45_4	Power Button
SATA2	CMOS Operation Mode
SKT3	VGA Port
USB3	COM2 RS232/485/422 Setting
USB4	LCD ID Setting
VGA3	Power Mode Setting
JP3	Cash Drawer power selection
JP4	AT/ATX
JP5	CMOS Operation Mode
JP6	LCD ID Setting
JP7	H/W RESET
JP8	CRT Power Setting
JP9	COM Power Setting
JP10	Inverter Selection

6-1-3 Jumper Settings

CD Power Setting

Function	JP3 (1-2) (3-4)
19V	
▲12V	

Power Mode Setting

Function	JP4 (1-2)
▲ATX Power	
AT Power	

CMOS Operation Mode

Function	JP5 (1-2)
▲CMOS Normal	
CMOS Reset	

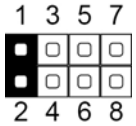
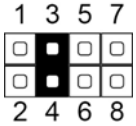
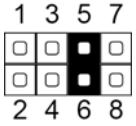
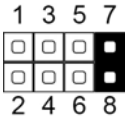
System Reset

Function	JP7 (1-2)
▲System Normal	
System Reset	

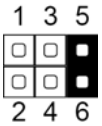
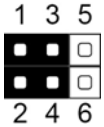
CRT Power Ctrl

Function	JP8 (1-2)
▲HW	
BIOS	

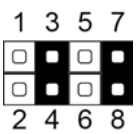
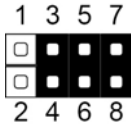
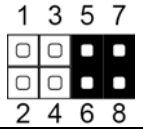
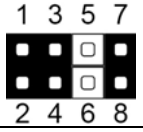
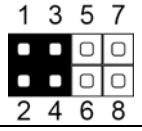
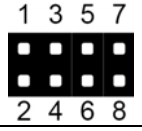
COM Power Setting

Function	JP9 (1-2) (3-4) (5-6) (7-8)
▲COM3 5V	
COM3 12V	
COM4 5V	
▲COM4 12V	

Inverter Selection

Function	JP10 (1-2) (3-4) (5-6)
▲CCFL	
LED	

LCD ID Setting

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

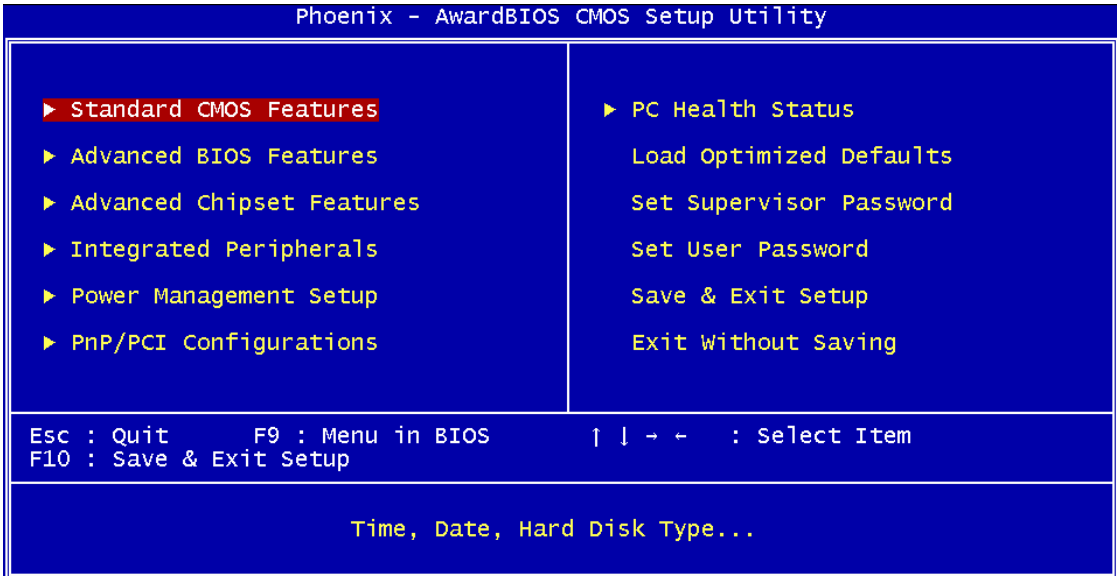
*Note: specialized for Sharp 12.1" LQ121S1LG41/LQ121S1LG42 panel.

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.

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”.