POS X
POINT OF SALE SIMPLIFIED

ION

Fit POS Terminal
User Manual

Version 1.0 August 2014

POS X
POINT OF SALE SIMPLIFIED

1975 Midway Lane, Suite O
Bellingham, WA 98226
sales@pos-x.com
360.738.8433
www.pos-x.com

■ POS-X Warranty

Industry-leading Warranty Protection
- 3 year warranty
- *2-day Advance Exchange - standard on all products
- Warranty extensions and overnight exchanges are available to provide means to further reduce the total cost of ownership

*Available in USA and Canada

■ POS-X Service and Support

24/7 Technical Support and Lifetime Customer Support
- 24/7 access to our USA-based experienced technical support representatives
- Support techs utilize advanced techniques such as remote access for quick and accurate system analysis
- Lifetime support on all POS-X products

TRADEMARK

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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
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.

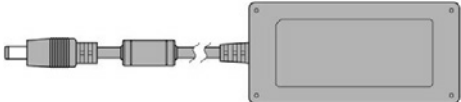This product should not be mixed with other commercial wastes for disposal.
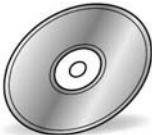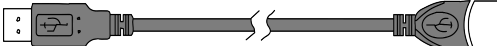
Revision History

Revision	Date	Description
V1.0	March, 2014	● Release
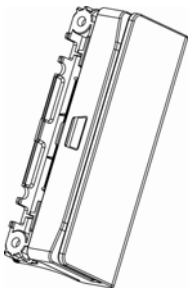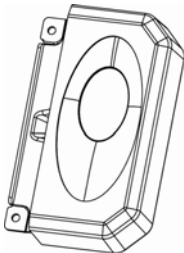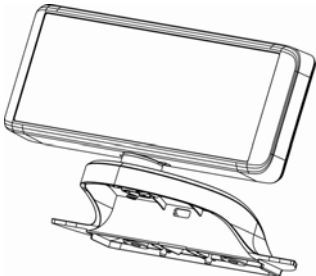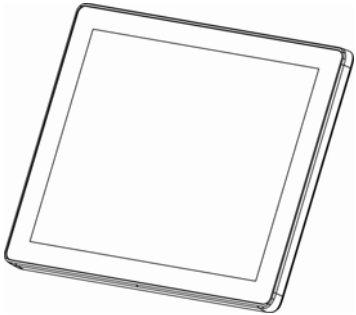
Table of Contents

1   Item Checklist

1-1   Standard Items

a. System	b. Power adapter (65W)
c. Power cable	d. COM-RJ45 cable (x2)
e. Driver CD	f. USB Extension cable

1-2   Optional Items

a. MSR module	b. Fingerprint module
c. Customer display	d. 2nd display
c. 15" Customer display	

2   System View

2-1   Front View & Side View
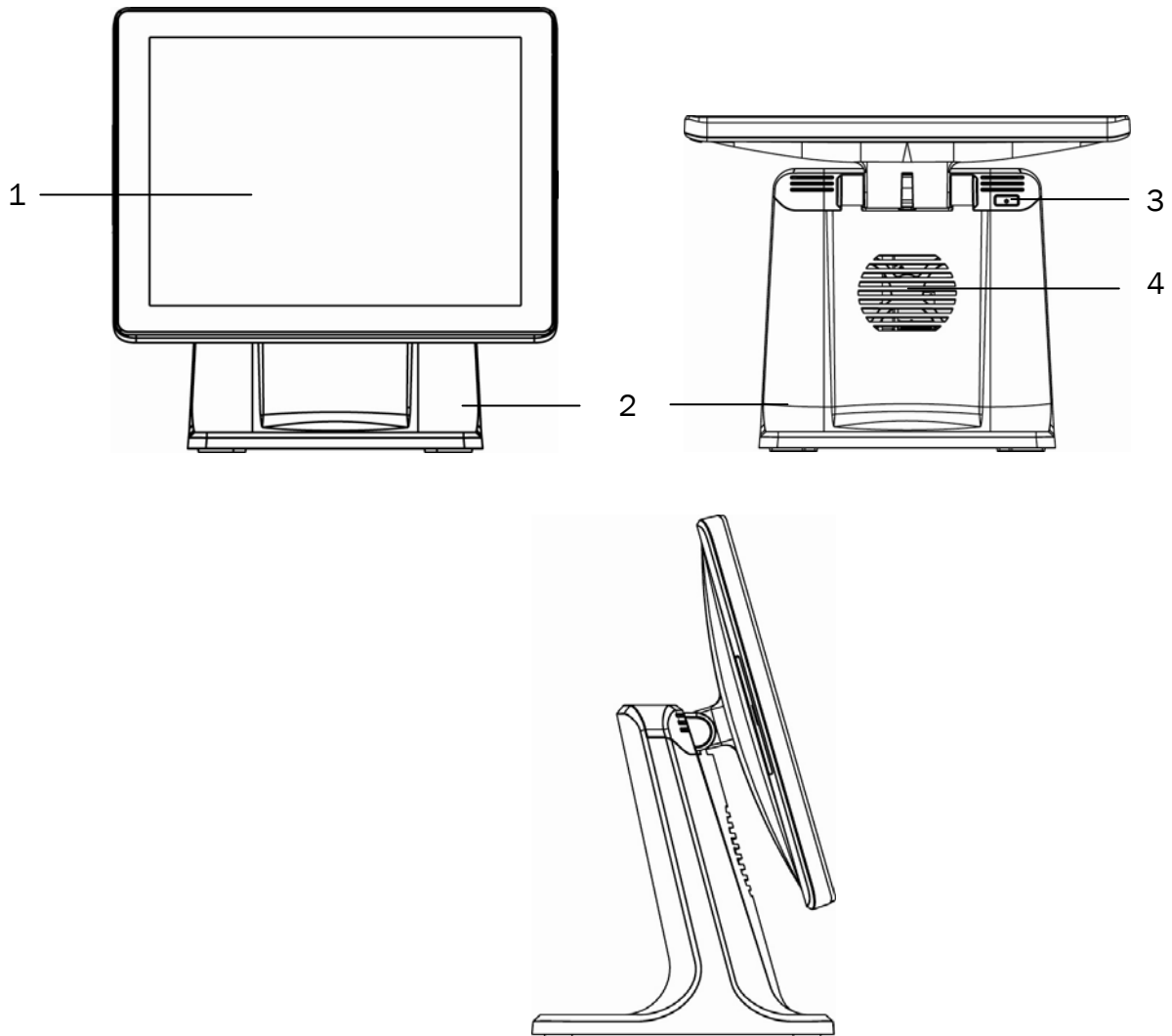
No.	Description
1	Touch screen
2	Stand base
3	Power button
4	Ventilation hole

2-2   Rear View
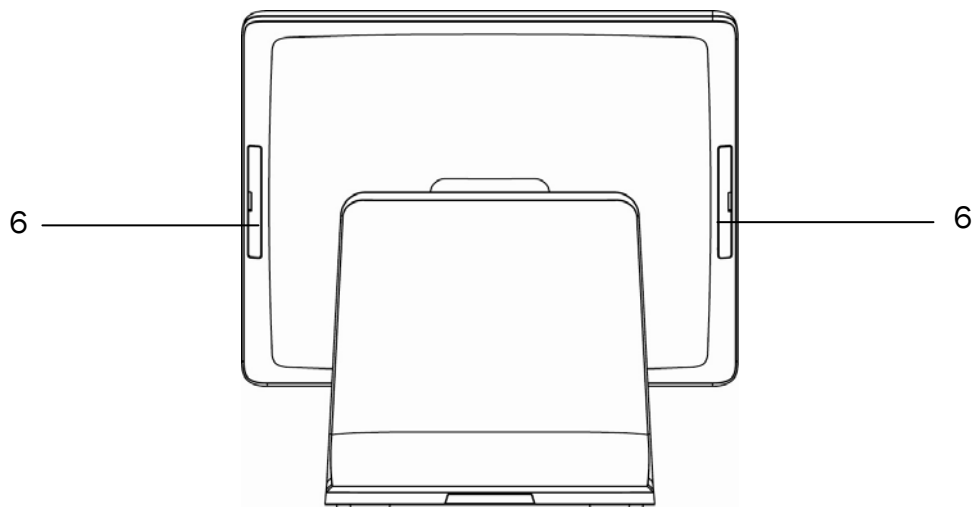
No.	Description
6	MSR /Fingerprint dummy cover

2-3   Dimension
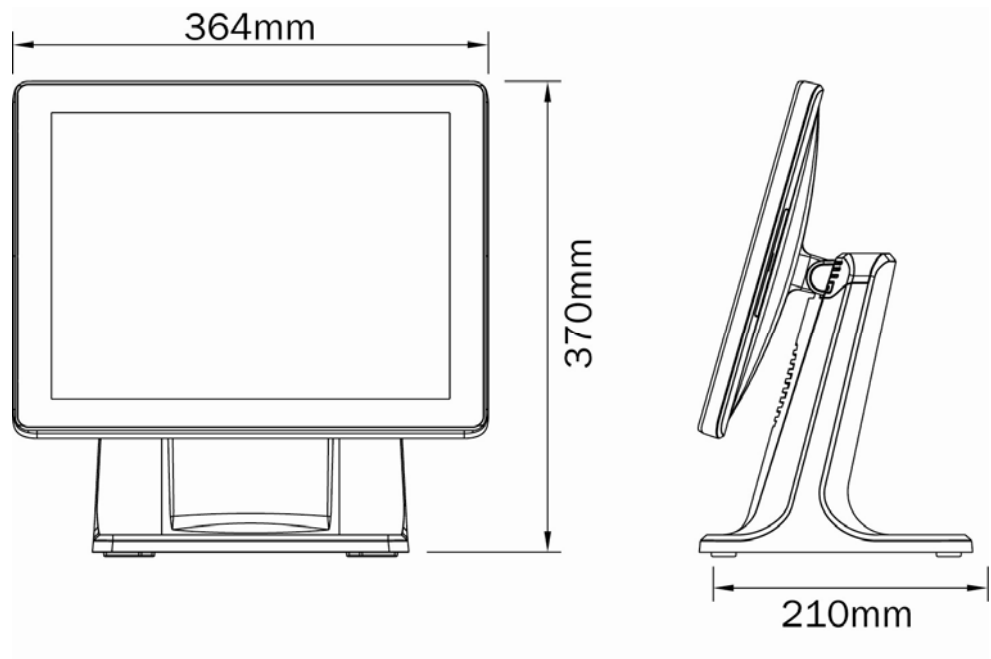
2-4   I/O View

C56L Motherboard
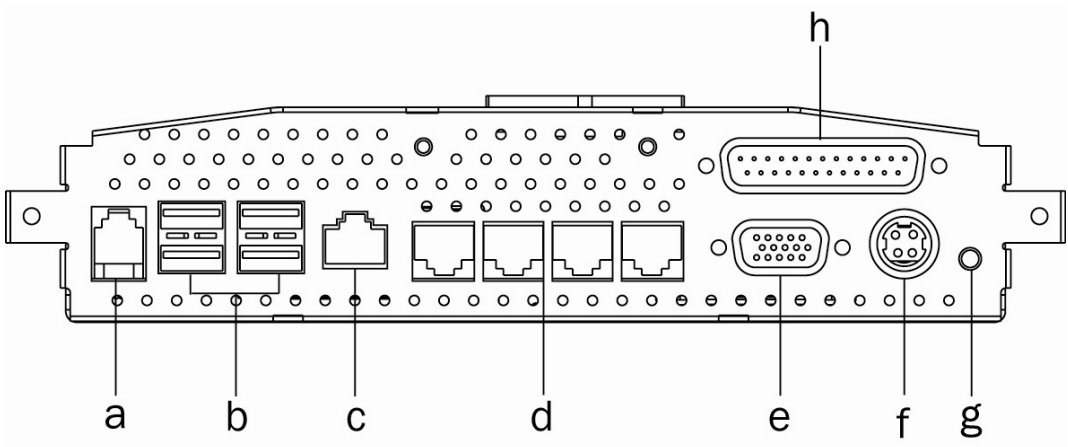
Number	Description
a	Cash drawer
b	USB x 4 (USB2.0)
c	LAN
d	COM1~4 (from left to right)
e	VGA
f	DC Jack 19V
g	Power button
h	Printer

D36 Motherboard
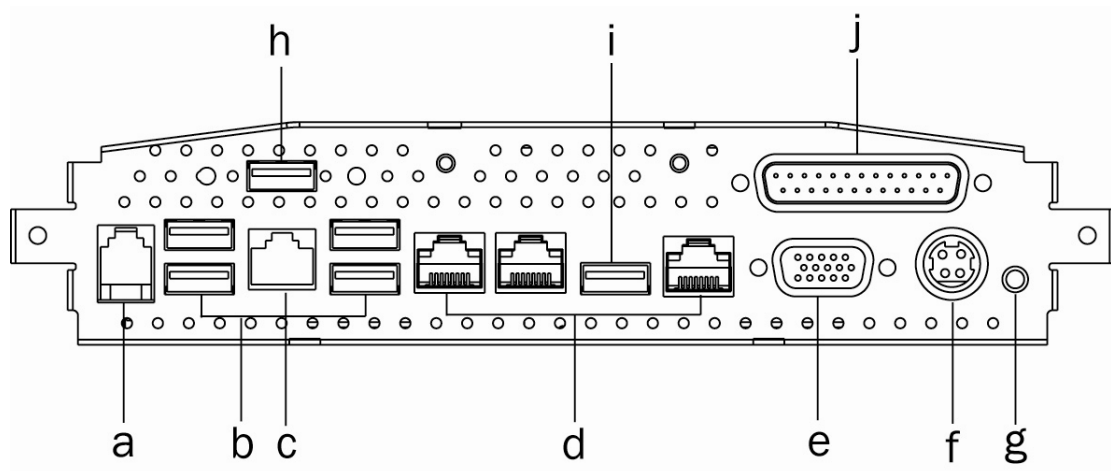
Number	Description
a	Cash drawer
b	USB x 4 (USB2.0)
c	LAN
d	COM1~3 (from left to right)
e	VGA
f	DC Jack 19V
g	Power button
h	USB (USB2.0)
i	USB (USB3.0)
j	Printer

3 System Assembly & Disassembly

3-1 Install the Power Adapter

The system is equipped with a 65W or 90W power adapter. Please plug it into the system as shown below.

1. Place the system face down. Make sure not to scratch the monitor.
2. You will find the I/O panel located at the bottom of the stand.
3. Find the DC Jack on the I/O panel.(refer to chapter 2-4.) and connect the power adapter directly to the DC Jack connector.
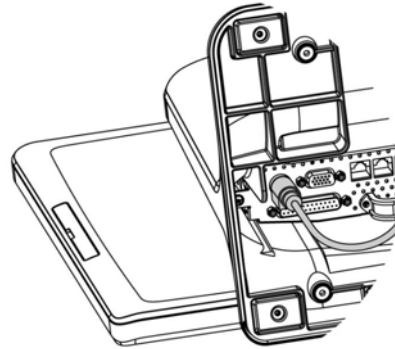
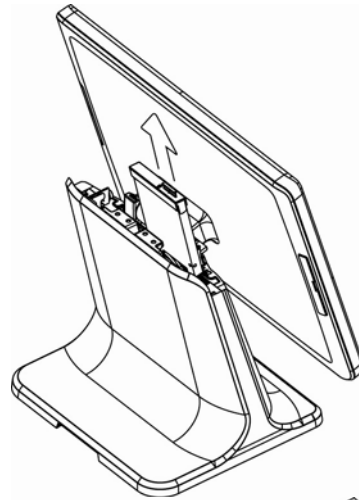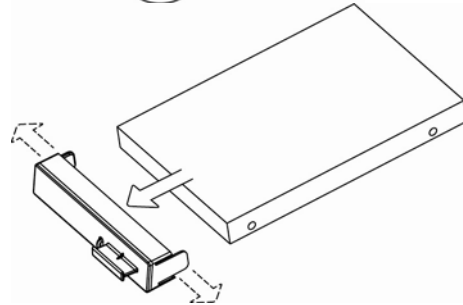## 3-2 Replace the HDD

1. Use both hands to pull the top cover of the stand.

2. The HDD is secured by a clip, slide the clip aside.
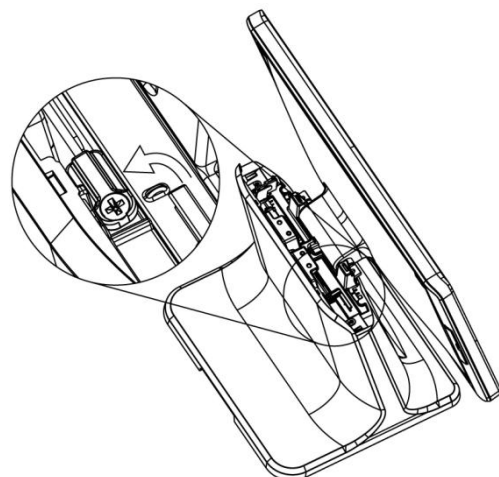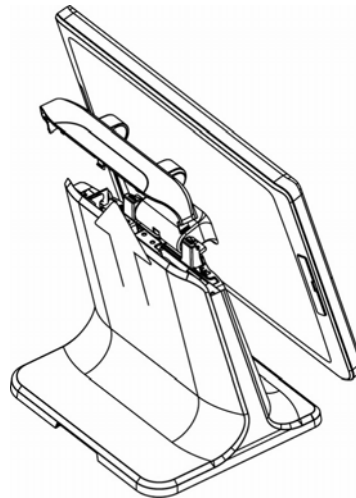
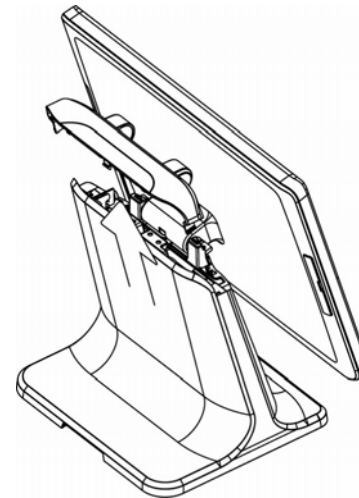3. Hold the plastic tab and pull the HDD outward.

4. To remove the HDD module pull the ejector clips out of the side of the module.

3-3　Open the System

1. Use both hands to pull the top cover of the stand outwards.

2. Remove the screw as shown in the picture.
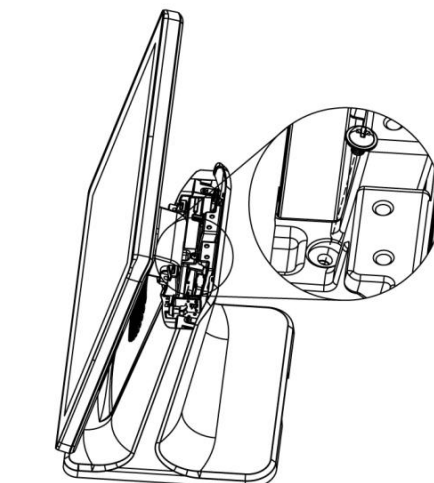
3. Disconnect the LCD cables (x2).
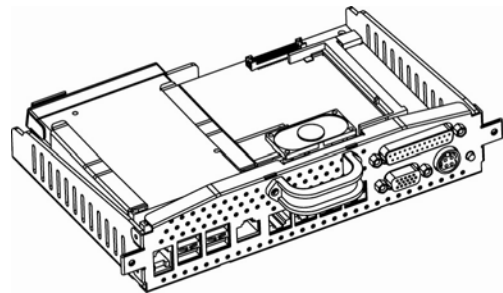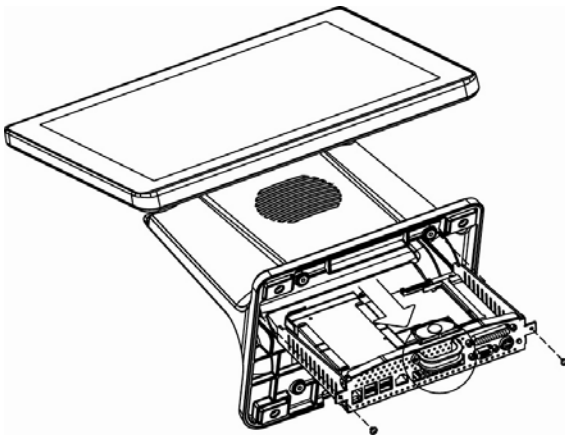
4. Lay the system on its back to access the bottom of the system.
5. Pull the motherboard tray towards you by the handle

3-4 Replace the RAM

1. Follow the steps described in Chapter 3-3 to open the system.

2. Find the RAM location on the motherboard (refer to Chapter 6-1-1 and).

3. Slide the memory module into the memory slot and press down until it locks in place.
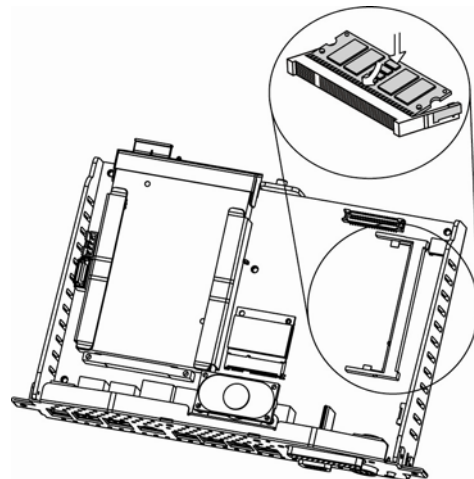
Removing a RAM module:

To remove the module pull the ejector clips out of the side of the module.
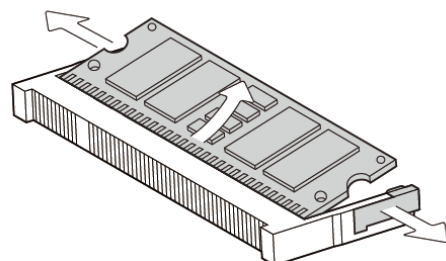
4-1   Install the MSR Module

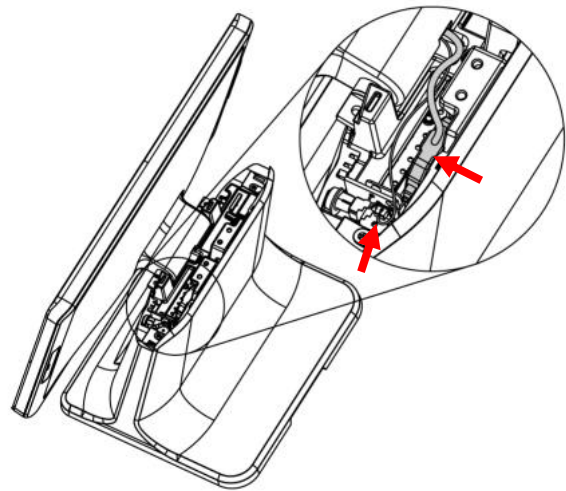MSR module can be installed to either side of the system. Choose one side and follow the steps below.   Make sure the unit is powered down before starting.
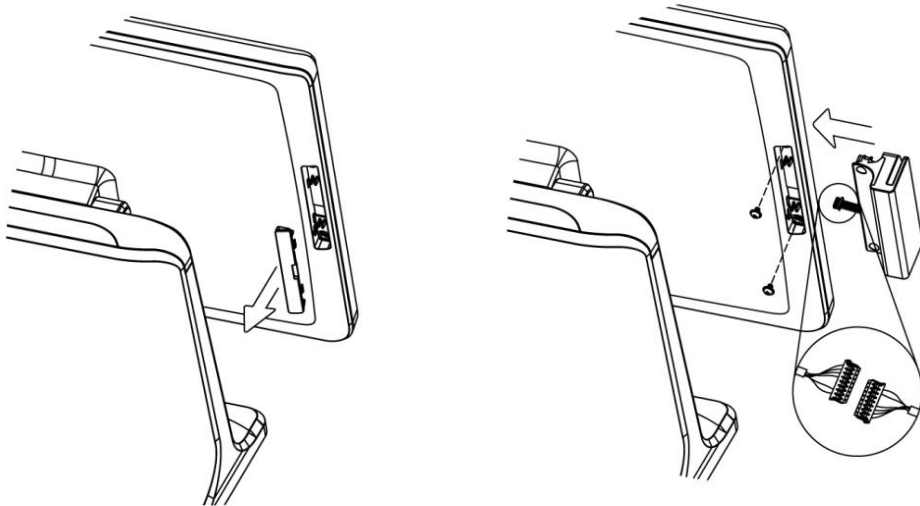
1.   Remove the dummy cover first.
2.   Connect the MSR cable to the connector on the system side.
3.   Remove the M3*6 screws (must be done before inserting the MSR module).
4.   Insert the MSR module in place and fasten the M3*8L screws (x2) on the back to secure the module.
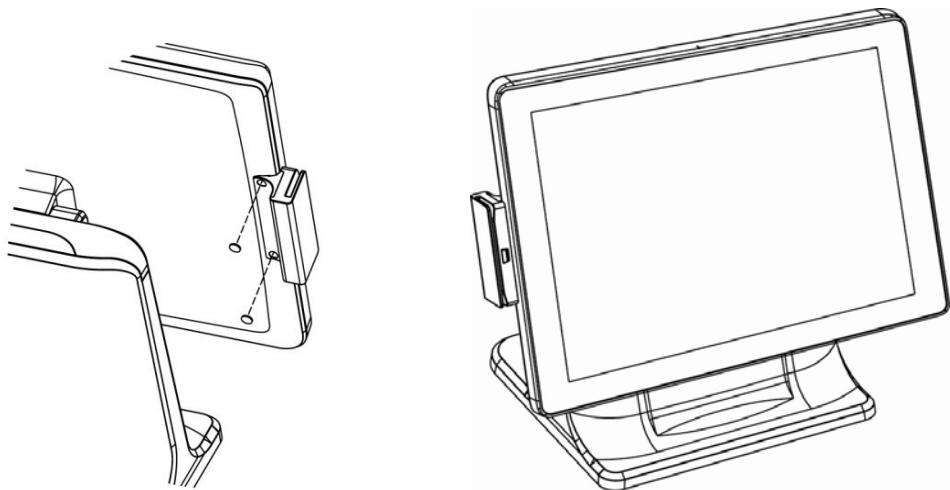
5.   Finally cover the screw holes by the rubber pads (x2).

4-2 Install the Fingerprint Module
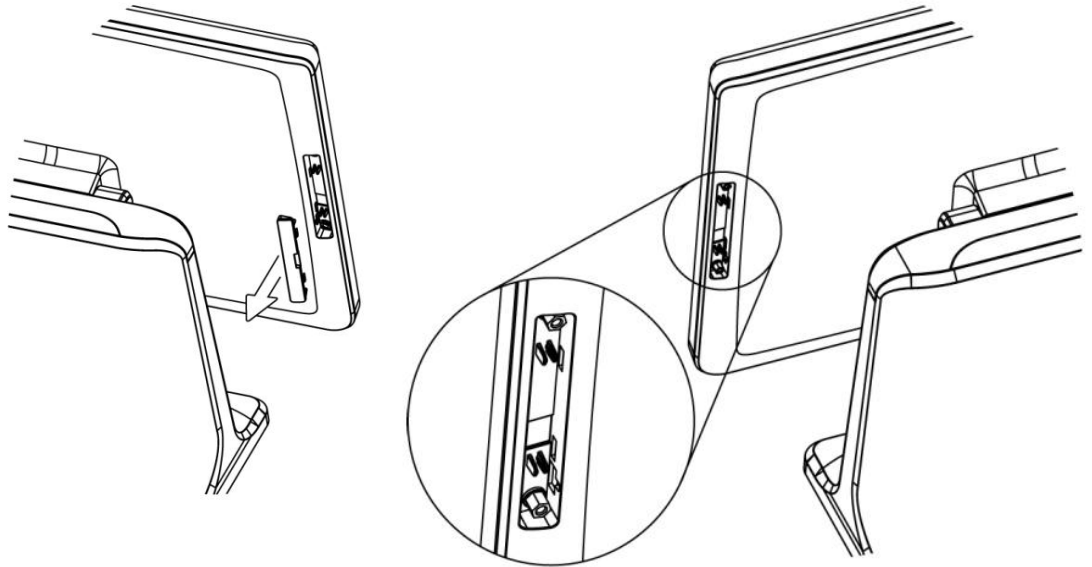
1. Remove the dummy cover first.
2. Remove the M3*6 screws (x2).
3. Fix the hex standoffs (x2) to the screw hole as shown in the picture.
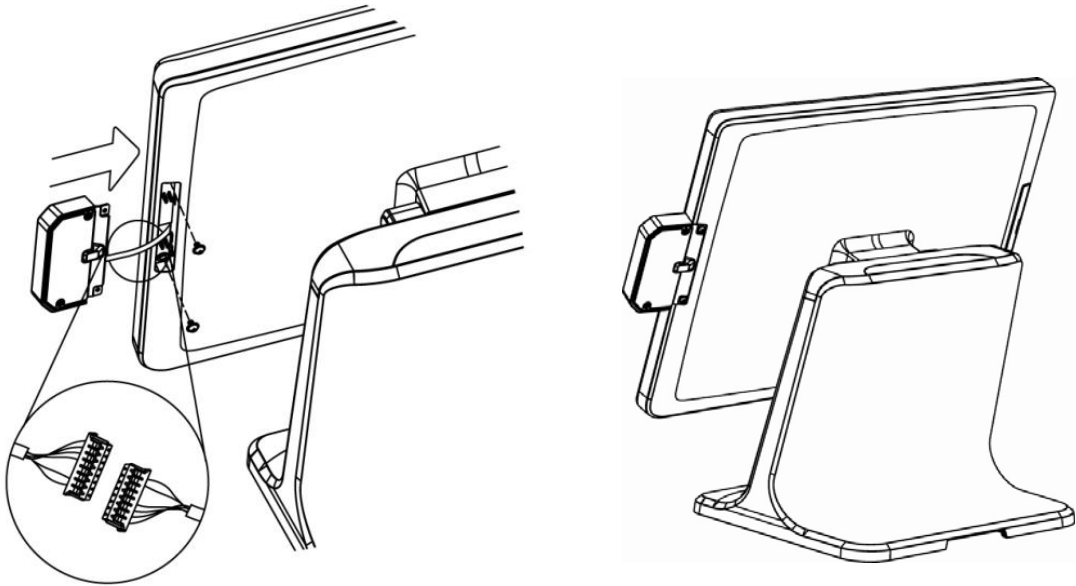
4. Connect the fingerprint cables to the connector on the system side.
5. Insert the fingerprint module in place and fasten the M3*4 screws (x2) on the back to secure the module.

*Please note the M3*6 screws (x2) should be removed before inserting the Fingerprint module.

4-3   Install the Customer Display
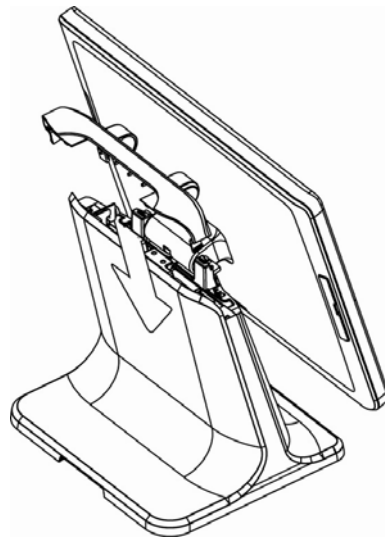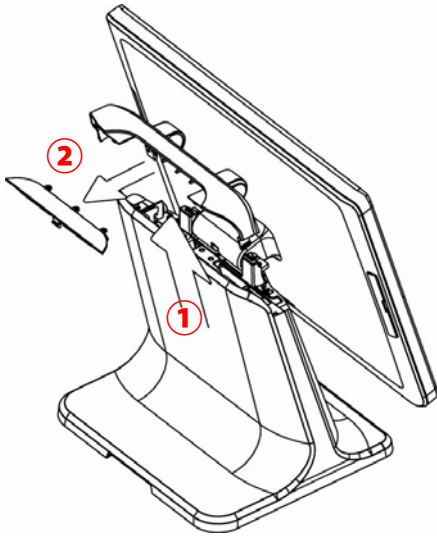
1. Use both hands to pull the top cover of the stand upwards.
2. Release the plastic plate from the top cover.
3. Put the top cover of the stand back to the position.
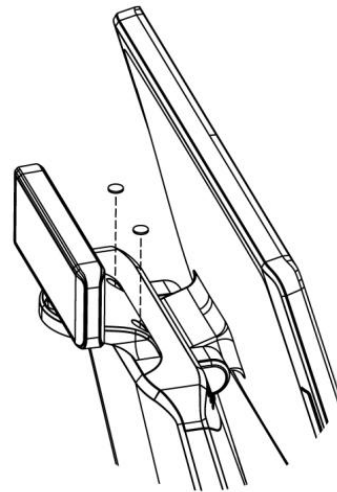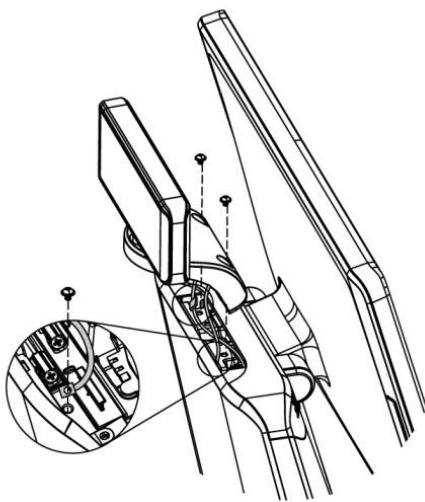
3. Connect the customer display cable (x1) to the connector on system side and fasten the ground cable (x1) with a M3*4 screw.
4. Attach the customer display and fasten the M4 screws (x2).
5. Cover the screw holes by the rubber pads (x2).
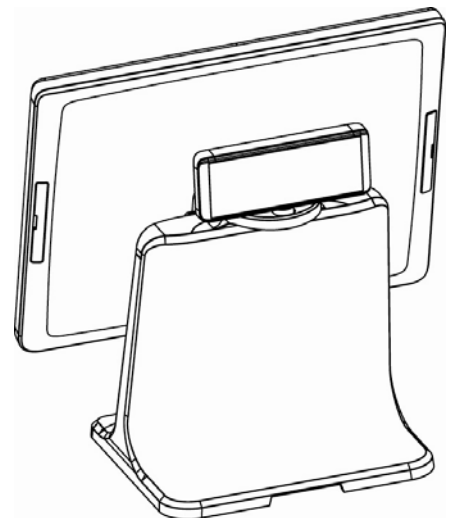
4-4   Install the 2nd Display
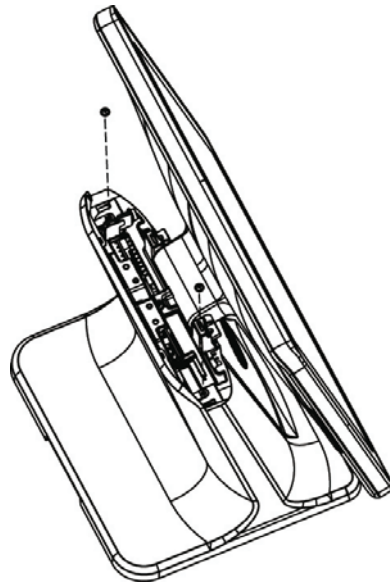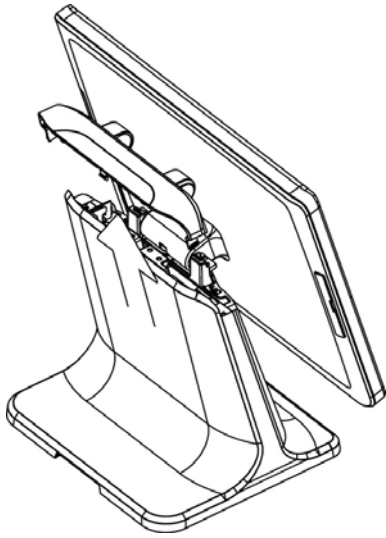
1. Use both hands to pull the top cover of the stand upwards.
2. Remove the M3*8 screws (x2) as shown in the picture.
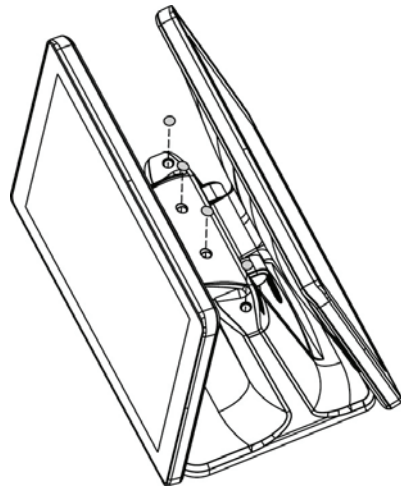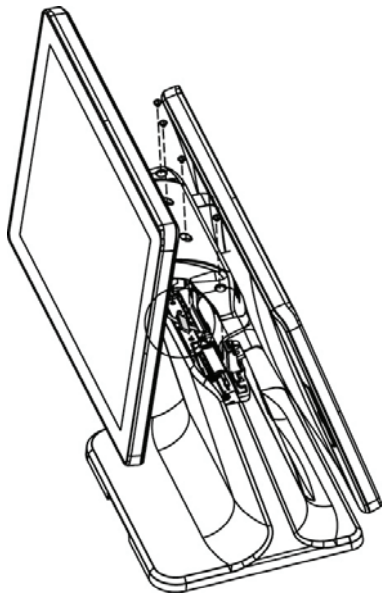
3. Connect the 2nd display cables (x1) to the connector on system side.
4. Attach the 2nd display and fasten screws (x4).
    (M4 screw x2 / M3*12 screw x2)
5. Finally cover the screw holes by the rubber pads (x4).
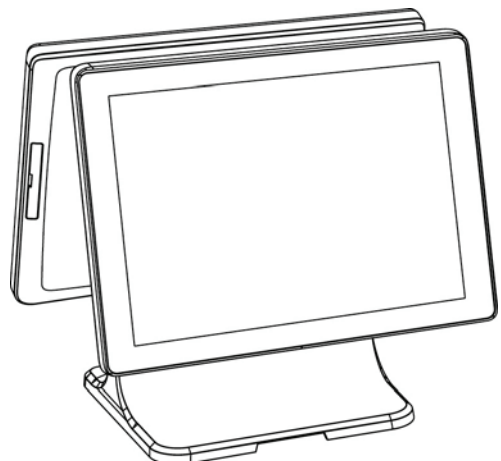
4-5   Install the Cash Drawer

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

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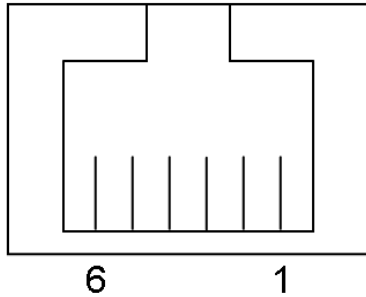
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

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	

Reserved

Cash Drawer "DOUT bit0" pin output control

Cash Drawer "DOUT bit1" pin output control

Reserved

Cash Drawer "DIN bit0" pin input status
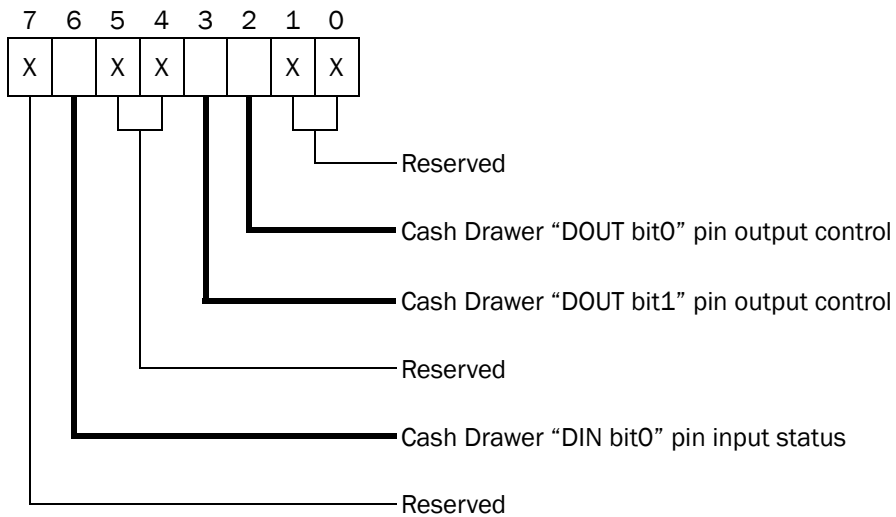
Reserved

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.	

| MODELS	ION-TP3A-D		ION-TP3A-F	ION-TP3C-F
Processor	Intel Atom D2550 1.86 GHz Dual Core		Intel Celeron J1900 2.42GHz Quad-Core	
Bezel	Standard Bezel		Standard Bezel	TruFlat Bezel
Chip Set	CPU integrated graphic + NM10, 2W		Processor Integrated	
System Memory	1 x DDR3 SO-DIMM 2-4GB		1 x DDR3 SO-DIMM 4-8GB	
Hard Drive	320GB HDD or 60-120GB SSD			
Graphic Memory	DX9, Graphic core speed at 640MHz		Intel Gen7 at 300MHz	
Electrical	65W/19V			
PORTS				
USB	4 x USB Type A (default) (USB 2.0)		6 x USB Type A (USB 3.0 / 2.0 x1, USB 2.0 x5)	
Serial	4 x RJ45 COM4 with 5V/12V		3 x RJ45 COM3 with 5V/12V	
VGA	1			
GigaLAN (10/100/1000)	1 x RJ45			

PHYSICAL	
Housing	ABS
Weight	12.27lb (5.57kg)
Dimensions (w/base) (WxDxH)	14.3" x 8.26" x 14.56" (364mm x 210mm xt 370mm)
Tilt Angle	40° ~ 90°
Housing Color	Black
LCD Display	15″ (381mm) LED LCD
Resistive Touch	5-Wire Resistive

*Available in USA and Canada

ENVIRONMENTAL	
Operating Temperature	32°F to 95°F (0°C to 35°C)
Humidity	20% ~ 85% non condensing
Warranty	3-year warranty with free *2-day Advance Exchange Service
Certifications	FCC, CE, LVD, RoHs, NOM
Supported OS	POS Ready7, Win 7 Pro, Available with no O/S

OPTIONAL ACCESSORIES	
ION-MR3	3-track Magnetic Stripe Reader with USB interface
ION-RD3-LCM	Integrated 2 x 20 LCM customer display
ION-RD3-LCD8	Integrated rear display, 8.4" (213mm) LCD, VGA
ION-RD3-LCD15A	Integrated 15" (381mm) Bezeled Rear LCD
ION-RD3-LCD15C	Integrated 15" (381mm) TruFlat Rear LCD
ION-BR3	ION Integrated U.are.U 4500 BIO Reader

WARRANTY EXTENSION AND UPGRADES	
ZWE-TPC	2-Year Warranty Extension
ZOE-TPC3	*3-Year Overnight Exchange
ZOE-TPC5	*5-Year Overnight Exchange

6　Jumper Setting

6-1　C56L Motherboard
6-1-1　Motherboard Layout
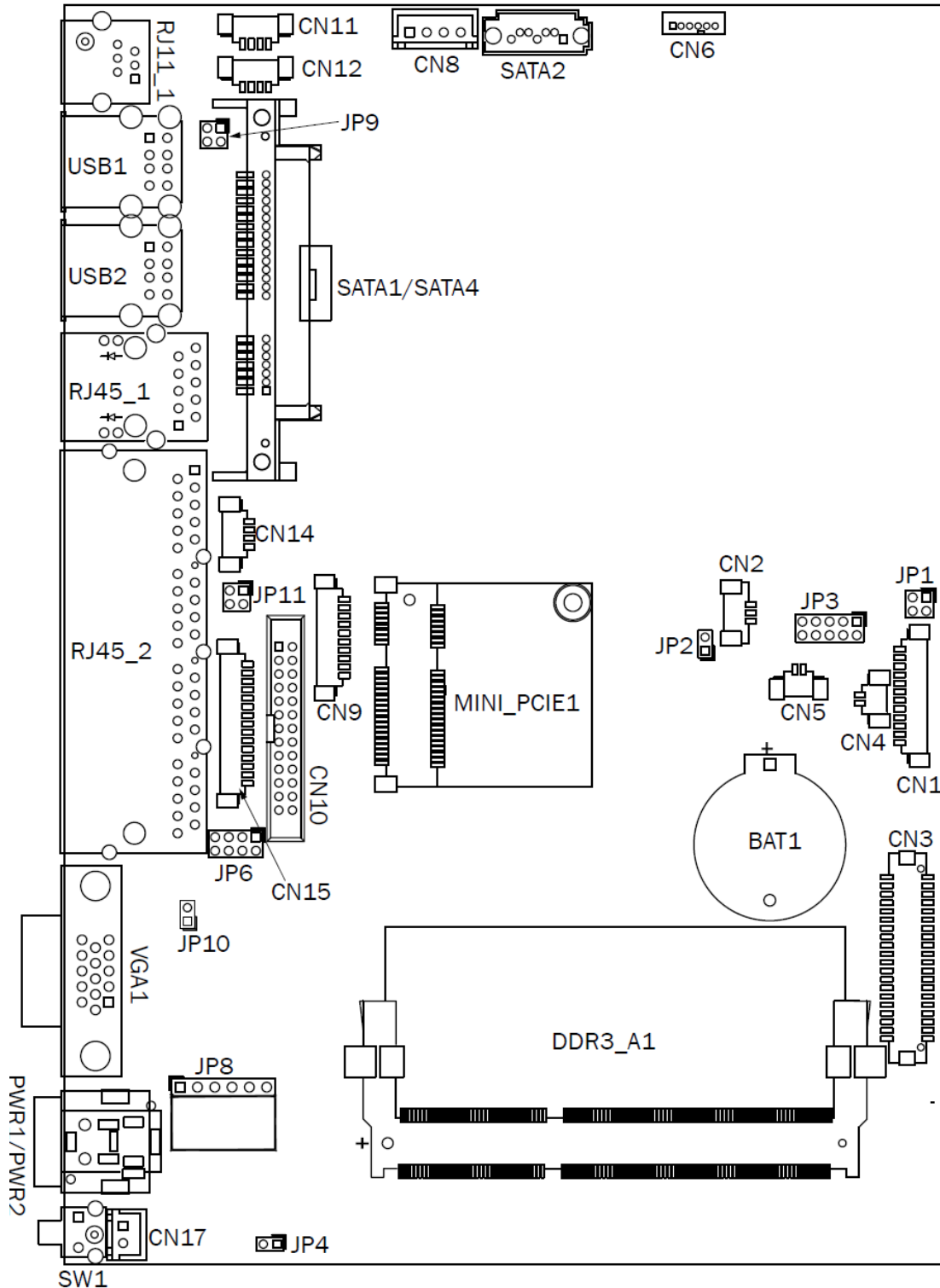
6-1-2 Connectors & Functions

Connector	Function
CN1	LVDS inverter connector
CN2	System FAN connector
CN3	LVDS connector
CN4	Power LED connector
CN5	HDD LED connector
CN6	Speaker & MIC connector
CN8	SATA power connector
CN9	COM5 (touch) connector
CN10	Printer port connector
CN11/12	USB port (internal)
CN14	PS2 keyboard connector
CN15	MSR Connector
CN17	Power button (internal)
PWR2	DC Jack (4 pin)
PWR1	DC Jack (2 pin)
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
RJ45_2	COM1/ COM2/ COM3/ COM4
DDR3_A1	DDR3 SO-DIMM
SATA1/4	SATA1
SATA2	SATA2
USB1/2	USB2.0
VGA1	CRT connector
SW1	Power button
MINI_PCIE1	MINI PCIE
JP1	Inverter select
JP3	LCD ID setting
JP6	COM3/COM4 power setting
JP8	Touch connector
JP9	Cash drawer power setting
JP10	CRT power select
JP11	MSR/PS2 keyboard select

6-1-3 Jumper Setting

Inverter Selection

Function	JP1 (1-2) (3-4)
▲ LED	[1-2 shorted]
CCFL	[3-4 shorted]

Cash Drawer Power Setting

Function	JP9 (1-2) (3-4)
▲ +19V	[3-4 shorted]
+12V	[1-2 shorted]

VGA Power Setting

Function	JP10 (1-2)
▲ +0V	[open]
+12V	[1-2 shorted]

▲ = Manufacturer Default Setting   □/□ OPEN   ■/■ SHORT

MSR/PS2 Keyboard Power Setting

Function	JP11 (1-2) (3-4)
▲ MSR + PS2 Keyboard	1 3 2 4
MSR	1 3 2 4
Only PS2	1 3 2 4

COM 3 & COM4 Power Setting

Function	JP6 (1-2) (3-4) (5-6) (7-8)
▲ COM3 +0V	1 3 5 7 2 4 6 8
COM3 +5V	1 3 5 7 2 4 6 8
COM3 +12V	1 3 5 7 2 4 6 8
COM4+ 5V	1 3 5 7 2 4 6 8
▲ COM4 +12V	1 3 5 7 2 4 6 8

▲ = Manufacturer Default Setting   □ OPEN   ■ SHORT

LCD ID Setting

Panel Number	Resolution	LVDS		Output Interface	JP3 (1-2) (3-4) (5-6) (7-8) (9-10)
		Bits	Channel		
1	800 x 600	18	Single	LVDS Panel	shorted: (3-4) (5-6) (7-8)
2	800 x 600	18	Single	LVDS Panel	shorted: (1-2) (5-6) (7-8)
3	800 x 600	24	Single	LVDS Panel	shorted: (5-6) (7-8)
4	1024 x 600	18	Single	LVDS Panel	shorted: (1-2) (3-4) (7-8)
5	1024 x 768	18	Single	LVDS Panel	shorted: (3-4) (7-8)
6	800 x 600	24	Single	LVDS Panel	shorted: (1-2) (7-8)
7	1024 x 768	24	Single	LVDS Panel	shorted: (7-8)
10	1366 x 768	18	Single	LVDS Panel	shorted: (1-2) (5-6)
11	1366 x 768	24	Single	LVDS Panel	shorted: (5-6)
				CRT	shorted: (9-10)

6-2   D36 Motherboard
6-2-1   Motherboard Layout
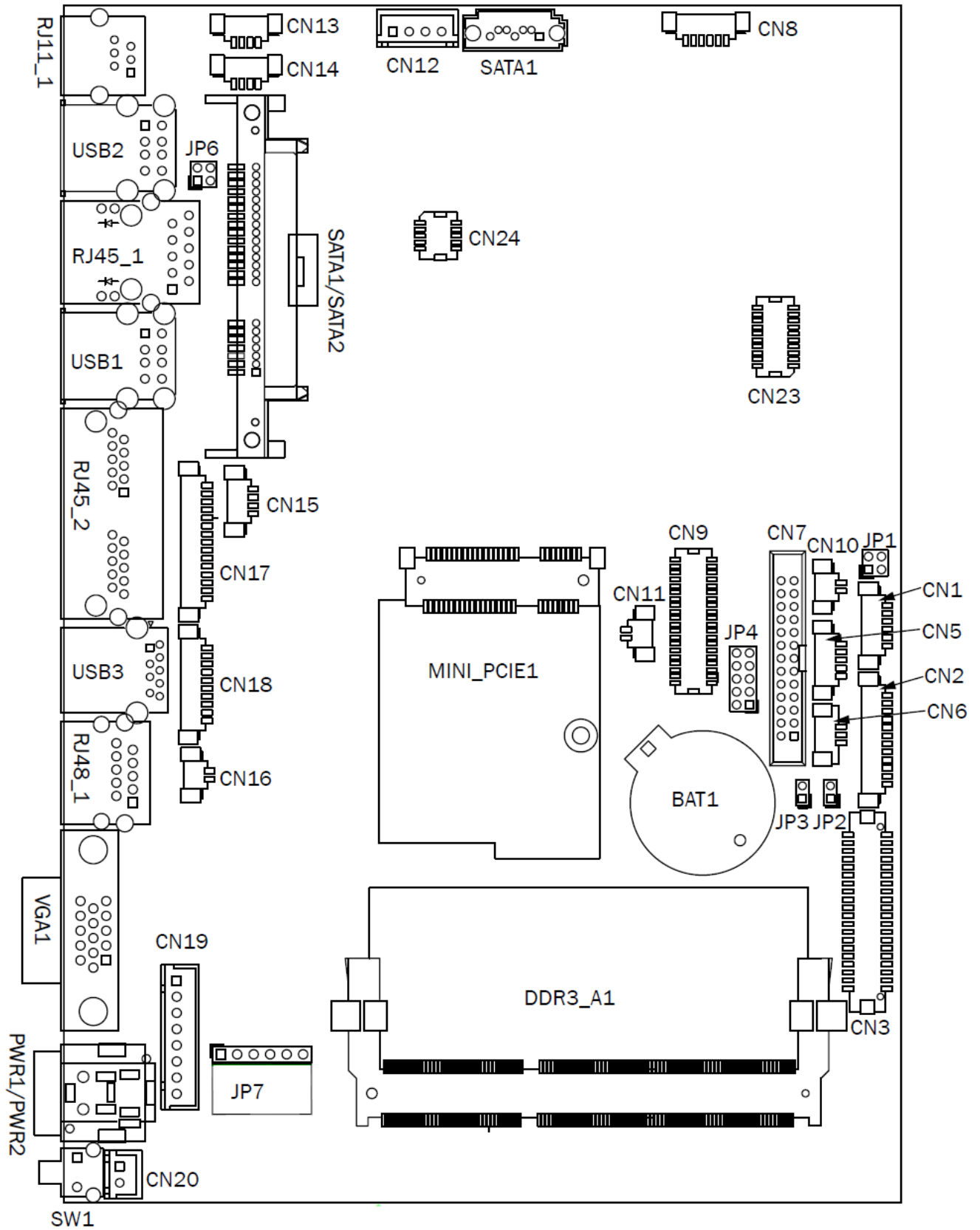
6-2-2 Connectors & Functions

Connector	Function
CN1	Front I/O board
CN2	Inverter connector
CN3	LVDS connector
CN6	System FAN connector
CN7	LPT port connector
CN8	Speaker & MIC connector
CN9	40pin external connector
CN10	HDD LED connector
CN11	Power LED connector
CN12	SATA power connector
CN13/14	USB port (internal)
CN15	PS2 keyboard connector
CN16	LPT touch
CN17	MSR connector
CN18	COM5 (touch) connector
CN19	Wide Range
CN20	Power button (internal)
CN21	LCM connector
CN22	POS325 51pin connector
PWR1/PWR2	DC Jack
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
RJ45_2	COM1/ COM2
RJ48_1	COM3
DDR3_A1	DDR3 SO-DIMM
SATA0/SATA2	SATA
USB1/USB2	USB2.0
USB3	USB3.0
VGA1	CRT connector
SW1	Power button
MINI_PCIE1	MINI PCIE
JP1	Inverter select
JP4	LCD ID setting
JP6	Cash drawer power setting
JP7	Touch connector

6-2-3 Jumper Setting
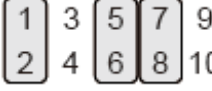
Inverter Selection

Function	JP1 (1-2) (3-4)
▲ LED	1 3 2 4
CCFL	1 3 2 4

Cash Drawer Power Setting

Function	JP6 (1-2) (3-4)
▲ +19V	1 3 2 4
+12V	1 3 2 4

LCD ID Setting

Panel Number	Resolution	LVDS		Output Interface	JP4 (1-2) (3-4) (5-6) (7-8) (9-10)
		Bits	Channel		
1	800 x 600	18	Single	LVDS Panel	1 3 5 7 9 2 4 6 8 10
2	800 x 600	24	Single	LVDS Panel	1 3 5 7 9 2 4 6 8 10
3	1024 x 768	18	Single	LVDS Panel	1 3 5 7 9 2 4 6 8 10
4	1024 x 768	24	Single	LVDS Panel	1 3 5 7 9 2 4 6 8 10
5	1366 x 768	18	Single	LVDS Panel	1 3 5 7 9 2 4 6 8 10
6	1366 x 768	24	Single	LVDS Panel	1 3 5 7 9 2 4 6 8 10

7	1024 x 600	18	Single	LVDS Panel	1 3 5 [7] 9 / 2 4 6 [8] 10
8	1280 x 1024	24	Dual	LVDS Panel	[1 3 5] 7 9 / [2 4 6] 8 10
9	1440 x 900	24	Dual	LVDS Panel	1 3 [5] 7 9 / 2 4 [6] 8 10
15	1920 x 1080	24	Dual	LVDS Panel	1 [3 5] 7 9 / 2 [4 6] 8 10
				CRT	1 3 5 7 [9] / 2 4 6 8 [10]

COM1/COM2/COM3 Power Setting

COM1, COM2 and COM3 can be set to provide power to your serial device.
The voltage can be set to +5V or +12V in the BIOS.

Phoenix SecureCore Technology Setup

Item Specific Help

VGA/COM Power Configuration

[Windows 8.X]

Help   Select Item   Change Values   Setup Defaults
Exit   Select Menu   Select ▶ Sub-Menu   Save and Exit

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 Configuration** Ports and press <Enter> to go to display the available options.

VGA/COM Power Configuration	Item Specific Help
[None] [None] [None] [None] [8] [1] [USB MSR] [USB LCM]	Power Setting with COM PORT

Help	Select Item	Change Values	Setup Defaults
Exit	Select Menu	Select ▶ Sub-Menu	Save and Exit

4.   To enable the power, select COM1 , COM2 or COM3 Power setting and press
       <Enter>.   Select Power and press <Enter>.   Save the change by pressing F10.

The shipping package includes a Driver CD. All drivers and utilities can be found on the driver CD.

Please insert the Driver CD into a computer with a CD drive and double click on the "index.htm" to pick the models. You can refer to the drivers installation guide for each driver in the "Driver/Manual List". For more information please visit www.pos-x.com

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1975 Midway Lane, Suite O
Bellingham, WA 98226
sales@pos-x.com
360.738.8433
www.pos-x.com