User Manual

June 2008 Revision 1.2a

Point – of- Sale Hardware System

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Manual Version 1.2a
P/N: 48201360

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrial 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 89/336/EEC with regard to “Electromagnetic compatibility” and 73/23/EEC “Low Voltage Directive”.

FCC

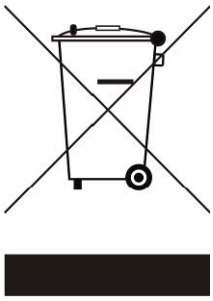
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

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.

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

Revision Number	Description	Revision Date
1.0	Initial release	2007 August
1.1	Cover page update System View update System Installation update System Disassembly update Specification update	2007 December
1.2	Performance model info. added	2008 January
1.2a	Updated cash drawer default setting information Updated LCD ID jumper settings	June 2008

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1. Item Checklist

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

1.1 Standard Items

a. Driver CD

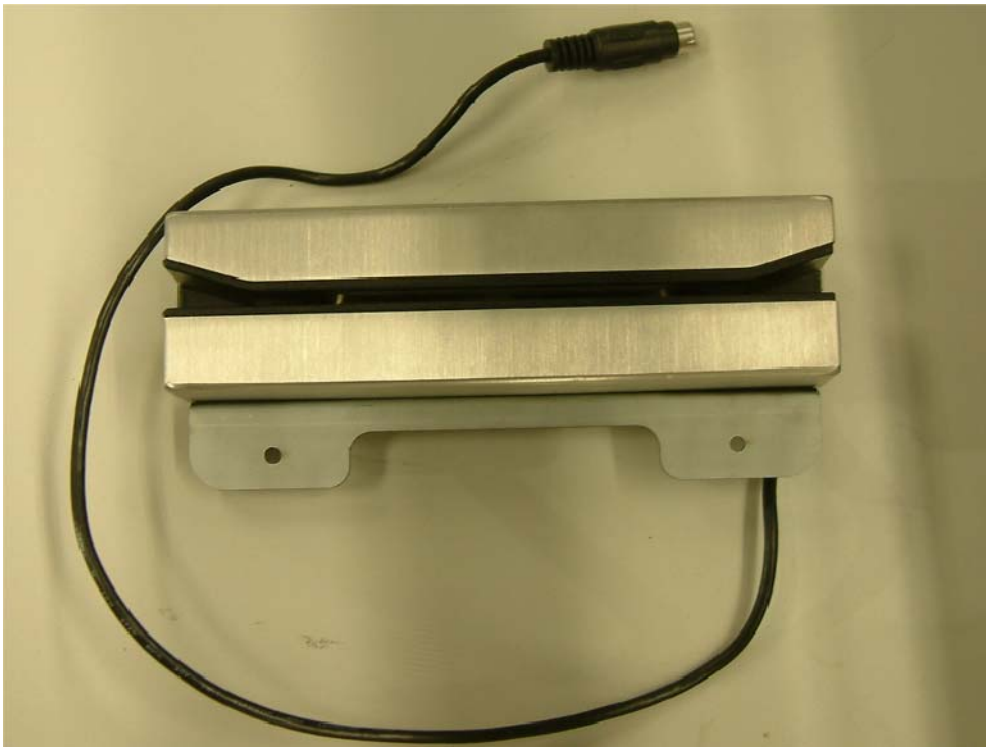
b. Com port Cables (4)

c. Power Cable

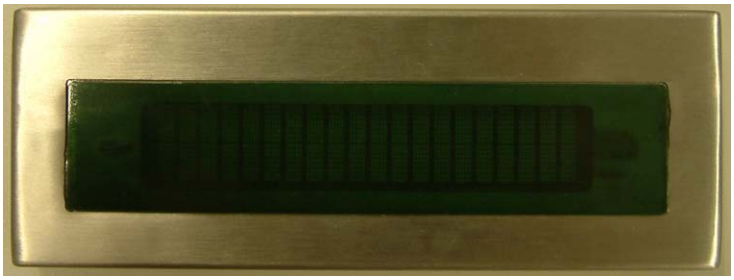
d. Power Adapter

e. System

1.2 Optional Items



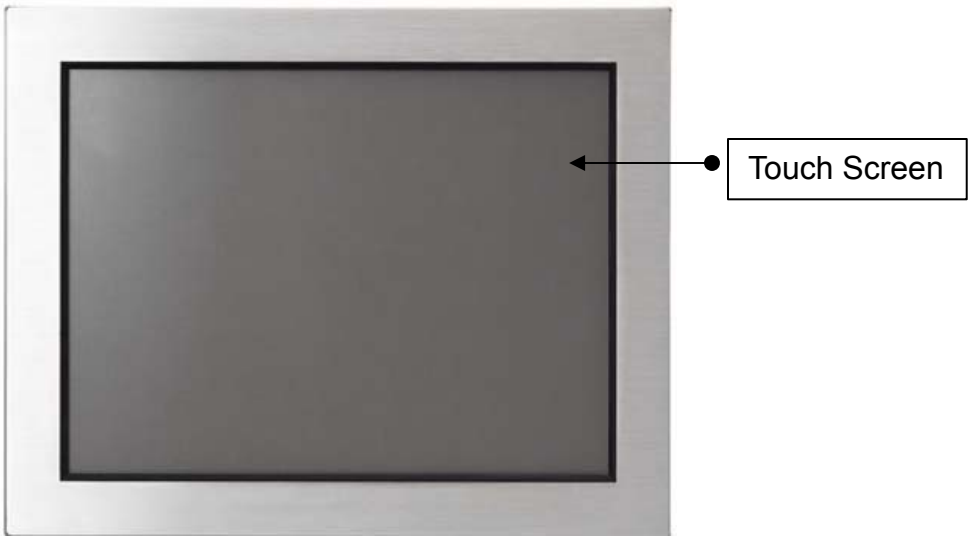
a. MSR



b. VFD

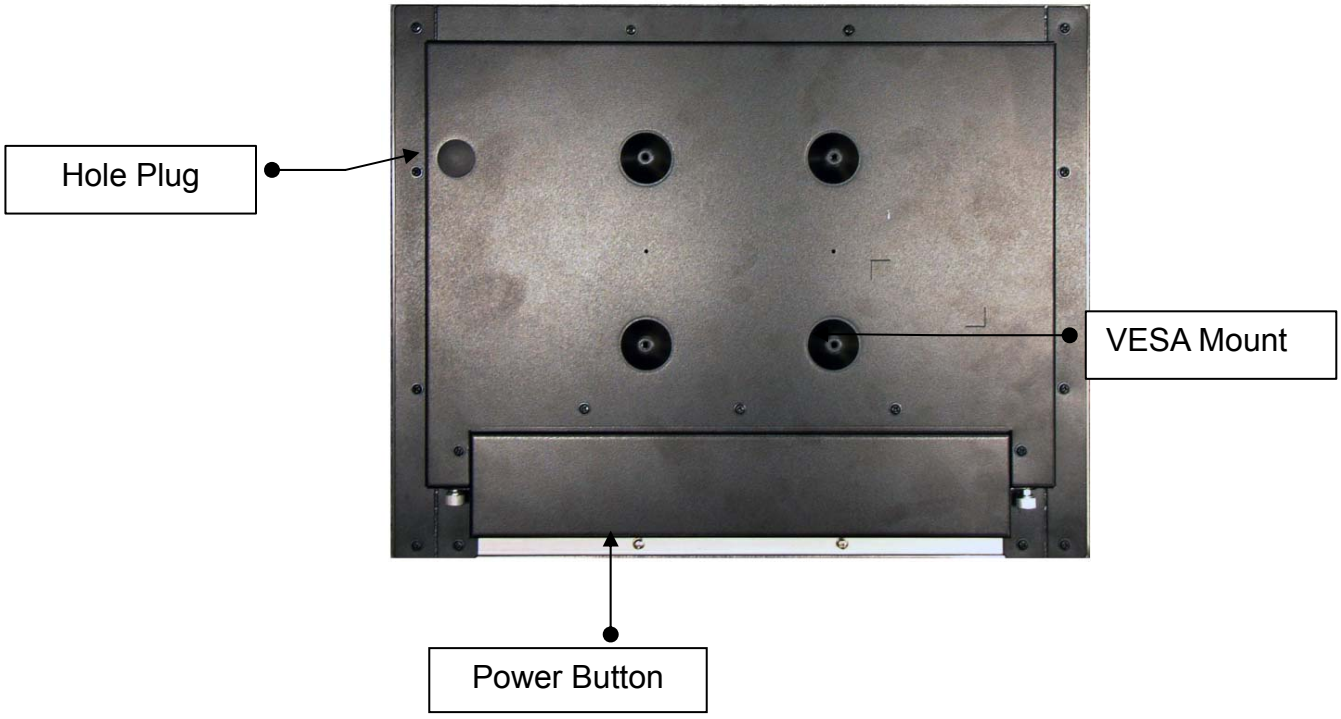
2. System View

2.1 Front View

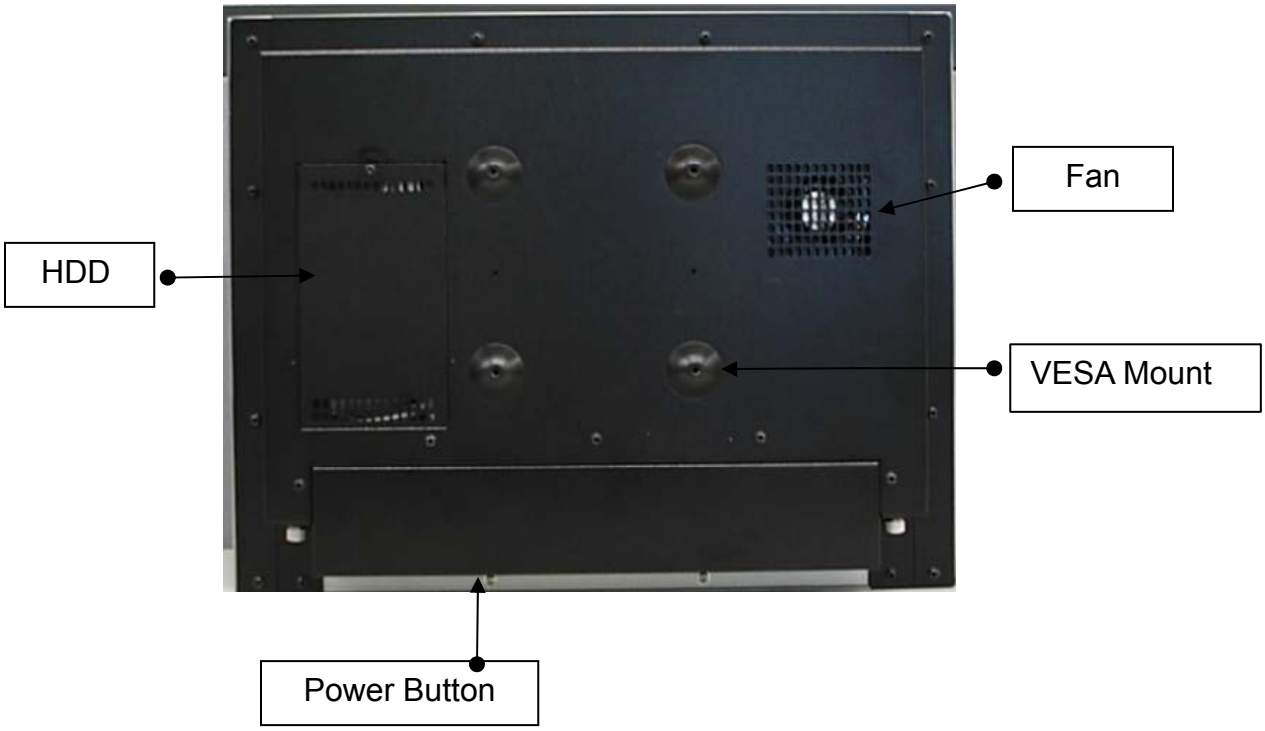


2.2 Rear View

2.2.1 Fanless

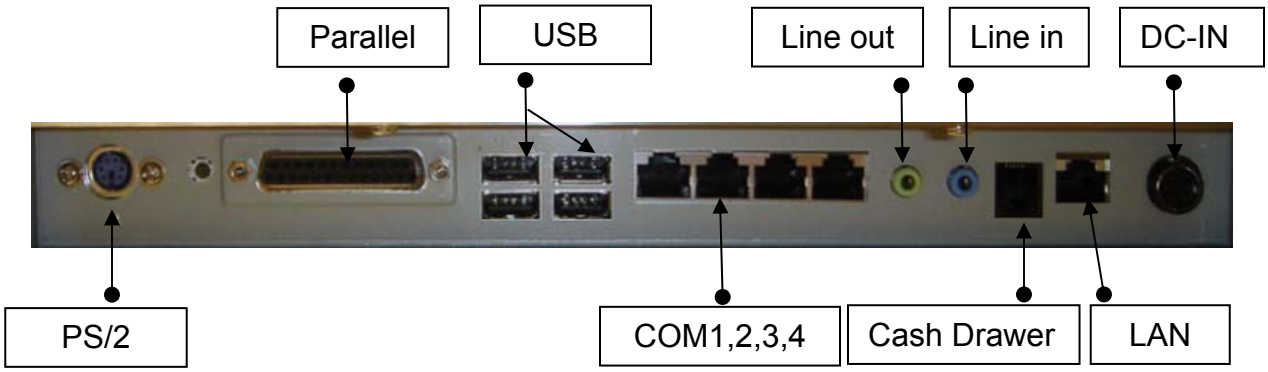


2.2.2 Performance

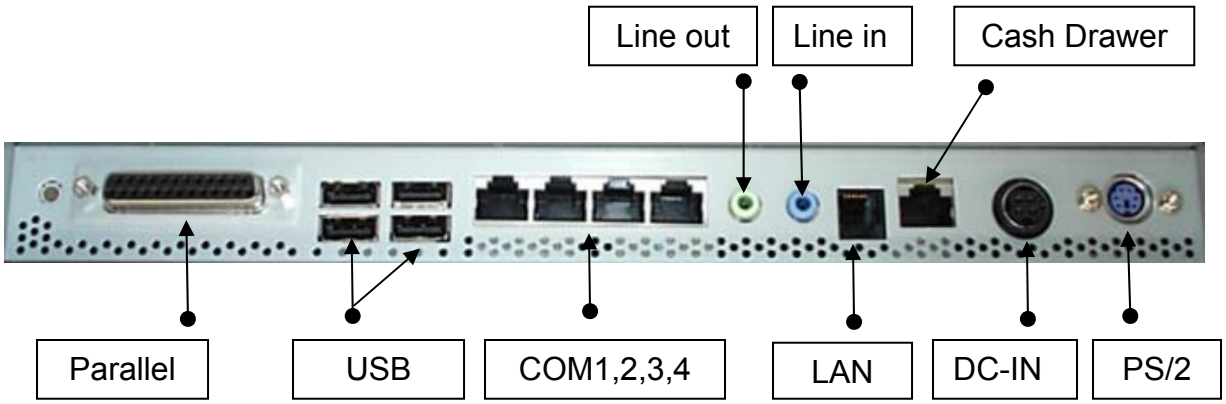


2.3 I/O View

2.3.1 Fanless



2.3.2 Performance



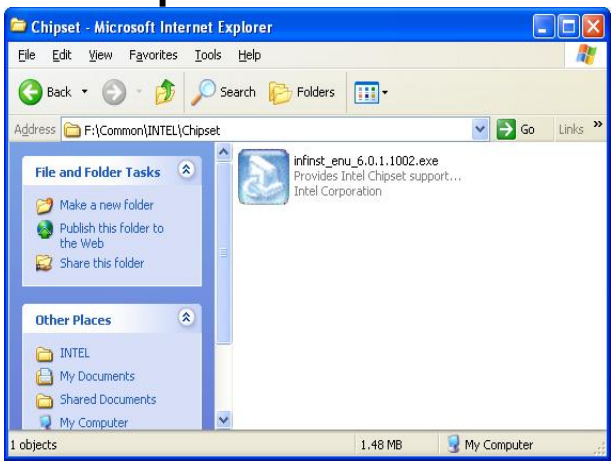
3. Drivers Installation

3.1 Driver List

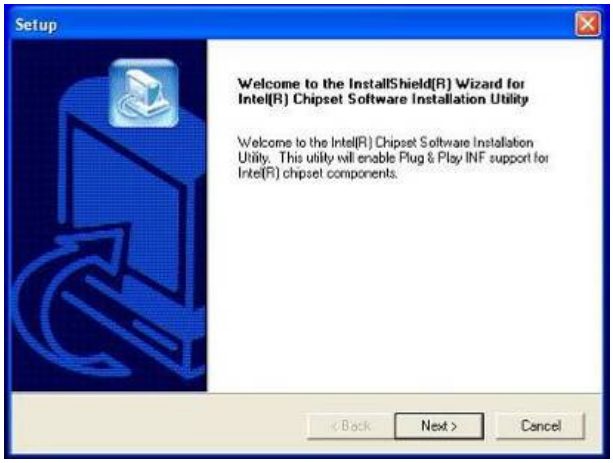
Folder/File	File Description
<CD>:\POS790_B78.htm	B78 Driver List
<CD>:\COMMON\INTEL\Chipset\i8xx	Chipset Driver
<CD>:\COMMON\INTEL\USB20	USB 2.0 Driver
<CD>:\COMMON\INTEL\VGA\i85x	VGA Driver
<CD>:\COMMON\POS_Touch	POSTouch Driver
<CD>:\COMMON\Lan_driver\R8139_810x	10/100Mb LAN Driver

-The following procedures are for Windows 2000/XP, other platforms are similar.

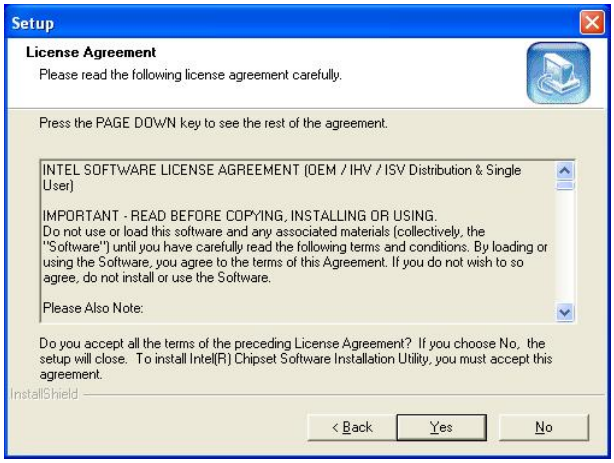
3.2 Chipset Driver Installation



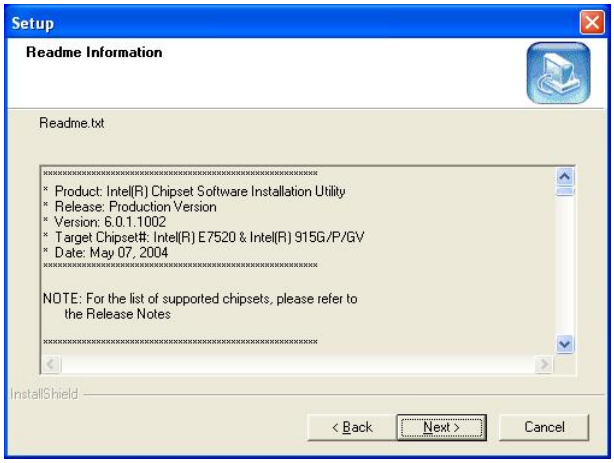
a. Double click “infinst_enu_6.0.1.1002” on the My computer window.



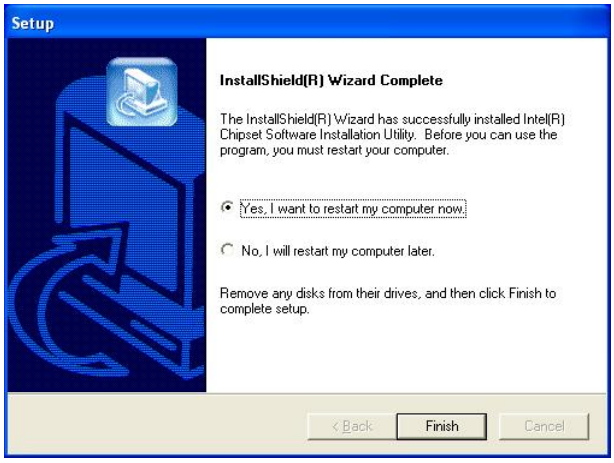
b. Click the “Next” button on the Welcome window.



c. Click the “Yes” button on the License Agreement window.



d. Click the ”Next” button on the Readme Information window.

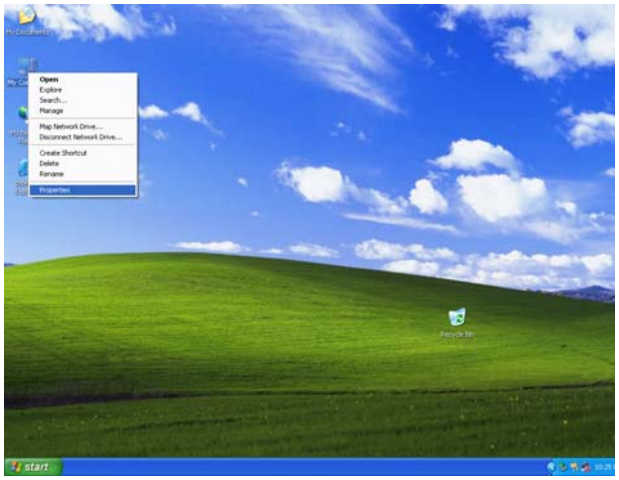


e. Click the “Finish” button and restart your system.

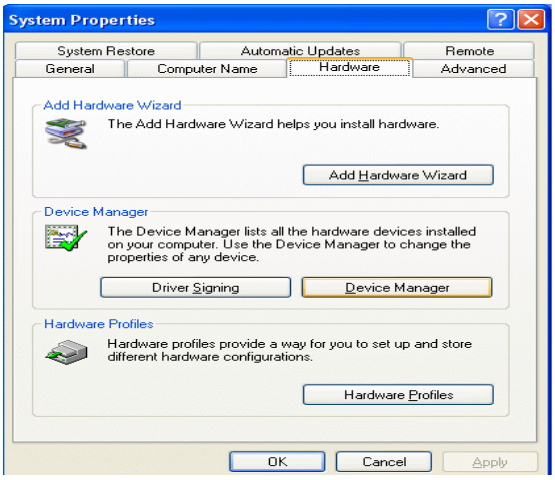
3.3 USB 2.0 Driver Installation

OS Requirements

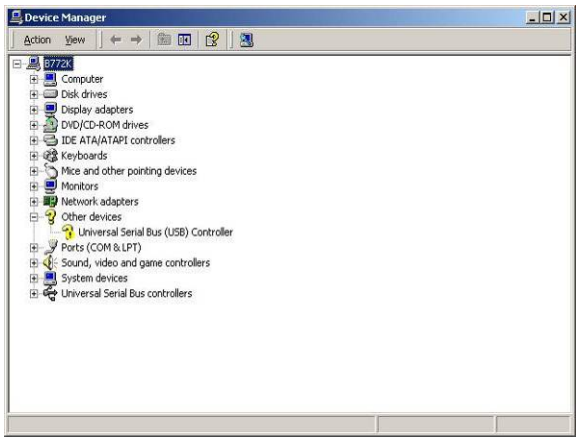
OS	USB 2.0 requirements
Windows XP	USB 2.0 drivers are provided in Service Pack 1 (SP1) for Windows XP, which is available through Windows Update.
Windows 2000	USB 2.0 drivers are available through Windows Update or Service Pack 4.
Windows 98SE/Me	USB 2.0 drivers are available on the Intel developer site.
Windows 98 (Retail)	Developers and OEMs should contact Orange Ware. For end-users, if your device does not ship with Windows 98 drivers, contact your device or system manufacturer. If USB 2.0 drivers are not available, your device will operate at USB 1.1 speeds
Linux	USB 2.0 support is available in kernel 2.4.19 or later development kernels, or in the 2.4.19 or later production kernel. More information.

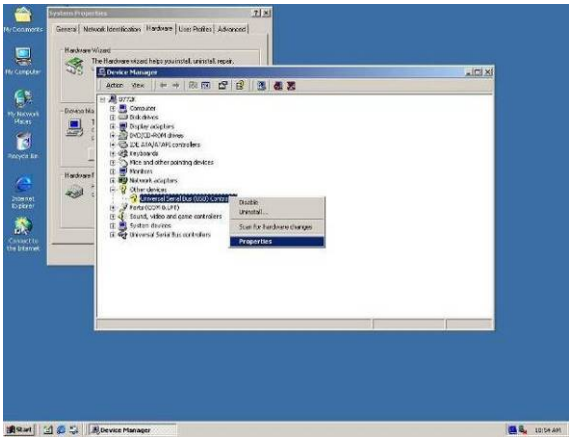


a. Right click My Computer on the desktop and select “properties”



b. Select “Hardware”→”Device Manager” on system properties.



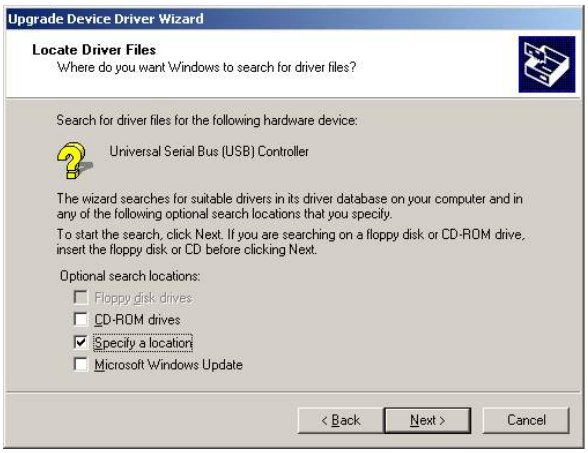


c. Select ”Other Devices” → “Universal Serial Bus (USB) Controller” →”Properties” on Device Manager.

d. Select “Device”→ “Update Driver…”.

e. Click the ”Next” button on the welcome window.

f. Select “Search for a suitable…”and click the “Next” button on the Install Hardware Device Drivers window.

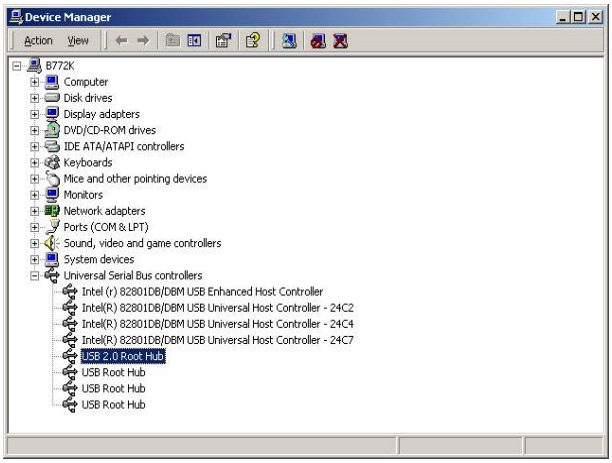


g. Select “Specify a location” and click the “Next” button on the Locate Driver Files window.

h. Press “Browse” to select the driver and then click the “OK” button to go to the next page.

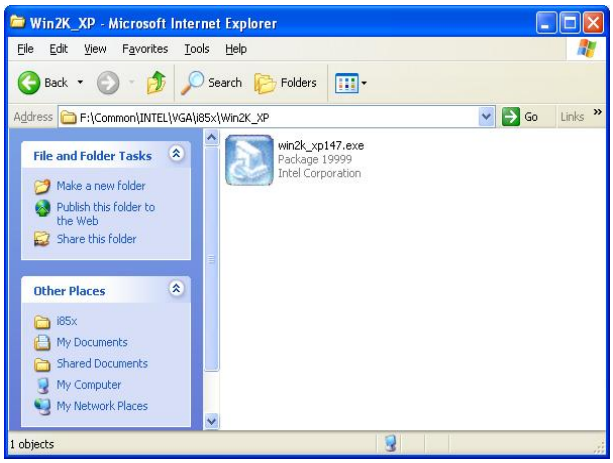
i. Click the “Next” button on the Driver Files Search Results window.

j. Click the “Finish” button to complete this process.

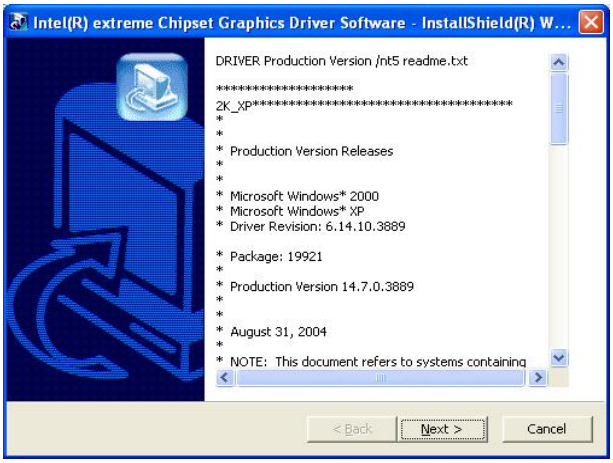


k. Finished.

3.4 VGA Driver Installation

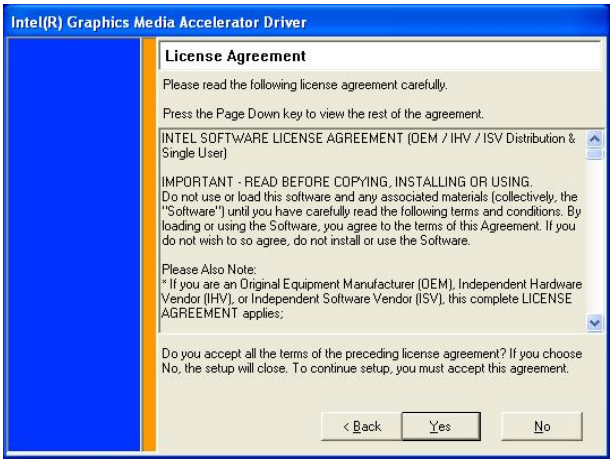


a. Double click “win2k_xp147” on the My Computer window.

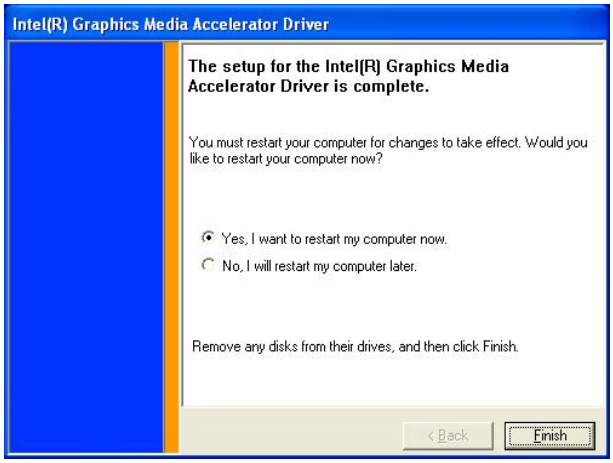


b. Click the “Next” button on the Welcome window.

c. Click the ”Next” button on the Welcome window.

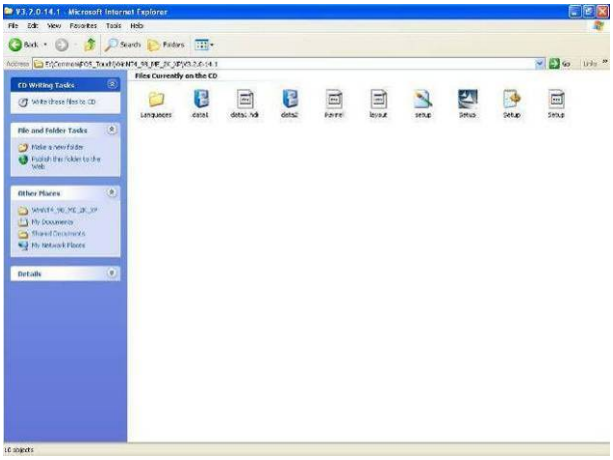


d. Click the ”Yes” button on the License Agreement window.

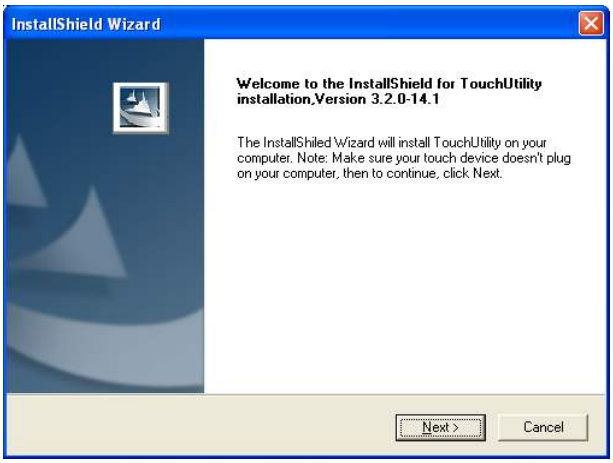


e. Click the ”Finish” button and restart your system.

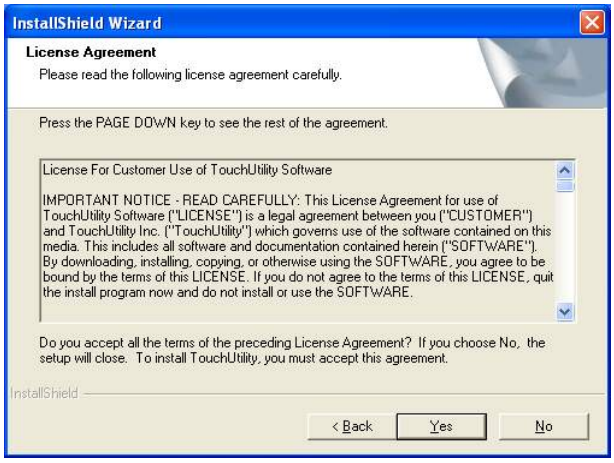
3.5 POSTouch Driver Installation



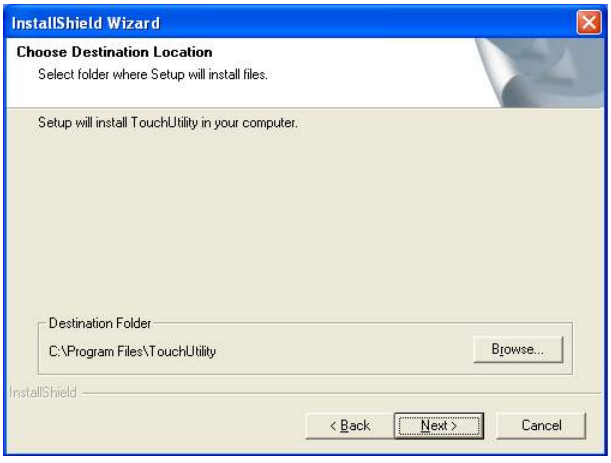
a. Double click the ”Setup” on the “My Computer” window.



b. Click the “Next“ button on the “Welcome window”.

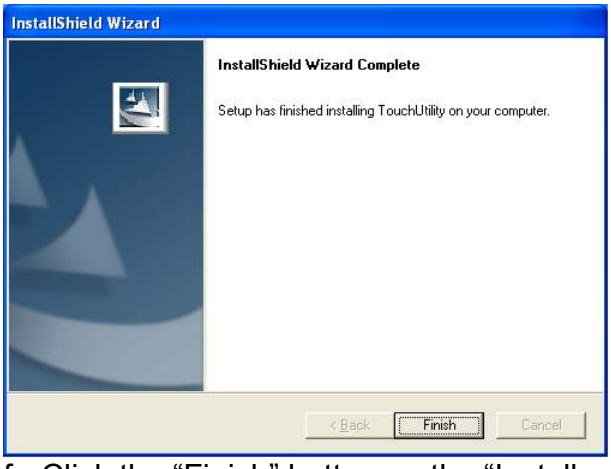


c. Click the ”Yes” button on the “License Agreement” window.



d. Click the ”Next” button on the “Choose Destination Location” window.

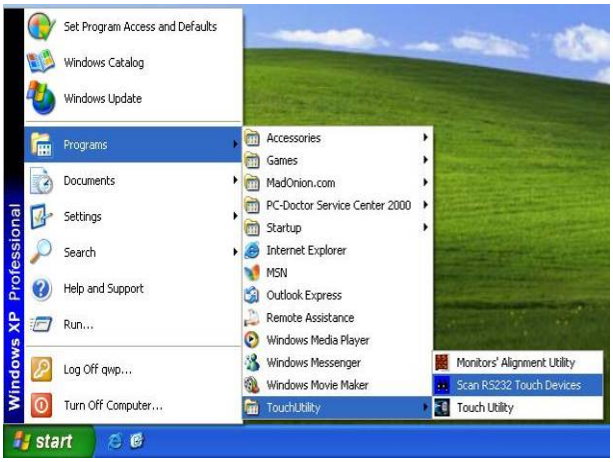
e. Click the “Next” button on the “Select Program Folder” window.



f. Click the “Finish” button on the “Install Shield Wizard Complete” window.

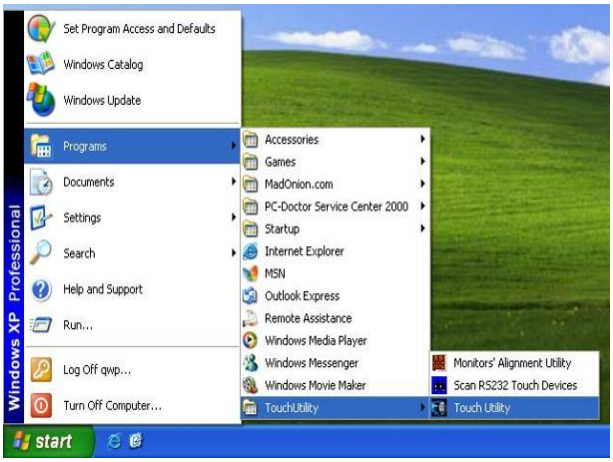
g. Click the “Continue Anyway “button on the “Hardware Installation” window.

h. Select the “Yes” and click the”OK” button and restart your system.

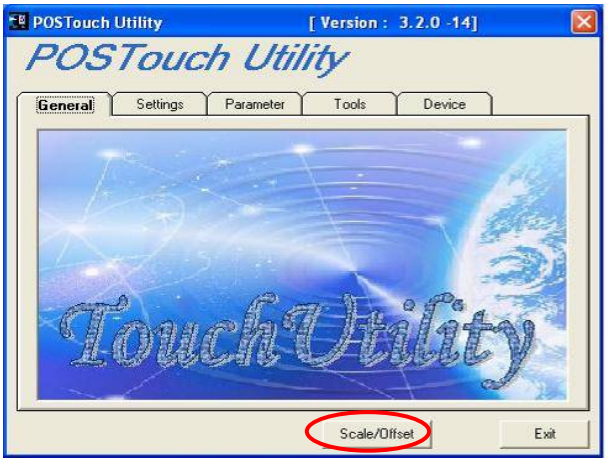


i. After the computer has restarted, select “Programs →TouchUtility →Scan RS232 Touch Device”.

j. The serial ports are scanned for a touch device.

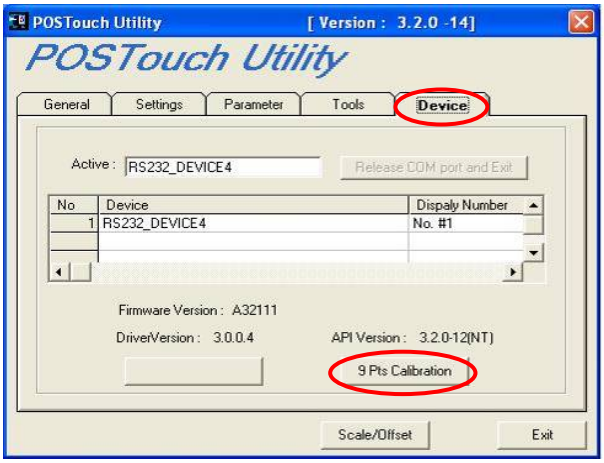


k. Select “Programs →TouchUtility →Touch Utility”.

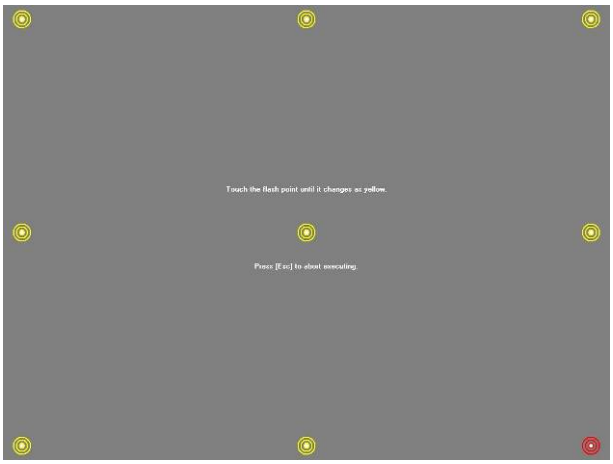


l. Click “Scale / Offset” on the POSTouch Utility window.

m. Follow the instructions on the screen to do a three point calibration of the touch panel.

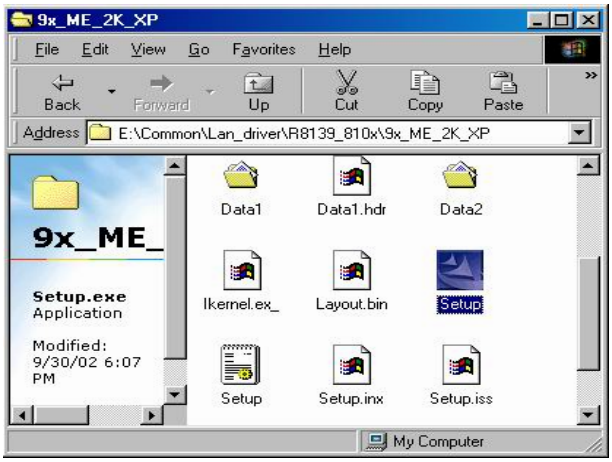


n. Select “Device →9Pts Calibration” on the POSTouch Utility window.

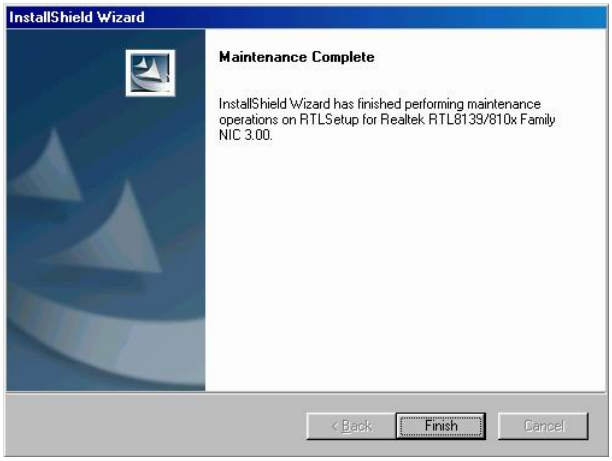


o. Follow the instructions on the screen to do a nine point calibration of the touch panel.

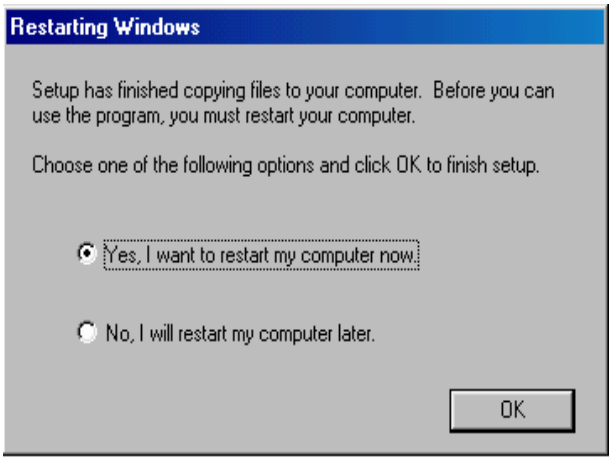
3.6 10/100Mb LAN Driver Installation



a. Double click ”Setup” on the My Computer window.



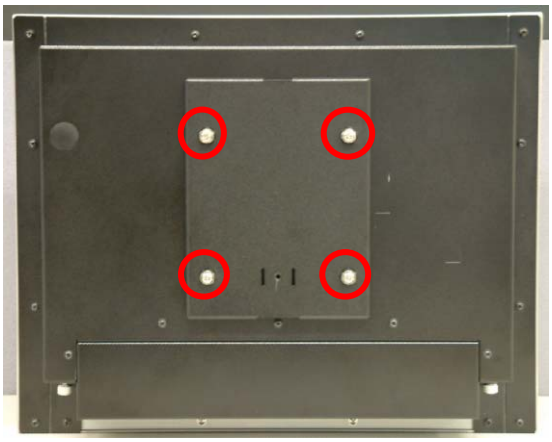
b. Click the “Finish” button on the Maintenance Complete window.

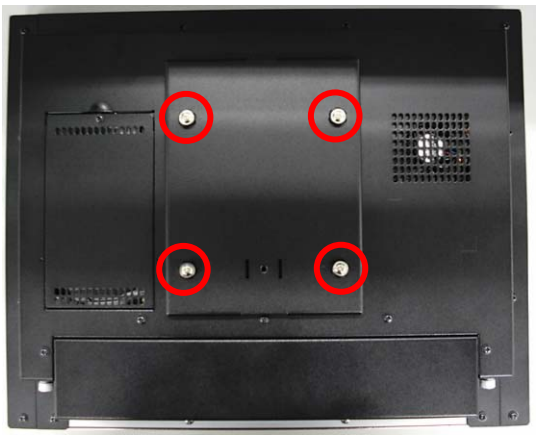


c. Click the ”OK” button and restart your system.

4. System Installation

4.1 VESA Installation



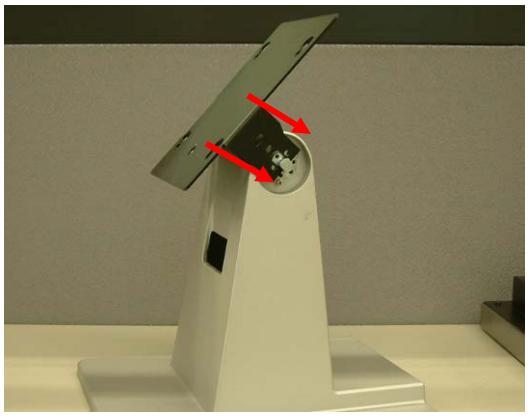


a. Attach the panel bracket to the VESA holds and tighten the screws (4)

b. Place the wall mount kit on the panel bracket and tighten the screw (1)

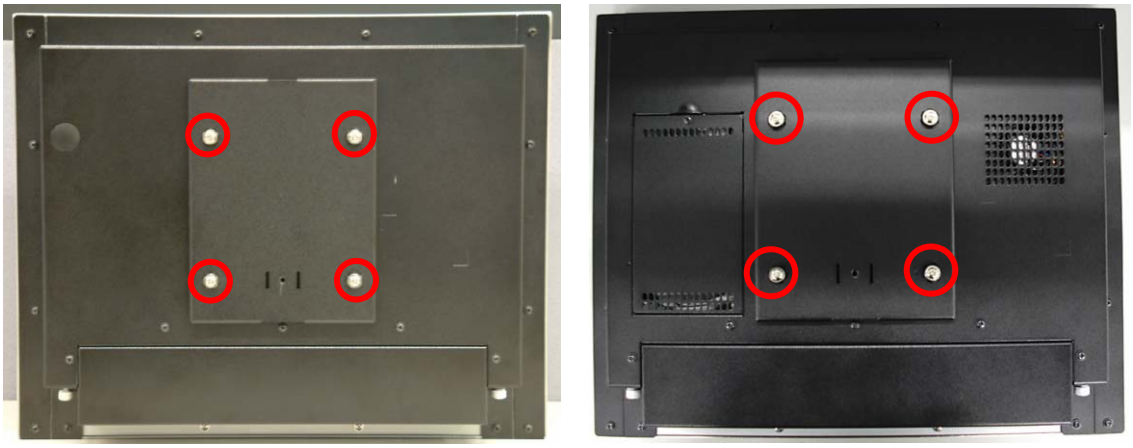
c. Attach the panel to the wall mount bracket and tighten the thumb screw to finish the Wall Mount Installation

4.2 Stand Holder Installation



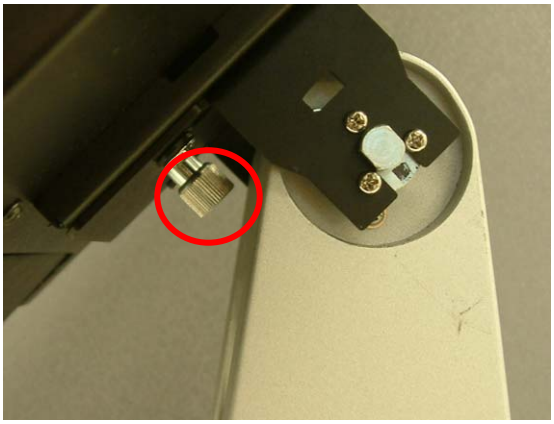
a. Slide the stand bracket into the position shown

b. Remove the screws (6) 3 on each side



c. Attach the panel bracket to the VESA holds and tighten the screws (4)

d. Attach the panel to the stand bracket



e. Tighten the thumbscrew (1)

f. Attach the hinge covers(2) to finish the installation

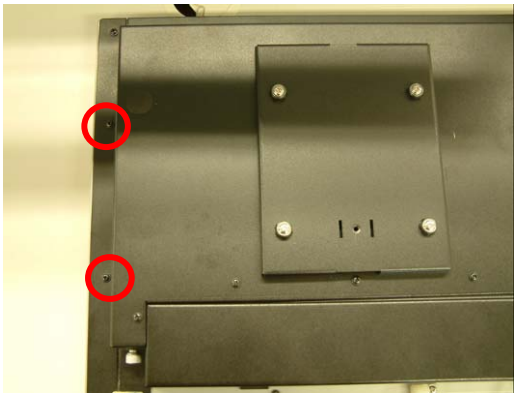
4.3 VFD Installation

a. Place the VFD holder on the VFD bracket and tighten the thumb screws (2)

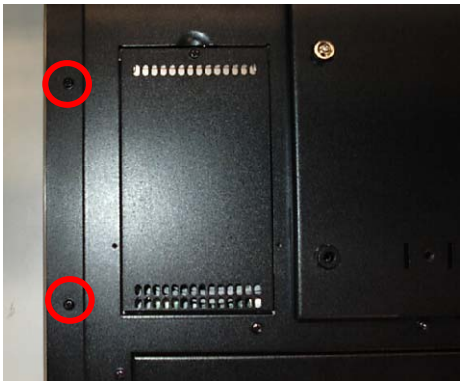
b. Attach the VFD holder on the rear cover and tighter the screws (2) to finish the installation

4.4 MSR Installation

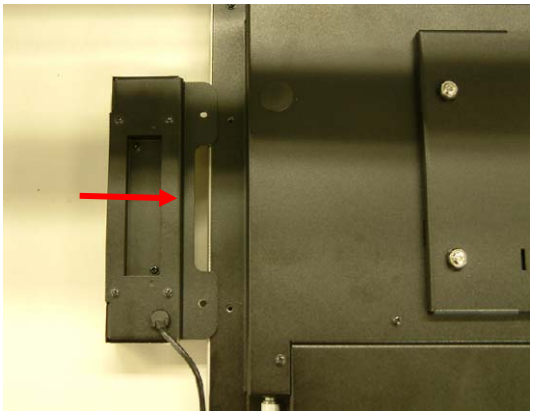
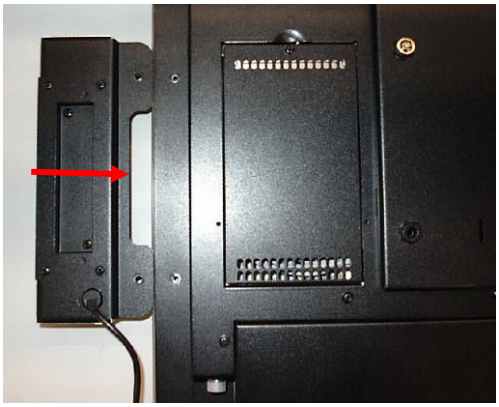
Fanless



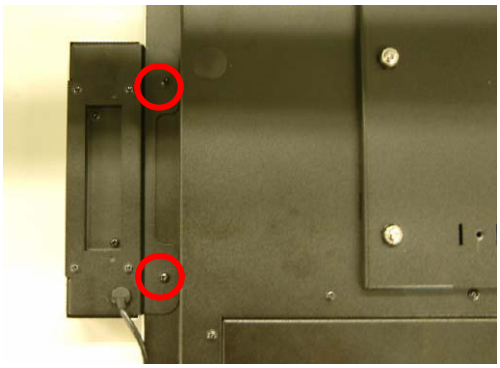
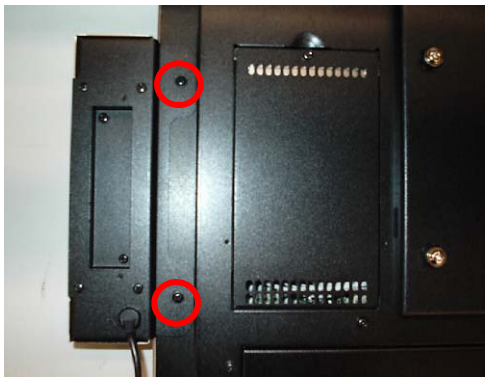
Performance



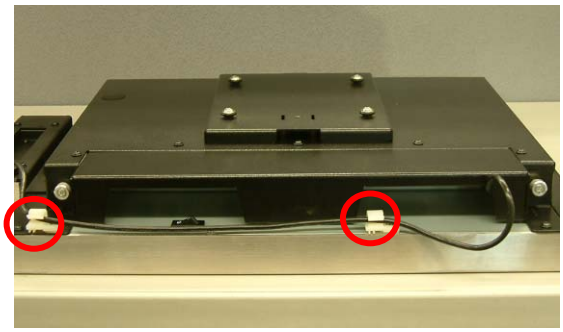
a. Loosen the screws (2)

b. slide the MSR into the position

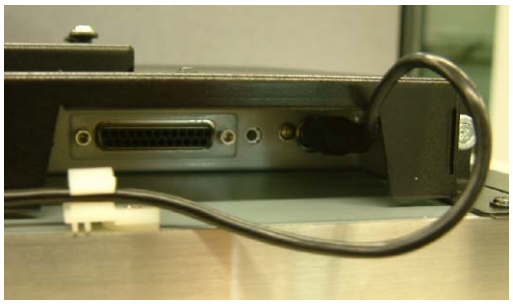



c. Tighten the screws (2)



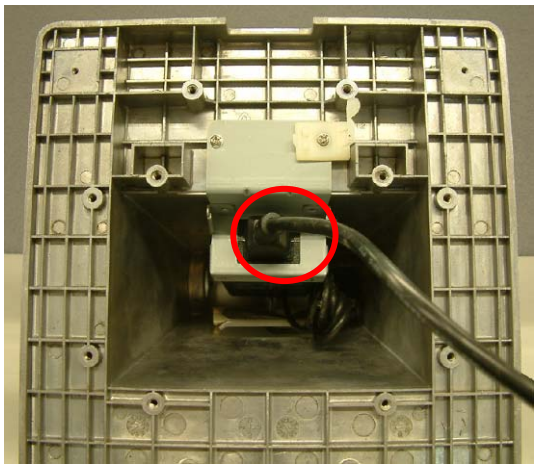
Step d. is only for the fanless model

d. Put the MSR cable through the clips (2)

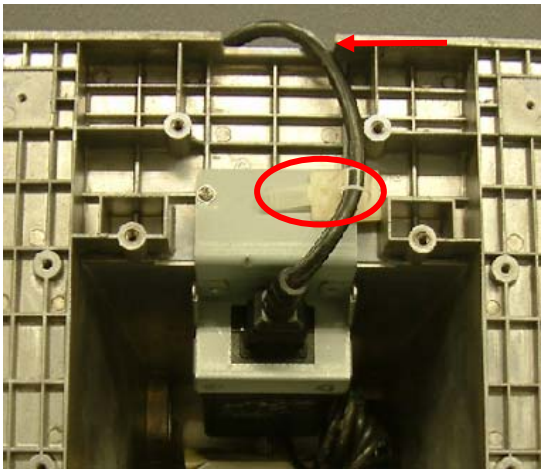


e. Connect the MSR cable to the PS2 socket to finish the installation

4.5 Power Cord Installation



a. Connect the power cord to the adaptor

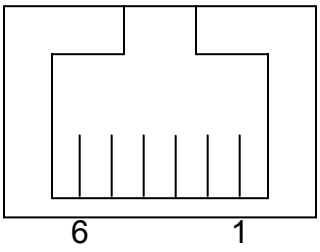


b. Place the cable on the holder and clip to properly locate it. Route through the base gap for cable management

4.6 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



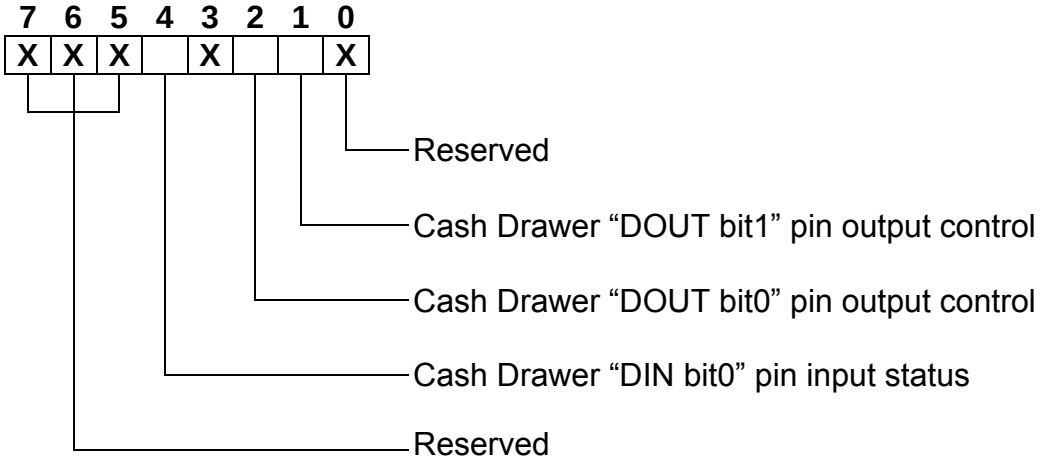
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

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

Register Location: 4B8h
Attribute: Read / Write
Size: 8bit

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



Bit 7: Reserved.
Bit 6: Reserved.
Bit 5: Reserved.
Bit 4: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer.
= 0: the Cash Drawer opened.
Bit 3: Reserved.

Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 1: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 0: Reserved

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

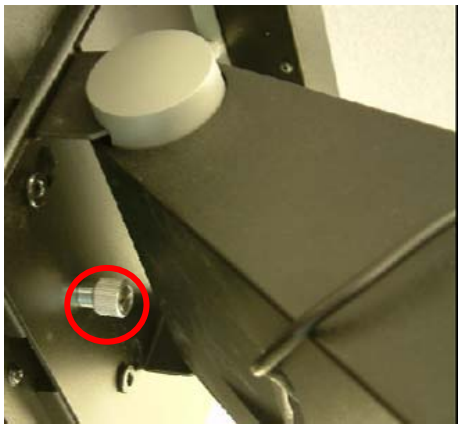
Cash Drawer Control Command Example
Use Debug.EXE program under DOS or Windows98

Command	Cash Drawer
O 4B8 04	Opening
O 4B8 00	Allow to closing
➢ Set the I/O address 4B8h bit2 =1 for opening the Cash Drawer by “DOUT bit0” pin control. ➢ Set the I/O address 4B8h bit2 = 0 to allow closing Cash Drawer.	

Command	Cash Drawer
I 4B8	Check status
➢ The I/O address 4B8h bit4 =1 means the Cash Drawer is closed or no Cash Drawer. ➢ The I/O address 4B8h bit4 =0 means the Cash Drawer is open.	

5. System Disassembly

5.1 Removing the Stand and the Stand holder



a. Loosen the thumbscrew (1)

Fanless

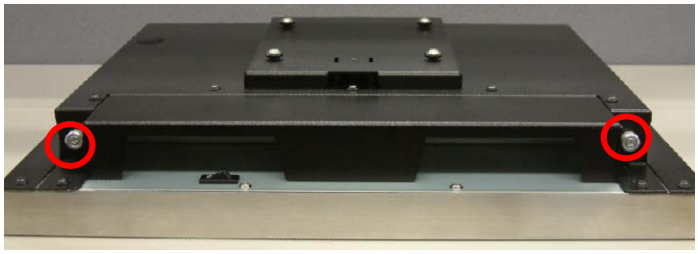
Performance

b. Lift the panel up and separate it from the stand bracket

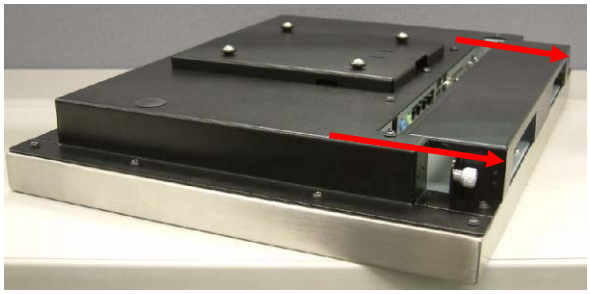
5.2 Opening the I/O Cover

To open the I/O cover, please first follow the steps in chapter 5.1

5.2.1 Fanless



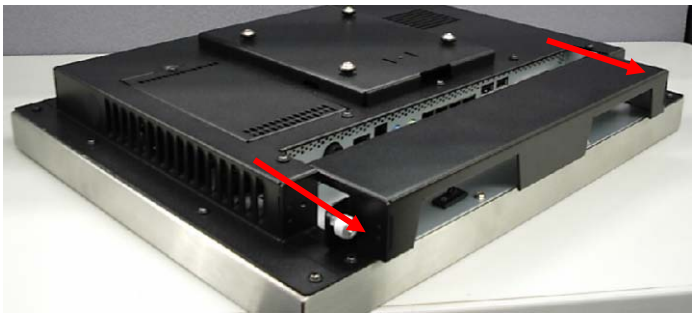
a. Loosen the thumbscrews (2)



b. Remove the I/O cover from the panel

5.2.2 Performance

a. Loosen the thumbscrews (2)

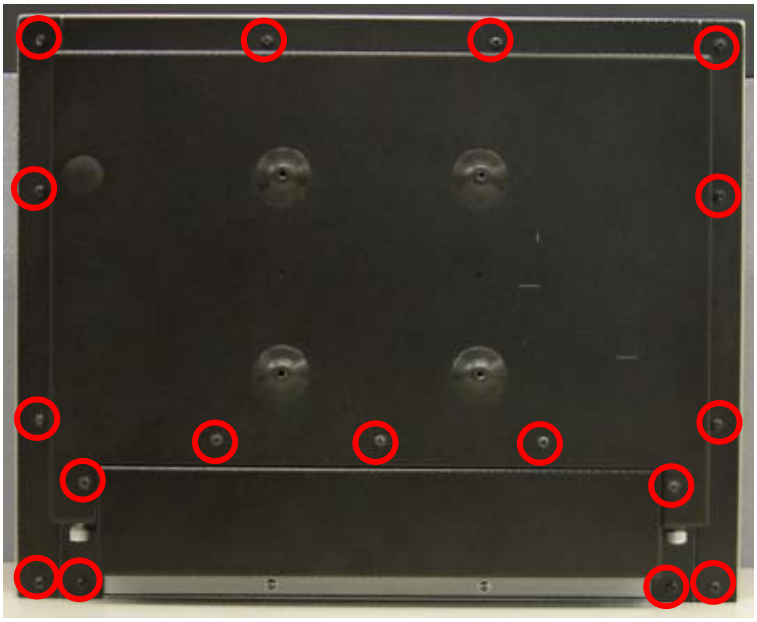


b. Remove the I/O cover from the panel

5.3 Opening the Rear Cover

To open the rear cover, please first follow the steps in chapter 5.1

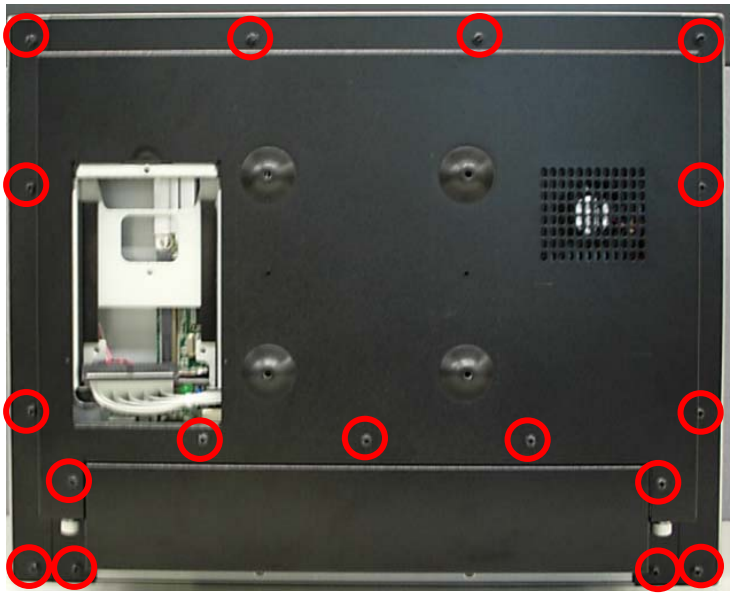
5.3.1 Fanless



a. Remove the screws (17) to remove the rear cover

5.3.2 Performance

To remove the rear cover from the fan model, please remove the HDD as describe in chapter 5.4

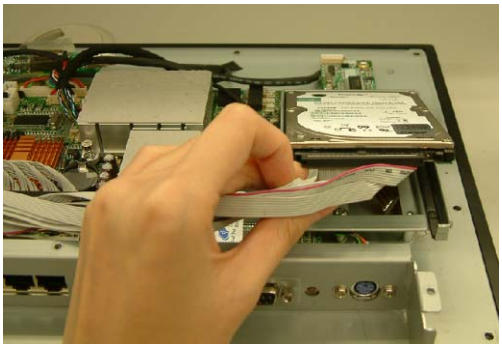


a. Remove the screws (17) to remove the rear cover

5.4 Replacing the Slim HDD

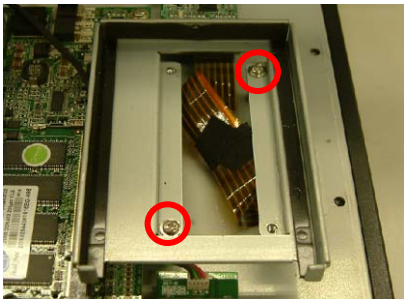
To replace the HDD, please first follow the steps in chapter 5.1 and 5.3

5.4.1 Fanless



a. Lift the HDD up from the holder

b. Disconnect the IDE cable from the HDD



c. remove the screws(2) to remove the HDD holder

5.4.2 Performance

a. Remove the screw (1) to remove the HDD cover

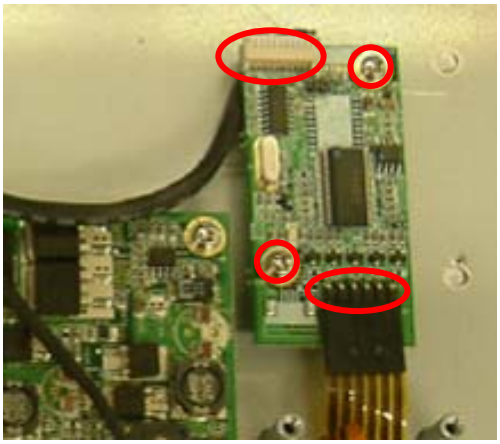
b. Disconnect the IDE cable to replace the slim HDD

5.5 Replacing the Touch Board & PS/2 Board

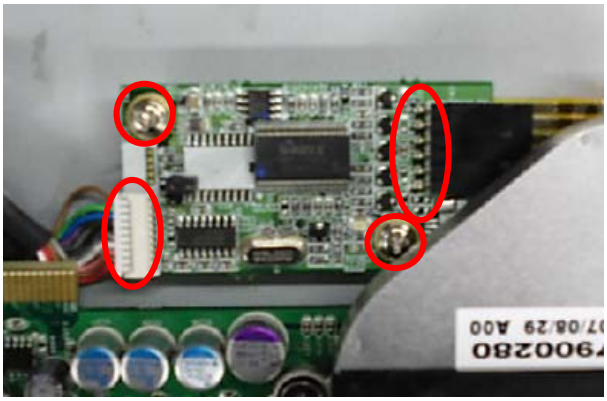
To replace the touch board and the PS/2 board, please first follow the steps in chapter 5.1, 5.3. and 5.4

Touch Board

Fanless

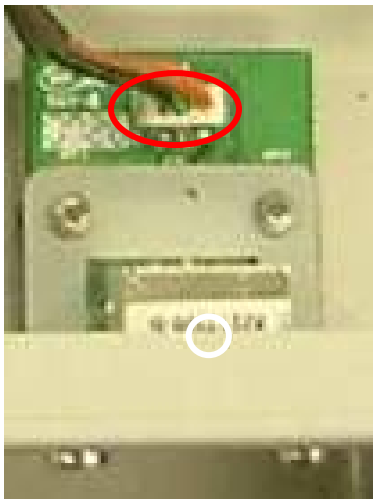


Performance

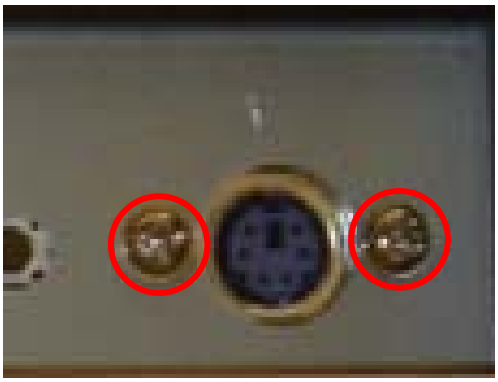


a. Disconnect the cables (2) and remove the screws (2) to replace the touch board

PS/2 Board



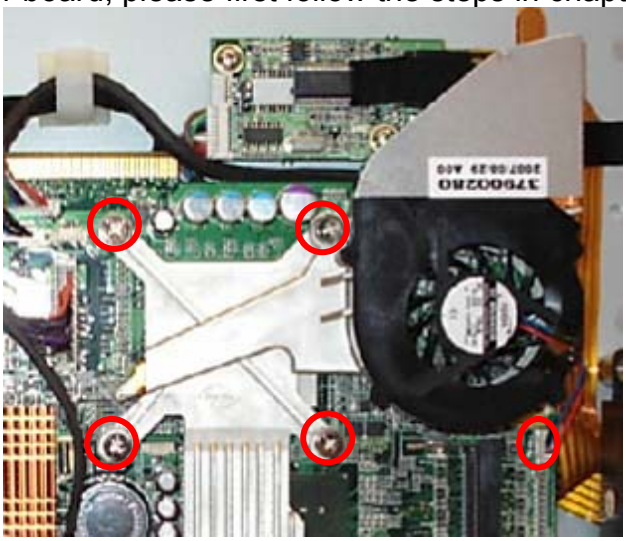
a. Disconnect the cable (1)



b. Remove the screws(2) from I/O then remove the PS/2 board.

5.6 Replacing the Fan (for performance model only)

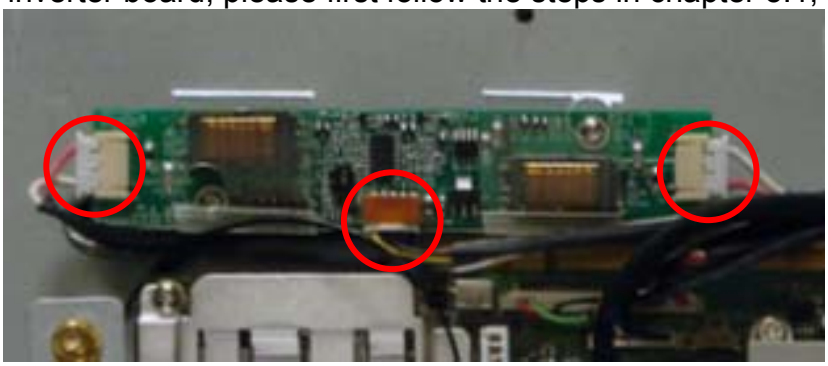
To replace the inverter board, please first follow the steps in chapter 5.1, 5.3, 5.4.



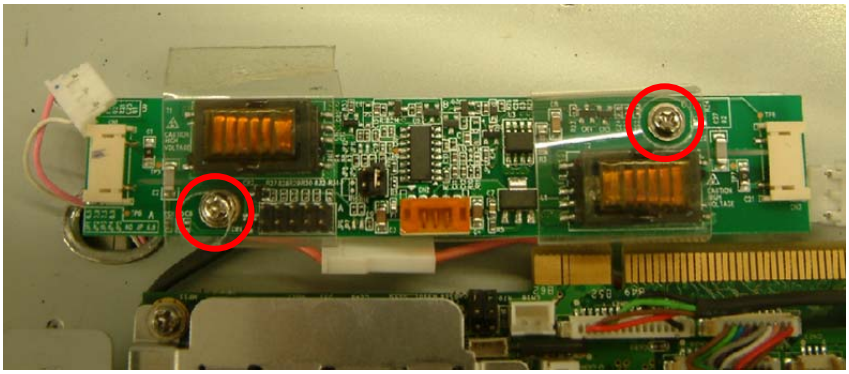
a. Disconnect the cable (1) and remove the screws (4) to replace the Fan

5.7 Replacing the Inverter Board

To replace the inverter board, please first follow the steps in chapter 5.1, 5.3.



a. Disconnect the cables (3)

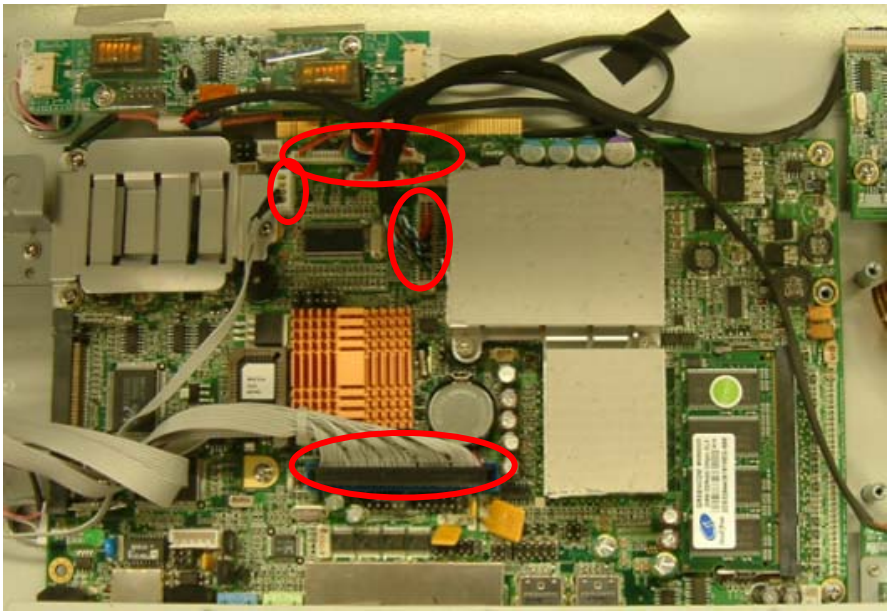


b. remove the screws (2) to replace the inverter board

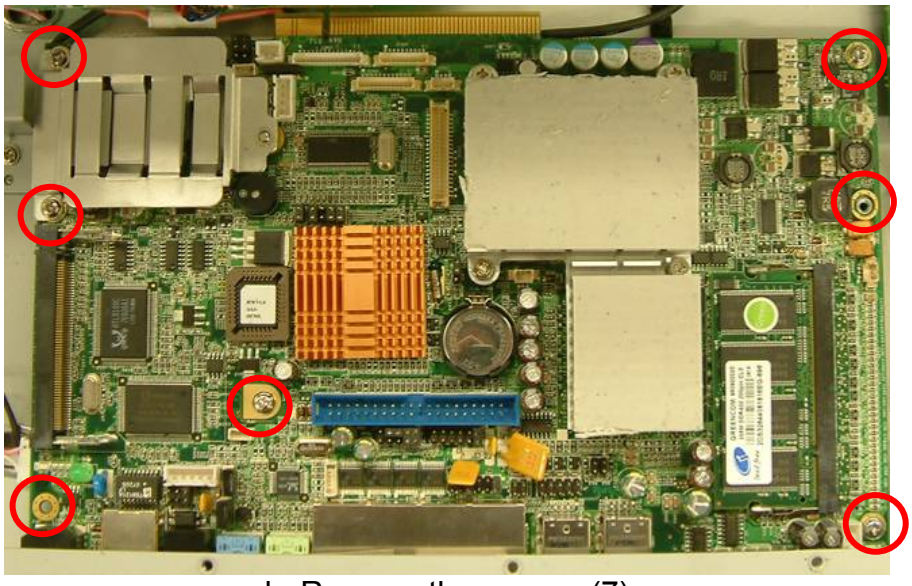
5.8 Replacing the Main Board

To replace the main board, please first follow the steps in chapter 5.1, 5.3. and 5.4

5.8.1 Fanless



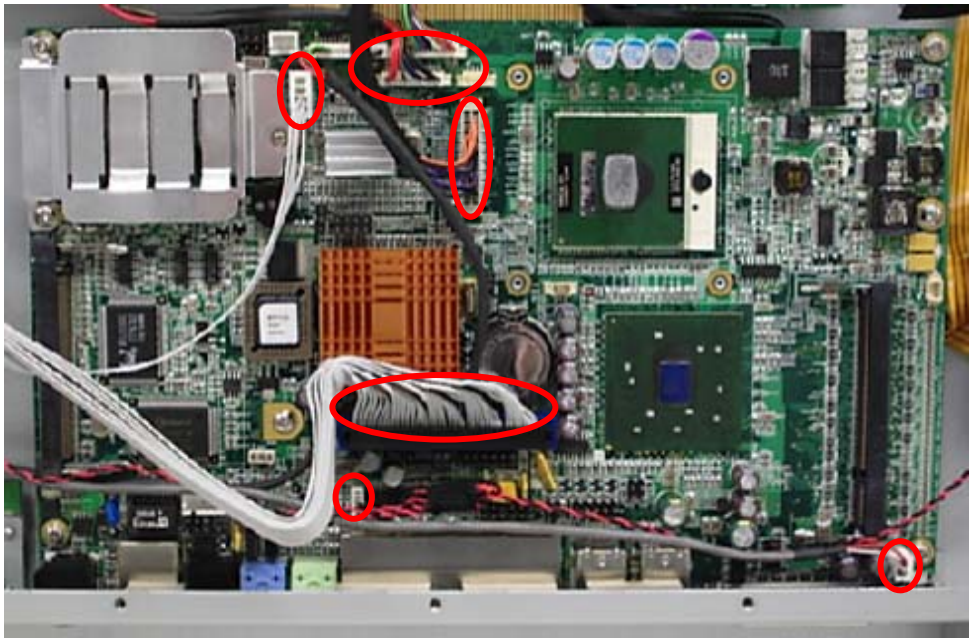
a. Disconnect the cables (6)



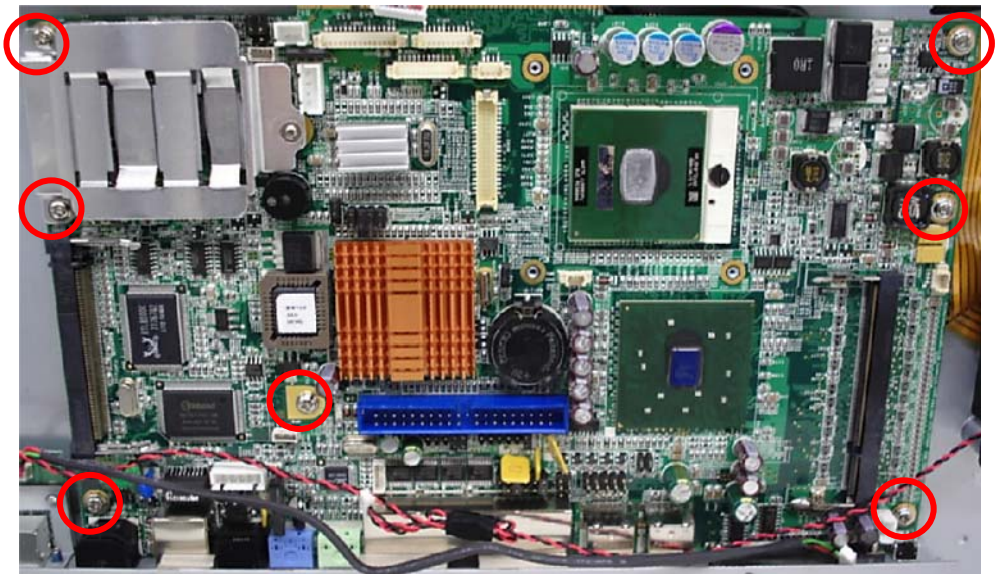
b. Remove the screws (7)

c. Remove the hex screws (2) to replace the main board

5.8.2 Performance



a. Disconnect the cables (7)

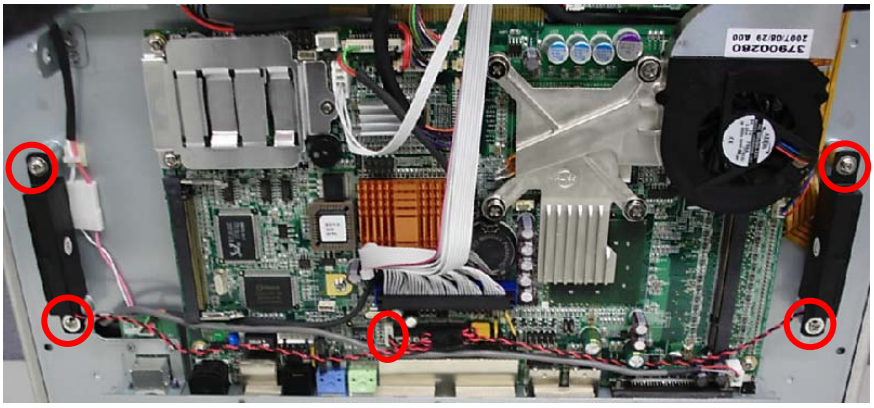


b. Remove the screws (7)

c. Remove the hex screws (2) to replace the mainboard

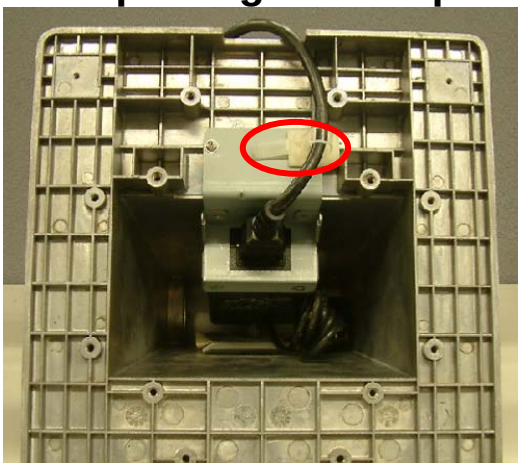
5.9 Replacing the Speaker (for Performance model only)

To replace the touch board and the PS/2 board, please first follow the steps in chapter 5.1, 5.3. and 5.4

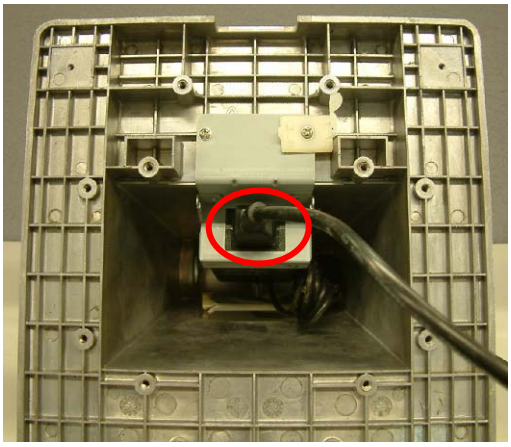


a. Disconnect the cable (1) and remove the screws 4) to replace the speakers (2)

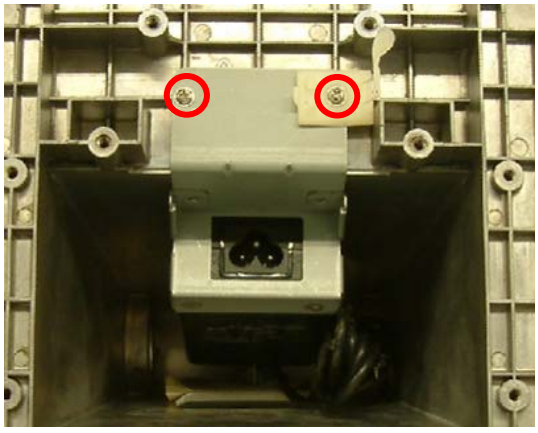
5.10 Replacing the Adaptor



a. Unclip the cable holder



b. Disconnect the power cord from the adaptor



c. Loosen the screws (2) to release the adaptor and the bracket from the system.

6. Specification

6.1 Fanless

System	12.1”	15”	17”
Mainboard	**B78**		
CPU Support	Intel Celeron M ULV 1.0GHz Zero Cache		
Chipset	Intel 852GM FSB 400 / ICH4		
System Memory	2 x DDR SO-DIMM Slot support 2GB		
Graphic Memory	Shared system memory 8~64MB		
BIOS	AWARD BIOS		
LCD Touch Panel			
LCD Size	12.1” TFT LCD	15” TFT LCD	17” TFT LCD
Brightness	400nits	250nits	300nits
Maximal Resolution	800 x 600	1024 x 768	1280 x 1024
Touch Screen Type	Resistive touch	Resistive type (default)/, IR touch (optional)	
Storage			
HDD	Compact flash	Slim HDD / Compact flash	
Expansion			
Mini-PCI Slot	802.11 b/g wireless LAN card (optional)		
External I/O Ports			
USB	4 ports (V2.0)		
PS2	1		
Serial / COM	4 x COM ports RJ-45 connectors (COM1&COM2 standard RS-232; COM3 & COM4 pin9 with 5V /12V power by jumper)		
Parallel	1 x D-sub / 25F		
LAN (10 / 100)	1 x RJ45		
Cash Drawer	1 x RJ-11 (12V /19 V)		
DC Jack	1 x DC Jack latch type		
Audio Jack	1 x Line-out, 1 x Line-in		
Power			
Power Adapter	19V, 90W		

Peripheral			
Metal MSR	3 Tracks (PS/2)		
Metal Customer Display	Flush mount VFD (COM)		
Control			
Power Button	1		
Environment			
EMC & Safety	FCC, Class A, CE, LVD		
Operating Temperature	0°C ~ 40°C (32 °F ~ 104 °F)		
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140 °F)		
Operating Humidity	5% ~ 95% RH non condensing		
Storage Humidity	5% ~ 95% RH non condensing		
Dust & Water Proof	IP 55 (Front bezel)		
Dimension (W x D x H mm / inch)	Stand (90° Angle) 331x250x346mm 13”x9.84”13.6”	Stand (90° Angle) 386x250x370mm 15.2”x9.8”x14.6”	Stand (90° Angle) 411 x 250 x390mm 16.2”x9.8”15.4”
	Wall mount 331x55x260mm 13”x2.2”x10.2”	Wall mount 386x60x308mm 15.2”x2.4”x12.1”	Wall mount 411x60x345mm 16.2”x2.4”x13.6”
Mounting	100mm x100mm VESA Standard holes		
OS Support	Windows XP, WEPOS, XP Embedded, XP Professional Embedded, Windows 2000 Professional Embedded, Embedded Linux		

6.2 Performance

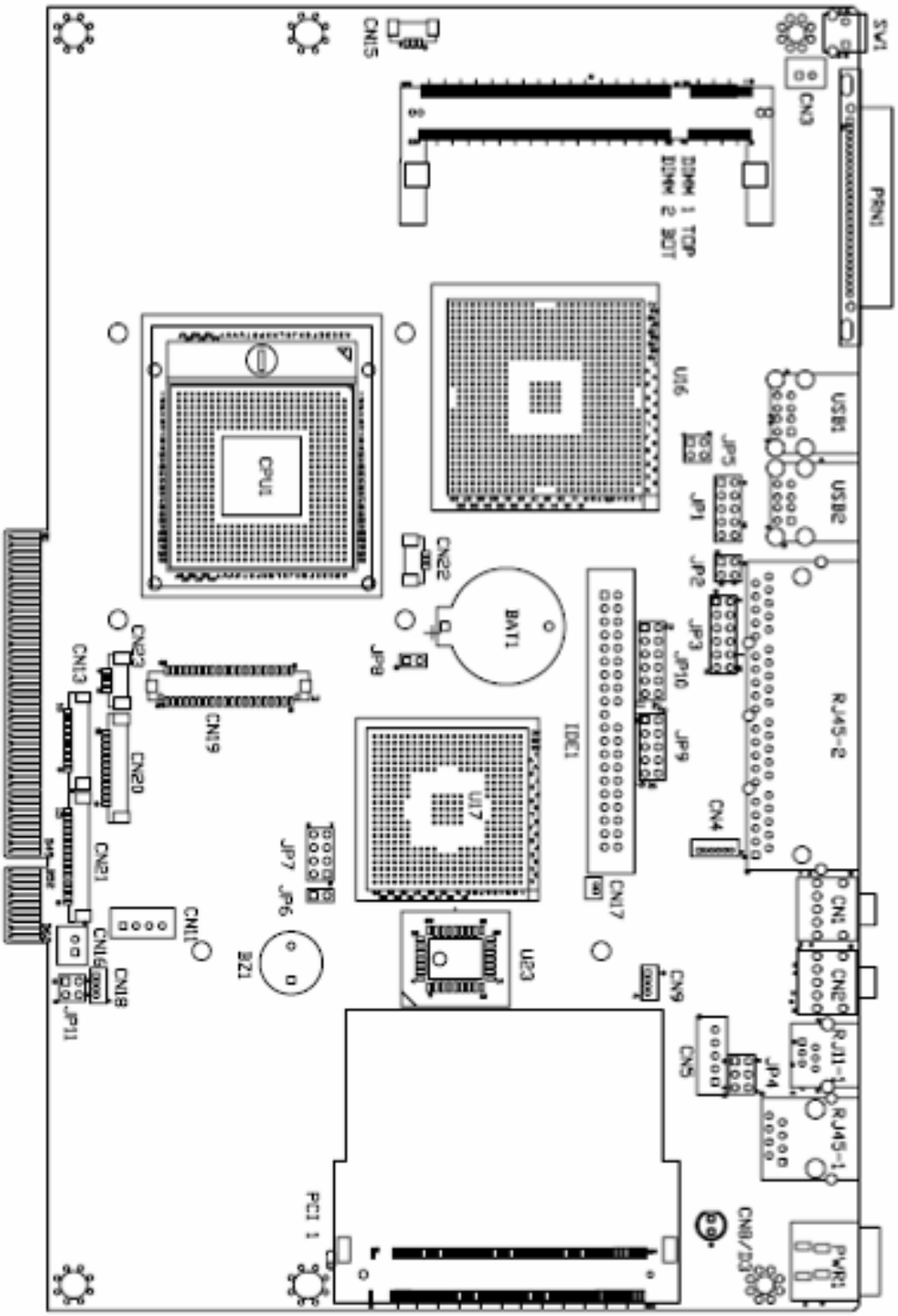
System	12.1”	15”	17”
Motherboard	**B78**		
CPU	Intel Celeron M 1.5G/ Pentium M 1.8G (socket)		
Chipset	Intel 852GM FSB 400 / ICH4		
System Memory	2 x DDR SO-DIMM Slot support 2GB		
Graphic Memory	Share system memory 8~64MB		
LCD /Touch Panel			
LCD Size	12.1“ TFT LCD	15“ TFT LCD	17“ TFT LCD
Brightness	400nits	250nits	300nits
Maximal Resolution	800X600 /1024X768	1024X768	1280X1024
Touch Screen Type	Resistive touch	Resistive (default) / IR (option) touch	
Storage			
HDD	Compact flash	Slim HDD / Compact Flash	
Expansion			
Mini PCI slot	802.11 b/g wireless LAN card (optional)		
External I/O Port			
USB	4x USB(2.0)		
PS/2	1		
Serial / COM	4 x COM ports RJ-45 connectors (COM1&COM2 standard RS-232; COM3 & COM4 pin9 with 5V /12V power by jumper)		
Parallel	1x DB 25/F		
LAN(10/100)	1x RJ-45		
Cash Drawer	1x RJ-11 (12V or 19V)		
DC Jack	1 x DC Jack latch type		
Audio	1x Line- in, 1x Line- out		
Speaker	N/A	2 x 3W	
Control			
Power Button	1		
Power			
Power Adapter	19V 90W		
Peripheral			
Metal MSR	3 Tracks (PS/2)		
Metal Customer Display	Flush mount VFD (COM)		

Environment			
EMC & Safety	FCC Class A, CE, LVD		
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)		
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)		
Operating Humidity	5% - 95% RH non condensing		
Storage Humidity	5% - 95% RH non condensing		
Dust & Water Proof	IP55 (Front bezel)		
Dimension (W x D x H)	Stand (90° Angle) 331x250x346mm 13”x9.84”13.6”	Stand (90° Angle) 386x250x370mm 15.2”x9.8”x14.6”	Stand (90° Angle) 411 x 250 x390mm 16.2”x9.8”15.4”
	Wall mount 331x55x260mm 13”x2.2”x10.2”	Wall mount 386x60x308mm 15.2”x2.4”x12.1”	Wall mount 411x60x345mm 16.2”x2.4”x13.6”
Mounting	100mm x100mm VESA Standard holes		
OS support	Windows XP, WEPOS, XP Embedded, XP Professional Embedded, Windows 2000 Professional Embedded, Embedded Linux		

* This specification is subject to change without prior notice.

7. Jumper Settings

B78 Motherboard



Connectors

Connector	Function
CN1	Audio Line Out
CN2	Audio Line In
CN13	COM5 for Touch
CN15	CPU FAN Connector
CN16	Hardware Reset
CN18	USB2
CN19	LCD Interface Connector
CN20	Inverter Connector
CN21	Card Reader Connector

Connector	Function
IDE1	Primary IDE Connector
PRN1	Parallel Port
PWR1	+19V Power Adapter
RJ11_1	Cash Drawer Connector
RJ45_1	LAN (On Board)
RJ45_2	COM1, COM2, COM3, COM4
USB1	USB3, USB4
USB2	USB5, USB6
SW1	Power Switch

Jumper Settings

CMOS Operation Mode

Function	JP8
CMOS Normal	◎N/C
CMOS Reset	1-2

To clear the CMOS:
Remove AC power from the unit.
Open the cabinet.
Change the JP8 jumper setting from N/C to 1-2.
Wait 1 minute.
Change the JP8 jumper setting back to N/C.
Close the cabinet.
Apply AC power and continue.

Power Mode Setting

Function	JP6
ATX Power	◎N/C
AT Power	1-2

Cash Drawer Power Setting

Voltage	JP4
+12V	1-2
N/A	3-4
+19V	◎5-6

COM3 & COM 4 Power Setting

Function	JP3
COM3 PIN10_RI	◎1-2
COM3 PIN10_+5V	3-4
COM3 PIN10_+12V	5-6
COM4 PIN10_RI	◎7-8
COM4 PIN10_+5V	9-10
COM4 PIN10_+12V	11-12

Card Reader Setting

Function	JP11
◎**Docking**	1-2
On Board	3-4

LCD ID Setting

Panel #	Resolution			LVDS		JP7 0= Short; 1= Open				Supported panels
				Bits	Channel	1-2	3-4	5-6	7-8	
0	640	x	480	18	Single	0	0	0	0	
1	800	x	600	18	Single	0	0	0	1	AU G121SN01 Sharp 12” LQ121S1LLG41
2	1024	x	768	18	Single	0	0	1	0	CHI MEI N121X5-L03) XGA CHI MEI G121X1-L01) XGA AU G150XG01 XGA IDTech IAXG02L5 XGA LTA121C250F-01 AU M150XN07 V1
3	1280	x	1024	24	Dual	0	0	1	1	AU 17" / 19"
4	1024	x	768	24	Single	0	1	0	0	SHARP LQ150X1LGN1 SHARP LQ150X1LGN2 AU M150XN07 V.2 AU G150XG03 V.0 24bit Sharp LQ150X1LG55 24bit Sharp LQ150X1LG45 24bit
5	800	x	600	24	Single	0	1	0	1	Torisan 12.1” L5S30548P00
6	800	X	600	18	Single	0	1	1	0	Reserved
7	800	X	600	18	Single	0	1	1	1	Sharp 12” LQ121S1LLG41
8	1024	X	768	24	Single	0	1	0	0	SVA150XG10TB

COM2 RS232

Function	JP9	JP10
◎RS232	1-2 3-4 5-7	1-2

Note:

OPEN SHORT

Connectors Pin Definition

CN4: Speaker & MIC Connector

Pin 1	AMP_ORL	Pin 2	GND
Pin 3	GND	Pin 4	AMP_ORR
Pin 5	GND	Pin 6	MIC1

CN9: CD-IN Connector

Pin 1	CDIN_L	Pin 2	CDIN_REF
Pin 3	CDIN_R	Pin 4	CDIN_REF

CN11: Power Connector For 3.5” HDD

Pin 1	+12V	Pin 2	GND
Pin 3	GND	Pin 4	+5V

CN13: COM5

Pin 1	DCD#	Pin 2	RX#
Pin 3	TX#	Pin 4	DTR#
Pin 5	GND	Pin 6	DSR#
Pin 7	RTS#	Pin 8	CTS#
Pin 9	RI	Pin 10	+5V

CN15: CPU FAN Connector

Pin 1	+5V	Pin 2	Feedback
Pin 3	GND		

CN18: USB 2

Pin 1	+5V_USB1	Pin 2	USB20_R_P1
Pin 3	USB20_R_P1+	Pin 4	GND

CN19: LVDS Interface

Pin 1	LVDS_B0+	Pin 2	LVDS_A3+
Pin 3	LVDS_B0-	Pin 4	LVDS_A3-
Pin 5	GND	Pin 6	GND
Pin 7	LVDS_B1+	Pin 8	LVDS_CLKA+
Pin 9	LVDS_B1-	Pin 10	LVDS_CLKA-
Pin 11	GND	Pin 12	GND
Pin 13	LVDS_B2+	Pin 14	LVDS_A2+
Pin 15	LVDS_B2-	Pin 16	LVDS_A2-
Pin 17	GND	Pin 18	GND
Pin 19	LVDS_B3+	Pin 20	LVDS_A1+
Pin 21	LVDS_B3-	Pin 22	LVDS_A1-
Pin 23	GND	Pin 24	GND
Pin 25	LVDS_CLKB+	Pin 26	LVDS_A0+
Pin 27	LVDS_CLKB-	Pin 28	LVDS_A0-
Pin 29	GND	Pin 30	GND
Pin 31	+5V_LCDVDD	Pin 32	+3.3V_LCDVDD
Pin 33	+5V_LCDVDD	Pin 34	+3.3V_LCDVDD
Pin 35	+5V_LCDVDD	Pin 36	+3.3V_LCDVDD
Pin 37	+5V_LCDVDD	Pin 38	+3.3V_LCDVDD
Pin 39	+5V_LCDVDD	Pin 40	+3.3V_LCDVDD

CN20: Inverter Connector

Pin 1	+12V_INV	Pin 2	+12V_INV
Pin 3	+12V_INV	Pin 4	+12V_INV
Pin 5	Back-Light Enable	Pin 6	N/C
Pin 7	N/C	Pin 8	Back-Light Enable
Pin 9	GND	Pin 10	GND
Pin 11	GND	Pin 12	GND

CN21: POS Card Reader Connector

Pin 1	+5V	Pin 2	+5V
Pin 3	KDATA_SIO_TO_MSR	Pin 4	KDATA_SIO_TO_MSR
Pin 5	KDATA_MSR_TO_GFINGER	Pin 6	KCLK_MSR_TO_GHINGER
Pin 7	RS232_6_RX#	Pin 8	RS232_6_TX#
Pin 9	RS232_6_CTS#	Pin 10	RS232_6_RTS#
Pin 11	KB_EN	Pin 12	GND
Pin 13	USB20_MSR_P0+	Pin 14	USB20_MSR_P0-
Pin 15	GND		

CN22: System FAN Connector

Pin 1	+5V	Pin 2	Feedback
Pin 3	GND		

CN23: IrDA Connector

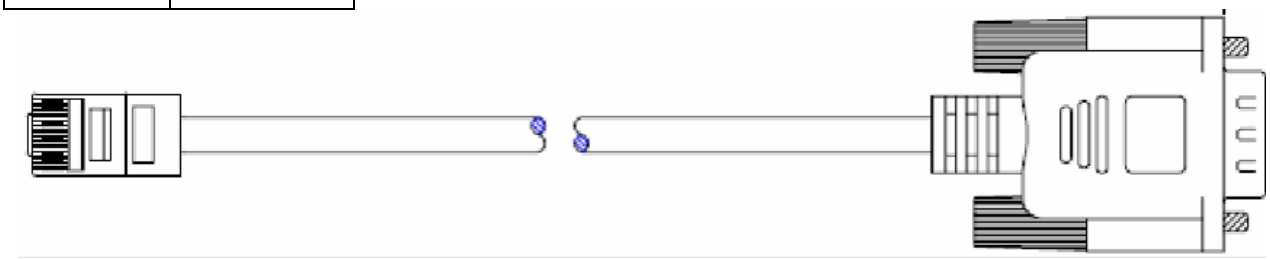
Pin 1	+5V	Pin 2	IRDA_RX
Pin 3	IRDA_TX	Pin 4	GND

RJ45_2: COM1(Pin1~10), COM2 (Pin11~20)

Pin 1	N/C	Pin 2	RS232_1_DCD#
Pin 3	RS232_1_DSR#	Pin 4	RS232_1_RX#
Pin 5	RS232_1_RTS#	Pin 6	RS232_1_TX#
Pin 7	RS232_1_CTS#	Pin 8	RS232_1_DTR#
Pin 9	GND	Pin 10	RS232_1_RI
Pin 11	N/C	Pin 12	RS232_2_DCD#
Pin 13	RS232_2_DSR#	Pin 14	RS232_2_RX#
Pin 15	RS232_2_RTS#	Pin 16	RS232_2_TX#
Pin 17	RS232_2_CTS#	Pin 18	RS232_2_DTR#
Pin 19	GND	Pin 20	RS232_2_RI

RJ45 to DB9 Cable for COM Ports

RJ45	**DB9**
Pin 1	---
Pin 2	Pin 1
Pin 3	Pin 6
Pin 4	Pin 2
Pin 5	Pin 7
Pin 6	Pin 3
Pin 7	Pin 8
Pin 8	Pin 4
Pin 9	Pin 5
Pin 10	Pin 9



RJ45_2: COM3(Pin21~30), COM4(Pin31~40)

Pin 21	N/C	Pin 22	RS232_3_DCD#
Pin 23	RS232_3_DSR#	Pin 24	RS232_3_RX#
Pin 25	RS232_3_RTS#	Pin 26	RS232_3_TX#
Pin 27	RS232_3_CTS#	Pin 28	RS232_3_DTR#
Pin 29	GND	Pin 30	RS232_3_RI
Pin 31	N/C	Pin 32	RS232_4_DCD#
Pin 33	RS232_4_DSR#	Pin 34	RS232_4_RX#
Pin 35	RS232_4_RTS#	Pin 36	RS232_4_TX#
Pin 37	RS232_4_CTS#	Pin 38	RS232_4_DTR#
Pin 39	GND	Pin 40	RS232_4_RI

JP1: VGA Port

Pin 1	GND	Pin 2	CRT_R
Pin 3	GND	Pin 4	CRT_G
Pin 5	GND	Pin 6	CRT_B
Pin 7	GND	Pin 8	CRT_HSYNC
Pin 9	GND	Pin 10	CRT_VSYNC

JP2: VGA Power

Pin 1	+12	Pin 2	GND
Pin 3	+12	Pin 4	GND

8. BIOS Settings

1. BIOS Setup Utility

The BIOS setup defines how the system is configured. You need to run this program the first time you configure this product. You may need to run it again if you change the configuration.

You need to connect a PC keyboard to the keyboard connector to run the BIOS setup utility.

2. Starting the BIOS Setup

1. Turn on or reboot this product.
2. Press the DEL key immediately after the product is turned on, or press the DEL key when the following message is displayed during POST (the Power on Self-Test).

   Press DEL to enter SETUP.
3. The main menu of the BIOS setup is displayed.
4. If the supervisor password is set, you must enter it here.

3. When a Problem Occurs

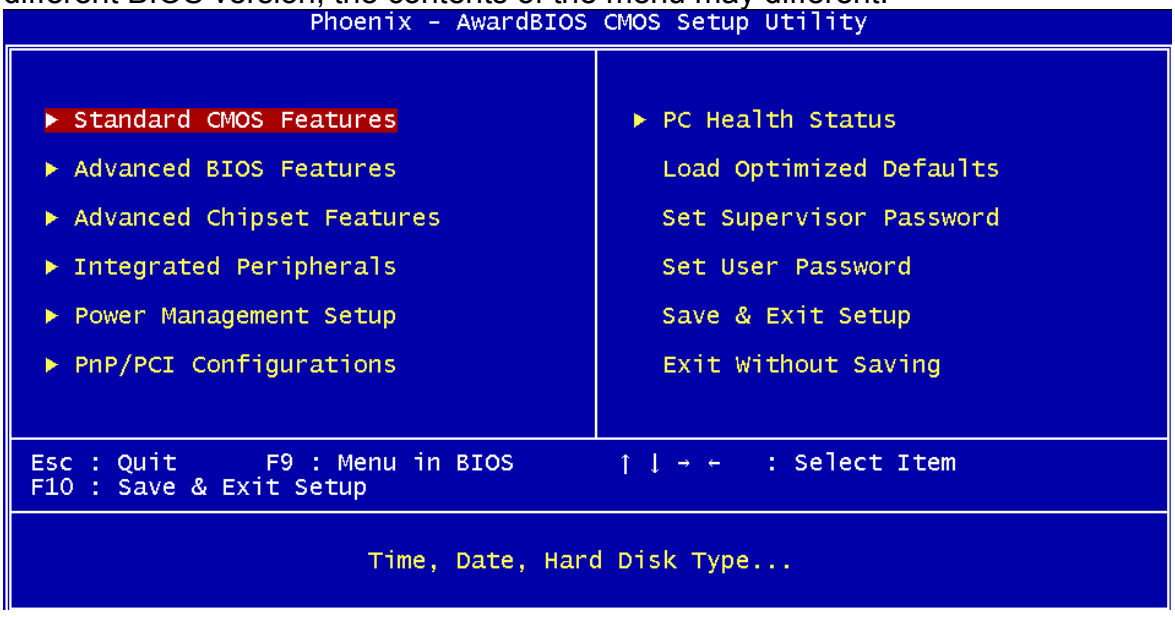
If, after making and saving system changes with the Setup utility, you find that this product no longer boots, start the BIOS setup and execute the following.

Load Optimized Defaults

4. 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 menu below is from B78 BIOS version B78FV10.BIN. If you have a different BIOS version, the contents of the menu may different.



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.