User Manual

February 2009 Revision 2.3

Point-of Sale Hardware System

Manual Version 2.3

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.

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 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.

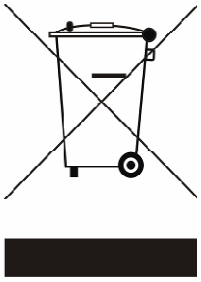
(2) This device must accept any interference received, including interference that may cause undesired operation

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
V1.0	Release	Nov, 2005
V2.0	● 1 P.7 _ add the "Note: The maximum current that can be drawn from each COM port is 500 mA." ● 2 P.26_add the "Note: Please set the Jumper setting 15 of the motherboard to 1-2 (Refer to P.38 Item 12. Second Display Power Setting)." ● 3 P.27_item c_change to "Insert the other end of the VGA cable (male) into the VGA port.	Mar, 2006
V2.1	● 1. P.15_add "calibration part" ● 2. P.17,18_add "calibration part" ● 3. P.28-30_add "Note: The procedure below is valid only for POS462 with Sanyo Torisan LCD Panel." ● 3. P.39_add 4 & 5 items for LCD ID Setting	Jul, 2006
V2.3	● B91 MB Added ● Specification of B91 Added ● Jumper settings of B91 Added ● BIOS of B91 Added	Feb, 2009

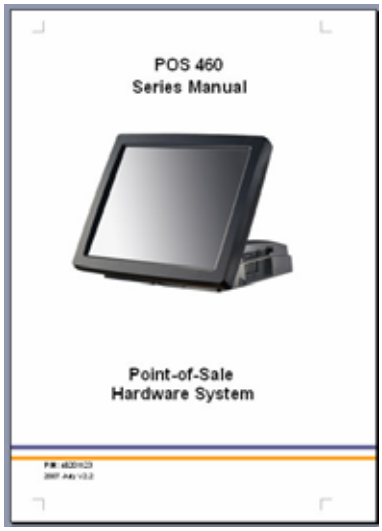
Table Contents

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

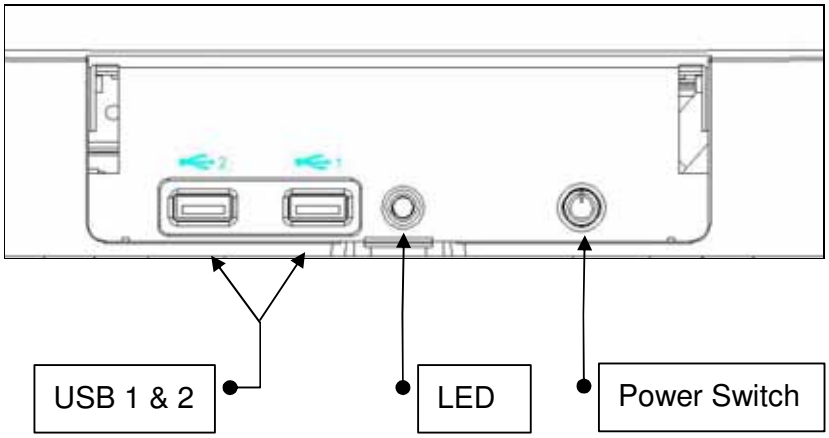


b. Manual

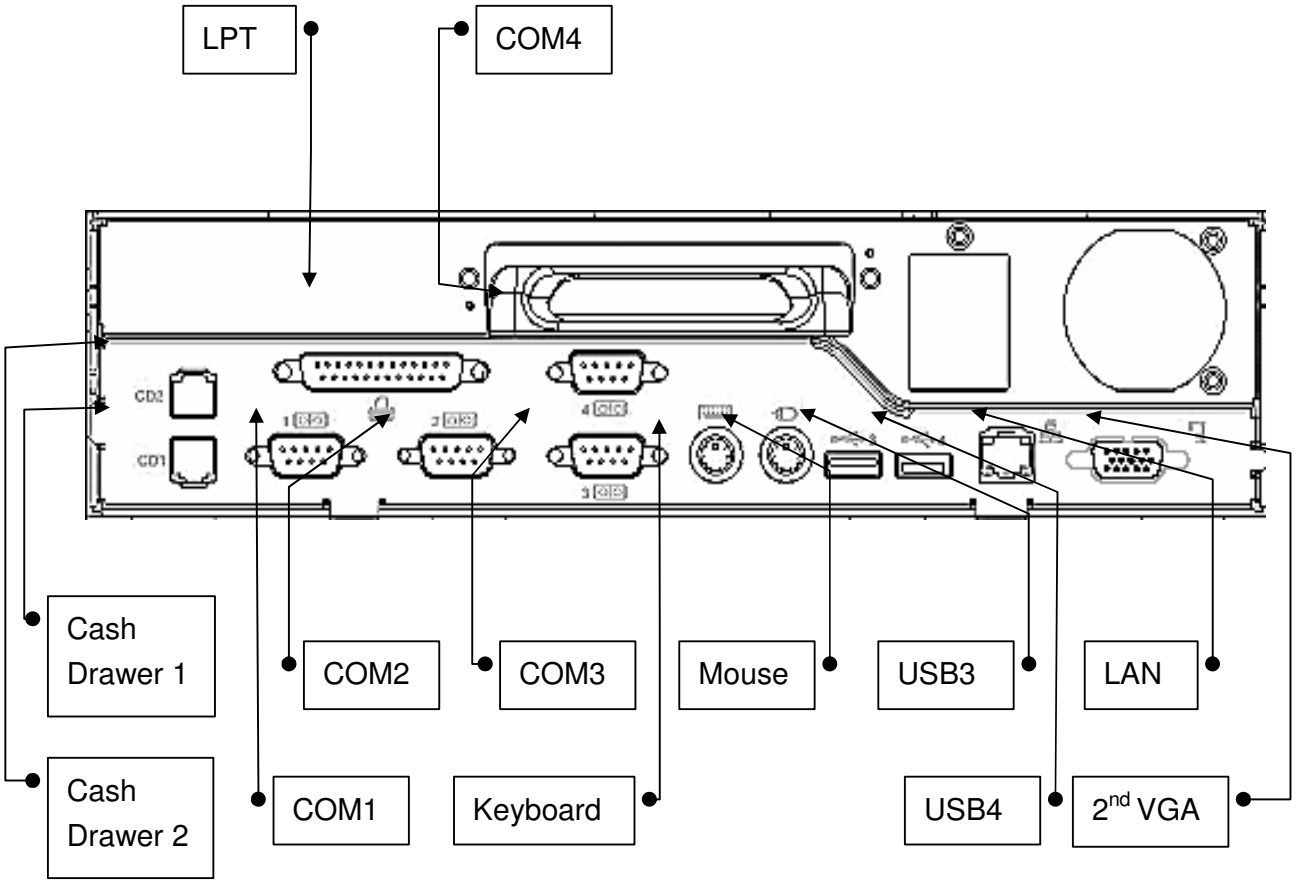
c. Power Cable

2. System View

2.1 Front View



2.2 2.2 Rear View



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

3. B81 Drivers Installation

3.1 Driver list

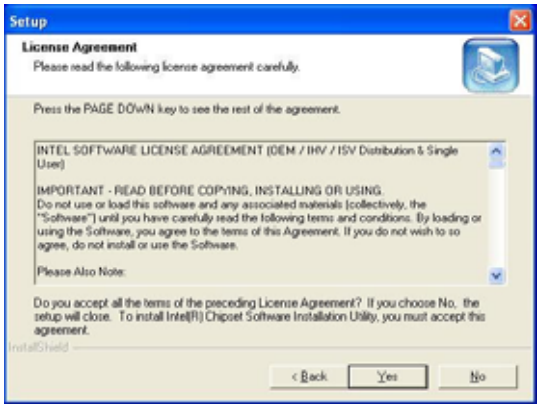
Folder/File	File Description
<CD>:\B81.htm	B81 Driver List
<CD>:\Common\INTEL\Chipset\i8xx	Chipset Driver
<CD>:\Common\INTEL\VGA\i85x	VGA Driver
<CD>:\Common\Lan_driver\R8139_810x	10/100Mb LAN Driver
<CD>:\Common\INTEL\USB20	USB 2.0 Driver
<CD>:\Common\SmartCard\USB	USB Smart Card Reader Driver
<CD>:\Common\Elo_Touch	ELO Touch Screen Driver
<CD>:\Common\POS_Touch	POSTouch Touch Screen Driver

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

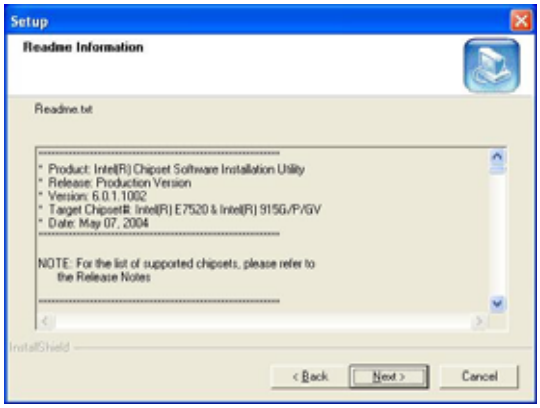
3.2 Chipset Driver Installation

a. Double click "infinst_enu_6.0.1002" on the My Computer window.

b. Click the "Next" button on the Welcome window.



c. Click the "Yes" button on the License Agreement window.

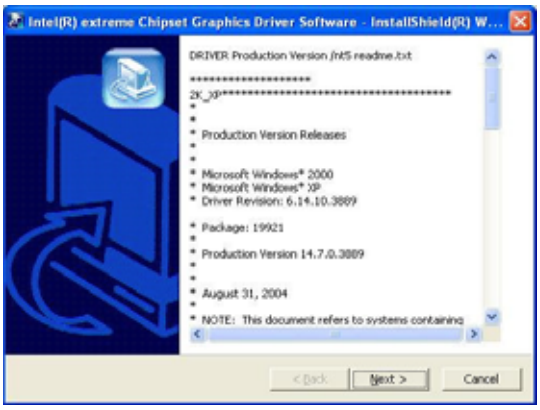


d. Click the ”Next” button on the Readme Information window.

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

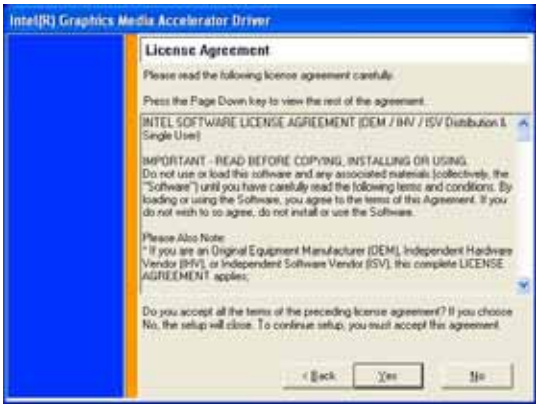
3.3 VGA Driver Installation

a. Double click "win2k_xp147" on the My Computer window.



b. Click the "Next" button on the Welcome window.

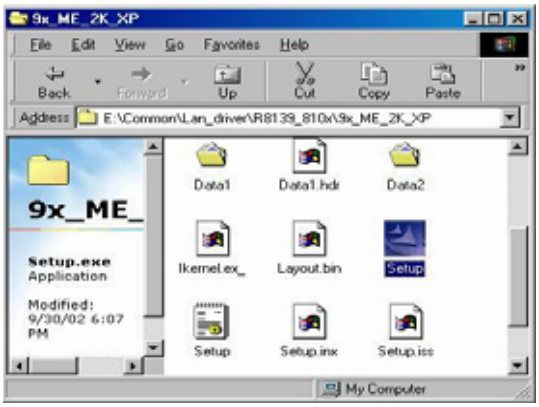
c. Click the ”Next” button on the Welcome window.



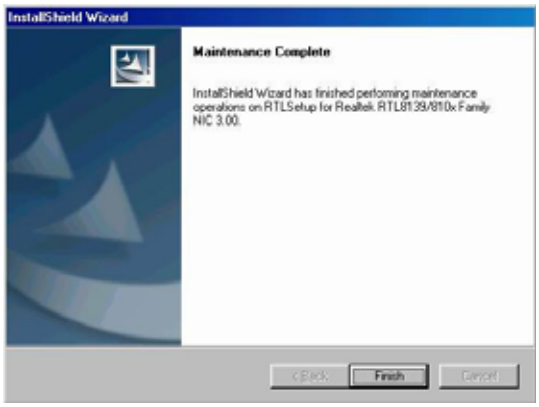
d. Click the ”Yes” button on the License Agreement window.

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

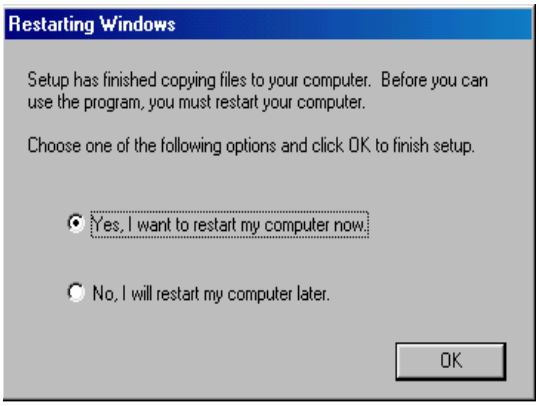
3.4 LAN Driver Installation



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



b. Click the "Finish" button on the Maintenance complete window.



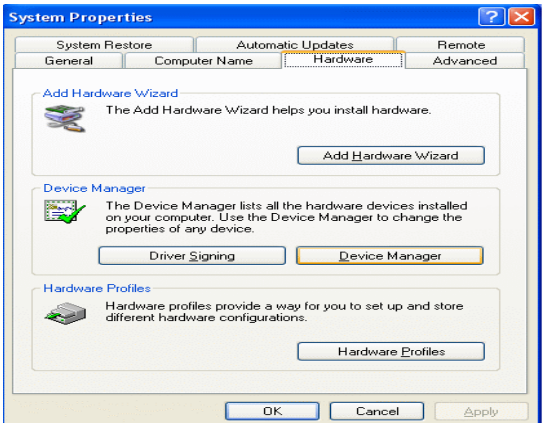
c. Click the ”OK” button and restart your system.

3.5 USB2.0 Driver Installation

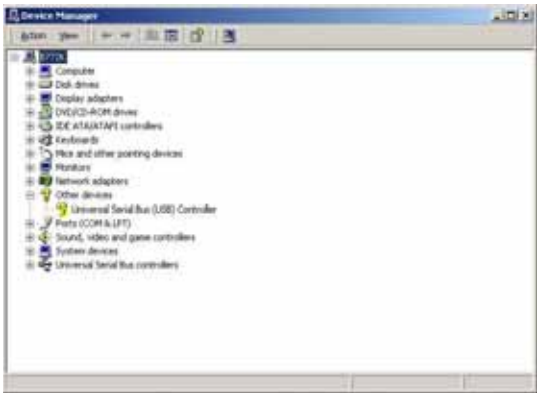
OS Requirements

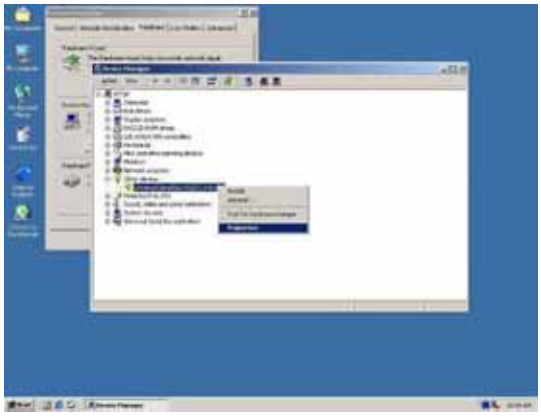
OS	USB 2.0 requirements
Windows XP	USB 2.0 drivers are provided in Service Pack 1 (SP1) for Windows XP, which is available through Windows Update.
Windows 2000	USB 2.0 drivers are available through Windows Update or Service Pack 4.
Windows 98SE/Me	USB 2.0 drivers are available on the Intel developer 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.



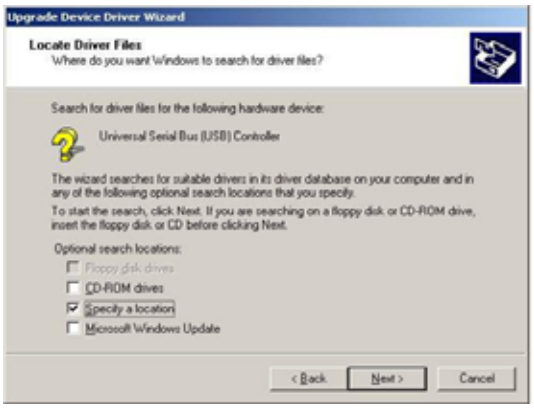


c. Select ”Other Devices” → “Universal Serial Bus (USB) Controller” →”Properties” on Device Manager.

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.

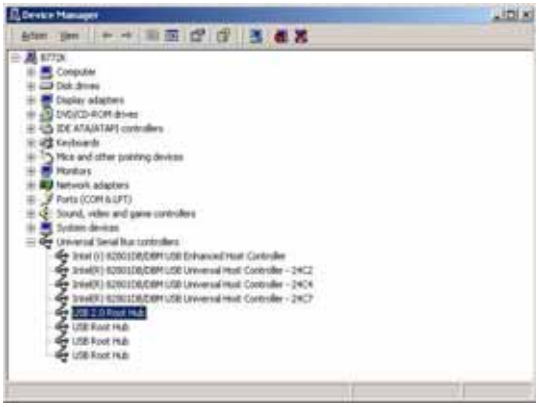


g. Select “Specify a location” and click the “Next” button on the Locate Driver Files window.

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

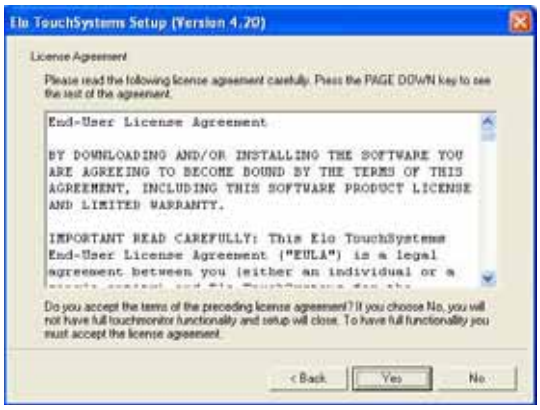
3.6 ELO Touch Screen Driver Installation

a. Click ”sw500930” on the My Computer window.

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

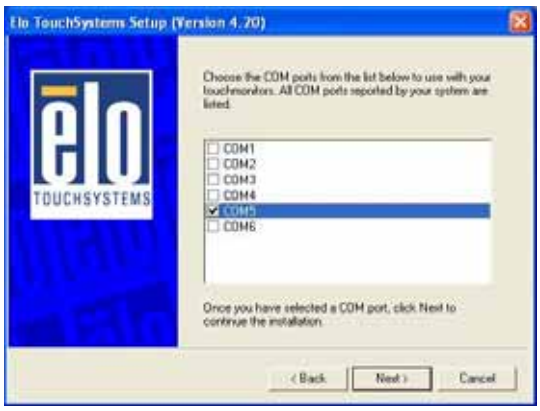
c. Click the ”Unzip” button on the WinZip Self-Extractor window.

d. Select “Install Serial Touchscreen Drivers” and then click the “Next” button on the Welcome window.



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

f. Click the “Next” button on the on the “Select the COM ports…” window.

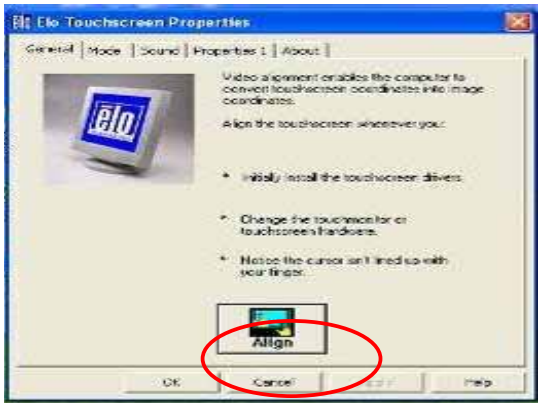


g. Select “COM5” and click the “Next” button on the Choose the COM ports… window.

h. Click the “Next” button on the You have selected the COM ports…window.

i. Click the “Finish” button on the Setup Complete window

j. Click the “Yes” button and restart your system.

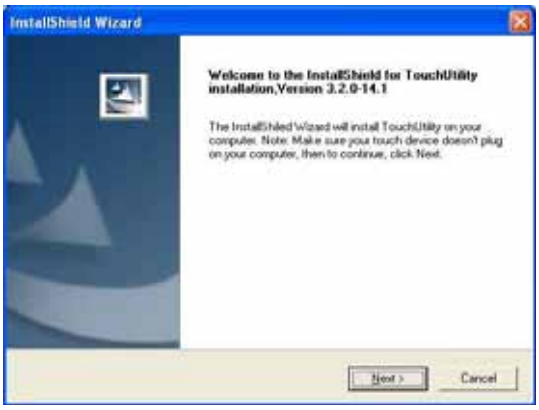


k. After the computer has restarted, click “Align” on the Elo Touchscreen Properties window.

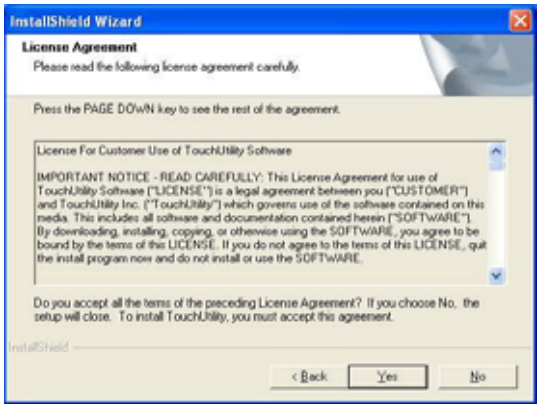
l. Follow the instructions on the screen to calibrate the touch panel.

3.7 POSTouch Touch Screen Driver Installation

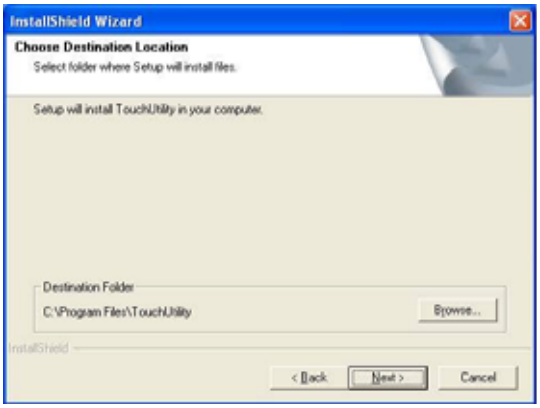
a. Double click ”Setup” on the My Computer window.



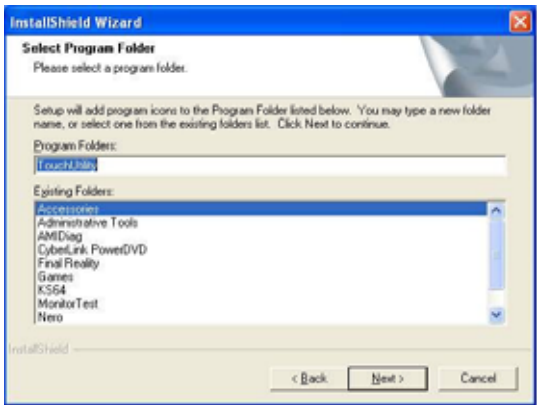
b. Click the “Next“ button on the Welcome window.



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



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



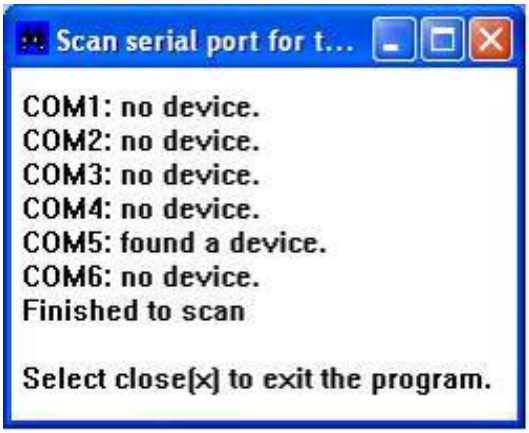
e. Click the “Next” button on the Select Program Folder window.

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

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

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

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

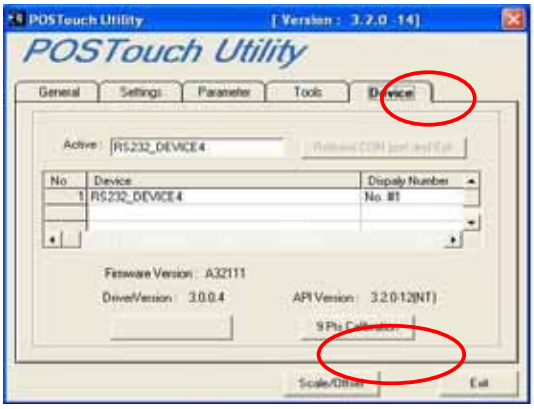


j. The serial ports are scanned for a touch device.

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 three point calibration of the touch panel.

3.8 USB Smart Card Reader Driver Installation

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

b. Click the “yes” button on the window.

c. Click the “YES” button and restart your system.

4. B91 Driver Installation

4.1 Driver List

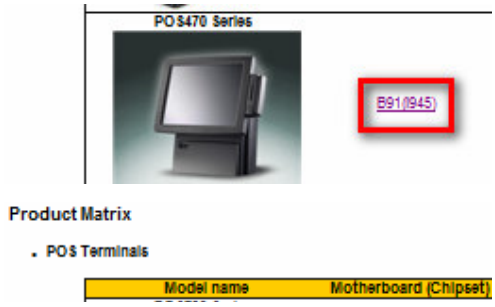
Folder/File	File Description
<CD>:\B91.htm	Driver List
<CD>:\COMMON\INTEL\Chipset\i9xx	Chipset Driver
<CD>:\COMMON\INTEL\VGA\i94x	VGA Driver
<CD>:\COMMON\INTEL\Raid\ICH7R	SATA RAID Driver
<CD>:\COMMON\POS_Touch	POSTouch Driver
<CD>:\COMMON\Elo_Touch	ELO Touch Driver
<CD>:\COMMON\Lan_driver\Realtek_PCIe	10/100/1000 Mb LAN Driver

The following procedures are for Windows 2000/XP. Installation on other platforms is similar.

4.2 Driver Bank CD

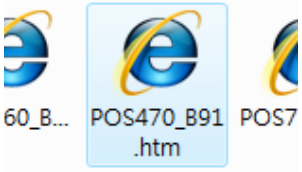
To install the drivers for your device, please follow these steps:

- Insert the Driver Bank CD in your CD drive.
  It should start automatically and you should see a screen as shown below.



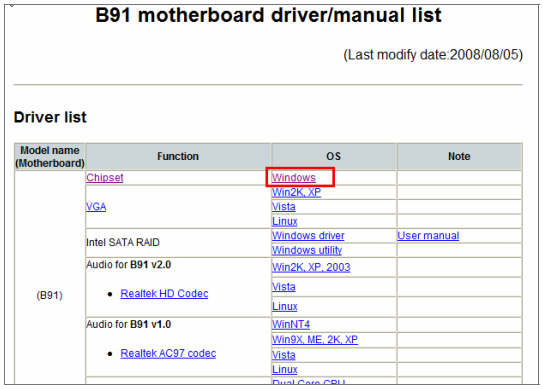
a. Click on the **POS460 Series' B91(i945)** link

b. The driver menu is displayed.
Continue with the driver installation instructions on the next page



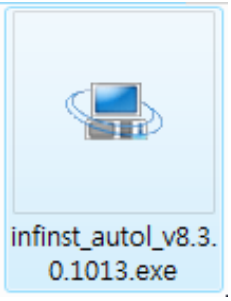
c. **Note:** If the CD does not start automatically, open the CD in Windows Explorer and double-click on the **POS470_B91.htm** icon to display the driver menu.

4.3 Chipset Driver Installation



a. In the **Chipset** section, click on **Windows**

b. Double-click **v8.3.0.1013**



c. Double-click **infinst_autol_V8.3.0.1013.exe**

d. Click **Next**

e. Click **Yes**.

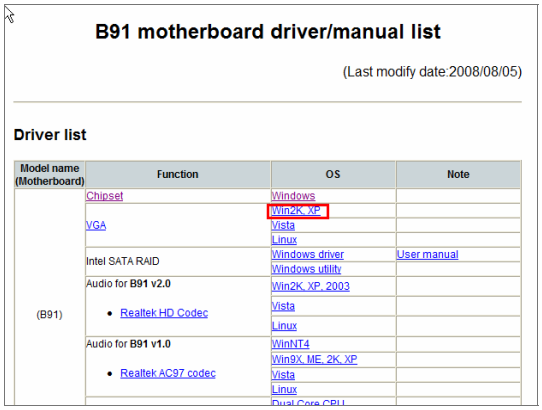
f. Click **Next**

g. The driver installation starts

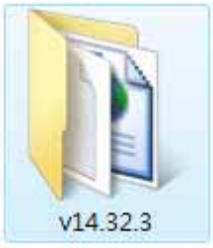
h. Click **Next**

i. Click **Finish** to restart the system

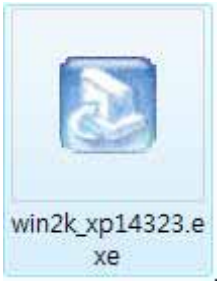
4.4 VGA Driver Installation



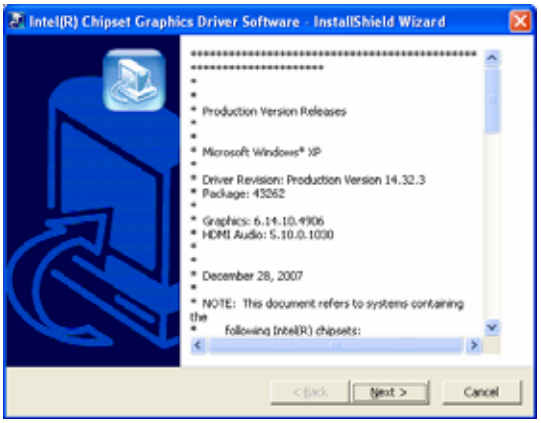
a. In the **VGA** section, click on **Win2K_XP**.



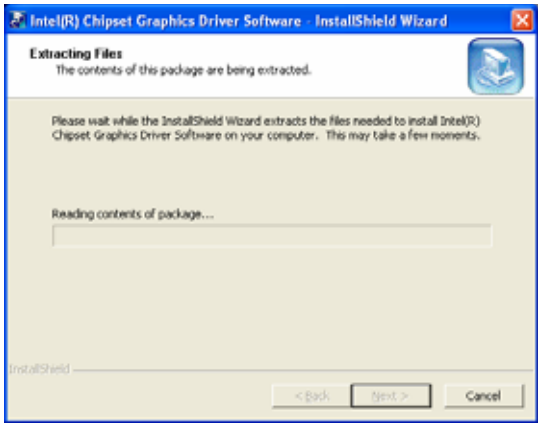
b. Double-click **v14.32.3**.



c. Double-click **win2k_xp14323.exe**



d. Click **Next**.



e. Extracting files…

f. Click **Next**.

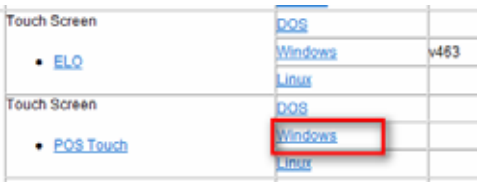
g. Click **YES** to accept the license agreement

h. Click **Next**.

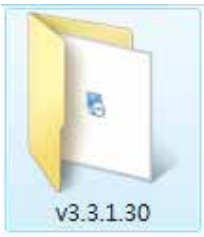
i. Click **Next**.

j. Select **Yes** and click Finish to restart the computer

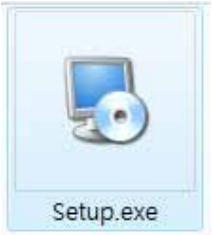
4.5 POSTouch Driver Installation



a. In the **POSTouch** section, click **Windows**.

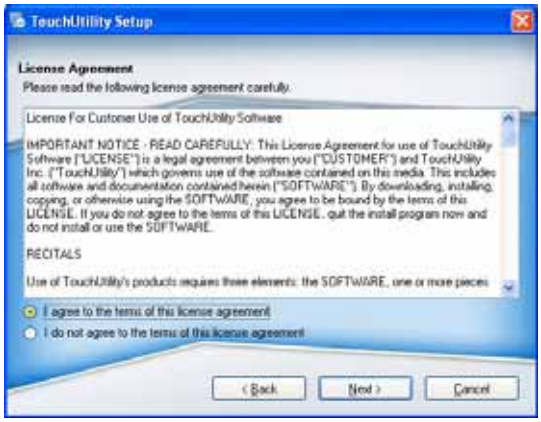


b. Double-click on **v3.3.1.30**.



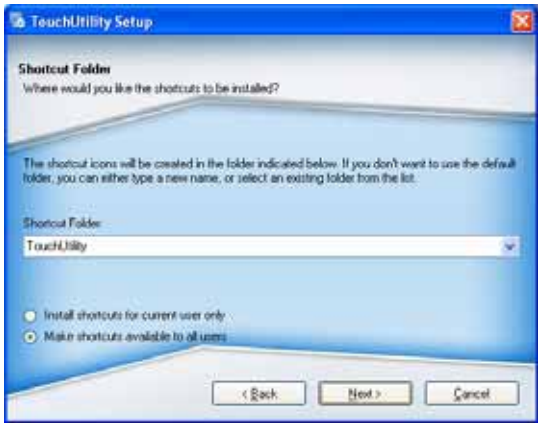
c. Double-click **Setup.exe**.

d. Click **Next**.



e. Select **I agree**… and click **Next**.

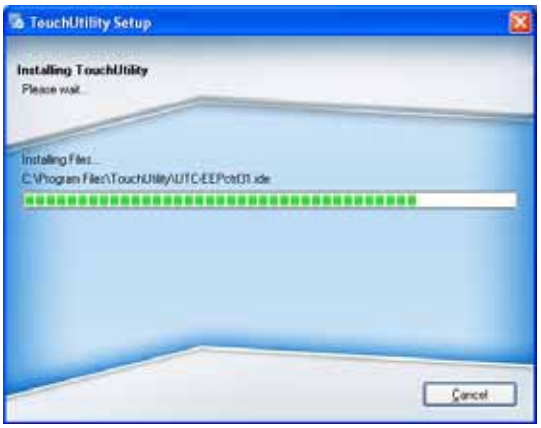
f. Select the installation folder for the touch utility driver and click **Next**.



g. Select the shortcut folder for the touch utility driver and click **Next**.

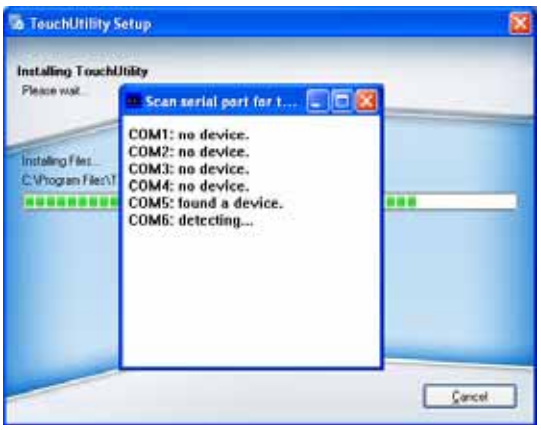
h. Click **Next**.

i. Click **Next**.

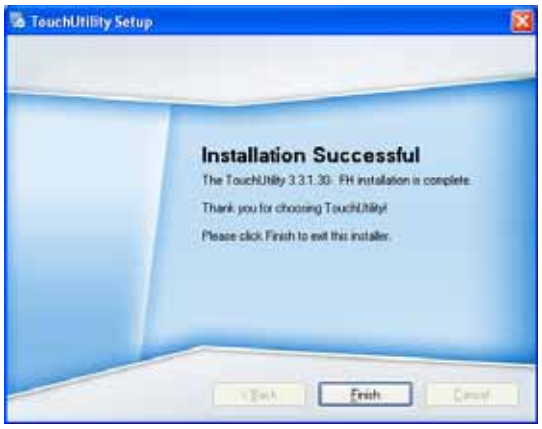


j. The computer is installing the touch driver

k. Click **Continue Anyway**.



l. The serial ports are scanned for a touch device. The Touch panel is on COM5.



m. Click **Finish**.

n. Click **OK** to restart the computer and finish the touch utility installation.

o. The computer has restarted. Click on the **Start button**, select **Programs**, then select **Touch utility**.

p. Select the **Device** tab.

q. Click on the **3 points** or the **9 points** calibration button.

r. Follow the instructions on the screen to do the calibration of the touch panel

s. Touch the screen to save the calibration

4.6 ELO Touch Driver Installation

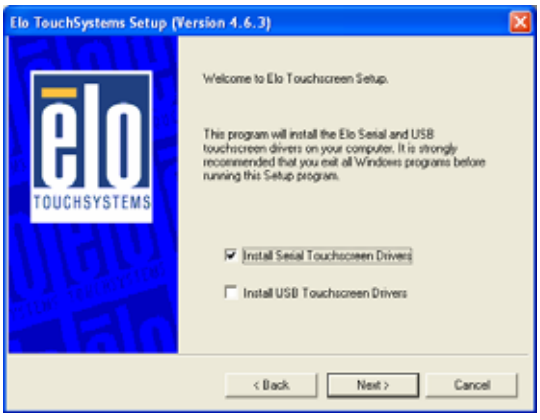
a. In the **ELO** section, click on **Windows**.

b. Click **OK**.

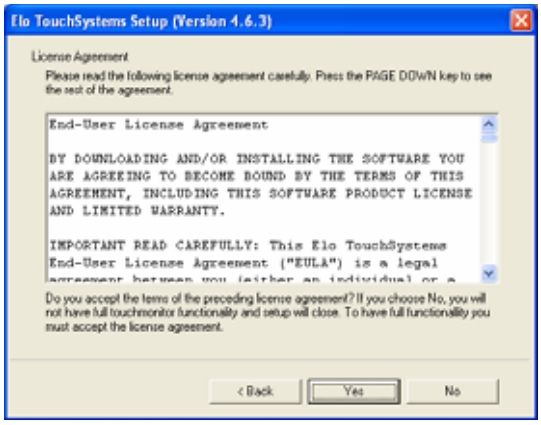
c. Click **Unzip** to extract the driver to the specified folder.

d. Finished unzipping. Click **OK**.

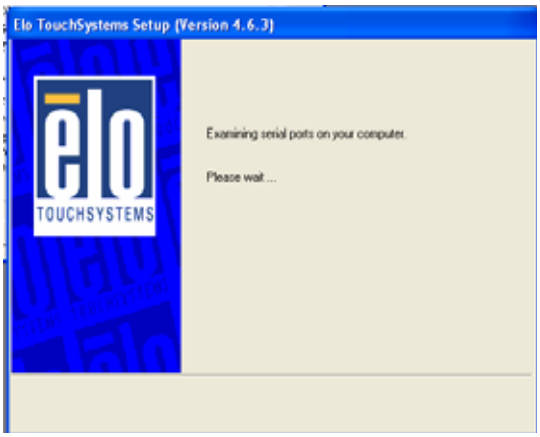
e. Click **Next**.



f. Check the box **Install Serial Touchscreen Drivers** and click **Next**.



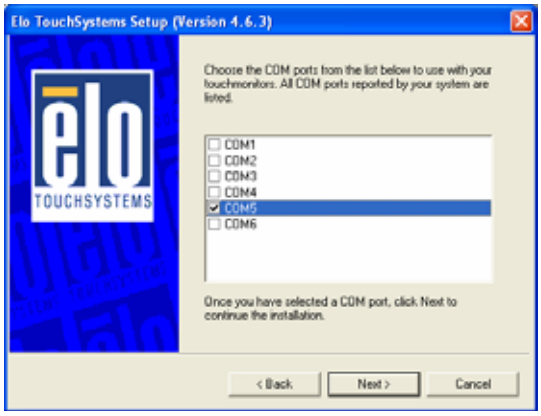
g. Click **Yes** to accept the End User License Agreement



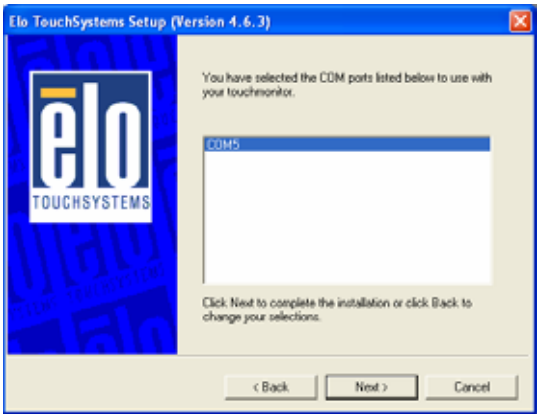
h. Examining serial ports on the computer…

i. Check the box **Auto-detect Elo devices** and click **Next**.

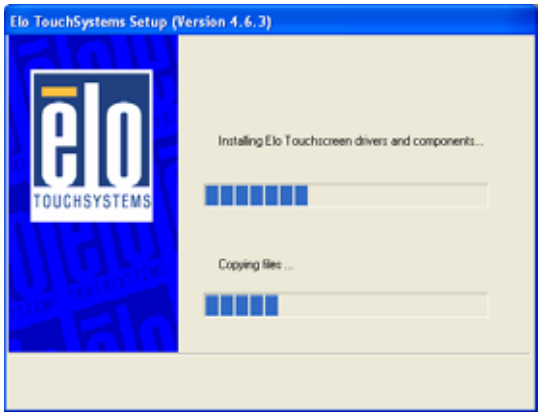
j. The computer is searching for a connected to Elo Touchscreen.



k. Touchscreen found on COM5. Click **Next**.

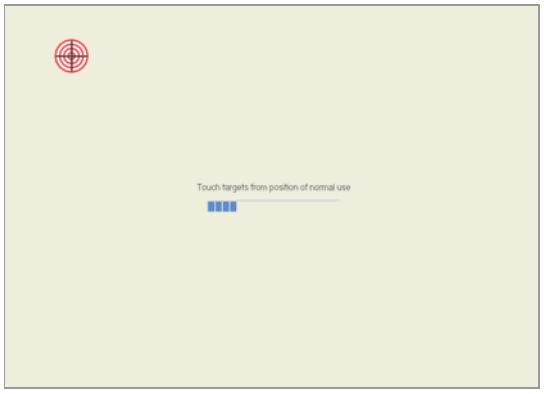


l. Click **Next** to complete the driver installation.

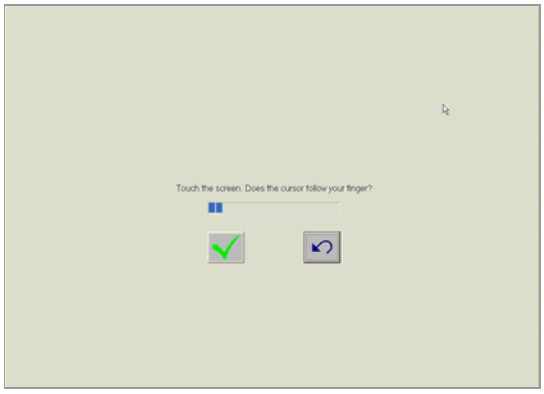


m. Driver is installing…

n. The driver installation and setup are now complete. Click **Finish** to start the touchscreen calibration.



o. Follow the instructions on the screen to calibrate the Touchscreen.



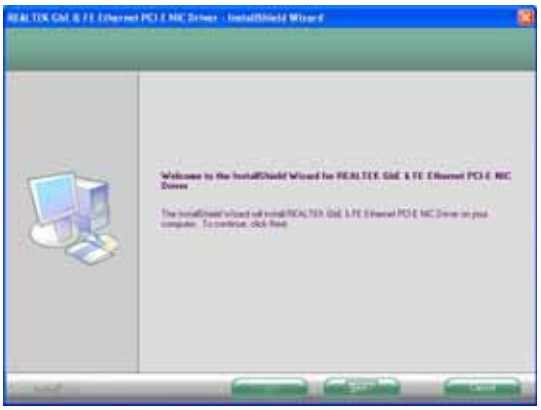
p. Verify that the touchscreen is working correctly by moving your finger on the screen. The mouse cursor should follow your finger. Finally, touch the green checkmark to save the calibration settings and exit the program.

4.7 10/100/1000Mb LAN Driver Installation

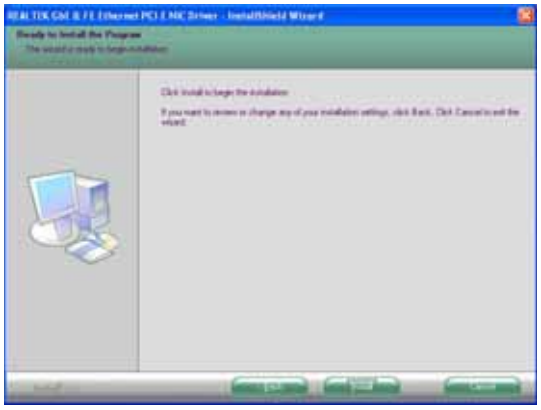
a. In the **Realtek RTL8111** section, click on **Win9X, ME, 2K, XP**

b. Double-click **v686**.

c. Double-click **Setup.exe**

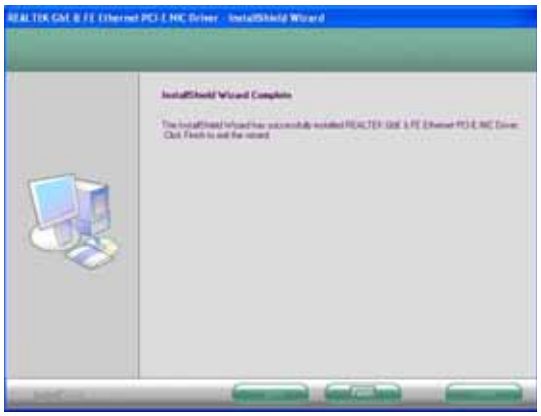


d. Click **Next**.



e. Click **Install** to begin the driver installation.

f. The driver is being installed…



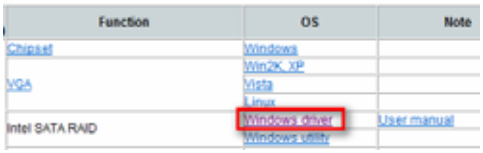
g. Click **Finish** to complete the installation.

4.8 SATA RAID Driver Installation

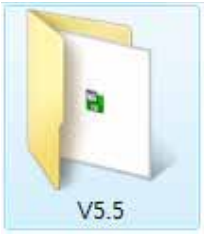
Before installing the SATA RAID driver, please refer to Chapter 8.2 ”Enabling RAID in the BIOS” and Chapter 8.3 “RAID Volume Creation”.

4.8.1 Create a RAID Driver Disk

The SATA RAID Driver is for users who plan to install Windows on SATA HDDs with RAID functions. To use RAID functions, you need to make a SATA RAID Driver floppy disk before you install the operation system, such as Windows XP. If you do not plan to use RAID functions, it is not necessary to make a SATA RAID Driver floppy disk. Connect a USB-FDD to the system, then follow below steps to make a SATA RAID Driver floppy disk.



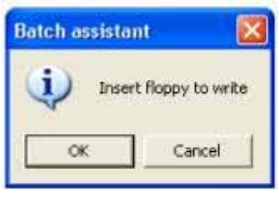
a. In the Intel **SATA RAID** section, click on **Windows driver**



b. Double-click **v5.5**

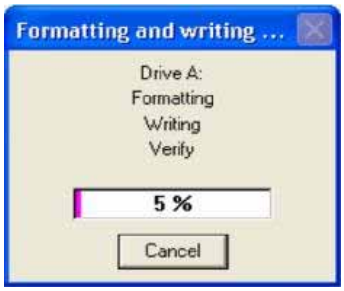
c. Double-click **Driver**

d. Double click **F6flpy32.exe**



e. Insert a blank floppy disk into the FDD, and click on the **OK** button

f. Click **Yes**



g. Wait for the driver disk to be written

4.8.2 RAID driver installation

1. Press the F6 key when prompted in the status line with the Press **F6** if you need to install a third party SCSI or RAID driver message. This message appears at the beginning of Windows XP setup (during the text-mode phase).
   Note: Nothing will happen immediately after pressing F6. Setup will temporarily continue loading drivers. You will then be prompted with a screen asking you to load support for mass storage device(s).

2. Press the **S** key to **Specify Additional Device**.

3. You will be prompted to ***Please insert the disk labeled Manufacturer-supplied hardware support disk into Drive A***: When prompted, insert the floppy disk containing the following files: IAAHCI.INF, IAAHCI.CAT, IASTOR.INF, IASTOR.CAT, IASTOR.SYS, and TXTSETUP.OEM and press the **Enter** key.

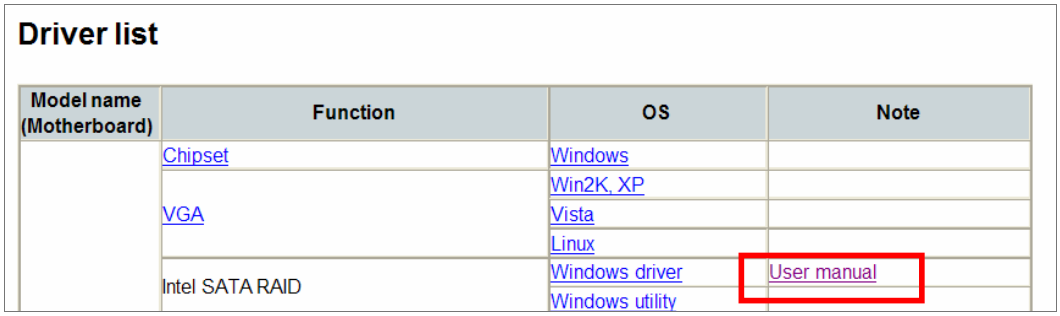
   After pressing Enter, you should be presented with a list of available SCSI Adapters. Select your controller from the list. The up and down arrow keys can be used to scroll through the list as all controllers may not be visible. The list may include:
   - Intel® 82801ER SATA RAID Controller
   - Intel® 82801FR SATA RAID Controller
   - Intel® 82801GR/GH SATA RAID Controller
   - Intel® 82801GHM SATA RAID Controller
   - Intel® 631xESB/632xESB SATA RAID Controller
   - Intel® 82801R/DO/DH SATA RAID Controller

4. The next screen should confirm your selected controller. Press the **Enter** key again to continue.

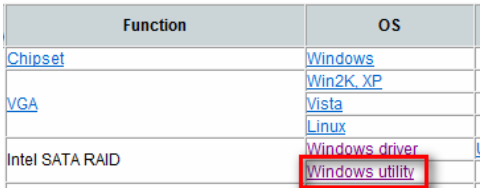
5. At this point, you have successfully F6'ed in the Intel® Matrix Storage Manager driver and Windows setup should continue. Leave the floppy disk in the floppy drive until the system reboots. Windows setup will need to copy the files from the floppy again to the Windows installation folders. Once Windows setup has copied these files again, you should then remove the floppy diskette so that Windows setup can reboot as needed.

6. During Windows setup, create a partition and file system on the RAID volume as you would on any physical disk.

   Note: Please also refer to the Driver Bank CD for a detailed F6 installation procedure.
   Link: Intel SATA RAID / User Manual
   Page 23, Chapter 5_ Loading Driver During OS Installation

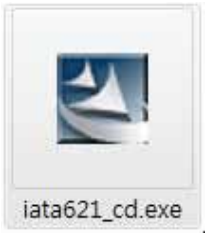


4.8.3 RAID Manager Utility installation

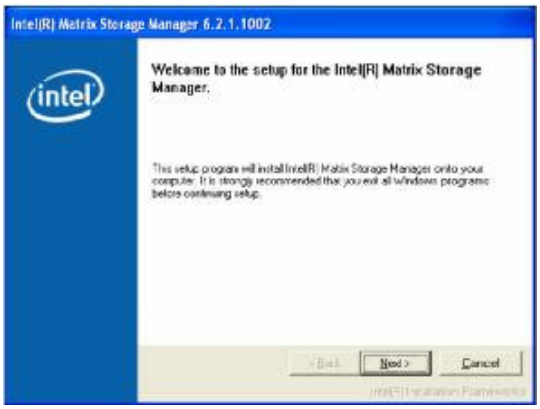


a. In the **Intel SATA RAID** section, click on **Windows utility**

b. Double-click **v6.2.1**



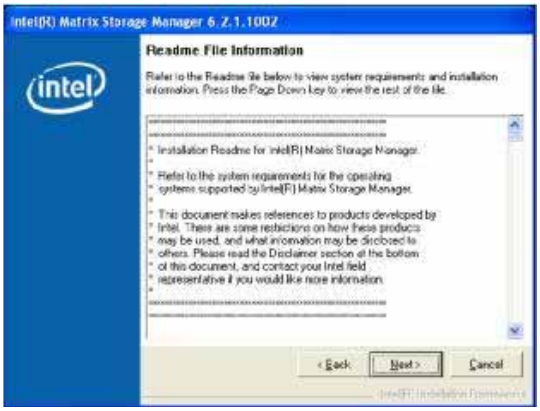
c. Double-click **iata621_cd.exe**



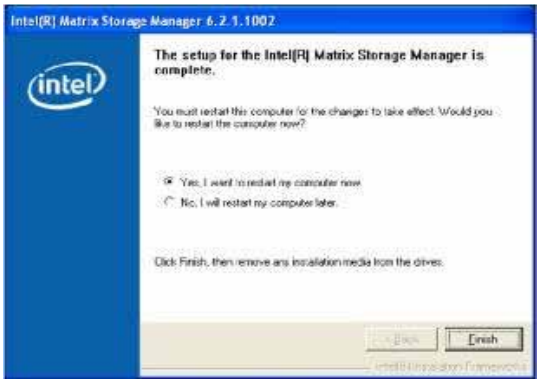
d. Click **Next**.

e. Click **Next**.

f. Click **Yes**.



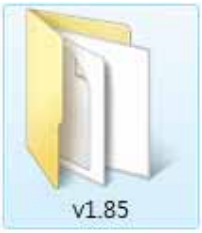
g. Click **Next**.



h. Select "**Yes, I want to restart my computer now**" and click **Finish** to complete the installation

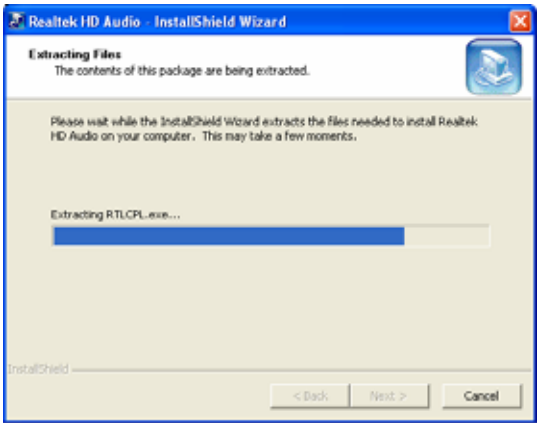
4.9 Audio Driver Installation

a. In the **Realtek HD Codec** section, click on **Win2K, XP, 2003**



b. Double click on **v1.85**

c. Double-click **WDM_R185.exe**



d. Driver files are extracted…

e. Click **Next**.

f. The computer is installing the Audio HD driver.

g. Select “**Yes, I want to restart my computer**” and click **Finish**.

5. System Installation

Peripheral Installation

5.1 Magnetic (Smart) Card Reader / I-Button Installation

The module unit is tested and can be supplied at your request. This module is removed during transportation and can be connected by the user.

a. Remove the screws (2) of the plastic cover on the right side of the display.

b. Slide the cover out as shown in the picture.

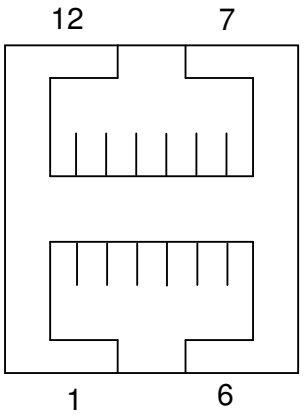
c. Connect the MSR connector on the right side of the system.

d. Slide the MSR into position as shown in the picture, and fasten it to the display housing by tightening the screws (2).

5.2 B81 Cash Drawer Installation

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

5.2.1 4.2.1 Cash Drawer Pin Assignment



Pin	Signal	Pin	Signal
1	GND	7	GND
2	DOUT bit0	8	DOUT bit2
3	DIN bit0	9	DIN bit1
4	12V / 24V	10	12V / 24V
5	DOUT bit1	11	DOUT bit3
6	GND	12	GND

5.2.2 Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.
The Cash Drawer Control Register and the Cash Drawer Status Register.

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

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

Bit 7: Reserved.
Bit 6: Reserved.
Bit 5: Cash Drawer2 “DIN bit1” pin input status.
= 1: the Cash Drawer2 closed or no Cash Drawer.
= 0: the Cash Drawer2 opened.
Bit 4: Cash Drawer1 “DIN bit0” pin input status.
= 1: the Cash Drawer1 closed or no Cash Drawer.
= 0: the Cash Drawer1 opened.
Bit 3: Cash Drawer2 “DOUT bit3” pin output control.
= 1: Opening the Cash Drawer2

= 0: Allow closing the Cash Drawer2

Bit 2: Cash Drawer2 “DOUT bit2” pin output control.

= 1: Opening the Cash Drawer2

= 0: Allow closing the Cash Drawer2

Bit 1: Cash Drawer1 “DOUT bit1” pin output control.

= 1: Opening the Cash Drawer1

= 0: Allow closing the Cash Drawer1

Bit 0: Cash Drawer1 “DOUT bit0” pin output control.

= 1: Opening the Cash Drawer1

= 0: Allow closing the Cash Drawer1

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

5.2.3 Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

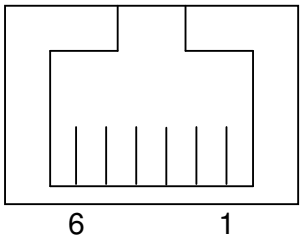
Command	Cash Drawer 1
O 4B8 01	Opening
O 4B8 00	Allow to closing
➢ Set the I/O address 4B8h bit0 =1 for opening the Cash Drawer1 by “DOUT bit0” pin control. ➢ Set the I/O address 4B8h bit0 = 0 to allow closing Cash Drawer1.	

Command	Cash Drawer 1
I 4B8	Check status
➢ The I/O address 4B8h bit4 =1 means the Cash Drawer1 is closed or no Cash Drawer. ➢ The I/O address 4B8h bit4 =0 means the Cash Drawer1 is open.	

5.3 B91 Cash Drawer Installation

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

5.3.1 Cash Drawer Pin Assignment



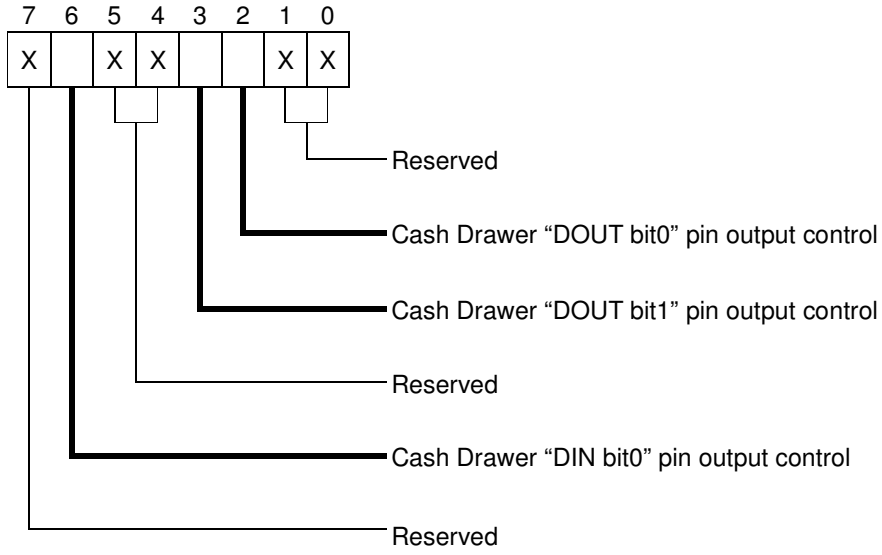
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

5.3.2 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.

5.3.3 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.	

5.4 Customer Display Installation

a. Take out the rubber cover.

b. Take out the round plastic cover.

c. Remove the screws (4))

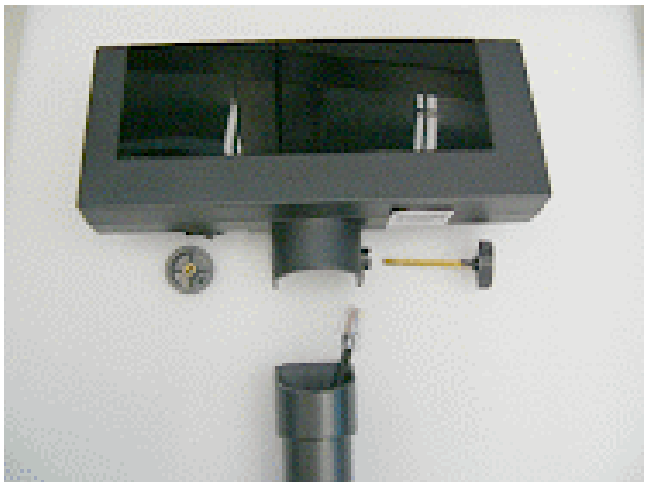
d. Release the VFD cover

e. install the stand base.

f.. Tighten the screws (1) to fix the stand base.

g. Install the VFD cover and tighten it with the screws (3).

h. Install the VFD cable. & short /long pole



i. Assemble the VFD.

j. Connect VFD cable to the COM port. Don’t forget to setup the COM port power.

k. finished

5.5 Second Display Installation

Please ensure that the system power is turned off before connecting the second display. Failure to do so may damage the electronics of the system, and is not covered by the product warranty.

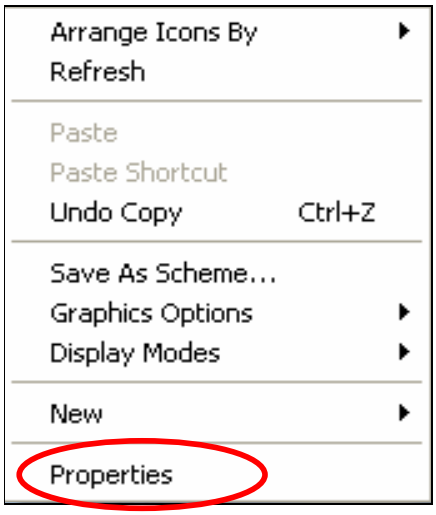
Note: Please set motherboard Jumper 15 to 1-2 (Refer to P.38 Item 12. Second Display Power Setting).

a. Insert the male head of the VGA cable into the VGA port.

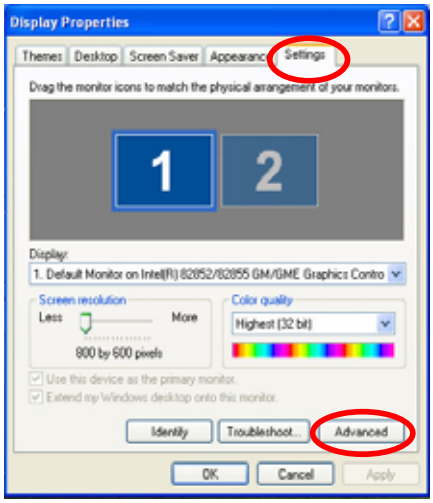
b. Mount the second display on the rear of the system and tighten the screws (4) on the supporter.

c. Insert the other end of the VGA cable (male) into the VGA port of the system to establish the connection.

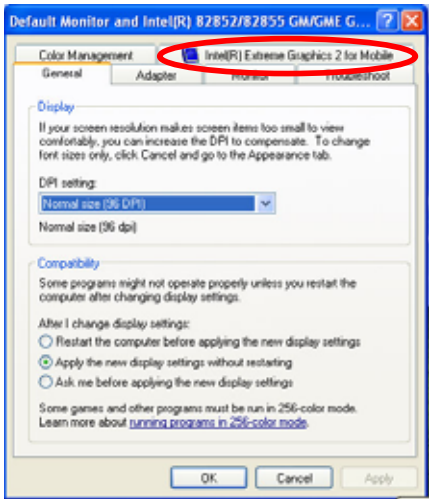
Note: The procedure below is valid only for POS462 with Sanyo Torisan LCD Panel.
After installing the second display with Sanyo Torisan LCD panel and the VGA driver under Windows XP, please set the monitor contents for second display as follows.
Do not set the monitor contents from the Intel [R] Extreme Graphics 2 for Mobile icon in the taskbar, but follow the instructions below.



a. Click on the desktop with the right mouse button.
Select “Properties”.

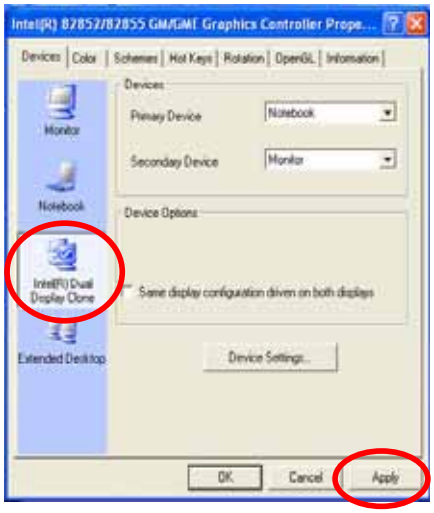


b. Select the “Settings” tab, then click on the “Advanced” button on the Display Properties window.

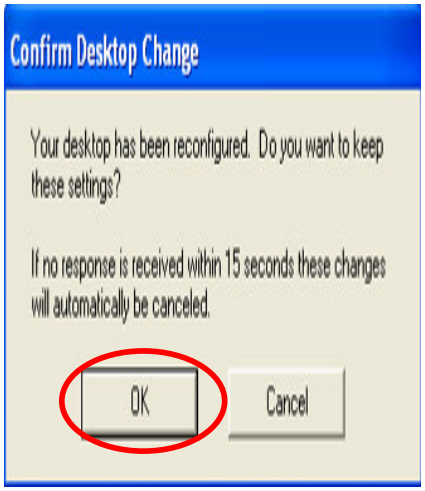


c. Select “Intel [R] Extreme Graphics 2 for Mobile” on the Default Monitor and Intel [R]… window.

d. Select “Graphic Properties” on the Default Monitor and Intel [R]… window.



e. Select “Intel [R] Dual Display Clone” and click “Apply” on the Intel [R] 82852/82855 GM/GME Graphics Controller… window.



f. Click “OK” on the Confirm Desktop Change window.

6. System Disassembly

6.1 Open the Chassis Box

The HDD, Power Supply, CPU + Cooler, Memory and Mini PCI SCSI Card can be replaced by opening the chassis box, which is located in the top part of the main modular box.

a. Loosen the screws (2).

b. Press the buttons and remove the rear cover towards you.

c. Pull the chassis box cover towards you by the handle, and lift it up.

d. Fix the chassis box cover in the open position as shown in the picture.

e. Replace the HDD and the power supply.

6.2 Replace the HDD

Open the chassis box as described in chapter 5.1.

a. Disconnect the cables (2) as shown in the picture.

b. Remove the screws (4) to remove the HDD.

6.3 Replace the Power Supply

Open the chassis box as described in chapter 5.1.

a. Disconnect the cables (2) as shown in the picture.

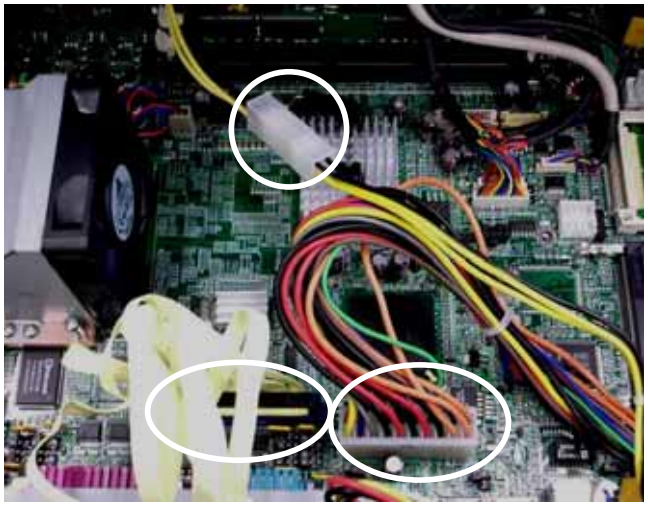
b. Remove the screws (3).

c. Remove the screws (2) to remove the power supply.

6.4 Replace the Motherboard Tray

Open the chassis box as described in chapter 5.1.

a. Lift the chassis box cover to disengage it from the chassis box.



b. Disconnect the cables (3) as shown in the picture.

c. Disconnect the cables (4) as shown in the picture.

d. Remove the screw (1) on the right side.

e. Remove the screw (1) on the left side.

f. Remove the screw (1) on the motherboard.

g. Pull the motherboard tray towards you to remove the motherboard.

7. Specification

7.1 B81 Specification

Main Name	POS 462	POS 465	POS 467
Mainboard	**B81**		
CPU Support	P4 2A / 2.6G, Celeron 2.0 / 2.4 / 2.5G, Mobile Celeron 1.2G		
Chipset	Intel 852GM & ICH4 FSB 400Mhz		
System Memory	2 x DDR DIMM sockets supported with memory size up to 2GB		
Graphic Memory	Shared Memory up to 64MB		
LCD Touch Panel			
LCD Size	12.1" TFT	15" TFT	17" TFT
Brightness	150 – 400 cd/㎡	250 – 350 cd/㎡	300 cd/㎡
Maximal Resolution	800 x 600 / 1024 x 768	1024 x 768	1280 x 1024
Touch Screen Type	Resistive		
Tilt Angle	0° ~ 60°		
Storage			
HDD	1 x 3.5" Drive bay		
Flash Memory	Compact Flash (Type I & II)		
Expansion			
Mini-PCI Socket	1		
External I/O Ports			
Front I/O			
USB	2 (V2.0)		
Rear I/O			
PS/2 Keyboard	1		
PS/2 Mouse	1		
USB	2 (V2.0)		2(V1.1 / 2.0)
Serial / COM	4 x powered COM ports (pin 1 / pin9 support +5Vv / +12V by Jumper)		
Parallel	1		
LAN (10 / 100)	1 x RJ45		
2 nd VGA Output	1 female type connector with power		

Cash Drawer Port	2 x RJ11 (12V / 24V)		
Internal Interface			
USB	USB 5 / 6		
COM	COM5 for touch, COM6 for MSR		
Control / Indicator			
Power Button	1		
Indicator LED	1		
Power			
Power Supply	250W ATX		
Environment			
EMC & Safety	FCC, Class A, CE, LVD		
Operating Temperature	5℃~ 35℃ (41℉ ~ 95℉)		
Storage Temperature	-20℃~ 60℃ (-4℉~95℉)		
Operating Humidity	20% ~ 80% RH non condensing		
Storage Humidity	20% ~ 80% RH non condensing		
Water and Dust protection	Front bezel protected against splashing water and dust (IP54 rating)		
Peripheral			
Input Device			
3 in 1 MSR / IC Card / I-Button	MSR (PS2/RS-232) / Smart IC Card (USB) / I-Button (PS2/RS232)		
Finger Print + Card Reader	MSR (PS2 /RS-232) / Finger Print (USB)		
Output Device			
Customer Display	VFD / LCD type		
Second Display	8.4”/ 10.4”/12.1”TFT LCD		
Communication			
Wireless LAN	Optional Mini PCI 802.11a / b / g WI-FI card and antenna		
Dimension (W x D x Hmm)	323 x 335-353 x 180-287mm	378 x 358.5-367.5 x 179-305mm	410 x 373.7-382.2 x 192.8-335.9mm
Weight (N.W. / G.W.)	8kgs / 3.64lbs / 9kgs / 4.10lbs	9kgs / 4.10lbs / 10kgs / 4.55lbs	10kgs / 4.55lbs / 11kgs / 5.01lbs
OS Support	Vista, Windows XP, WEPOS, XP Embedded, XP Professional for Embedded, WIN 2000 Professional Embedded, Linux		

7.2 B91 Specification

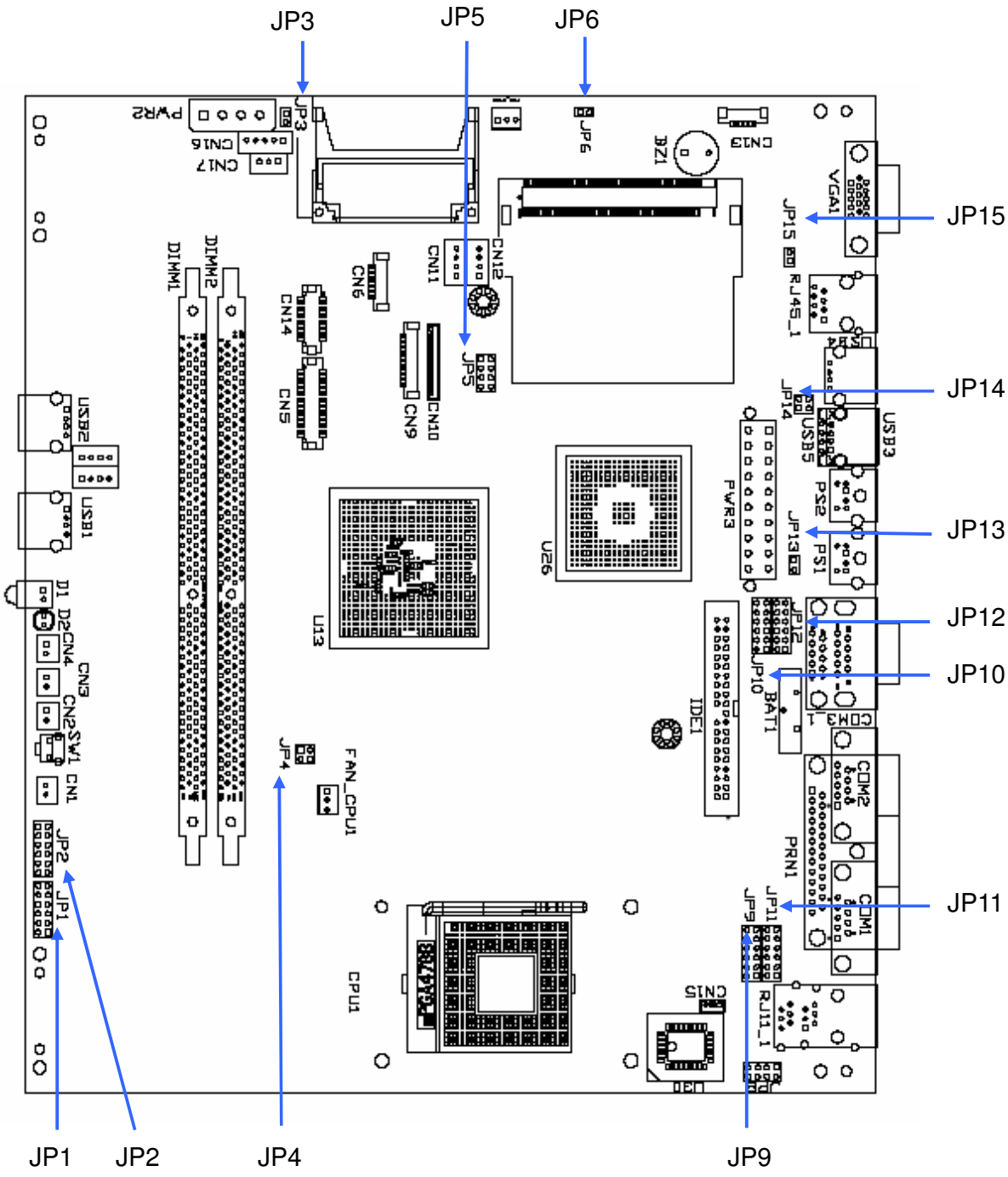
Model	POS462	POS465	POS467
Motherboard	**B91 V2.0**		
CPU Supports	Intel P4 / Celeron / Core 2 Duo Processor LGA775		
Chipset	945G + ICH7R support hardware RAID		
System memory	2 x 240-pin DIMM socket DDR2 667/800 MHz up to 4GB		
Graphic Memory	Share System Memory up to 232MB		
LCD/Touch Panel			
LCD Size	12.1"TFT	15"TFT	17"TFT
Brighness(cd /m2)	150 - 400	250 - 350	300
Maximal Resolution	800 x 600	1024 x 768	1280 x 1024
Touch type	Resistive		
Tilt Angle (Degree)	0-60		
Storage			
HDD	2 x SATA 2.5" slim HDD		
Expansion			
Mini PCI socket	1		
External I/O Ports			
Front I/O			
USB	2		
Rear I/O			
PS2	1		
USB	4		
Serial/COM	4 (pin1/pin9 with 5V/12V power)		
Parallel	1		
LAN (10 / 100/1000)	1		
2nd VGA	1 x female type connector with power		
Cash Drawer Port	2 (12V/24V)		
24V receipt print	1		
Internal Interface			
USB	2		
COM	COM5 for touch, COM6 for MSR		
Control / Indicator			
Power Button	1		
Indicator LED	1		

Power			
Power Supply	250W ATX		
Environment			
EMC & Safety	FCC / CE Class A, LVD		
Operating Temperature	5 to +35 ℃		
Storage Temperature	-20 to 60 ℃		
Operating Humidity	20% ~ 80% RH non condensing		
Storage Humidity	20%~ -85% RH non condensing		
Peripheral			
Input Device			
3--in-1 MSR	MSR (PS2/COM) / Smart IC card (USB) / I-button (PS2/COM)		
2 -in-1 MSR	MSR (PS2/ COM) / Finger Print (USB)		
Output Device			
Second Display	7"/ 8.4" /10.4" /12.1" 2nd display		
Customer Display	VFD /LCD		
Communication			
Wireless LAN	Mini PCI 802.11 a / b / g WI-FI card and antenna		
Dimension (WxDxH)	323 x355 x 182	378 x365 x 182	410 x373.7 x 192.8
	13.7" x 15" x 7.7"	16" x 15.4" x 7.7"	17.4" x 15.9" x 8.2"
Weight (N.W./G.W.)	8kgs/ 9kgs	9kgs/ 10kgs	10kgs/ 11kgs
OS Support	Vista, Windows XP,WEPOS, XP Embedded, XP professional for Embedded, WIN 2000 professional Embedded, Embedded Linux		

* This specification is subject to change without prior notice.

8. B81 Jumper Setting

8.1 B81 Motherboard Layout



8.2 Jumper Settings

1.CPU Frequency Setting **◎ Factory Default Setting**

Function	JP4 (SHORT)
FSB400	◎1-2, 3-4
FSB533	3-4

2. Compact Flash Master/Slave Setting

Function	JP3 (SHORT)
Master	◎1-2
Slave	N/C

3. CMOS Operation Mode

Function	JP6 (SHORT)
CMOS Normal	◎N/C
CMOS Reset	1-2

To clear the CMOS:

1. Remove AC power from the unit.
2. Open the cabinet.
3. Change the JP6 jumper setting from N/C to 1-2.
4. Wait 1 minute.
5. Change the JP6 jumper setting back to N/C.
6. Close the cabinet.
7. Apply AC power and continue.

4. POWER USB Power Setting (Reserved)

Function	JP14 (SHORT)
+24V	1-2
+12V	3-4

5. Cash Drawer Power Setting

Function		JP8 (SHORT)
Cash Drawer 1	+12 V	◎1-2
	+24V	3-4
Cash Drawer 2	+12 V	◎5-6
	+24V	7-8

6. COM1 Power Setting

Pin	Function	JP9 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

7. COM2 Power Setting

Pin	Function	JP11(SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

8. COM3 Power Setting

Pin	Function	JP10 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

9. COM4 Power Setting

Pin	Function	JP12 (SHORT)
1	DCD#	◎1-2
	+5V	3-4
	+12V	5-6
9	RI#	◎7-8
	+5V	9-10
	+12V	11-12

10. CPU Voltage Setting

CPU Type	JP1 (SHORT)	JP2 (SHORT)
◎P4	1-2, 3-4, 5-6, 7-8, 9-10, 11-12	N/C
Mobile Celeron 1.2G (1.3V)	N/C	3-4, 9-10

11. LCD ID Setting

Panel Number	Resolution	LVDS		JP5			
		Bits	Channel	1-2	3-4	5-6	7-8
0	640 x 480	18	Single	SHORT	SHORT	SHORT	SHORT
1	800 x 600	18	Single	SHORT	SHORT	SHORT	OPEN
2	1024 x 768	18	Single	SHORT	SHORT	OPEN	SHORT
3	1280 x 1024	24	Dual	SHORT	SHORT	OPEN	OPEN
4	1024 x 768	24	Single	SHORT	OPEN	SHORT	SHORT
5	800 x 600	24	Single	SHORT	OPEN	SHORT	OPEN

12. Second Display Power Setting

Function	JP15 (SHORT)
+12V	1-2
NC	◎1

13. ACPI Mode Setting

Function	JP7 (SHORT)
Disable	1-2
Enable	◎N/C

14. Power Mode Setting

Function	JP13 (SHORT)
ATX Power	◎N/C
AT Power	1-2

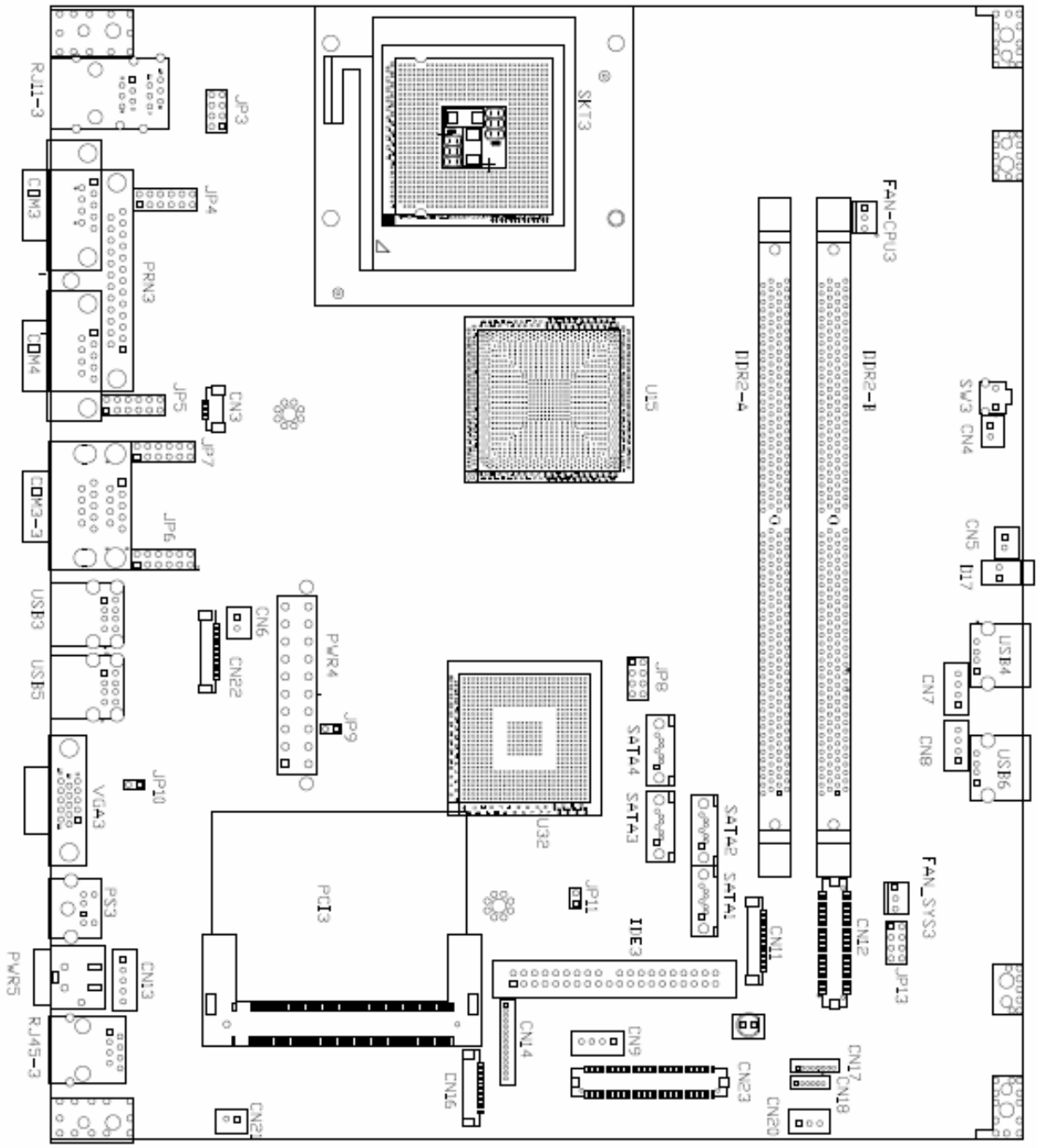
Note:

OPEN

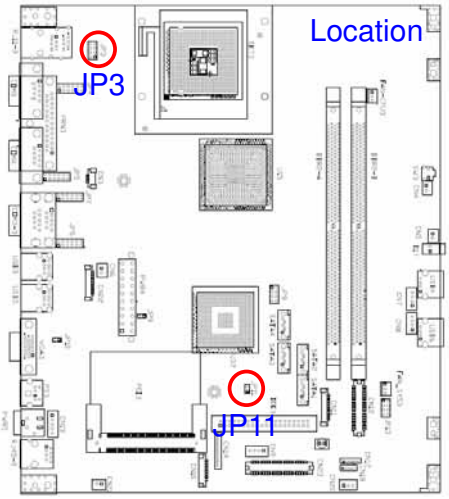
SHORT

9. B91 Jumper Settings

9.1 B91 Motherboard Layout



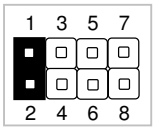
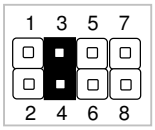
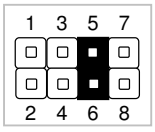
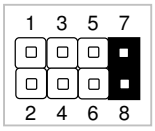
9.2 Connectors & Jumper settings



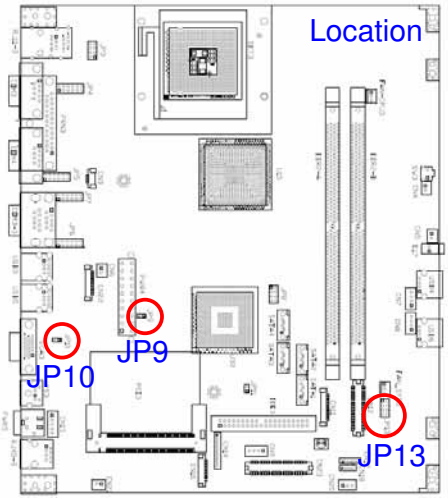
CMOS Operation Mode

Function	JP11 (1-2)
◎CMOS Normal	
CMOS Reset	

Cash Drawer Power Setting

Function	JP3 (1-2) (3-4) (5-6) (7-8)
◎CDR1_+12V	
CDR1_+24V	
◎CDR2_+12V	
CDR2_+24V	

◎ = Default Setting



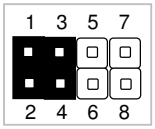
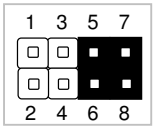
2nd Display Power Setting

Function	JP10 (1-2)
+12V	
◎NC	

Power Mode Setting

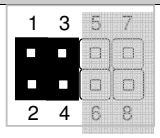
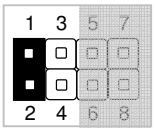
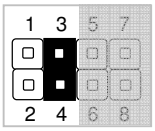
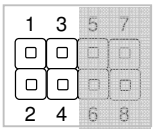
Function	JP9 (1-2)
◎ATX Power	
AT Power	

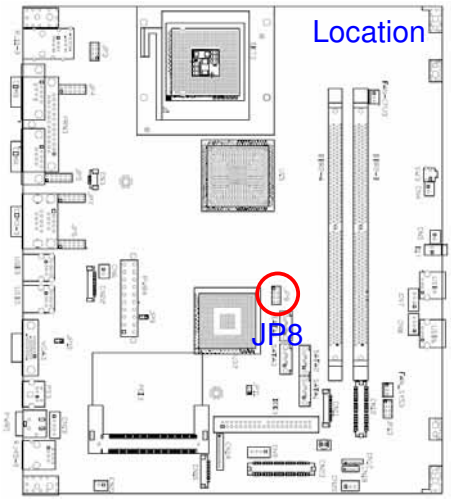
System Indicator

Function	JP13 (1-2) (3-4) (5-6) (7-8)
◎Disable	
Enable	

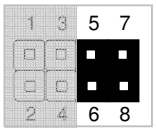
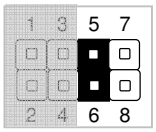
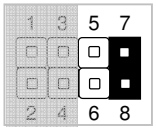
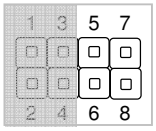
◎ = Default Setting

Boot Display Device Setting

Function	JP8 (1-2) (3-4)
By BIOS Setup	
Force CRT only	
Force LCD only	
Force CRT+LCD	

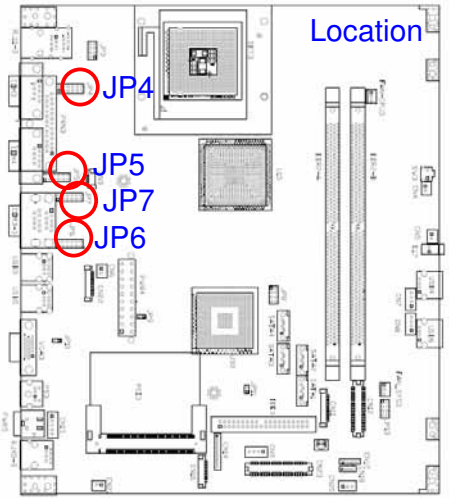


LCD ID Setting

Panel Number	Resolution	LVDS		JP8 (5-6) (7-8)
		Bits	Channel	
1	1024 x 768	24	Single	
2	1280 x 1024	24	Dual	
3	800 x 600	24	Single	
4	1024 x 768	18	Single	

COM1/COM2/COM3/COM4 Power Setting

Function	COM1		COM2		COM3		COM4	
	JP4		JP5		JP7		JP6	
	(1-2)	(3-4)	(5-6)		(7-8)	(9-10)		(11-12)
◎PIN1_DCD								
PIN1_+5V								
PIN1_+12V								
◎PIN9_RI								
PIN9_+5V								
PIN9_+12V								



◎ = Default Setting

Note:

OPEN

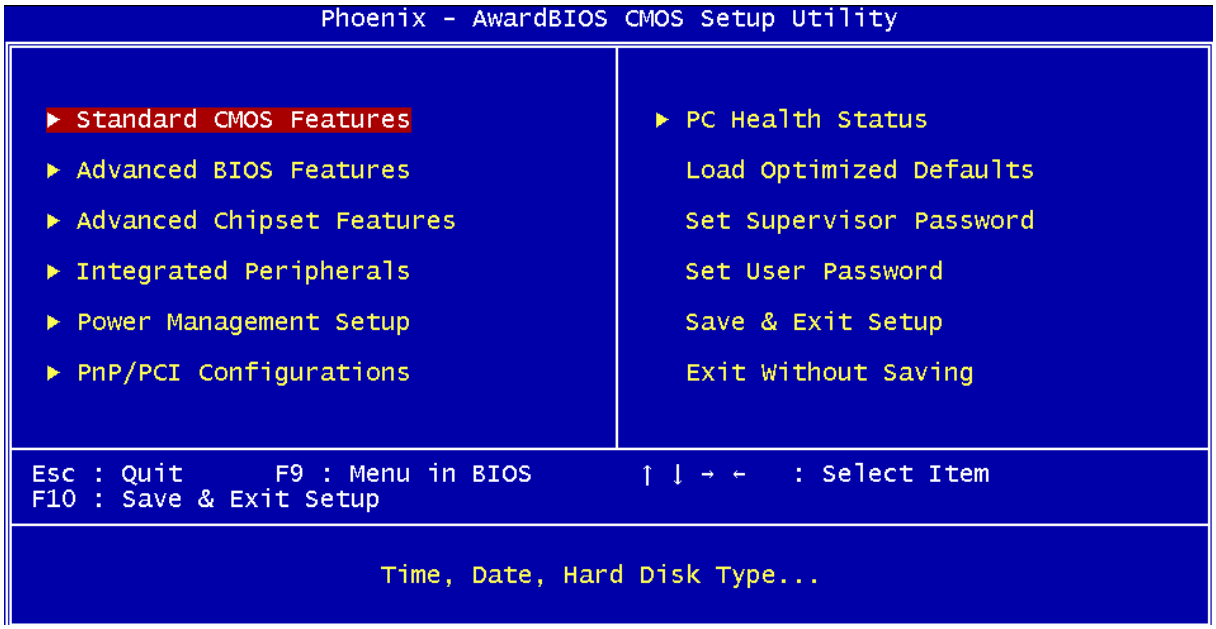
SHORT

10. B81 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 menu below is from B81 BIOS version B81FV10D.BIN. If you have a different BIOS version, the contents of the menu may differ.



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.

11. B91 BIOS Settings

11.1 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.

11.1.1 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.

11.1.2 When a Problem Occurs

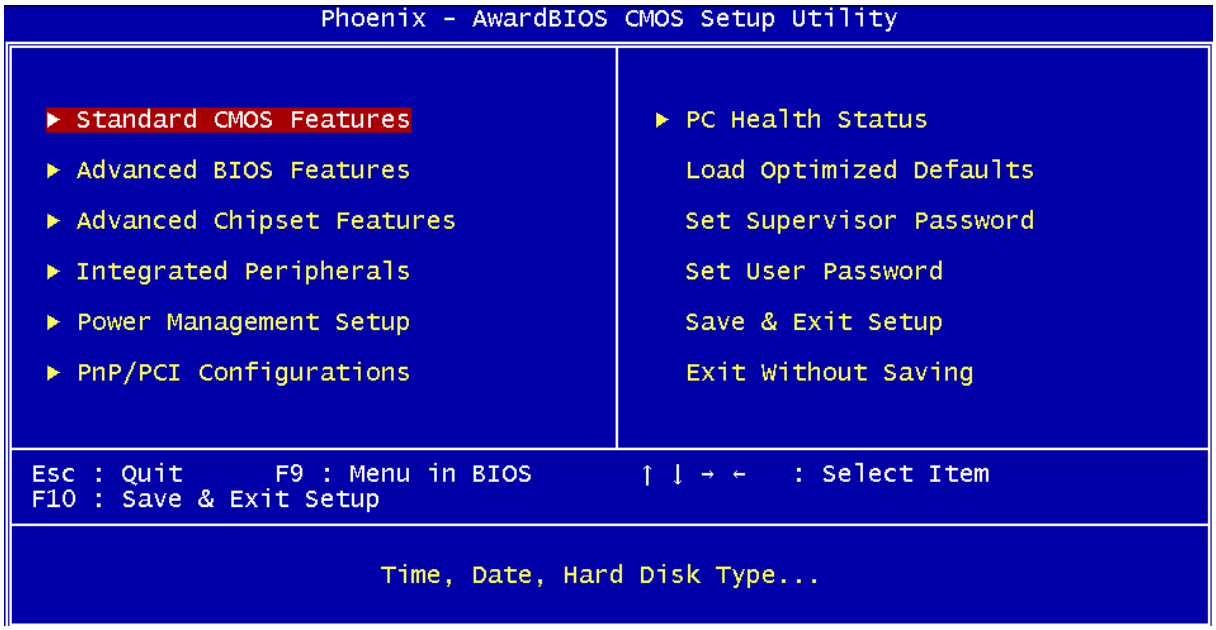
If, after making and saving system changes with the Setup utility, you find that this product no longer boots, start the BIOS setup and execute the following.

Load Optimized Defaults

11.1.3 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

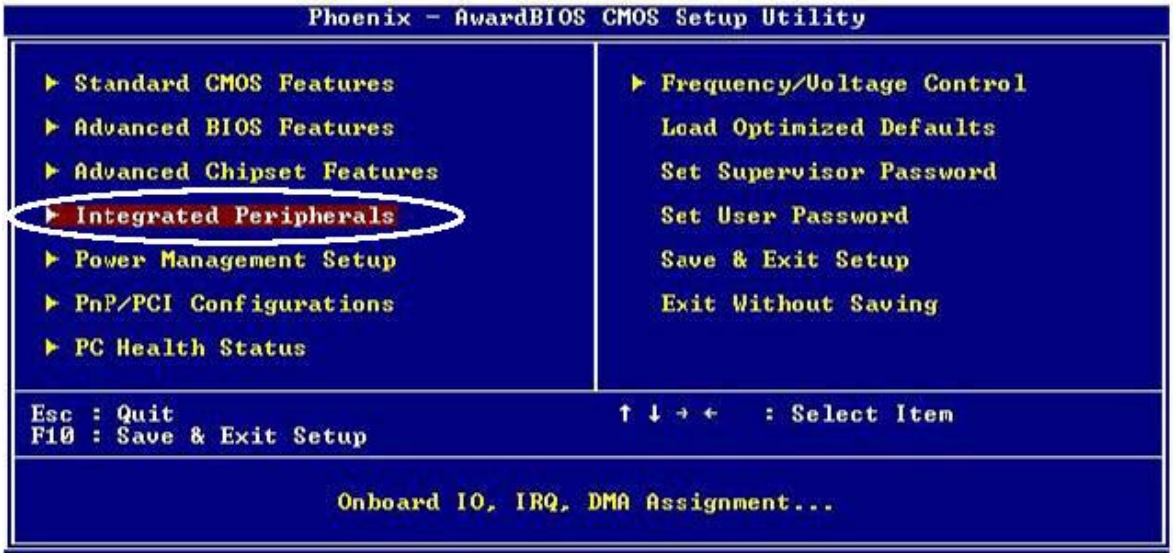
Save CMOS value changes to CMOS and exits setup.

Exit without saving

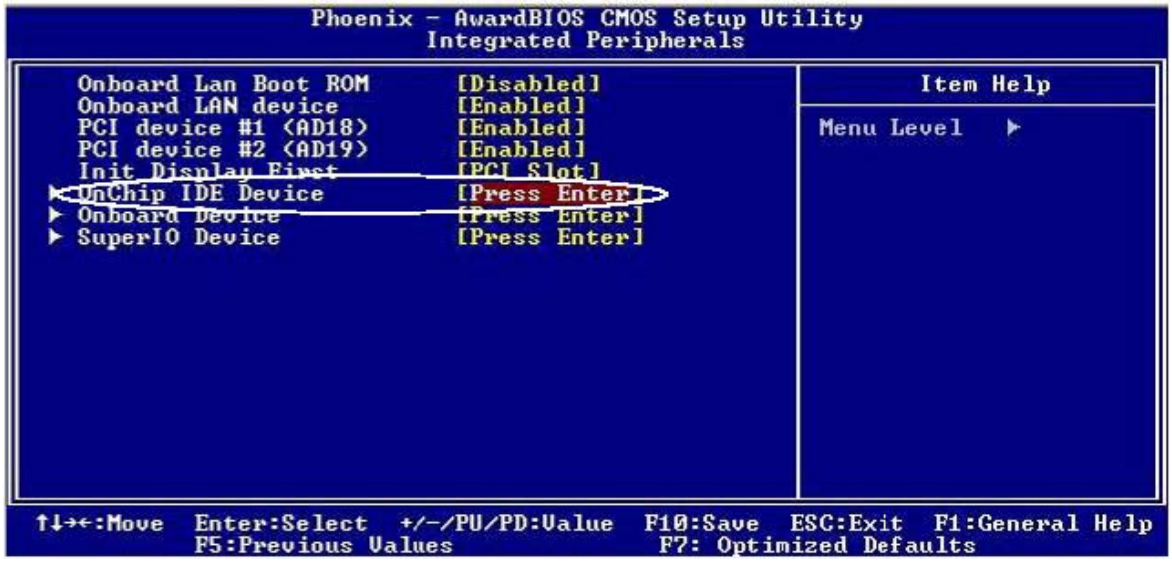
Ignores all CMOS value changes and exits setup.

11.2 Enabling RAID in the BIOS

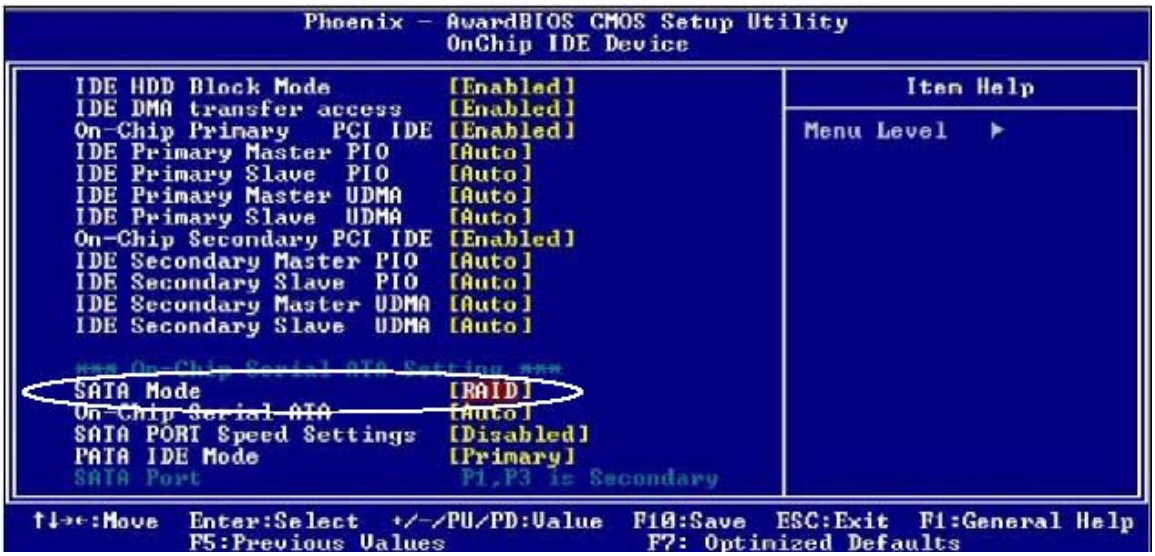
Enter the BIOS Setup program by pressing the DEL key.



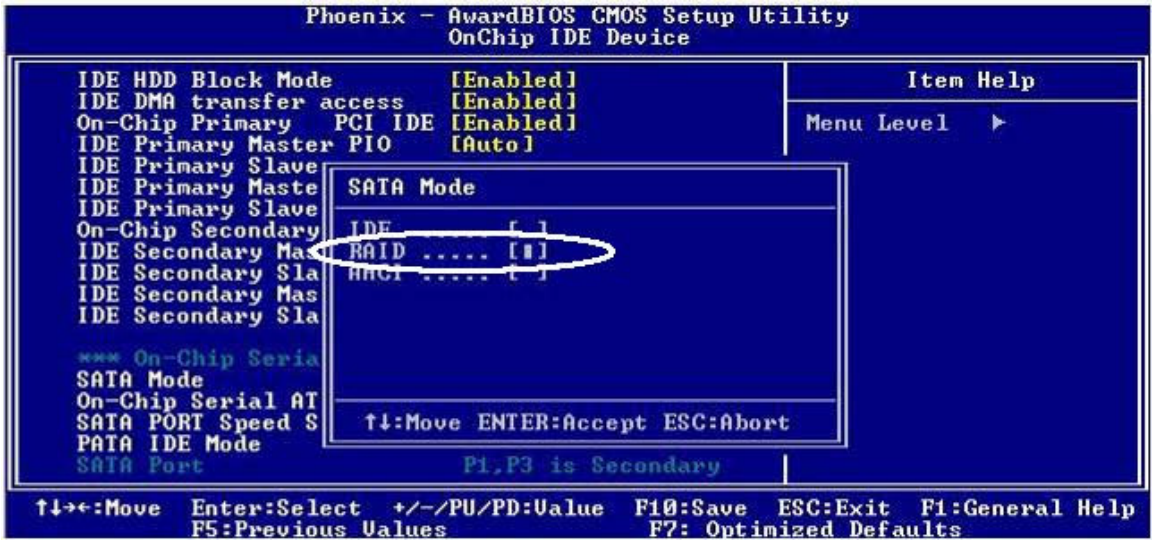
Select **Integrated Peripherals**, and then press "**Enter**"



Select **OnChip IDE Device**, and then press "**Enter**"



Select **SATA Mode**, and then press "**Enter**"



Select **RAID**, and then press "**Enter**"

Press the **F10** key to save the BIOS settings and exit the BIOS Setup program.

11.3 RAID Volume Creation

1. When the Intel® Matrix Storage Manager option ROM status screen appears during POST, press the **Ctrl** and **i** keys at the same time to enter the Intel Matrix Storage Manager option ROM user interface.

2. Select Option 1: Create **RAID Volume** and press the **Enter** key.

3. Use the up or down array keys to select the **RAID level** and press the **Enter** key.

4. Unless you have selected RAID 1, use the up or down arrow keys to select the **strip size** and press the **Enter** key.

5. Press the **Enter** key to select the physical disks.

6. Select the appropriate number of hard drives by using the up or down arrow keys to scroll through the list of hard drives and pressing the **Space** key to select the drive. When finished, press the **Enter** key.

7. Select the **volume size** and press the **Enter** key.

8. Press the **Enter** key to create the volume. At the prompt, press the **Y** key to confirm volume creation.

9. Select Option 4: Exit and press the Enter key. Press the **Y** key to confirm exit.