User Manual

April 2009 Revision 2.4

Point-of Sale
Hardware System

Manual Version 2.4
Part Number:

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TRADEMARK

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical Power Supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

CE MARK

CE This device complies with the requirements of the EEC directive 2004/108/EC with regard to “Electromagnetic compatibility” and 2006/95/EC “Low Voltage Directive”

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

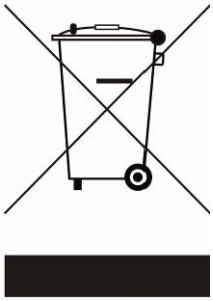
(2) This device must accept any interference received, including interference that may cause undesired operation

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.

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

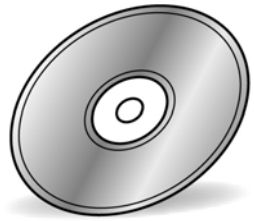
Revision Number	Description	Revision Date
V1.0	Release	Nov, 2005
V2.0	● 1 P.7 _ add the "Note: The maximum current that can be drawn from each COM port is 500 mA." ● 2 P.26_add the "Note: Please set the Jumper setting 15 of the motherboard to 1-2 (Refer to P.38 Item 12. Second Display Power Setting)." ● 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
V2.4	● 2 x 2.5” SATA HDD added on B91 M/B ● 3.5” ATA HDD change to 1 x 3.5” SATA HDD (with adapter board) on B81 M/B ● 3-in-1 MSR with I-Button module added ● Boot Display Device Setting modified: By BIOS Setup→ Reserved; Force CRT+LCD → Reserved.	Apr. 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

1.2 Optional Items

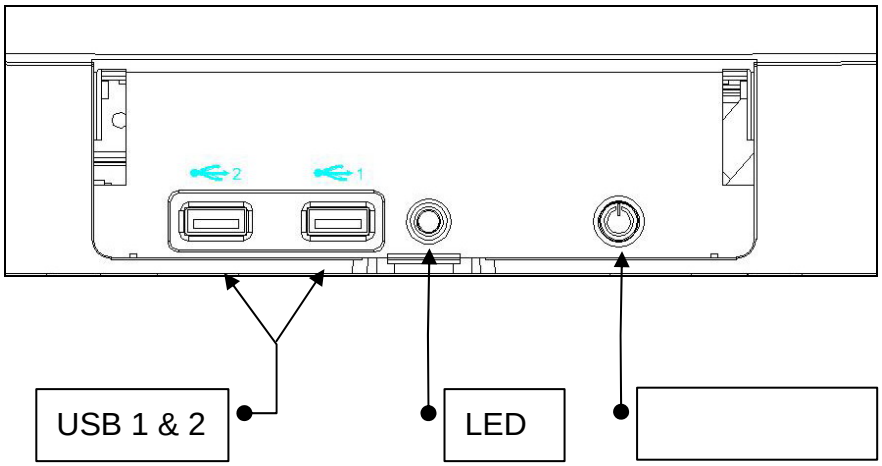
a. 3-in-1 MSR Card Reader

b. VFD

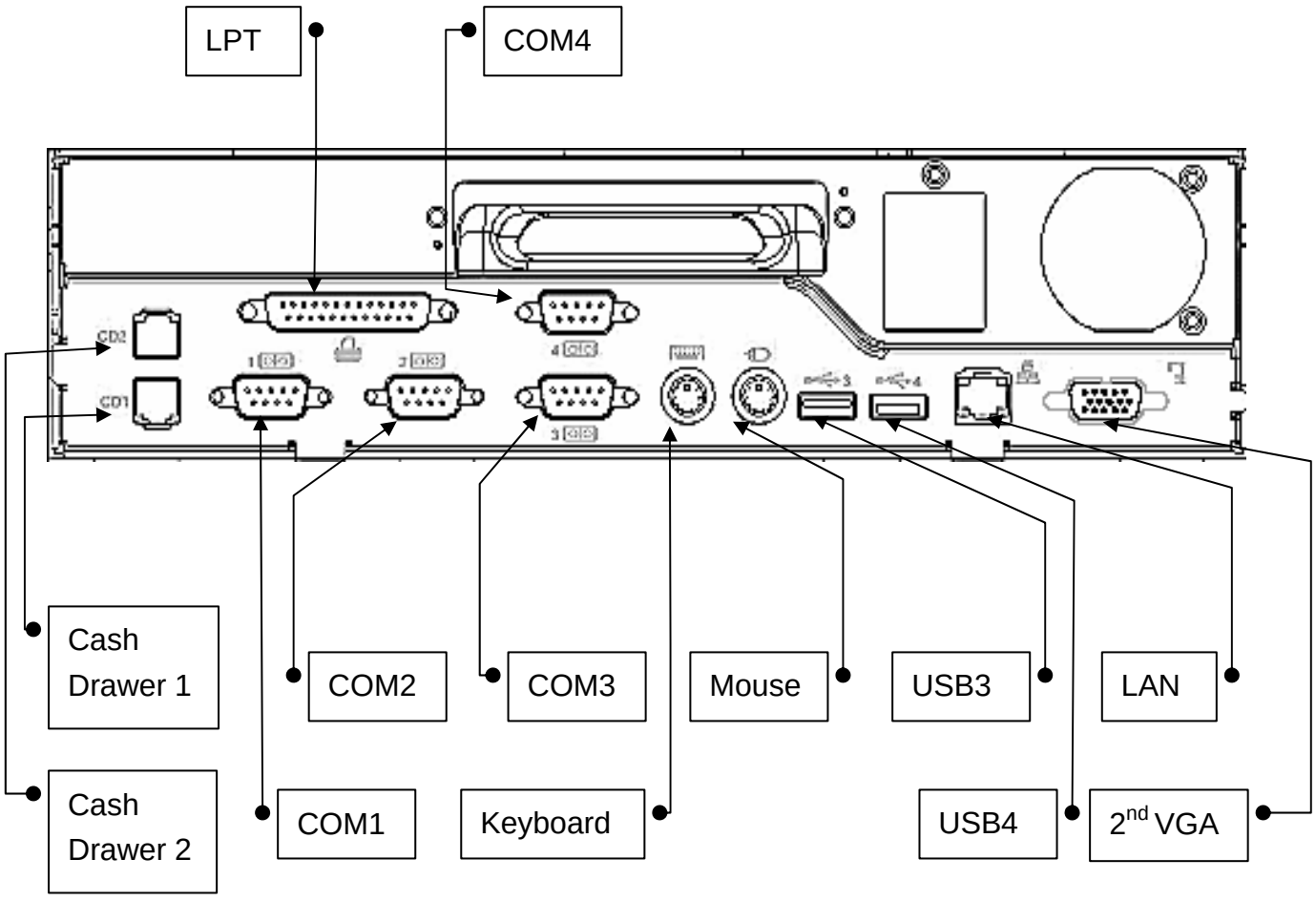
c. Second Display

2. System View

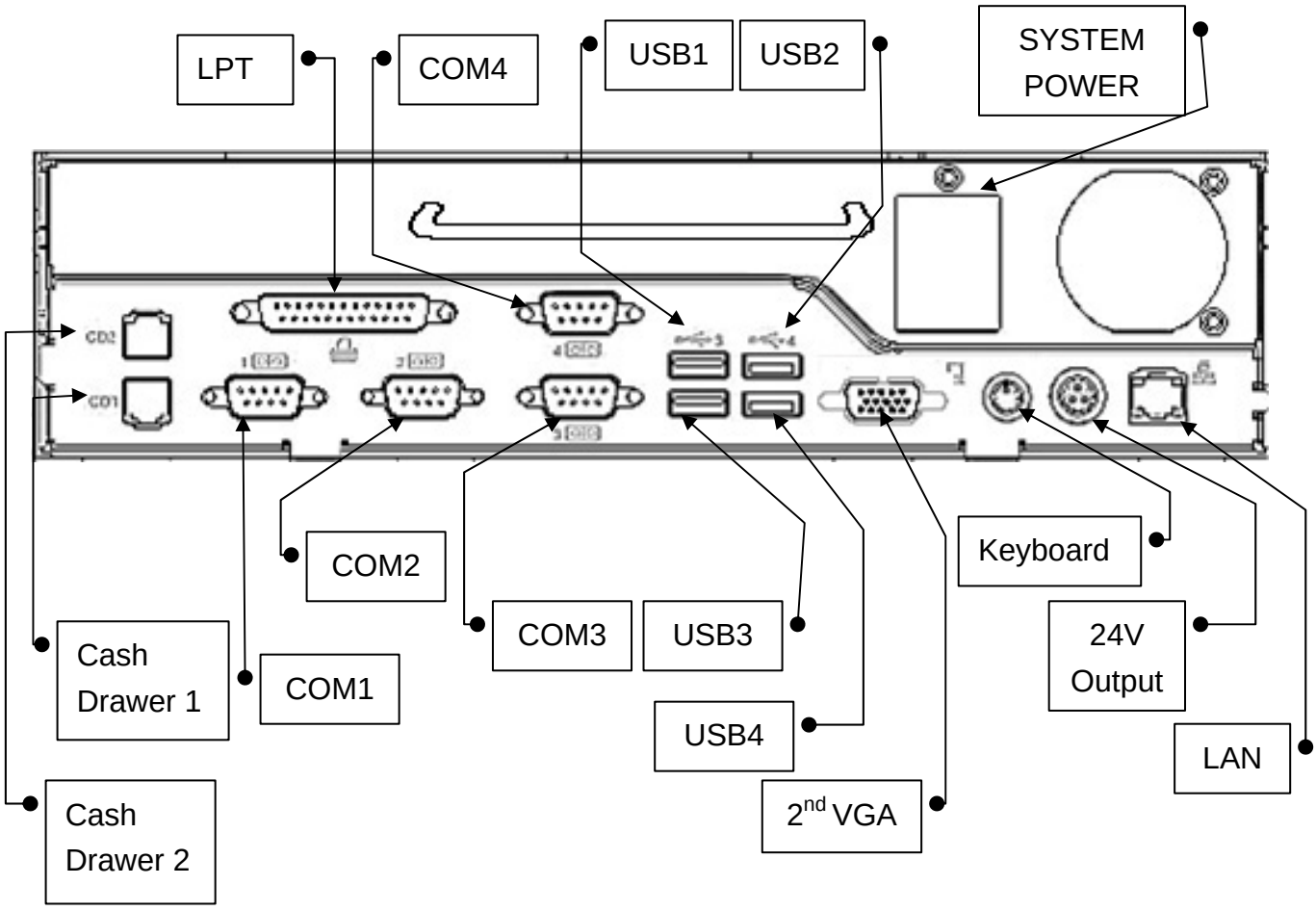
2.1 Front View



2.2 I/O View of B81 Motherboard



2.3 I/O View of B91 Motherboard



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

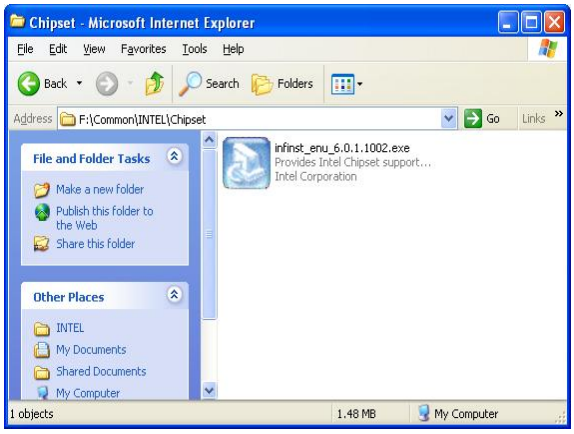
3. B81 Drivers Installation

3.1 Driver list

Folder/File	File Description
<CD>:\B81.htm	B81 Driver List
<CD>:\Common\INTEL\Chipset\i8xx	Chipset Driver
<CD>:\Common\INTEL\USB20	USB 2.0 Driver
<CD>:\Common\INTEL\VGA\i85x	VGA Driver
<CD>:\COMMON\Lan_driver\Realtek_PCI	10/100MB LAN Driver
<CD>:\Common\Elo_Touch	ELO Touch Screen Driver
<CD>:\Common\POS_Touch	POSTouch Touch Screen Driver
<CD>:\Common\SmartCard\USB\EZ110PU	USB Smart Card Reader Driver

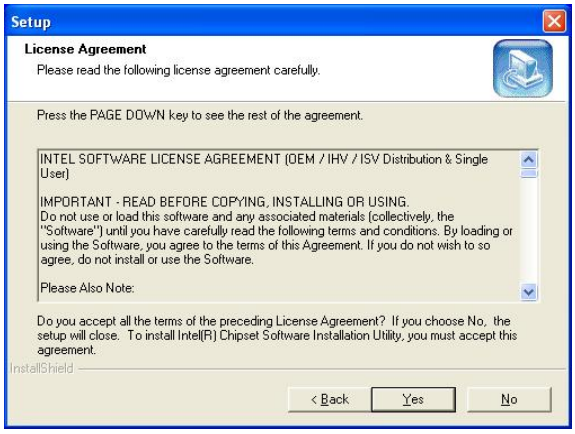
The following procedures are for Windows 2000/XP, other platforms are similar.

3.2 Chipset Driver Installation

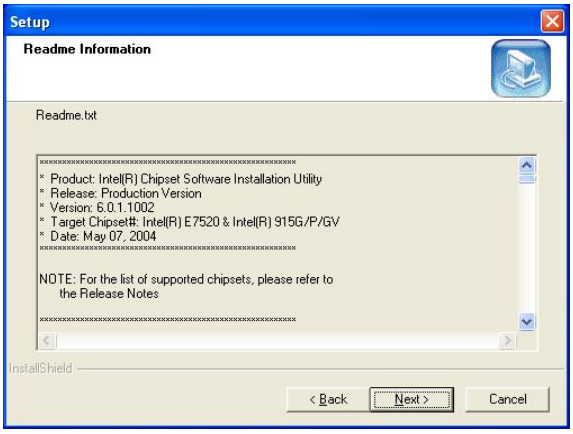


a. Double click "**infinst_enu_6.0.1002**" on the My Computer window.

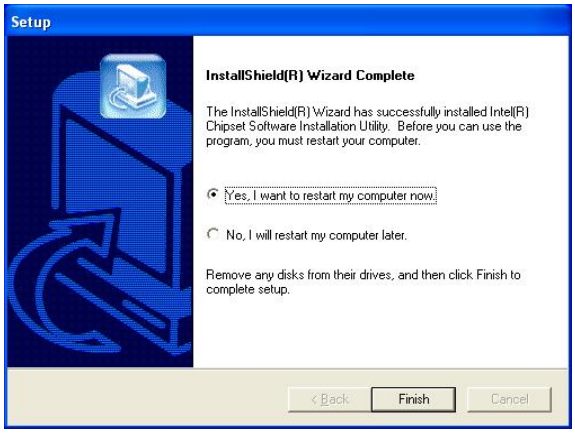
b. Click the "**Next**" button on the Welcome window.



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



d. Click the "**Next**" button on the Readme Information window.

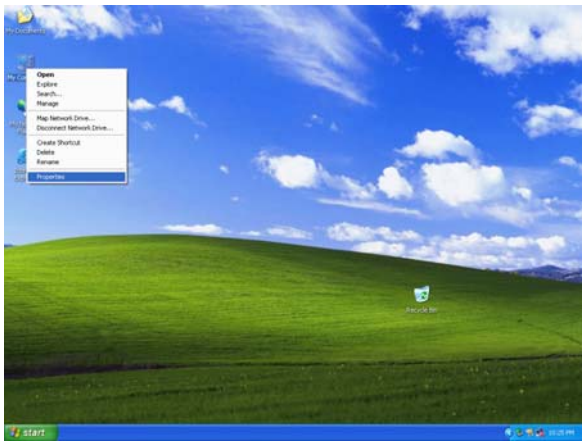


e. Click the "**Finish**" button and restart your system.

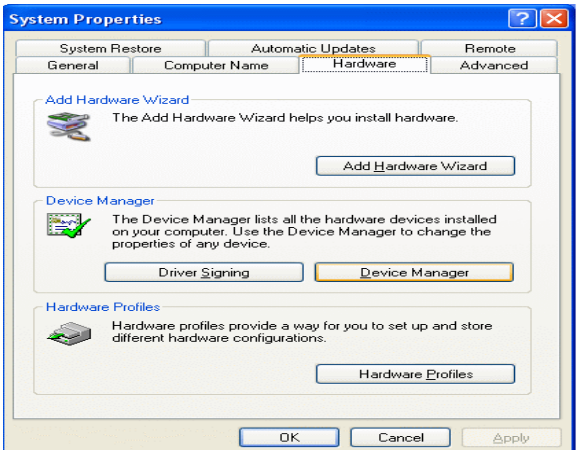
3.3 USB2.0 Driver Installation

OS Requirements

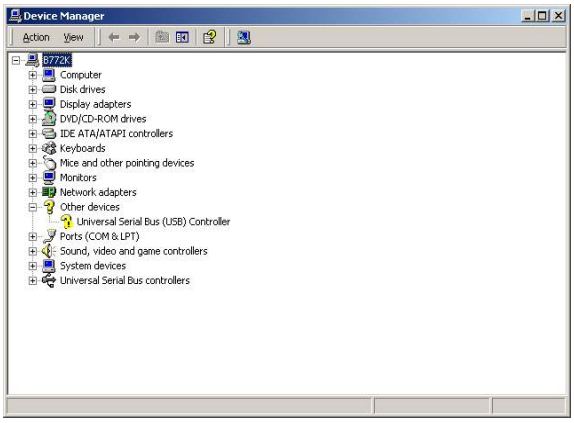
OS	USB 2.0 requirements
Windows XP	USB 2.0 drivers are provided in Service Pack 1 (SP1) for Windows XP, which is available through Windows Update.
Windows 2000	USB 2.0 drivers are available through Windows Update or Service Pack 4.
Windows 98SE/Me	USB 2.0 drivers are available on the Intel developer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

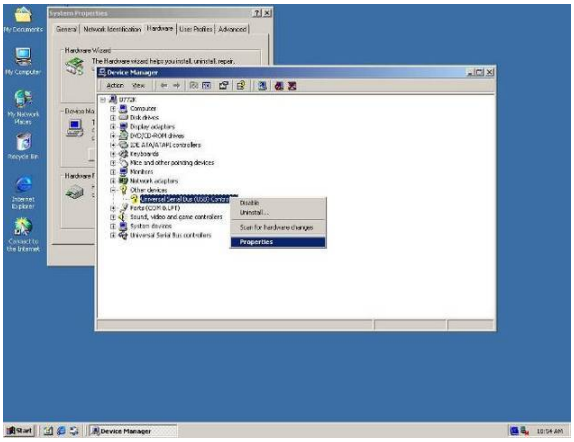


a. Right click My Computer on the desktop and select "**properties**"



b. Select "**Hardware**"→"**Device Manager**" on system properties.





c. Select "**Other Devices**" → "**Universal Serial Bus (USB) Controlle**r" →"**Properties**" on Device Manager.

d. Select "**Device**"→ "**Update Driver…**".

e. Click the "**Next**" button on the welcome window.

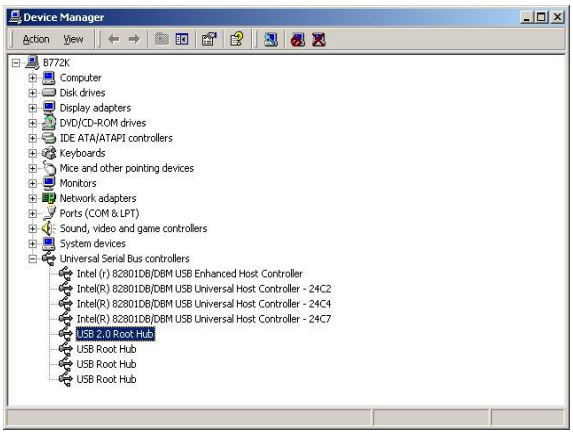
f. Select "**Search for a suitable…**"and click the "**Next**" button on the Install Hardware Device Drivers window.

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.

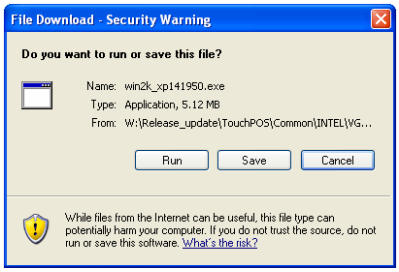
j. Click the “**Finish**” button to complete this process.



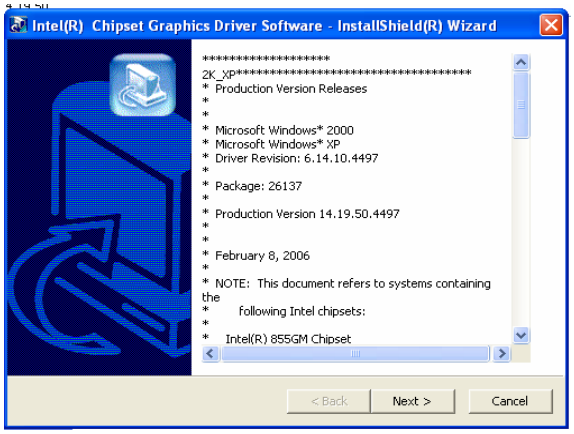
k. Finished.

3.4 VGA Driver Installation

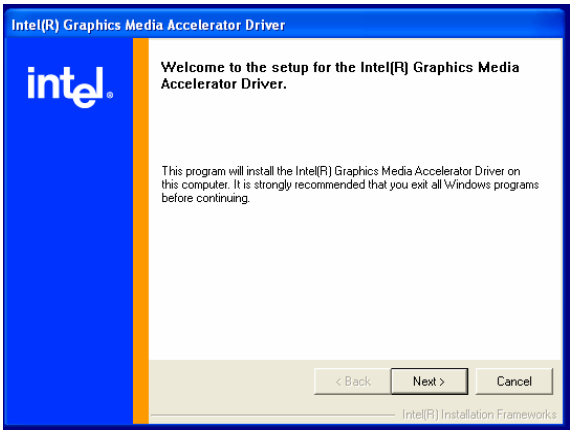
a. To click link “**Win2K_XP**” to run “win2k_xp141950.exe”.



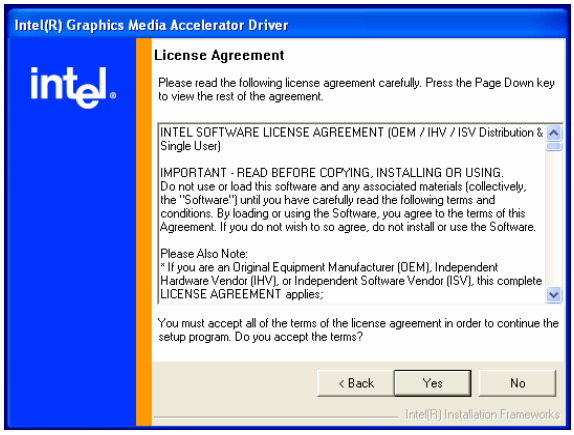
b. To press “**Run**” icon to run win2k_xp141950.exe.



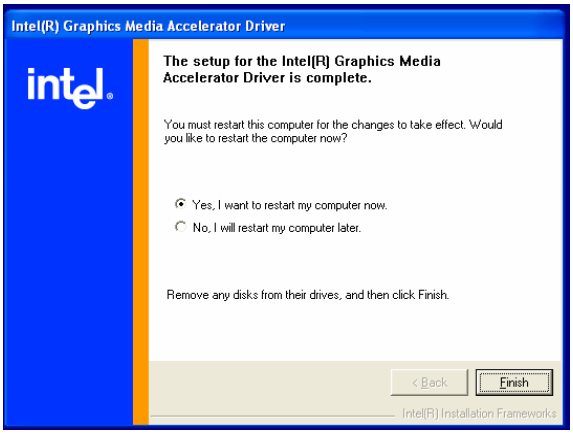
c. Click the “**Next**” button on the Intel(R) Chipset Graphics Driver Software- Install Shield(R) Wizard window.



d. Click the “**Next**” button on the Intel(R) Graphics Media Accelerator Driver window.



e. Click the “**Yes**” button on the Intel(R) Graphics Media Accelerator Driver window.

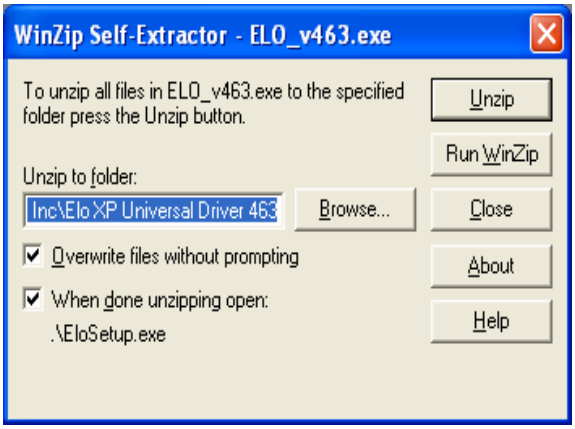


f. Select “**Yes**, I want to restart my computer now” and click the “Finish” button on the Intel(R) Graphics Media Accelerator Driver window.

3.5 ELO Touch Driver Installation

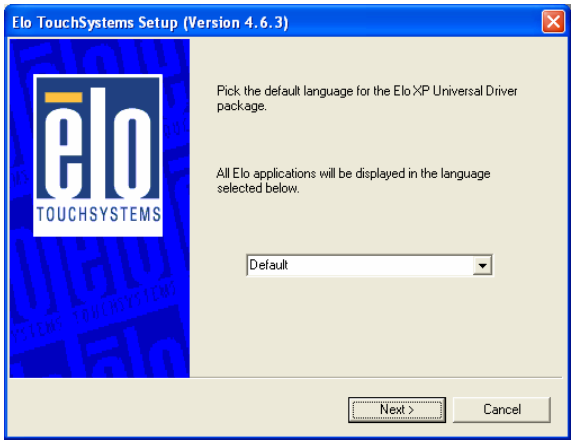
a. In the “**ELO**” section, click on “**Windows**” to select “**v463**” version.

b. Click “**OK**”.

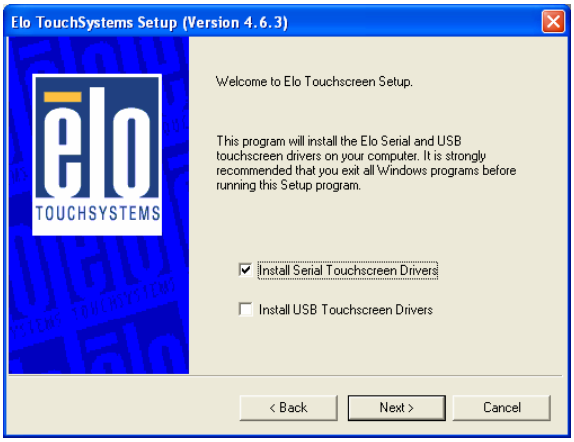


c. Click “**Unzip**” to extract the driver to the specified folder.

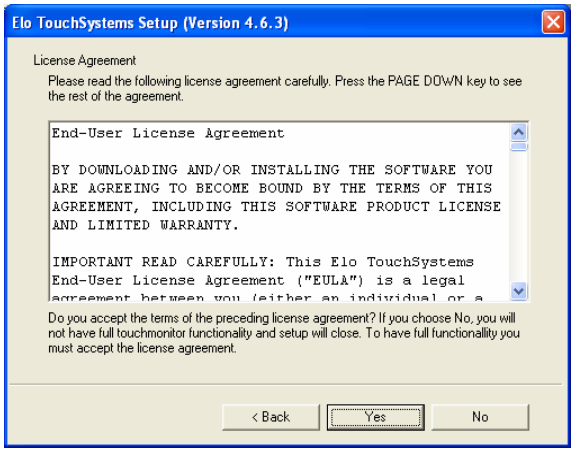
d. Finished unzipping. Click “**OK**”.



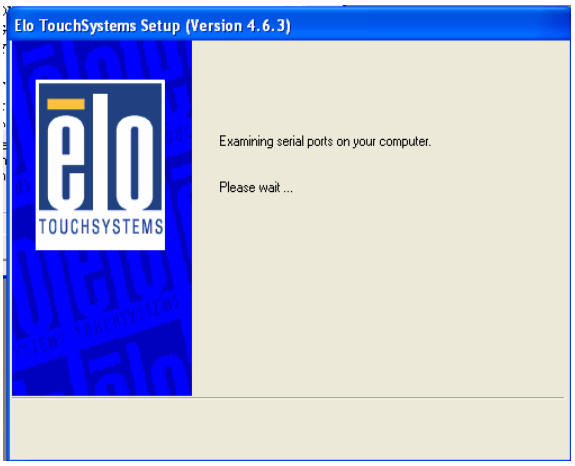
e. Click “**Next**”.



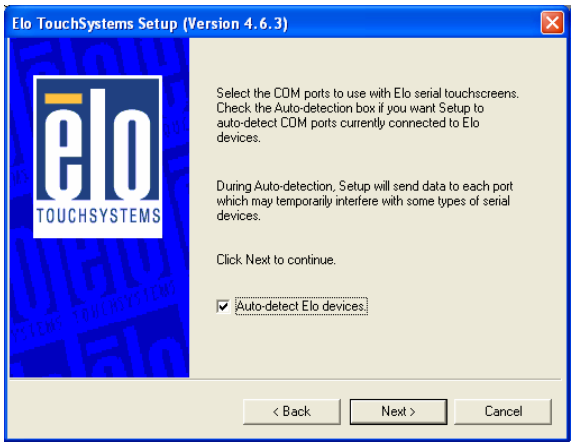
f. Check the box Install Serial Touchscreen Drivers and click “**Next**”.



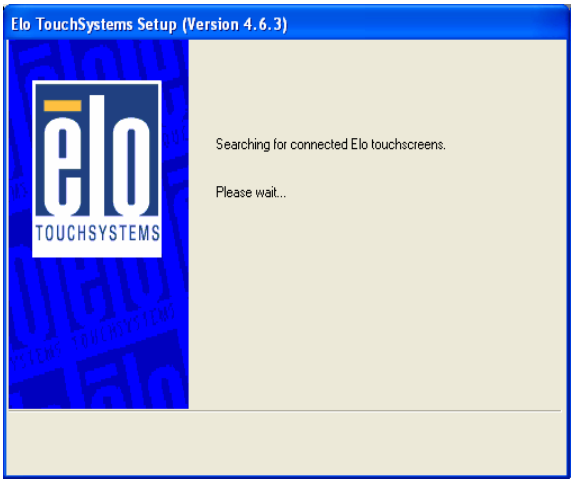
g. Click “**Yes**” to accept the End User License Agreement



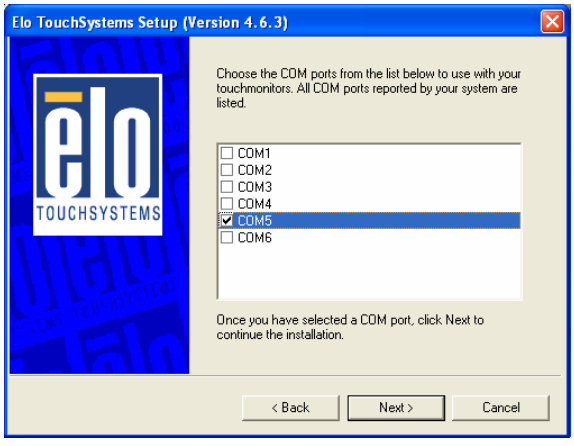
h. Examining serial ports on the computer…



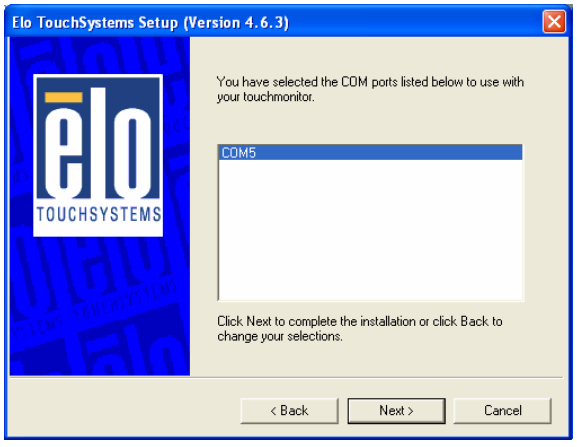
i. Check the box Auto-detect Elo devices and click “**Next”**.



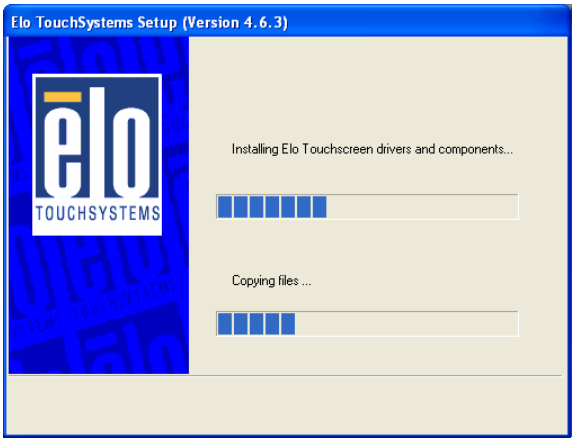
j. The computer is searching for a connected to Elo Touchscreen.



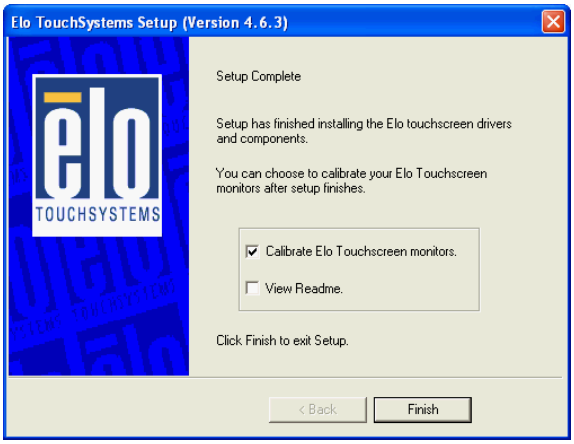
k. Touchscreen found on “**COM5**”. Click “**Next**”.



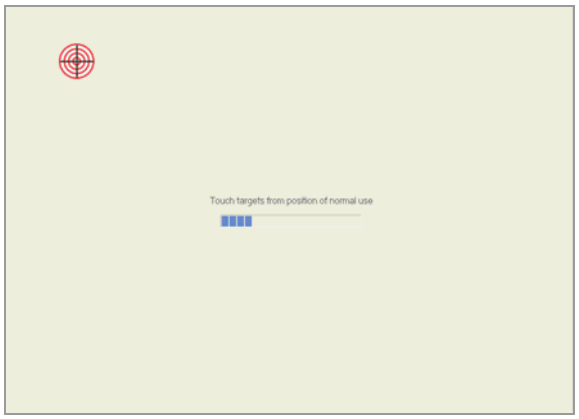
l. Click “**Next**” to complete the driver installation.



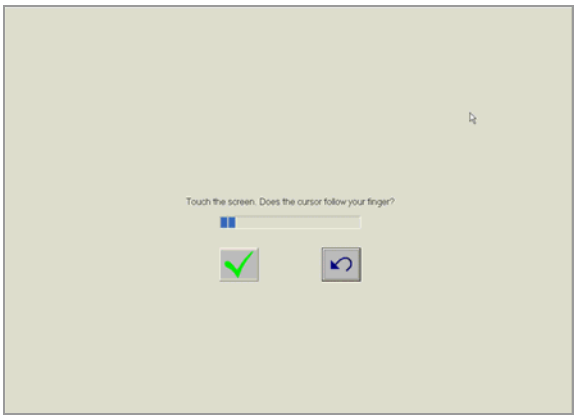
m. Driver Ais installing…



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



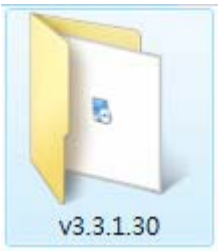
o. Follow the instructions on the screen to calibrate the Touchscreen.



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.

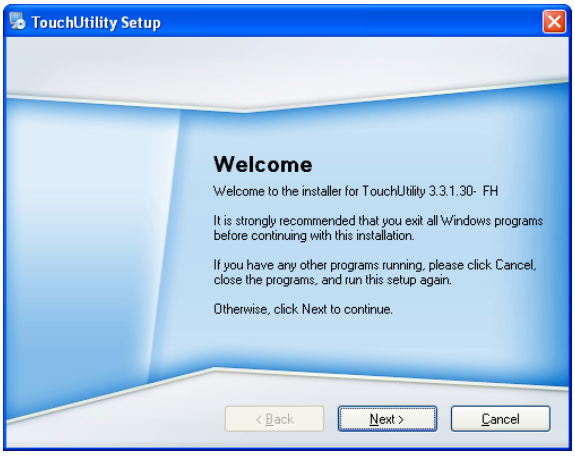
3.6 POSTouch Driver Installation

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



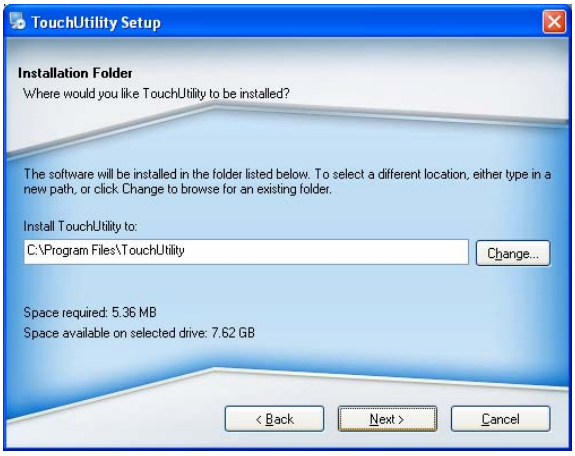
b. Double-click on "**v3.3.1.30**".

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

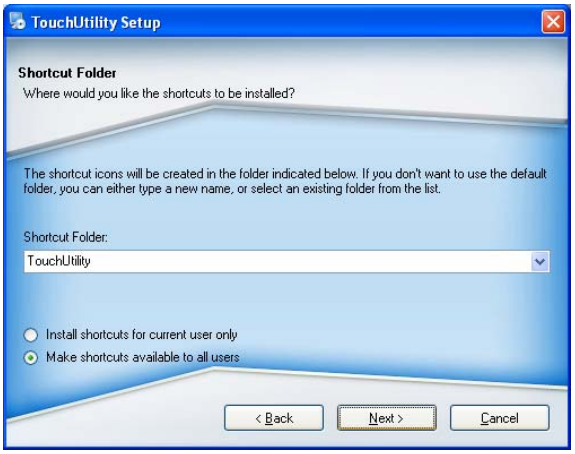


d. Click "**Next**".

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

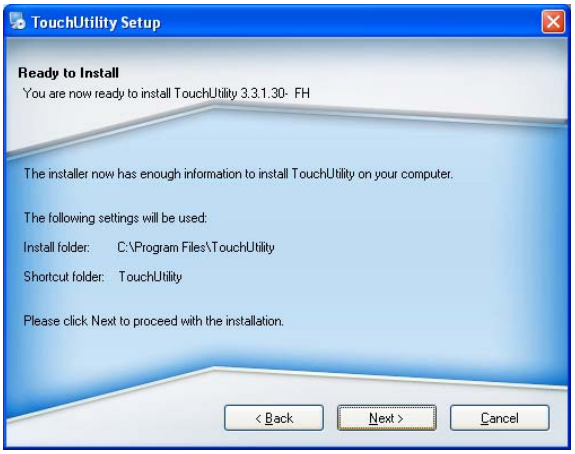


f. Select the installation folder for the touch utility driver and click "**Next**".

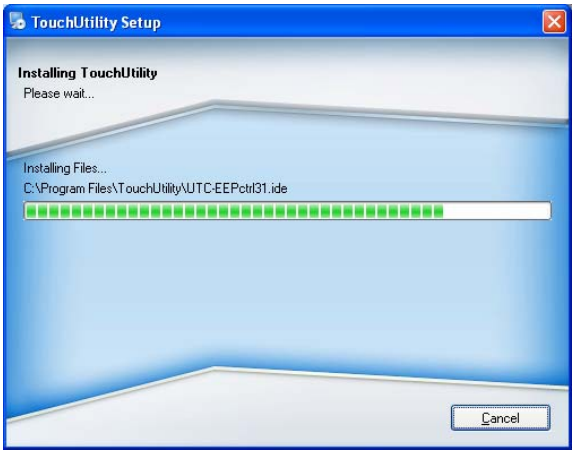


g. Select the shortcut folder for the touch utility driver and click "**Next**".

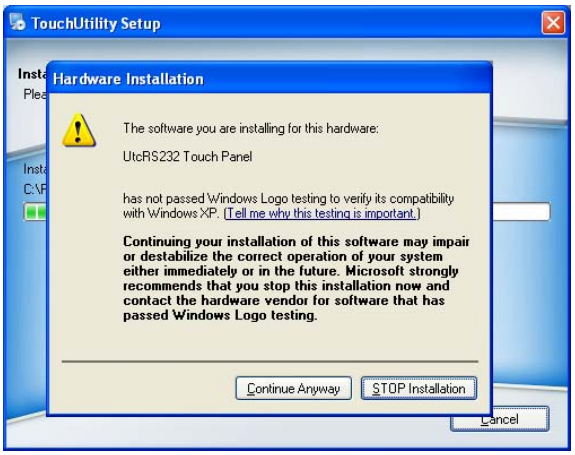
h. Click "**Next**".



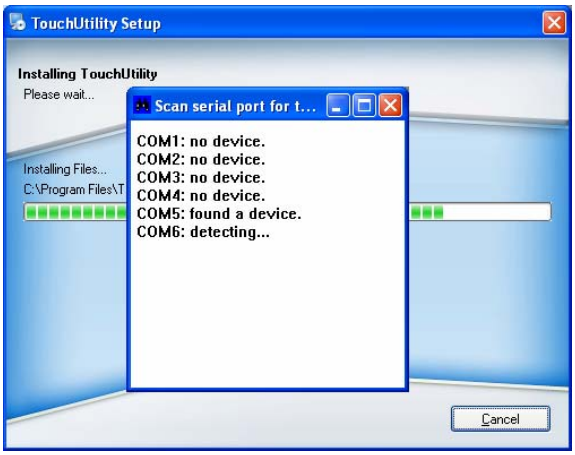
i. Click **Next**.



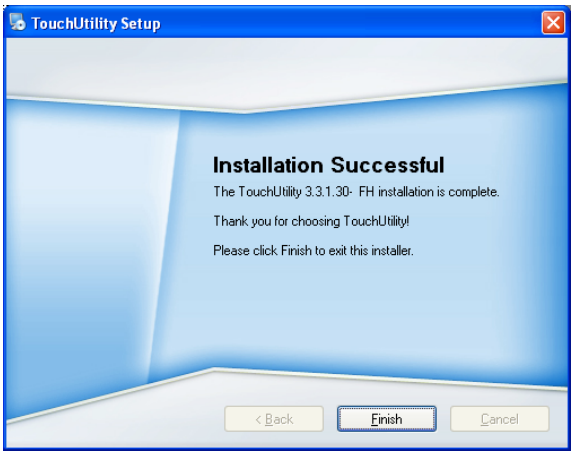
j. The computer is installing the touch driver



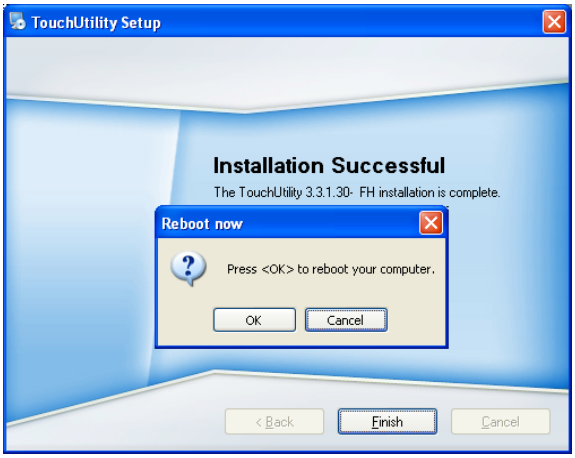
k. Click "**Continue Anyway"**.



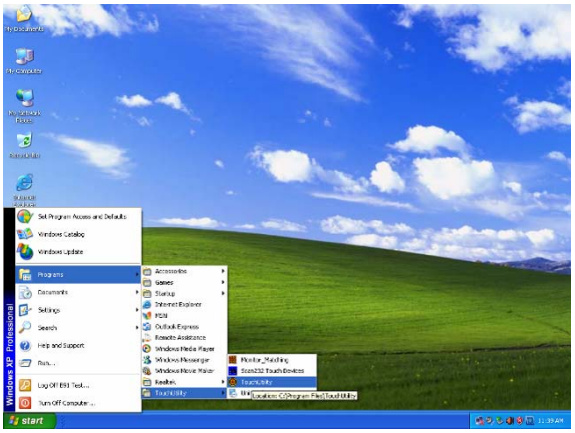
l. The serial ports are scanned for a touch device. The Touch panel is on COM5.



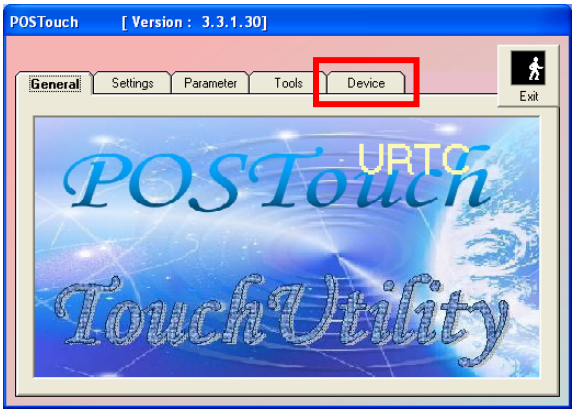
m. Click “**Finish**”.



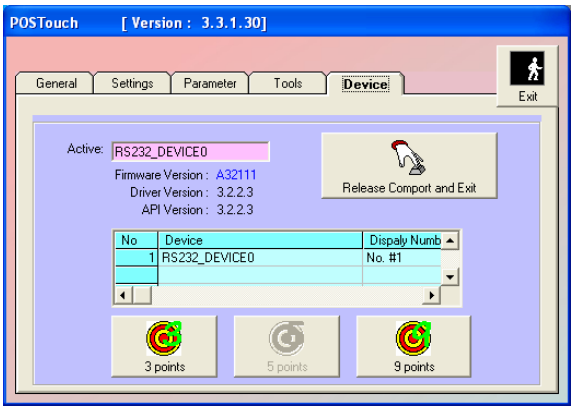
n. Click “**OK**” to restart the computer and finish the touch utility installation.



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.

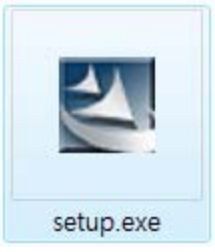
r. Follow the instructions on the screen to do the calibration of the touch panel

s. Touch the screen to save the calibration

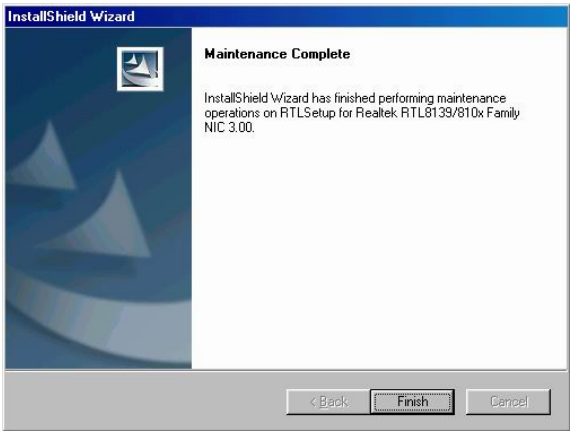
3.7 10/100MB LAN Driver Installation

a. In the "**Realtek RTL8110**" section, click on Win9X, ME, 2K, XP

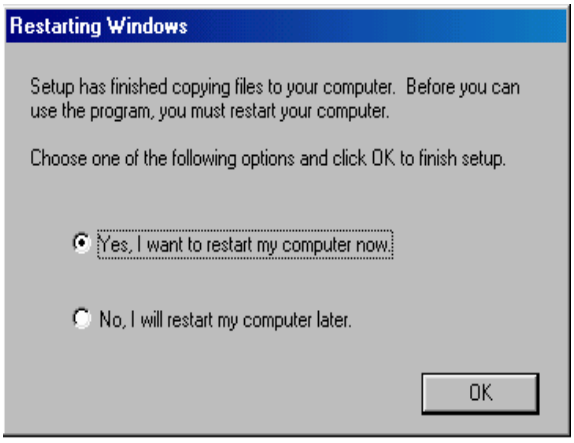
b. Double-click "**v709**"



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



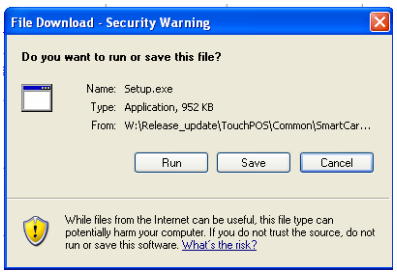
d. Click the "**Finish**" button on the Maintenance Complete window.



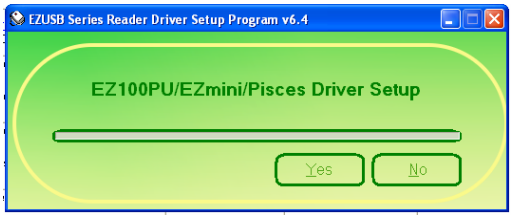
e. Click the "**OK**" button and restart your system.

3.8 USB Smart Card Reader Driver Installation

a. To select "**Win2K, XP, Vista**".



b. To Click "**Run**" to run "**Setup.exe**".



c. Click the "**Yes**" button on the window.

d. Click the "**YES**" button and restart your system.

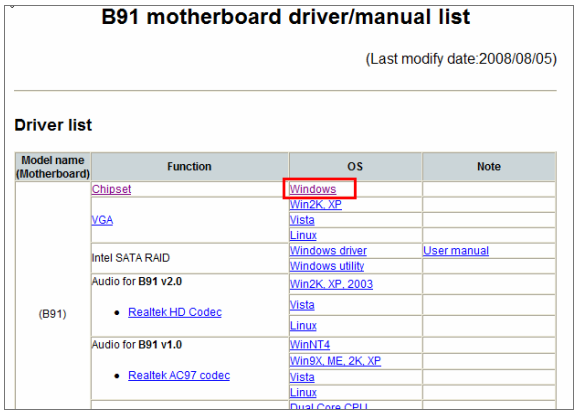
4. B91 Driver Installation

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\Audio\Realtek_HD_Codec	Audio for B91 V2.0
<CD>:\COMMON\Elo_Touch	ELO Touch Driver
<CD>:\COMMON\POS_Touch	POSTouch Driver
<CD>:\COMMON\Lan_driver\Realtek_PCIe	10/100/1000 MB LAN Driver

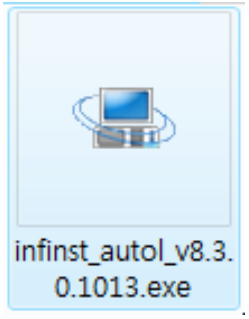
The following procedures are for Windows 2000/XP. Installation on other platforms is similar.

4.2 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**”.

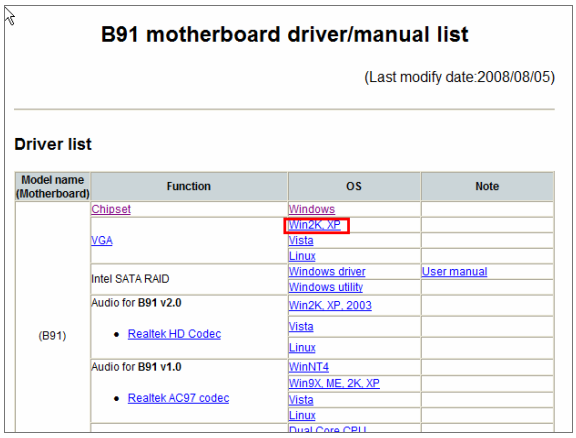
f. Click “**Next**”.

g. The driver installation starts

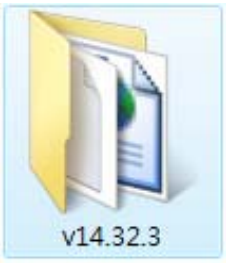
h. Click “**Next**”.

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

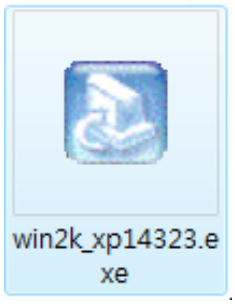
4.3 VGA Driver Installation



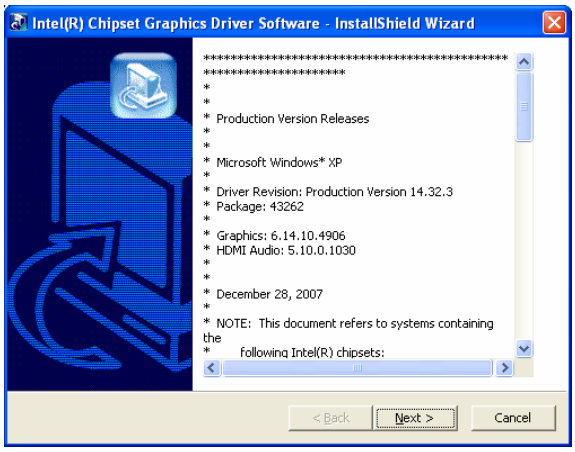
a. In the "**VGA**" section, click on "**Win2K_XP**".



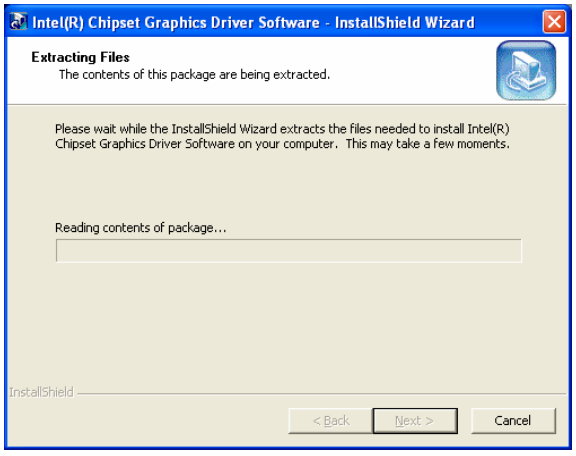
b. Double-click "**v14.32.3**".



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

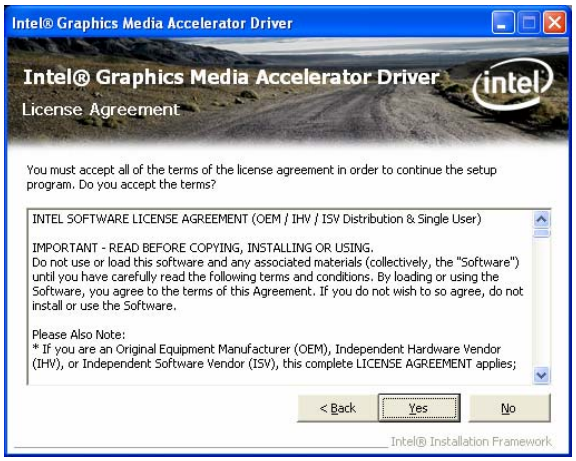


d. Click "**Next**".

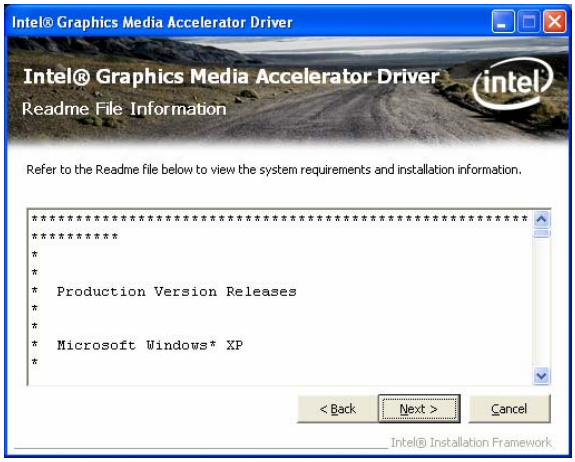


e. Extracting files…

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

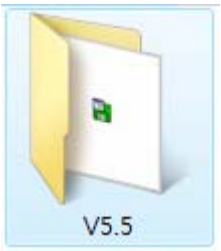
4.4 SATA RAID Driver Installation

Before installing the SATA RAID driver, please refer to Chapter 11.2 ”Enabling RAID in the BIOS” and Chapter 11.3 “RAID Volume Creation”.

4.4.1 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**

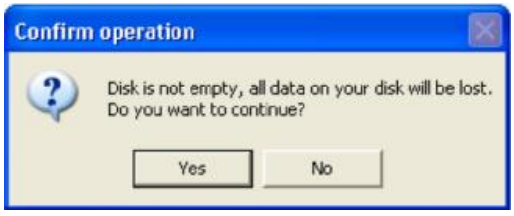


b. Double-click “**v5.5**”.

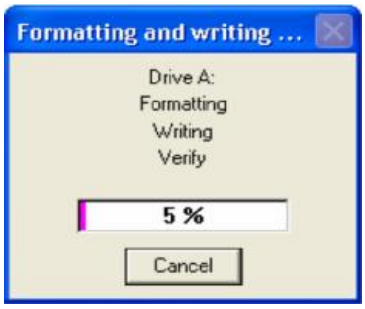
c. Double-click “**Driver**”.

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

4.4.2 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.

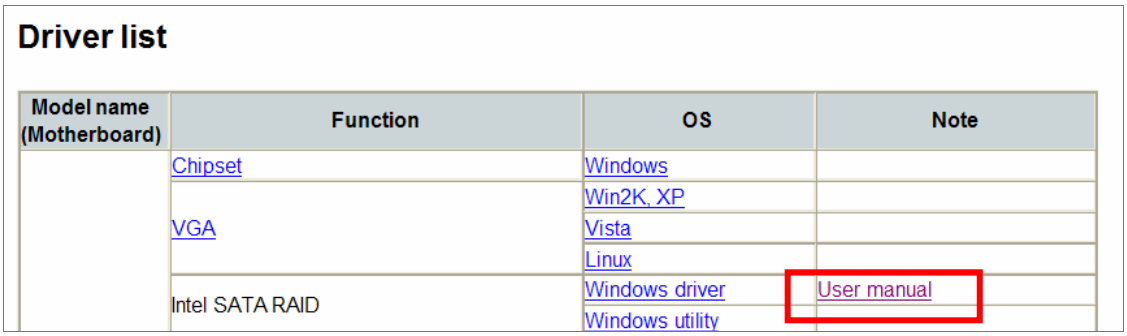
   After pressing Enter, you should be presented with a list of available SCSI Adapters. Select your controller from the list. The up and down arrow keys can be used to scroll through the list as all controllers may not be visible. The list may include:
   Intel® 82801ER SATA RAID Controller
   Intel® 82801FR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

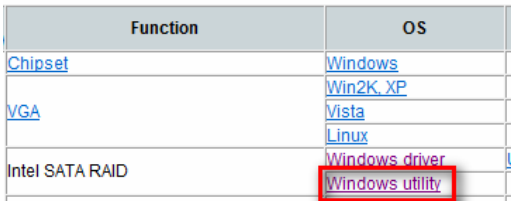
5. At this point, you have successfully F6'ed in the Intel® Matrix Storage Manager driver and Windows setup should continue. Leave the floppy disk in the floppy drive until the system reboots. Windows setup will need to copy the files from the floppy again to the Windows installation folders. Once Windows 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.

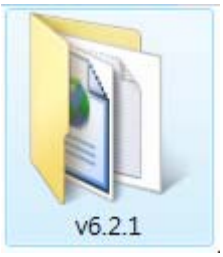
   Note: Please also refer to the Driver Bank CD for a detailed F6 installation procedure.
   Link: Intel SATA RAID / User Manual
   Page 23, Chapter 5_ Loading Driver During OS Installation



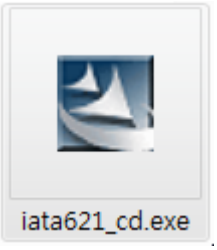
4.4.3 RAID Manager Utility installation



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

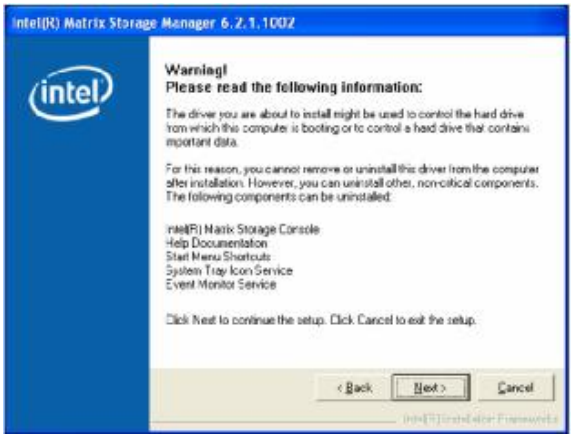


b. Double-click "**v6.2.1**".

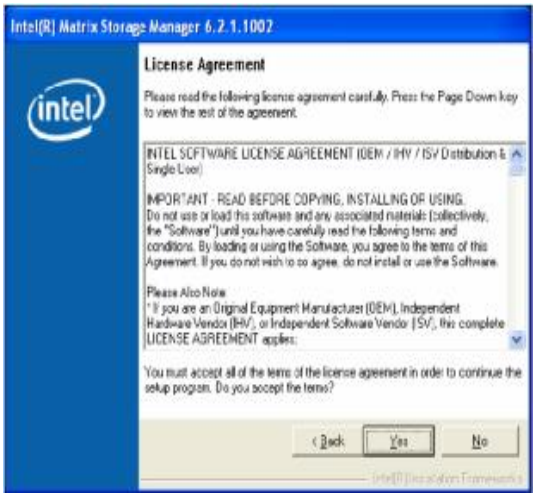


c. Double-click “**iata621_cd.exe**”.

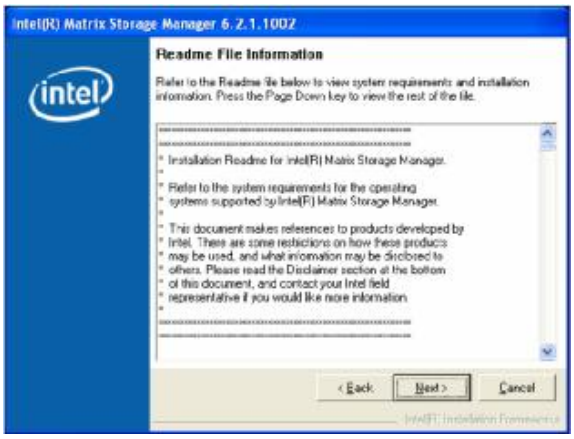
d. Click “**Next**”.



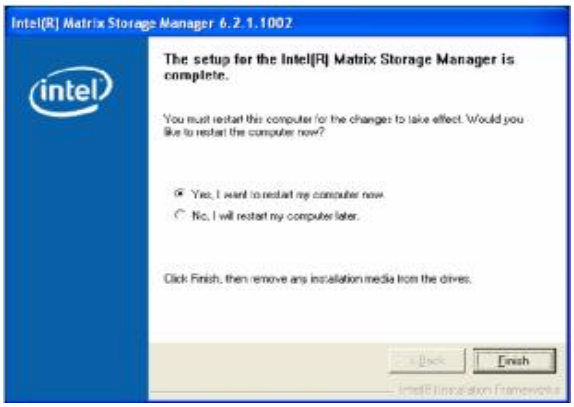
e. Click “**Next**”.



f. Click “**Yes**”.

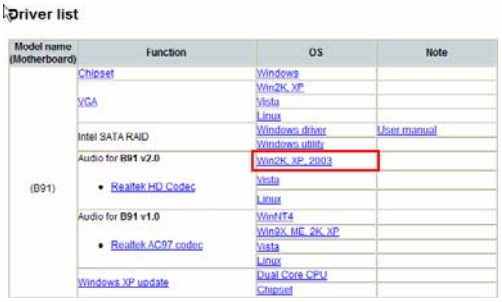


g. Click “**Next**”.

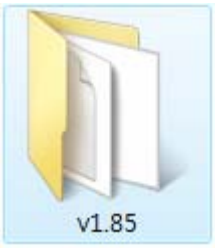


h. Select “**Yes, I want to restart my computer now**” and click “**Finish**” to complete the installation

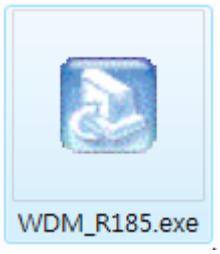
4.5 Audio Driver Installation



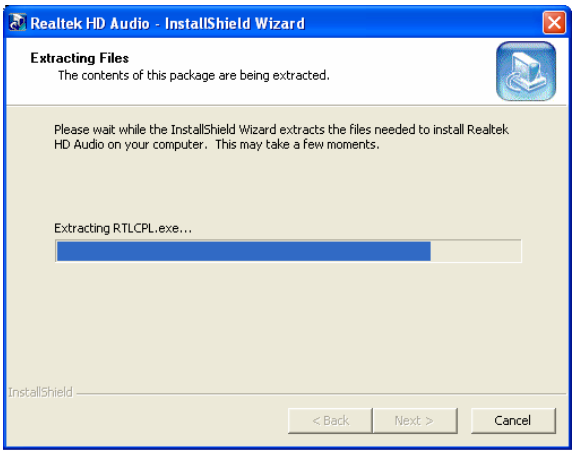
a. In the "**Realtek HD Codec"** section, click on "**Win2K, XP, 2003**".



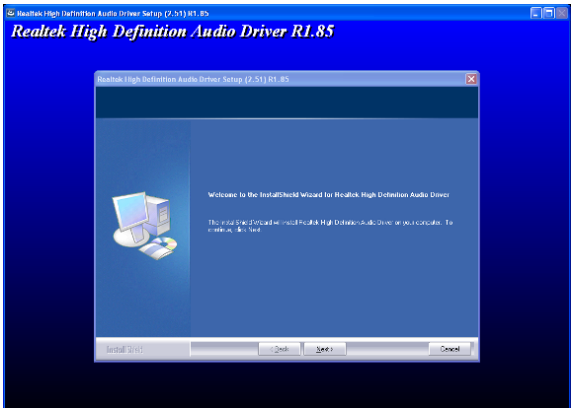
b. Double click on "**v1.85**".



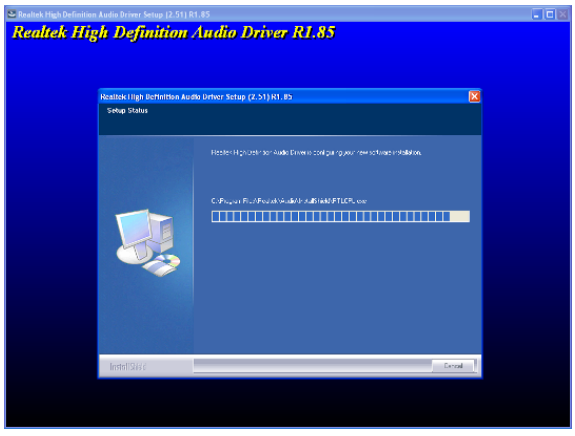
c. Double-click "**WDM_R185.exe**".



d. Driver files are extracted…



e. Click "**Next**".



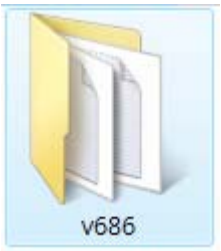
f. The computer is installing the Audio HD driver.

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

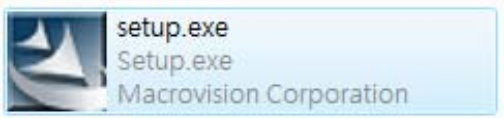
4.6 10/100/1000MB LAN Driver Installation

PCI-E 1000Mb LAN for **B91 v2.0** • Realtek RTL8111	DOS Win9X, ME, 2K, XP Vista Linux
PCI 100Mb LAN for **B91 v1.0** • Realtek RTL8139 / 8100	DOS Win9X, ME, 2K, XP Vista Linux

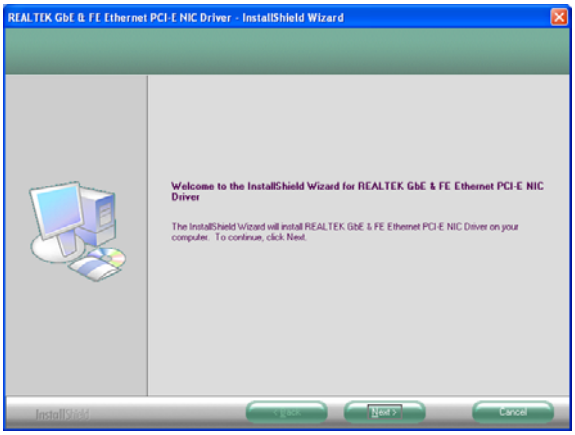
a. In the "**Realtek RTL8111**" section, click on "**Win9X, ME, 2K, XP**".



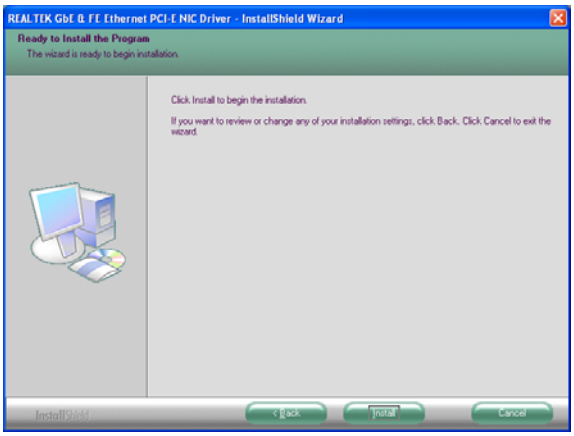
b. Double-click "**v686**".



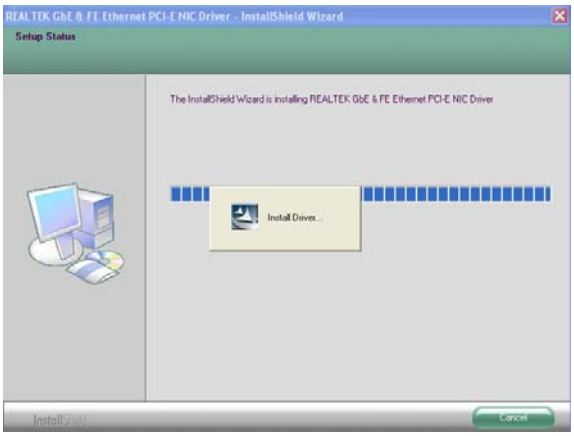
c. Double-click "**Setup.exe**".



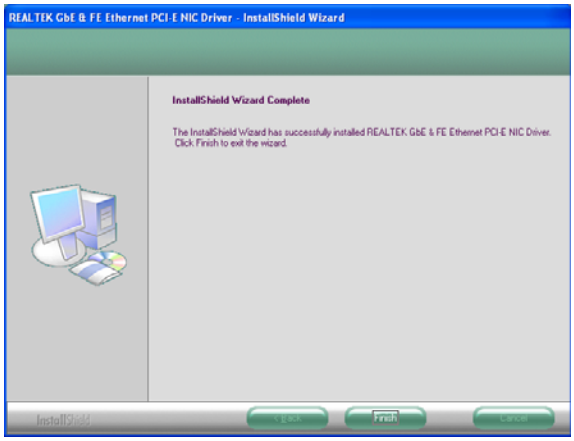
d. Click "**Next**".



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



f. The driver is being installed…



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

4.7 ELO Touch Driver Installation

Please refer to B81 Elo Touch Driver Installation on page 16.

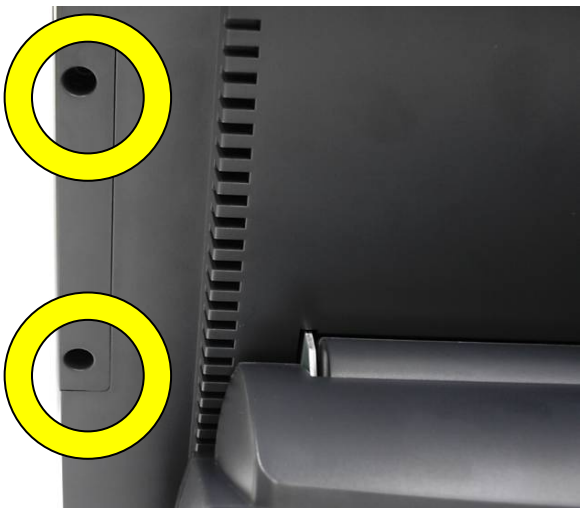
4.8 POSTouch Driver Installation

Please refer to B81 POSTouch Driver Installation on page 19.

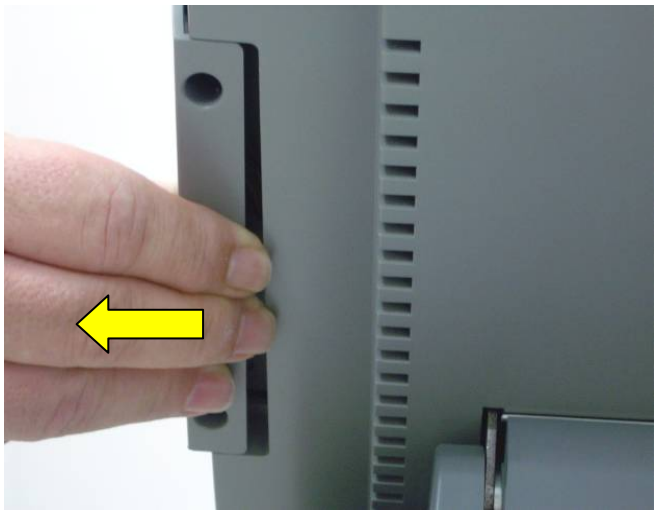
5. Peripheral Installation

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

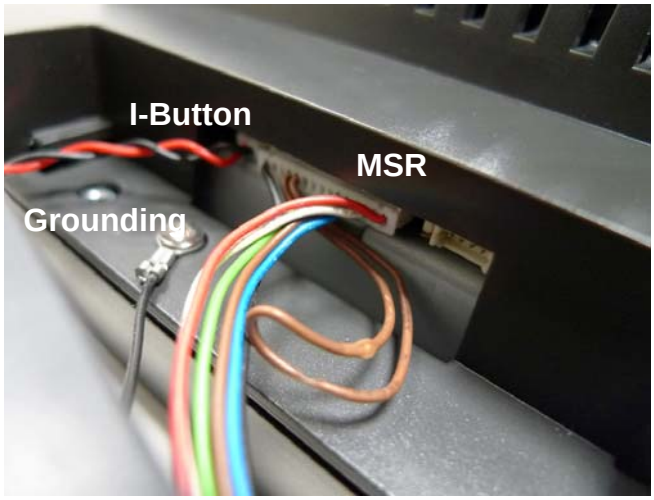
The module unit is tested and can be supplied at your request. This module is removed during transportation and can be connected by the user.



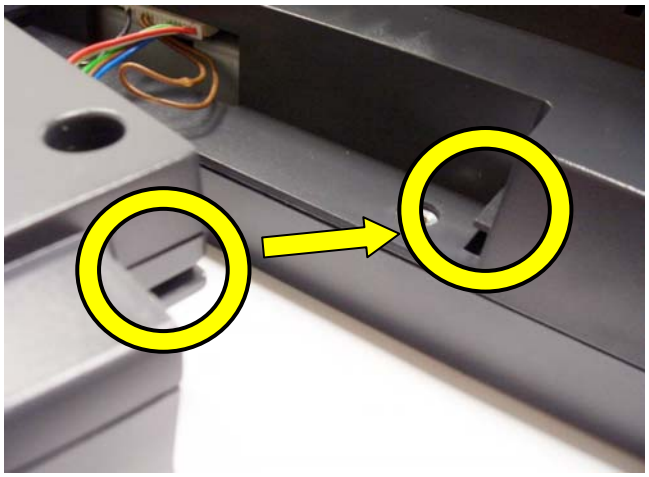
a. Remove the screws (2) of the plastic cover on the right side of the display.



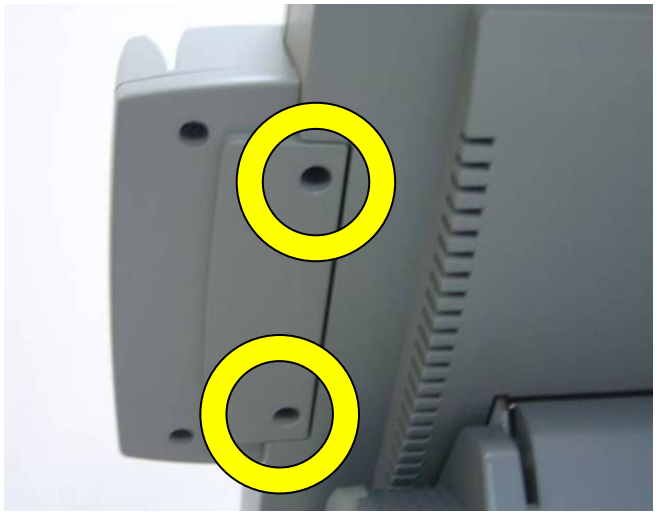
b. Slide the cover out as shown in the picture.



c. Fasten the grounding cable with a screw and connect the MSR and I-Button Cables to the respective connectors on the system.



d. To make sure the groove in the MSR module was allied to right position of the system.

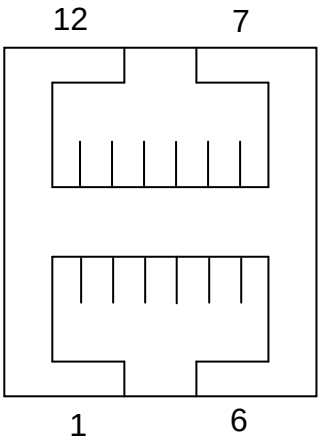


e. Slide the MSR into position as shown in the picture, and fasten it to the display housing by tightening the screws (2).

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 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

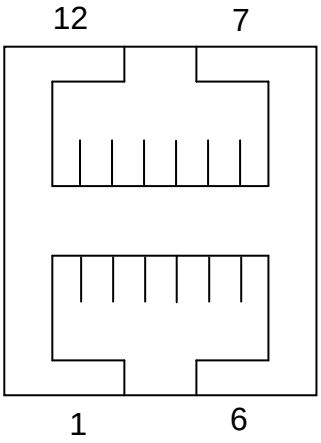
Command	Cash Drawer 1
O 4B8 01	Opening
O 4B8 00	Allow to closing
➢ Set the I/O address 4B8h bit0 =1 for opening the Cash Drawer1 by “DOUT bit0” pin control. ➢ Set the I/O address 4B8h bit0 = 0 to allow closing Cash Drawer1.	

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



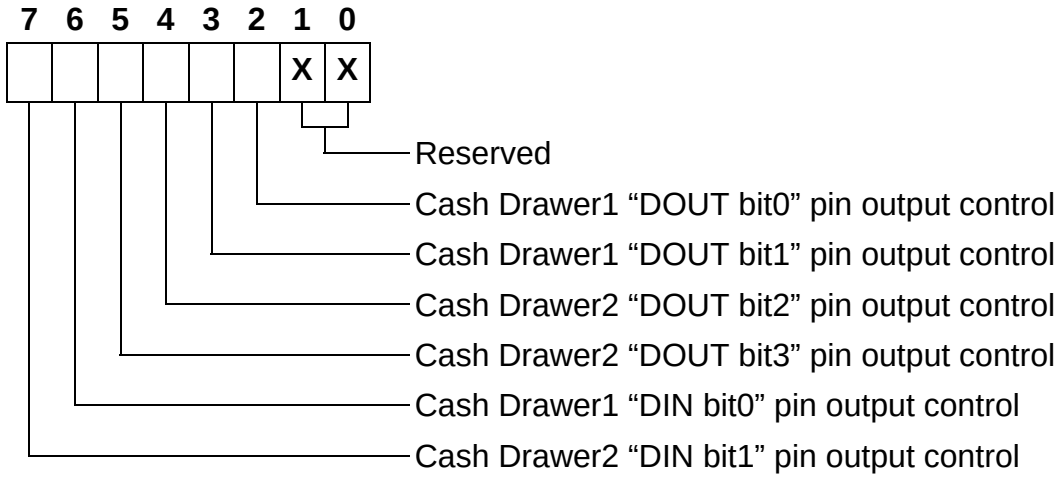
Pin	Signal	Pin	Signal
1	GND	7	GND
2	DOUT bit0	8	DOUT bit2
3	DIN bit0	9	DIN bit1
4	12V/24V	10	12V/24V
5	DOUT bit1	11	DOUT bit3
6	GND	12	GND

5.3.2 Cash Drawer Controller register description

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	Read		Write				Reserved	



Bit 7: Cash Drawer2 “DIN bit1” pin input status.
= 1: the Cash Drawer2 closed or no Cash Drawer
= 0: the Cash Drawer2 opened
Bit 6: Cash Drawer1 “DIN bit0” pin input status.
= 1: the Cash Drawer1 closed or no Cash Drawer
= 0: the Cash Drawer1 opened
Bit 5: Cash Drawer2 “DOUT bit3” pin output control.
= 1: Opening the Cash Drawer2
= 0: Allow close the Cash Drawer2
Bit 4: Cash Drawer2 “DOUT bit2” pin output control.
= 1: Opening the Cash Drawer2
= 0: Allow close the Cash Drawer2
Bit 3: Cash Drawer1 “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer1
= 0: Allow close the Cash Drawer1
Bit 2: Cash Drawer1 “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer1
= 0: Allow close the Cash Drawer1
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 Drawer1 by “DOUT bit0” pin control.** ➢ **Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer1.**	

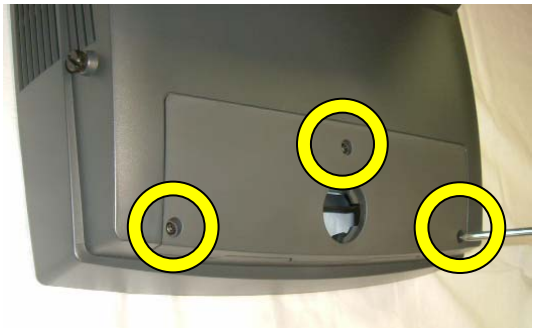
Command	Cash Drawer
I 48C	**Check status**
➢ **The I/O address 48Ch bit6 =1 mean the Cash Drawer1 is opened or not exist.** ➢ **The I/O address 48Ch bit6 =0 mean the Cash Drawer1 is closed.**	

5.4 Customer Display Installation

a. Take out the rubber cover.

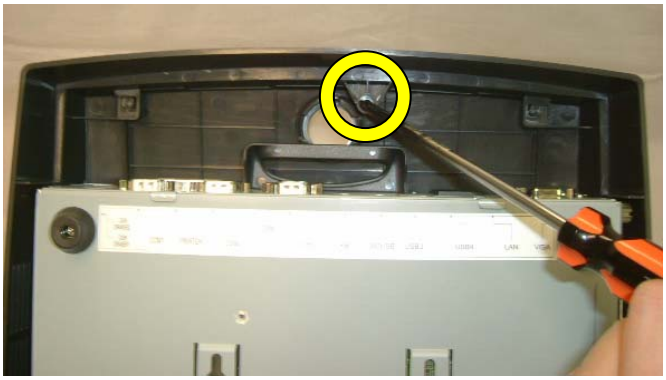
b. Take out the round plastic cover.

c. Remove the screws (4))



d. Release the VFD cover

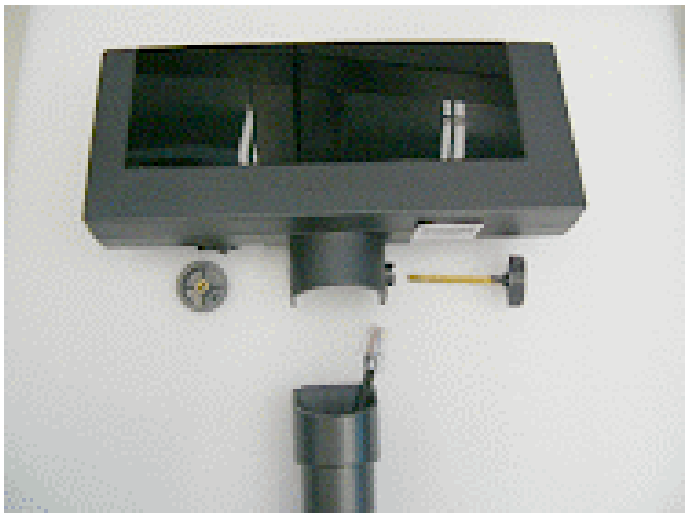
e. Install the stand base.



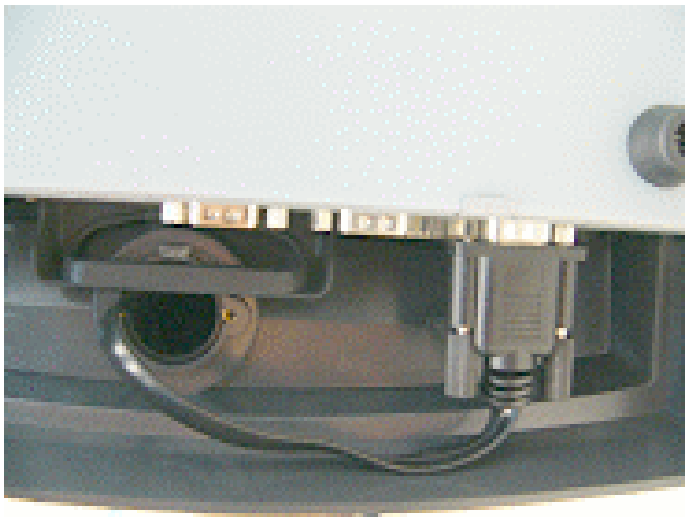
f. Tighten the screws (1) to fix the stand base.

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

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



i. Assemble the VFD.



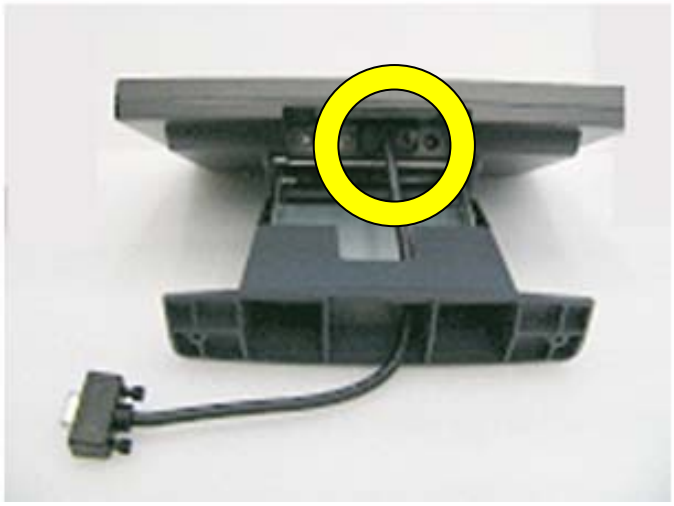
j. Connect VFD cable to the COM port. Don’t forget to setup the COM port power.

k. Finished.

5.5 Second Display Installation

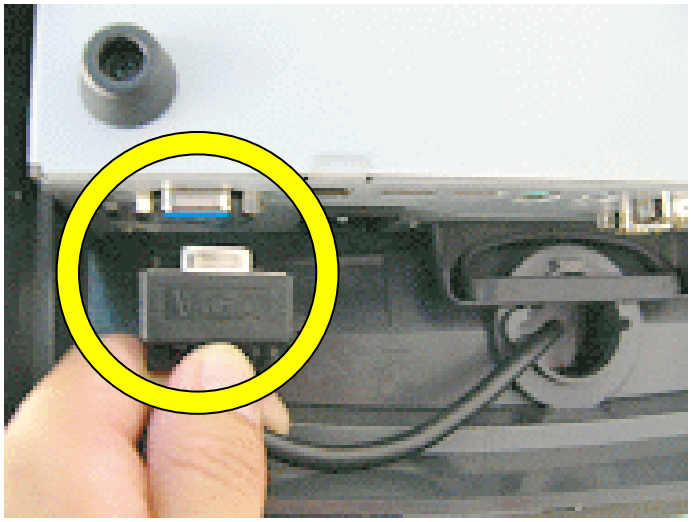
Please ensure that the system power is turned off before connecting the second display. Failure to do so may damage the electronics of the system, and is not covered by the product warranty.

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



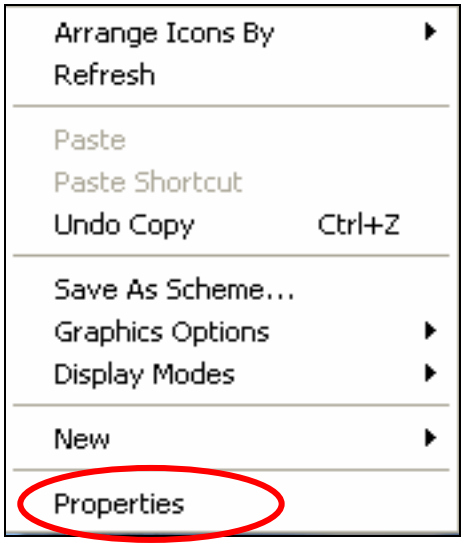
a. Insert the male head of the VGA cable into the VGA port.

b. Mount the second display on the rear of the system and

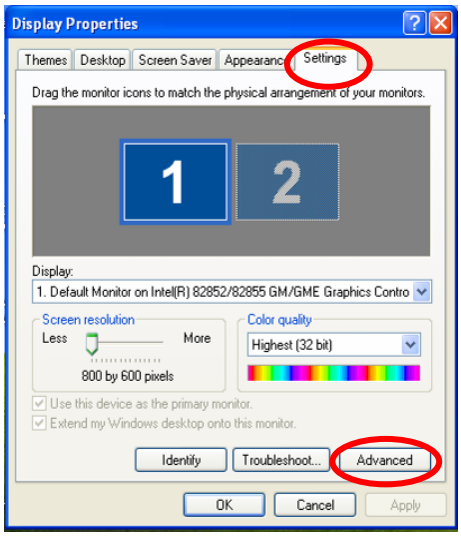


c. Insert the other end of the VGA cable (male) into the VGA port of the system to establish the connection.

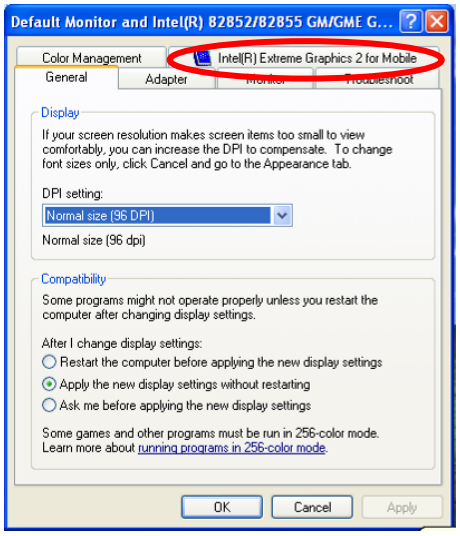
Note: The procedure below is valid only for POS462 with Sanyo Torisan LCD Panel.
After installing the second display with Sanyo Torisan LCD panel and the VGA driver under Windows XP, please set the monitor contents for second display as follows.
Do not set the monitor contents from the Intel [R] Extreme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



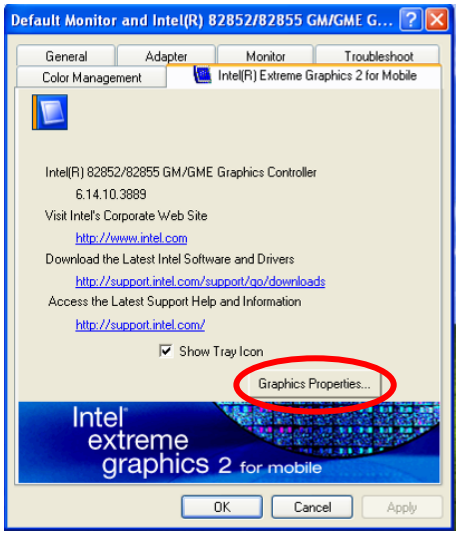
a. Click on the desktop with the right mouse button.
Select "**Properties**".



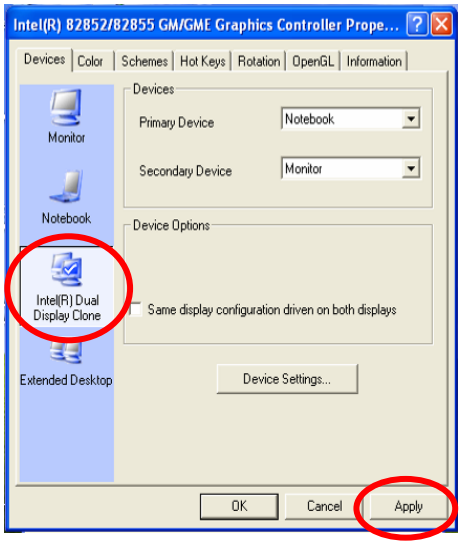
b. Select the "**Settings**" tab, then click on the "**Advanced**" button on the Display Properties window.



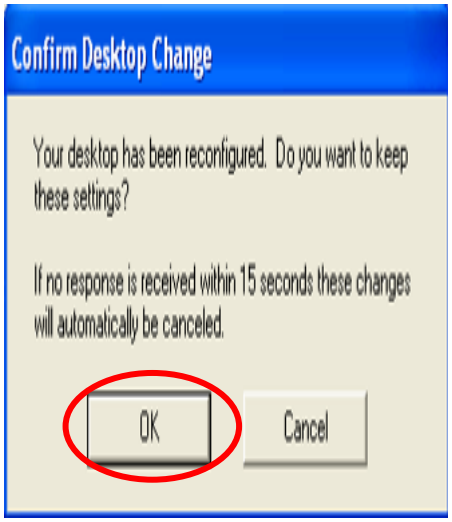
c. Select "**Intel [R] Extreme Graphics 2 for Mobile**" on the Default Monitor and Intel [R]… window.



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.



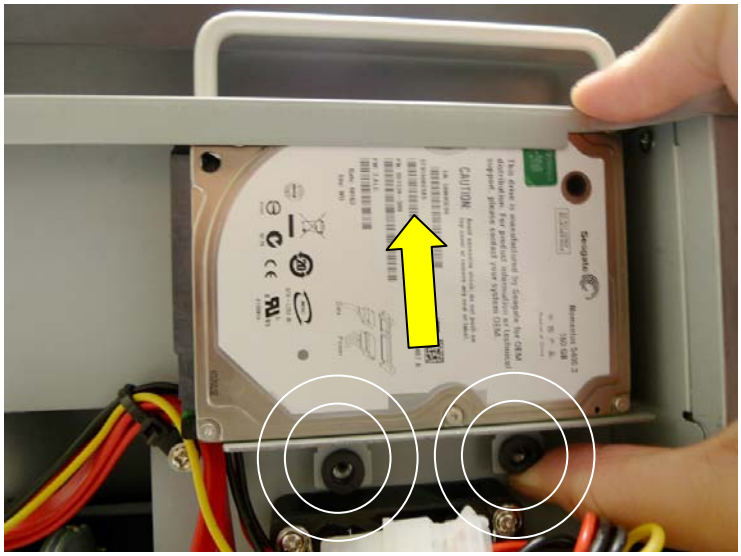
f. Click **"OK**" on the Confirm Desktop Change window.

5.6 Second 2.5” HDD Installation (B91 M/B)

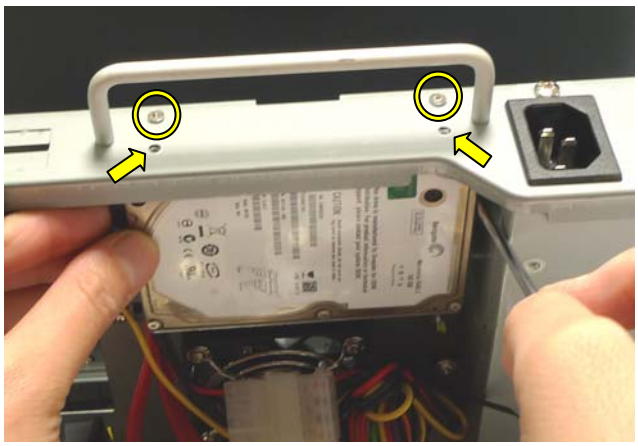
To install the second HDD, please follow the steps in Chapter 6.1 firstly to remove the Top Plastic Cover of Motherboard and Chapter 6.3 (a), (b) and (c) to separate the HDD metal mounting bracket from the system then go to the steps below.

NOTE: Only B91 Motherboard supports 2 SATA HDD (2.5”).

a. Place the 2nd HDD on top of the other and fasten the screws (2) to fix the 2nd HDD to the metal mounting bracket



b. Use your finger nail to push a little bit pressure upward to align the screw holes with spacers (2) on the HDD metal mounting bracket into the juts of the sheet metal chassis.



c. Tighten the screws (2) for the 1st HDD (circle marked).

d. Use flat-head screw driver to align the screw holes of the top of sheet metal chassis and the 2nd HDD (arrow showed).

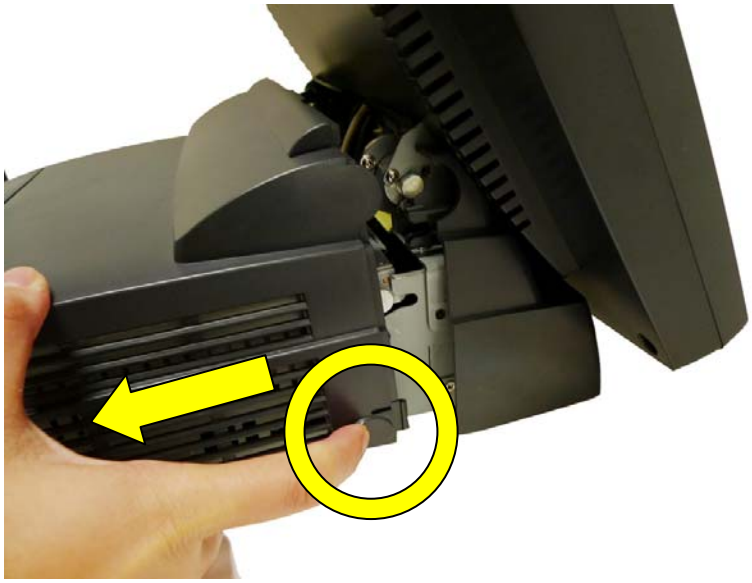
e. Tighten the screws (2) for the 2nd HDD.

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 on the top part of the main modular box.

a. Loosen the screws (2) at both sides of the plastic top cover.

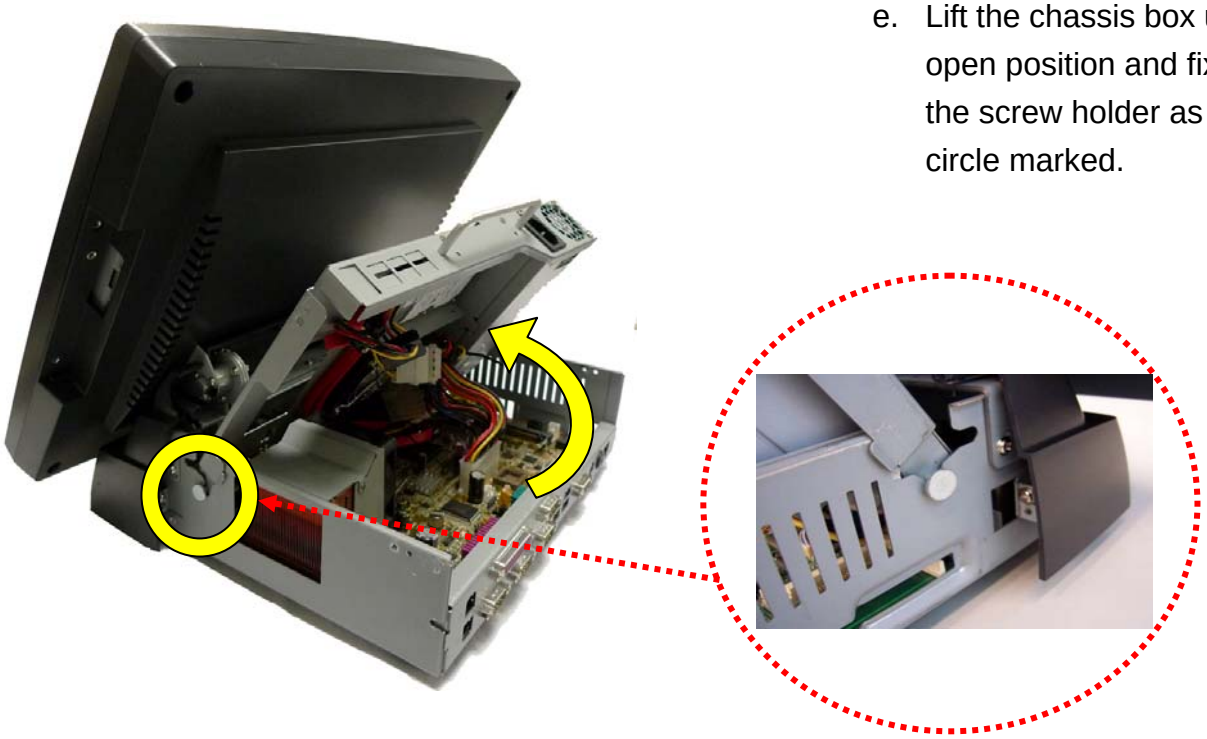


b. Use your finger nail to press the button as circle marked to release the clip and then pull the plastic top cover outwards.

c. Use both hands to remove the plastic top cover.

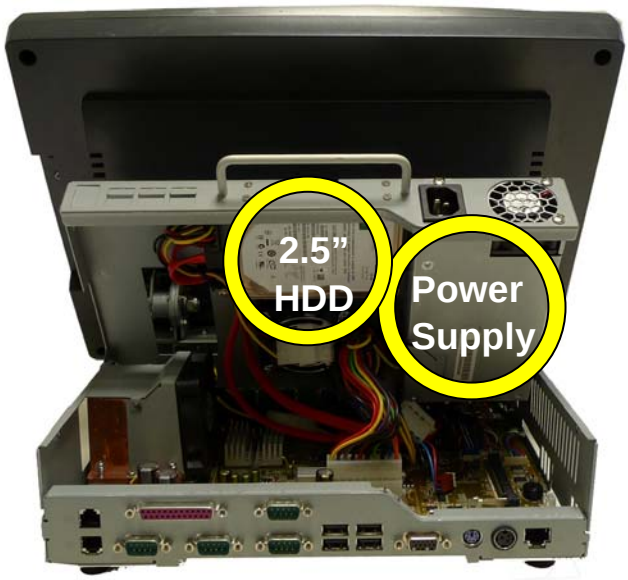
d. Pull the chassis box cover towards you by the handle and lift it up.

e. Lift the chassis box up as open position and fix it to the screw holder as the circle marked.



B81 Motherboard

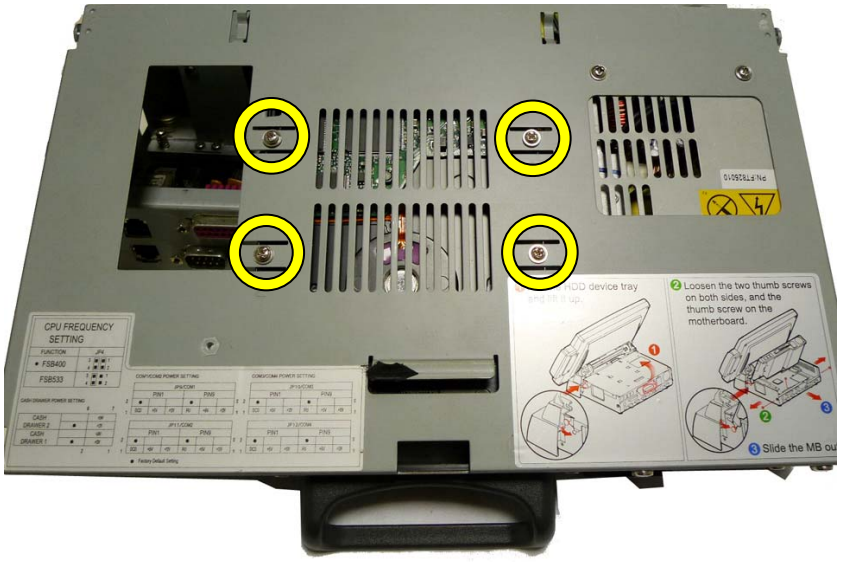
B91 Motherboard



6.2 Replace the 3.5” HDD on B81 Motherboard

To replace the 3.5” HDD on B81 Motherboard, please open the sheet metal chassis firstly as steps described in chapter 6.1.

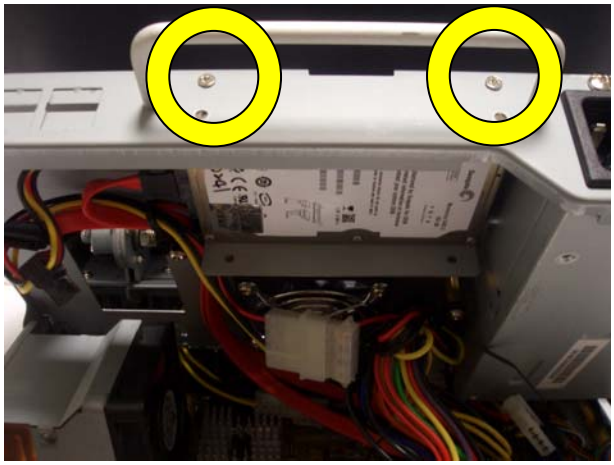
a. Disconnect the cables (2) as circle marked in the picture.



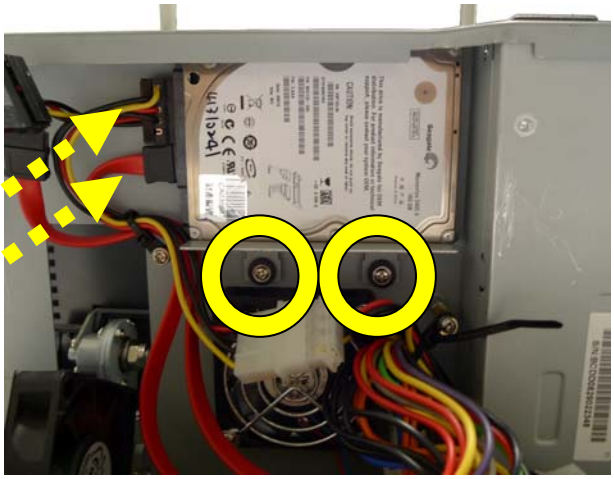
b. Turn over the Sheet metal chassis and loosen the screws (4) that secure the HDD.

6.3 Replace the 2.5” HDD on B91 Motherboard

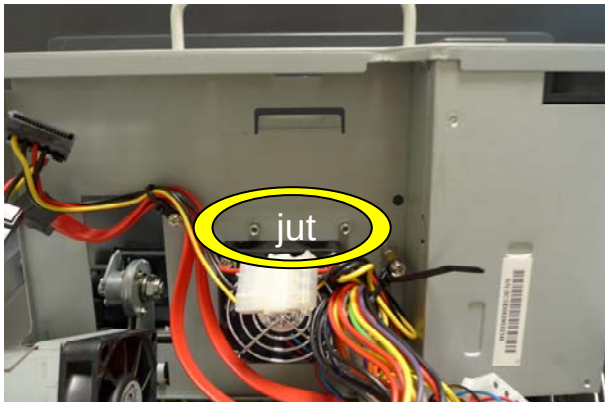
B91 Motherboard supports 2 x 2.5” SATA HDD, if you want to replace the 1st 2.5” HDD from B91 Motherboard, please open the sheet metal chassis firstly as steps described in chapter 6.1 and then follow the steps below.



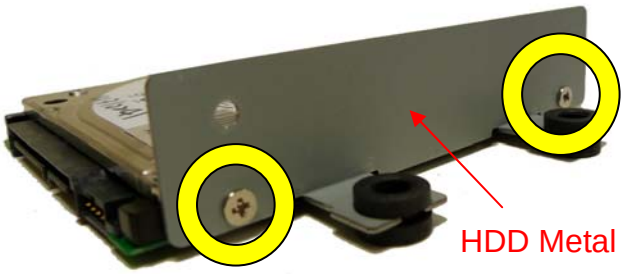
a. To remove the screws (2) attached 1st HDD to the top of the sheet metal chassis.



b. To loosen the cables (2) as arrow marked and the screws (2) that fix the HDD metal mounting bracket and the sheet metal chassis.



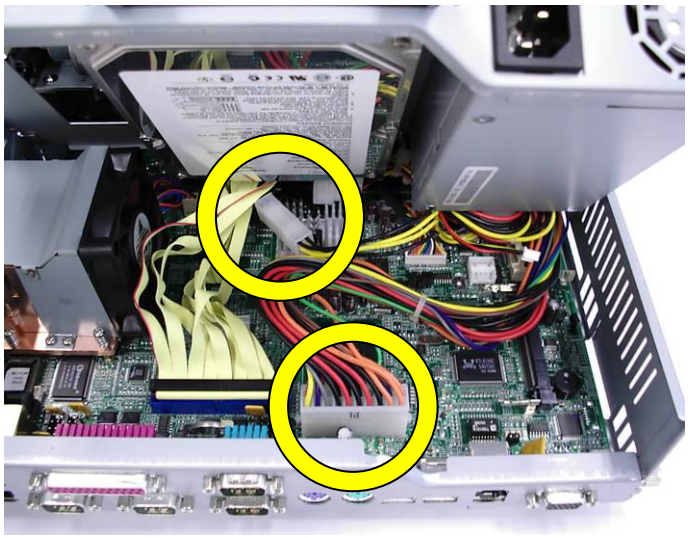
c. Remove the HDD with the HDD metal mounting bracket from the juts on the sheet metal chassis



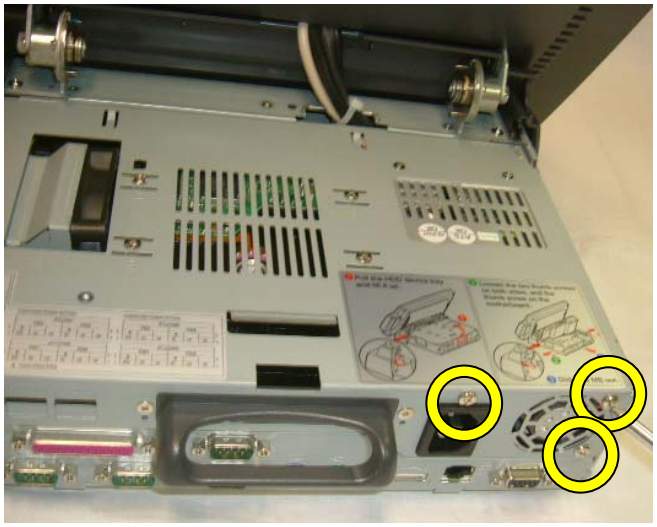
d. To remove the screws (2) to separate the 1st HDD from the HDD mounting metal bracket and replace another.

6.4 Replace the Power Supply

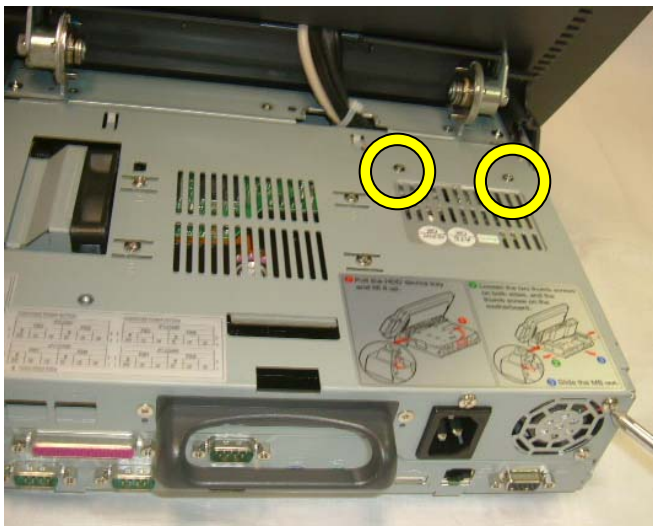
Open the chassis box as described in Chapter 5.1.



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



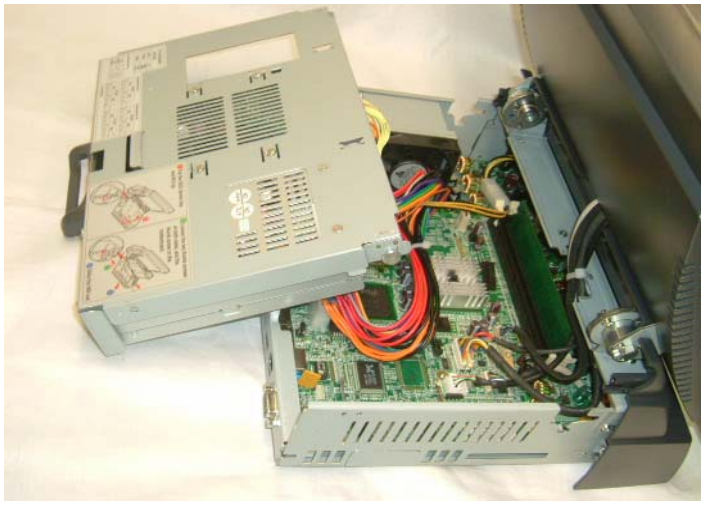
b. Remove the screws (3).



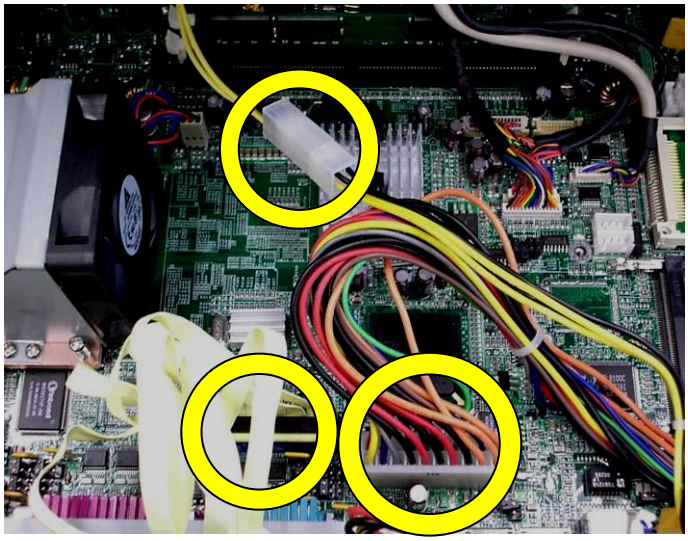
c. Remove the screws (2) to remove the power supply.

6.5 Replace the Motherboard Tray

Open the chassis box as described in Chapter 5.1.

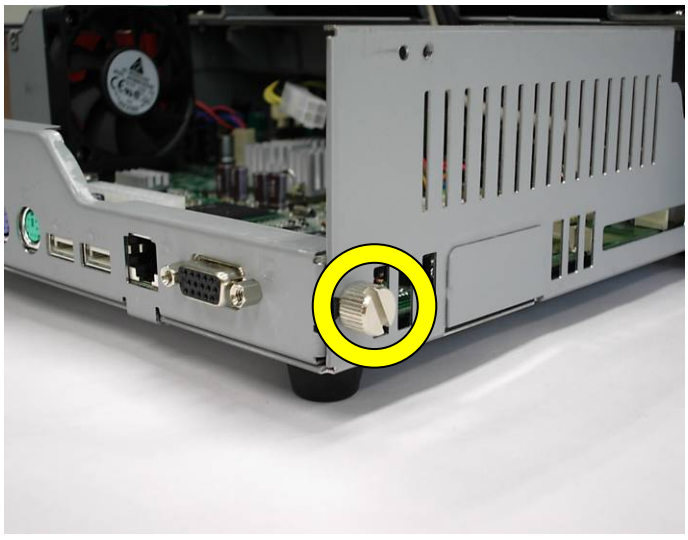


a. Lift the chassis box cover to disengage it from the chassis box.



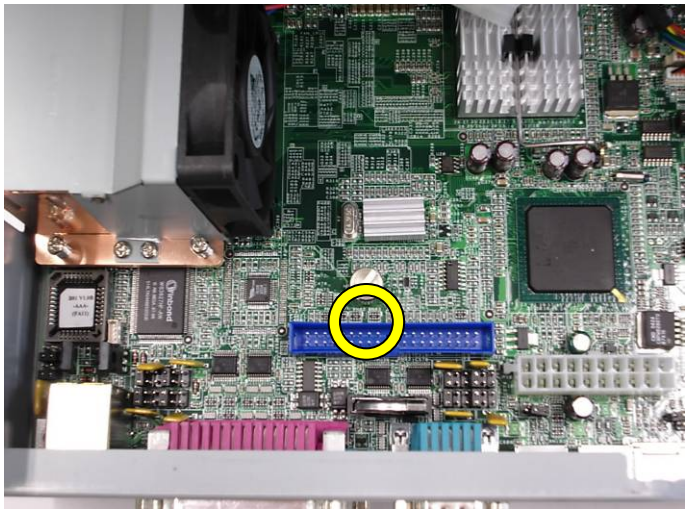
b. Disconnect the cables (3) as shown in the picture.

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

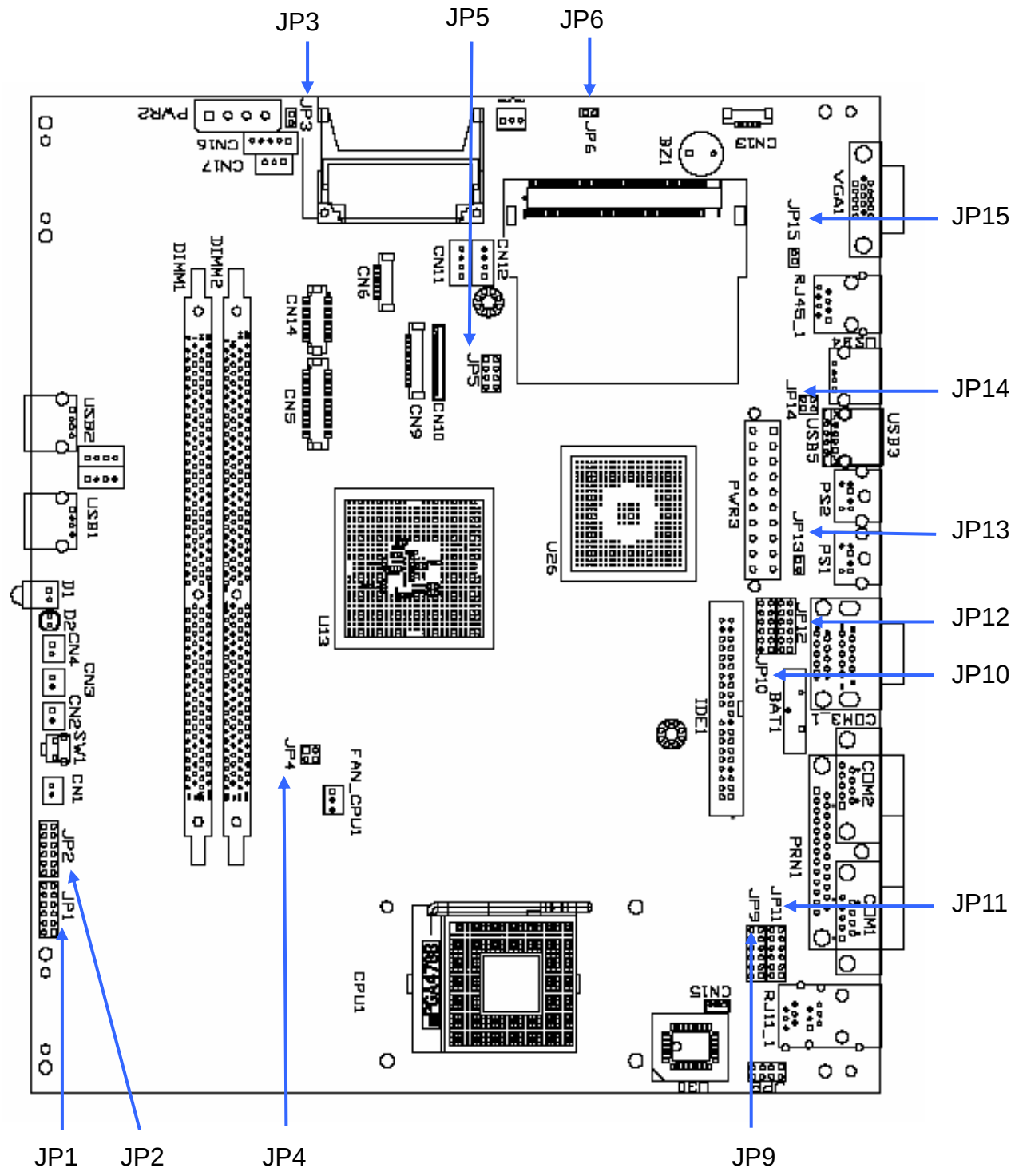
Model Name	**POS 460**	
Motherboard	**B81**	**B91**
CPU Supports	mP478-Pin CPU socket FSB400Mhz, Celeron M 1.2G, Celeron 2.0G / 2.5G, P4 2.0G	Intel P4 / Celeron / Core 2 Duo Processor LGA775
Chipset	852GM + ICH4	945G + ICH7R support hardware RAID
System Memory	2 x 184-pin DIMM socket DDR 200 / 266 MHz up to 2GB	2 x 240-pin DIMM socket DDR2 667 / 800 MHz up to 4GB
Graphic Memory	Share System Memory up to 64MB	Share System Memory up to 232MB
LCD / Touch Panel		
LCD Size	POS 462: 12.1" TFT LCD, 150 - 400 cd /m², 800 x 600	
Brightness (cd / m²)	POS 465: 15" TFT LCD, 250 - 350 cd / m², 1024 x 768	
Maximal Resolution	POS 467: 17" TFT LCD, 300 cd / m², 1280 x 1024	
Touch Screen Type	Resistive	
Tilt Angle (Degree)	0° ~ 60°	
Storage		
HDD	1 x 3.5" HDD drive bay	2 x SATA 2.5" HDD bay
Expansion		
Mini-PCI Socket	1	
External I/O Ports		
Front I/O		
USB	2	
Rear I/O		
PS/2	2 (1 x PS/2 keyboard, 1 x PS/2 mouse)	1 (1 x PS/2 keyboard)
USB	2	4
Serial / COM	4 (pin 1 / pin 9 with 5V / 12V)	
Parallel	1	
LAN	1 (10 / 100)	1 (10 / 100 / 1000)
Second Display	1 x female type connector with power	
Cash Drawer Port	2 (12V / 24V)	
24V receipt print	N / A	1

Control / Indicator	
Power Button	1
Indicator LED	1
Power	
Power Supply	Internal ATX 250W
Environment	
EMC & Safety	FCC / CE Class A, LVD
Operating Temperature	5°C ~ +35°C
Storage Temperature	–20°C ~ 60°C
Operating Humidity	20% - 80% RH non condensing
Storage Humidity	20% - 85% RH non condensing
Peripheral	
Input Device	
3-in-1 MSR	MSR (PS/2 / COM) / Smart IC card (USB) / I-button (PS/2 / COM)
2-in-1 MSR	MSR (PS/2 / COM) / Finger Print (USB)
Output Device	
Second Display	10.4" / 12.1" TFT LCD
Customer Display	Flash mount VFD / LCD
Communication	
Wireless LAN	Mini PCI 802.11 a/b/g WI-FI card and antenna
Dimension (W x D x H) **0° Angle**	POS 462: 324.8 x 334.2 x 180.1 mm / 12.8" x 13.16" x 7.1" POS 465: 378 x 358.5 x 180.1 mm / 14.88" x 14.11" x 7.1" POS 467: 410 x 373.7 x 192.8 mm / 16.14" x 14.71" x 7.59"
Weight	POS 462: N.W. 8 kgs / G.W. 9 kgs POS 465: N.W. 9 kgs / G.W. 10 kgs POS 467: N.W. 10 kgs / G.W. 11 kgs
OS Support	Vista (Vista only for B91), Windows XP, WEPOS, XP Embedded, XP professional for Embedded, WIN 2000 professional Embedded, Linux

* This specification is subject to change without prior notice.

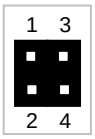
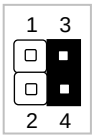
8. B81 Jumper Setting

8.1 B81 Motherboard Layout



8.2 Jumper Settings

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

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

2. Compact Flash Master/Slave Setting **◎ Factory Default Setting**

Function	JP3 (1-2)
◎Master	
Slave	

3. CMOS Operation Mode **◎ Factory Default Setting**

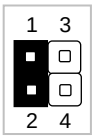
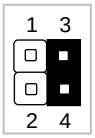
Function	JP6 (1-2)
◎CMOS Normal	
CMOS Reset	

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.

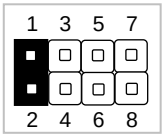
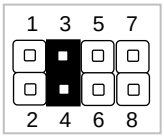
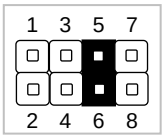
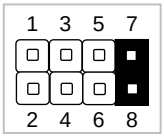
4. POWER USB Power Setting (Reserved)

◎ Factory Default Setting

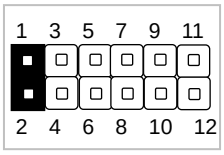
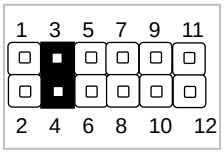
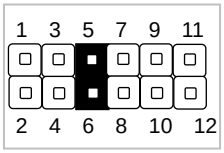
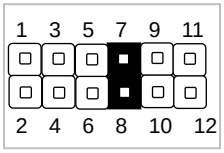
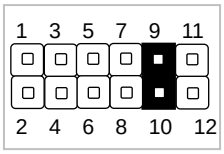
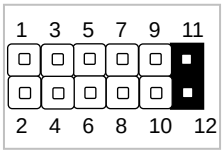
Function	JP14 (1-2) (3-4)
+24V	
+12V	

5. Cash Drawer Power Setting

◎ Factory Default Setting

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

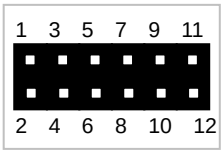
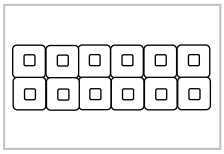
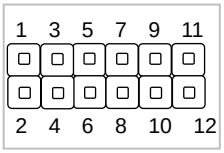
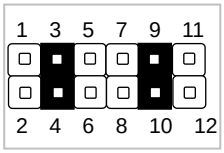
6. COM1/COM2/COM3/COM4 Power Setting

Function		COM1	COM2	COM3	COM4
		JP9	JP11	JP10	JP12
		(1-2) (3-4)	(5-6)	(7-8)	(9-10) (11-12)
PIN1	◎DCD				
	+5V				
	+12V				
PIN9	◎RI				
	+5V				
	+12V				

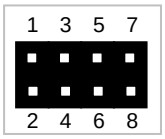
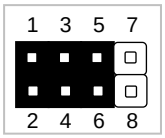
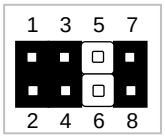
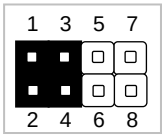
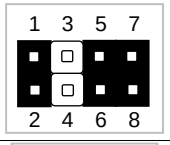
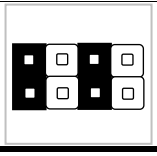
◎ = Default Setting

7. CPU Voltage Setting

◎ Factory Default Setting

Function	JP1 (1-2) (3-4) (5-6) (7-8) (9-10) (11-12)	JP2 (1-2) (3-4) (5-6) (7-8) (9-10) (11-12)
◎P4		
Mobile Celeron 1.2G (1.3V)		

8. LCD ID Setting

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

9. Second Display Power Setting ◎ **Factory Default Setting**

Function	**JP15** (1-2)
+12V	
◎N/C	

10. ACPI Mode Setting ◎ **Factory Default Setting**

Function	**JP7** (1-2)
Disable	
◎Enable	

11. Power Mode Setting ◎ **Factory Default Setting**

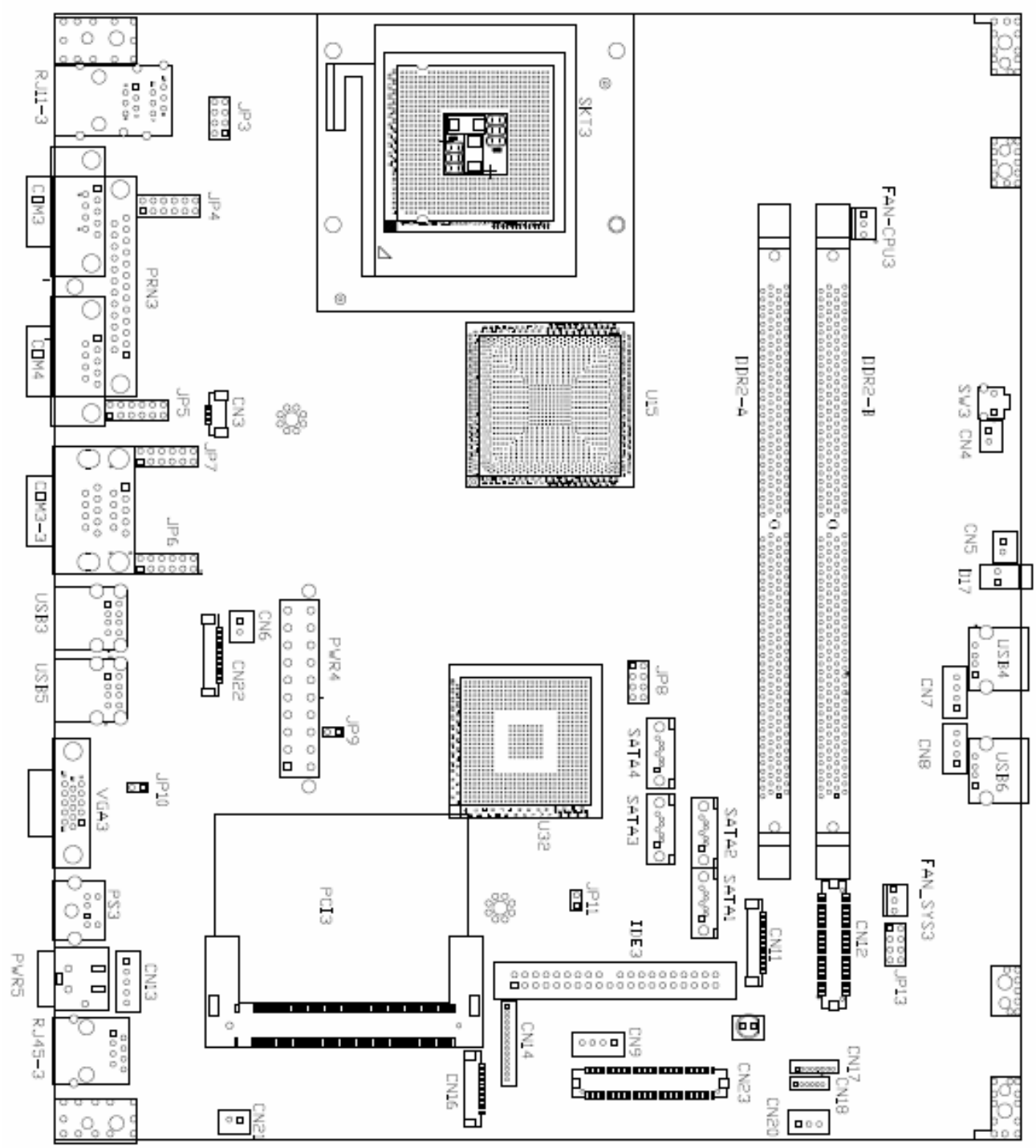
Function	**JP13** (1-2)
◎ATX Power	
AT Power	

Note:  

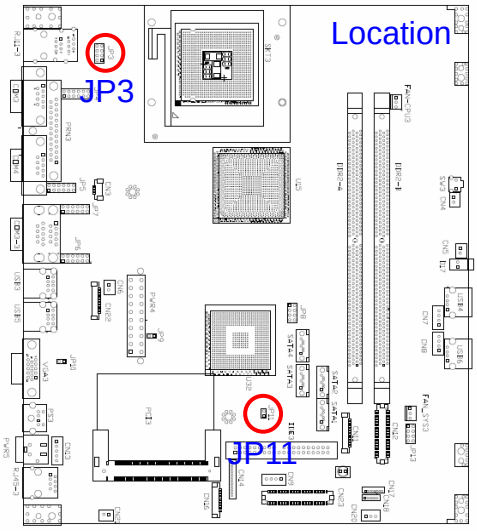
OPEN SHORT

9. B91 Jumper Settings

9.1 B91 Motherboard Layout



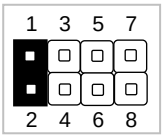
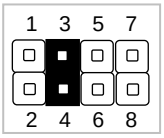
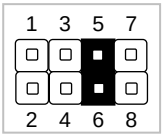
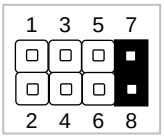
9.2 Connectors & Jumper settings



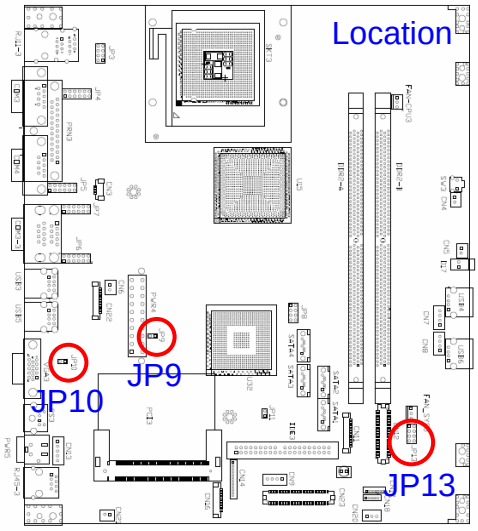
1. CMOS Operation Mode

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

2. Cash Drawer Power Setting

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

◎ = Default Setting



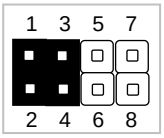
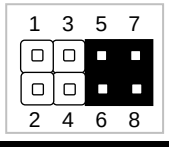
3. 2nd Display Power Setting

Function	JP10 (1-2)
+12V	
◎NC	

4. Power Mode Setting

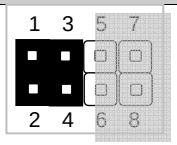
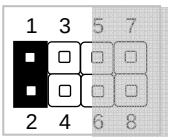
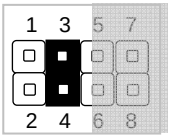
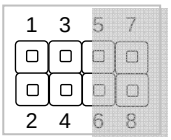
Function	JP9 (1-2)
◎ATX Power	
AT Power	

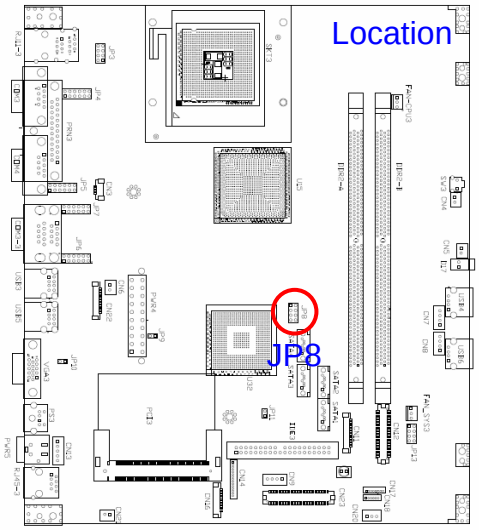
5. System Indicator

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

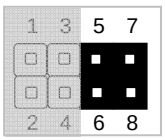
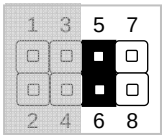
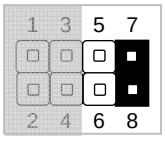
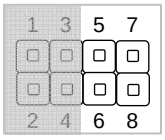
◎ = Default Setting

6. Boot Display Device Setting

Function	JP8 (1-2) (3-4)
Reserved	
Force CRT only	
Force LCD only	
Reserved	

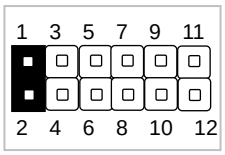
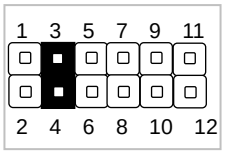
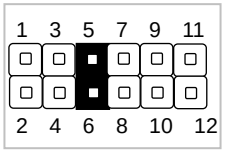
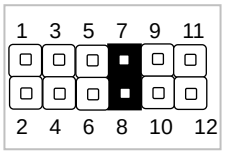
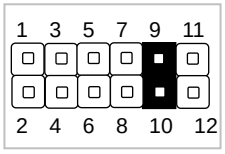
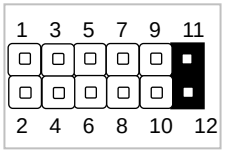


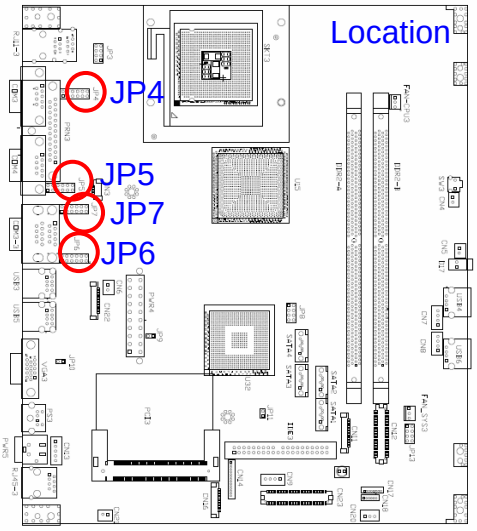
7. LCD ID Setting

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	

Note: The "**Boot Display Device Setting**" and "**LCD ID Setting**" share the same Jumper Settings_JP8.

8. COM1/COM2/COM3/COM4 Power Setting

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



◎ = Default Setting

Note:

OPEN

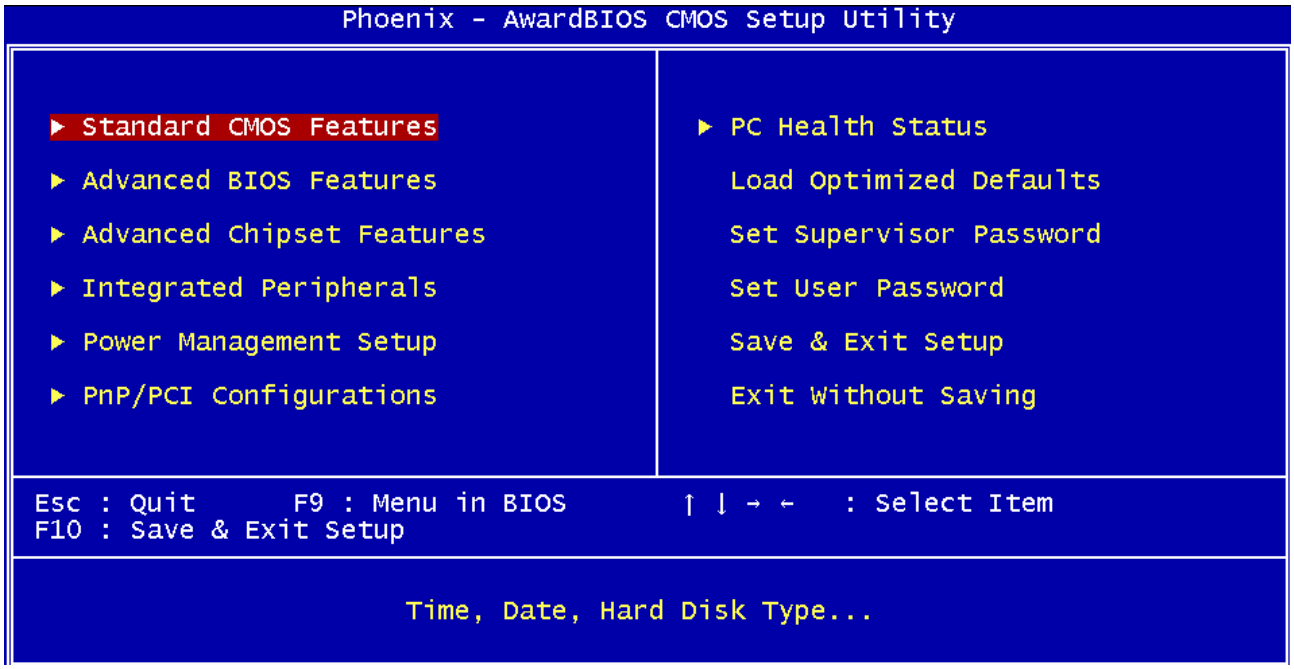
SHORT

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

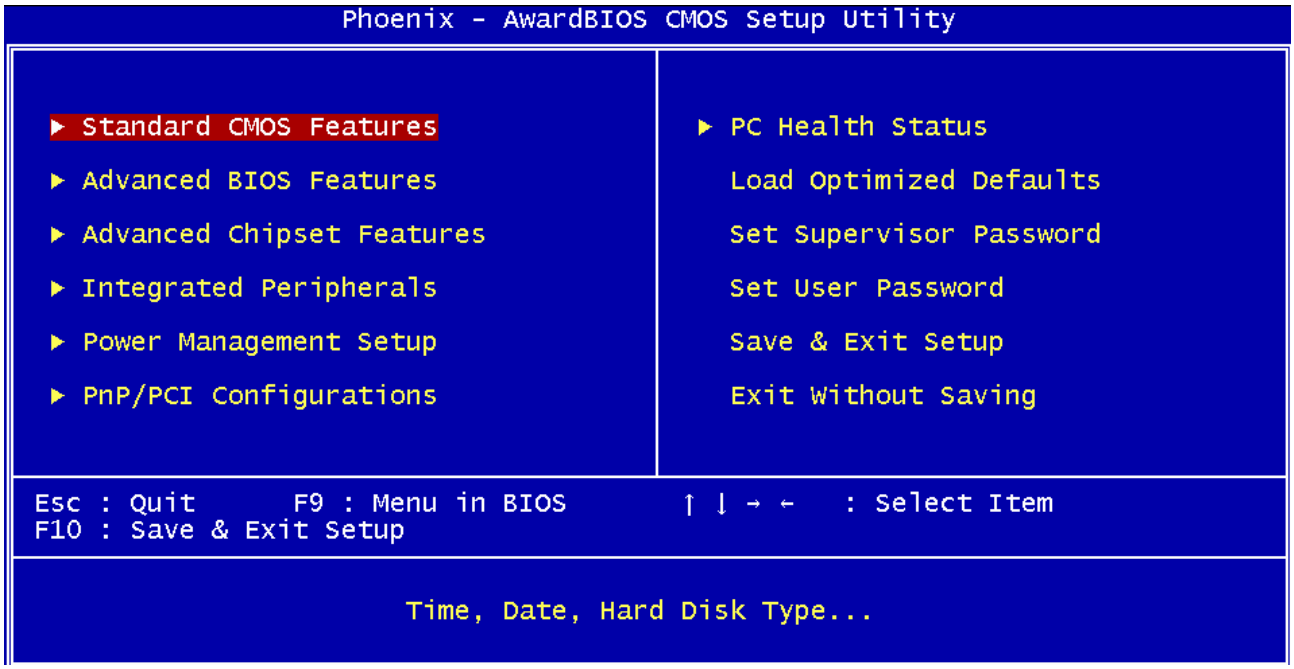
If, after making and saving system changes with the Setup utility, you find that this product no longer boots, start the BIOS setup and execute the following.

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

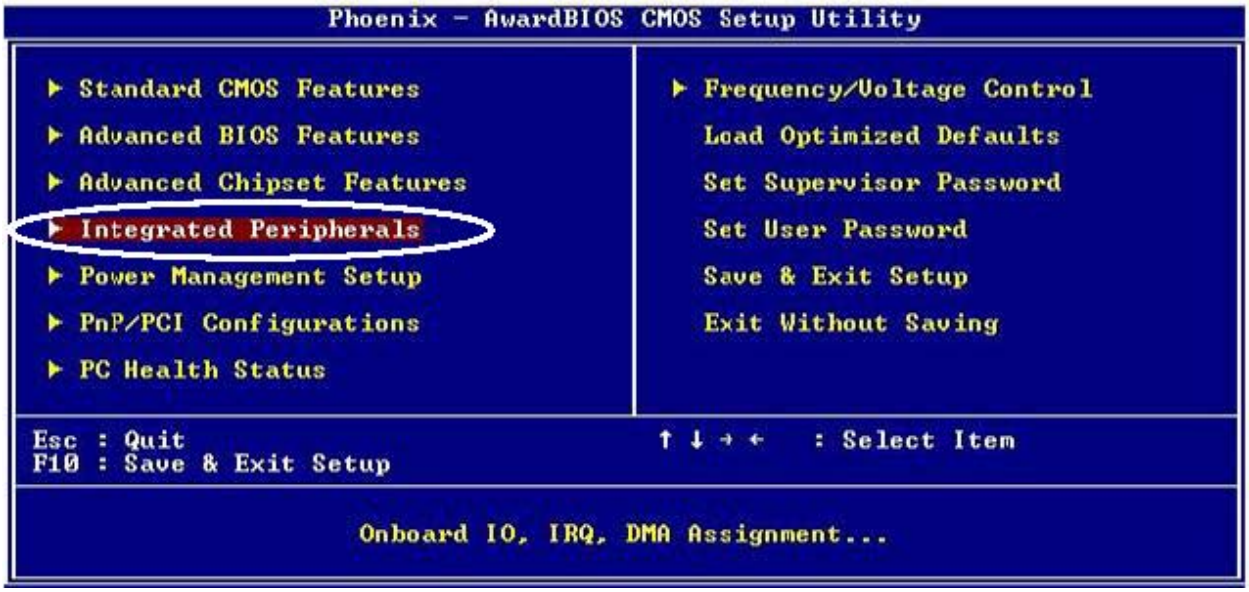
Save CMOS value changes to CMOS and exits setup.

Exit without saving

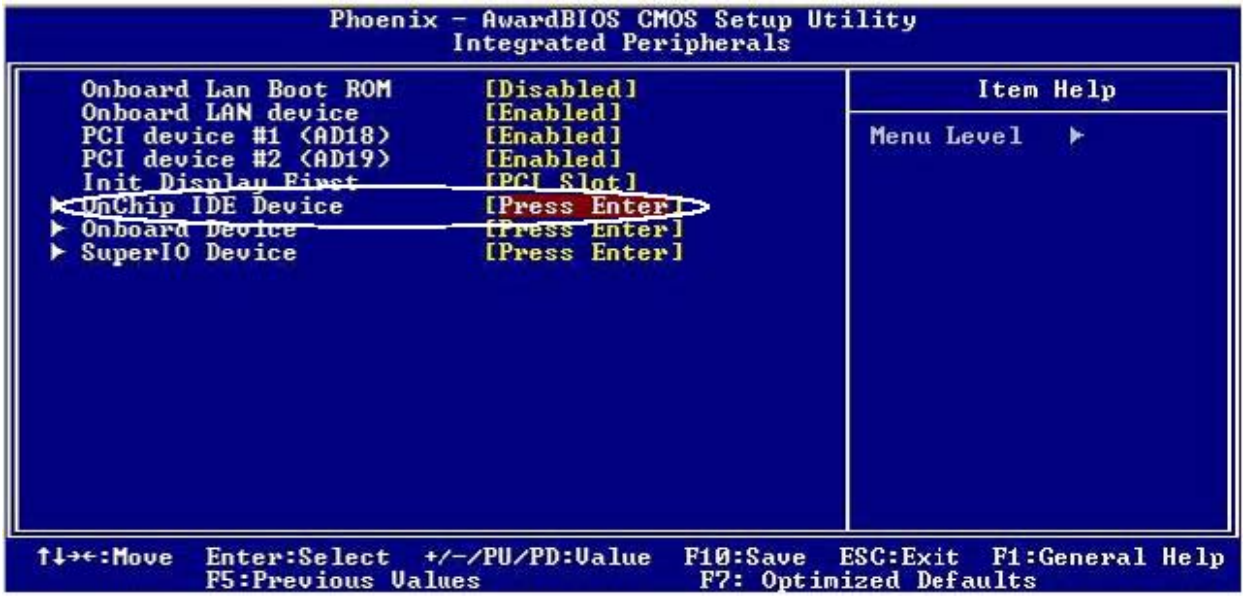
Ignores all CMOS value changes and exits setup.

11.2 Enabling RAID in the BIOS

Enter the BIOS Setup program by pressing the DEL key.

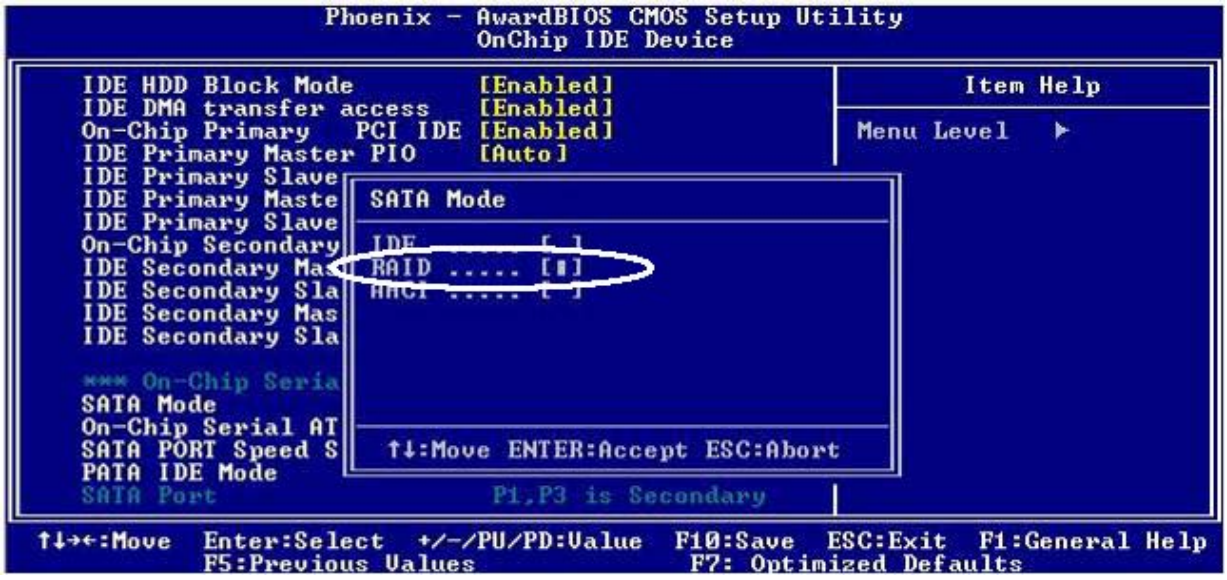


Select **Integrated Peripherals**, and then press "**Enter**"



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.