KPC 2 / 3 / 4

B72

User Manual

P/N: 48201182
2006 September V1.2

Manual Version 1.2

TRADEMARK
Intel®, Pentium® and MMX are registered trademarks of Intel® Corporation.
Microsoft® and Windows® are registered trademarks of Microsoft Corporation.
ELO Touch is the registered trademark of ELO Touch Systems.

Safety

IMPORTANT SAFETY INSTRUCTIONS

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

CE MARK

CE This device complies with the requirements of the EEC directive 89/336/EEC with regard to “Electromagnetic compatibility” and 73/23/EEC “Low Voltage Directive”.

FCC

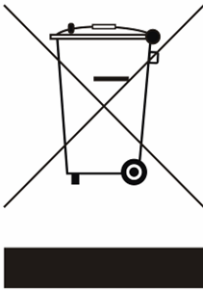
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION ON LITHIUM BATTERIES

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

LEGISLATION AND WEEE SYMBOL

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.
To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

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

Table of Contents

1. Item Checklist 6
   - 1.1. Standard Items 6
   - 1.2. Optional Items 7
2. System View 8
   - 2.1. Front View 8
   - 2.2. Rear View 9
3. Driver Installation 11
   - 3.1. Driver List 11
   - 3.2. Chipset Driver Installation 11
   - 3.3. USB2.0 Driver Installation 13
   - 3.4. VGA Driver Installation(Support Standard Resolutions & DVI / TV-Out) 16
   - 3.5. VGA IEGD Driver Installation(Supports 1366 x 768 Resolution) 17
   - 3.6. Audio Driver Installation 19
   - 3.7. LAN Driver Installation 20
4. System Disassembly 21
   - 4.1. Remove the Top Cover 21
   - 4.2. Replace the Heatsink and CPU 22
   - 4.3. Replace the Motherboard 24
   - 4.4. Wall Mount Kits Installation 27
   - 4.5. COM Port Cables Installation (For KPC 2 / 3) 29
   - 4.6. DVO Board Installation (For KPC 2 / 3) 32
   - 4.7. Replace the CF Adapter Card (For KPC 2 / 4) 33
   - 4.8. KPC 2 34
     - 4.8.1. Replace the 3.5” HDD and Slim CD-ROM 34
     - 4.8.2. Replace the PCI Riser Card (2 x Slots) 35
     - 4.8.3. PCI Card Installation 36
   - 4.9. KPC 3 37
     - 4.9.1. DDR Memory Installation 37
     - 4.9.2. Replace the Slim CD-ROM and CF Adapter Card 37
     - 4.9.3. Replace the Slim HDD and Slim CD-ROM 39
     - 4.9.4. Replace the 3.5” HDD 41
     - 4.9.5. Replace the PCI Riser Card (1 x Slot) 41
     - 4.9.6. PCI Card Installation 42
   - 4.10. KPC 4 43
     - 4.10.1. Replace the Slim HDD 43
5. Specification 45
6. Connectors and Jumper Settings 47
7. Connector Pin Definition 51
8. BIOS Setting 54

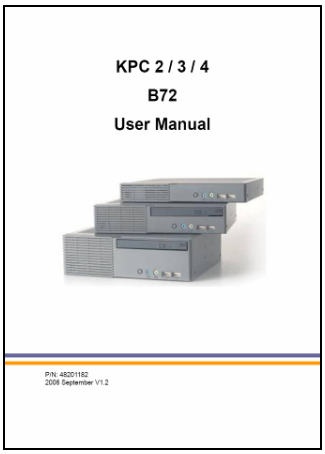
Appendix A: PCI Card Dimension 57
Appendix B: Wall Mount Kit Dimensions 59
Appendix C: Watch Dog Timer Programming Guide 61

1. Item Checklist

Take the system out of the carton. Remove the unit by carefully clutching the foam inserts and remove slowly to protect the system. The following contents should be found in the carton:

1.1. Standard Items

a. System (KPC 2 / 3 / 4)

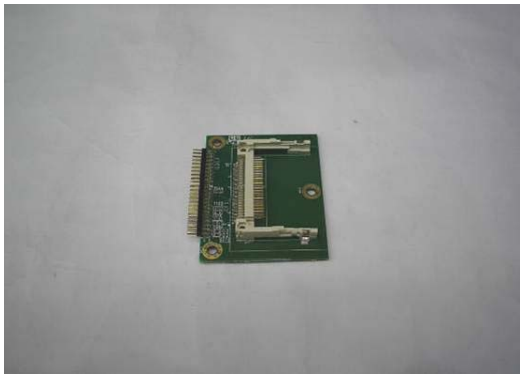


b. Manual

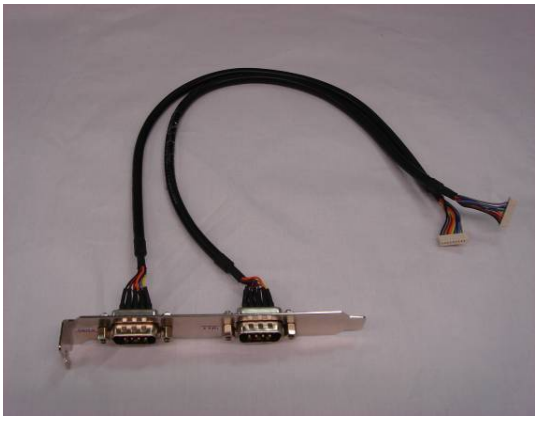
c. Driver CD

1.2. Optional Items

a. DVO Board (1)



b. CF Adapter Card (1)



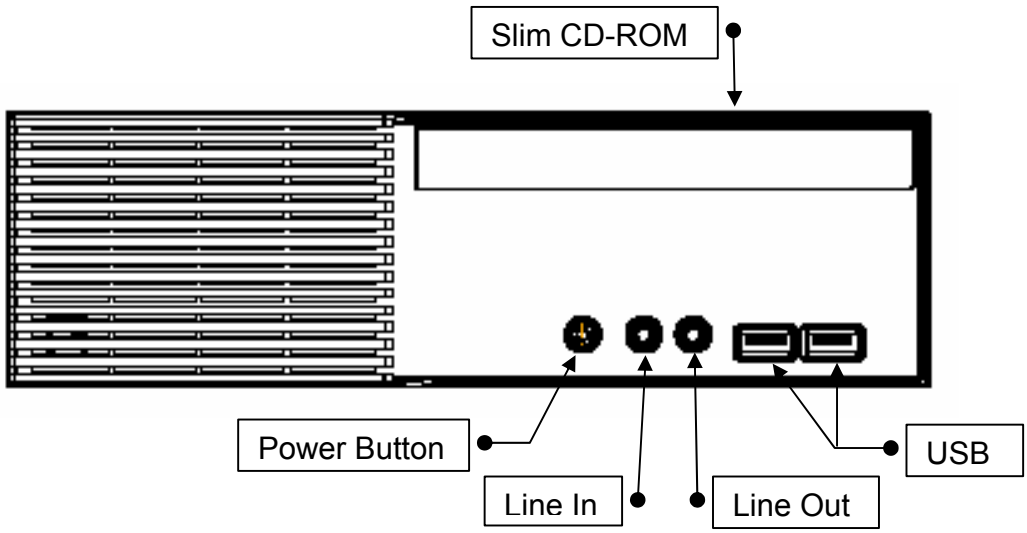
c. COM Port Cables (2)

d. Wall Mount Kits (2)

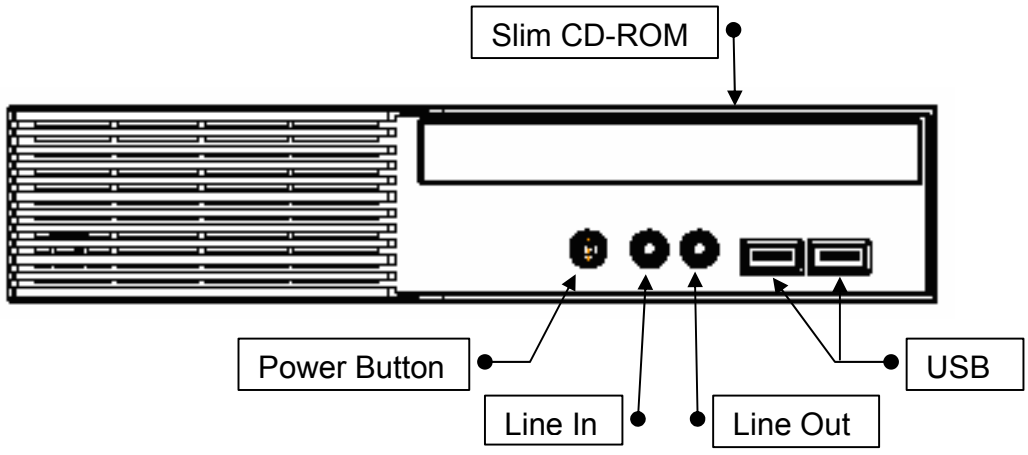
2. System View

2.1. Front View

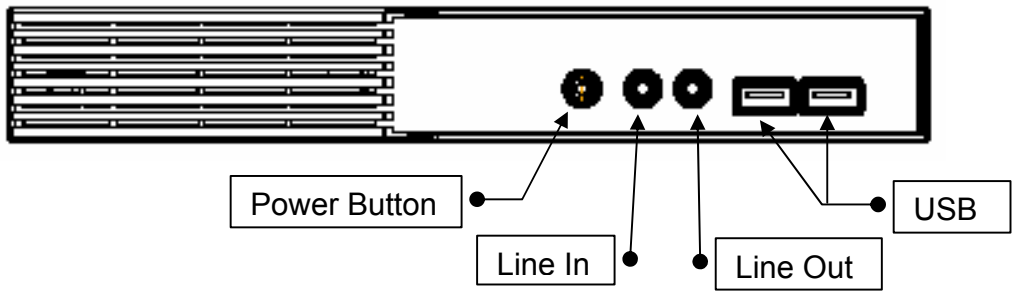
KPC 2



KPC 3

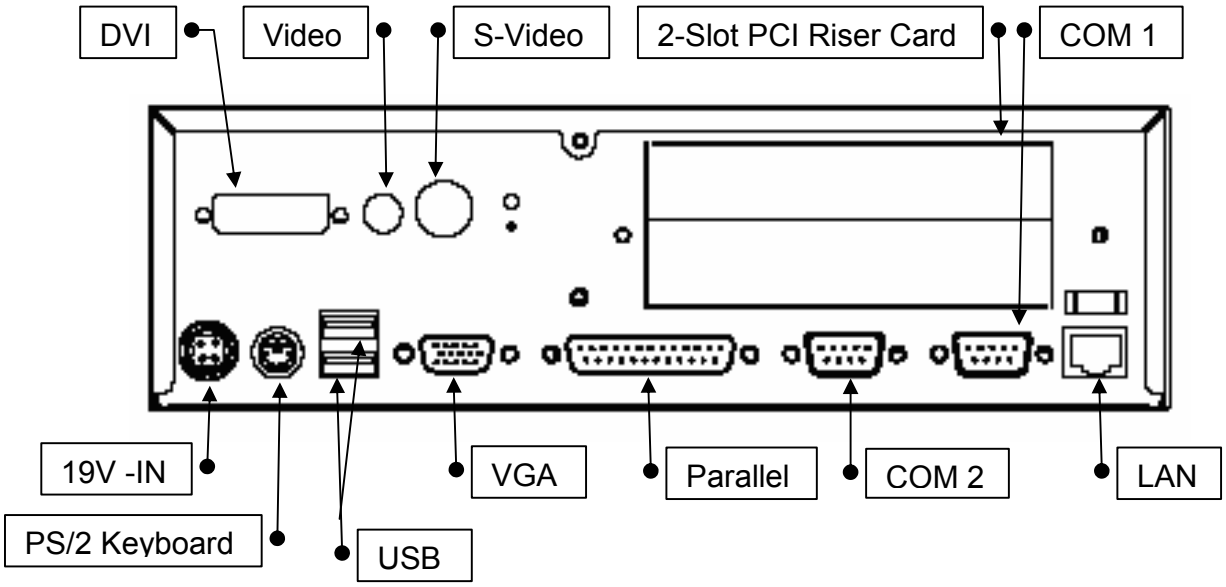


KPC 4

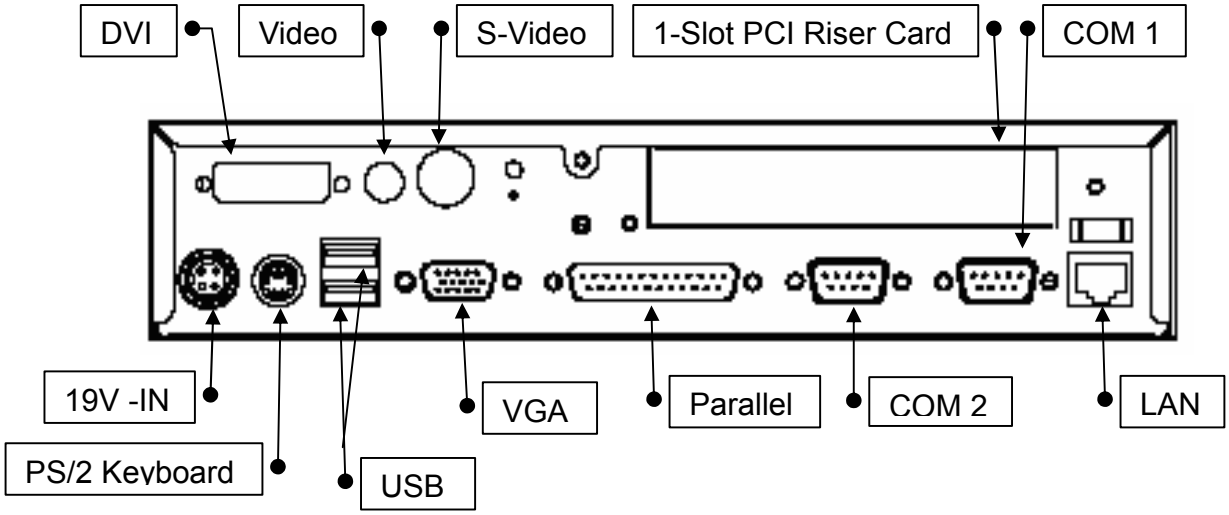


2.2. Rear View

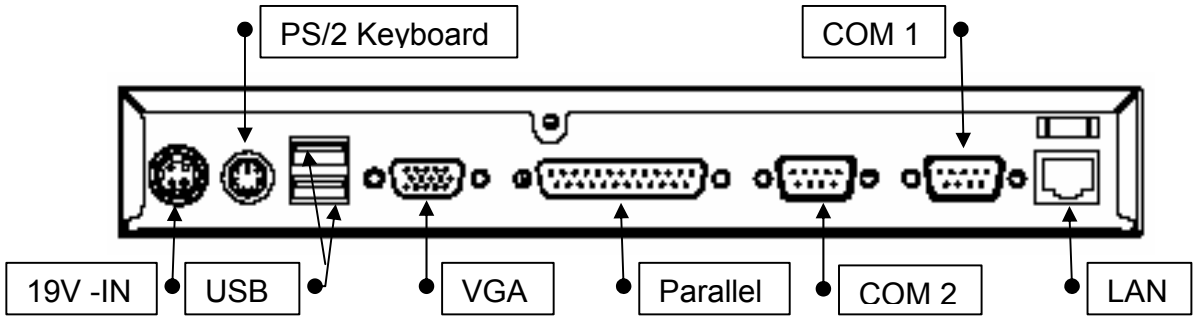
KPC 2



KPC 3



KPC 4



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

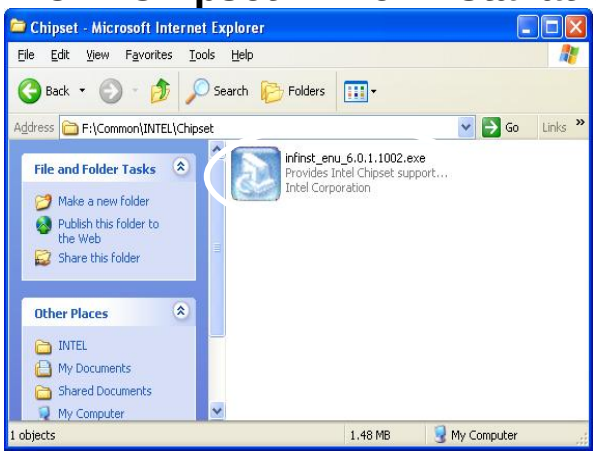
3. Driver Installation

3.1. Driver List

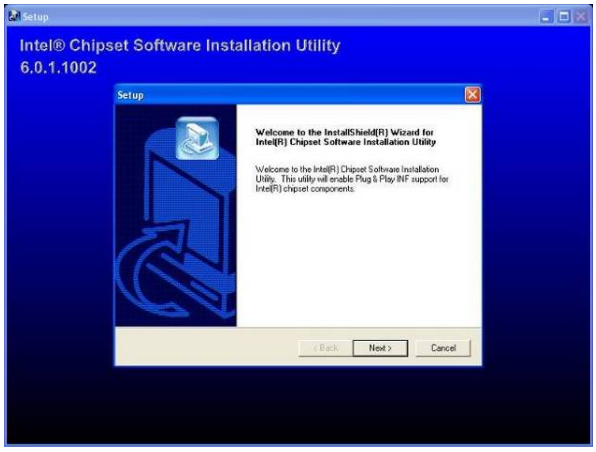
Folder/File	File Description
<CD>:\KPC_B72.htm	B72 Driver List
<CD>:\COMMON\INTEL\Chipset	Chipset Driver
<CD>:\COMMON\INTEL\USB20	USB 2.0 Driver
<CD>:\COMMON\INTEL\VGA\i85x\Win2K_XP\alpha\v14.19.50	VGA Driver
<CD>:\COMMON\INTEL\VGA\i85x\Win2K_XP\alpha\IEGD51-FT2a	VGA IEGD Driver
<CD>:\COMMON\Ac97_codec\Realtek\ALC202A	Audio Driver
<CD>:\COMMON\Lan_driver\R8139_810x	LAN Driver

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

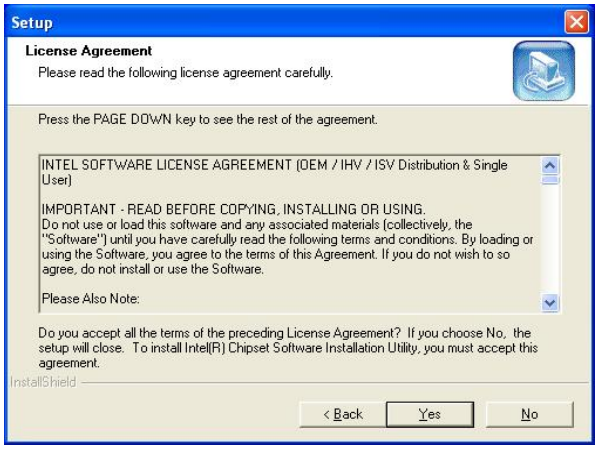
3.2. Chipset Driver Installation



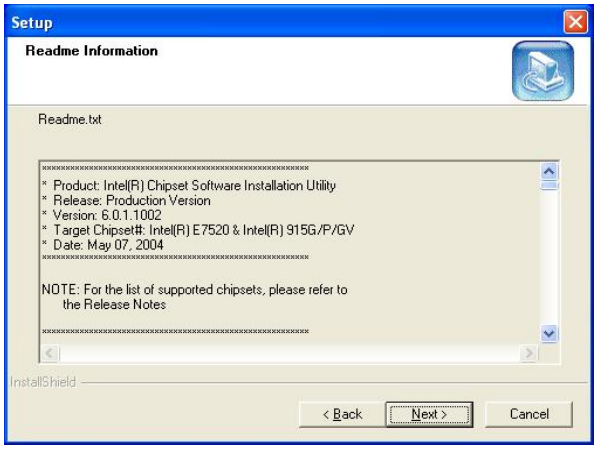
a. Double click the "infinst_enu_6.0.1.1002" on the "My Computer" window.



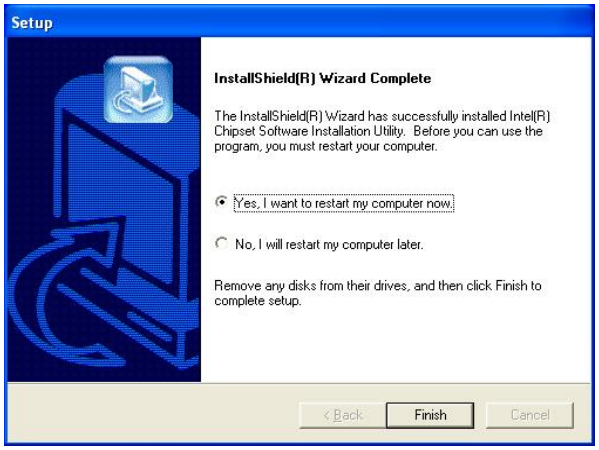
b. Click the "Next" button on the "Welcome" window.



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



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

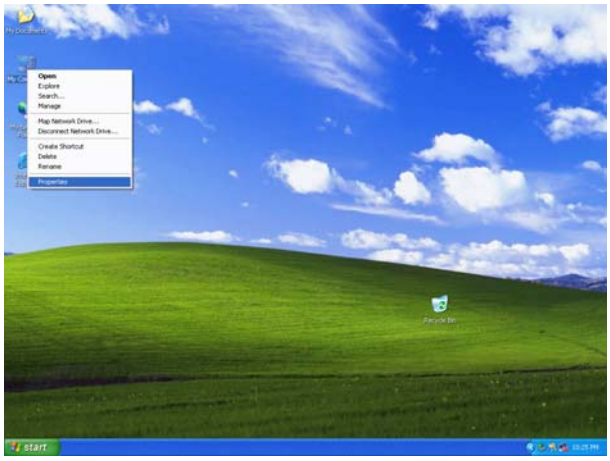


e. Click the “Finish” button and restart your system.

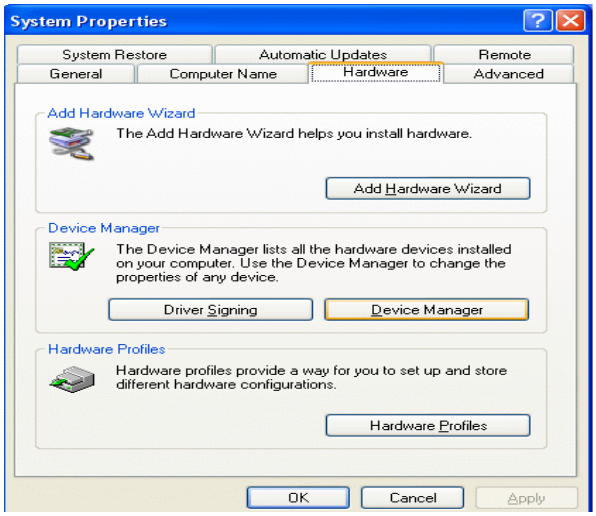
3.3. USB2.0 Driver Installation

OS Requirements

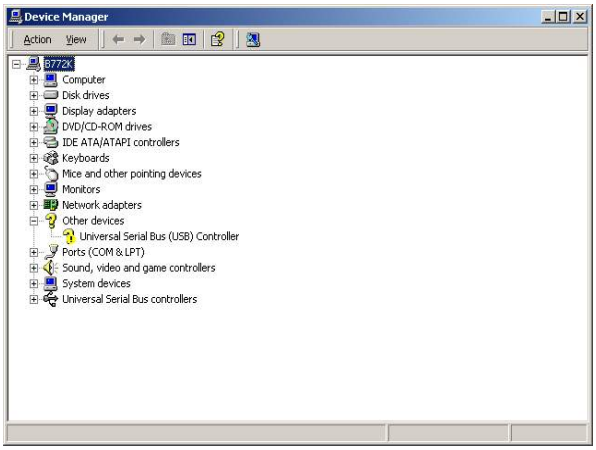
OS	USB 2.0 requirements
Windows XP	USB 2.0 drivers are provided in Service Pack 1 (SP1) for Windows XP, which is available through Windows Update.
Windows 2000	USB 2.0 drivers are available through Windows Update or Service Pack 4.
Windows 98SE/Me	USB 2.0 drivers are available on the Intel developer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

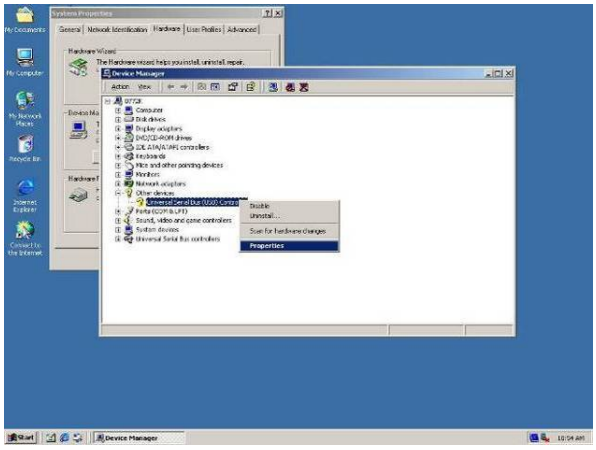


a. Right click the “My Computer” on the windows desktop and select “properties”.



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



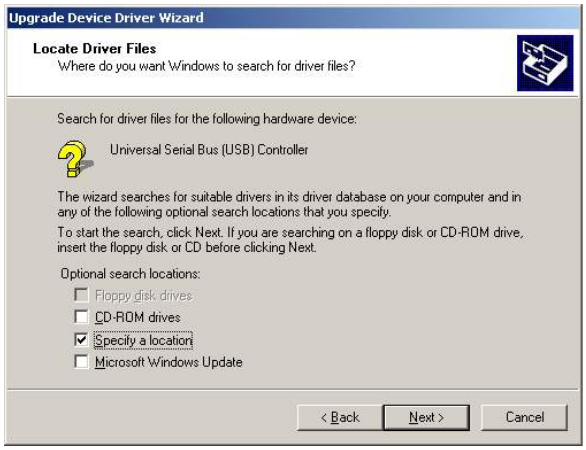


c. Select ”Other Devices” → “Universal Serial Bus (USB) Controller” →”Properties” in the Device Manager.

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.

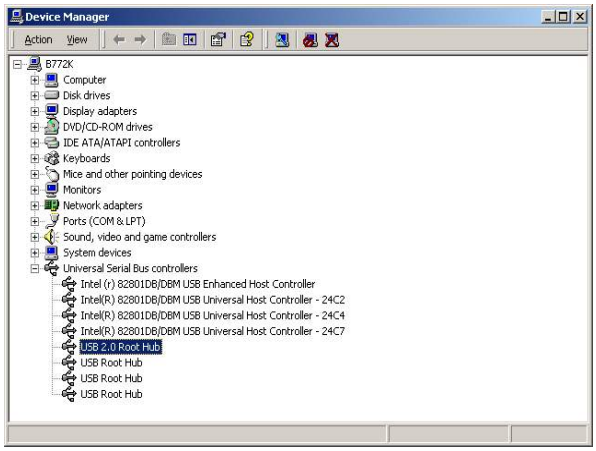


g. Select “Specify a location” and click the “Next” button on the “Locate Driver Files” window.

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

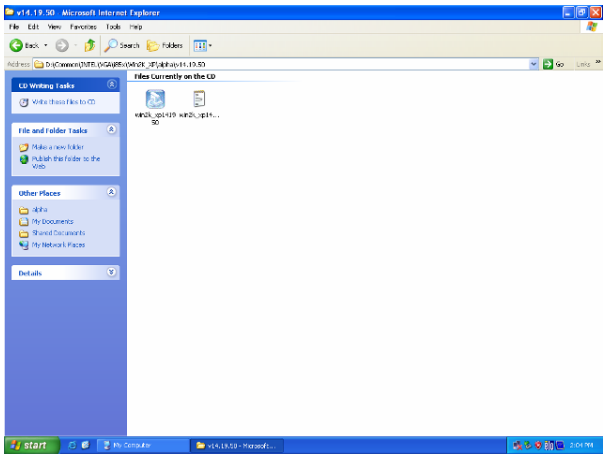
i. Click the “Next” button on “Driver Files Search Results” window.

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

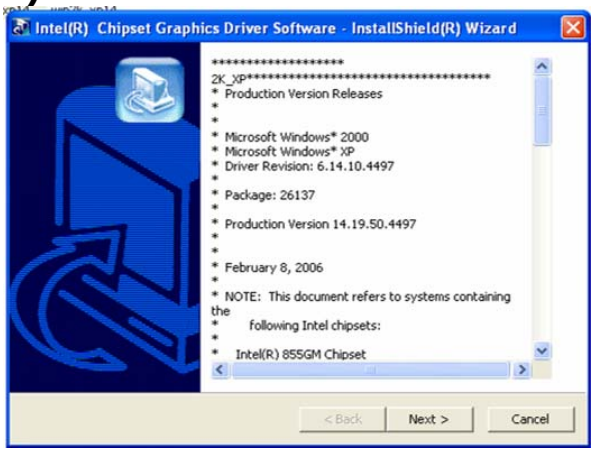


k. Finished.

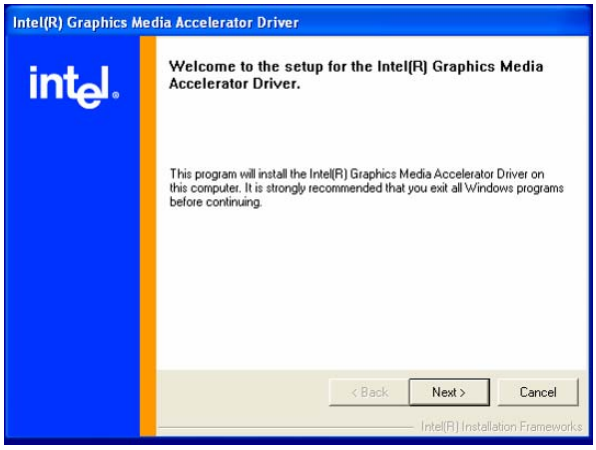
3.4. VGA Driver Installation (Support Standard Resolutions & DVI / TV-Out)



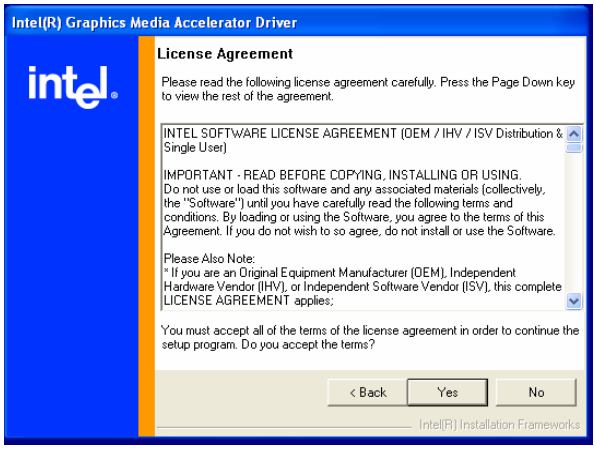
a. Double click the “win2k_xp141950” on the “My Computer” window.



b. Click the “Next” button on the “Intel (R) Chipset Graphics Driver Software – InstallShield (R) Wizard” window.



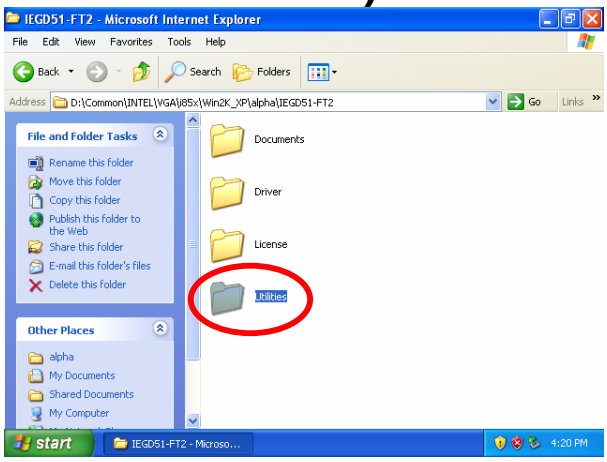
c. Click the “Next” button on the “Intel (R) Graphics Media Accelerator Driver” window.



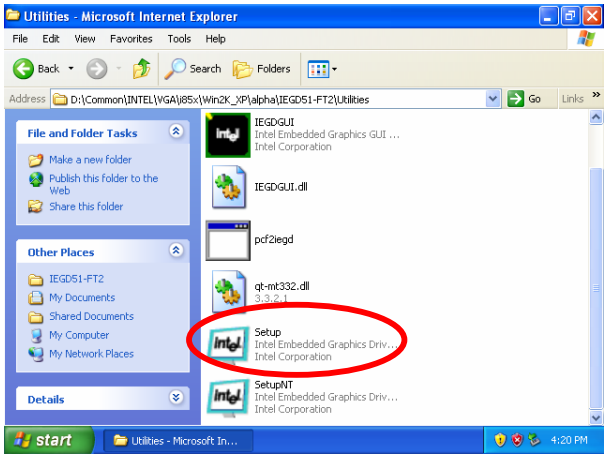
d. Click the “Yes” button on the “Intel (R) Graphics Media Accelerator Driver” window.

e. Select “Yes, I will restart my computer now” and click the “Finish” button.

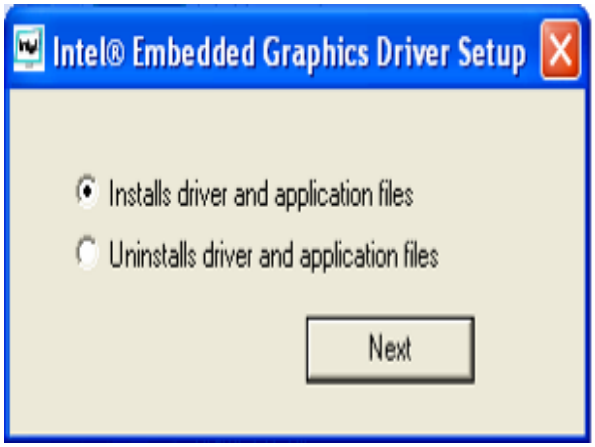
3.5. VGA IEGD Driver Installation (Supports 1366 x 768 Resolution)



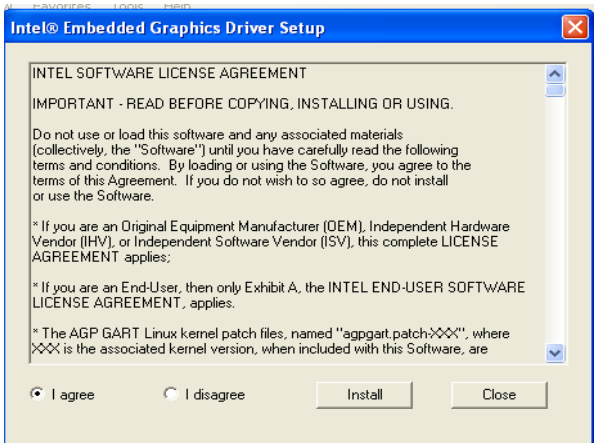
a. Select “Utilities” on the My Computer window.



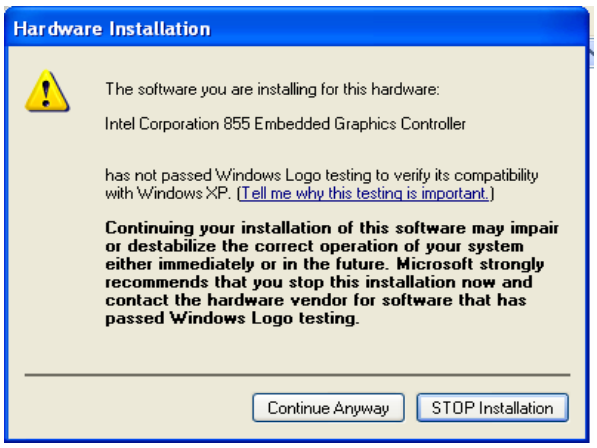
b. Double click the “Setup” button on the My Computer window.



c. Select “Installs driver and application files” and click the “Next” button on Intel ® Embedded Graphics Driver Setup.

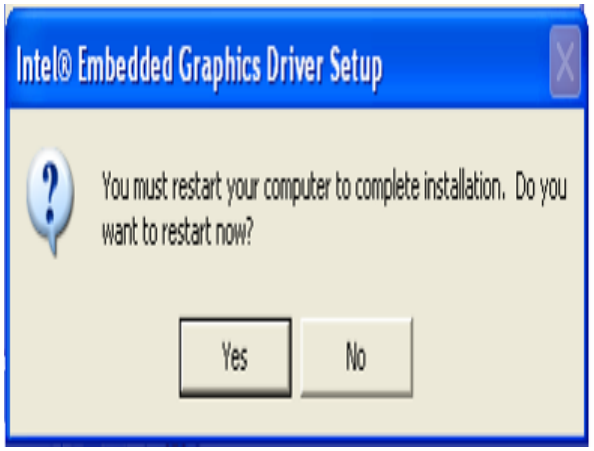


d. Select “I agree” and click the “Install” button on Intel ® Embedded Graphics Driver Setup.



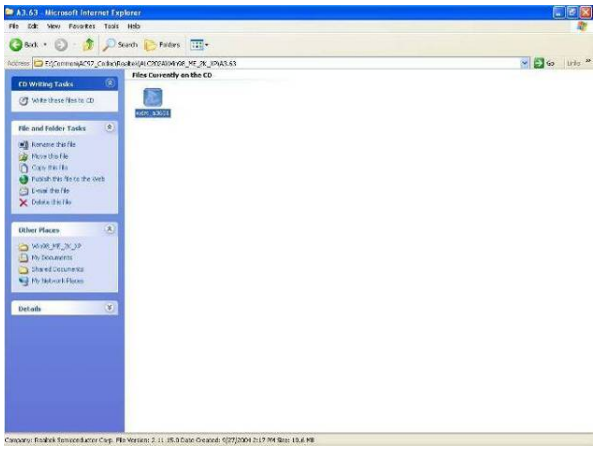
e. Click the “Continue Anyway” button on the Hardware Installation” window.

f. Select “No, not this time” and click the “Next” button on the Found New Hardware Wizard window.

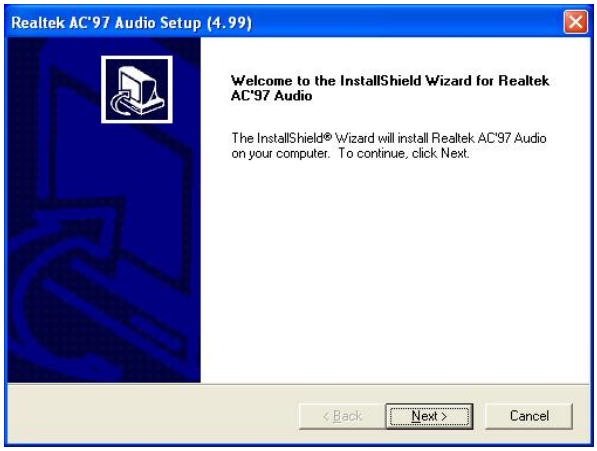


g. Click the “Yes” button and restart your system.

3.6. Audio Driver Installation

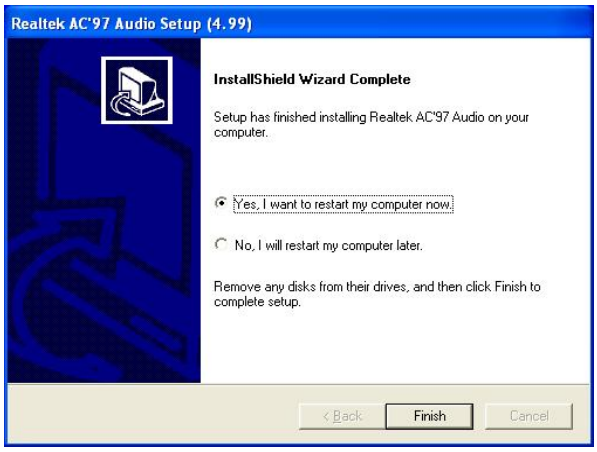


a. Double click the ”wdm_93631” on the My computer window.



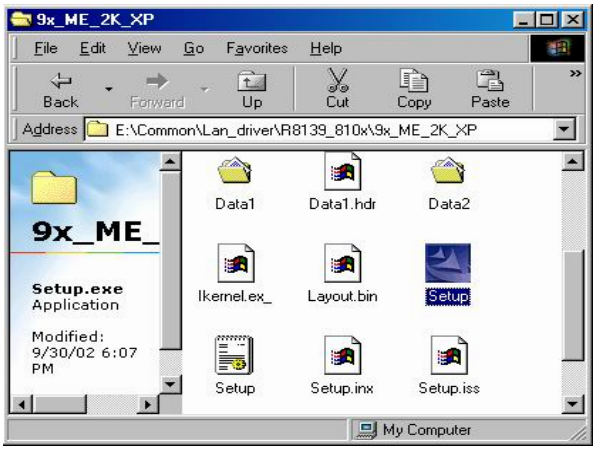
b. Click the “Next” button on the Welcome window.

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

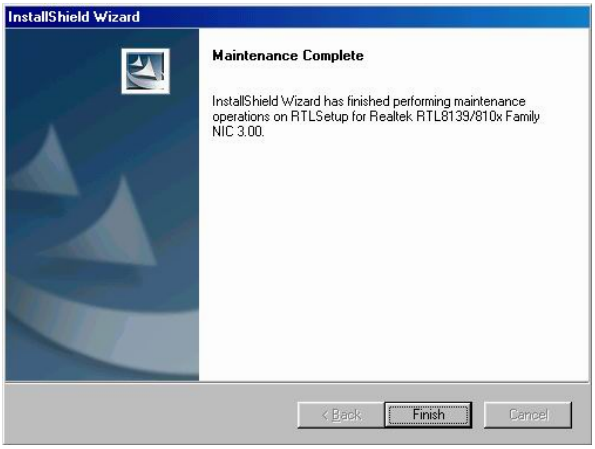


d. Click the “Finish” button and restart your system.

3.7. LAN Driver Installation



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



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

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

4. System Disassembly

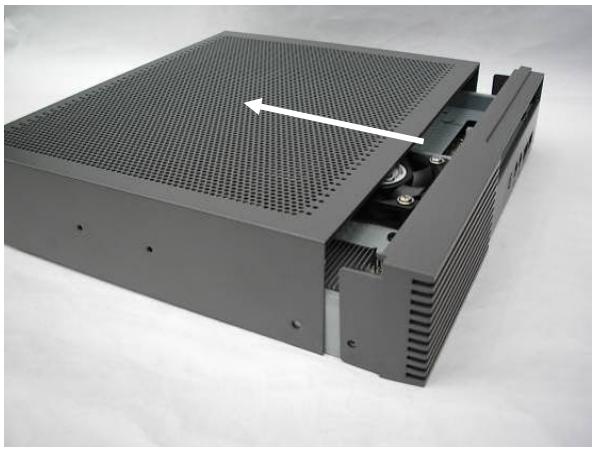
Chapter 4.1., 4.2. ,4.3. and 4.4. are valid for KPC 2/ 3/ 4.

4.1. Remove the Top Cover

a. Remove the screws (2).

b. Remove the screws (2).

c. Remove the screw (1).



d. Remove the top cover towards you.

4.2. Replace the Heatsink and CPU

Remove the top cover as described in chapter 4.1.

a. Disconnect the fan.

b. Remove the screws (2).

c. Remove the fan.

d. Remove the screws (4) that secure on the heatsink.

e. Turn 180 degree to open the key lock.

f. Remove the CPU.

Notice

Fan: Celeron M 1.3/1.5GHz, Pentium M 1.8GHz

a. Fan, Heatsink

b. CPU, Socket, Copper hex screw

Fanless: Intel ULV Celeron M 800MHz/1.0GHz, LV Pentium M 1.4GHz

a. Heatsink

b. CPU

4.3. Replace the Motherboard

Remove the top cover, heatsink and CPU first as described in chapter 4.1., 4.2.

a. Remove the screw (1) that secures on the I/O bracket.

b. Remove the screw (1) that secures on the I/O bracket.

c. Remove the hex secures (8) to remove the I/O bracket.

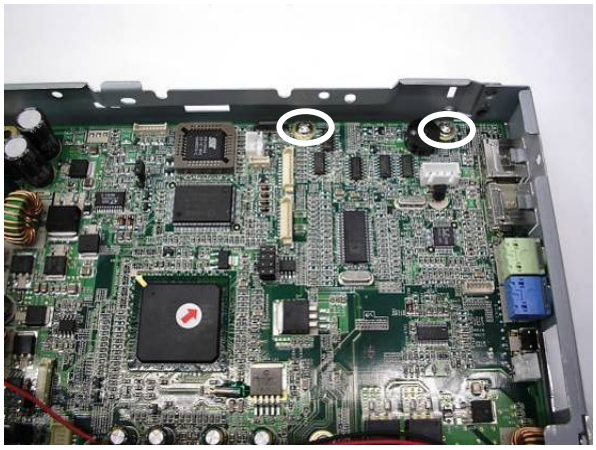
d. Remove the screws (2).

e. Remove the screw (1).

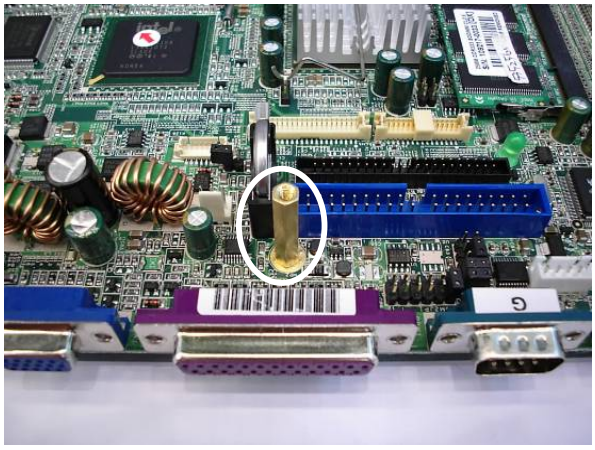
f. Remove the screw (1).

g. Remove the screw (1) that secures on the motherboard.

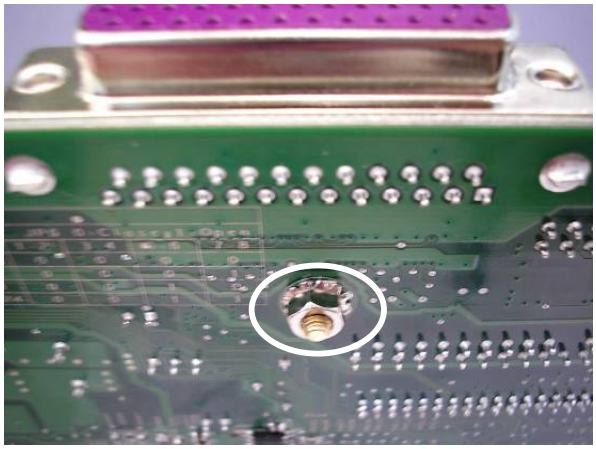
h. Remove the screws (3).



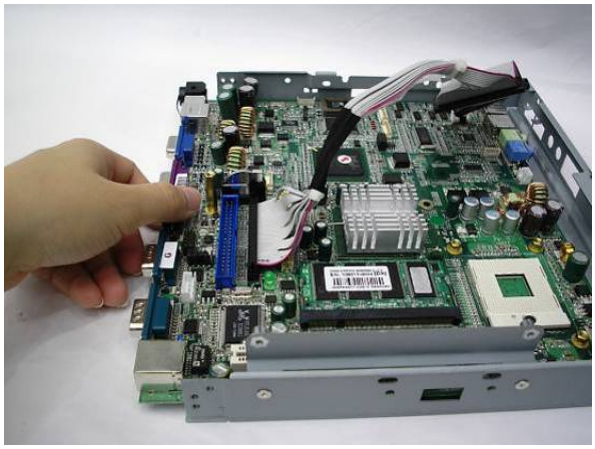
i. Remove the screws (2).



j. Remove the six hex copper screw.



k. There is a washer behind the six hex copper screw.

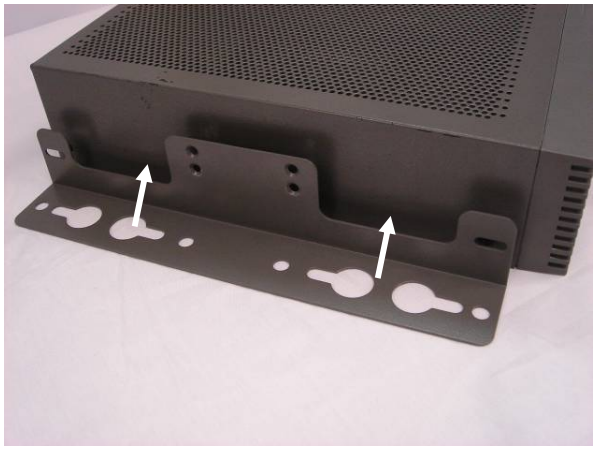


l. Withdraw the motherboard towards you.

4.4. Wall Mount Kits Installation

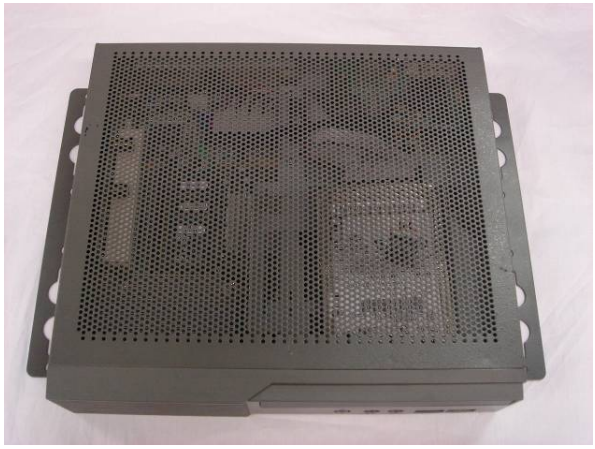
Please refer to wall mount kit dimensions in Appendix B.

a. Mount the system to the flat surface.



a. Place the wall mount kits (2) (one on each side) into two sides.

b. Tighten the screws (4) (two on each side) as shown in the picture.



c. Mount the system to the flat surface.

b. The typical height is approximately 7 mm to mount the system to the surface.

a. Remove the screws (4) (two on each side).

b. Place the wall mount kits (2) into two sides.

c. Tighten the screws (8) (four on each side).

d. Mount the system to the surface.

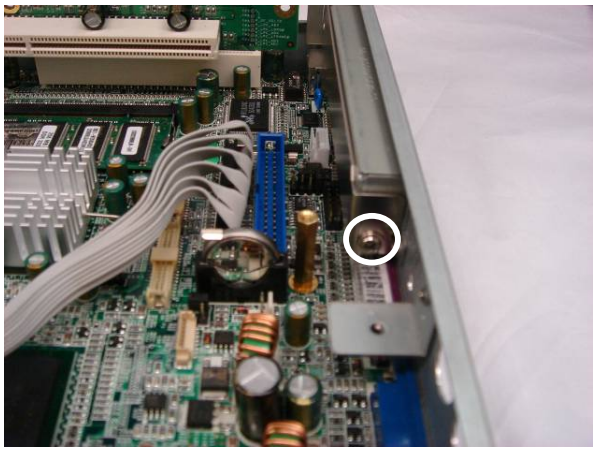
4.5. COM Port Cables Installation (For KPC 2 / 3)

Remove the top cover and replace the slim HDD and slim CD-ROM as described in chapter 4.1 and 4.9.3.

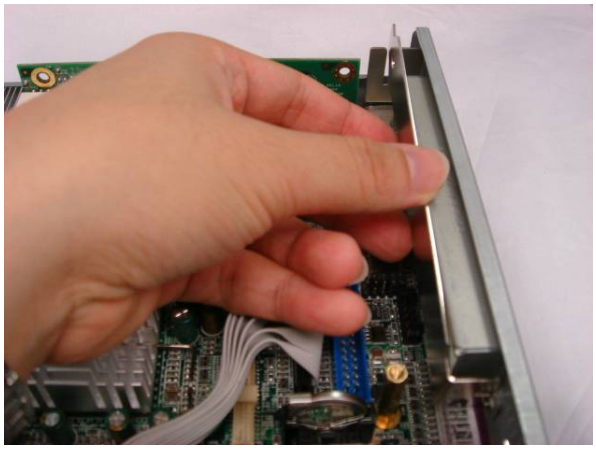
a. Remove the screw (1) that secures on the bracket.

b. Remove the screw (1).

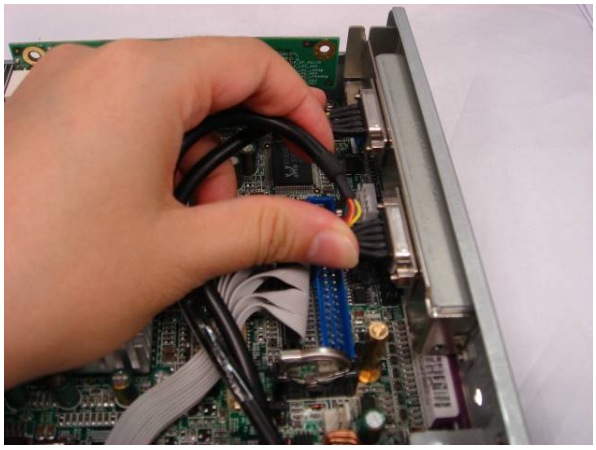
c. Remove the bracket.



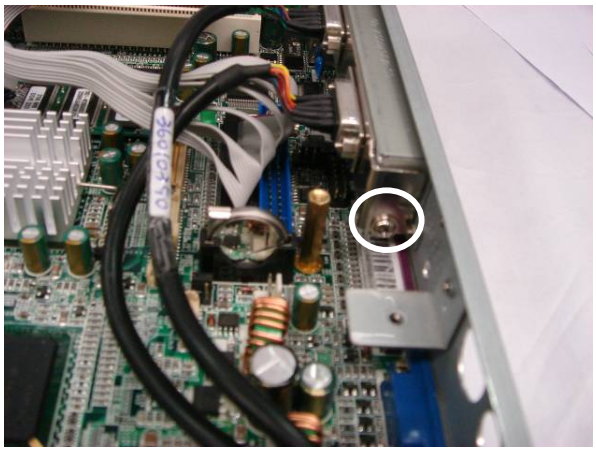
d. Remove the screw (1) that secures the PCI bracket.



e. Remove the PCI bracket.

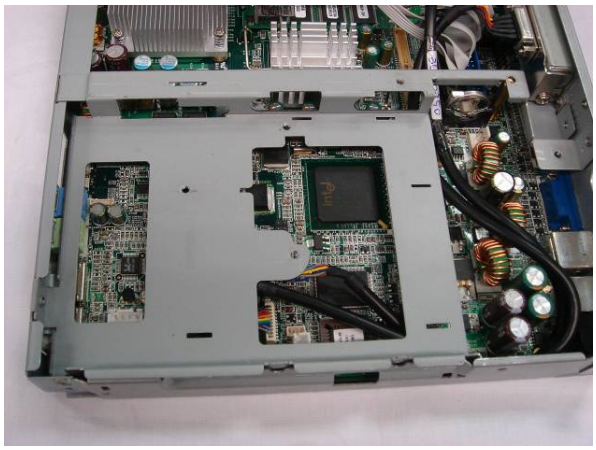


f. Insert the COM port cables into the slot.

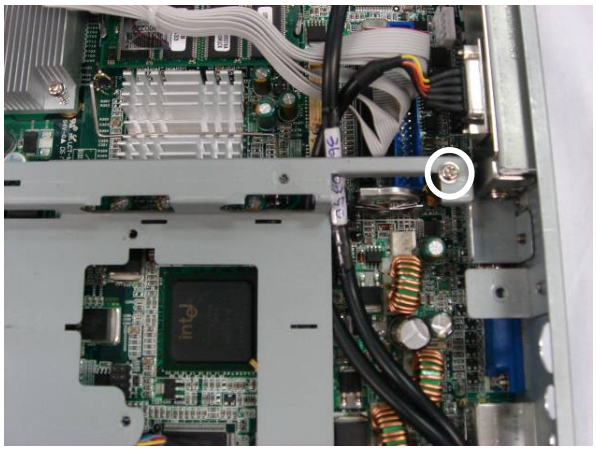


g. Tighten the screw (1).

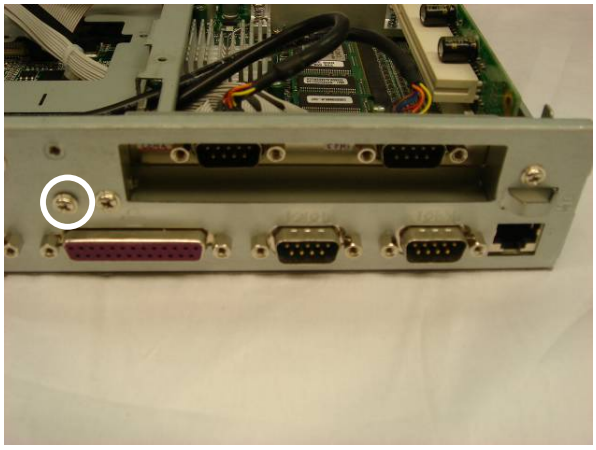
h. Connect the cables (2) (Refer to 6. Connectors & Jumper Settings).



i. Place the bracket into the position.

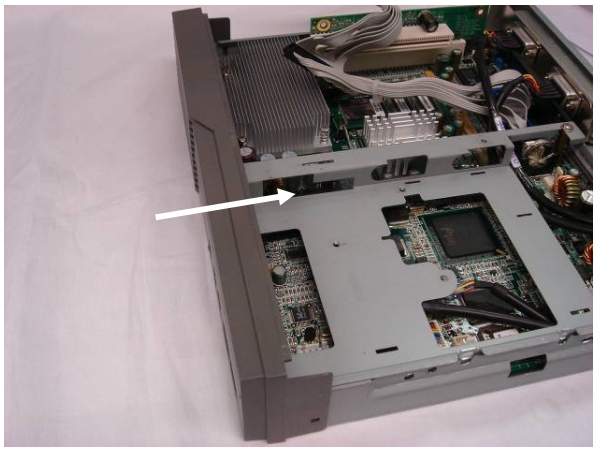


j. Tighten the screw (1).



k. Tighten the screw (1).

l. Remove the screws (2).



m. Slide the front cover into the system. Assemble the slim HDD, Slim CD-ROM and the top cover.

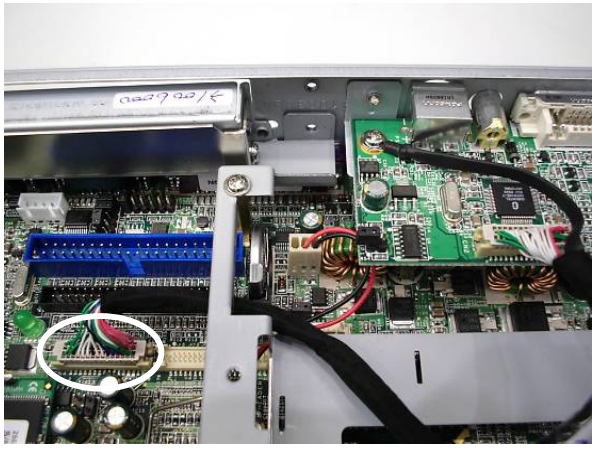
4.6. DVO Board Installation (For KPC 2 / 3)

Remove the top cover as described in chapter 4.1.

a. Insert the DVO board into the I/O bracket.

b. Tighten the hex screws (2).

c. Tighten the screw with the ground cable. Then, connect the DVO cable (1).



d. Connect the cable (1) on the motherboard.

4.7. Replace the CF Adapter Card (For KPC 2 / 4)

Remove the top cover as described in chapter 4.1.

a. Disconnect the cable.

b. Slide the CF card out.

c. Remove the screws (3) that secure on the board.

4.8. KPC 2

4.8.1. Replace the 3.5” HDD and Slim CD-ROM

Remove the top cover as described in chapter 4.1.

a. Disconnect the cables (2).

b. Remove the screws (2).

c. Remove the screws (2).

d. Slide the CD-ROM towards you.

e. Disconnect the cables (2).

f. Remove the screws (2).

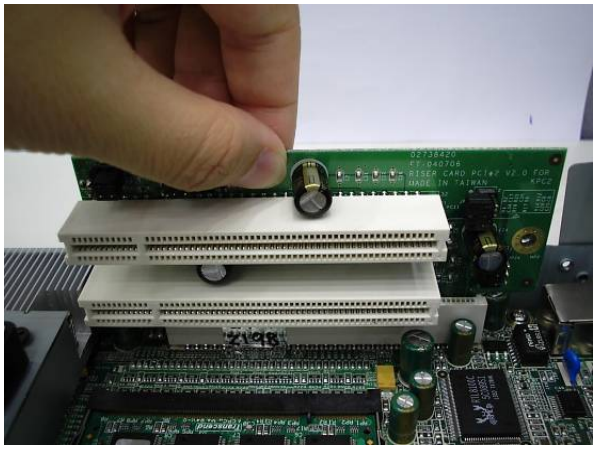
g. Slide the 3.5” HDD to remove it.

4.8.2. Replace the PCI Riser Card (2 x Slots)

Remove the top cover as described in chapter 4.1.

a. Remove the PCI cards towards you.

b. Remove the screws (2).



c. Remove the PCI slot.

4.8.3. PCI Card Installation

Remove the top cover as described in chapter 4.1.

a. Remove the screws (2).

b. Insert the PCI card.

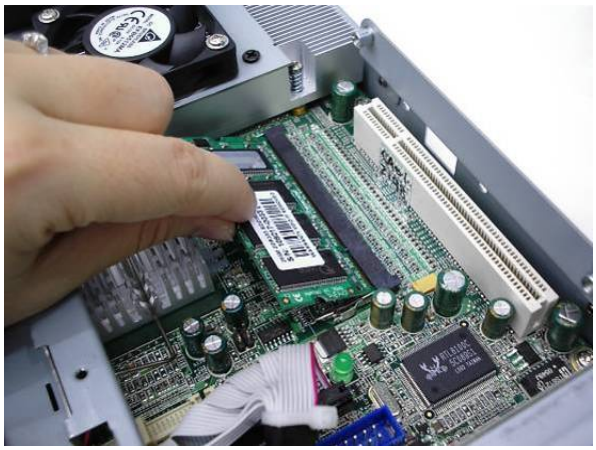
c. Insert the second PCI card.

d. Tighten the screws (2).

4.9. KPC 3

4.9.1. DDR Memory Installation

Remove the top cover as described in chapter 4.1.

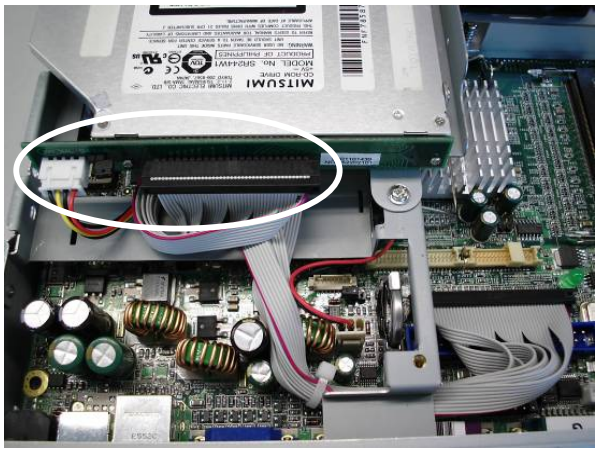


a. Install DDR Memory by inserting it into the slot.

b. Push the card down gently until two metal latches on the side of the slot click into place.

4.9.2. Replace the Slim CD-ROM and CF Adapter Card

Remove the top cover as described in chapter 4.1.



a. Disconnect the cables (2).

b. Remove the screw (1).

c. Remove the screw (1).

d. Disconnect the cable.

e. Slide the CF card out.

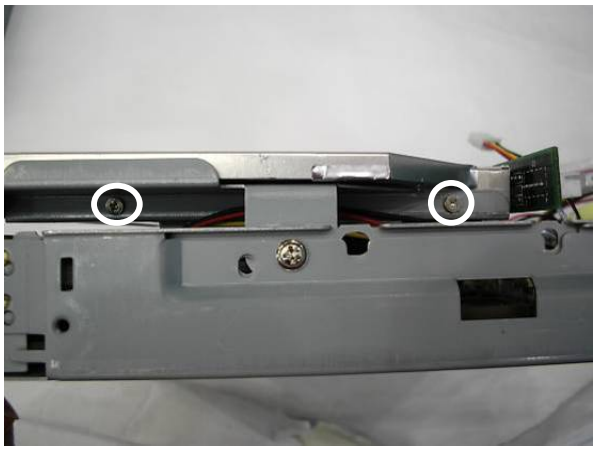
f. Remove the screws (3) that secure on the board.

4.9.3. Replace the Slim HDD and Slim CD-ROM

Remove the top cover as described in chapter 4.1.

a. Disconnect the cables (2).

b. Remove the screws (2).



c. Remove the screws (2) to remove the slim CD-ROM.

d. Disconnect the cable (1).

e. Remove the screw (1).

f. Remove the screw (1) to remove the bracket.

g. Remove the screws (2).

h. Remove the screws (2) to remove the slim HDD.

4.9.4. Replace the 3.5” HDD

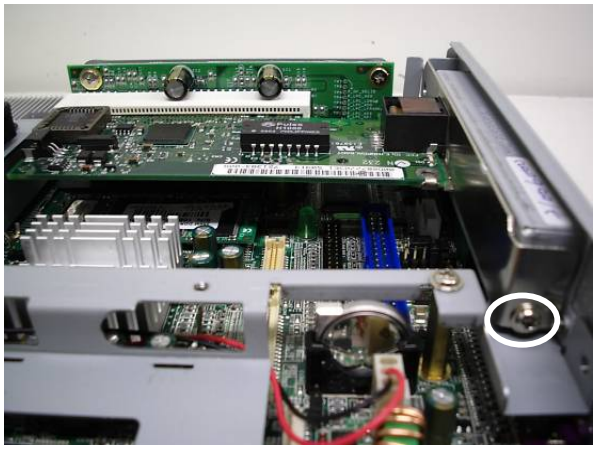
Remove the top cover as described in chapter 4.1.

a. Disconnect the cables (2).

b. Remove the screws (2).

4.9.5. Replace the PCI Riser Card (1 x Slot)

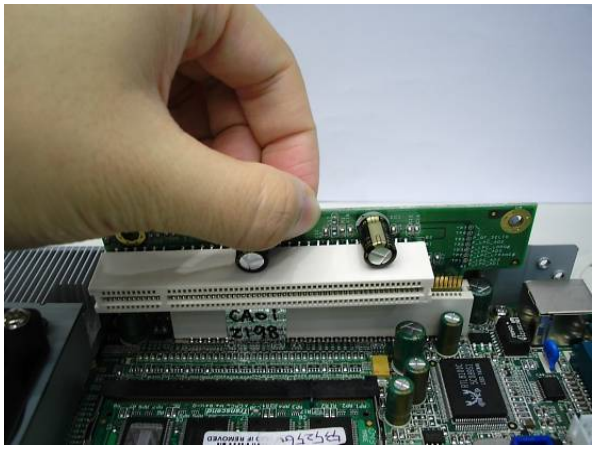
Remove the top cover as described in chapter 4.1.



a. Remove the screw (1).

b. Remove the PCI card towards you.

c. Remove the screws (2).



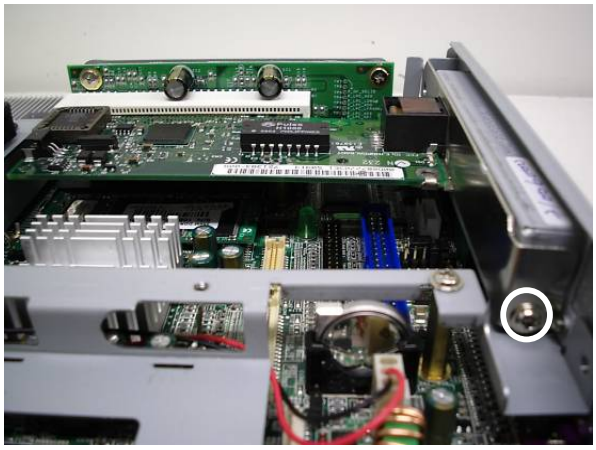
d. Remove the PCI slot.

4.9.6. PCI Card Installation

Remove the top cover as described in chapter 4.1.

a. Remove the screw (1) that secures on the bracket. Then, remove the bracket.

b. Insert the PCI card into the slot.



c. Tighten the screw (1).

4.10. KPC 4

4.10.1. Replace the Slim HDD

Remove the top cover as described in chapter 4.1.

a. Disconnect the cable (1).

b. Remove the screws (2) that secure on the slim HDD.

c. Slide the slim HDD to remove it.

5. Specification

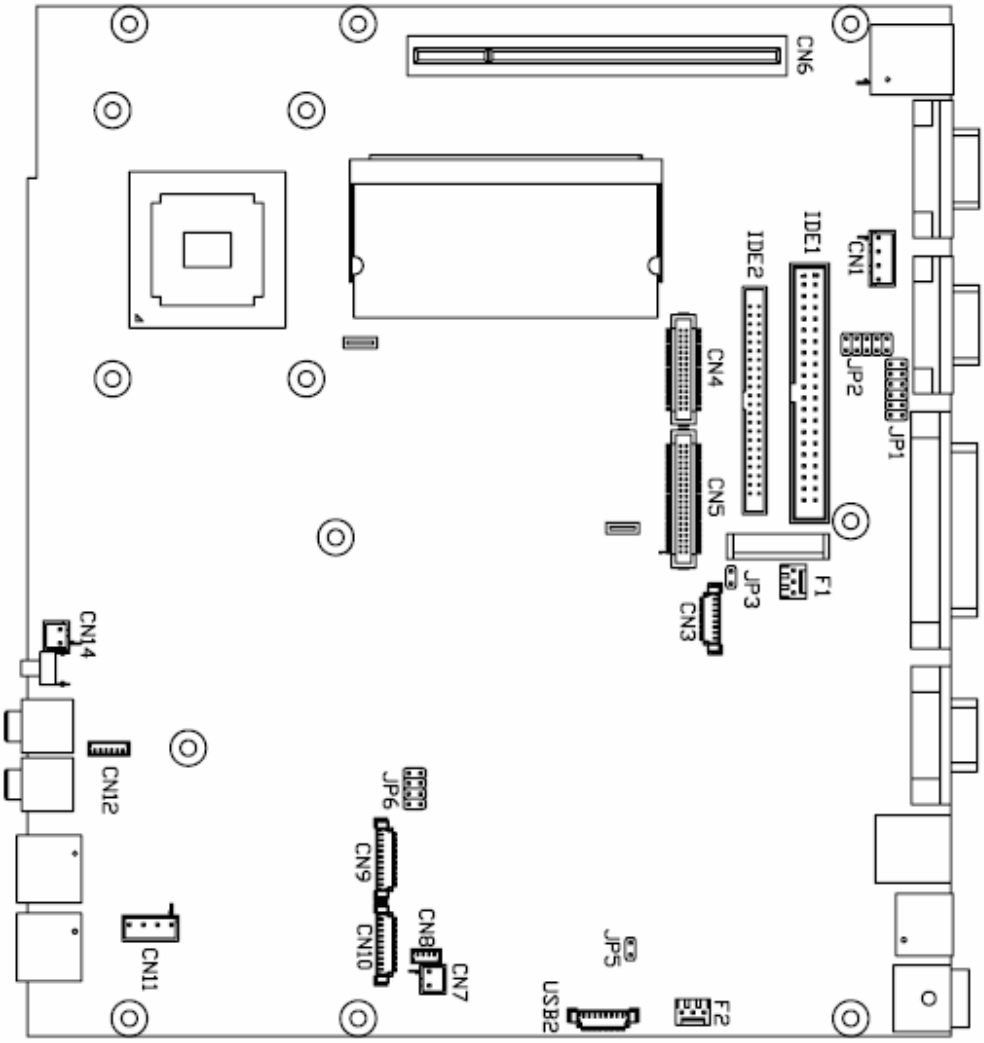
Model Name	KPC 2	KPC 3		KPC 4
Motherboard Model	B72			
CPU Supports	Intel ULV Celeron M 800MHz/1.0GHz (fanless); up to Celeron M 1.3/1.5GHz, Pentium M 1.8GHz			Intel ULV Celeron M 800MHz/1.0GHz (fanless)
Chipset	852GM + ICH4			
System Memory	1 x DDR SO-DIMM slot, up to 1GB			
Graphic Memory	Share system memory 8 ~ 64MB			
BIOS	AWARD BIOS			
Storage				
HDD	3.5" HDD	2.5" Slim HDD	3.5” HDD (Optional)	2.5" Slim HDD
ODD	Slim CD-ROM	Slim CD-ROM	N/A	N/A
Solid State Disk	Support Compact Flash Card by optional CF adapter card.			
Expansion				
PCI Slot	2-slot PCI riser card	1-slot PCI riser card		N/A
External I / O Ports				
Front I / O				
USB	2			
Audio				
Line in	1			
Line out	1			
Rear I / O				
PS/2 Keyboard	1, Optional Y-cable for Mouse			
USB	2			
Serial/COM	1 x RS-232 port, 1 x RS-232 / 422 / 485 port			
	2 x RS232 ports by COM3 / COM4 cable kits (For KPC2 / 3 Only)			
Parallel	1			
LAN (10 / 100)	1			
VGA	1			

Rear I / O			
2nd VGA	Optional by DVI/ TV-out card		N/A
TV-Out	Optional by DVI/ TV-out card		N/A
DC Jack	1		
Control Indicator			
Power Button	1		
Indicator LED	Power LED, HDD LED		
Power			
Power Adapter	Default 65W DC-19V Power Adapter; Optional DC-19V 90W Power Adapter.		
Option			
Wall Mount Kit	2		
Environment			
EMC & Safety	CE, FCC Class A, LVD		
Operating Temperature	0 ~35°C		
Storage Temperature	-20 ~ 60°C		
Operating Humidity	5% to 95% RH, Non-condensing		
Storage Humidity	5% to 95% RH, Non-condensing		
Dimension (W x D x H mm/inch)	243 x 218 x 72 mm 9.6” x 8.6” x 2.8”	243 x 218 x 50 mm 9.6” x 8.6” x 2.0”	243 x 218 x 35 mm 9.6” x 8.6” x 1.4”
Weight (kg/lbs) N.W.	2.7kg / 6.0lbs	2.3kg / 5.0lbs	1.7kg / 3.8lbs
Weight (kg/lbs) G.W.	3.2kg / 7.1lbs	2.8kg / 6.1lbs	2.3kg / 4.9lbs
OS Support	Microsoft Windows XP Professional, Windows XP Embedded		

- This specification is subject to change without prior notice.

6. Connectors and Jumper Settings

1. B72 Motherboard



2. Connectors

Connector	Function
CN1	Power Connector For 3.5" HDD
CN3	Inverter Connector
CN4	DVO Connector
CN5	LVDS Interface
CN6	PCI SLOT
CN7	Hardware Reset
CN8	IrDA Connector
CN9	COM3
CN10	COM4
CN11	CD-IN Connector
CN12	Speaker & MIC Connector
CN14	Power Switch
CN15	Audio Line-In
CN16	Audio Line-Out
COM1	COM1

Connector	Function
COM2	COM2
DIMM1	SO-DIMM DDR Memory
F4	CPU Fan Connector
F7	System Fan Connector
IDE1	3.5” IDE Device
IDE2	Slim HD or CD-Rom
PRN1	Parallel Port
PS1	Keyboard & Mouse
PWR1	19V Power Adaptor
RJ45_1	LAN Connector
USB1	USB Port 1 USB Port 2
USB2	USB Port 5 USB Port 6
USB3	USB Port 3
USB4	USB Port 4
VGA1	VGA Port

3. Jumper Settings

1. CMOS Operation Mode

◎ Factory Default Setting

Function	JP3
CMOS Normal	◎ N/C
CMOS Reset	1-2

2. Power Mode Setting

Function	JP5
ATX Power	◎ N/C
AT Power	1-2

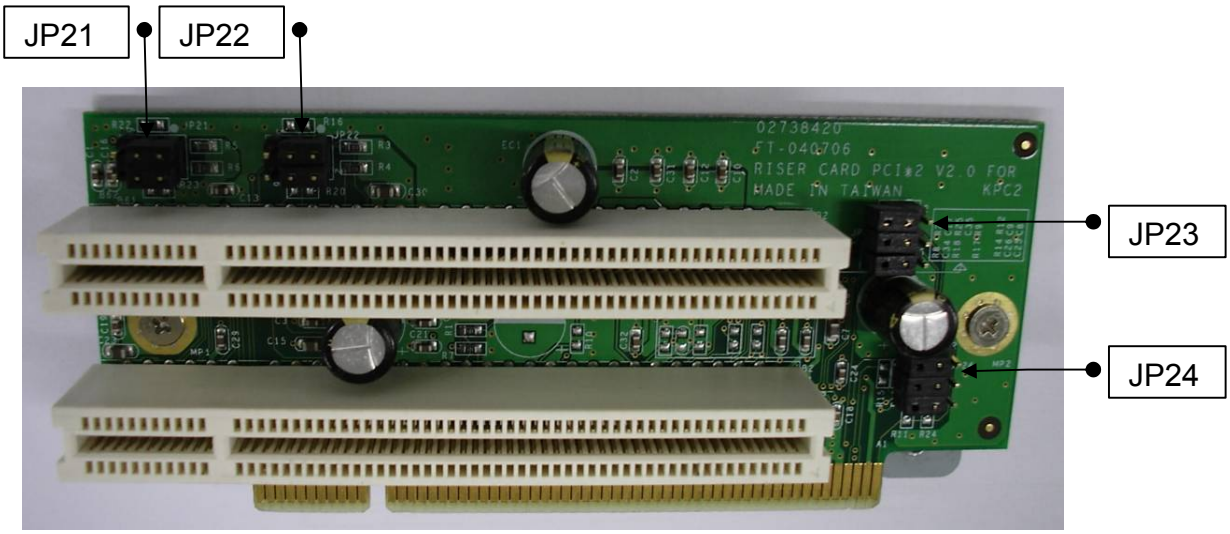
3. COM2 RS232 / 485 / 422 Setting

Function	RS232 ◎	RS485	RS422
JP2 (1-2)	Short		
JP2 (3-4)	Short		
JP2 (4-6)		Short	
JP2 (5-7)	Short		
JP2 (7-8)		Short	
JP2 (9-10)			Short
JP1(1-2)	Short		
JP1(3-4)		Short	
JP1(5-6)			Short
JP1(7-8)			Short
JP1(9-10)			Short
JP1(11-12)			Short

4. LCD ID Setting

Panel Number	Resolution	LVDS		JP6			
		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

4. PCI Card Jumper Settings



JP 21 REQ#5 / GNT#5	
Factory Default Setting	1-3, 2-4

JP 22 SERIRQ / GPIO 21	
Factory Default Setting	1-3, 2-4

JP 23 LPC	
Factory Default Setting	1, 3, 5

JP 24 LPC	
Factory Default Setting	1, 3, 5

7. Connector Pin Definition

CN1 : Power Connector For 3.5" HDD

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

CN3 : Inverter Connector

Pin 1	+12V	Pin 2	+12V
Pin 3	+12V	Pin 4	Back-light Enable
Pin 5	Brightness Control	Pin 6	GND
Pin 7	GND	Pin 8	GND

CN4 : DVO Connector

Pin 1	DVOC 11	Pin 2	DVOC_HSYNC
Pin 3	DVOC 10	Pin 4	DVOC_VSYNC
Pin 5	DVOC 9	Pin 6	GND
Pin 7	DVOC 8	Pin 8	DVO_DETECT
Pin 9	DVOC 7	Pin 10	DVOC_BLANK#
Pin 11	DVOC 6	Pin 12	DVOC_FLDSTL
Pin 13	DVOC 5	Pin 14	GND
Pin 15	DVOC 4	Pin 16	DVI_MDVIDATA
Pin 17	DVOC 3	Pin 18	DVI_MDVICLK
Pin 19	DVOC 2	Pin 20	GND
Pin 21	DVOC 1	Pin 22	DVOC_CLK#
Pin 23	DVOC 0	Pin 24	DVOC_CLK
Pin 25	+5V	Pin 26	GND
Pin 27	+5V	Pin 28	+1.5V
Pin 29	+5V	Pin 30	+1.5V

CN5 : LVDS Interface

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

CN8 : IrDA Connector

Pin 1	+5V	Pin 2	IrDA_RX
Pin 3	IrDA_TX	Pin 4	GND

CN9 : COM3

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

CN10 : COM4

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

CN11 : CD- IN Connector

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

CN12 : Speaker & MIC Connector

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

USB2 : USB5 & USB6

Pin 1	+5V_USB4	Pin 2	USB20_P4-
Pin 3	USB20_P4+	Pin 4	GND
Pin 5	+5V_USB5	Pin 6	USB20_P5-
Pin 7	USB20_P5+	Pin 8	GND

8. BIOS Setting

1. BIOS Setup Utility

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

2. Starting the BIOS Setup

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

Press DEL to enter SETUP.

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

3. When a Problem Occurs

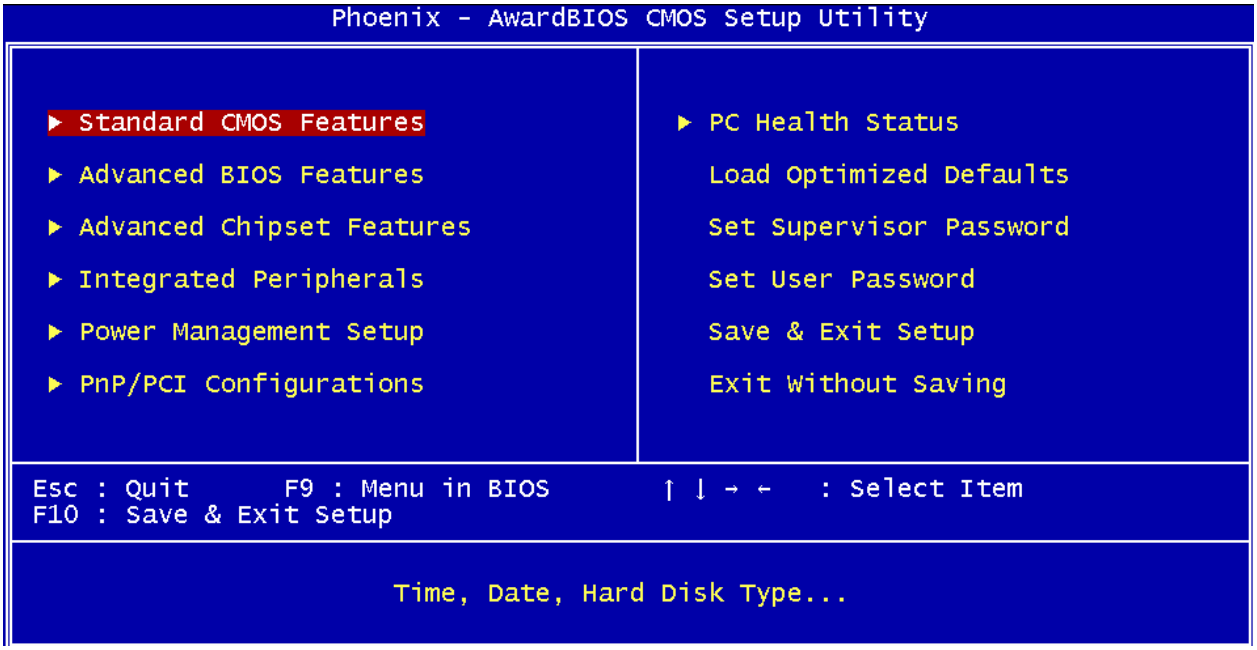
If, after making and saving system changes with the Setup utility, you find that this product no longer boots, start the BIOS setup and execute the following.

Load Optimized Defaults

4. BIOS Main Menu

When the BIOS Main Menu is displayed, the following items can be selected. Use the arrow keys to select items and the Enter key to accept and enter the sub-menu.

Note: The BIOS menu below is from B72 BIOS version. If you have a different BIOS version, the contents of the menu may different.



Standard CMOS Features
Use this menu for basic system configuration.

Advanced BIOS Features
Use this menu to set the Advanced Features available on the system.

Advanced Chipset Features
Use this menu to change the values in the chipset registers and optimize the system's performance.

Integrated Peripherals
Use this menu to specify your settings for integrated peripherals.

Power Management setup
Use this menu to specify your settings for power management.

PnP/PCI Configurations
This entry appears if your system supports Plug and Play and PCI Configuration.

PC health status
Displays CPU, System Temperature, Fan Speed, and System Voltages Value.

Load Optimized Defaults
Use this menu to load the BIOS default values, i.e., factory settings for optimal performance system operations. While Award has designed the custom BIOS to maximize performance, the factory has the option to change these defaults to meet their needs.

Set Supervisor Password
Enables you to change, set, or disable the supervisor or user password.

Set Password
Change, set, or disable the password. It allows you to limit access to the system and to the setup, or just to the setup.

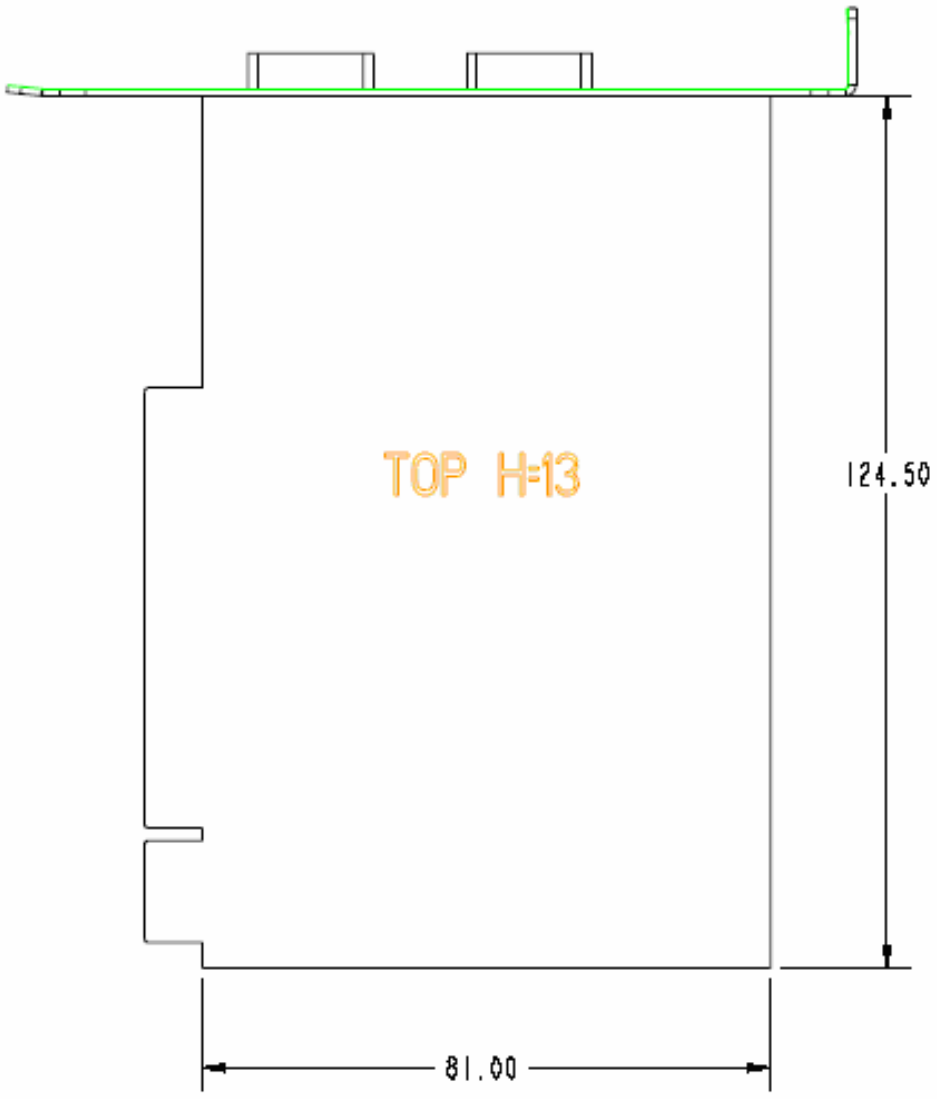
Save & exit setup
Save CMOS value changes to CMOS and exits setup.

Exit without saving
Ignores all CMOS value changes and exits setup.

Appendix A: PCI Card Dimension

Maximum dimension of the PCI add-on card:

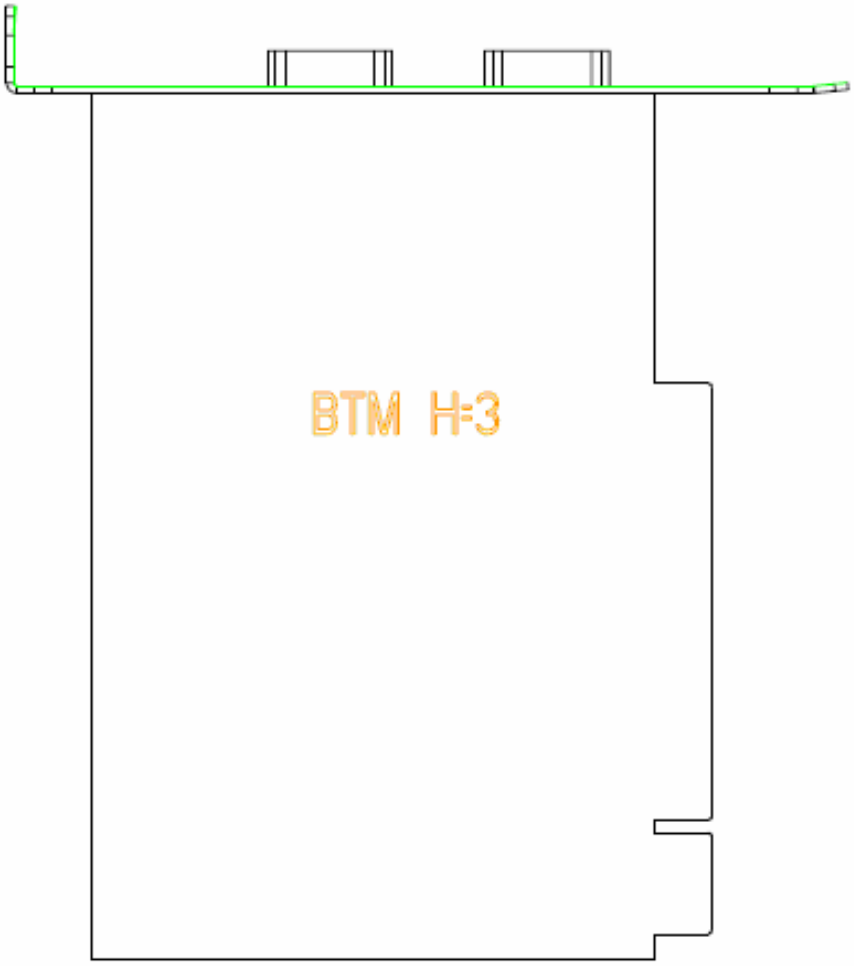
Component Side: 124.5mm x 81mm x 13mm (W x D x H) (Picture 1)



Picture 1: Component side

Maximum dimension of the PCI add-on card:

Bottom Side: 124.5mm x 81mm x 3mm (W x D x H) (Picture 2)



Picture 2: Bottom Side

Appendix B: Wall Mount Kit Dimensions

Figure 1 shows the system and wall mount kit dimensions.

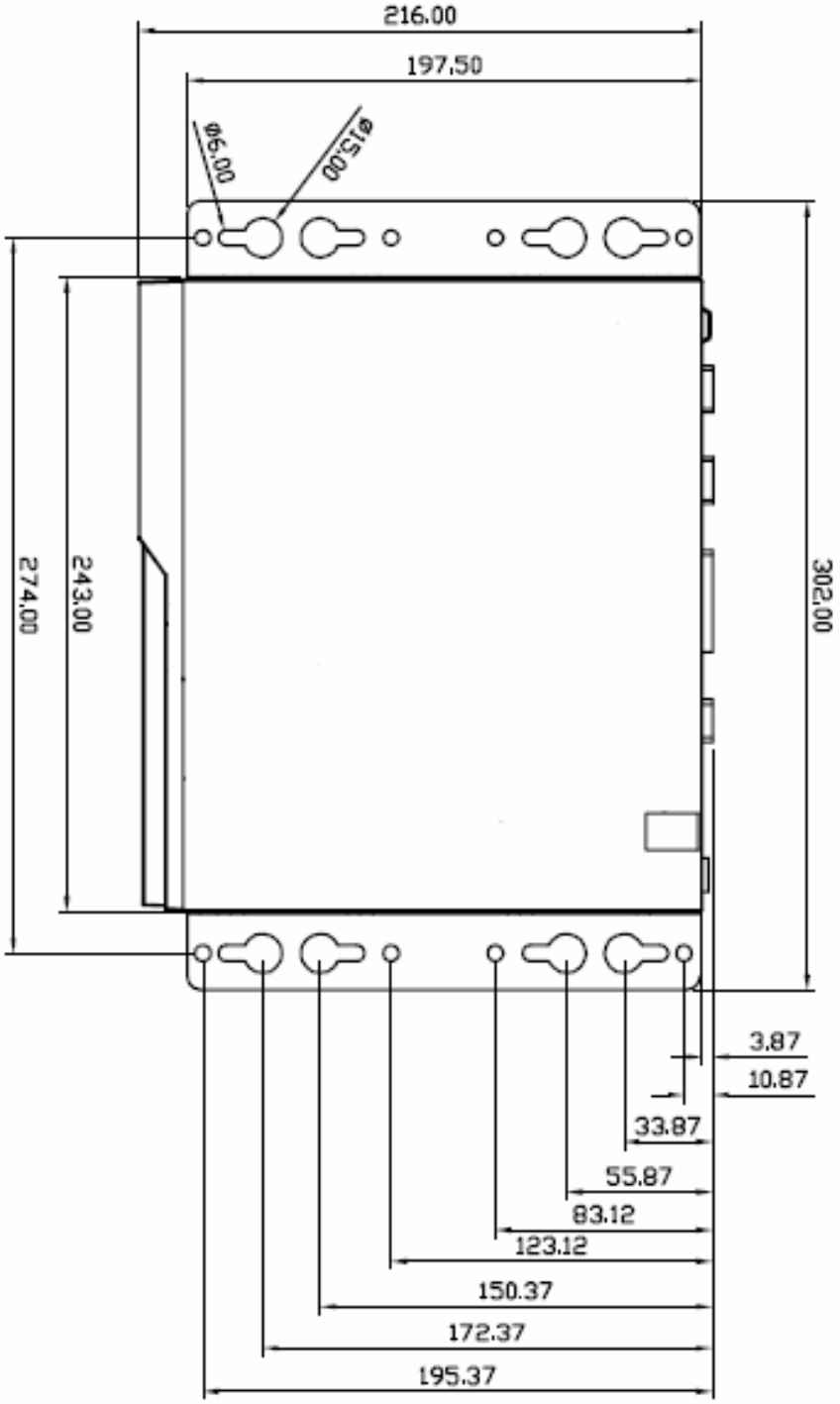


Figure 1: System and Wall Mount Kit Dimensions (mm)

The typical distance between the wall and the bottom of the system is 7mm. Figure 3 shows the wall mount kit dimensions.

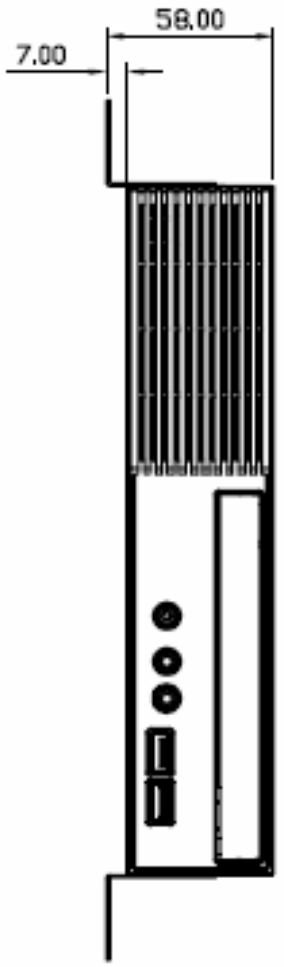


Figure 2: Mounting Height (mm) (KPC3 shown)

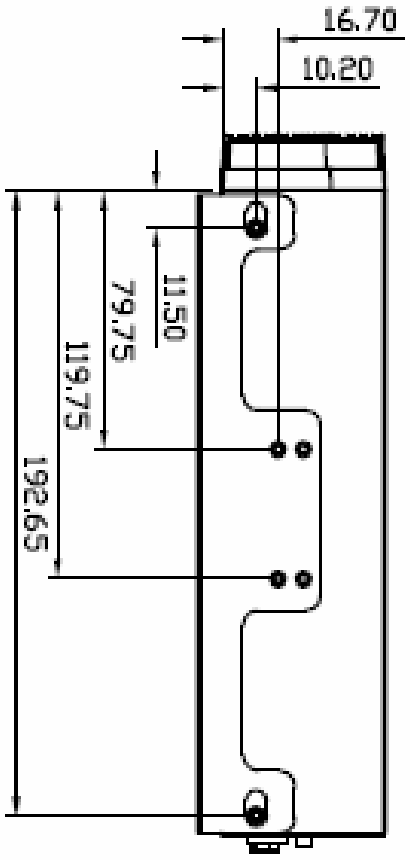


Figure 3: Wall Mount Kit Dimensions (mm)

Appendix C: Watch Dog Timer Programming Guide

1. Register Description

CRF5 Bit3: Select WDT Count Mode

=0 second
=1 minute
Bit7: 4 reserved
Bit2: 1 reserved

CRF6 (Default 0x00)

Watch Dog Timer Time-out value. Writing a non-zero value to this register causes the counter to load the value to Watch Dog Counter and starts counting down. If Bit 7 and Bit 6 are set, any Mouse Interrupt or Keyboard Interrupt event will also cause the reload of a previously loaded non-zero value to Watch Dog Counter and starts counting down. Reading this register returns the current value in the Watch Dog Counter instead of the Watch Dog Timer Time-out value.

Bit 7 – 0
= 0x00 Time-out Disable
= 0x01 Time-out occurs after 1 second/minute
= 0x02 Time-out occurs after 2 seconds/minutes
= 0x03 Time-out occurs after 3 seconds/minutes
.....
= 0xFF Time-out occurs after 255 seconds/minutes

CRF7 (Default 0x00)

Bit 7 : Mouse interrupt reset Enable or Disable
= 1 Watch Dog Timer is reset upon a Mouse interrupt
= 0 Watch Dog Timer is not affected by Mouse interrupt
Bit 6 : Keyboard interrupt reset Enable or Disable
= 1 Watch Dog Timer is reset upon a Keyboard interrupt
= 0 Watch Dog Timer is not affected by Keyboard interrupt
Bit5:0 reserved

2. Basic Process to Enter/Exit Watch Dog Timer Configuration Mode

2.1. Enter Watch Dog Timer Configuration Mode

```
; Write 87h to the location 4E twice.
mov dx, 4Eh
mov al, 087h
out  dx,al
nop
nop
out  dx,al
; Set Logical Device 8
mov dx,4Eh
mov al, 07h       ;;Logical Device selector
out   dx,al
mov dx,4Fh
mov al,08h        ;;logical device 8
out   dx,al
```

2.2. Exit Watch Dog Timer Configuration Mode

```
mov dx, 4Eh
mov al, 0AAh
out   dx,al
```

3. Register Setting Example

Please follow the example procedure: Step 2.1 → Step 3.1 → Step 3.2 → Step 3.5 → Step 2.2

3.1. Set Watch Dog Timer Counter Mode by Second

```
mov dx, 4Eh
mov al, 0F5h      ;select CRF5
out  dx,al
mov dx,4Fh
in    al,dx           ;get original value
and al,0F4h       ;bit3=0, WDT count mode = second.
                  ;Note: Must keep other bits value.
out  dx,al
```

3.2. Set Watch Dog Timer Counter Mode by Minute

```
mov dx, 4Eh
mov al, 0F5h      ;select CRF5
out  dx,al
mov dx,4Fh
in    al,dx           ;get original value
or    al,08h          ;bit3=1, WDT count mode = minute.
                      ;Note: Must keep other bits value.
out  dx,al
```

3.3. PS/2 Mouse Interrupt Reset Watch Dog Timer

```
mov dx, 4Eh
mov al, 0F7h      ;select CRF7
out dx, al
mov dx,4Fh
in   al,dx
or   al,80h       ;Watch Dog Timer reset by mouse interrupt
out dx,al
```

3.4. PS/2 Keyboard Interrupt Reset Watch Dog Timer

```
mov dx, 4Eh
mov al, 0F7h      ;select CRF7
out dx, al
mov dx,4Fh
in   al,dx
or   al,40h       ;Watch Dog Timer reset by keyboard interrupt
out dx,al
```

3.5. Set Watch Dog Timer Counter Value

```
mov dx, 4Eh
mov al, 0F6h      ;select CRF6
out dx, al
mov dx,4Fh
mov al,xxh        ;;set Time-out value here, xx=1~0FFh for Set Watch
                   Dog Timer counter value
out dx,al
```

3.6. Update Watch Dog Timer Counter Value

Repeat step 3.3 to reset the Watch Dog Timer counter value to update the counter value.

3.7. Disable Watch Dog Timer

Repeat step 3.3 to reset the Watch Dog Timer counter value to update the counter value.

```
mov dx, 4Eh
mov al, 0F6h      ;select CRF6
out dx, al
mov dx,4Fh
mov al, 00h       ; set 0 to disable Watch Dog function.
out dx,al
```

Notice: A demo tool is provided on the Driver Bank CD.