

# R5110

## Barebone Server

## Quick Installation Guide



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# Overview

RIOWORKS™ R5110 is a density-optimized 1U barebone server for space conscious front-end networking sites requiring high levels of reliability and performance in a rack-ready form factor. The RCC chipset based system supports dual Intel Pentium III 500MHz~1GHz+ CPU with 133MHz Front side bus (FSB) as well as PC133 Registered ECC SDRAM for up to 4GB maximum system memory. This truly state-of-art barebone server solution combines our powerful SDRCB motherboard with our innovative density-optimized 1U server chassis bundling 3 SCSI hot-swap HDD bays.

## *Feature Highlight*

- |                |   |
|----------------|---|
| <b>CPU</b>     | <ul style="list-style-type: none"><li>▪ Support dual Intel PIII 500MHz~1GHz+ FC-PGA CPU at 133/100 FSB</li></ul>  |
| <b>Chipset</b> | <ul style="list-style-type: none"><li>▪ ServerWorks RCC LE Chipset with 133 Front Side Bus</li></ul>  |
| <b>Memory</b>  | <ul style="list-style-type: none"><li>▪ Support PC133 Register ECC SDRAM memory, expandable to maximum 4GB memory size</li></ul>  |
| <b>VGA</b>     | <ul style="list-style-type: none"><li>▪ Embedded standard 4MB VGA memory</li></ul>  |
| <b>SCSI</b>    | <ul style="list-style-type: none"><li>▪ Onboard LSI dual-channel ultra160 SCSI controller for internal HDD backplane and external SCSI storage expansion at 64-bit/66Mhz operating bus speed.</li><li>▪ 3 SCSI hot-swap HDD bays for the latest Ultra160 SCSI HDD</li></ul> |
| <b>LAN</b>     | <ul style="list-style-type: none"><li>▪ Onboard dual 10/100 Intel 82559 NIC for</li></ul>   |

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automatic fault tolerance(AFT) and  
automatic loaded balance(ALB)

**Other Peripherals**

- Slim CD-ROM and Floppy drive

**Power Supply**

- 206 Watt PFC power supply (100~240V~  
47~63Hz)

**Dimension**

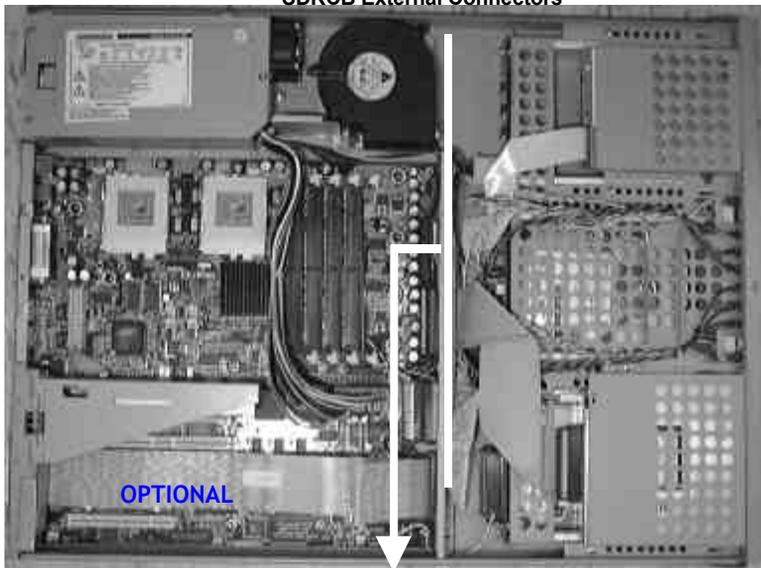
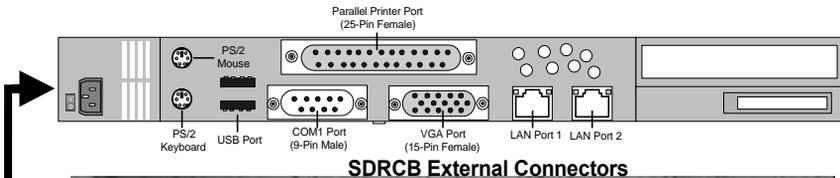
- Space saving 1U rack optimized server  
(L x W x H=610mm x 430mm x 44mm)

## Getting Help

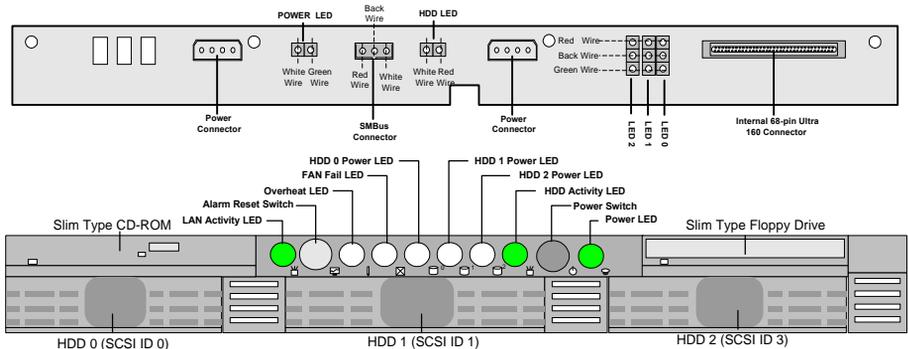
If a problem arises with your system during R5110 installing or OS operating, you should ask your dealer for help first as your system has most likely be configured by them. They always have the best idea and quick response for your symptoms. If your dealer is near to your locations, you should bring your system to them to have it quickly serviced instead of attempting to solve the problem by yourself. Besides these, RIOWORKS™ also provides some helpful resources to help you.

1. Select RIOWORKS™ 's website at [www.rioworks.com](http://www.rioworks.com) and navigate to this product page which contain links to product updates such as Jumper settings or BIOS updates.
2. FAQ sections on RIOWORKS™ Website are often helpful since other user's questions are often your own.
3. Email us at: [tsd@rioworks.com](mailto:tsd@rioworks.com) and we will try to answer your questions within 24 hours

# R5110 Layout-1



**The R5110 Back-plane Board Layout**

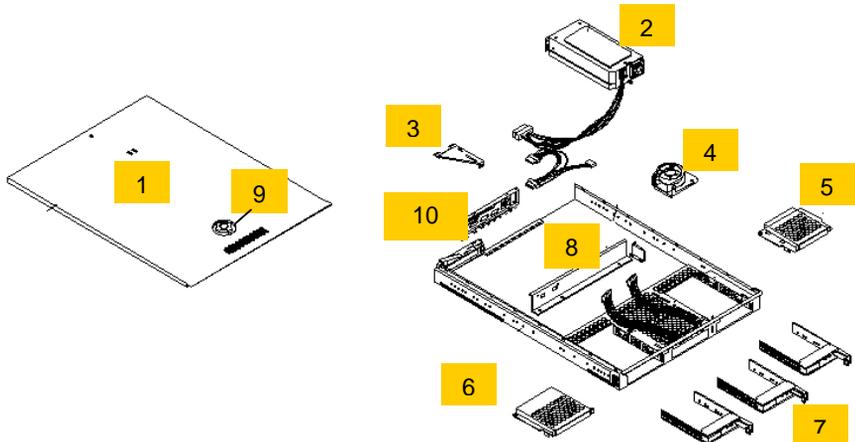


**The LED Indicators of Front-Panel**

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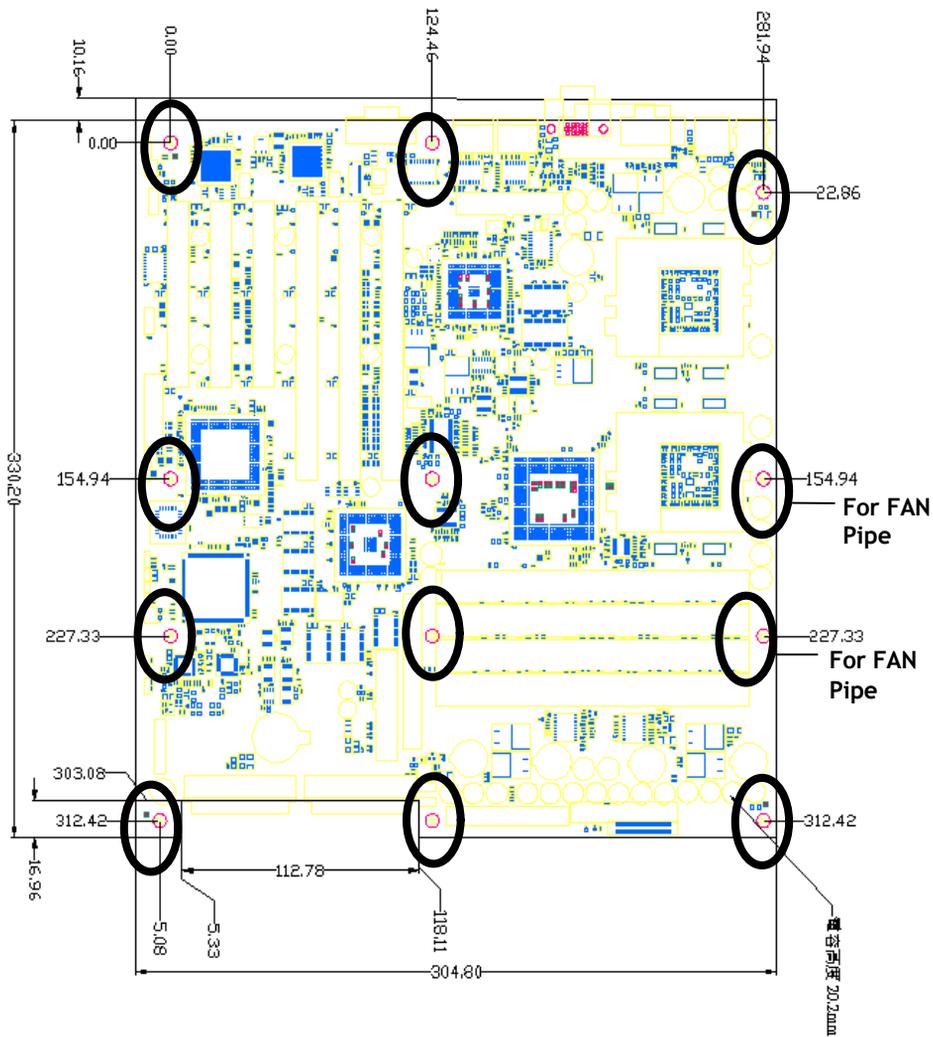
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## R5110 Layout-2



<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Top Cover	6	CD-ROM Holder
2	206W 100~240V 47~63Hz Power Supply	7	SCSI HDD SCA Tray
3	Riser Card Holder	8	Link Bar
4	Fan Blower	9	Handle of the top cover
5	FDD Holder	10	IO Plate

# SDRCB's Mounting Hole Layout





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# Chapter 1

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## How To Use This Manual

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Before you start to assembly RIOWORKS™ R5110 1U barebone featuring with RIOWORKS SDRCB M/B, RIOWORKS highly recommends you examining all photos of the this quick installation guide first to get clear picture. Moreover, to complete a specified assembly, jumping from one step to another one may also required.

Please refer to the assembly flow chart below for getting clear assembly procedure. When you suffer the problem about motherboard's setup, please refer to the SDRCB User's Guide for detailed information.

This manual will guide you to install R5110 with picture demonstration. Please follow each step of this manual carefully and pay special attention to these icons



### **WARNING**

This icon alerted you for potential dangers during setting up your system with SDRCB. These warnings should not be regarded as the whole of your safety regimen. Never forget that computer are electronic devices and are capable of delivering a shock. Prevent damage to yourself and to your board: always ensure that your system is turned off and unplugged the power cords whenever you are working with it ,and that you are equipped



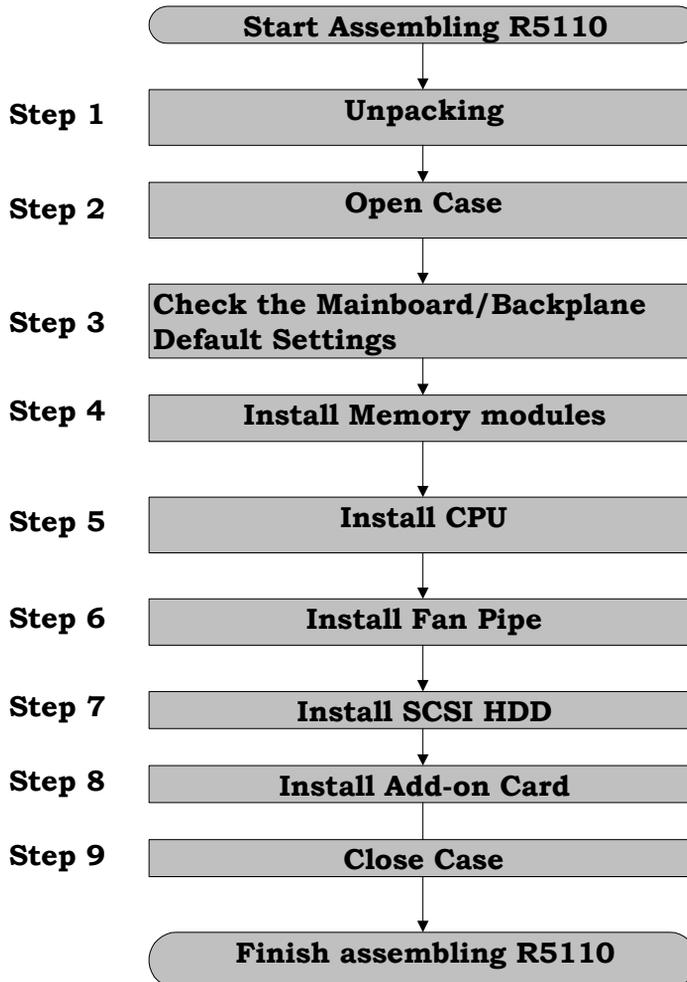
### **NOTE**

This icon alerted you for notice during setting up your system. It provides you can useful alert during setting up a new system.

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## **Assembly Flow Chart**



## Step 1

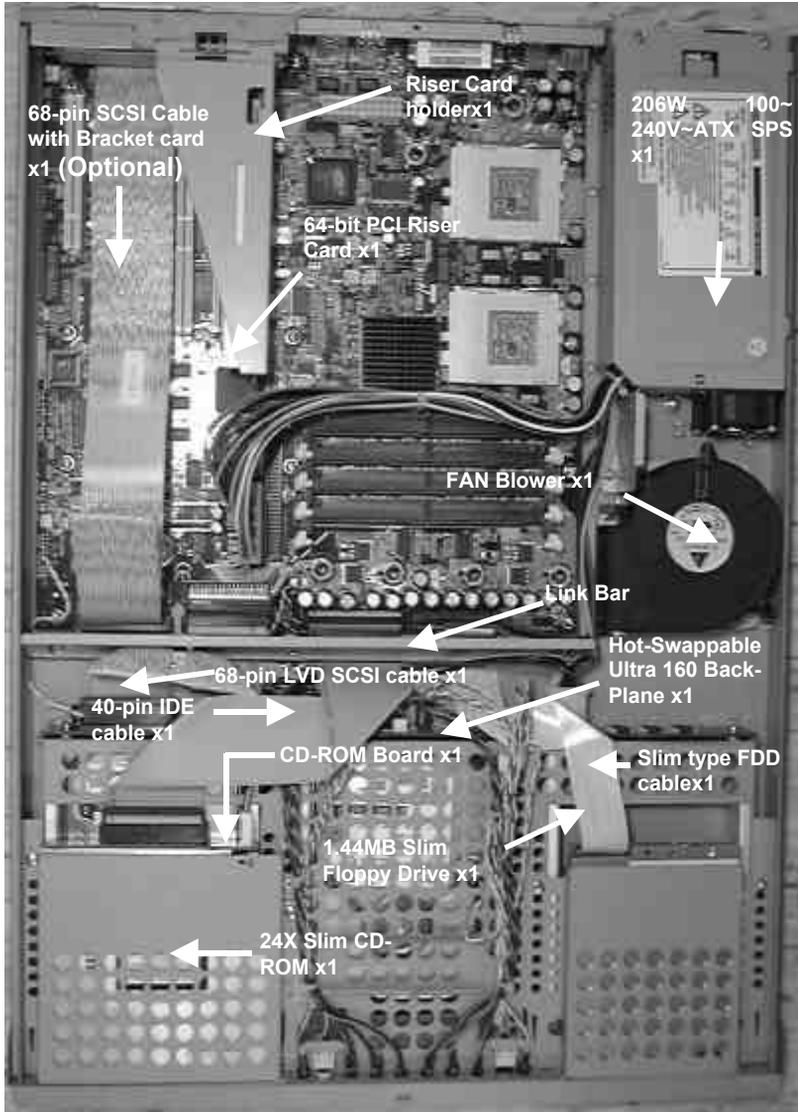
### Unpacking

Remove all items from the box and make sure you have these following items: Two Accessory Kit and one R5110 Barebone

### 1. Accessory Kits

Item	Accessory Kit 1	Item	Accessory Kit 2
1	 <p><u>FAN PIPE x1</u></p>	4	 <p><u>RM Holder x2</u></p>
2	 <p><u>BIG-One: CPU 0 HeatSink with Clipper x1</u></p>	5	 <p><u>Screw bag x4</u></p>
3	 <p><u>Small-One: CPU 1 HeatSink with Clipper x1</u></p>	6	A bag of jumpers
		7	Power Cord x1
		8	SDRCB M/B User Guide x1
		9	Onboard SCSI/LAN User Guidex1
		10	R5110 Quick Installation Guide x1
		11	Onboard SCSI Driver Disk x2
		12	Setup Kit CD

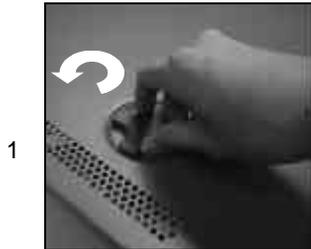
## R5110 Top View





*Step 2*

*Open Case*



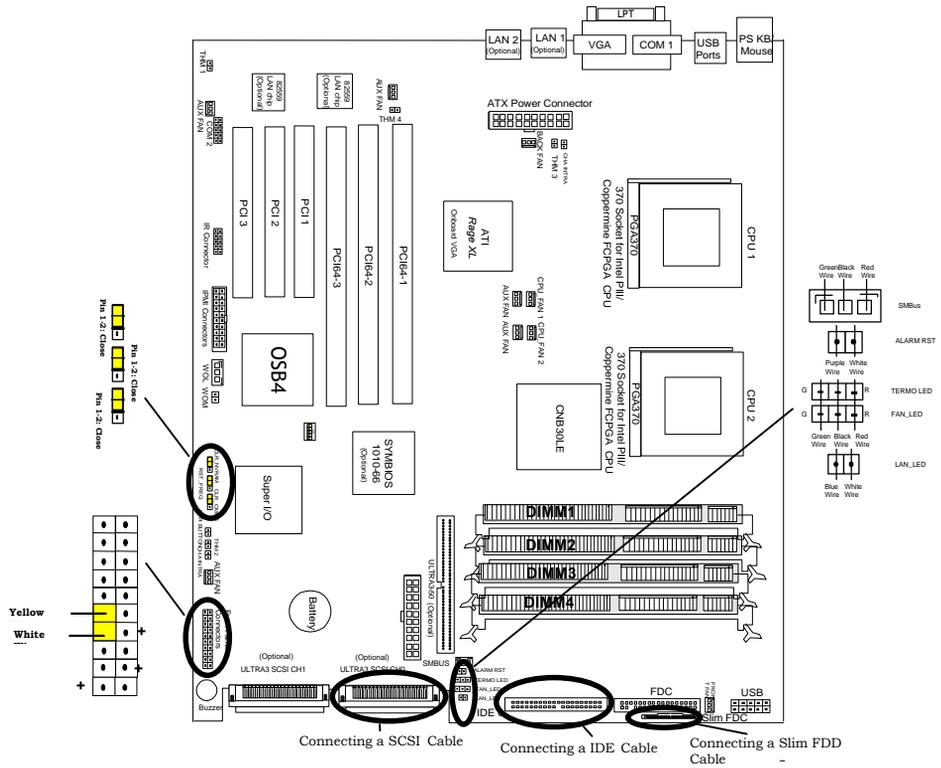
Rotate the handle and slider to up cover forwards to release



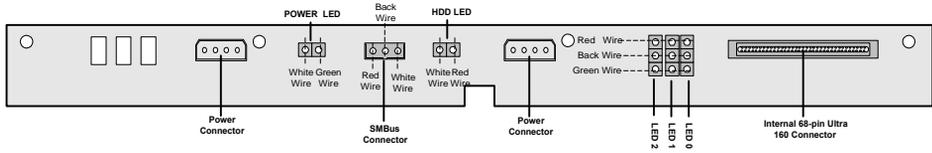
Lift and remove top cover

### Step 3

## Check the M/B/ Backplane default settings



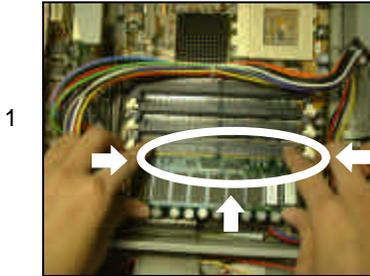
## The R510 Back-plane Board Connection



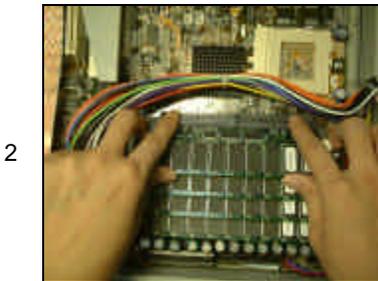
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## Step 4

### Install Memory Modules



Make sure the DIMM module's pin face down and match the socket's size. Insert the module down to the DIMM socket with both hands and press down firmly with 25 degree angle until the DIMM is securely in place



Continue the procedure 1 to install the rest memory modules.



### NOTE

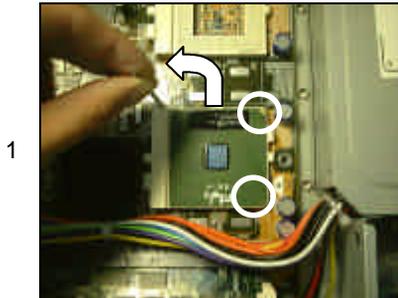
In order to make the SDRCM memory installing easier, RIOWORKS recommend a user following the memory socket installation sequence below

Total installed memory module(s)	Installation sequence
One	DIMM3
Two	DIMM3->DIMM2
Three	DIMM3->DIMM2->DIMM1
Four	DIMM3-> DIMM2->DIMM1->DIMM0

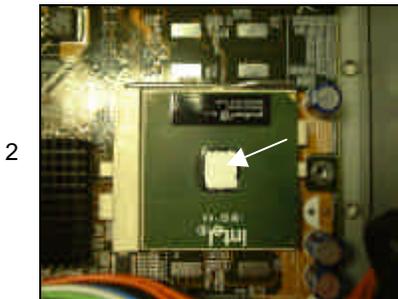
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## Step 5

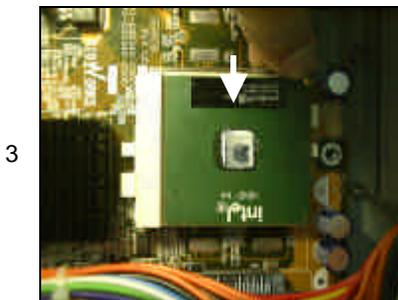
### *Install CPU*



Lift up the socket lever and carefully place one FC-PGA CPU with the correct orientation as the photo is shown on the left side.



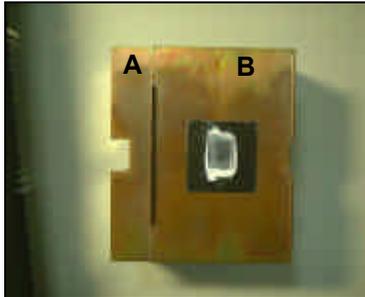
Spread good quality CPU epoxy on the metal part of the CPU.



Press the lever down until it is secured with a tab

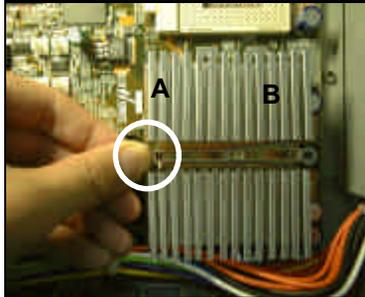
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4



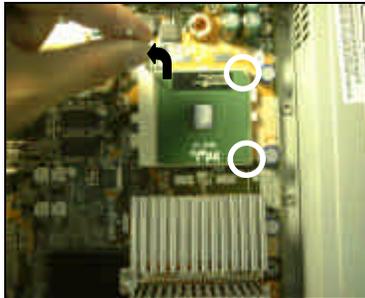
Take the **big one** heatsink (CPU2) from the accessory kit.

5

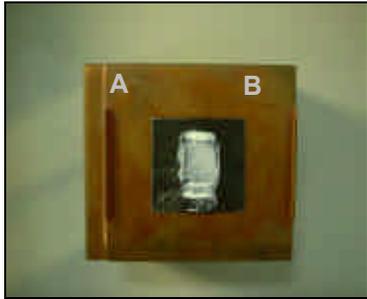


Put the CPU2 heatsink on the CPU socket named CPU2 with the correct orientation.(B side is close to the power supply) and secure it with the lock.

6

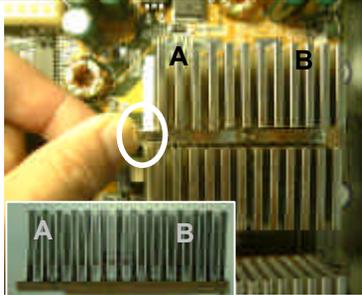


Lift up the other socket lever and carefully place one FC-PGA CPU with the correct orientation as the photo is shown on the left side.



7

Take the **small one** heatsink (CPU1) from the accessory kit.



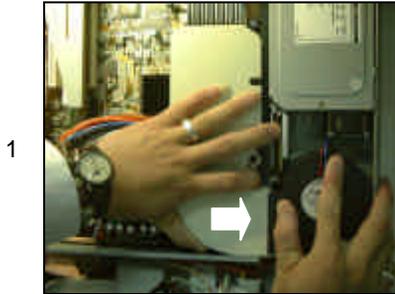
8

Put the CPU1 heatsink on the CPU socket named CPU1 with the correct orientation.(B side is close to the power supply) and secure it with the lock.

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## Step 6

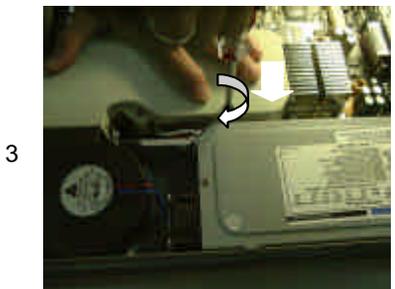
### *Install Fan Pipe*



Put the fan pipe into the open side of fan blower until fan pipe fully matched the fan blower.



At first, secure fan pipe with a screw.

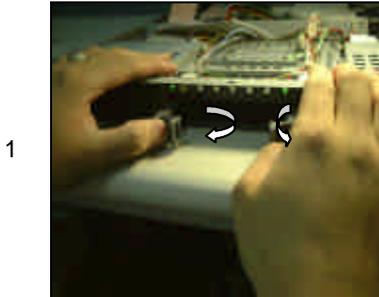


Then secure fan pipe with the other screw.

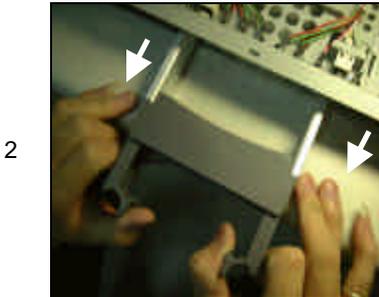


## Step 7

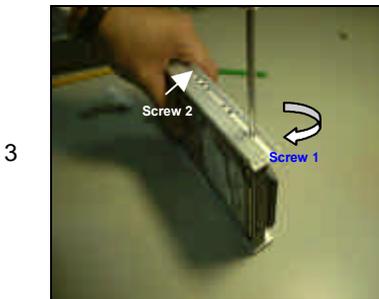
### *Install SCSI HDD*



Open HDD tray by moving the tabs outward



Then pull out the tray



Place a SCSI HDD (SCA type) into the tray and secure it with two screws in one side firstly.

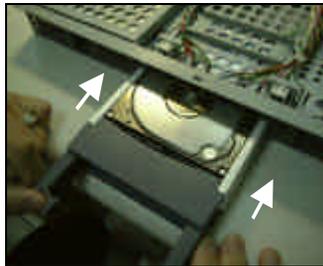
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4



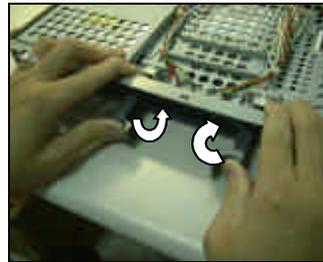
Secure it with the other two screws in the other side.

5



Slide the tray and back in close the tabs.

6

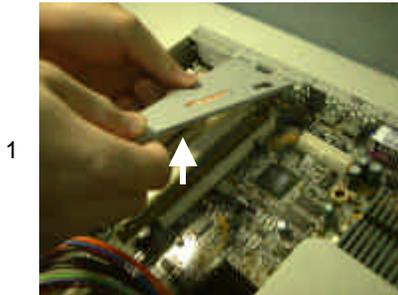


Make sure to push the tray all the way backward before closing the tabs.

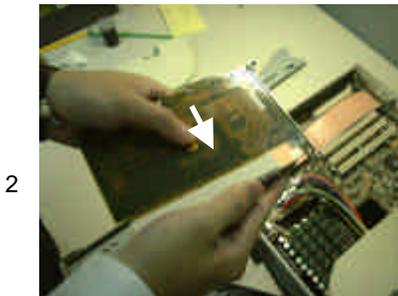
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## Step 8

### *Install an Add-on card*



Remove the riser card holder as indicated.



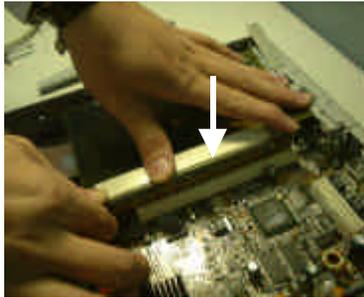
Install an add-on card as indicated.



Lift up the riser card fastener.

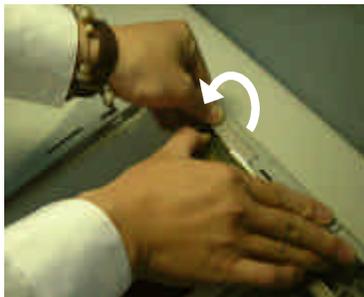
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4



Push the riser card with the add-on card into the PCI 1 slot.

5



Push the riser card fastener down to lock the riser card.

6



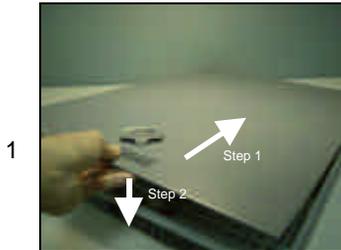
Push the riser card holder on the riser card as indicated.

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## Step 9

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## Close Case



Reinstall the top cover.



Rotate the handle and slide the top cover backwards.

