Chenbro

SR209/105/107
Tower&Rackable Server case

USER′S
GUIDE

Contents

Chapter 1

SR209/SR105/SR107
Server Case inside

1.1 Introduction

This document will guide you for Chenbro server cases- SR107, SR105, and SR209. They are designed to address the demand of performance and thermal management, and deliver user friendly mechanical design as well as configuration flexibilty on data storage.

Additinally, users are able to benefit from their rackable feature. The SR209 and SR105 can be racked by tray, while the SR107 supports rackmount solution of slide rails. The specification table below will let you have general ideas about these server cases.

Model Number	SR107	SR105	SR209
Dimension(mm)	620x220x425	533x198x425	465x198x425
M/B Size(max.)	12"x13"	12"x13"	12"x10.5"
5.25" Bay	3	3	3
3.5" Bay	1	1	0
HDD Trays	8	8	4
Backplane	Ultra 320 SCSI& Serial ATA		
Cooling fan	3x120mm	1x120mm, 92mm, 80mm	
Front USB	2	2	2
PSU Support	Single PS/2, N+1 Redundant		Single PS/2
Rackmount	by slide rail	by tray	by tray

1.2 Naming Rule

Due to market demand and segement, Chenbro coninutes to develop the new front bezels for these chassis body. With various front bezel, the product number will be different. So, to know the naming policy, it will help you to identify which model your are talking about.

The model number is composed by three parts. They are server case family code, chassis body, and front bezel serial number. The following example will explain this rule for you in detail.

Example: SR10769

SR : pedestal server case family code

107: 3 digits, chassis body

69 : 2 digits, front bezel serial number

When you go through this document, the model numbers SR107, SR105, and SR209 will be used to stand all front bezels not for specific one.

1.3 SR10769 Outline
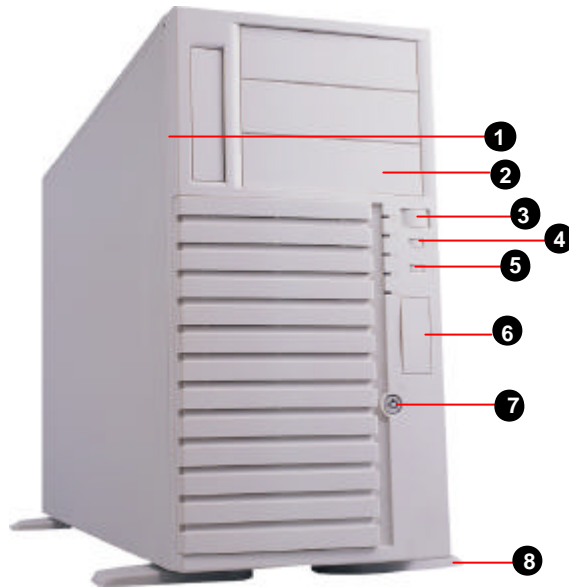
No.	Description
1	1x3.5"bay
2	3x5.25" bays
3	Power button
4	RESET button
5	Failure Alarm Mute
6	USB Cover
7	KeyLock
8	Foot Stand

Power ON LED

HDD activity LED

LAN1 activity LED

LAN2 activity LED

Fan Failure
&Overhet LED
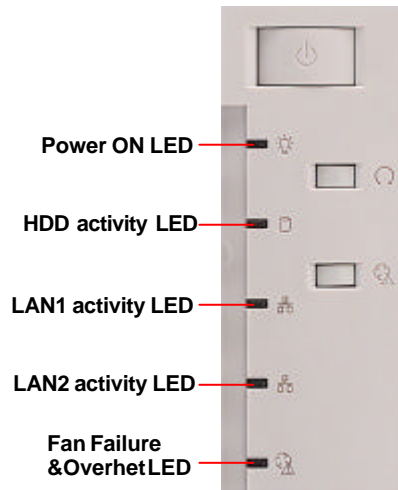
1.4 SR107 Front and Rear Views

Side Cover Thumbscrew

Optional 5.25″ to 3.5″ Bracket

5.25″ shielding Plates

3.5″ FDD Carrier

Optional Hotswap Cage and Non-Hotswap Cage

2 port USB Bracket

SR107 Front View

Changeable PSU Bracket for PS/2 or N+1 Redundant

Optional 120mm Rear Fan

Slot bracket with ventilation holes

Support Kensington Lock
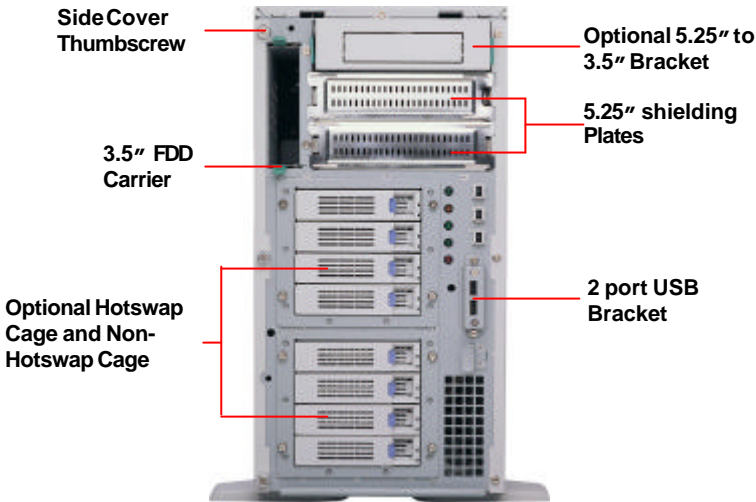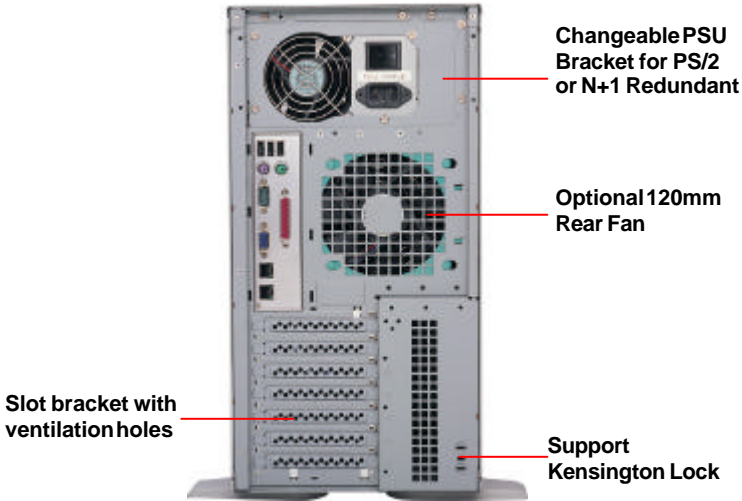
SR107 Rear View

1.5 SR107 Side View

Detachable top cover

**Optional
120mm T25
fans**

3 pairs slide rails

**Add-on card guide
and retainer**

**Optional SCSI and Serial
ATA blackplane**

Optional 92mm fan

Non-Hotswap Cage

**Hotswap Cage for SCSI and
Serial ATA backplane**
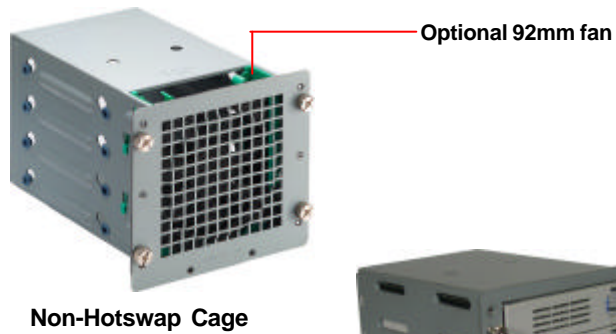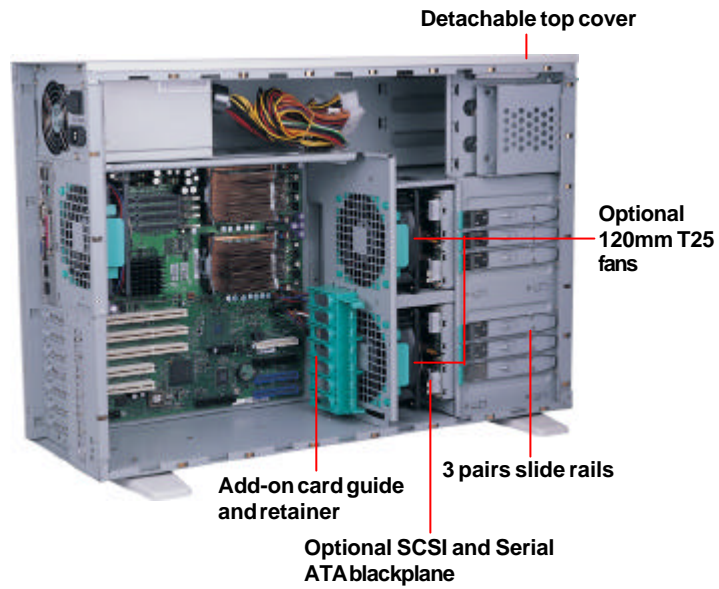
1.6 SR10569/SR20969 Outline
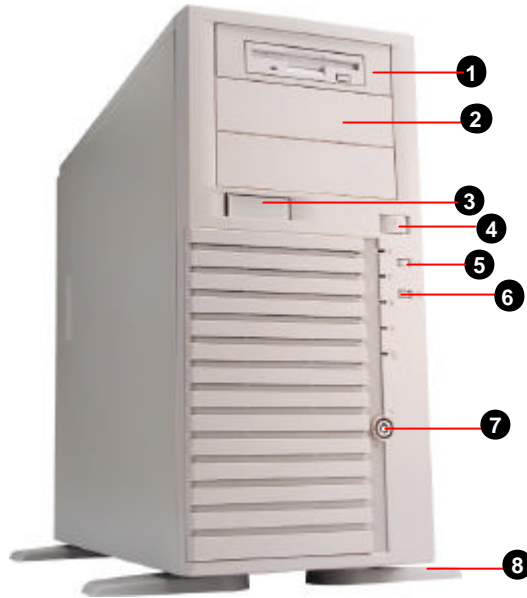
No.	Description
1	5.25" to 3.5' bracket
2	3x5.25" bays
3	USB Cover
4	Power button
5	RESET button
6	Alarm Mute
7	KeyLock
8	Foot Stand

Power ON LED

HDD activity LED

LAN1 activity LED

LAN2 activity LED

Fan Failure
&Overhet LED
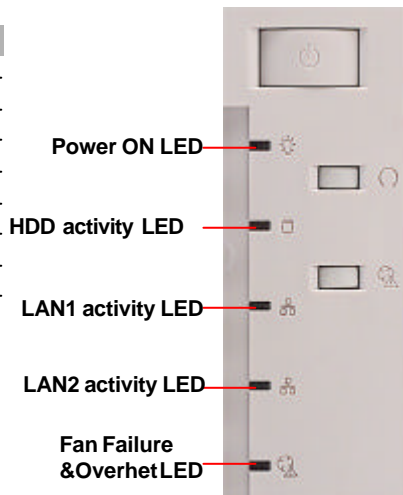
1.7 SR209 Front& Rear Views

Optional 5.25" to
3.5" Bracket

5.25" shielding
Plates

2 port USB
Bracket

Optional Hotswap
Cage and Non-
Hotswap Cage

Front ventilation
holes

SR209 Front View

Optional Single PS/2
ATX12V and EPS12V
PSU

Optional 120mm
Rear Fan

Slot bracket with
ventilation holes
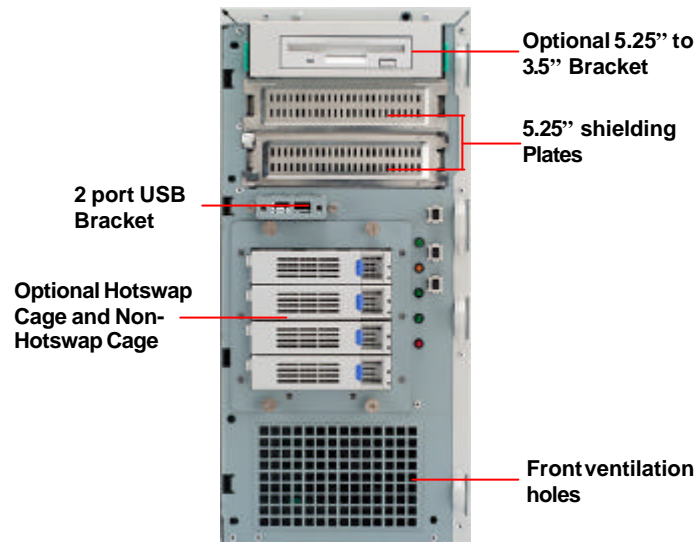
Support
Kensington Lock
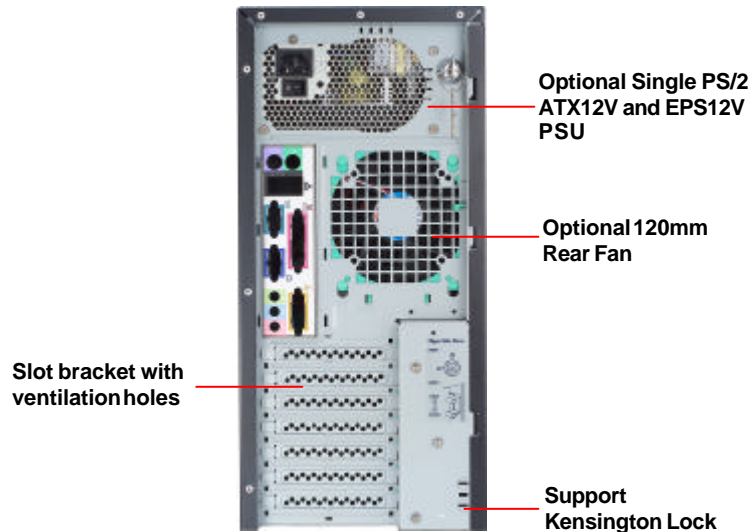
SR209 Rear View

1.8 SR209 Side Views
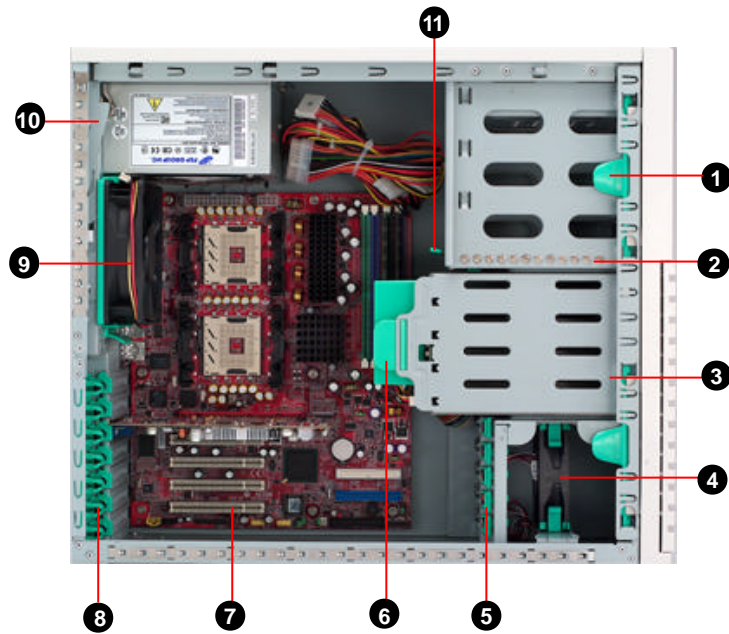
No.	Description
1	Easy bezel removal design
2	Screws for slide rail installation
3	HDD Cage
4	Optional 92mm fan
5	Add-on card retainer
6	80mm fan holder
7	Support M/B up to 12"x10.5"
8	Optional screwless holder
9	Optional 120mm rear fan
10	Side cover latch
11	6 pcs 5.25" slide rails

80mm fan holder

Hotswap Cage

optional 92mm fan

Non-Hotswap Cage

1.9 SR105 Front& Rear Views

Optional 5.25"
to 3.5" Bracket

5.25" shielding
Plates

2 port USB
Bracket

Optional Hotswap
Cage and Non-
Hotswap Cage

Front ventilation
holes

SR105 Front View

Side cover
thumbscrews

Optional Single
PS/2 or Mini-
Redundant PSU

Optional 120mm
Rear Fan

Slot bracket
with ventilation
holes
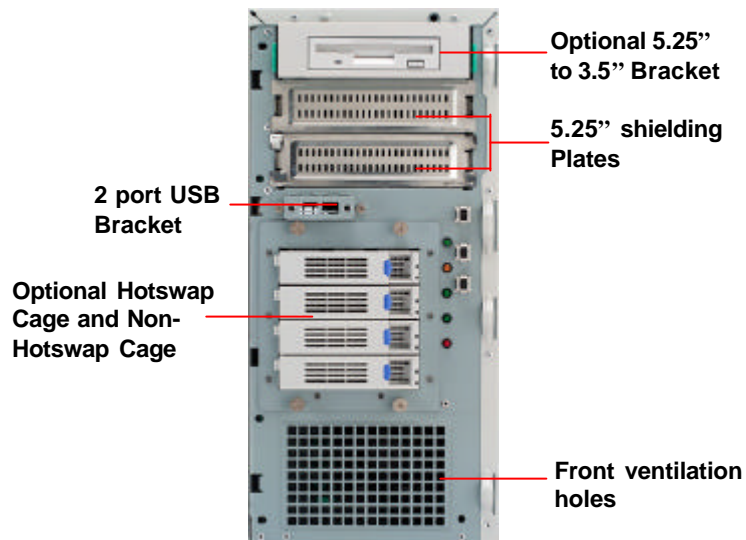
Support
Kensington Lock
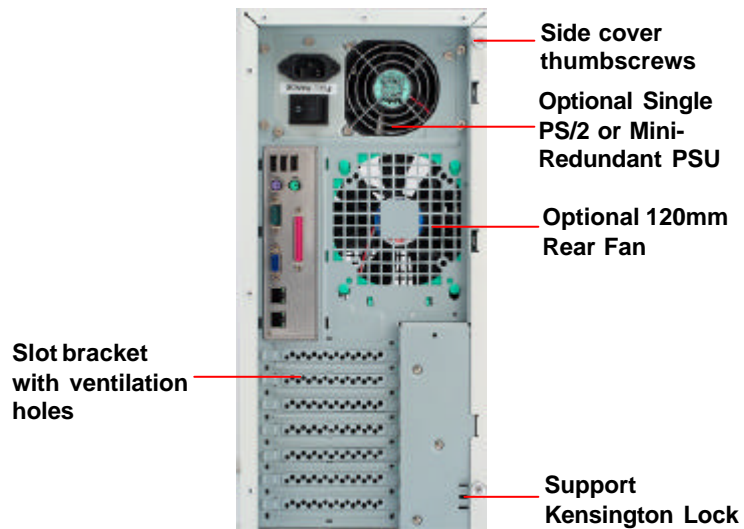
SR105 Rear View

1.10 SR105 Side View

80mm fan holder

Hotswap Cage

optional 92mm fan
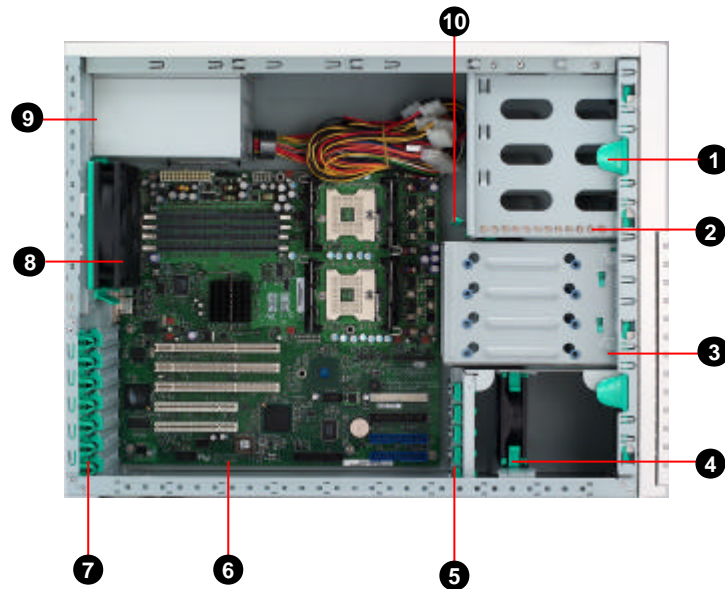
Non-Hotswap Cage

No.	Description
1	Easy bezel removal design
2	Screws for slide rail installation
3	Non-Hotswap HDD Cage
4	Optional 92mm fan
5	Add-on card retainer
6	Support 12" x13" server board
7	Optional screwless holder
8	Optional 120mm rear fan
9	Optional PS/2 or Mini-Redundant
10	6 pcs 5.25" slide rails

1.11 Front Panel Indicators

No.	LED	Status of LED colors
1	Power	Green, Power on
2	HDD Activity	Orange, Access IDE HDD
3	LAN1 Activity	Green/Cable connection
4	LAN2 Activity	Blinking green/LAN Activity
5	Overheat& Fan failure	Red, Fan Failure or HDD overheat

No.	LEDs	Color of Wires
1	Power	Green/Black
2	HDD Activity	RED/Black
3	LAN1 Activity	Orange/Black
4	LAN2 Activity	Yellow/Black
5	Overheat& Fan failure	Purple/Black, connect to backplane

Chapter 2

Ultra320 SCSI and Serial ATA backplanes

2.1 Serial ATA Backplane

I. Connectors Layout
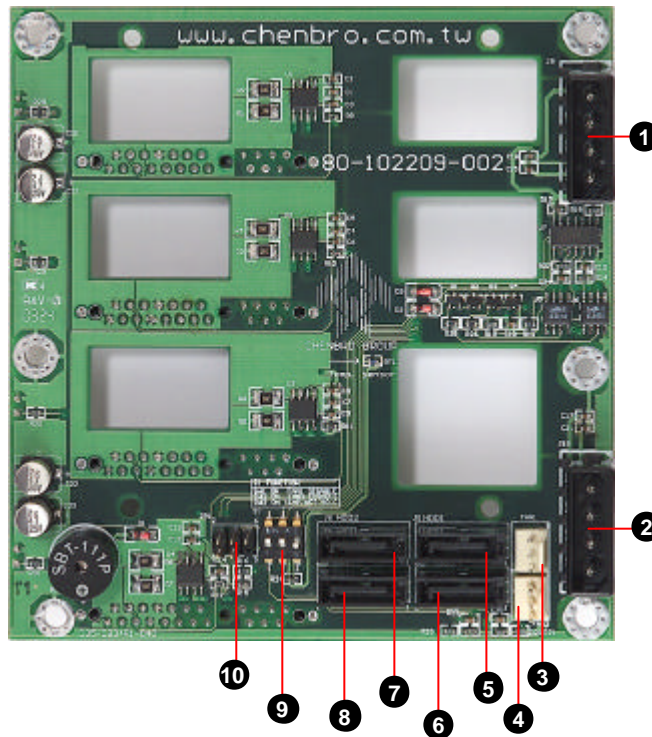
No.	Description
1	J9, 4pin DC Power Connector
2	J10, 4pin DC Power Connector
3	FAN1, 3P3C Fan Connector
4	FAN2, 3P3C Fan Connector
5	J5, 7P serial ATA Connector
6	J7, 7P serial ATA Connector
7	J6, 7P serial ATA Connector
8	J8, 7P serial ATA Connector
9	S1, Hardware Monitor switch
10	JP1, Front Panel Control Jumper

II. HDD Connnectors
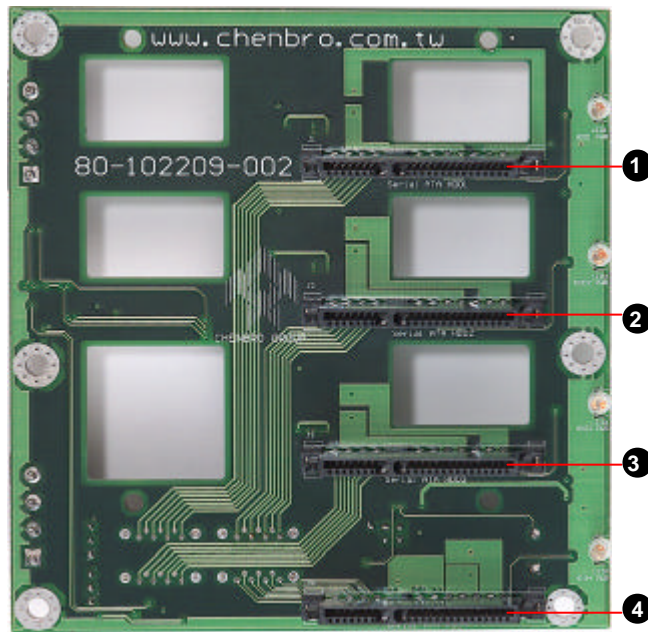
No.	Description
1	J1, serial ATA HDD1 connector
2	J2, serial ATA HDD2 connector
3	J3, serial ATA HDD3 connector
4	J4, serial ATA HDD4 connector

III. Jumper Settings

S1, Hardware Monitor Switch

ON

Position No.	Function	ON	OFF
1	FAN1 monitor	*Disable	Enable
2	FAN2 monitor	*Disable	Enable
3	Alarm Temperature	50	*60

JP1, Front Panel Control Jumper
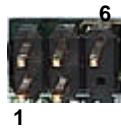
Pin No.	Function	Pin No.	Function
1	System Failure LED+	2	System Failure LED-
3	GND	4	Alarm Mute Switch+
5	N/A	6	Alarm Mute Switch-

Note: * Default Settings

2.2 Ultra320 SCSI Backplane, VER:1

I. Connectors& Jumpers Layout
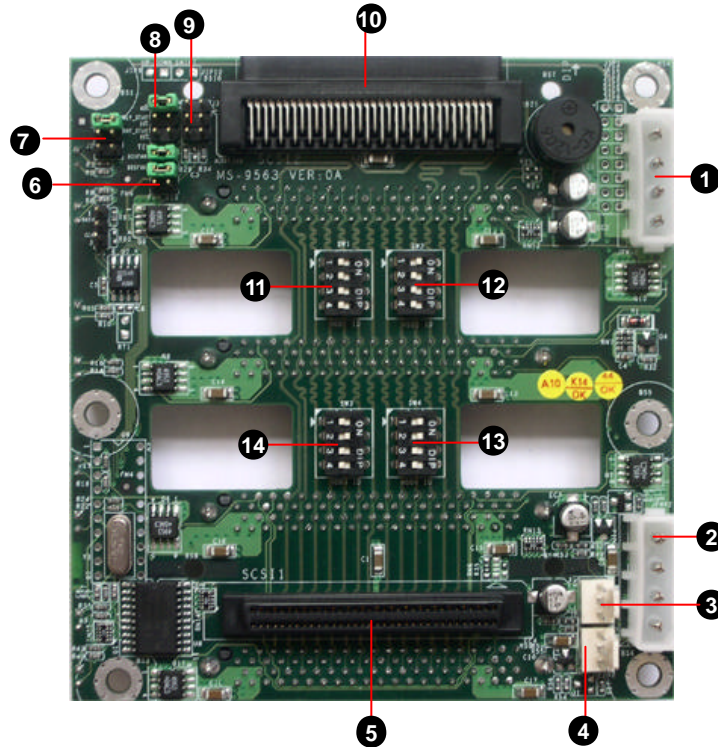
No.	Description	No.	Description
1	JPWR1,4-pin DC Power	8	TEMP_SET, Alarm Temperature
2	JPWR2,4-pin DC Power	9	J3, Front Panel Control
3	FAN1, 3P3C Connector	10	Terminator connector
4	FAN2, 3P3C Connector	11	SW1, HDD1 ID Swich
5	68-pin SCSI Connector	12	SW2, HDD2 ID Switch
6	FAN_DIS, FAN Monitor	13	SW3, HDD3 ID Switch
7	J2, HDD Motor Control	14	SW4, HDD4 ID Switch

NOTE:

This version doesn't support daisy chain feature, so the connector 10 is used for external SCSI terminator.

II. 80 pins SCA Connectors
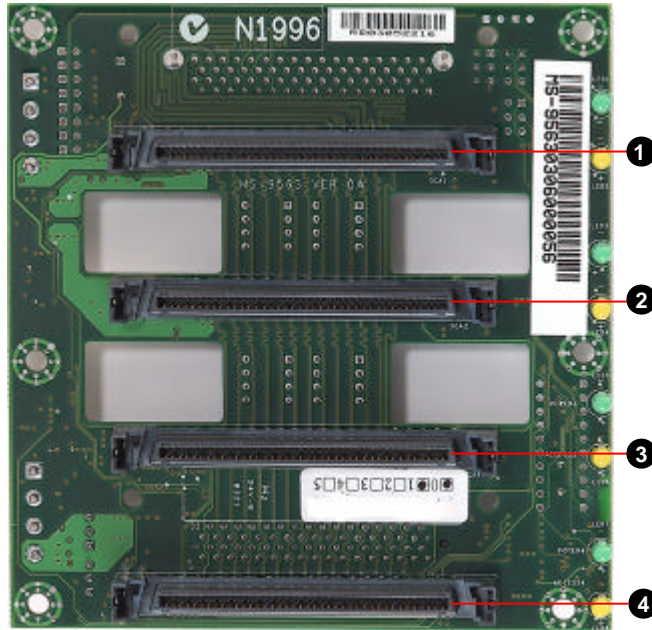
No.	Description	No.	Description
1	80-pin SCA Connector 1	3	80-pin SCA Connector 3
2	80-pin SCA Connector 2	4	80-pin SCA Connector 4

III. Jumper Settings

SCSI ID (SW1, SW2, SW3, SW4)

SCSI ID	P1	P2	P3	P4	SCSI ID	P1	P2	P3	P4
0	OFF	OFF	OFF	OFF	8	OFF	OFF	OFF	ON
1	ON	OFF	OFF	OFF	9	ON	OFF	OFF	ON
2	OFF	ON	OFF	OFF	10	OFF	ON	OFF	ON
3	ON	ON	OFF	OFF	11	ON	ON	OFF	ON
4	OFF	OFF	ON	OFF	12	OFF	OFF	ON	ON
5	ON	OFF	ON	OFF	13	ON	OFF	ON	ON
6	OFF	ON	ON	OFF	14	OFF	ON	ON	ON
7	ON	ON	ON	OFF	15	ON	ON	ON	ON

HDD Motor Control, J2

Operation Mode	P1-P2	P3-P4	P5-P6
Normal	OPEN	OPEN	SHORT
*DELAY START	SHORT	OPEN	OPEN
REMOTE START	OPEN	SHORT	OPEN

Normal: Motor spins up at D.C. power on.

DELAY START: Motor spins up at D.C. power on after a delay in seconds 12 times the value of the numeric SEL_ID for the SCSI devices.

REMOTE START: Motor spins up only when START UNIT command is received.

Alarm Temperature, TEMP_SET

Temperature	P1-P2	P3-P4	P5-P6
45	SHORT	OPEN	OPEN
*55	OPEN	SHORT	OPEN
65	OPEN	OPEN	SHORT

Note: * Default Settings

FAN Monitor function, FAN_DIS

Monitor Mode	FAN1(P1-P2)	FAN2(P3-P4)
*DISABLE	SHORT	SHORT
ENABLE	OPEN	OPEN

Front Panel Control,J3
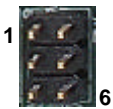
Pin No.	Description	Pin No.	Description
1	Alarm LED+	2	Alarm LED-
3	N/A	4	N/A
5	MUTE SWITCH	6	MUTE SWITCH

Chapter 3

Chassis Installation and Assembly

3.1 Open the front bezel of SR107

A keylock secures the front bezel to protect your system against unauthorized access:

(a). Insert the key into the security lock, and turn it clockwise until it points to the unlock icon as figure 3-1.

(b). Press two release button on top of front bezel, and the pull it toward yourself (Figure 3-2).

(c). Take off the front bezel from chassis body.

Figure 3-1

Figure 3-2

3.2 Open the front bezel of SR209/105

(a). Unlock the keylock on rear panel if necessary

(b). Remove the side cover as instrucions decribed in next section

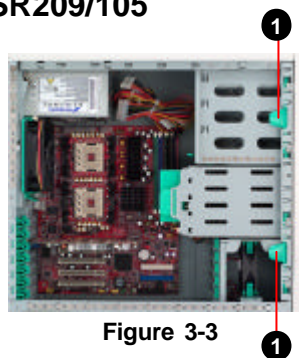(c). Swing the release lever(1) anticlockwise,and then take off it from chassis.

Figure 3-3

3.3 Removing the side cover

I. SR209 Side Cover

(a). Unlock the keylock(1) on rear panel.

(b). Push side cover latch(2) at upper position.

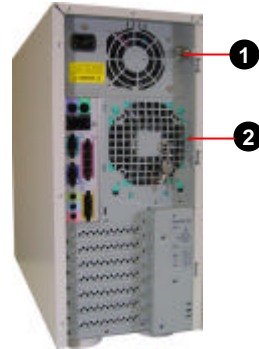(c). Slide the side cover backward, then upward before taking it off from the chassis body.

Figure 3-4

Figure 3-5

II. SR105 Side Cover

(a). Loosen the two thumbscrews(1) at end of side cover on rear panel.

(b). Slide the side cover backward, then upward before taking it off from the chassis body.

Figure 3-6

III. SR107 Side Cover

(a).Remove the front bezel.
Refer to the previous section
for detailed instructions.

(b).Loosen the three thumbscrews(1) of
side cover.

(c).Slide the side cover toward until it is
stopped(2), then upward before
taking it off from the chassis body.


Figure 3-7

Figure 3-8

3.4 Installing HDD and HDD Cage

I. Before start

There are two types of HDD drive cages equipped with SR209, SR105, and SR107, and exist a little bit differences for each product model. These differences are detailed as table below.

Hotswap Cage	SR209/SR105	SR107
80mm Fan Holder(1)	Support	N/A
Location of thumbscrews(2)	Up&down	Left& Right
Type of thumbscrews(3)	#6-32*D12	#6-32*D8

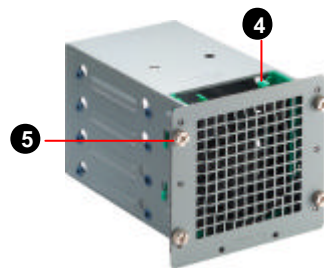| Non-hotswap Cage	SR209/SR105	SR107
92mm front fan(4)	Front	Front
Location of thumbscrews(5)	Up&down	Left& Right
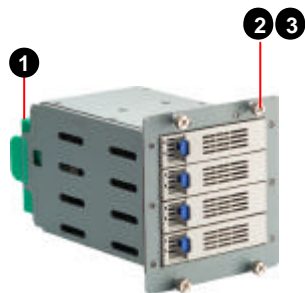
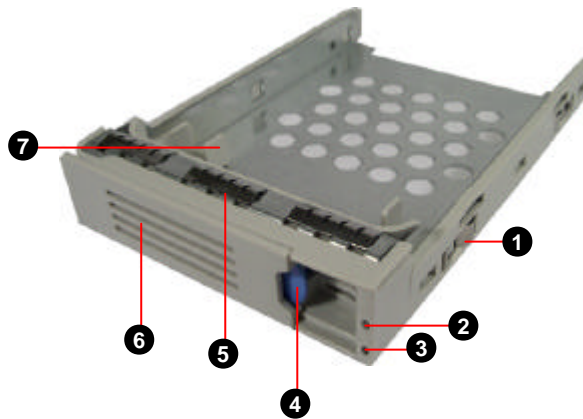SR209/105 Hotswap Cage   SR107 Hotswap Cage
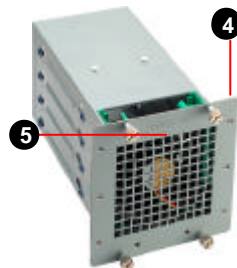
SR209/105 Non-Hotswap Cage   SR107 Non-Hotswap Cage

II. Know hard disk carrier

The hard disk carrier is used to hotswap cages of SR209, SR105, and SR107. The assembly parts are detailed as below picture.

No.	Description
1	Contact spring to chassis
2	HDD Power ON LED
3	HDD activity LED
4	Release button
5	Contact spring to upper carrier
6	Lever
7	Air dam

NOTE:

User could not fully install four HDDs to the hotswap cage. Under this situtation, the fresh air won′t flow over these installed hard drives, and cause bad cooling on them. The air dam is used to force fresh air going through them. Surely, if you want to install a HDD to a carrier, you have to remvoe air dam first.

III. Removing Hotswap or Non-Hotswap Cage

(a). Loosen the four thumbscrews, which secure the HDD cage to chassis body.

(b). Pull out the HDD cage slightly.

(c). Disconnect the SCSI, serial ATA, or power cables. If necessary, the SCSI terminator should be removed.

Figure 3-9

(d). Continute to pull out this HDD cage until it is totally out of drive bay.

Figure 3-10

IV. Installing a HDD to hard disk carrier

(a). Remove the air dam first.

(b). Install a HDD into hard disk carrier, and then secure it with the four screws you can find in screw bag.

Figure 3-11

(c). Insert the hard disk carrier into the Hot-swap cage with lever still extended.

(d). Push the lever back until it clicks into place.

Figure 3-11

V. Installing a 80mm fan to Hotswap cage

(a). Insert a 80/T25mm fan into fan holder. Please check if the direction of air flow is correct as Fingurexxx.

(b). Let these fan wires be holded by gap(1) of fan holder.

(c). Press the ears(2) to let them can hook the mouting holes of Hotswap cage.

(d). Align the position pins(3) of fan holder with four key holes(4) on backplane.

Figure 3-12

(e). Push toward to let the position pins into holes totally until you hear a crack sound.

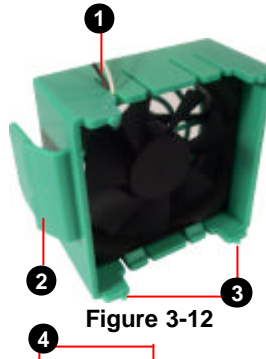**Figure 3-13**

VI. Installing a 92mm fan to Non-Hotswap cage

(a). Insert plastic holder clip(1) to both sides of cooling fan end-by-end.

(b). Insert the 92mm fan into Non-Hotswap cage or to slide rail of SR209/105 front fan as Figurexx.

(c). To remove it, you can press both ears(2), and then pull it out.

Figure 3-14

Figure 3-16

Figure 3-15

VII. Installing HDDs to Non-Hotswap Cage

(a). Find the special mounting
screws as Figure 3-17 in screw
bag.

(b). Put the HDD into drive cage, and
align with those mounting holes.

Figure 3-17

(c). Secure this HDD to drive cage
via the four specifc screws with
washers.

Note: Please have to use washer
with screw. Otherwise, that HDD
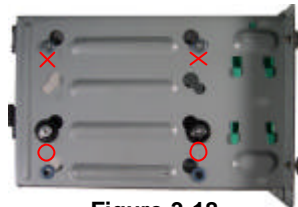won't be grounded with chassis.

Figure 3-18

VIII. Installing a drive cage into chassis

(a). Hold the drive cage with both
hands because it is very heavy
with four HDDs instalaltion.

(b). Insert the HDD cage into drive
bay, and then push it into more,
but still keep extended.

(c). For convenience of cabling, you
can connect all cables at this
status.

(d). Let the HDD cage to contact
chassis, and the secure it with
four thumbscrews

3.5 Installing the 120mm fan

The SR107 is designed to support three 120mm cooling fans with screwless fan holder. There are two fans in middle of chassis, and the other one is mounted on rear panel.

(a). Put a 120mm fan into hooks of fan holder (Figure 3-19)

(b). Press this 120mm fan to fan holder, and the four positioned pins have to insert into four mounting holes of 120mm fan around the frame.

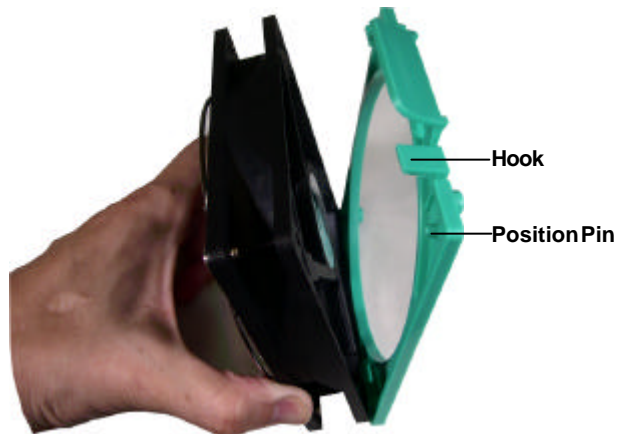(c). Please check if the four hooks of fan holder have exactly fastened this 120mm fan (Figure 3-20).

Hook

Position Pin

Figure 3-19

Figure 3-20

3.6 Installing a 120mm fan to chassis

(a). Install the 120mm fan to fan holder (Figure 3-21).

(b). Put the four hooks(1) into specified 120mm fan mouting holes(2) at rear panel or middle panels (Figure 3-23).

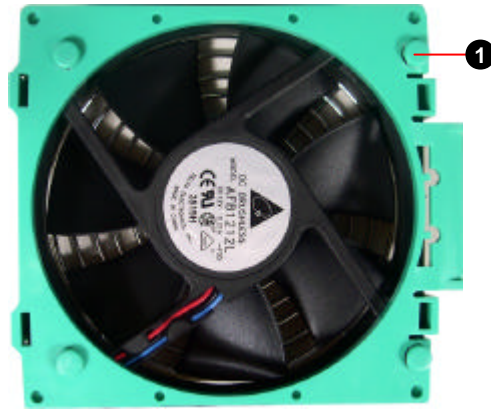**(c).**Slide it toward until you hear a crack sound.
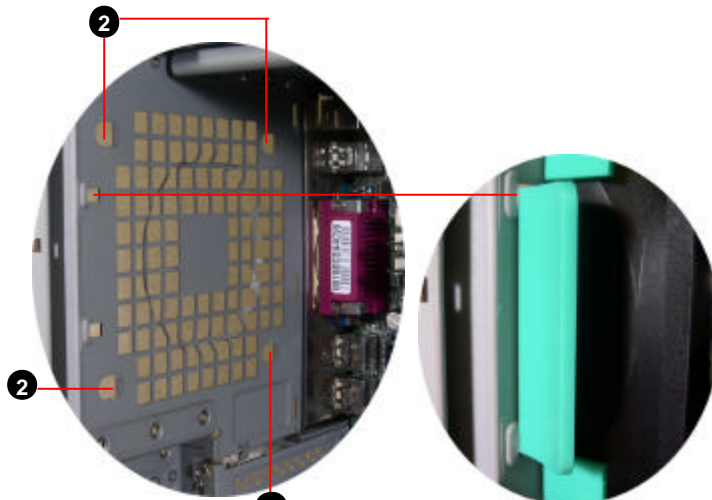

Figure 3-21

Figure 3-23

Figure 3-22

Revision: 1.0

3.7 Installing the floppy drive, SR107

(a). **Loosen two screws(1) fastened on side panel of the FDD carrier.**
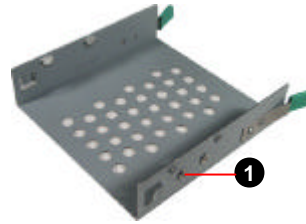
Figure 3-24

(b). **Insert the hooks, pointed by arrowed in Figure 3-25, into mounting holes of floppy drive.**

Figure 3-25

(c). **Push FDD down into the carrier, and then secure FDD with the two screws you have removed earier.**

Figure 3-26

(d). **Insert the drive carrier with FDD in the drive bay until you hear a crack sound.**

Figure 3-27

3.8 Installing the CD-ROM drive

(a). Take out a pair of slide rails from holder(SR209/SR105) or remove them from side panel of drive cage frame in SR107.

Figure 3-28

(b). Insert both guide pins, circled in Figurexxx, of slide rail in moutning holes of CD-ROM Drive, and then secure them with screws side by side.

(c). Insert the CD-ROM drive in the drive bay until you hear a crack sound.

Figure 3-29

Figure 3-30

3.9 Add-on card guide and Retainer, SR107

I. Detaching Add-on card retainer

(a). For convenience of instalaltion or cabling, user could want to remove the add-on card retainer.

(b). Push the release button on the top of add-on card holder, and then pull it out.

(c). Move it upward slightly, and then detach it totally from chassis body.

Figure 3-31

II. Releasing Add-on card retainer

(a). Press both releasers, pointed by arrows, and rotate toward right.

Figure 3-32

(b). The hold down clamp will be fixed at position as Figure 3-33.
User can install the full-size PCI card, which will be guided and fastened by this holder.

Figure 3-33