

Chenbro



ES34169

Chassis User Manual

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Chenbro works hard to offer our customers maximum performance from our chassis. But in case you have any problem with our product you can find supports from the following resources.

Web Support

Detail information of our products is in our website. You can find technical updates, installation guides, FAQs, Technical specifications and more. Our web address is: www.chenbro.com.

Email Support

You can also fill out the technical support form at our [Technical Support](#) page. Your technical issue inquiries will be sent directly to our support professionals.

Phone Support

You can also contact Chenbro HQ or branch office for immediate support; contact Information is as following:

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Packing List

ES34169 Chassis

<i>Item</i>	<i>Q'ty</i>	<i>Remark</i>
Chassis	1	
3.5" HDD tray	4	
2-port SAS / SATA-II backplane	2	
70x15 mm rear fan	2	
SATA-II cable, 440 mm	4	
120 watts internal PSU	1	
Screw pack for motherboard	1	
Screw pack for HDD	1	
USB 2.0 cable	1	
Key, front door	1	

Optional Items

<i>Item</i>	<i>Part #</i>	<i>Remark</i>
Power Cord, Europe	34H032100-011	
Power Cord, USA Japan	34H013100-013	
Power Cord, Australia	34H023100-006	
Power Cord, UK	34H043100-005	
Heatsink, for AMD / intel Socket	66H084534-001	Special size = 45mm
Riser Card, PCI 32-bit	80H094340-001	
4-in-1 card reader	83H554534-002	SD / Mini-SD / MMC / MCS
4-in-1 card reader bracket	83H554534-004	
Slim ODD adapter, IDE	84H453410-021	
Slim ODD adapter, SATA	84H453410-022	
60x15 mm fan	30H060015-103	

Features

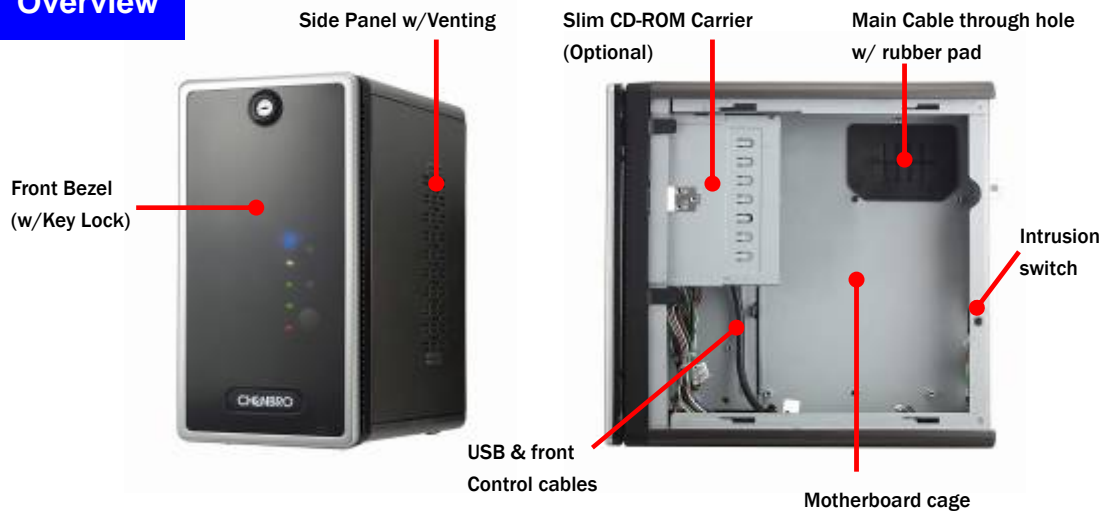
- 120 watts internal power supply
- Ideal for high storage capacity (Hot-swap HDDs) with RAID-5 functionality
- Available for multi-media platform
- 9.5 liters small form factor with Mini-ITX M/B
- Removable M/B carrier for excellent thermal performance & easy cabling
- External adapter reduces noise level
- Optional remote control & riser card

Technical Specifications

Model Name	◆ES34169			
M/B Form Factor	◆Mini-ITX			
Dimension (DxWxH)	◆260mm x140mm x260mm ◆10.24" x 5.51" x 10.24"			
Drive Bay	◆Hot-swap: 3.5" x4 ◆Internal: 2.5" x1 (optional) ◆Slim ODD: 1 (optional)			
PSU	◆Form Factor: External Adapter 120 W			
Indicator LEDs	◆Power, HDD Activity, LAN x2, Fault			
Front Control	◆Power, Reset & Alarm Mute Switches			
Front Access	◆USB 2.0 x2 ◆SD/Mini-SD/MMC/MS Card Reader (optional)			
Security	◆Kensington Lock & Padlock Loop			
Cooling Fan	◆Front: 60mm (optional) ◆Rear: 70x15mm x2			
Slot Opening	◆Low Profile x1			
Material	◆SECC			
Plastic Material Type	◆ABS-HB			
Sheet Metal Thickness	◆0.7 mm			
Net Weight	◆4.9 Kgs			
Gross Weight	◆5.9 Kgs			
Backplane	◆SATA-II / SAS			
Container Info.		20'	40'	40'H
	◆Single Packing	672	1344	1512

Opening the Chassis

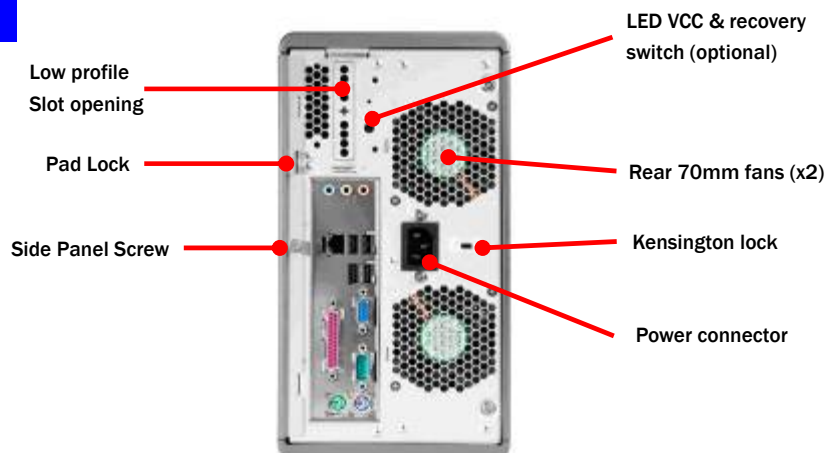
Overview



Front



Back



To open the chassis for assembly of internal parts, users need to:

- Remove the side panel and front bezel

Side Panel Removal

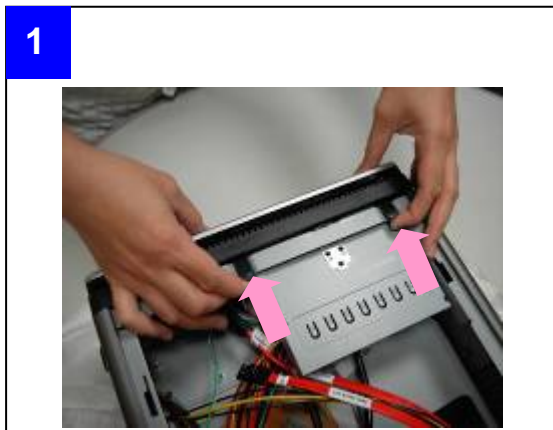


- Release the side panel thumb screw on the rear

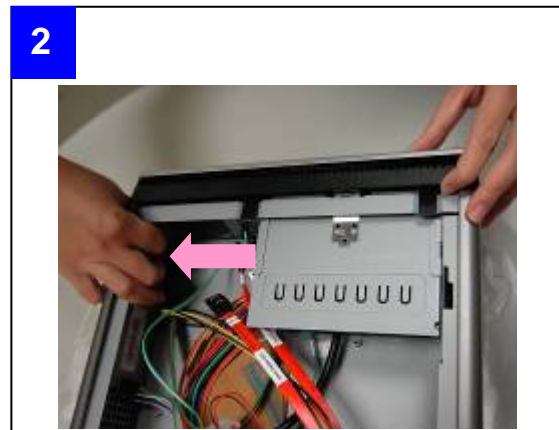


- Push and slide the side panel toward rear to open the chassis

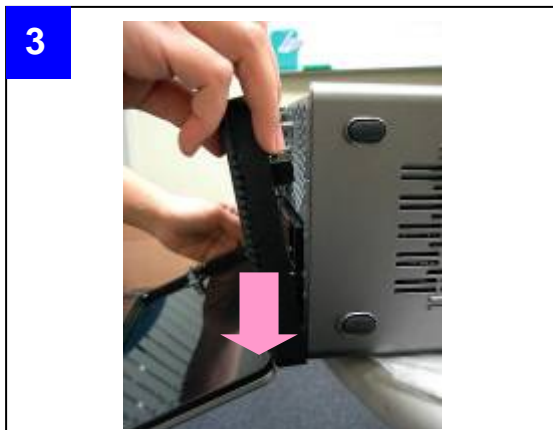
Front Bezel Removal



- Lift up the latch along the side to detach the bezel



- Detach the bezel from Slim ODD side gently



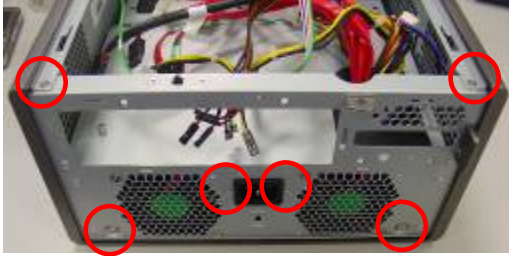
- Angle the latch until it is 15 degree away from the chassis



- gently pull the bezel to make it detach

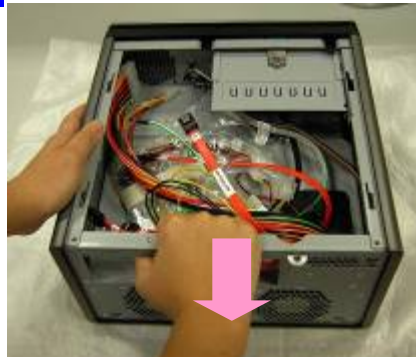
Motherboard Cage Removal

1



■ Release 6 secure screws on the M/B cage

2



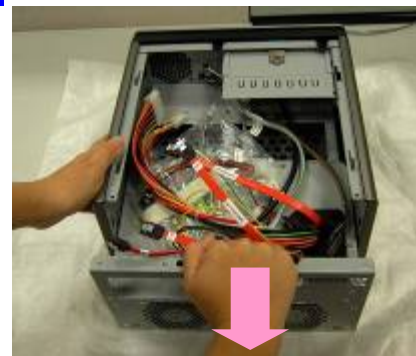
■ Remove the motherboard cage

3



■ Disconnect the extension fan cables

4



■ Detach the motherboard cage with System Cables (SATA, Power, Fan cables) through the cable routing hole

5



■ Finish detaching the M/B cage and make sure all the connection on backplane and PDB are still tight before assembly back the M/B cage

Devices Installation

Optional Parts:

- Slim Optical Drive
- 3.5" HDD
- 4-in-1 Card Reader
- Riser Card
- 2.5" HDD

Installing Slim Optical Drive (Slim ODD)

Before install the slim ODD, the front bezel must be removed. The slim ODD carrier should be apart from the chassis.

1

- Assemble the adapter board with attached screws onto Slim ODD

2

- Make sure the Slim ODD is fully seated with holder clip on the side.

3

- Slide the assembled ODD into chassis

4

- Make sure the holder latch is secured when fully seated

Installing 3.5" SATA-II Hard Drive

1



- Remove the HDD Carrier from the chassis and place the SATA-II HDD into it.

2



- Attach the HDD screws on both sides

3



- Slide in the assembled HDD into the chassis, suggest install by the ID definition on the front panel (No need to remove the front bezel)

4



- Make sure the carrier is fully seated

Installing Card Reader

1



- Detach the front screw of Card Reader holder

2



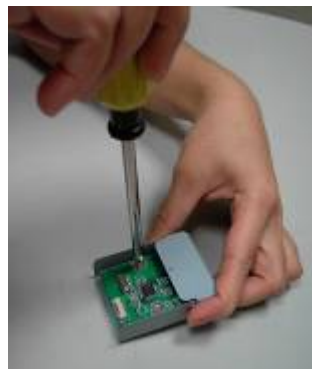
- Pull out the Card Reader holder

3



- Remove the seal on the holder and make sure the sockets is right to the opening

4



- Attach screws to fix the Card Reader

5



- Connect the short end of USB split cable to Card Reader

6



- Install the assembled Card Reader back to the chassis with screw

7



- connect cable to USB port on M/B

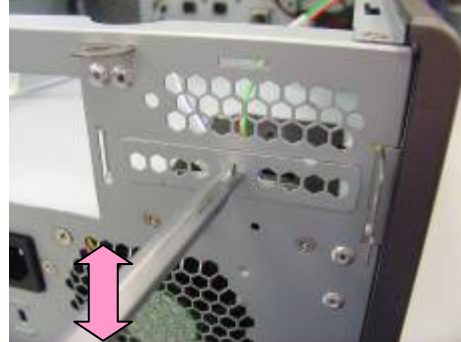
Installing Riser Card

1



■ Remove the cap on slot holder

2



■ Detach the low profile slot bracket from rear window

3



■ Assemble riser and low profile add-on card

4



■ Connect the cables before install.

5



■ Install the riser card onto motherboard.
(Please pay attention to the cable arrangement)

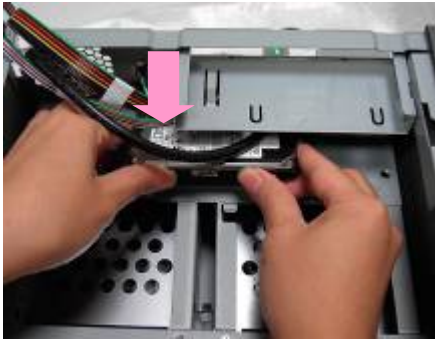
6



■ Attach screws on the rear side to secure the PCI card

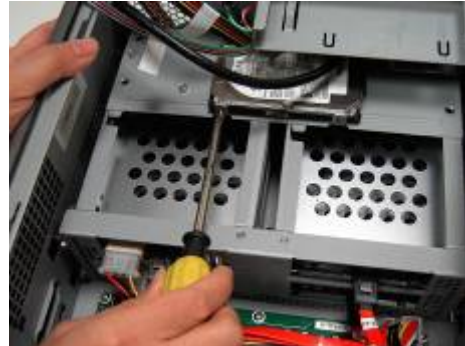
Installing 2.5" HDD

1



■ Place 2.5" HDD underneath the Slim ODD

2



■ Fix the 2.5" HDD with attached screws

Note: To install 2.5" HDD, disassemble the M/B cage is required.

Connecting Devices

- Four SATA-II cables for Hot-swap hard drive (HDD)
- Power cables for M/B
- Front panel I/O cables
- USB 2.0 cable

Connecting SATA-II Cables

1



■ Check the bundled cable with number tag

2



■ Connect the SATA cables to the M/B properly

Note: If there is no enough SATA port on M/B, users can either remove or keep the bundled P3/P4 SATA cable.

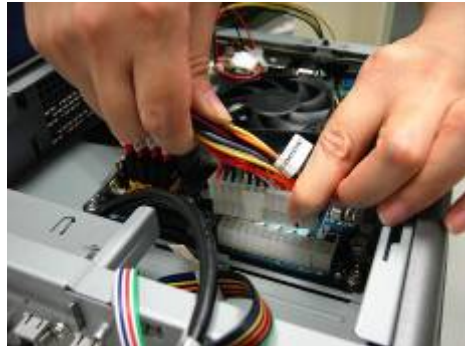
Connecting Power Cables

1



- The DC harness comes with 20+4 pin as main connection for different M/B requirement.

2



- Install and secure the DC harness cable to the M/B properly

Connecting Front Panel I/O, LED and Slim ODD Cables

a. USB 2.0 cable connection

1



- Front USB cable should be connected to on-board USB header properly depends on different M/B.

b. Front display cable connection**1**

- The cable with different connection for:
Power on, HDD, LAN, FAIL and the front switch

2

- Connect to the M/B according to the M/B pin header definition properly.

c. Slim ODD cable connection**1**

- Use power split cable in accessory pack for conversion of DC harness, small 4P is connected to the Slim ODD adaptor board

2

- Use either standard IDE / SATA cable from 3rd party M/B, or use optional cable from Chenbro to connect to the Slim ODD adaptor board

d. Cable management**1**

- Due to limited space inside the chassis, make sure all cable are connected properly and use the cable tie through the bridge land on side wall

2

- Tie up the cable so the cables are fixed in certain space.

Power Supply

Specification:

Input Characteristics		Output Characteristics	
Item	Spec	Item	Spec
Rated Input Voltage	115 V ~ 230 Vrms	Output Voltage	3.3 V, 5 V, 12 V
Input Voltage Range	90 ~ 264 Vrms	Efficiency	80 %
Input Frequency Range	47 Hz ~ 63 Hz		

Protection:

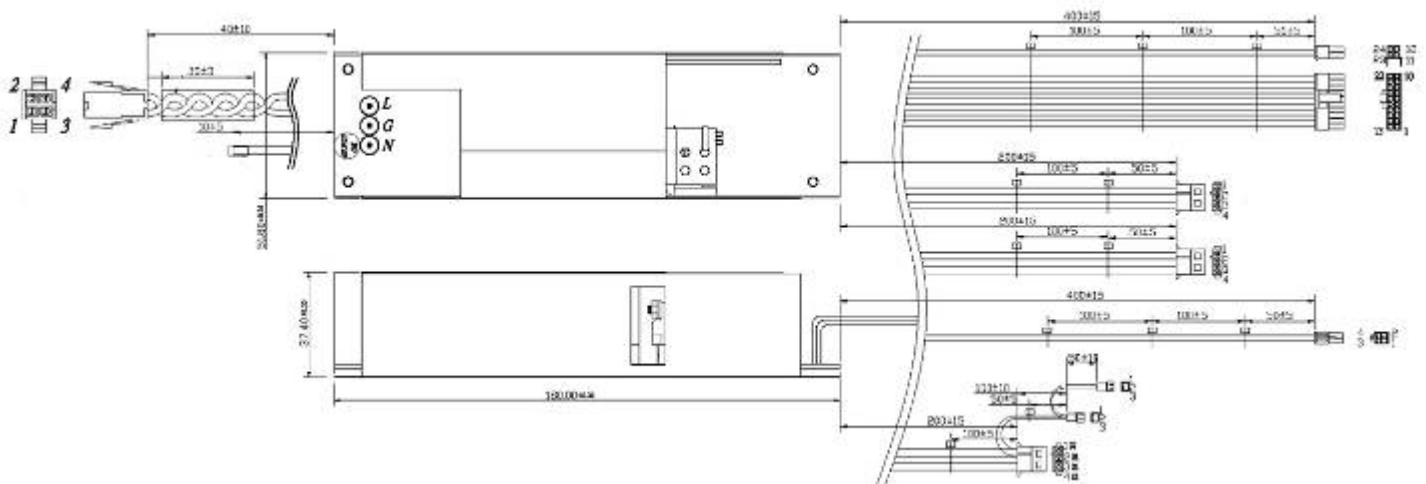
- Over-Voltage Protection
- Short Circuit Protection
- No Load Operation
- Reset After Shutdown
- Input Over Current Protection

Environmental Requirements:

- Temperature: -10 ~ 50 °C @ Operating; -40 ~ 70 °C @ Non-operating
- Humidity: 5% ~ 90% @ Operating; 5% ~ 90% @ Non-operating

Mechanical Dimension:

50 mm * 35 mm * 183.7 mm



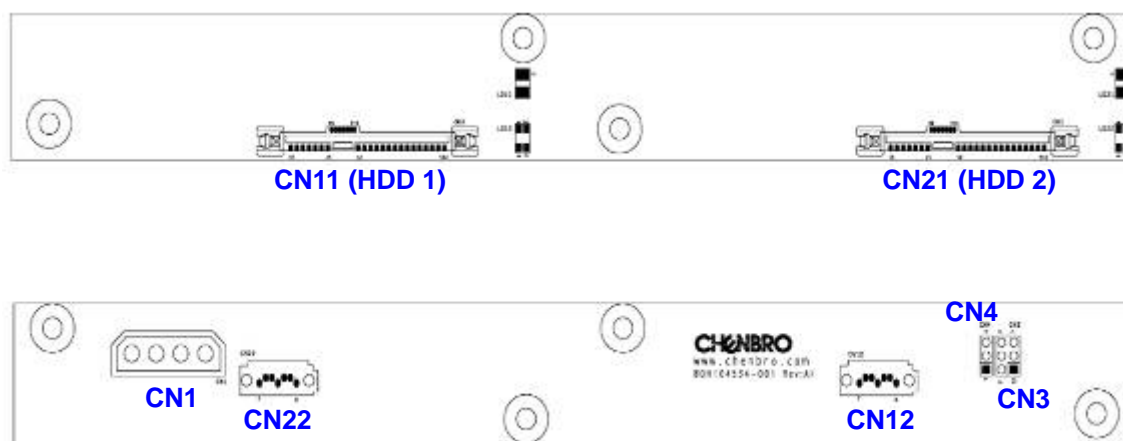
2-port SATA-II Backplane

ES34169 is integrated with two SATA-II backplanes to support four 3.5" HDD with hot-swap feature.

Hardware Specification:

Part Number	80H104534-001 Rev. A1
Host Interface	SATA 7-pin compatible
HDD Interface	SAS (22+7), SATA-II compatible
Hot-Swap	Yes, allows user to on line replace Hard Disk Drive
Connectors	1. SATA-II x2 (to Host) 2. SAS (22+7) x2 (for HDD) 3. Standard 4P Power connector x 1 for +5V, +12V from power supply
Dimension	232(L) x 27.4(W) x 1.6(T) mm

Backplane Connectors

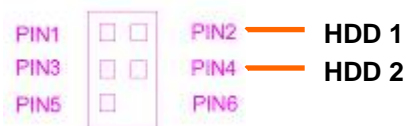


(1) [CN11/CN21] : "22+7" pin SAS Connectors to HDD

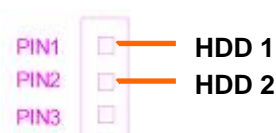
(2) [CN22/CN12] : SATA Connectors to Host

(3) [CN1] : 4-pin Power Connector

(4) [CN3] : HDD Access LED Signal Pin Header



(5) [CN4] : HDD Failure LED Signal Pin Header



Connecting Pin 1 & 2 to the CATHODE of the HDD failure connector on RAID card. Refer to the RAID card's user manual for the detail pin definition.