



RSC-3ETS

Rackmount Chassis User's Manual

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Preface

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Changes

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Warning

1. A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.
2. Use only shielded cables to connect I/O devices to this equipment.
3. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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Instruction Symbols

Special attention should be given to the instruction symbols below.



NOTE

This symbol indicates that there is an explanatory or supplementary instruction.



CAUTION

This symbol denotes possible hardware impairment. Upmost precaution must be taken to prevent serious hardware damage.



WARNING

This symbol serves as a warning alert for potential body injury. The user may suffer possible injury from disregard or lack of attention.

Safety Instructions

Before you commence, please attentively read the following important discretions below. All cautions and warnings on the equipment or in the manuals should be circumspectly noted and reviewed.

Always ground yourself to prevent static electricity.

請全程接地，以防止靜電。

请全程接地，以防止静电。

Всегда заземляйте себя, чтобы избежать статического электричества.

Aard jezelf altijd om statische elektriciteit te voorkomen.

- Firmly ground yourself at all times when installing or assembling the internal components of the server. Most of electronic components in the server are highly sensitive to electrical static discharge.
- Use a solid grounding wrist strap and distintively place all electronic components in static-shielded devices to prevent static. Grounding wrist straps can be purchased in any electronic supply store.
- Confirm that the power source is turned off and then disconnect the power cords from your system before performing any type of installation or manual servicing. A sudden surge of power could serverly damage the sensitive electronic components.
- Do not precipitously open the system's top cover. If you must open the cover for maintenance purposes, only a trained technician should be allowed to proceed this action. Integrated circuits on computer boards are highly sensitive to static electricity. Before operating a board or integrated circuit, touch an unpainted portion of the system unit chassis for a couple of seconds to discharge any static electricity on your body.

Place the server in a stable environment.

請將伺服器放置在穩定的環境中。

请将伺服器放置在稳定的环境中。

Поместите сервер в стабильную среду.

Plaats de server in een stabiele omgeving.

- Place this equipment on a stable surface when installing. A small mild drop or fall could cause fatal injury to both the equipment and the person handling the equipment.
- Please keep this equipment away from humidity to prevent vast rust and disintergration.
- Carefully and accurately mount the equipment into the rack. Uneven mechanical loading may lead to hazadous consequences.
- This equipment is to be installed for operation in an environment with maximum ambient temperature below 35°C.
- Review the environment before performing any installation or servicing. Keep the equipment away from hazardous and uneven grounds.
- This server must be installed only in Restricted Access Locations.

Handle equipment with care.

請謹慎操作設備。

请谨慎操作设备。

Обращайтесь с оборудованием осторожно.

Behandel de apparatuur voorzichtig.

- Do not cover the openings of the system. The openings on the system are for air convection, which intentionally protect the equipment from overheating.
- Never pour any liquid into ventilation openings of the system. This could cause catastrophic fire or electrical shock.

- Ensure that the voltage of the power source is within the specification on the label when connecting the equipment to the power outlet. The current load and output power of loads must be within the specification.
- This equipment must be firmly connected to reliable grounding before usage. Pay special attention to power supplied other than direct connections, e.g. using of power strips.
- Place the power cord out of the way of foot traffic. Do not place anything over the power cord. The power cord must be rated for the product, voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.

Pay attention to hardware maintenance.

注意硬體維護。

注意硬体维护。

Обратите внимание на обслуживание оборудования.

Besteed aandacht aan hardware-onderhoud.

- If the equipment is not used for a long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
- Module and drive bays must not be empty. They must have a dummy cover.
- Never open the equipment without professional assistance. For safety reasons, only qualified service personnel should open the equipment.
- If one of the following situations arise, the equipment should be checked and tested by service personnel:
 1. The power cord or plug is damaged.
 2. Liquid has penetrated the equipment.
 3. The equipment has been exposed to moisture.
 4. The equipment does not work well or will not work according to its user manual.
 5. The equipment has been dropped and/or damaged.
 6. The equipment has obvious signs of breakage.
 7. Please disconnect this equipment from the AC outlet before cleaning. Do not use liquid or detergent for cleaning. The use of a moisture sheet or cloth is recommended for cleaning.



CAUTION

The equipment intended for installation should be placed in Restricted Access Location.



CAUTION

There will be a risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions. After performing any installation or servicing, make sure the enclosure is correct in position before turning on the power.



CAUTION

This unit may have more than one power supply. Disconnect all power sources before maintenance to avoid electric shock.



About This Manual

Thank you for selecting and purchasing RSC-3ETS.

This user's manual is provided for professional technicians to perform easy hardware setup, basic system configurations, and quick software startup. This document pellucidly presents a brief overview of the product design, device installation, and firmware settings for 3ETS Rackmount Chassis. For the latest version of this user's manual, please refer to the AIC® website: <https://www.aicipc.com/en/productdetail/448>.

Chapter 1 Product Features

This chapter delivers the overall layout of the product, including the fundamental components of the rackmount chassis, design specifications, and noteworthy features.

Chapter 2 Hardware Setup

This chapter displays an easy installation guide for assembling the chassis. Utmost caution for proceeding to set up the hardware is highly advised.

Chapter 3 Hardware Specifications

This chapter elaborates the overall layout of the hardware design, including multifarious connectors, jumpers, and LED descriptions.

Chapter 4 Technical Support

For more information or suggestion, please contact the nearest AIC® corporation representative in your district or visit the AIC® website: <https://www.aicipc.com/en/index>. It is our greatest honor to provide the best service for our customers.

Chapter 1. Product Features

RSC-3ETS is a flexible rackmount storage chassis with tool-less design. This product supports hot swappable HDDs and easy swap fans. For more information about our product, please visit our website at <https://www.aicipc.com/en/index>.

Before removing the subsystem from the shipping carton, visually inspect the physical condition of the shipping carton. Exterior damage to the shipping carton may indicate that the contents of the carton are damaged. If any damage is found, do not remove the components; contact the dealer where the subsystem was purchased for further instructions. Before continuing, first unpack the subsystem and verify that the number of components in the shipping carton is accurate and in good condition.

1.1 Components

This product contains the components listed below.

Please confirm the number and the condition of the components before installation.

- Chasis (includes power supply, fan & hard disk drive tray)
- Power cord (vary per region)
- Slide rail x 1 set (optional)

Product specifications and features are subject to change without prior notice.

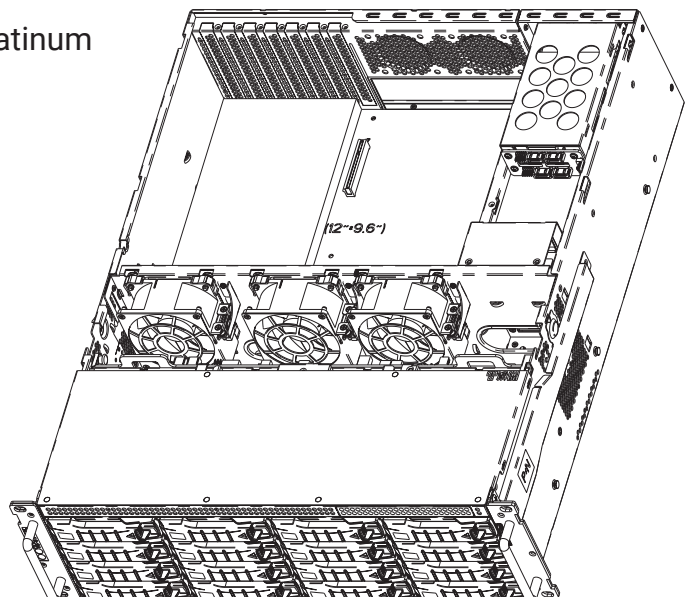
1.2 Specifications

Dimensions (W x D x H)	mm : 430 x 560 x 133		
	inches : 17 x 22 x 5.2		
Industry Standard	EIA-RS310D		
Material	Heavy-duty preplated SPGC cold-rolled steel		
Color	Front Panel : Black		
Cooling	3 x 80x38mm PWM & low-power consumption hot swap fans		
Power Supply	800W 1+1 redundant PSU PMBus 1.2 80+ Platinum		
Expansion Slots	7		
Front Panel	System power on/off, System reset and 2 x USB 3.0 ports		
LED Indicators	Power, LAN, Drive and Alert		
System Board	12"(W) x 9.6"(D) ATX		
Drive Bays	External	3.5" hot swap	16
	Internal	2.5"	Options : • 5 x 2.5" internal • 4 x 2.5" internal and 2 x 2.5" hot swap • 3 x 2.5" internal and 1 x Slim DVD-ROM • 2 x 2.5" internal, 2 x 2.5" hot swap and 1 x Slim DVD-ROM
	Peripheral Drive	Slim DVD-ROM	

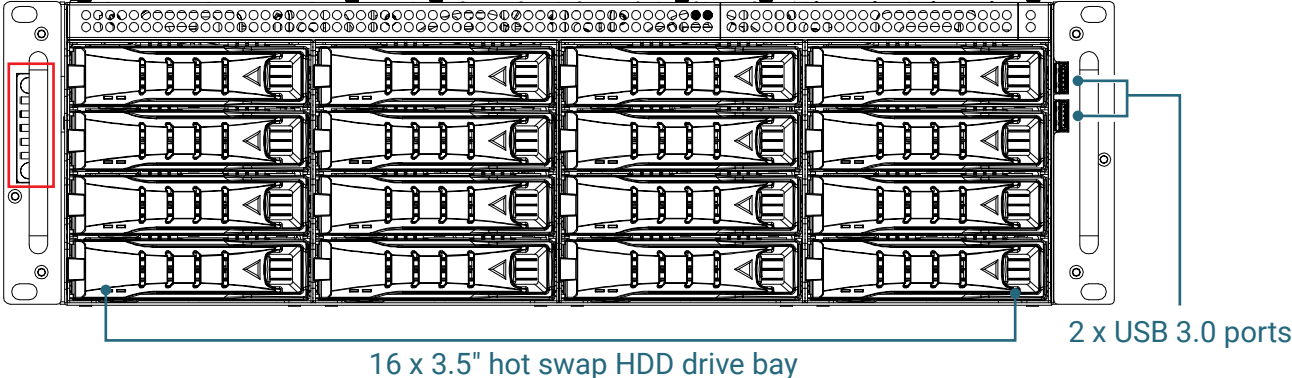
Backplane	1 x 16-port 12Gb SATA/SAS backplane with 28-PHY expander chip and 3 SFF-8643 connectors	
Storage Temperature	0°C(32°F) ~ 50°C(122°F)	
Humidity	5%~95% non-condensing	
Gross Weight	(w/ PSU & Rail)	kgs : 26.2
		lbs : 57.8
Packaging Dimensions	(W x D x H)	mm : 645 x 835 x 268
		inches : 25.4 x 32.9 x 10.6
Cubic Feet	6.03	
Container Load Quantity	20'	170
	40'	355
	40' H	405
Mounting	Standard	28" tool-less slide rail

1.3 Feature

- Tool-less design supports quick installation and easy maintenance:
 - Tool-less 3.5" & 2.5" drive trays
 - Tool-less top covers
 - Tool-less backplane
 - Tool-less slide rails
- 12Gb/s SAS expander chip on backplane
- Specially designed hot swap and low power consumption fans minimize rotational vibration and provide superior cooling
- 3.5" drive tray comes with 4 screw holes to adapt to 2.5" drive
- Two front access USB 3.0 port
- Comes with a redundant PSU 80+ Platinum

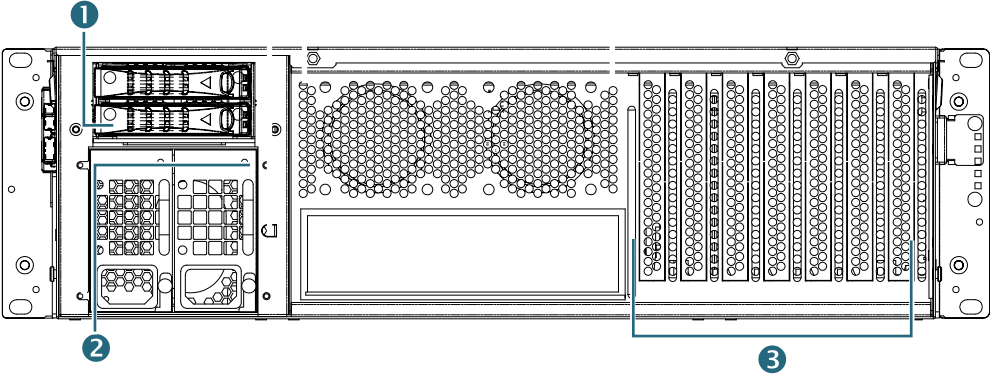


Front Panel



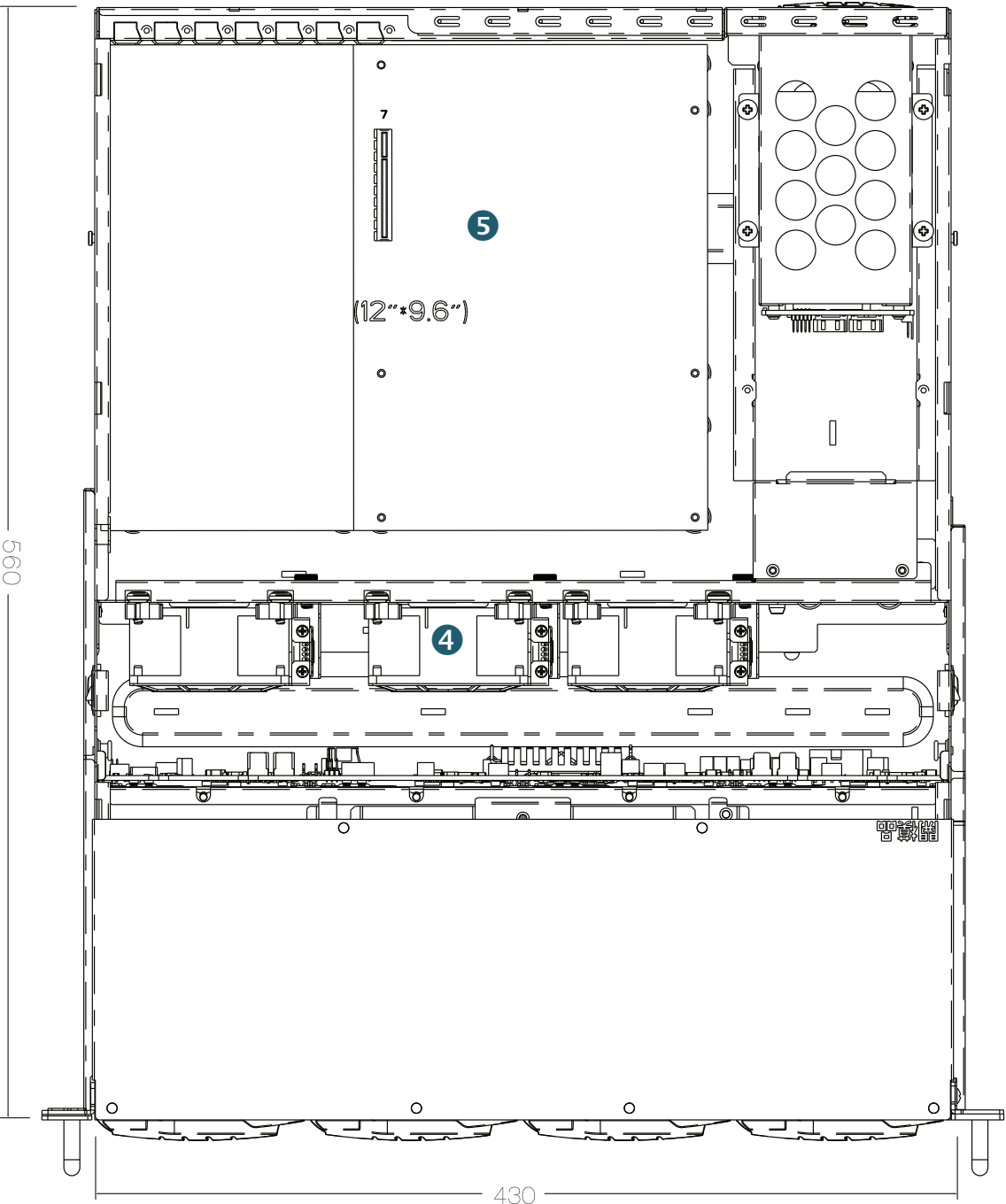
Item	Description	Item	Description
	Power Button		System Alert LED
	Power Status LED		System Reset Button
	Drive Activity LED		USB 3.0 Type A port
	LAN Activity LED		

Rear Panel



Item	Description
1	Option 1: 5 x 2.5" internal Option 2: 2 x 2.5" hot swap + 2 x 2.5" internal drive Option 3: 3 x 2.5" internal + 1 x Slim DVD-ROM Option 4: 2 x 2.5" hot swap + 2 x 2.5" internal drive + 1 x Slim DVD-ROM
2	800W 1+1 redundant PSU PMBus 1.2 80+ Platinum
3	7 x PCIe slots

Major Components



Item	Description
4	3 x 80 x38mm hot swap fans
5	12"x 9.6" (width x depth) ATX mother board

Chapter 2. Hardware Setup

2.1 Top Cover

- ① Push the release button on both sides of the chassis.
- ② Push the cover toward the rear panel.
- ③ Lift the top cover to complete removal.

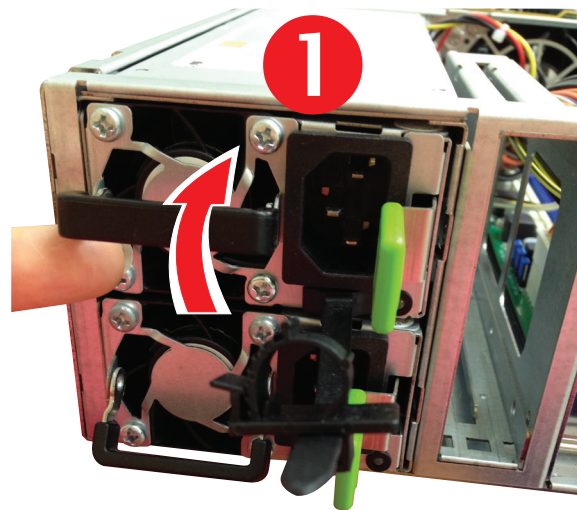
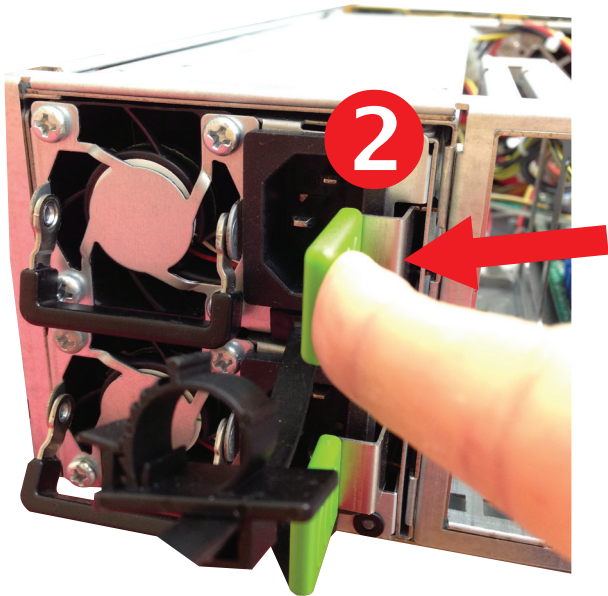


Push button on both sides.



2.2 Power Supply Unit Module

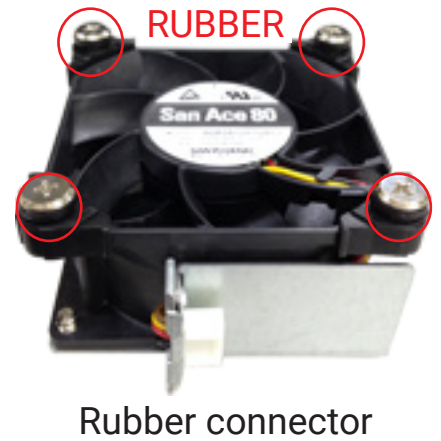
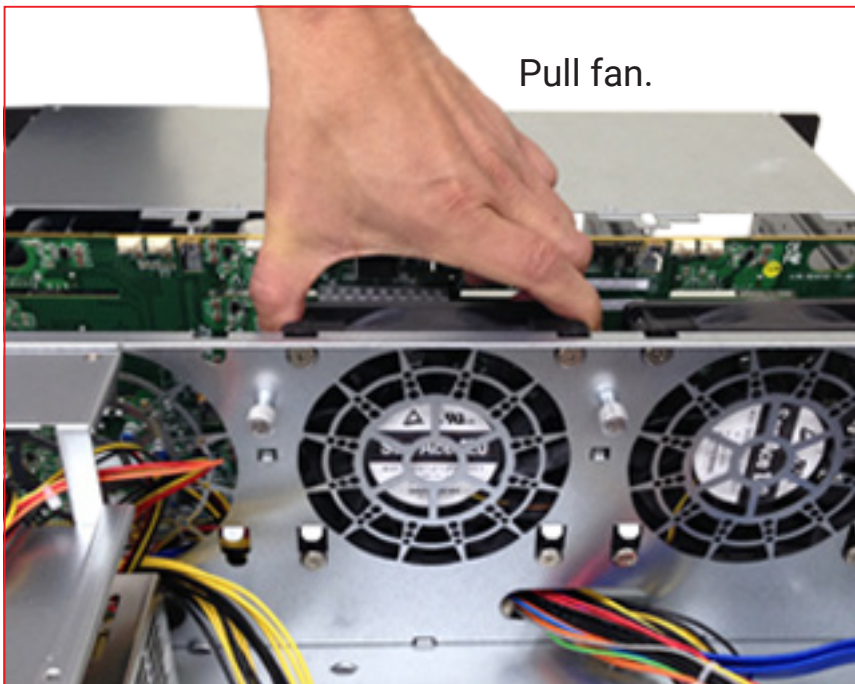
- ① Extract the power supply unit by pushing the ejector while pulling the power supply unit.
- ② Pull the module completely out of the chassis.
- ③ Install the new power supply unit by pushing it into the chassis. Ensure that the module is accurately inserted and locked into the chassis.



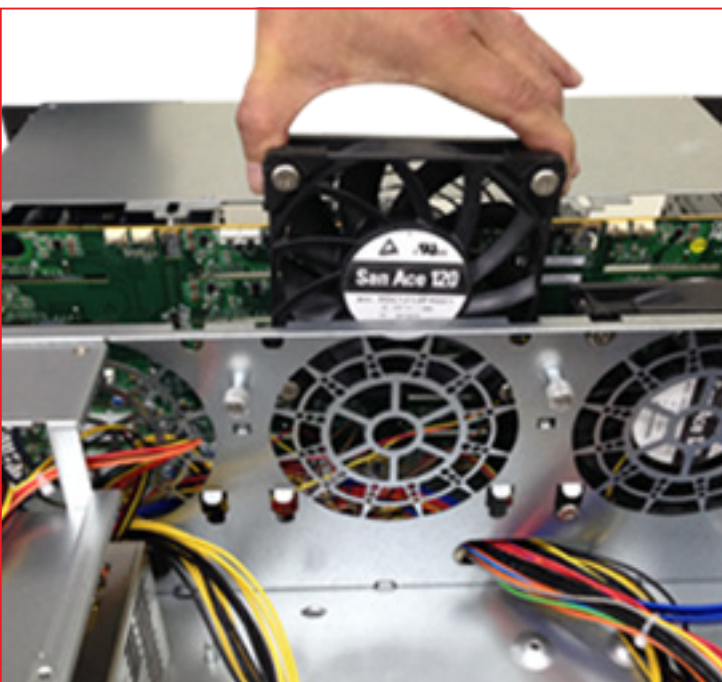
2.3 Fan Module

- ① Unplug the cables and connectors.
- ② Lift the fan module upward. Check to carefully dislodge the rubber connectors from the attached bracket.
- ③ Insert the new fan into the chassis. Verify to align the rubber connectors with the appropriate slot in the bracket.

2



3



Align rubber connector with bracket.

2.4 Hard Disk Drive

- ① Press the release button on the tray lever to loosen the lever.
- ② Pull the tray lever outward completely.
- ③ Pull the tray out of the chassis.

1



Press button.

2



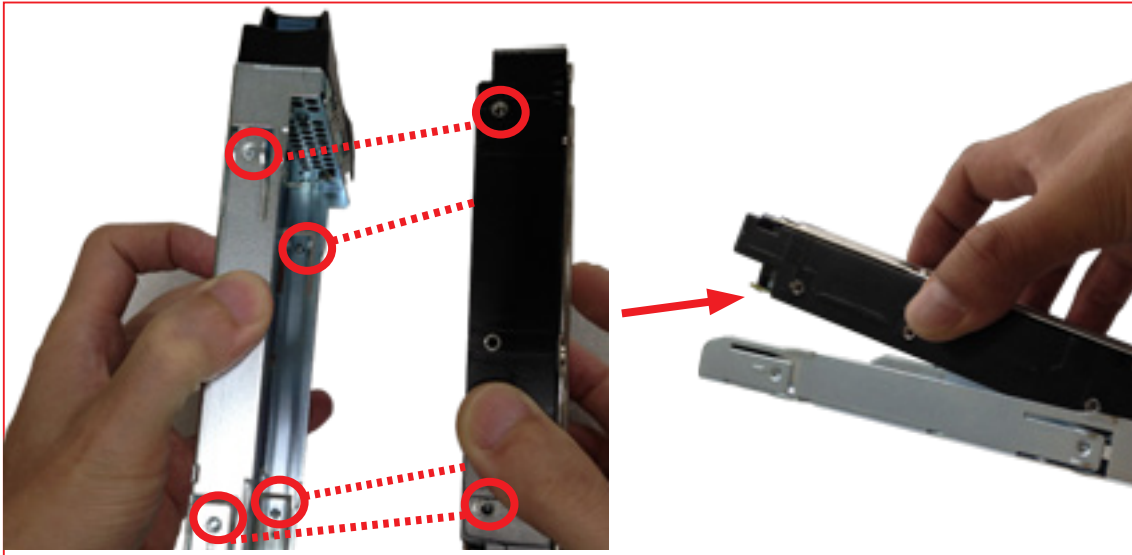
Open tray lever.

④ Remove the HDD by pushing the HDD out from the backside of the HDD tray,

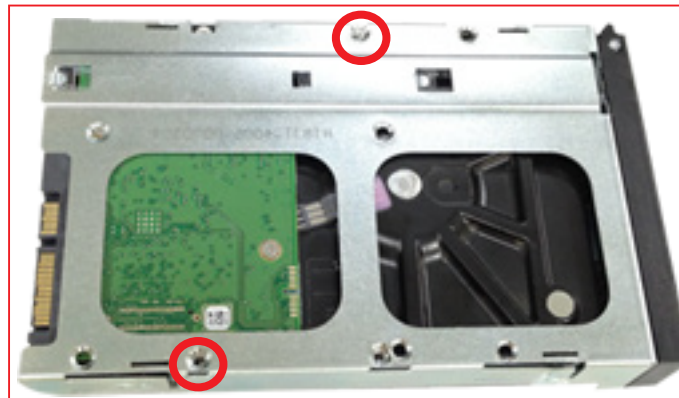
4



- ⑤ Match the dimples on the tray to insert the new HDD into the tray. Pull upward to remove the HDD from the HDD tray. Make certain that the HDD is not damaged during installation or removal process.



HDD can also be screwed on HDD tray by fastening two screws.

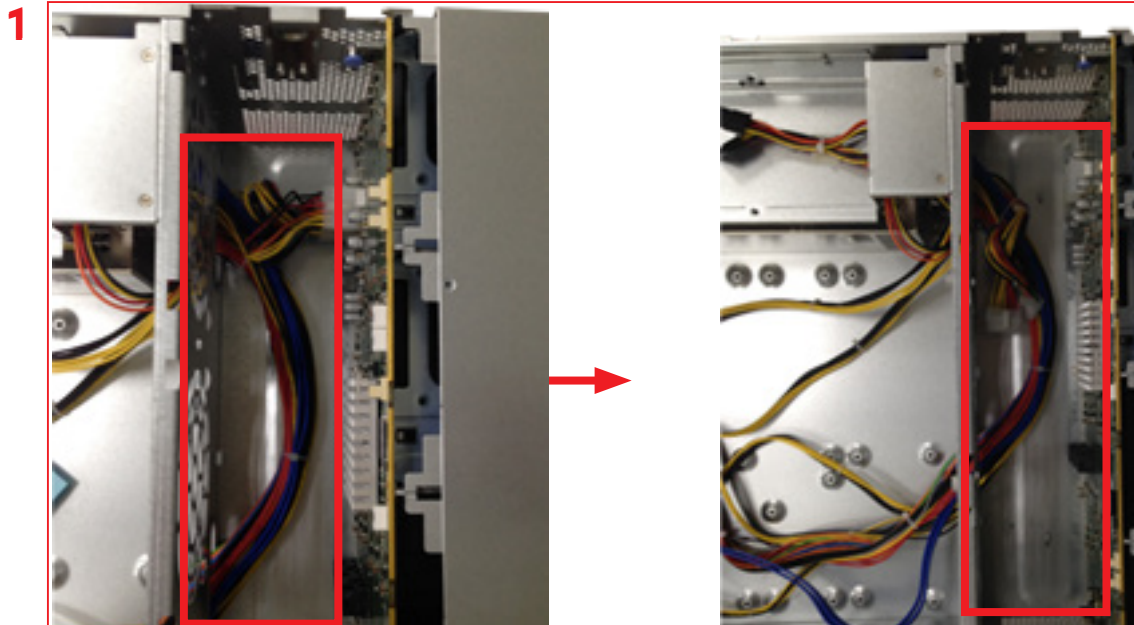


- ⑥ Insert the drive tray into chassis HDD cage. Make sure the drive tray is correctly secured in place when its front edge aligns with the bay edge. Push the tray lever until it reaches the end and clicks.

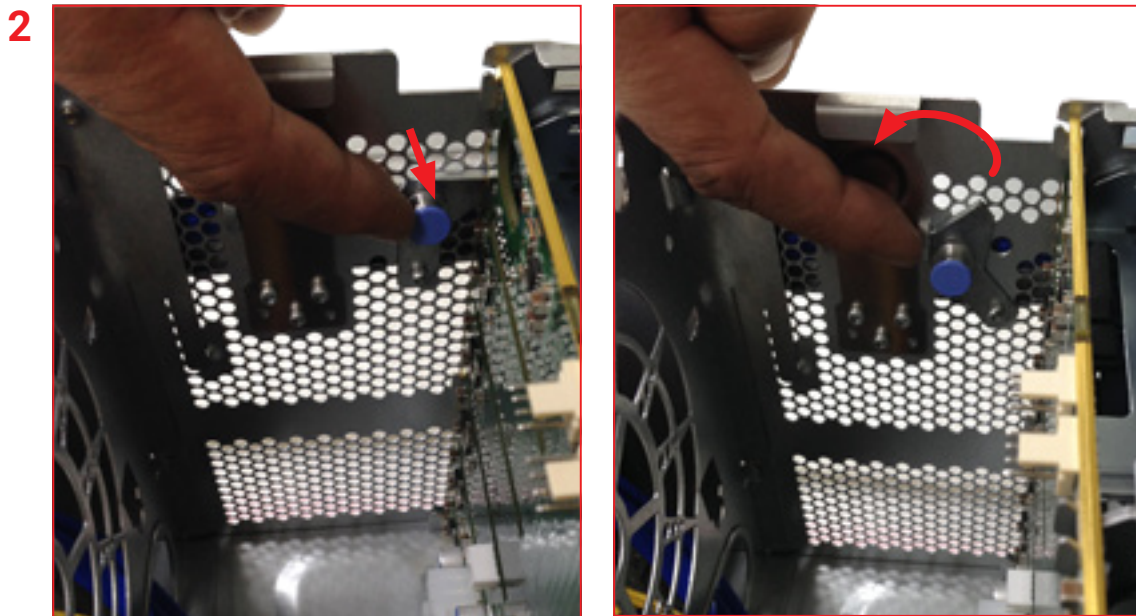


2.5 HDD Backplane Module

- ① Detach the cables and hard disk drives from the backplane module.
- ② Release the module by shifting the hook.



Unplug cables.



Shift the hook.

- ③ Hold the module on both sides.
- ④ Lift the module upward.



Hold.



Lift.

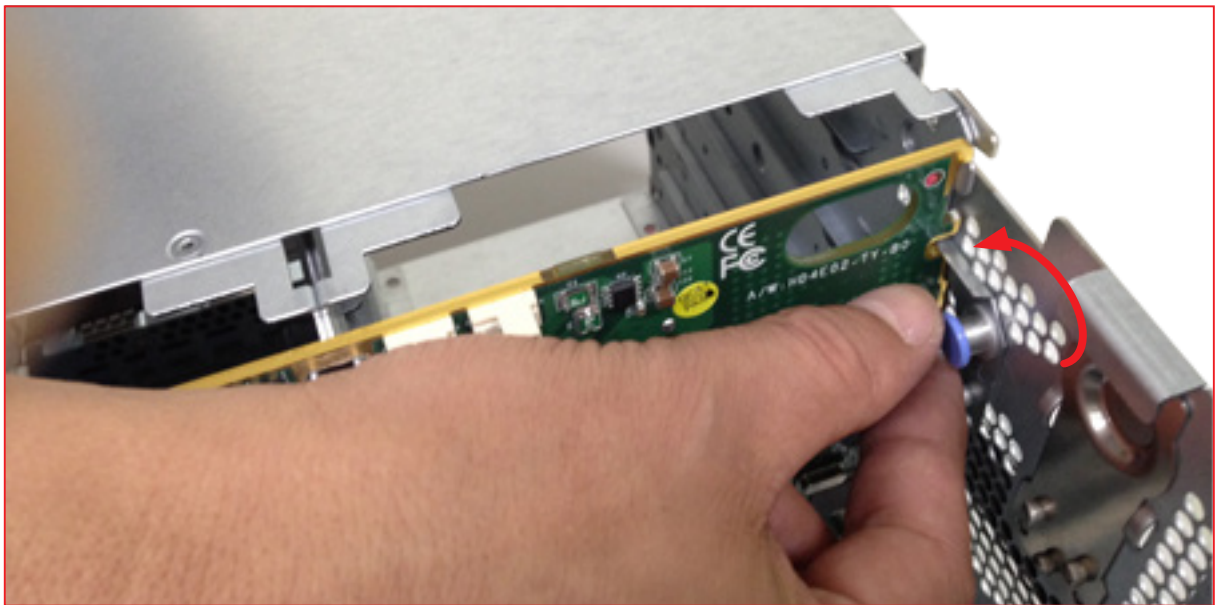
⑤ Align the new backplane module and insert it into the chassis.

5



⑥ Secure the module with the lock pin to complete installation.

6



2.6 Slide Rail

NOTE



This sections provides a basic instruction for mounting the slide rail onto the system. Tool-less rails vary per order. The rail in this manual may not exactly match the rail for your system. Please refer to the specifications or quick installation guide that came with your purchased product.

CAUTION

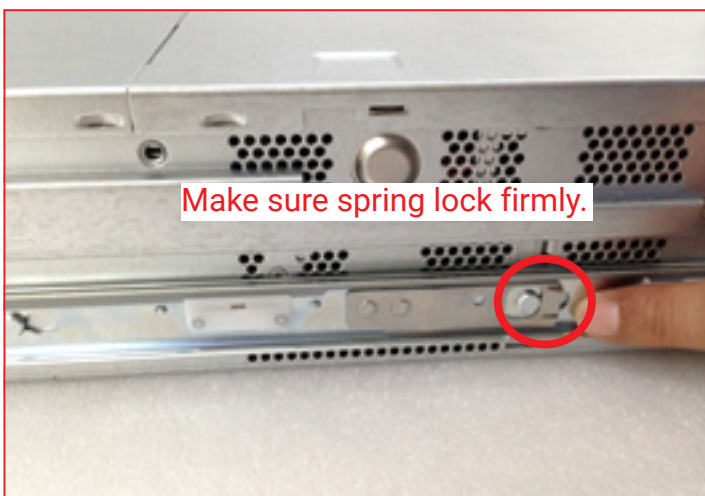
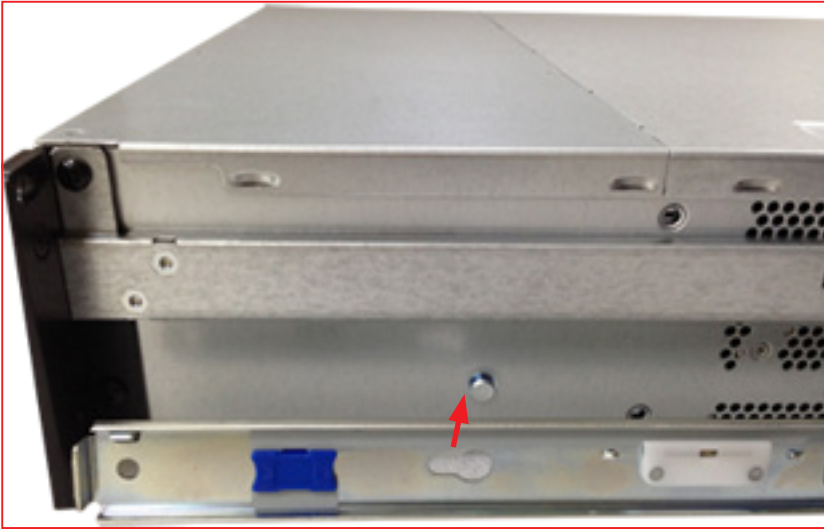


The rack may tilt and fall due to incorrect installation or placed on uneven grounds. The rack must be placed in a flat surface before you begin to slide the system barebone in for servicing.

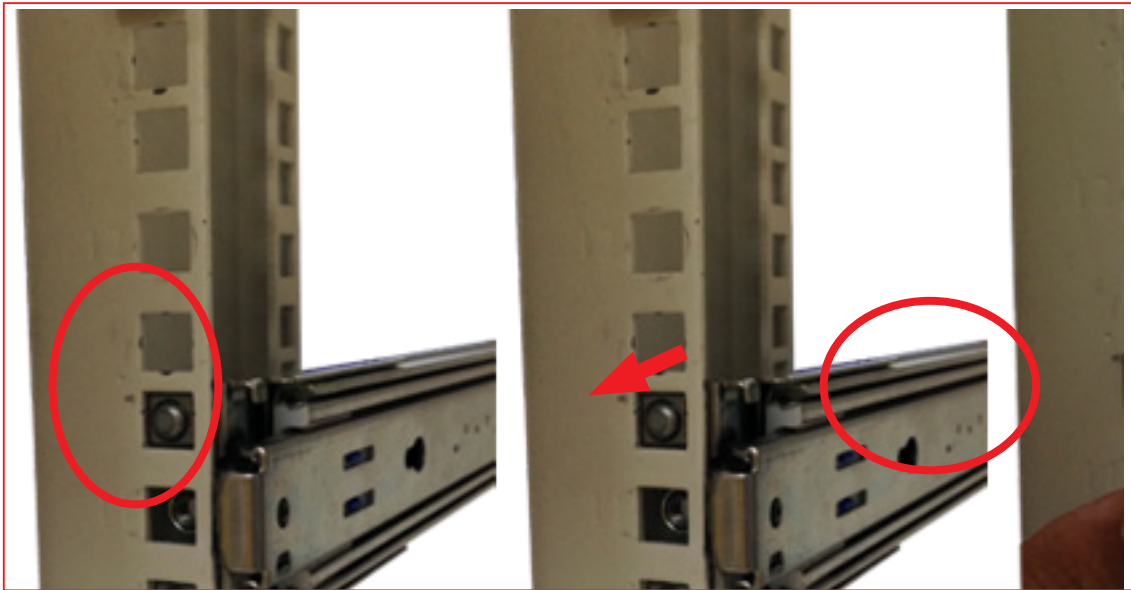
- ① Release and detach the inner rail from the slide.



② Attach inner rail to the system.



- ③ Attach outer rail to the rack.

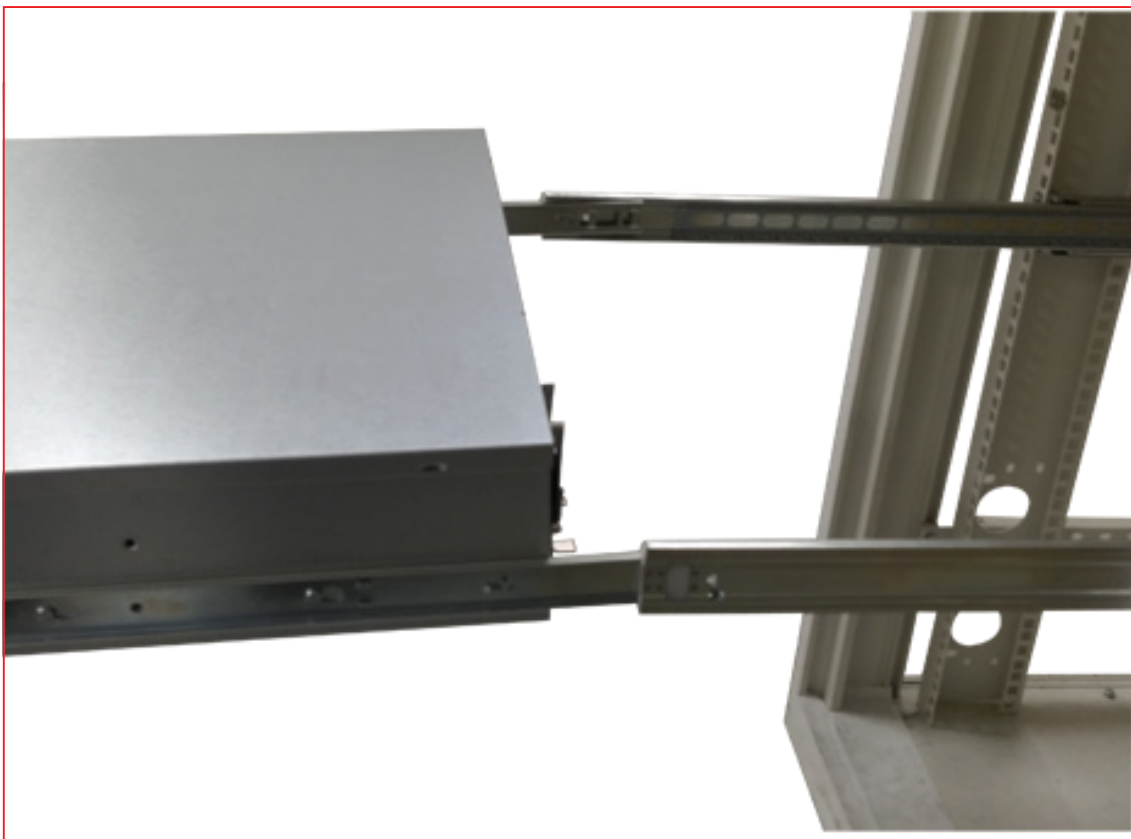


① Align.

② Push.

③ Lock.

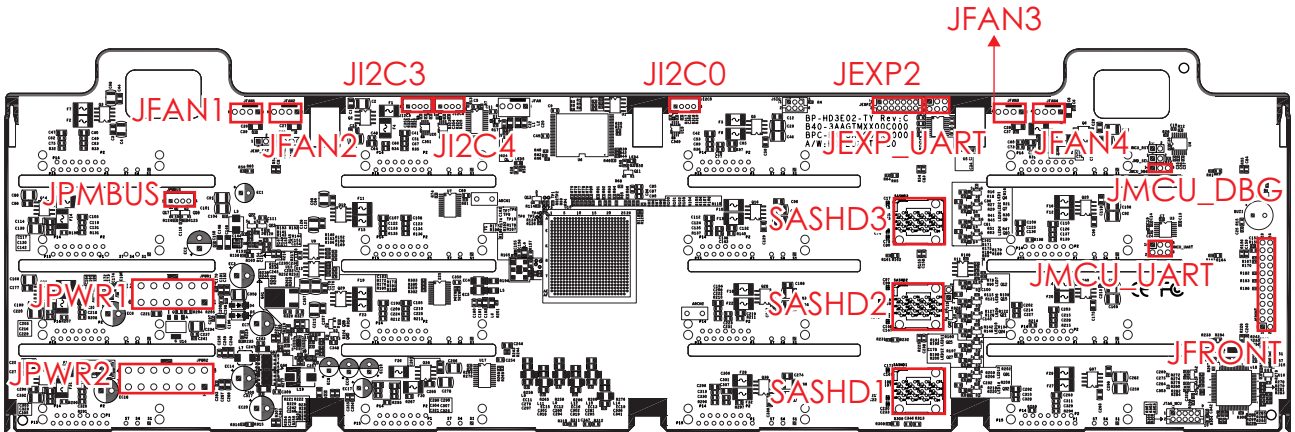
- ④ Verify that the ball bearing retainer is locked forward.
- ⑤ Pull out the intermediate rail until it is locked out.
- ⑥ Slide the release tab and push system into rack to complete installation.



Chapter 3. Hardware Specifications

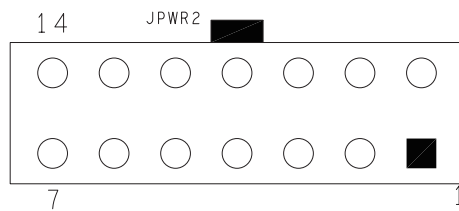
3.1 HDD Backplane

3.1.1 Placement



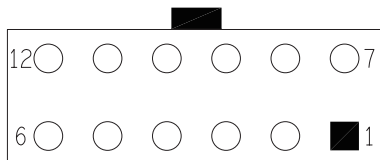
3.1.2 Connector

Power Connector (JPWR1)



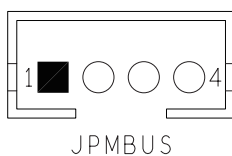
Pin	Description	Pin	Description
7	+12V	1	GND
8	+12V	2	GND
9	+3.3V	3	GND
10	+5V	4	MUTE_L
11	+5VSTBY	5	PSU_N1
12	PS_ON_L	6	GND

Power Connector (JPWR2)



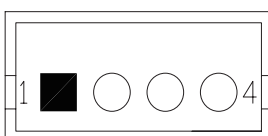
Pin	Description	Pin	Description
8	+12V	1	GND
9	+12V	2	GND
10	+12V	3	GND
11	+12V	4	GND
12	+5V	5	GND
13	+5V	6	GND
14	+5V	7	GND

PMBUS Connector (JPMBUS)



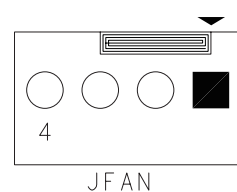
Pin	Description
1	GND
2	PMBUS_CLOCK
3	PMBUS_DATA
4	N/A

I2C Connector (JI2C0, JI2C3, JI2C4)



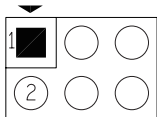
Pin	Description
1	GND
2	I2C_CLOCK
3	I2C_DATA
4	N/A

Fan Connector (JFAN1, JFAN2, JFAN3, JFAN4)



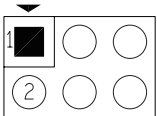
Pin	Description
1	GND
2	I2C_CLOCK
3	I2C_DATA
4	N/A

Console for Expander (JEXP_UART)



Pin	Description	Pin	Description
2	DEBUG_RXD	1	SMART_RXD
4	+12V	3	GND
6	DEBUG_TXD	5	SMART_TXD

Remote Power Control (JMCU_UART)



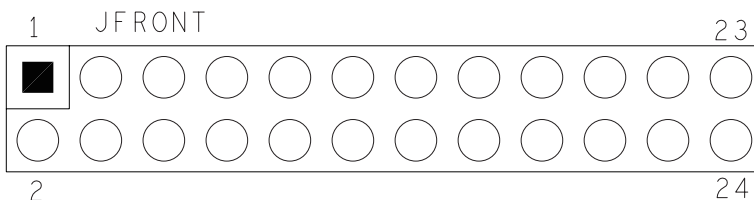
Pin	Description	Pin	Description
2	DOWN_RXD	1	UP_RXD
4	GND	3	GND
6	DOWN_TXD	5	UP_TXD

Console for MCU (JMCU_DBG)



Pin	Description
1	MCU_RXD
2	GND
3	MCU_TXD

2.54mm Header for Front I/O – JFRONT



- Fan number select

Pin[5,6]	Pin [3,4]	Pin [1,2]	Fan no. support	Active Fan Locate
Close	Close	Close	No Fan	
Close	Close	Open	One Fan	JFAN1
Close	Open	Close	Two Fan	JFAN1 and JFAN2
Close	Open	Open	Three Fan	JFAN1,JFAN2 and JFAN3
Open	Close	Close	Four Fan	JFAN1,JFAN2,JFAN3 and JFAN4

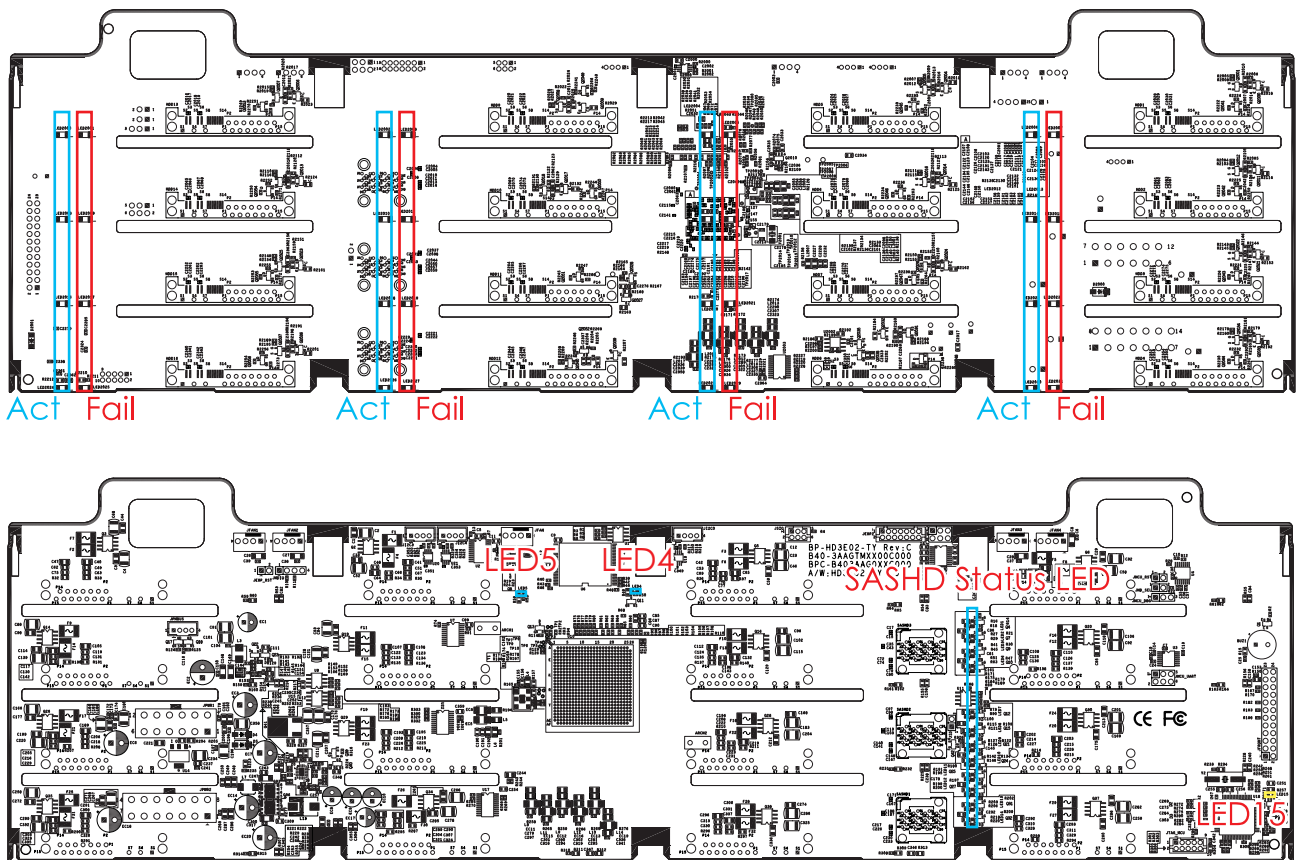
- AT Mode Setting

Pin	Description	Remark
9	GND	
10	AT_SEL_N	Active Low

- Mute SW

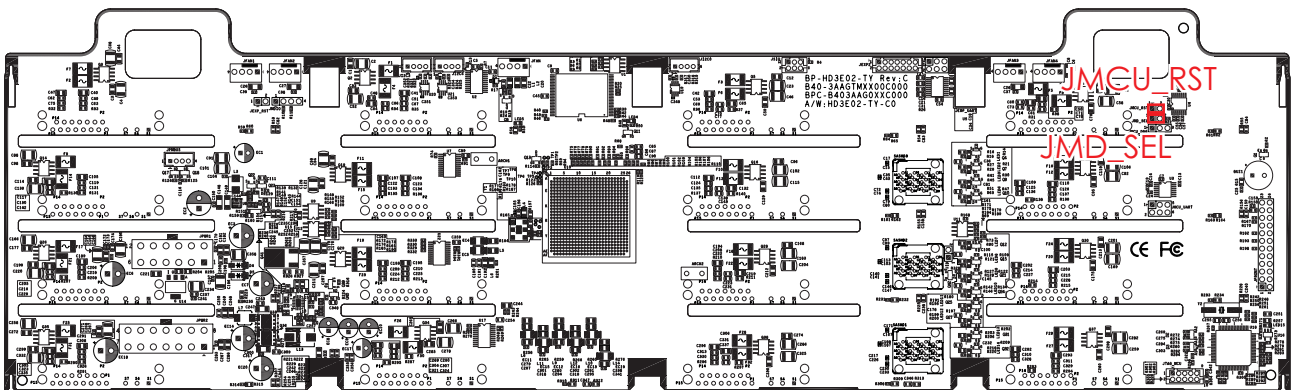
Pin	Description	Remark
17	GND	
18	MUTE Input(-)	Active Low

3.1.3 LED



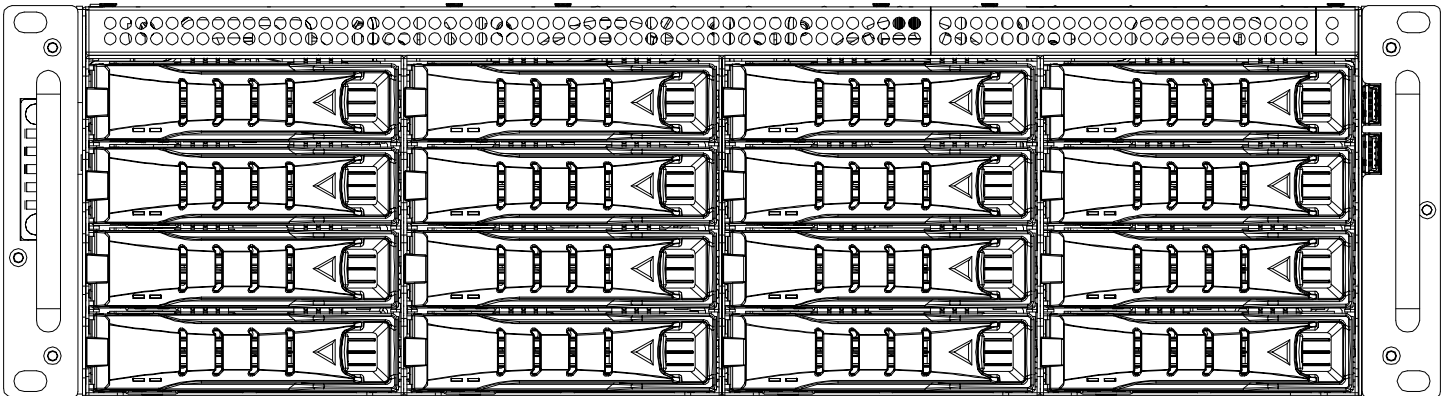
HDD Activity LEDs	Blue (On)	HDD present
	Blue (Blinking)	HDD Activity detected or Locate HDD
	Off	HDD no connect or Power Off
HDD Fault/Status LEDs	Off	Normal
	Red (Blinking)	Re-build status
	Red (On)	HDD Fault or Locate HDD
SAS HD Link Status	Blue (On)	Link up
	Blue (Blinking)	Activity detected
	Off	Link down
Expander Blink (LED5)	Blue (Blinking)	Expander alive, 0.833Hz (12 seconds per cycle)
Expander Heart Bit (LED4)	Blue (Blinking)	Expander FW running
MCU Status (LED15)	Yellow (On)	MCU alive
	Yellow (Off)	Boot loader mode

3.1.4 Jumper



JMCU_RST	Open	Normal, default
	Close	Reset MCU
JMD_SEL	Open	Normal, default
	Close	Boot loader mode

3.1.5 Drive Slot Map



HBA card			
0	1	2	3
4	5	6	7
8	9	10	11
12	13	14	15
MegaRaid card			
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Chapter 4. Technical Support



www.aicipc.com

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Support Email: support@aicipc.com

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Fax: +86-21-54961422 #608
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Support Email: support@aicipc.com

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