RSC-2ET

Rackmount Chassis
User's Manual

UM_RSC-2ET_v1.5_052323

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Preface

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Changes

The material in this document is for information purposes only and is subject to change without notice.

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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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 distinctively 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 severely 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 disintegration.
- Carefully and accurately mount the equipment into the rack. Uneven mechanical loading may lead to hazardous 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-2ET.

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 hardware settings for 2ET Rackmount Chassis. For the latest version of this user's manual, please refer to the AIC® website: https://www.aicipc.com/en/productdetail/84.

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-2ET is a flexible rackmount storage chassis with tool-less design. This product supports hot swappable HDD 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.

- Chassis (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

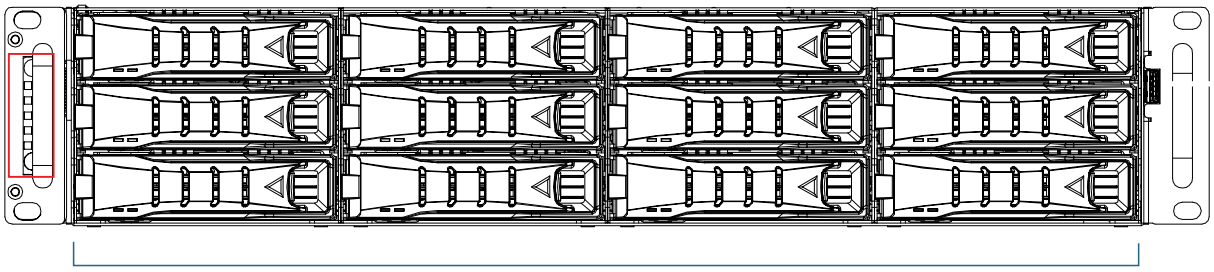
Dimensions (W x D x H)	mm : 430 x 680 x 88		
	inches : 17 x 26.8 x 3.5		
Industry Standard	EIA-RS310D		
Material	Heavy-duty preplated SPGC cold-rolled steel		
Color	Front Panel : Black		
Cooling	3 x 80x38mm PWM & low-power consumption hot swap fans		
Power Supply	800W 1+1 redundant PSU PMBus 1.2 80+ Platinum		
Expansion Slots	7 low profile		
Front Panel	System power on/off, System reset, System ID and 1 x USB 3.0 port		
LED Indicators	Power, LAN, Drive, Alert and System ID		
System Board	12”(W) x 13”(D) E-ATX/SSI EEB 3.6 compliant MB		
Drive Bays	External	3.5” hot swap	12
		2.5” hot swap	Options: • 2 x 2.5” (7mm) hot swap • 2 x 2.5” (15mm) internal
	Internal	2.5”	

Backplane	Options	1 x 12-port 12Gb SATA/SAS backplane with 28-PHY expander chip and 3 SFF-8643 connectors
		1 x 12-port SATA/SAS backplane with 3 x SFF-8643 connectors
Storage Temperature	0ºC(32ºF) ~ 50ºC(122ºF)	
Humidity	5%~95% non-condensing	
Gross Weight	(w/ PSU & Rail)	kgs : 23.5
		lbs : 51.8
Packaging Dimensions	(W x D x H)	mm : 645 x 835 x 224
		inches : 25.4 x 32.9 x 8.8
Cubic Feet	5.38	
Container Load Quantity	20’	200
	40’	420
	40’ H	450
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
- One front access USB 3.0 port
- Comes with a redundant PSU 80+ Platinum

Front Panel

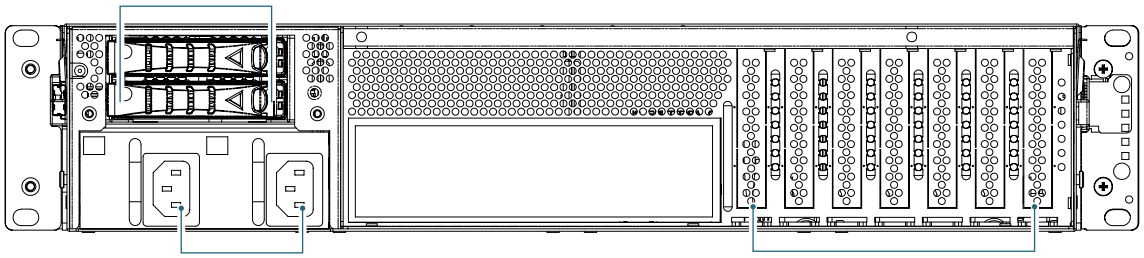


Item	Description
	Power Button
	Power Status LED
	Drive Activity LED
	LAN Activity LED
	System Alert LED
	System ID LED
	System ID Button
	System Reset Button
	USB 3.0 Type A port

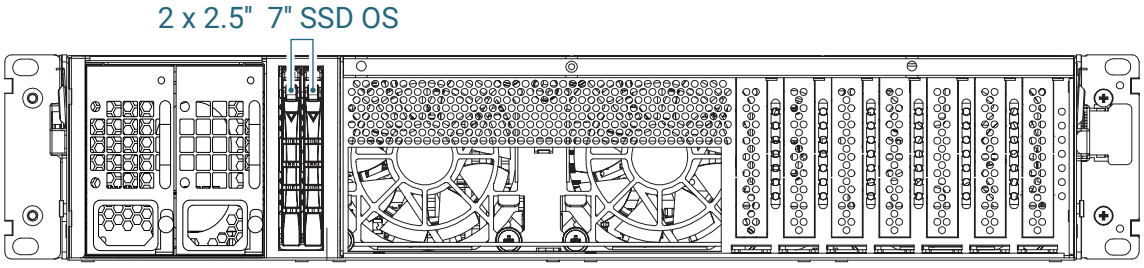
Rear Panel

Option 1

2 x 2.5" External hot swap drive bays

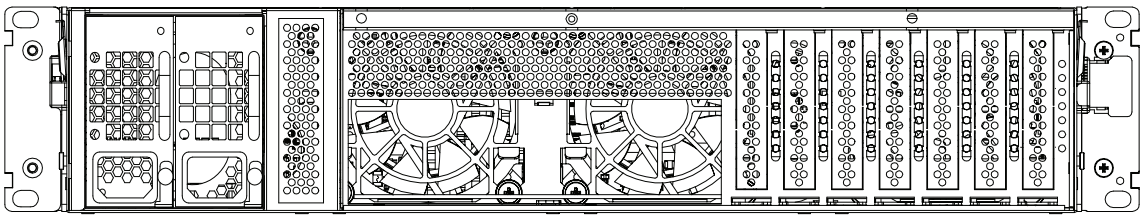


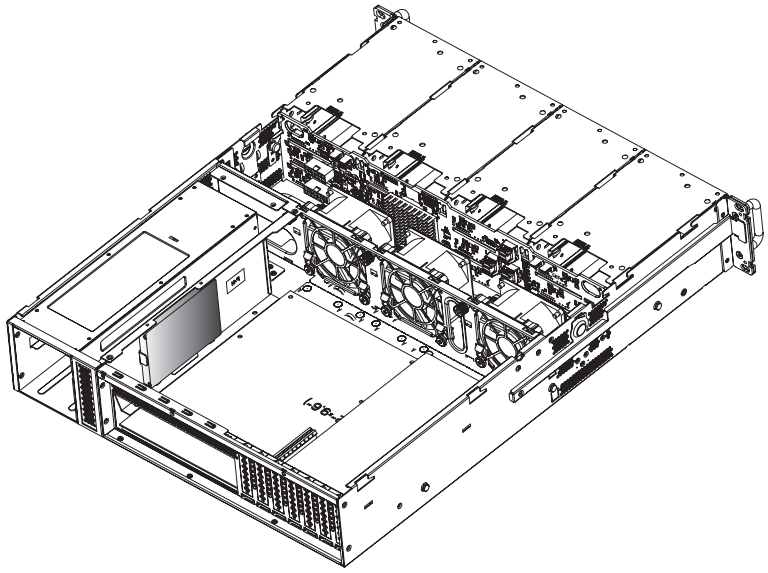
Option 2



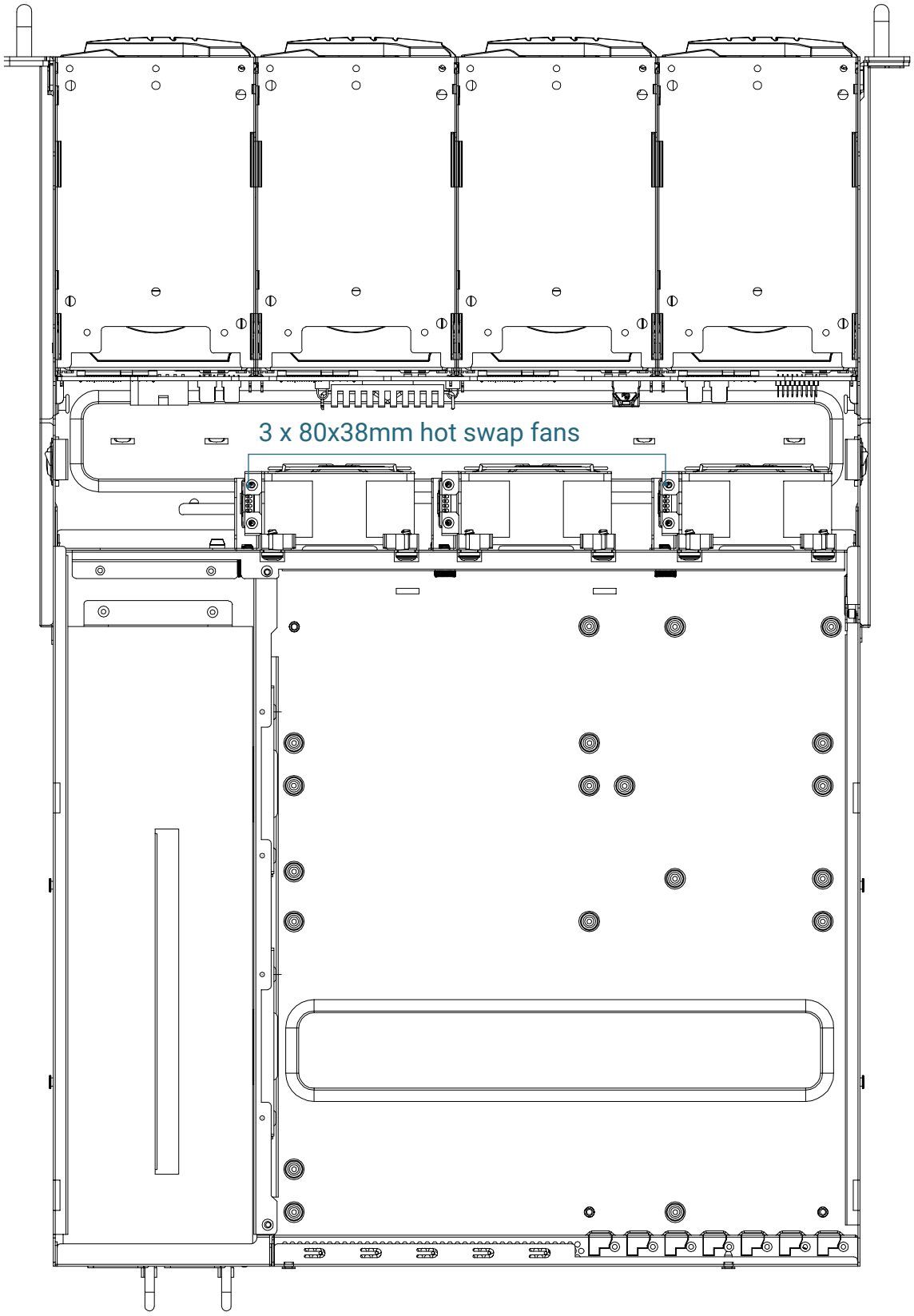
Option 3

2 x 2.5" internal SSD OS





Top View



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.

1



Push button on both sides.

2

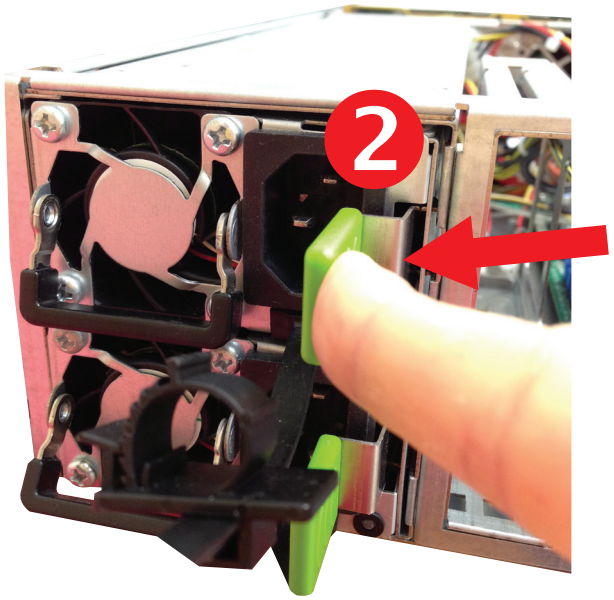


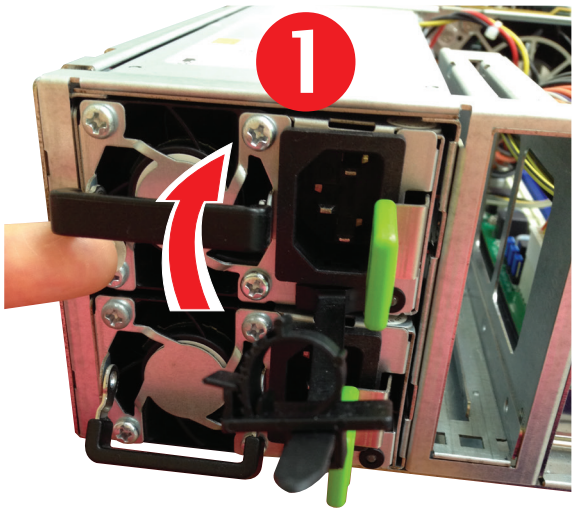
3



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.

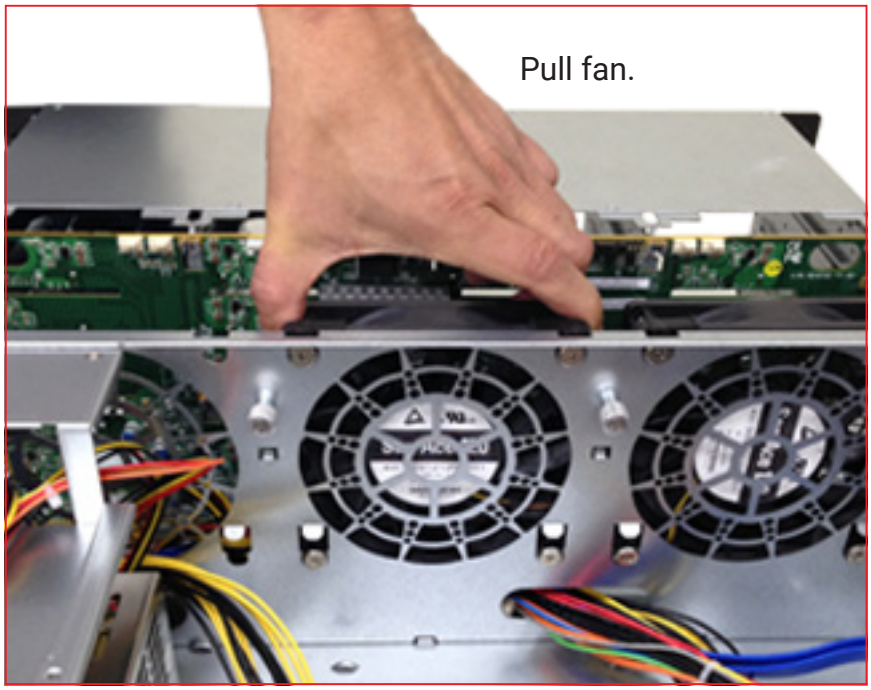




2.3 Fan Module

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.

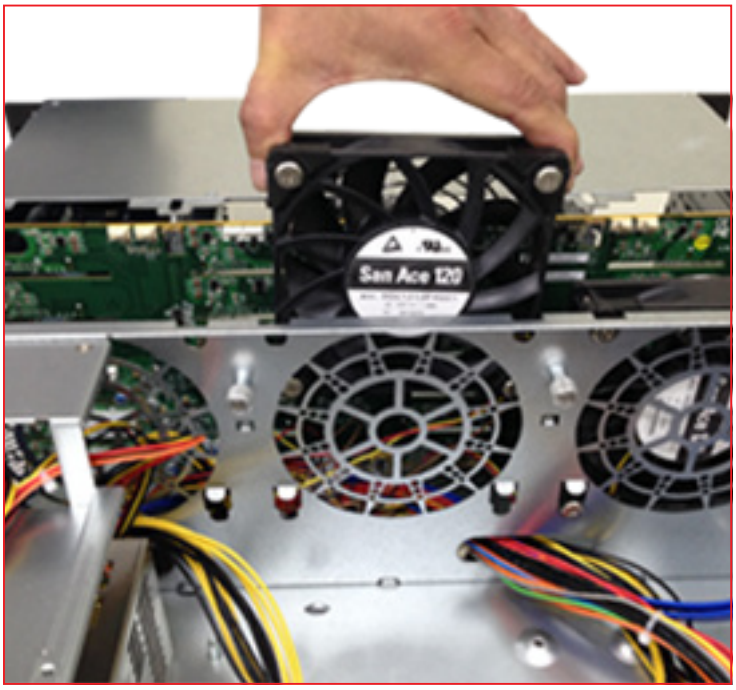
2





Rubber connector

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

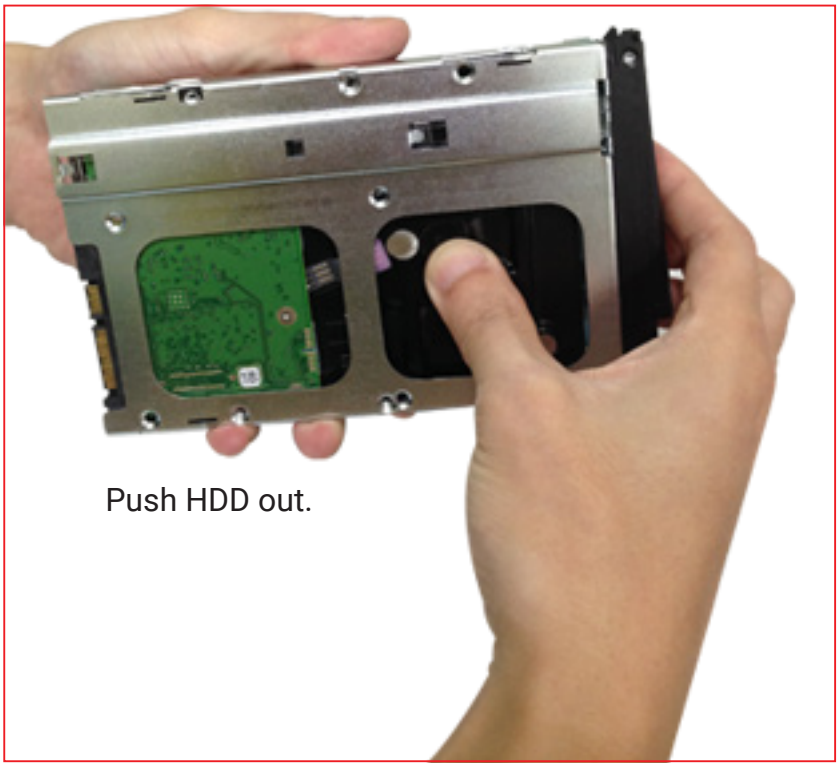
2

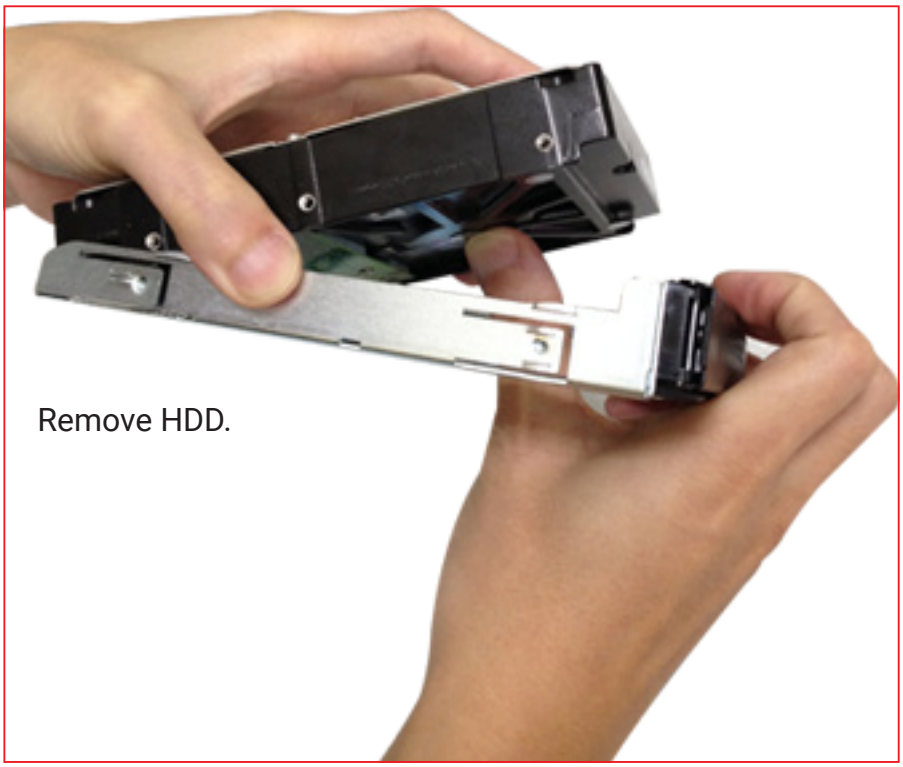


Open tray lever.

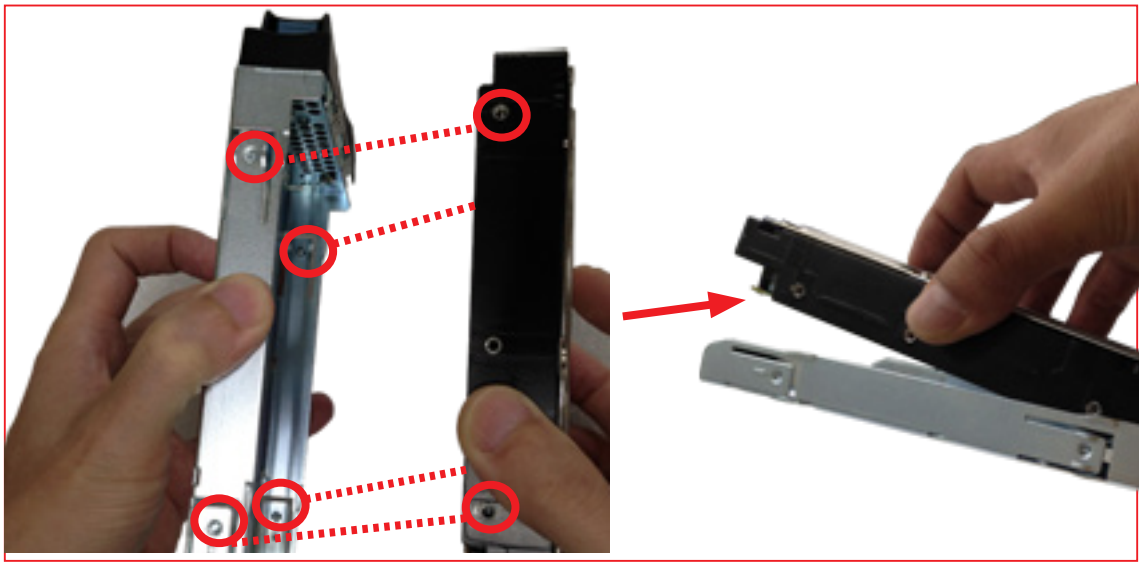
④ Remove the HDD by pushing the HDD out from the backside of the HDD tray,

4

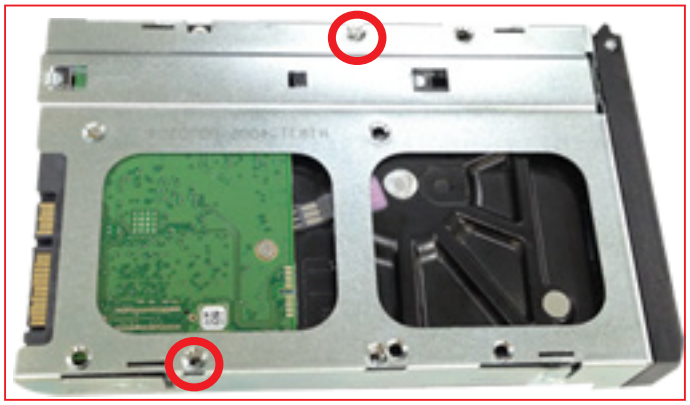




⑤ Match the dimples on the tray to insert the new HDD into the tray. Pull upward to remove the HDD from the HDD tray. Make certain that the HDD is not damaged during installation or removal process.



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



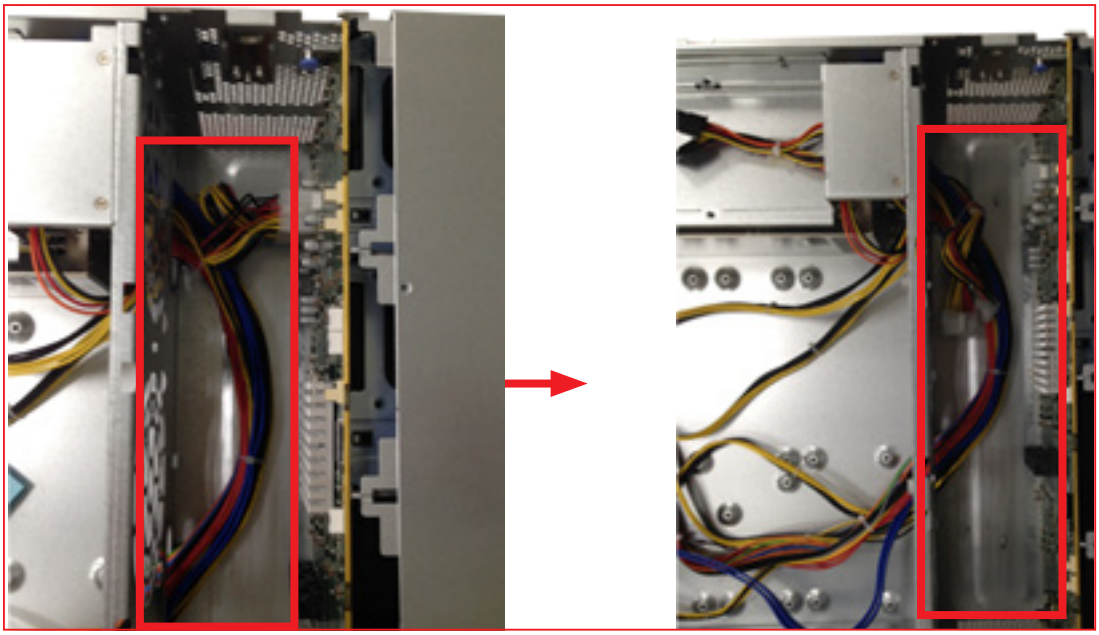
⑥ Insert the drive tray into chassis HDD cage. Make sure the drive tray is correctly secured in place when its front edge aligns with the bay edge. Push the tray lever until it reaches the end and clicks.



2.5 HDD Backplane Module

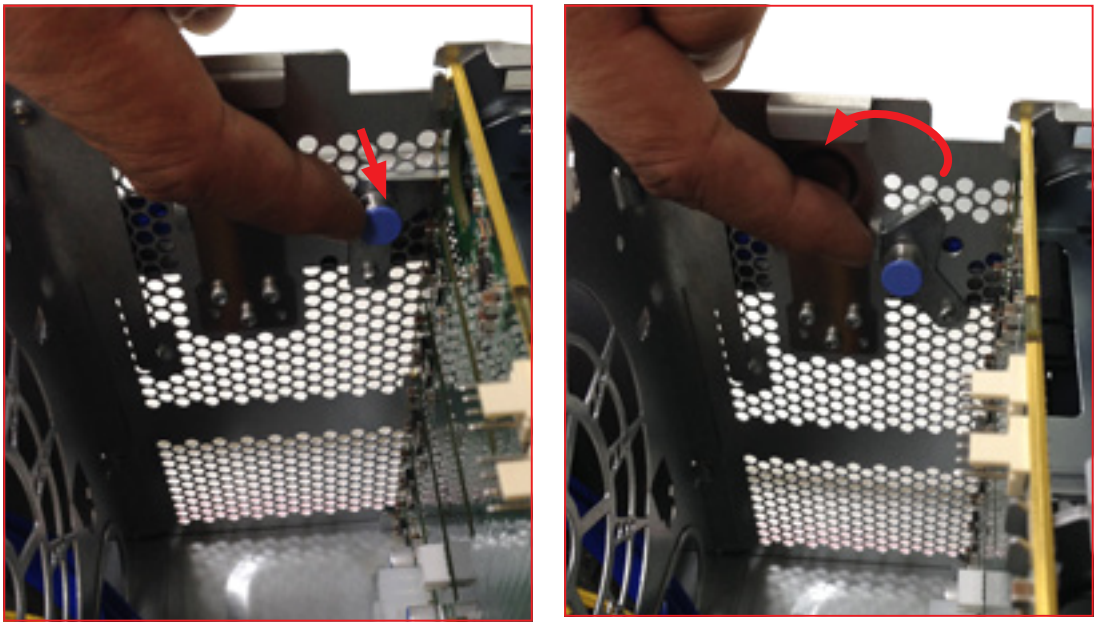
① Detach the cables and hard disk drives from the backplane module.
② Release the module by shifting the hook.

1



Unplug cables.

2



Shift the hook.

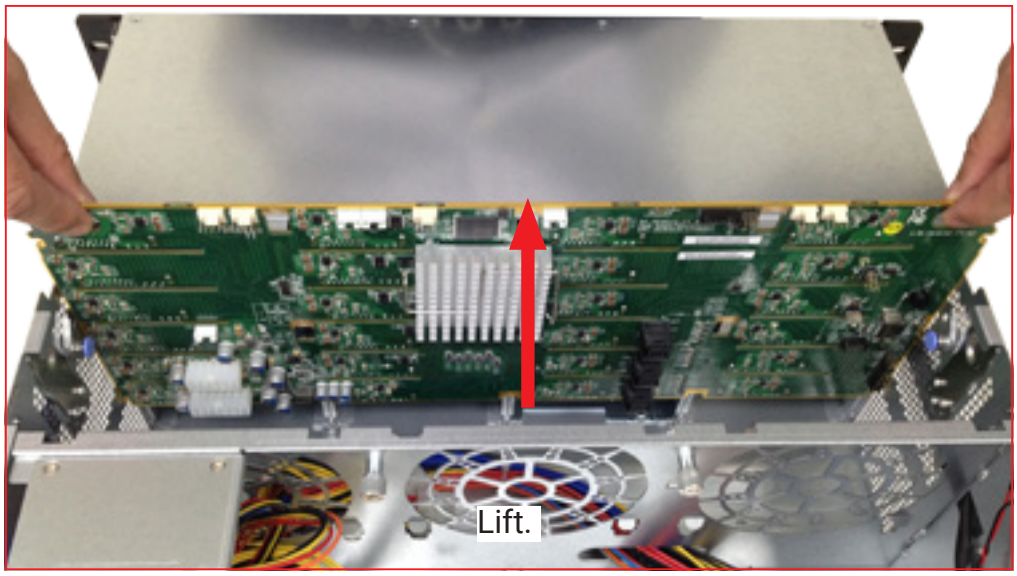
③ Hold the module on both sides.
④ Lift the module upward.

3



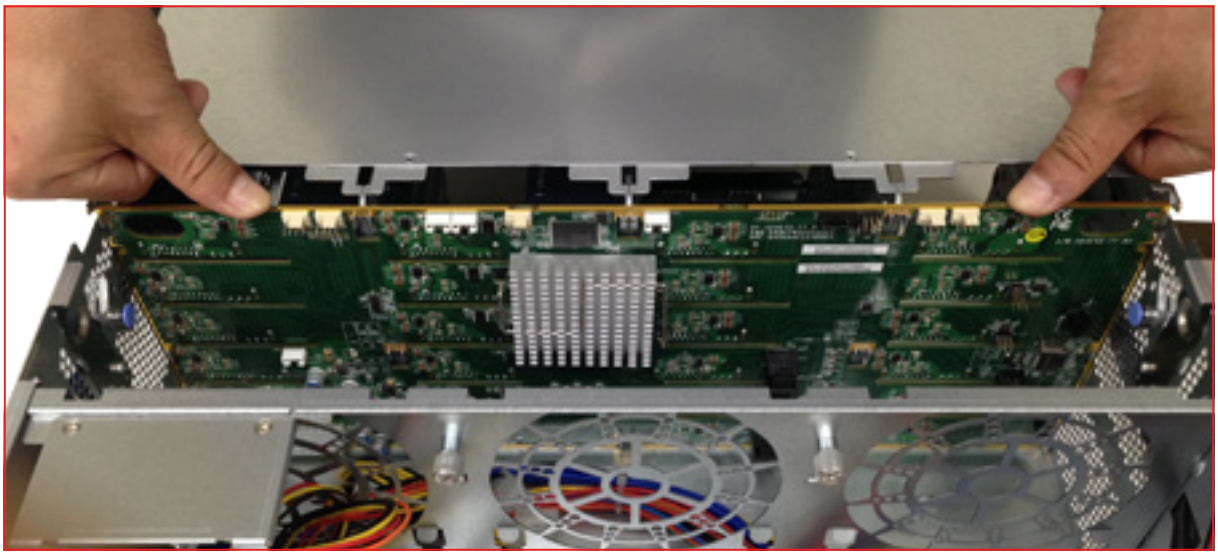
Hold.

4



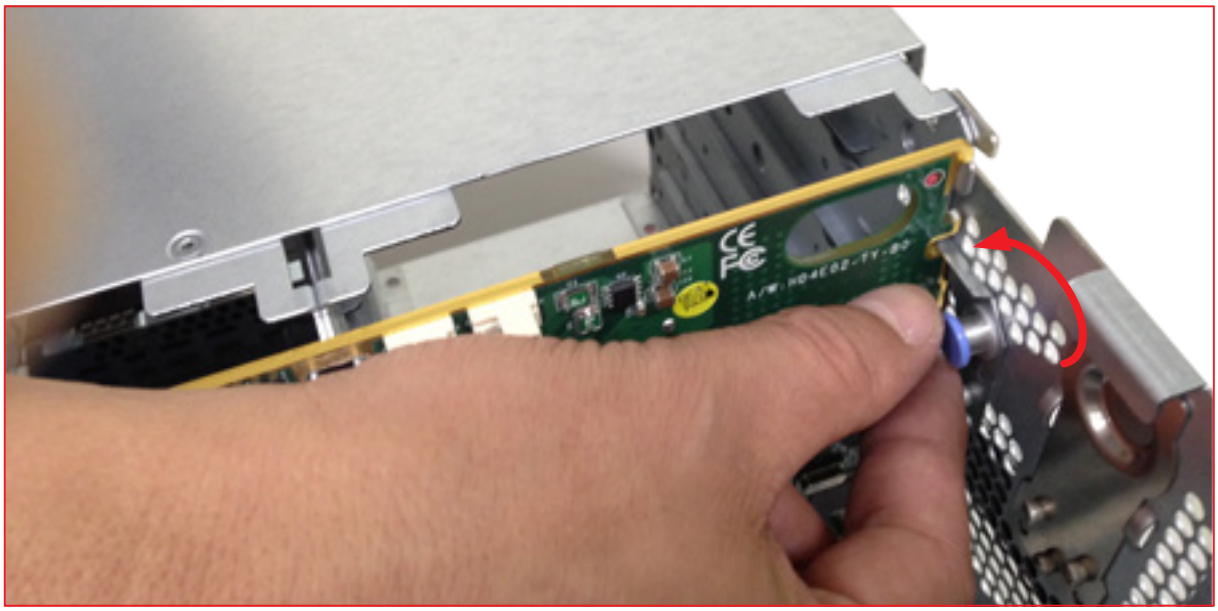
⑤ Align the new backplane module and insert it into the chassis.

5



⑥ Secure the module with the lockPin to complete installation.

6



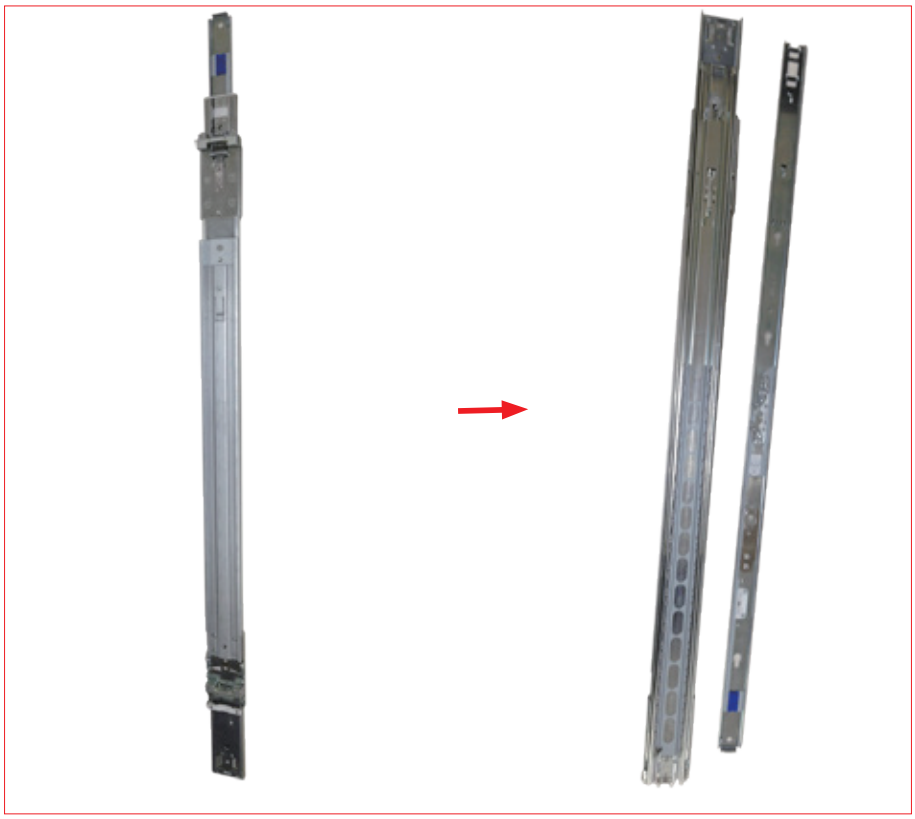
2.6 Slide Rail

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.

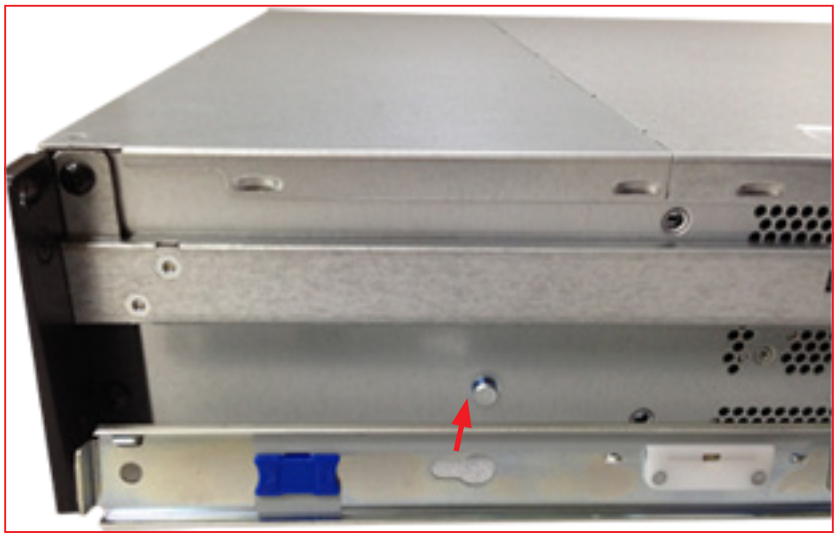
CAUTION
They rack may tilt and fall due to incorrect installation or placed on uneven grounds. The rack must be placed in a flat surface before you begin to slide the system barebone in for servicing.

①Release and detach the inner rail from the slide.

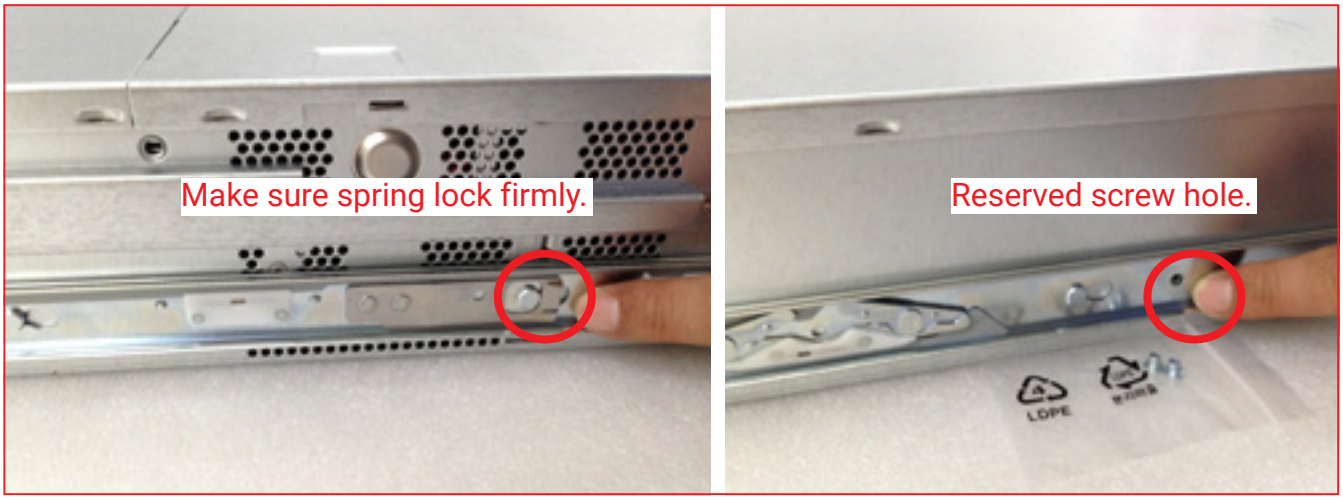




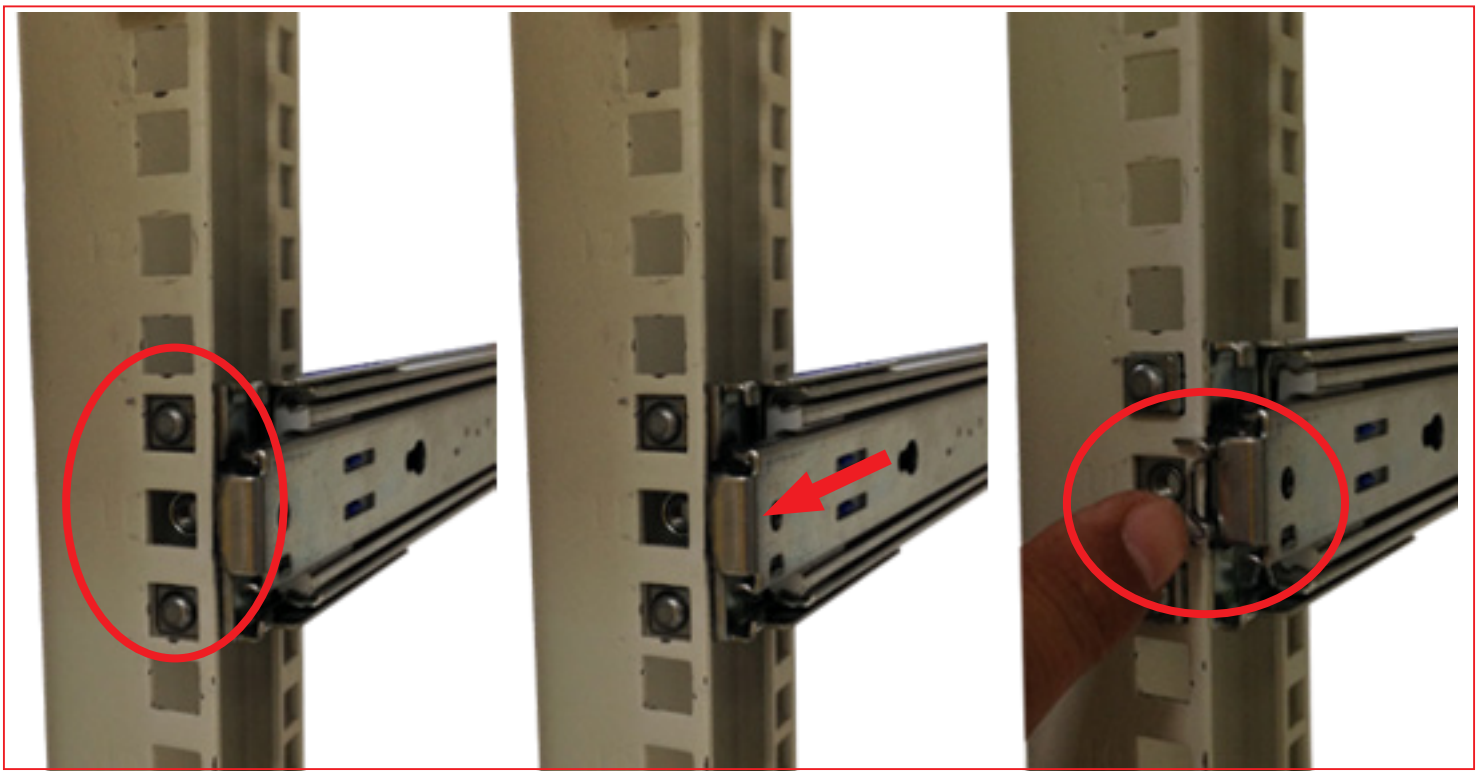
② Attach inner rail to the system.





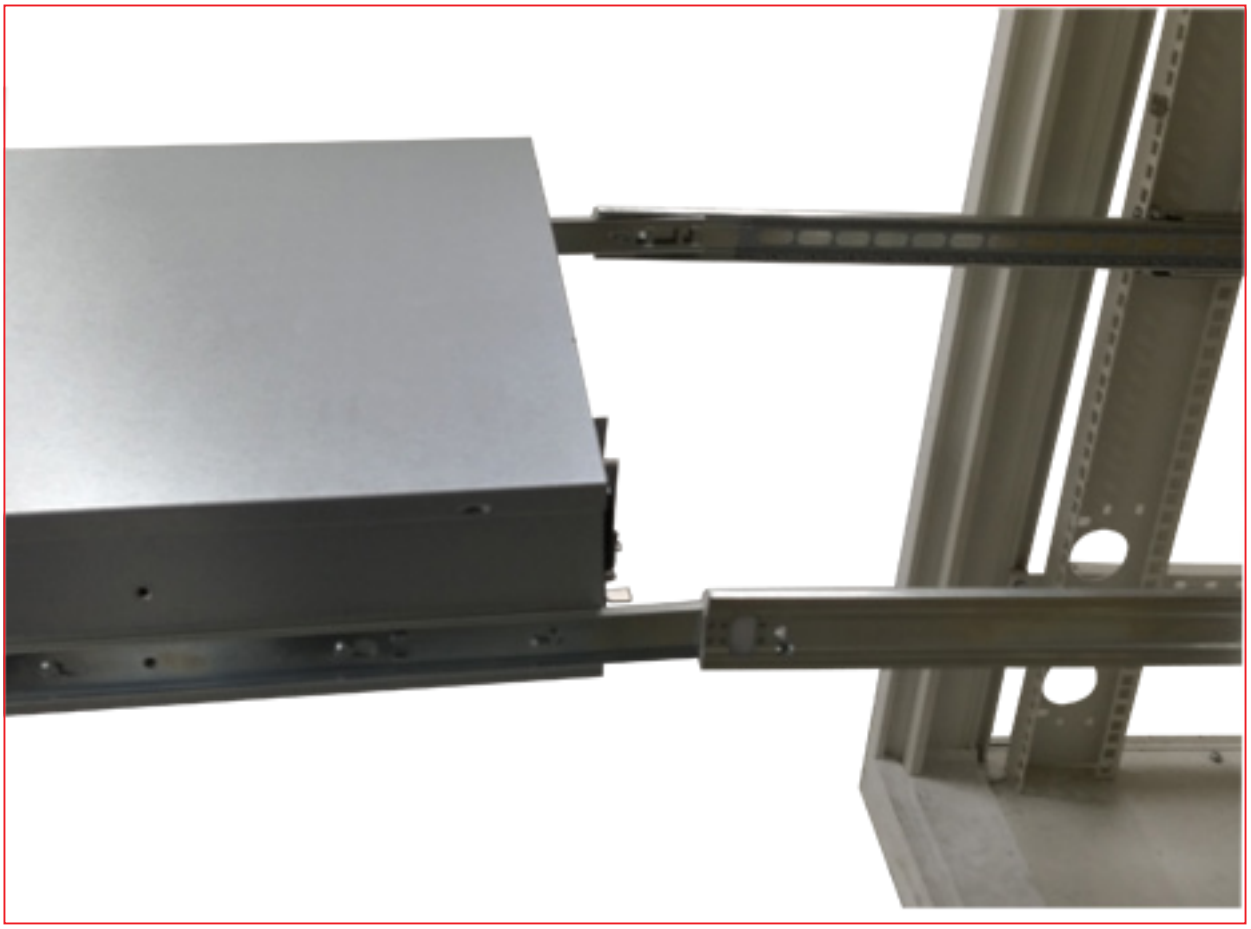


③ Attach outer rail to the rack.



❶ Align. ❷ Push. ❸ 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.

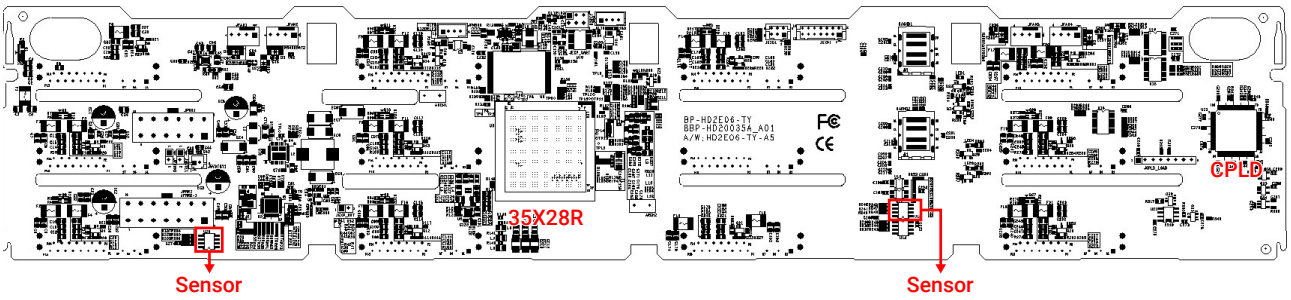


Chapter 3. Hardware Specifications

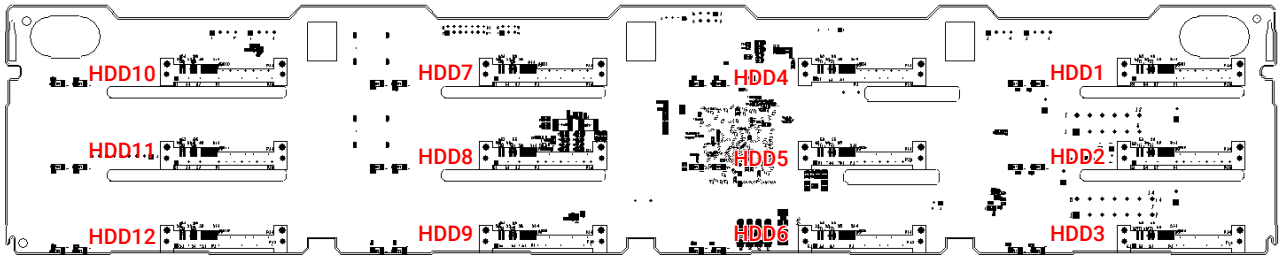
3.1 HDD Backplane

3.1.1 Placement

Top view

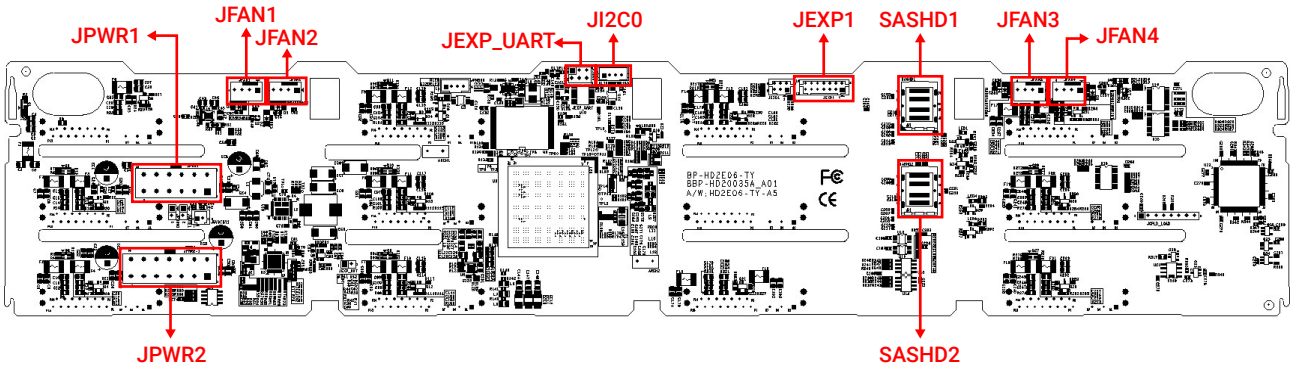


Bottom view



3.1.2 Connector

Location



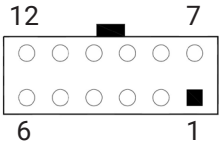
External connectors

connector	description	Comments
HDD1~12	SFF-8680 Receptacle	HDD connector

Internal connectors summary

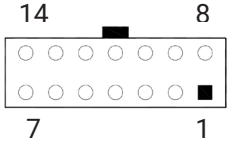
connector	description	Comments
Power Supply (JPWR1)	6 x 2 Pin Power Connector	12V/5V/3V3 7A per pin.
Power Supply (JPWR2)	7 x 2 Pin Power Connector	Addition 12V/5V power 6A per pin.
MiniSAS-HD (SASHD1/2)	36 pin Vertical MiniSAS-HD	SAS Host/Up/Down connection
I2C(JI2C0)	4 pin Box Header	Extended Expander I2C bus for OEM feature.
FAN (JFAN1/2/3/4)	4 pin Wafer	PWM FAN control.
UART (JEXP_UART)	3 x 2 Pin Header	Expander SMART/DEBUG port.
JEXP1	2 x 7 pin Box Header	GPIO/I2C Header

Power Connector (JPWR1)



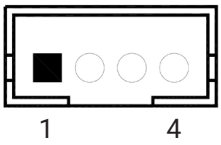
+12V	7	1	GND
+12V	8	2	GND
+3.3V	9	3	GND
+5V	10	4	MUTE_L (Not Use)
+5VSTBY (Not use)	11	5	PSU_N1 (Not Use)
PS_ON_L (Not Use)	12	6	GND

Power Connector (JPWR2)



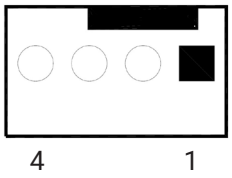
+12V	8	1	GND
+12V	9	2	GND
+12V	10	3	GND
+12V	11	4	GND
+5V	12	5	GND
+5V	13	6	GND
+5V	14	7	GND

I2C Connector (JI2C0)



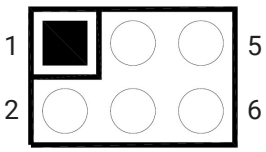
1	GND
2	I2C_CLOCK
3	I2C_DATA
4	N/A

FAN Connector (JFAN1, JFAN2, JFAN3, JFAN4)



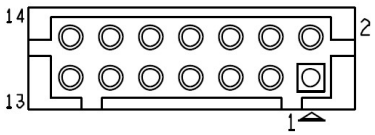
1	GND
2	+12V
3	TACH
4	PWM

Console for Expander (JEXP_UART)



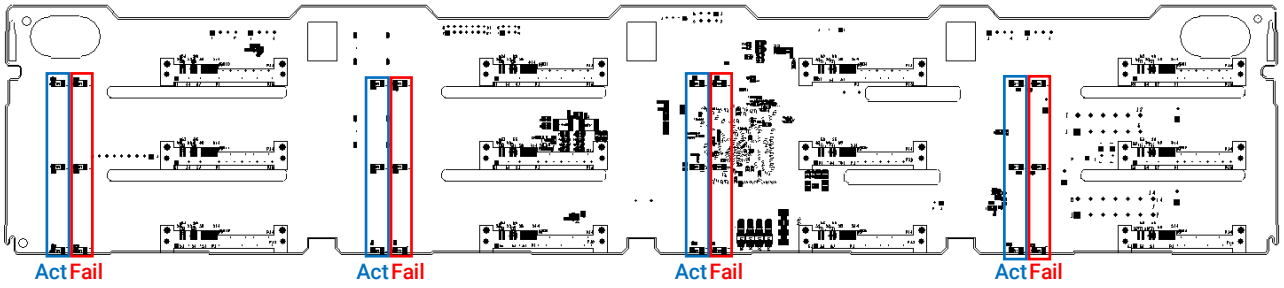
DEBUG_RXD	2	1	SMART_RXD
GND	4	3	GND
DEBUG_TXD	6	5	SMART_TXD

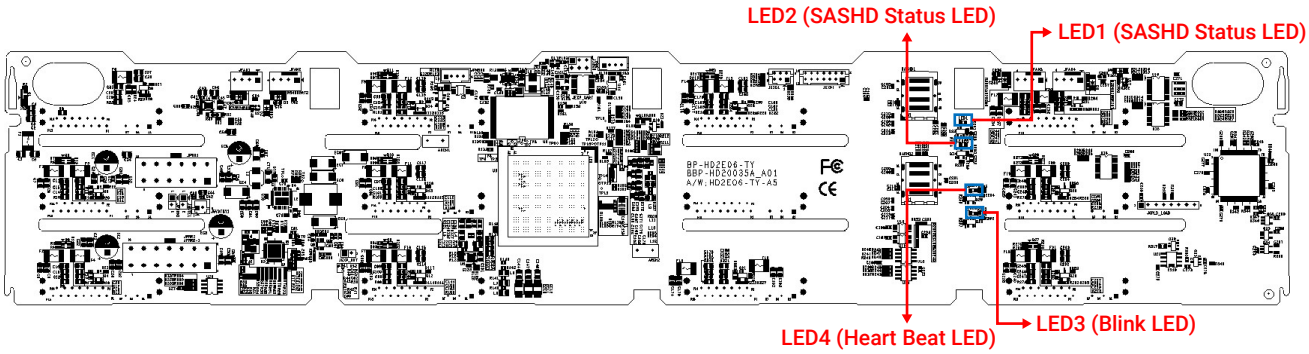
EXP GPIO/I2C Connector (JEXP1)



E2E_SCL	2	1	E2E_SCL
E2E_SDA	4	3	E2E_SDA
GND	6	5	GND
PEER_MATE_N	8	7	GND
GND	10	9	GND
LB_AB0	12	11	LB_BA0
LB_AB1	14	13	LB_BA1

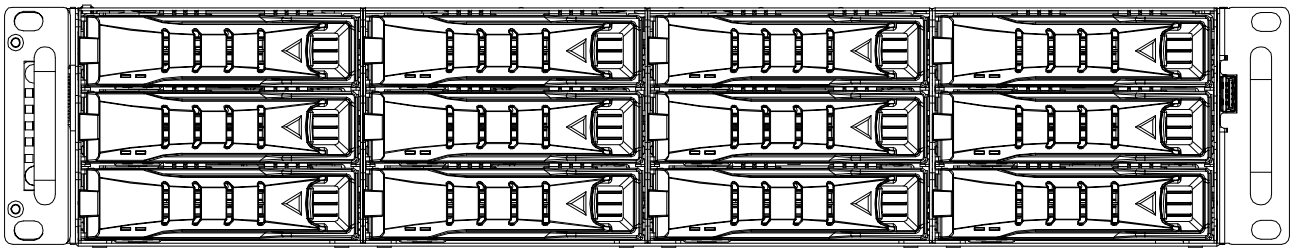
3.1.3 LED Indicator





HDD Activity LEDs	Blue (On)	HDD present
	Blue (Blinking)	HDD Activity detected or Locate HDD(slow)
	Off	HDD no connect or Power Off
HDD Fault/Status LEDs	Off	No control bit is set or set by any of the following bits: 1.RQST OK 2. RQST RSVD DEVICE 3. RQST HOT SPARE 4. RQST ACTIVE 5. DO NOT REMOVE 6. RQST IDENT 7. DEVICE OFF
	Red (Blinking)	Set by any of the following bits: 1. RQST CONS CHECK 2. RQST IN CRIT ARRAY 3. RQST IN FAILED ARRAY 4. RQST REBUILD/REMAP 5. RQST R/R ABORT 6. RQST INSERT 7. RQST REMOVE 8. PRDFAIL
	Red (On)	Set by any of the following bits: 1. RQST MISSING 2. RQST FAULT
SAS HD Link Status (LED1/2)	Blue (On)	Link up
	Blue (Blinking)	Activity detected
	Off	Link down
Expander Blink (LED3)	Blue (Blinking)	Expander alive, 0.0833Hz (12 seconds per cycle)
Expander Heart Bit (LED4)	Blue (Blinking)	Expander FW running

3.1.5 Drive Slot Map



HBA card			
0	1	2	3
4	5	6	7
8	9	10	11

MegaRaid card			
1	2	3	4
5	6	7	8
9	10	11	12

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