F2026-01-G5

2U26 PCIe Gen5 JBOF
User's Manual

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Release Date	Version	Update Content
May, 2025	1	Release to public.
June, 2025	1.1	Add Module board - M.2 sequency content.
August, 2025	1.2	Update retimer card section: BIOS setup/DIP switch configuration.
January, 2026	1.3	Add reminder notice to section 1.1.
June, 2026	1.4	Add Retimer card new content, Expansion card assembly and update Drive LEDs indicator content. Update HDD tray image.

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 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 disintergration.
- 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 F2026-01-G5.
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 F2026-01-G5. For the latest version of this user's manual, please refer to the AIC® website: https://www.aicipc.com/en/productdetail/51556.

Chapter 1 Product Features

F2026-01-G5 is an ideal SAS JBOF that is specifically designed to accommodate diverse corporations and enterprises who pursue flexibility, easy control, and density in external or backup storage. This product supports designs and is easily deployed for your benefit.

Chapter 2 Hardware Setup

This chapter displays an easy installation guide for assembling the main components of the JBOD. Utmost caution for proceeding to set up the hardware is highly advised. Do not endanger yourself by placing the device in an unstable environment. The consequences for negligent actions may be extremely severe.

Chapter 3 Hardware Settings

This chapter provides details about backplane and expander board. These descriptions assist users to configure different settings and functions of the backplane, as well as to confirm the placement of each connector and jumper.

Chapter 4 BMC Configuration Settings

This chapter illustrates the diverse functions of IPMI BMC, including the details on logging into the web page and assorted definitions. These descriptions are helpful in configuring various functions through Web GUI without entering the BIOS setup.

Chapter 5 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

F2026-01-G5 is a high performance JBOF product that includes 26 x 2.5" hot swap drive bays. 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 contents of the shipping carton are all there and in good condition.

1.1 Box Content

This product contains the components listed below.
Please confirm the number and the condition of the components before installation.

Pre-installed into the system		Number
✓	2.5-inch external hot swap drive tray	26
✓	7 x 4056 PWM fans per node	7+7
✓	3200W 1+1 hot swap redundant power supply 80+ Titanium	1+1
Accessory Item		**Number**
✓	EPE foam for front board: 563*420*105H	1
✓	EPE foam for rear board: 563*420*105H	1
✓	EPE foam for front tray: 563*300*145H	1
✓	EPE foam for rear tray: 563*300*145H	1
✓	EPE pad for rail: 130*100*40T	2
✓	36-inch tool-less slide rail assembly	1
BTO	Power cord	vary per region

The canister cover is equipped with a protective film to prevent scratches during handling. Please remove the film before use.

1.1.1 Accessory Bag Contents

Item	Part No.	Description	Number
F2026-01-G5 ACCESSARY	M15-1633-100X01	ACC	1 set
M.2 SCREW ASSY	M06-1633-410X01	MCB	1 set
SCREW/MECH	H38R0P305001	R(+),M3X5L,NI	8 pcs
#1 ZIPPER BAG	H81-Z-040001	5(O/W)*7CM,T=0.04MM	1 pcs

Product features are subject to change without notice.

1.2 Specifications

General	Number of Controller	2
	PCIe Switch	Broadcom PEX 89144
	Host/Expansion Interface	4 x PCIe Gen5 x16 per node
Drives Supported	Drive Interface	SFF-8639
	Form Factor	U.2
	Internal Drive	4 x M.2 2242 (PCIe) per node (total 4+4 pcs)
Administration / Management	Admin/Firmware Upgrade	BMC with IPMI 2.0 compliance
	LED Indicators	Yes
Hot swap and Redundancy	Disk Drive	26
	Cooling	7 x 4056 easy swap fans per node (total 14 fans)
	Power Supply	3200W 1+1 hot swap redundant 80+ Titanium
	Power Entry	Dual AC inlet
	Controller	Dual

Electrical and Environmental	Universal A/C Input	100~240V AC Full Range
	Operating Environment	• Temperature : 0ºC to 35ºC • Relative humidity : 20% to 80%
	Non-operating Environment	• Storage temperature : -20° to 60°C • System relative humidity : 10% to 90%
Physical Specification	Dimensions (W x D x H)	mm : 438 x 750 x 8 8
		inches : 17.2 x 29.5 x 3. 5
	Gross Weight (w/ PSU, Rail and Pallet; w/o Disks)	kgs : 38
		lbs : 83.8
	Packaging Dimensions (W x D x H)	mm : 605 x 1060 x 294
		inches : 23.8 x 41.7 x 11.6
Mounting	Standard	36” tool-less rail

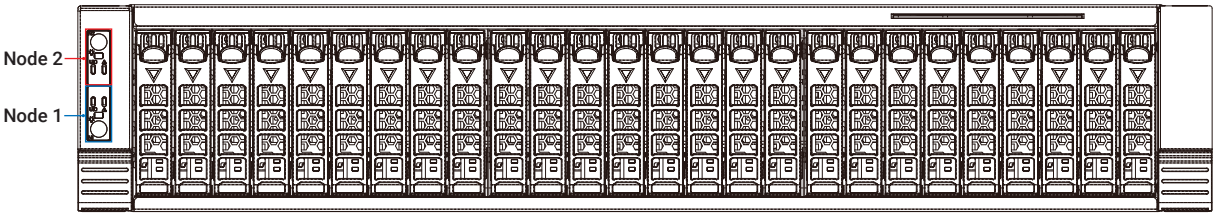
AC input 100V-127V~ only support 1300W power supply.

1.3 Features

F2026-01-G5 is an innovative 2U26 JBOF that integrates 2.5" NVMe drive. This product is designed to accommodate single node with 4 x PCIe Gen5 x16 slots. Featuring Broadcom Atlas 2 PCIe Gen5 Switch chip 89144, and board-to-board connection design into a compact and stable system with exceeding productivity.

- 2U high-availability support 26 x hot swap Gen5 U.2 dual port drives
- Broadcom 89144 PCIe Gen5 switch base bridge board
- Supports dual controllers up to 8 x PCIe Gen5 x16 slots
- Designed for low latency and high performance applications
- PCIe Gen5 interface to support NVMe over fabrics (3rd party cards)
- Fully redundant, fault-tolerant system supporting hot swap design for easy maintence and management
- Intelligent Enclosure Managment with IPMI 2.0 compliance
- Tool-less tray design

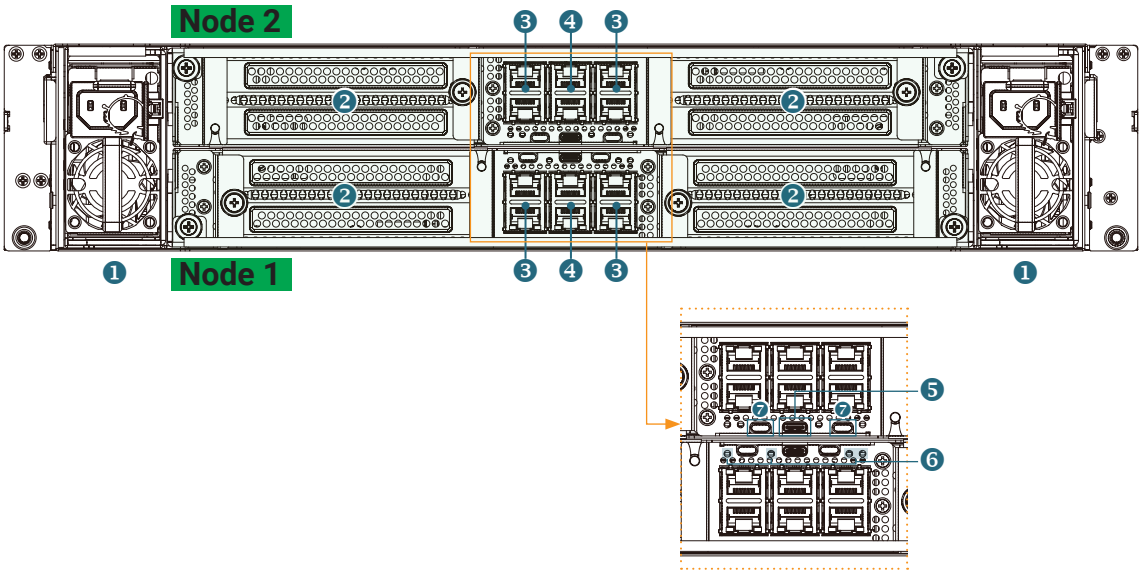
Front Panel



System LED Indicator and switch

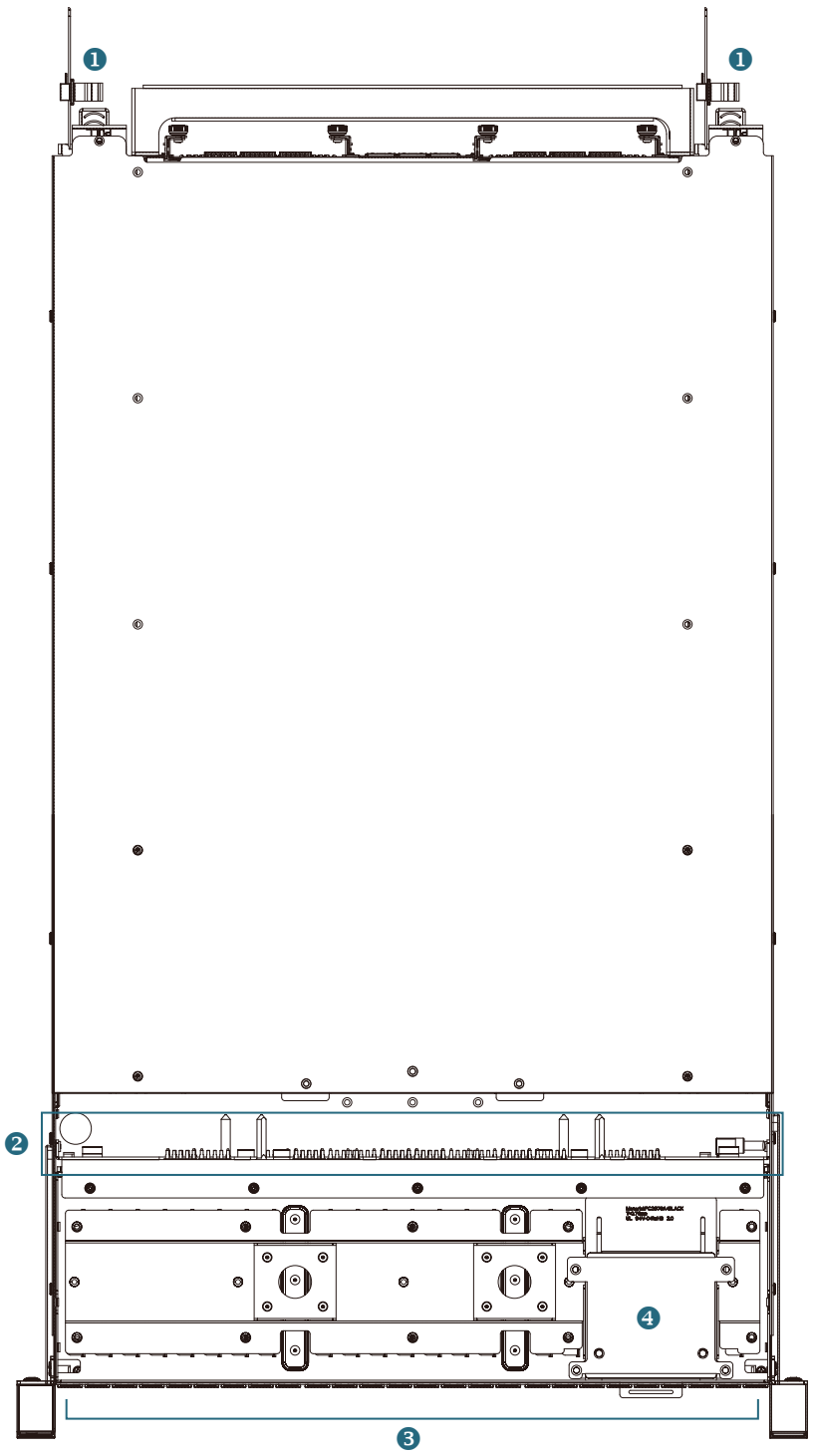
Item	Description	Item	Description
	Node Power Button		Node Power Status LED
	Node ID LED		BMC Alert LED

Rear Panel



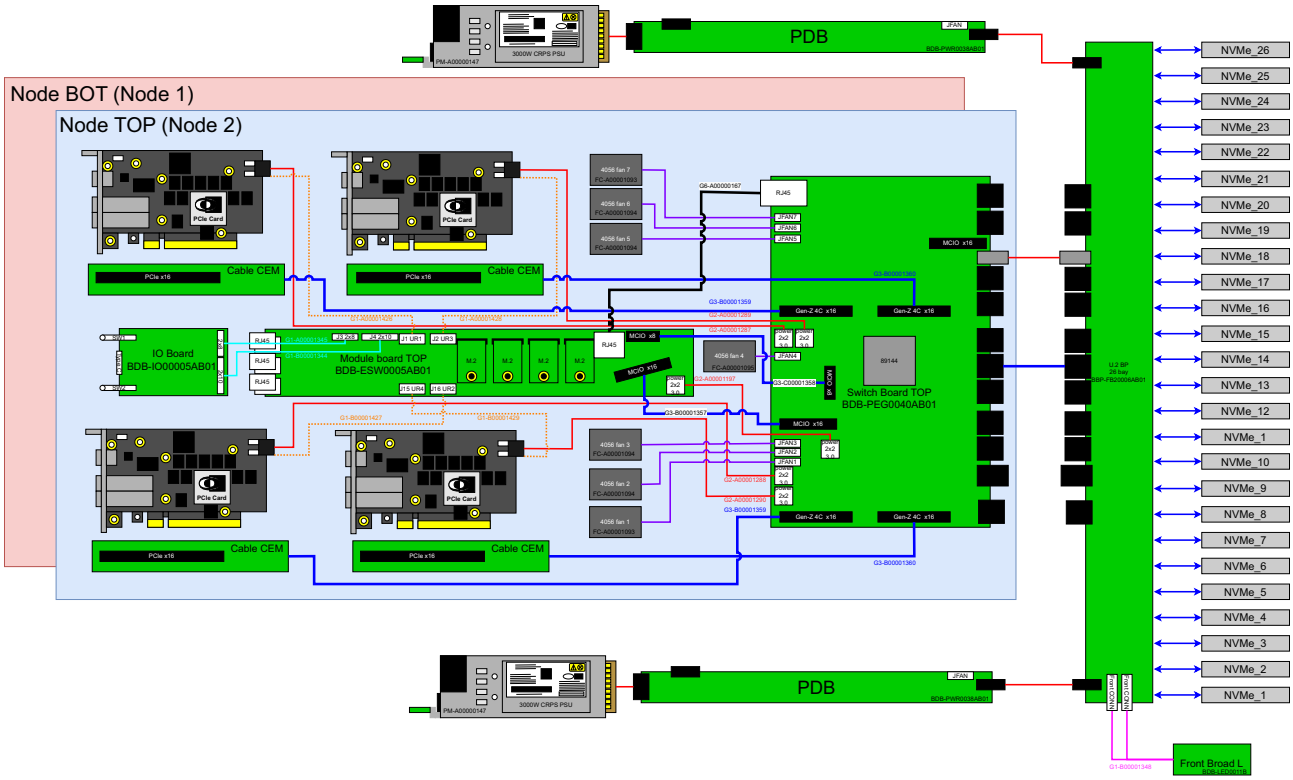
Item	Description
1	1+1 3200W redundant power supply 80+ Titanium
2	4x PCIe 5.0 x16 slots FHHL (Node)
3	4x GbE RJ45 for DPU firmware management (Per Node)
4	2x GbE RJ45 for BMC management (Per Node)
5	1x USB Type-C to UART for BMC, DPU, and PCIe switch FW access (Per Node)
6	4x Bi-Color, red & green, user define LED . (Per Node)
7	1x System ID button & 1x User define button (Per Node)

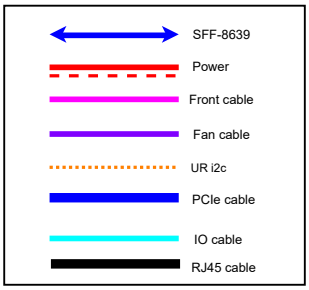
Top View



Item	Description
1	3200W 1+1 hot swap redundant 80+ Titanium
2	NVMe Backplane
3	26 x 2.5" hot swap drive bays
4	Information card

1.4 Block Diagram



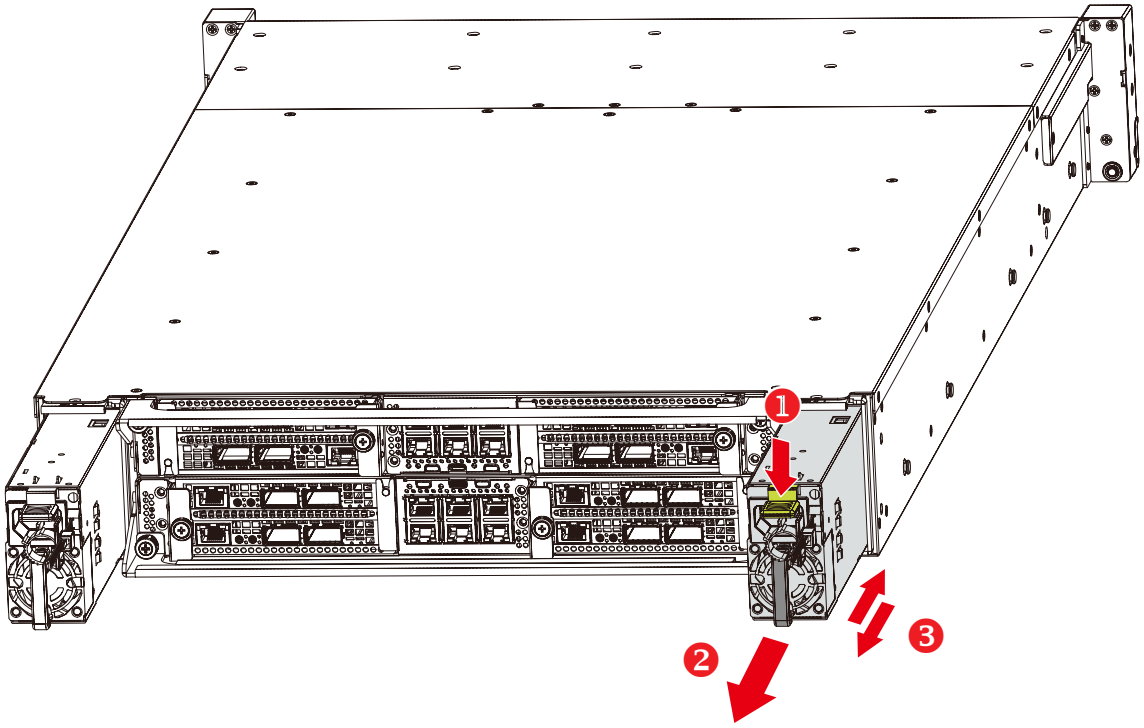


Chapter 2. Hardware Setup

2.1 Power Supply Unit

2.1.1 Installation

① Press the ejector to release the module.
② Pull the handle to remove the module out of the chassis.
③ Push the replaced power supply unit into the chassis. Ensure that the module is hooked into the cage.



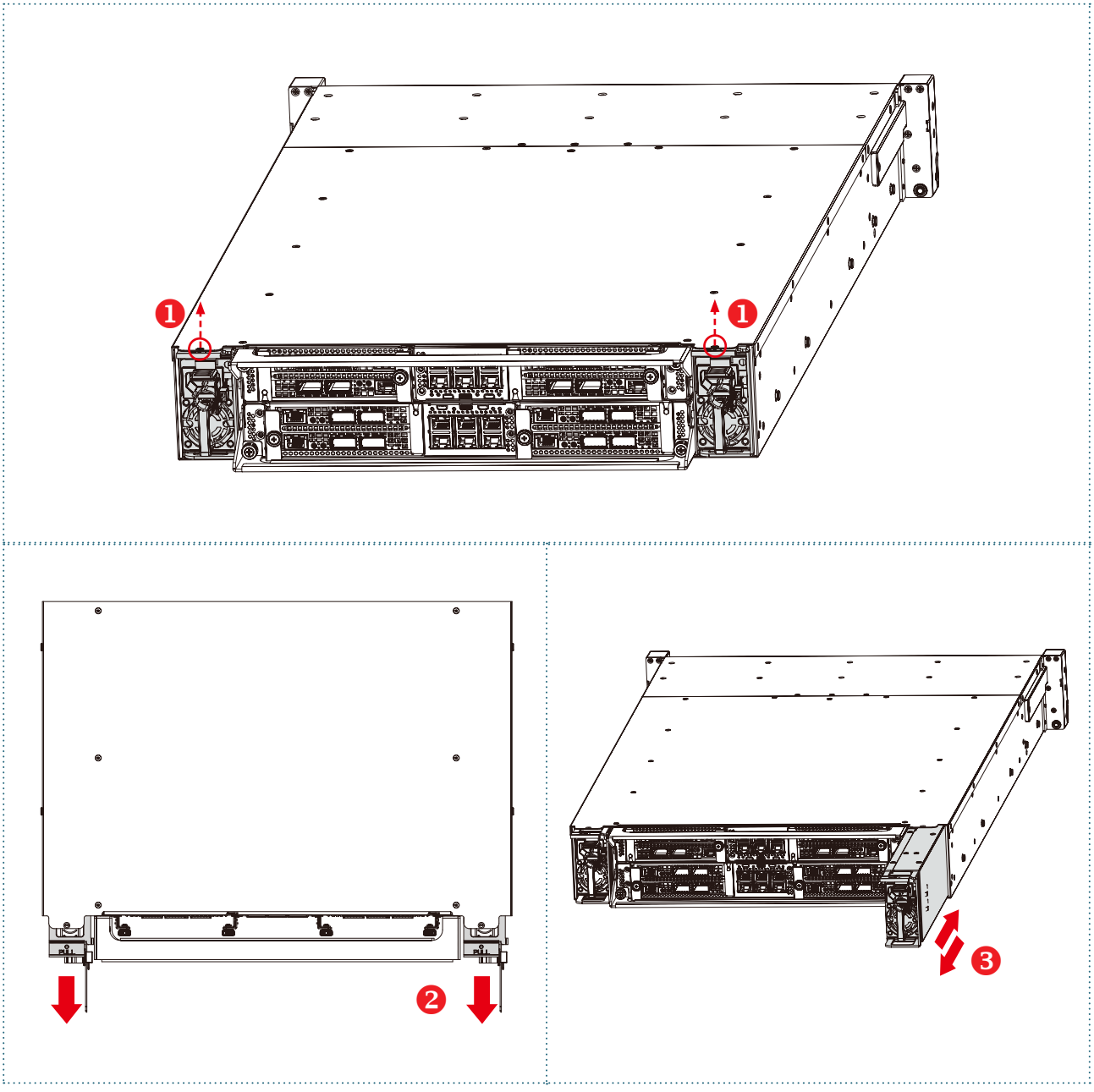
2.1.2 LED Indicator

Indicator Color	Behavior
Green	12V Output is normal.
Off	No AC power to all power supplies.
Green (1Hz Blink)	AC present / Only Vsb on (PS off).
Green (1Hz Blink)	Slave PSU is set as active standby mode (Cold Redundant)
Amber	AC cord unplugged or AC power lost; with a second power supply in parallel still with AC input power.
Amber	Power supply critical event causing a shutdown; failure, OCP, SCP, OVP, Fan Fail and OTP.
Amber (1Hz Blink)	Power supply warning events where the power supply continues to operate; high temp, high power, high current and slow fan.
Green (2Hz Blink)	Power supply FW updating.

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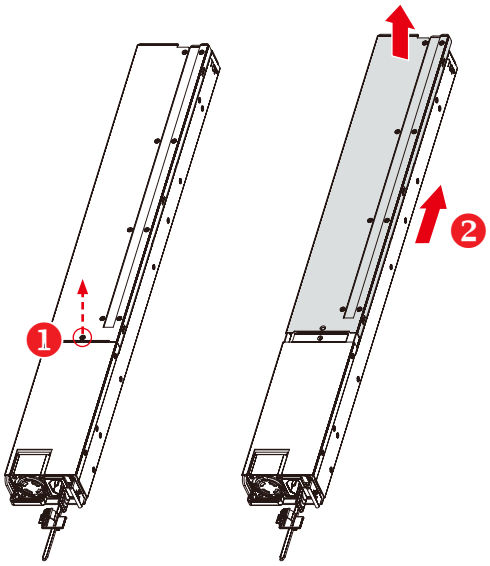
2.2 Power Supply Unit Assembly

① Dislodge the screws to release the module.
② Hold the handle and pull.
③ Pull the module out of the chassis.



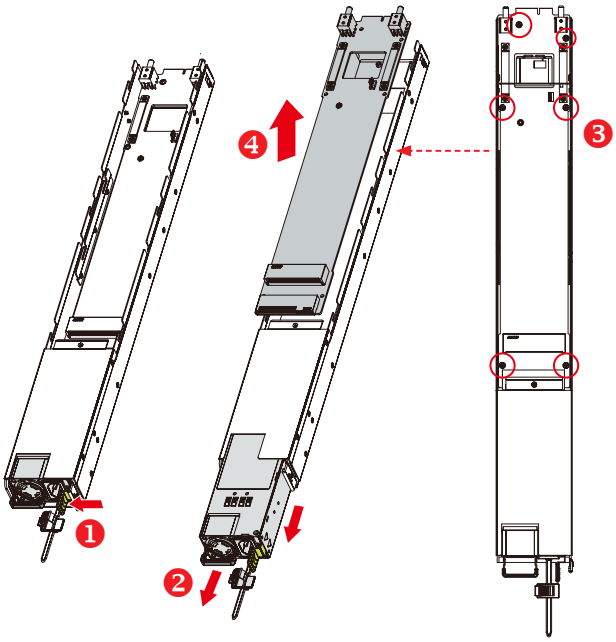
This information is provided for professional technicians only.

① Dislodge the screw.
② Slide the cover towards the opposite direction of PSU and lift upward to remove it.



PDB (Power Distribution Board)

① Press the ejector
② Pull the handle to remove the module out of the chassis.
③ Dislodge the screws*6 on PDB.
④ Lift the PDB upward to remove it.

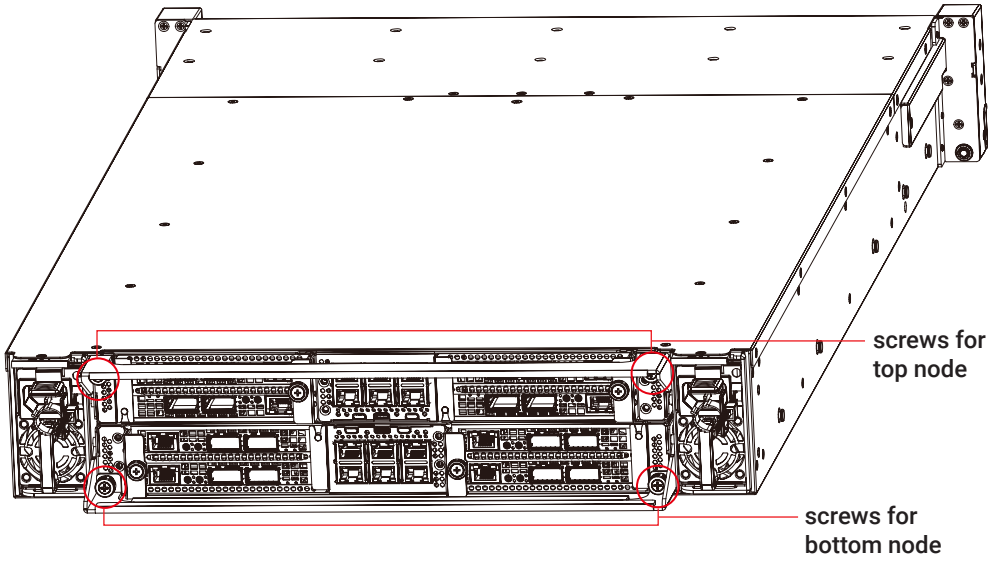


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2.3 Node

2.3.1 Remove the node from chassis

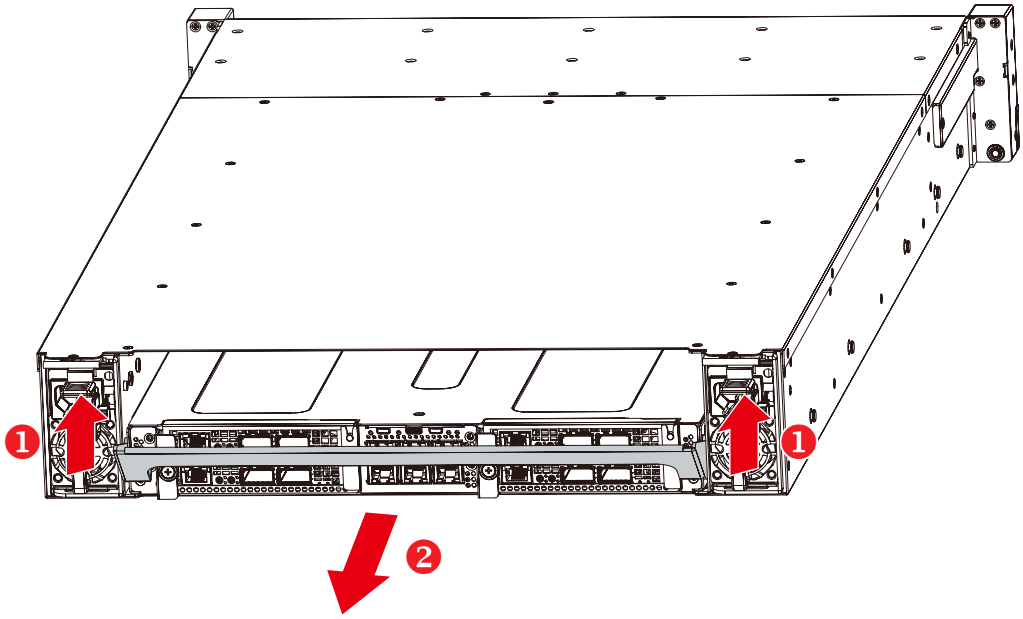
① Dislodge the screws(two of each node).



For transportation security, the four screws are firmly tightened. Please loosen them using a screwdriver.

Bottom Node

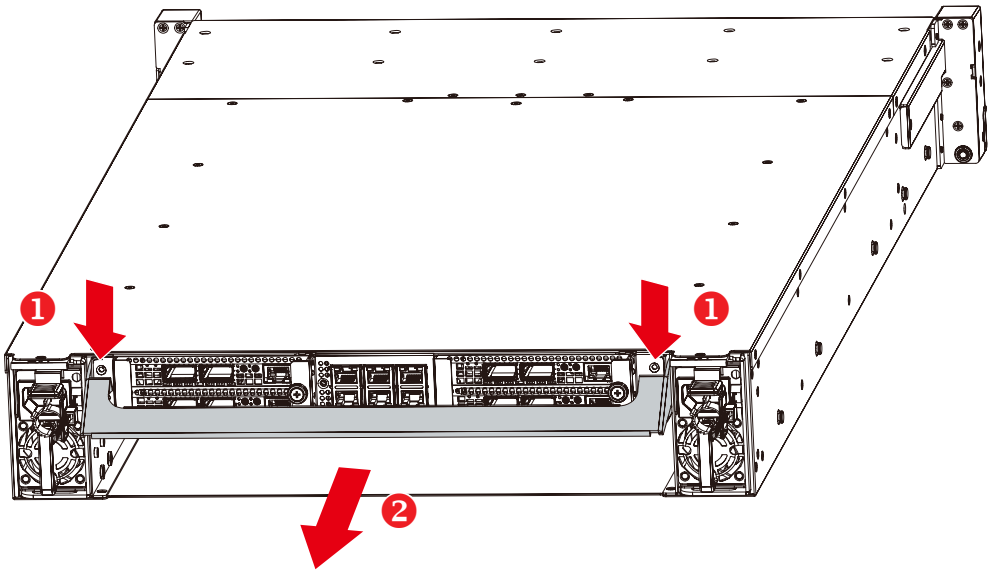
① Lift up the handle to release the node.
② Hold the handle and pull the node out of the chassis.



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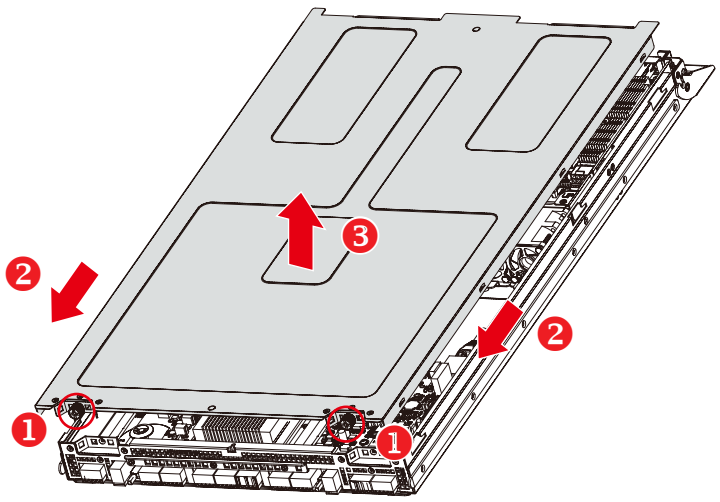
Top Node

① Press down the handle to release the node.
② Hold the handle and pull the node out of the chassis.
*Flip the top node upside down to the correct position.



2.3.2 Top cover of the node

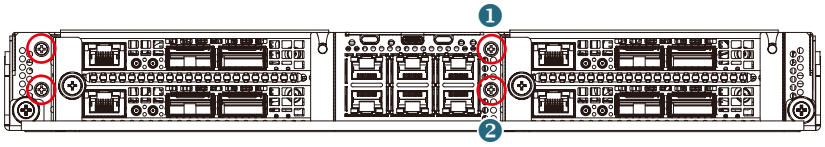
① Loosen the captive screws.
② Slide the top cover foward.
③ Lift the cover upward to remove it.

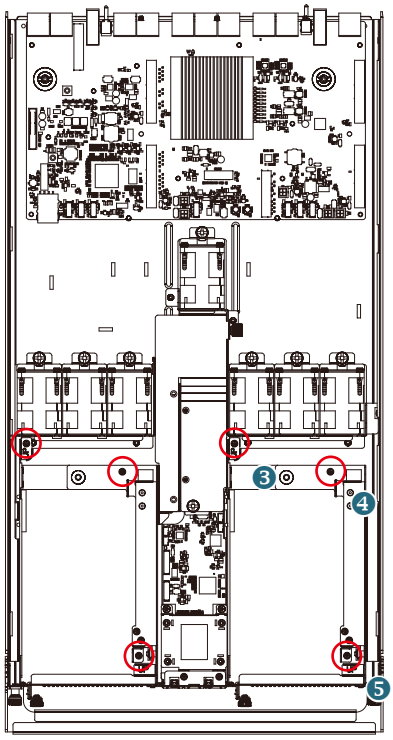


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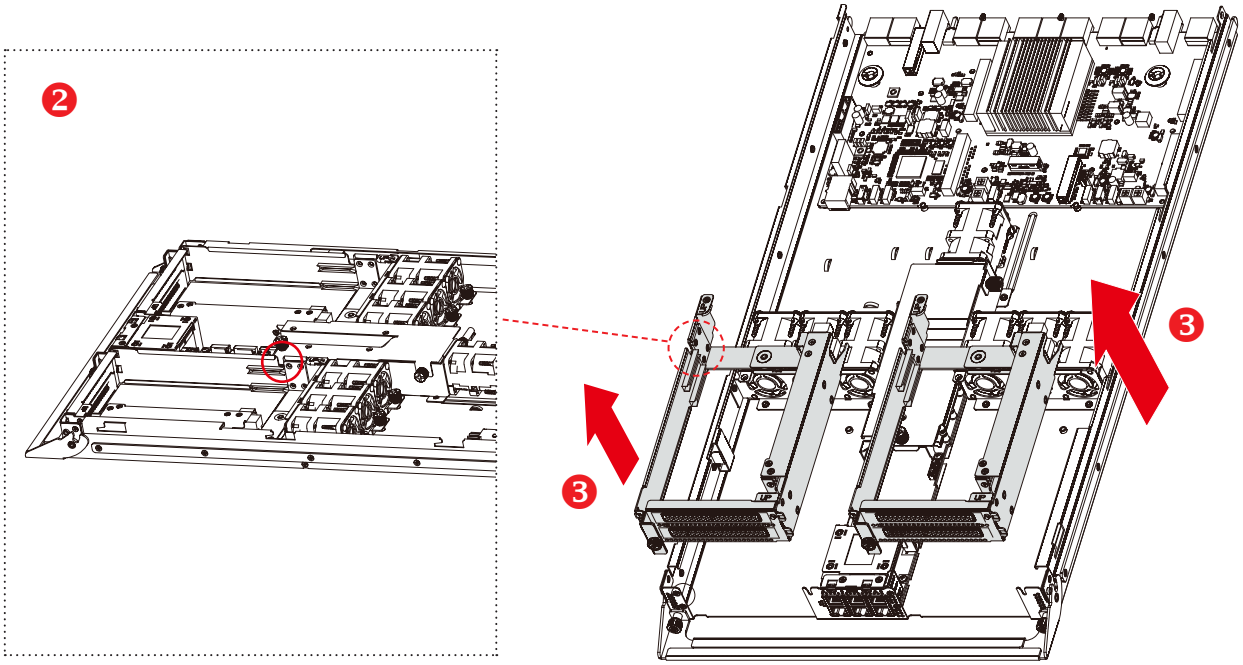
2.3.2.1 PCIe Module

① Dislodge the screws. (five screws for each PCIe module)





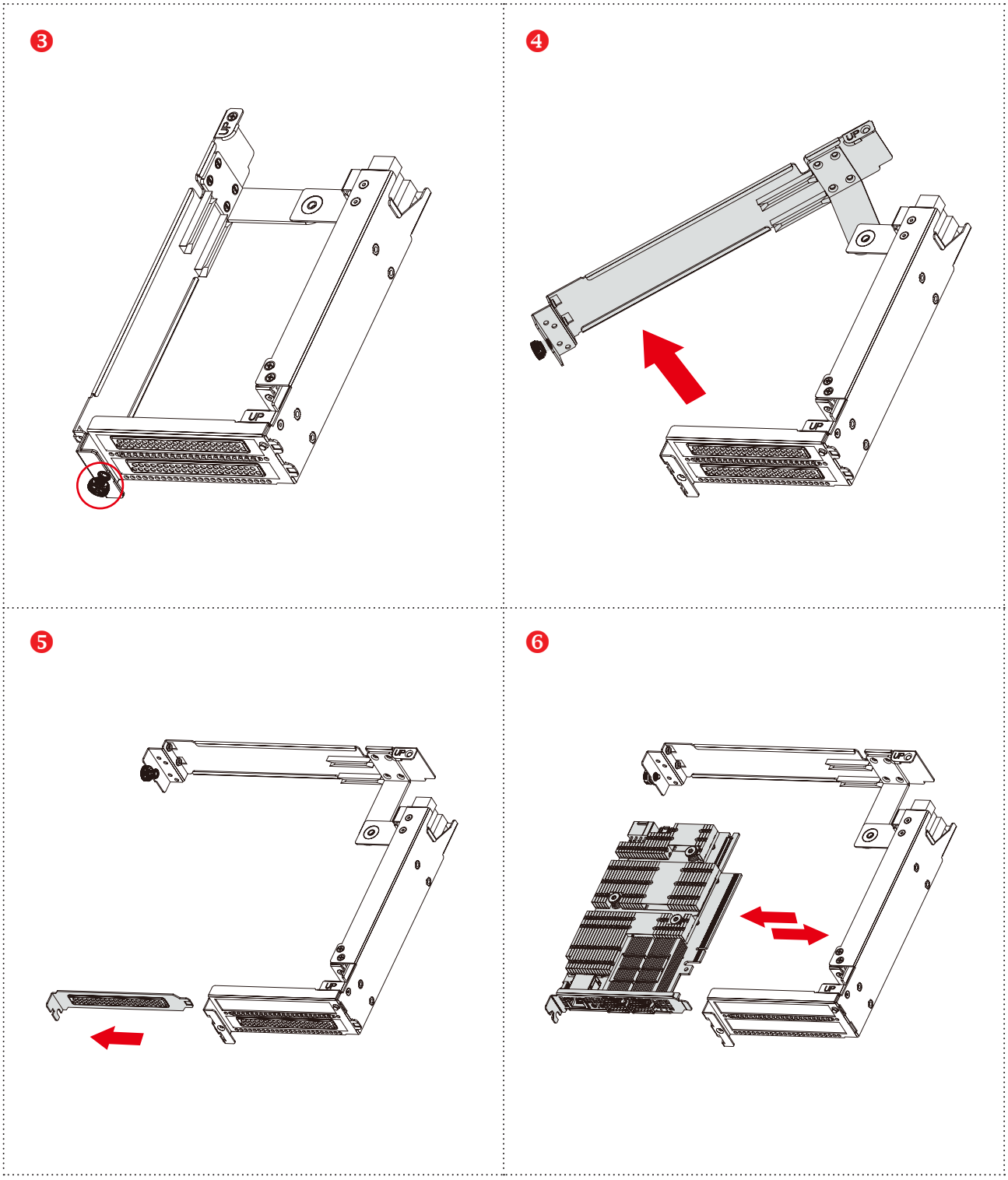
② Remove the UART cable from the U-shaped routing groove at the edge of the bracket.
③ Pull the PCIe module upward to remove.



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2.3.2.1.1 PCIe card

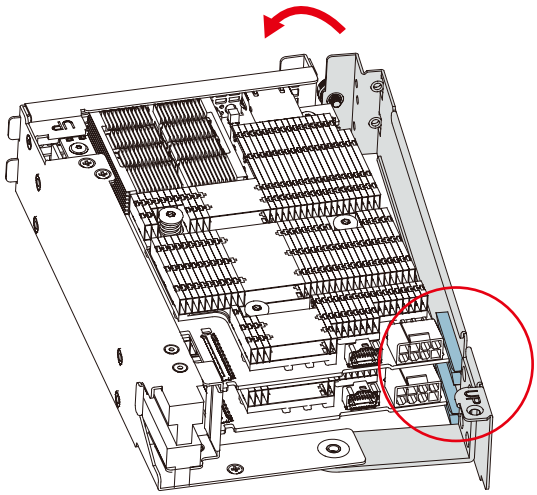
③ Loosen the captive screw. (as marked in red circle)
④ Open the bracket in the direction indicated by the arrow.
⑤ Remove the PCIe card slot cover.
⑥ Insert the PCIe card into the card slot.

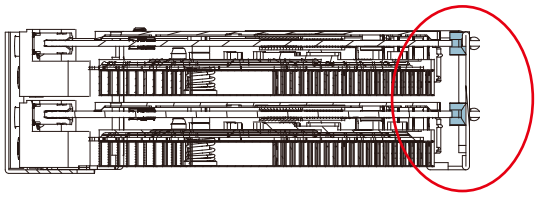


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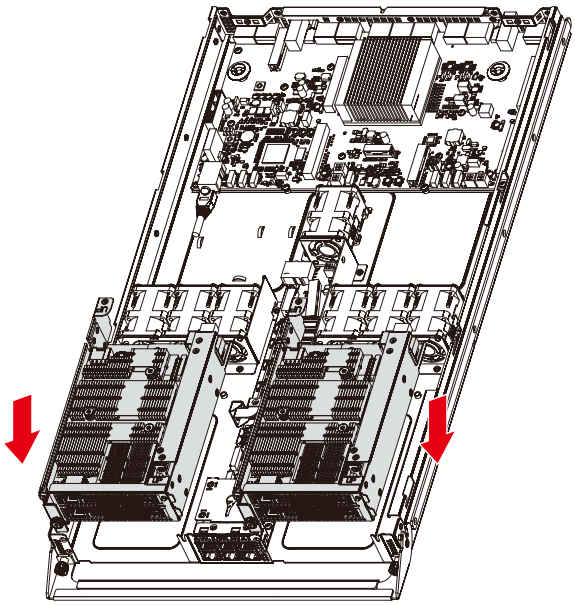
⑦ Close the bracket in the direction indicated by the arrow. Ensure the PCIe card is properly seated in the card guide (highlighted in blue) on the side bracket.
⑧ Press down on the PCIe module and insert it into the node to complete the installation.

7





8

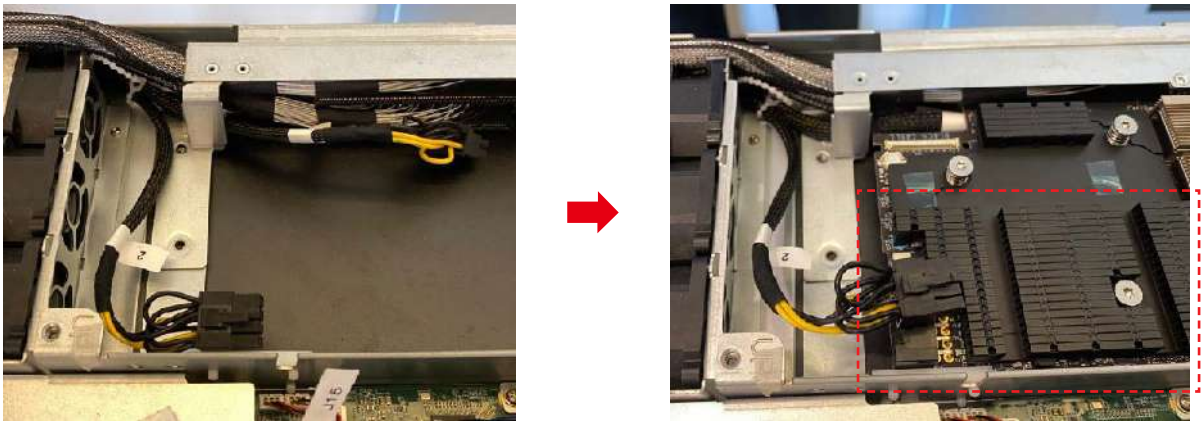


This information is provided for professional technicians only.

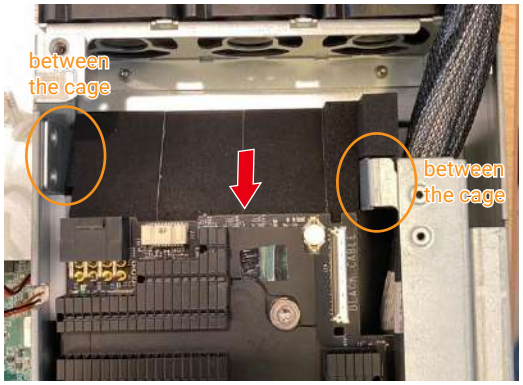
- **Expansion cards assembly**

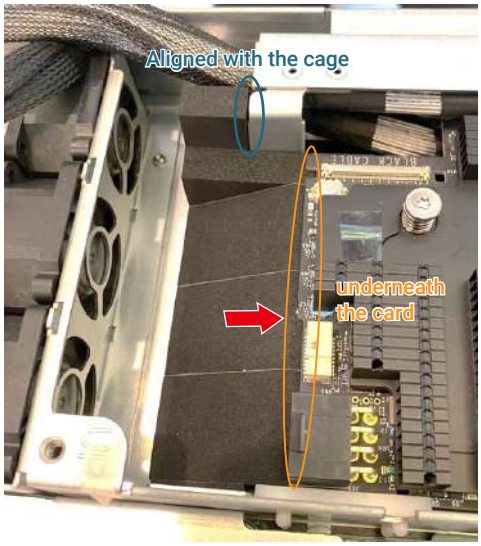
  If you need to install additional expansion cards, please refer to the installation instructions below.

  ① Insert the BF3 card or other expansion cards to the card slot.

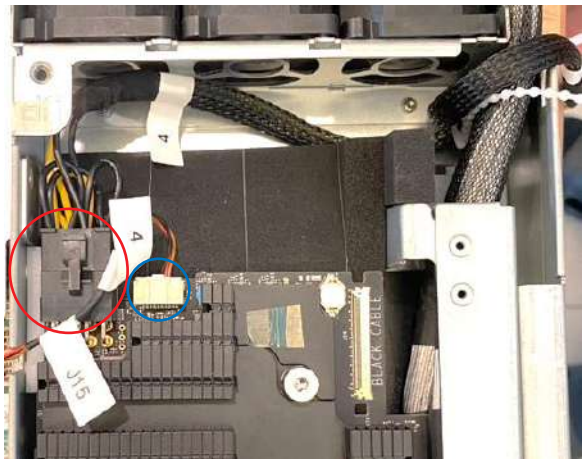


  ② Place the sponge in the proper position. Ensure that the sponge is secured between both sides of the cage, with a small portion of the sponge pressed underneath the expansion card.





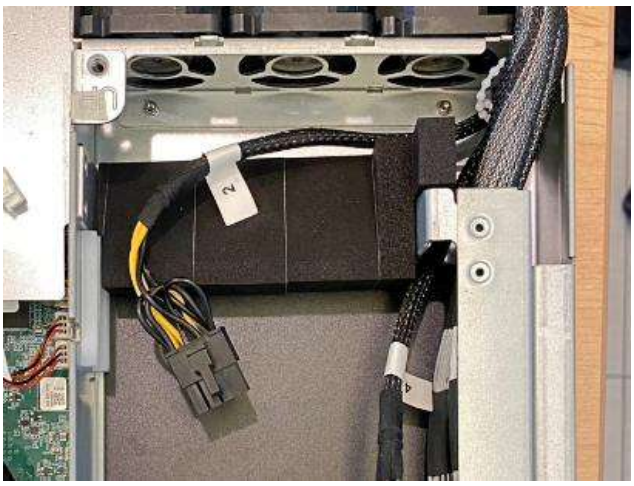
  ③ Plug the power cable(as marked in the red circle) and plug the UART cable(as marked in blue circle).



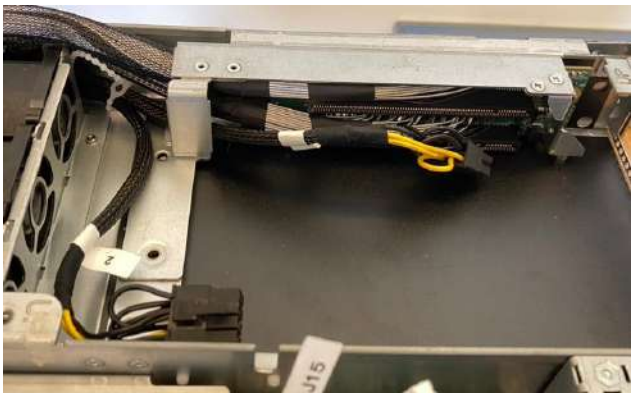
NOTE

Shipping Status

- As the BF3 bracket is not installed in the shipping configuration, the sponge cannot be fully secured and may shift during transportation. Therefore, the sponge will not be included inside the canister during shipment.



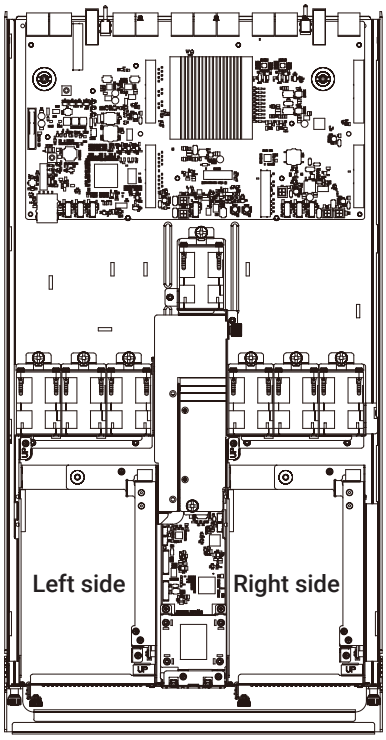
- Since IBM requires only one BF3 card, one cable will be pre-installed inside the cage, while the other cable will remain outside the cage.



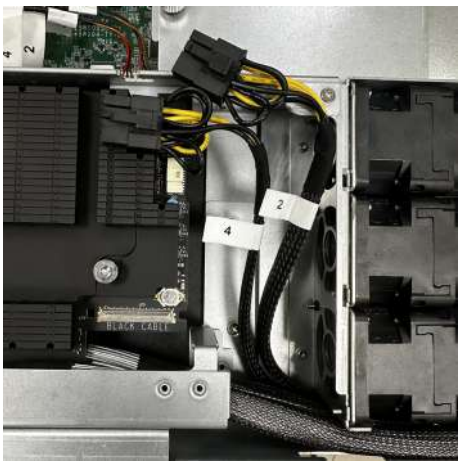
The following section provides installation instructions for PCIe cards that require an external power connection and a UART cable.

Cable Connection : Power cable

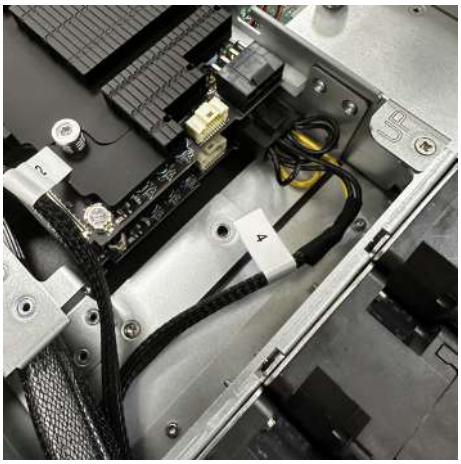
There are four power cables for each PCIe card.



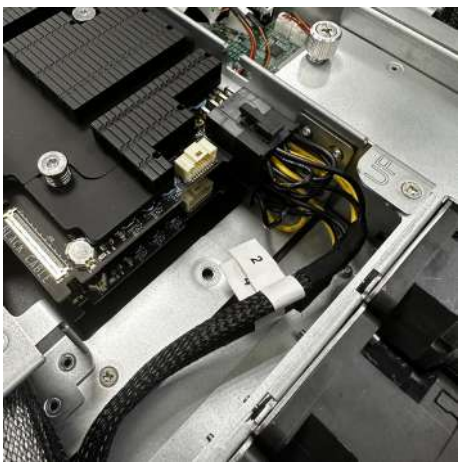
① Remove the fan cover, please refer to the section 2.3.2.5 Module Board > **Remove Fan cover**. Right side has cables labeled with numbers 2 and 4.



② Connect power cable #4 to the bottom PCIe card first.



③ Then, connect power cable #2 to the top PCIe card.



① Left side has cables labeled with numbers 1 and 3.



② Connect power cable #3 to the bottom PCIe card first.



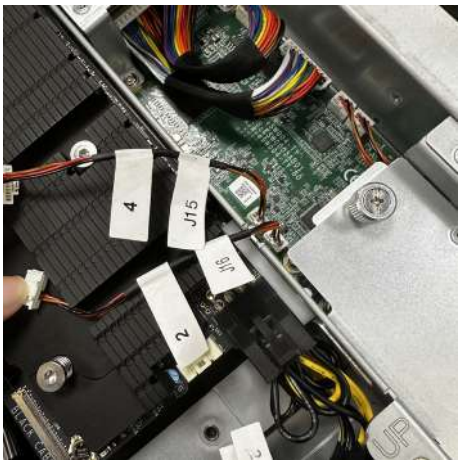
③ Then, connect power cable #1 to the top PCIe card.



Cable Connection : UART cable

There are four UART cables for each DPU card.

① Right side has cables labeled with numbers 2 and 4.



② Connect power cable #4 to the bottom DPU card first.



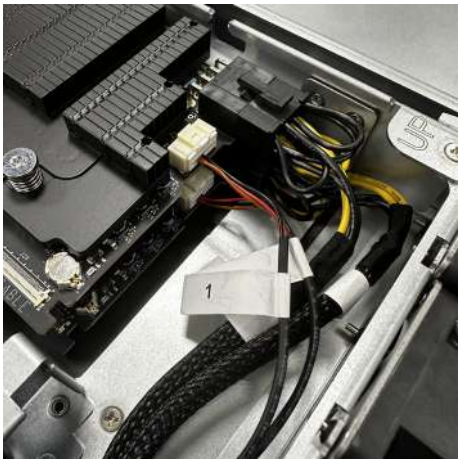
③ Then, connect power cable #2 to the top DPU card.



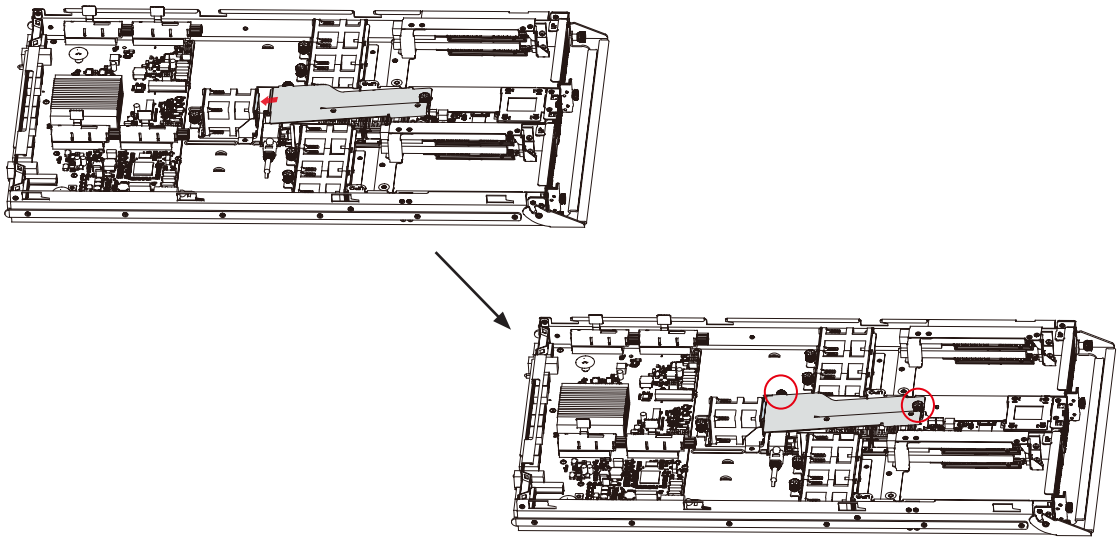
① Left side has cables labeled with numbers 1 and 3.
② Connect power cable #3 to the bottom DPU card first.



③ Then, connect power cable #1 to the top DPU card.

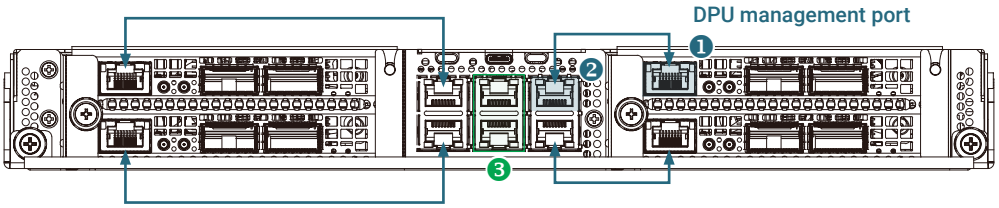


④ Tilt the fan cover and insert it into the designated position. Fasten the captive screws to complete the fan cover installation.



Cable Connection : DPU MGMT cable

Connect the DPU management port to the RJ45 port (❶→❷) as illustrated.
Afterward, the host can connect to the middle RJ45 port (item ❸) to simultaneously link four DPU MGMT and F2026-01-G5 MGMT.



Item	Description
1	DPU management port
2	GbE RJ45 for DPU firmware management
3	GbE RJ45 for BMC management

2.3.2.1.2 Retimer card

Host Server BIOS Setup Menu Setting

Please make sure the setting below has been Enabled/Disabled in the BIOS setup menu.

- Independent Clock Mode: Set to Enabled
- Spread Spectrum Clocking, SSC: Set to Disabled

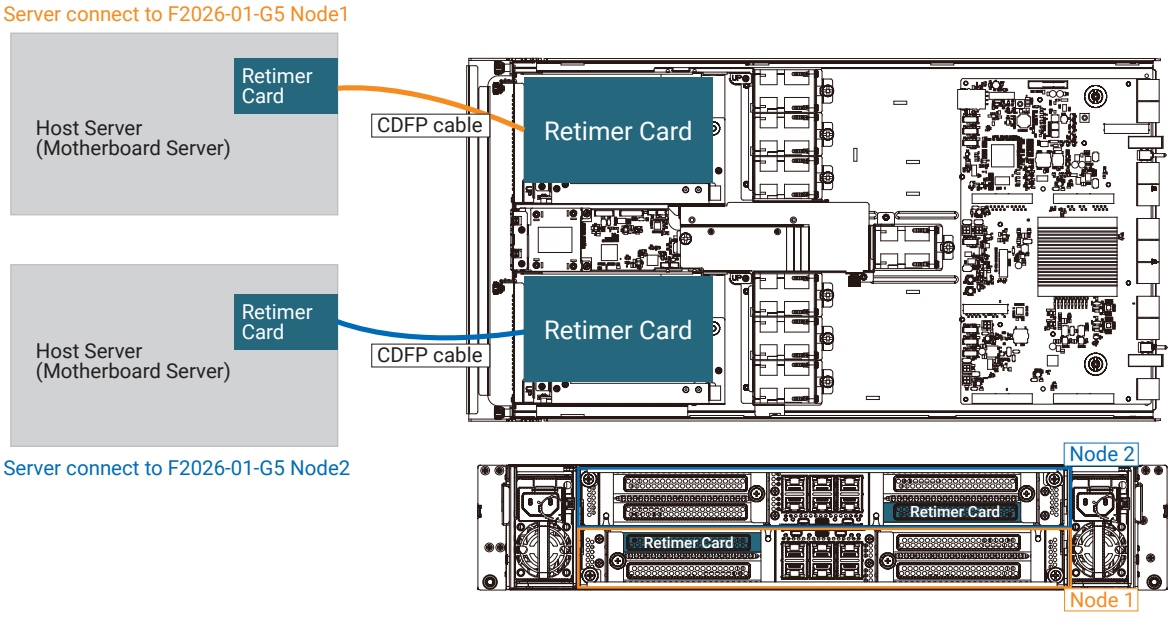
NOTE
BIOS settings may vary depending on the motherboard manufacturer. To ensure compatibility and proper functionality, it is strongly recommended to consult the vendor in advance and verify support for the required configurations.

NOTE
Currently, only one retimer card supports the function mentioned in the BIOS settings. It is an optional AIC component (model name: DB-PEG502-TY). In the following descriptions, all references to a retimer card refer to this model.

NOTE
Hardware Compatibility: For reliable detection and signal integrity at cold start, the use of AIC qualified host motherboards is highly recommended. These systems are engineered with optimized PCIe link training sequences for high speed enterprise storage. Using non qualified boards may result in inconsistent device recognition during the initial boot sequence.

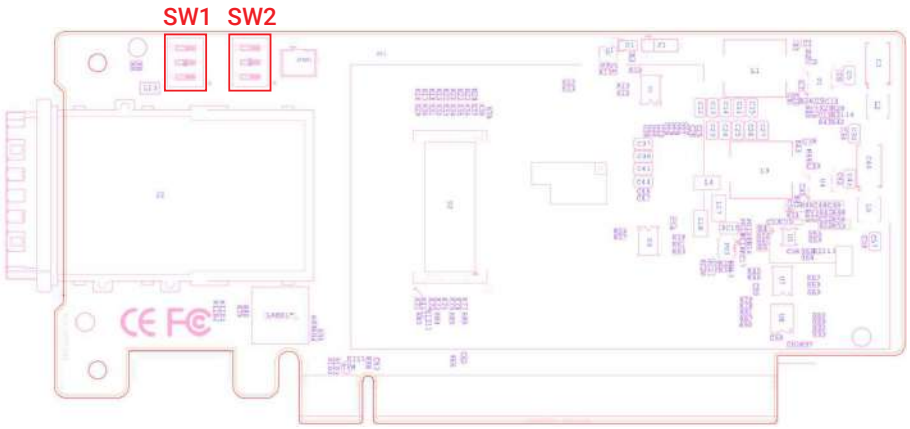
Retimer Card Dip Switch Settings

Ensure that the Dip Switch settings are configured before installing the retimer card.



■ Retimer Card DIP Switch Configuration

The Retimer Card features two DIP switch banks- SW1 and SW2, which must be correctly configured to ensure proper signal routing and I²C communication with the host or JBOF system.



■ SW1 DIP Switch Configuration-Downstream and Upstream Ports

The SW1 DIP switch bank on the Retimer Card is used to configure key control signals for both the Downstream and Upstream PCIe ports. These settings are critical for proper PCIe link initialization and I²C communication, and must be adjusted according to the system topology—whether the card is installed in a host server or within a cascaded JBOF configuration.

① **Host-Based Topology**

In a standard host-to-device configuration:

- Upstream port connects to the host motherboard (PCIe root complex).
- Downstream port connects to PCIe endpoints such as SSDs or accelerators.

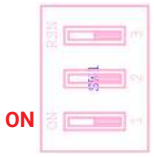
② **Cascaded JBOF Topology**

In a cascaded JBOF setup, multiple JBOF systems are interconnected via PCIe slots using Retimer Cards to extend storage capacity or bandwidth:

- Upstream port connects to the initiating JBOF or bridge system.
- Downstream port connects to the next JBOF in the cascade.

NOTE

Correct SW1 configuration ensures stable PCIe link training and system-level communication across both host and cascaded JBOF environments. Improper settings may result in link failures, device detection issues, or loss of management interface.



Dip Switch-SW1 (Default settings)

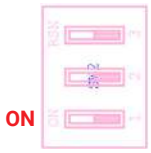
Downstream		Upstream	
DIP Switch	Net Name	DIP Switch	Net Name
ON	PERST	OFF	PERST
ON	I2C_SDA	ON	I2C_SDA
ON	I2C_SCL	ON	I2C_SCL

In a standard host-to-device configuration:

- Upstream port connects to the host motherboard (PCIe root complex).
- Downstream port connects to PCIe endpoints such as SSDs or accelerators.

■ SW2 DIP Switch– I²C Address Configuration

SW2 sets the I²C address of the Retimer Card by adjusting three address bits: A2, A1, and A0.
The default configuration sets the address to 0xEA, using the following DIP switch positions:



Dip Switch-SW2 (Default settings)

setting the I²C address to 0xEA	
DIP Switch	Net Name
OFF	PCA9546APW_1_A2
ON	PCA9546APW_1_A1
OFF	PCA9546APW_1_A0

If the I2C address conflicts with the host system, follow the spec below to adjust SW2.
SW2 : OFF = High(1), ON = Low(0)

1	1	1	0	A2	A1	A0	R/$\overline{W}$

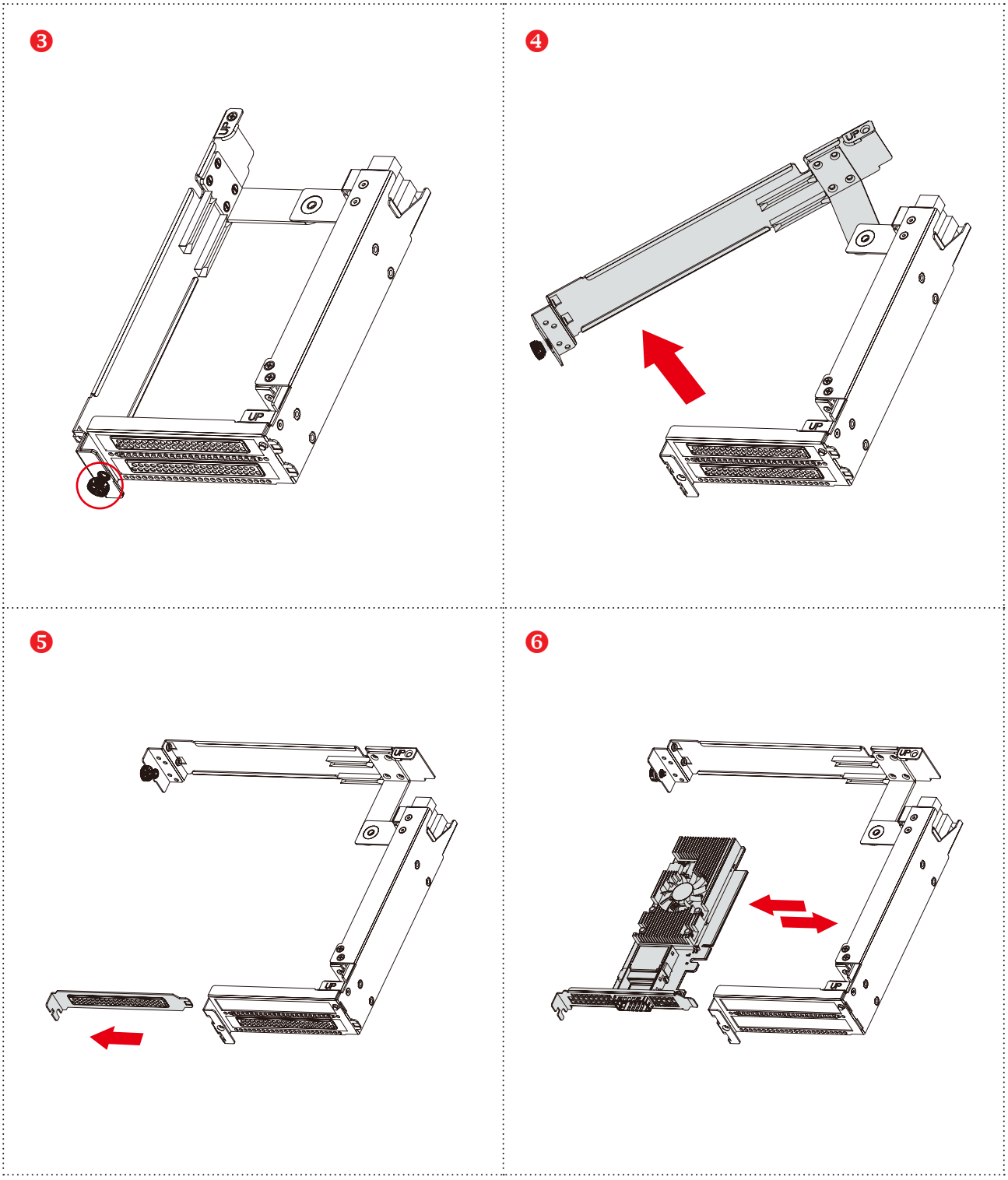
fixed — hardware selectable

I²C Address Mapping Table

A2	A1	A0	8 Bit Address
0	0	0	E0/E1
0	0	1	E2/E3
0	1	0	E4/E5
0	1	1	E6/E7
1	0	0	E8/E9
1	0	1	EA/EB
1	1	0	EC/ED
1	1	1	EE/EF

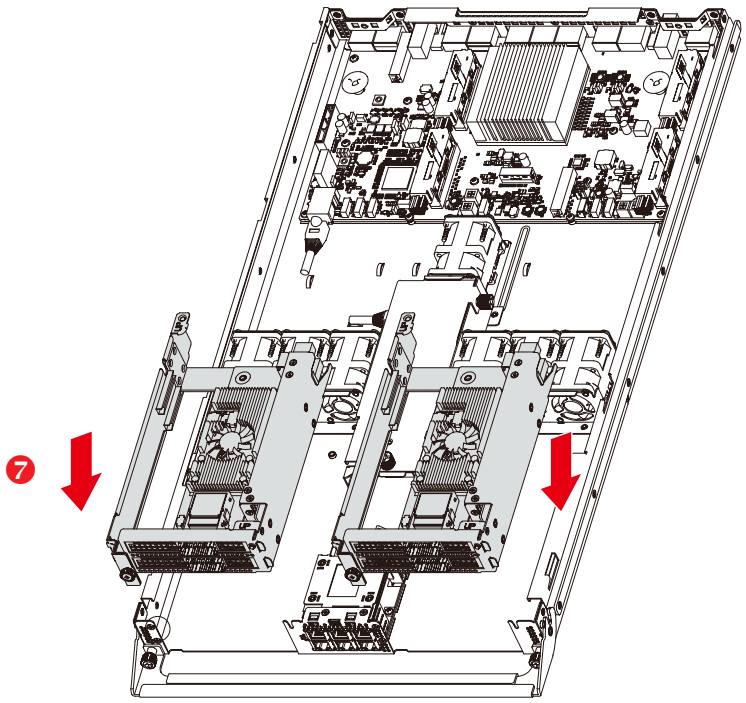
Retimer Card Installation

③ Loosen the captive screw. (as marked in red circle)
④ Open the bracket in the direction indicated by the arrow.
⑤ Remove the Retimer card slot cover.
⑥ Insert the PCIe card into the card slot.



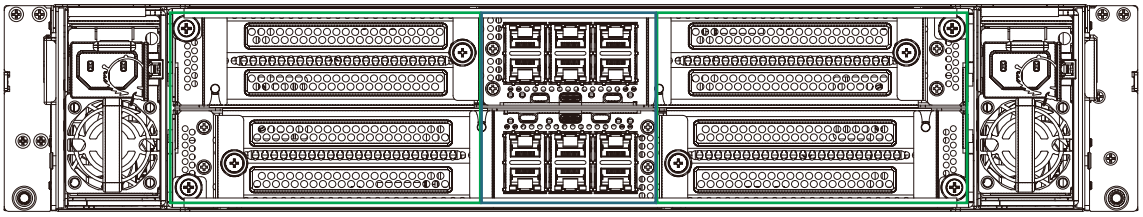
This information is provided for professional technicians only.

⑦ Press down on the Retimer card module and insert it into the node to complete the installation.



This information is provided for professional technicians only.

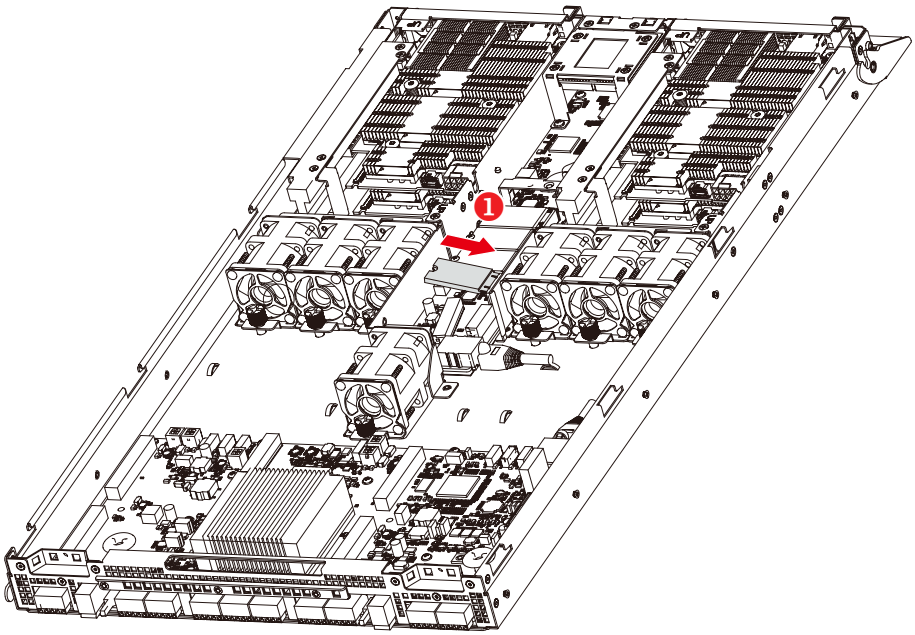
2.3.2.1.3 PCIe card (ID)

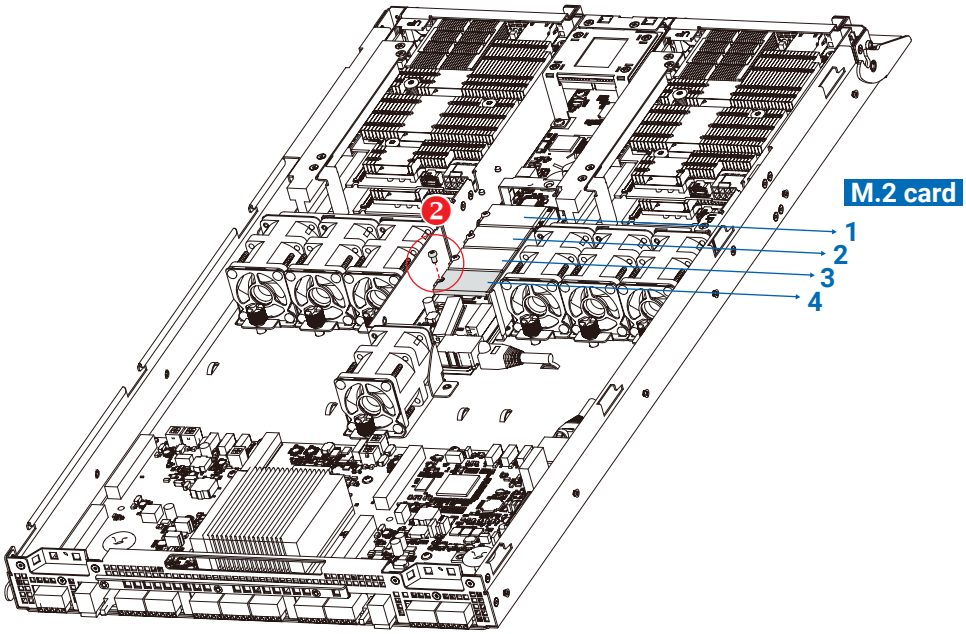


PSU1	Node2 PCIe 4 (FHHL)	Node2 I/O	Node2 PCIe 3 (FHHL)	PSU2
	Node2 PCIe 2 (FHHL)		Node2 PCIe 1 (FHHL)	
	Node1 PCIe 1 (FHHL)	Node1 I/O	Node1 PCIe 2 (FHHL)	
	Node1 PCIe 3 (FHHL)		Node1 PCIe 4 (FHHL)	
1	3	2	3	1

2.3.2.2 M.2 Card

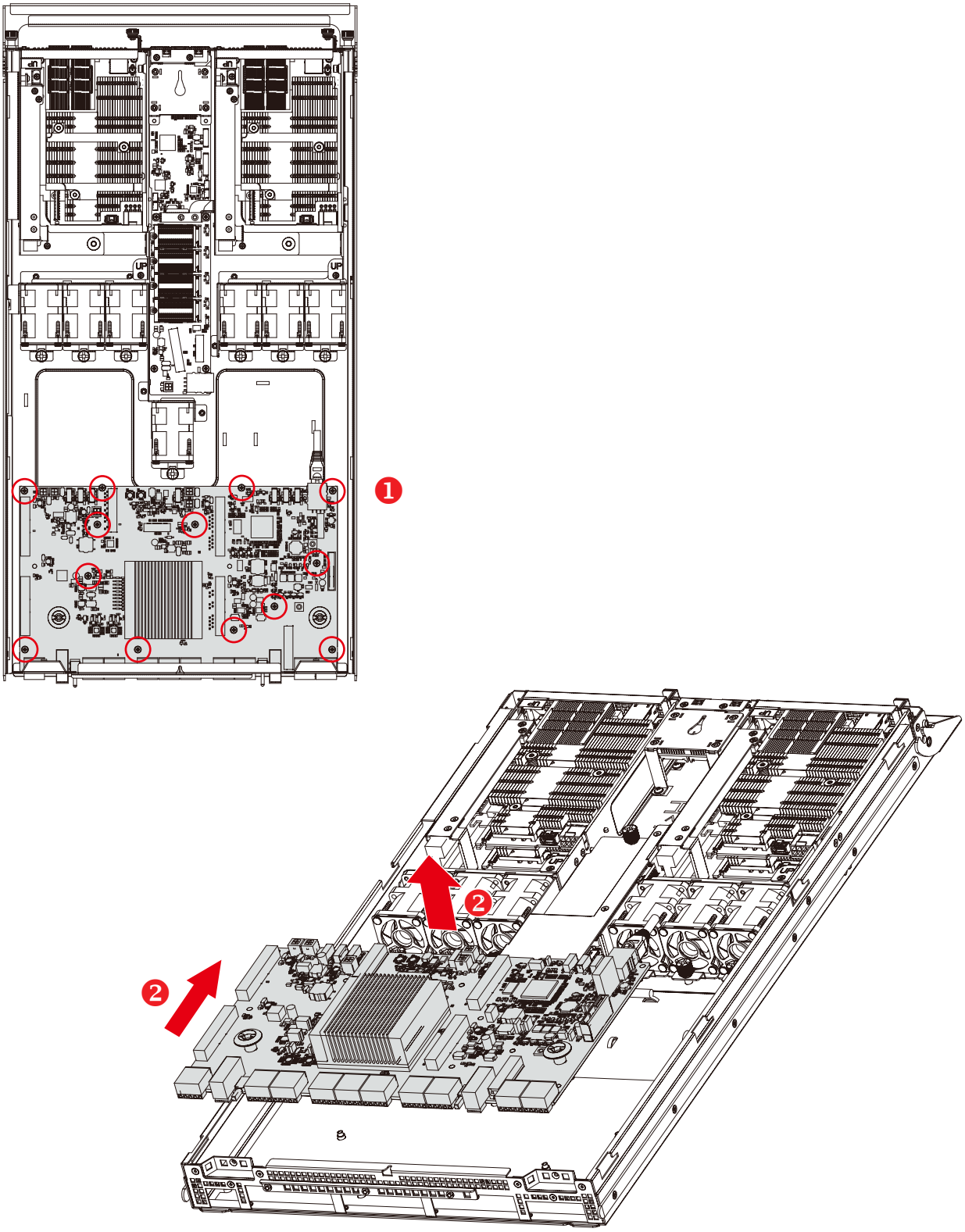
① Align and insert the M.2 card into the appropriate slot on the serverboard. Ensure that the length of the M.2 card matches the corresponding standoff on the serverboard.
② Secure the card by fastening the screw to the standoff to complete the installation.





2.3.2.3 Switch Board

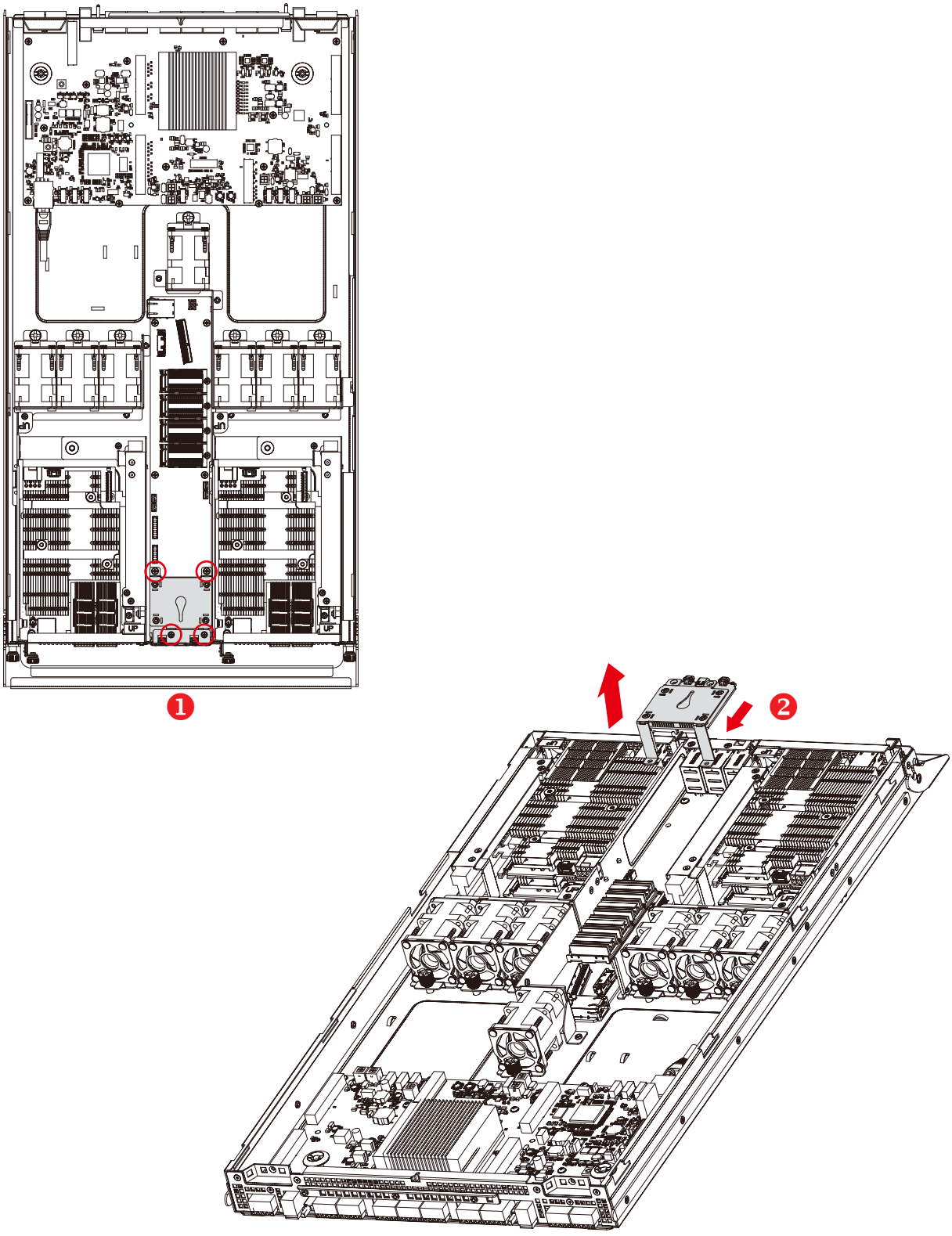
① Dislodge the screws*13. (as marked in red circle)
② Pull the switch board towards the fan and lift up to remove it.



This information is provided for professional technicians only.

2.3.2.4 IO (LED) Board

① Dislodge the screws*4. (as marked in red circle)
② Pull the IO Board towards the fan and lift up to remove it.

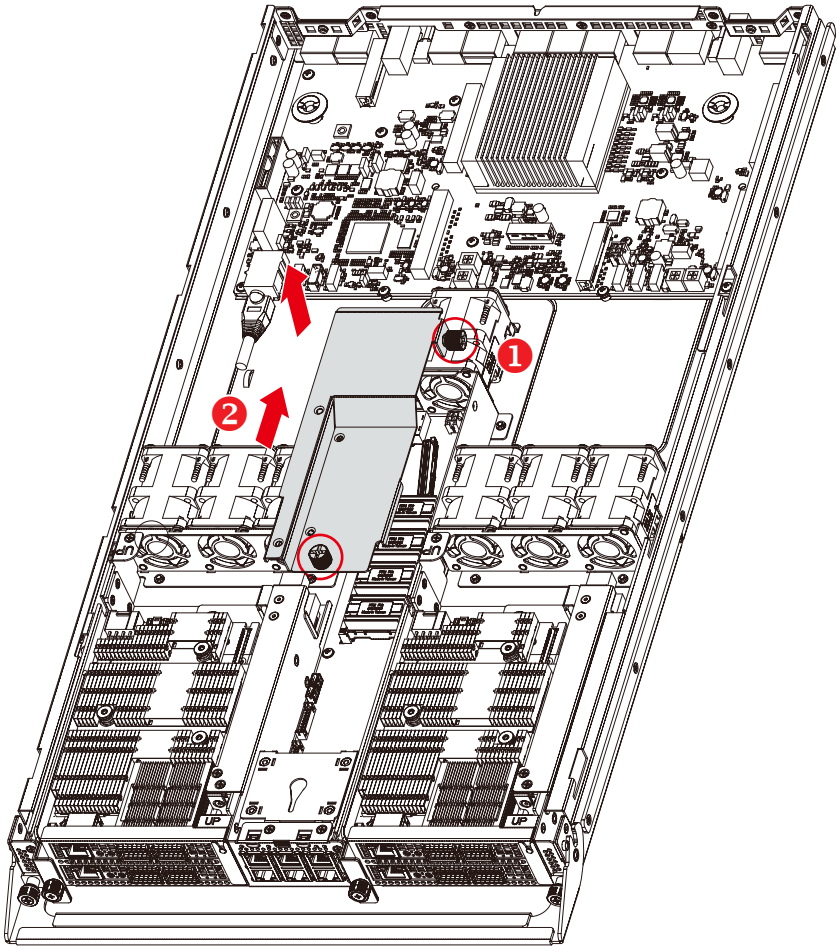


This information is provided for professional technicians only.

2.3.2.5 Module Board

Remove Fan cover

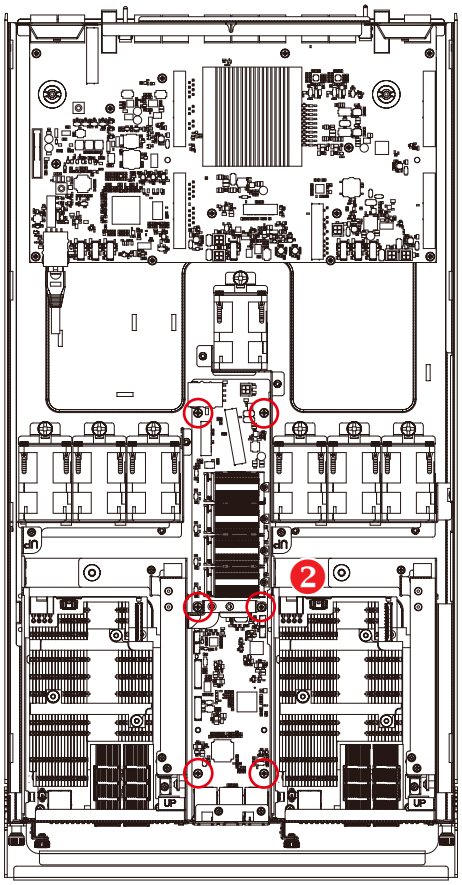
① Loosen the captive screws.
② Pull the cover towards the fan and lift up to remove it.

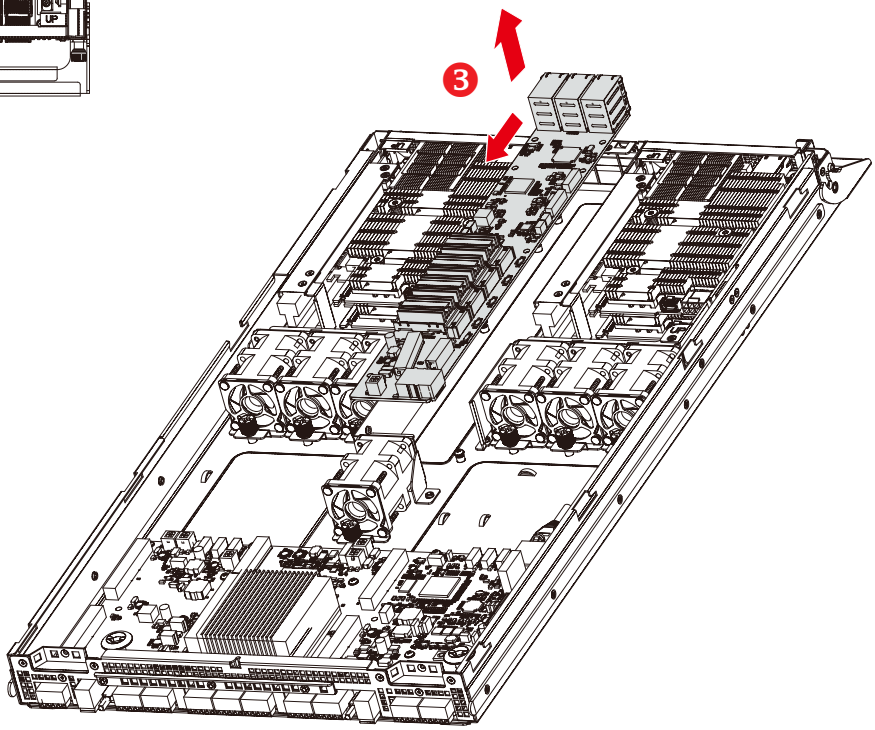


This information is provided for professional technicians only.

Remove the Module Board

① Remove IO Board. Please refer to the Section 2.3.2.4 IO (LED) Board.
② Dislodge the screws*6. (as marked in red circle)
③ Pull the module board towards the fan and lift up to remove it.



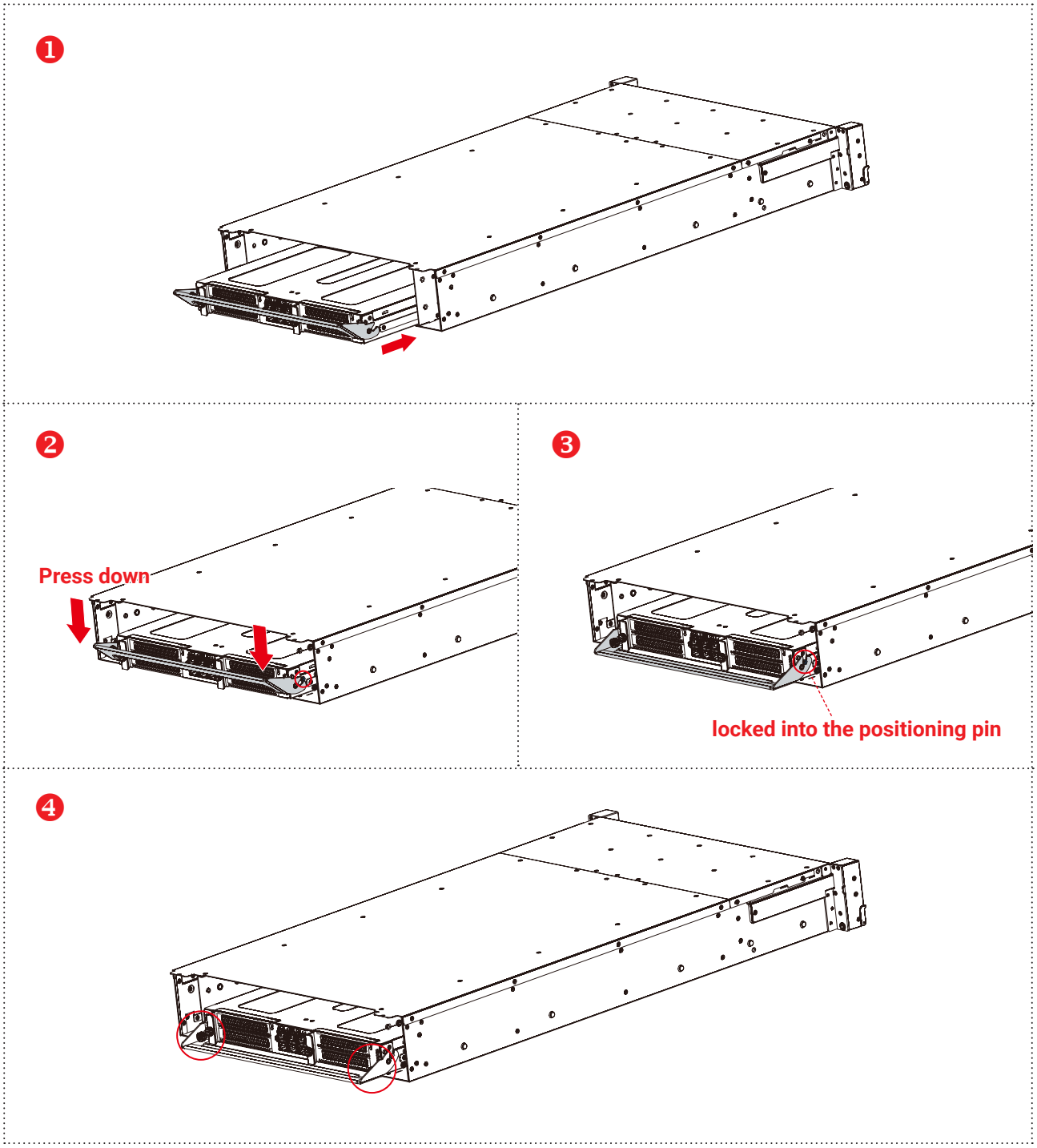


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2.3.3 Installation of the node

Bottom Node

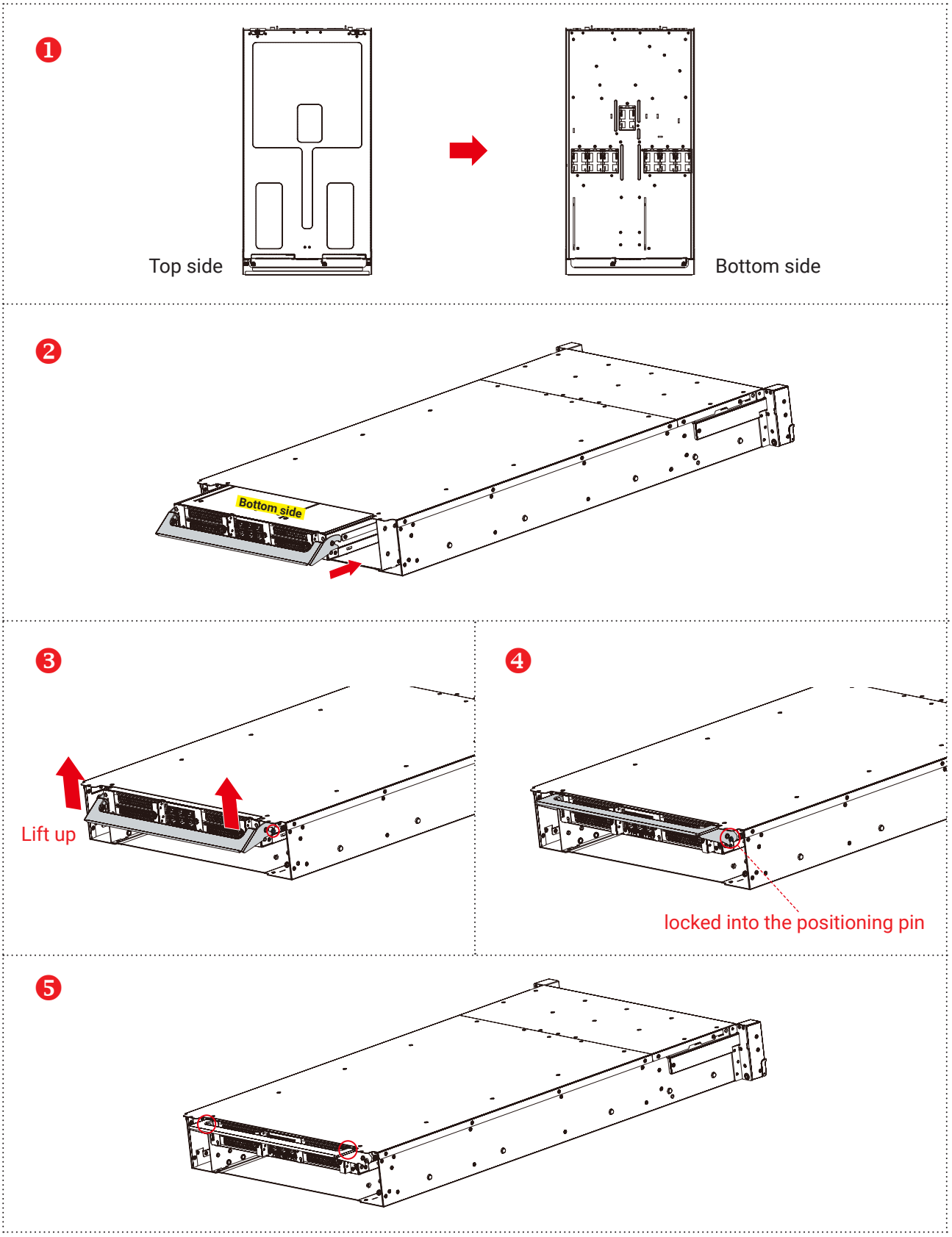
① Push the node into the chassis and keep the handle open.
②③ Press down the handle to ensure it is securely locked into the positioning pin.
④ Fasten the captive screw to complete the installation



This information is provided for professional technicians only.

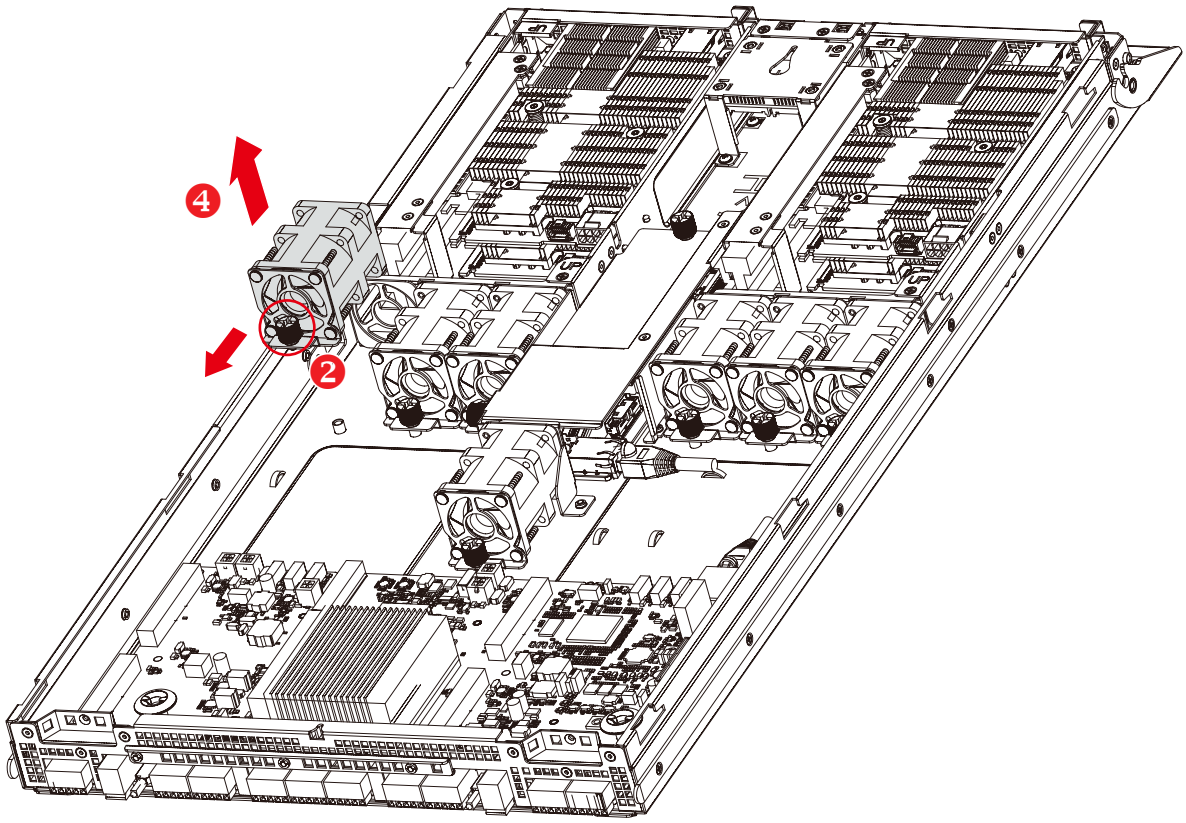
Top Node

① Flip the node upside down (from top side to bottom side).
② Push the node into the chassis and keep the handle open.
④⑤ Lift up the handle to ensure it is securely locked into the positioning pin.
⑥ Fasten the captive screw to complete the installation



2.4 Fan

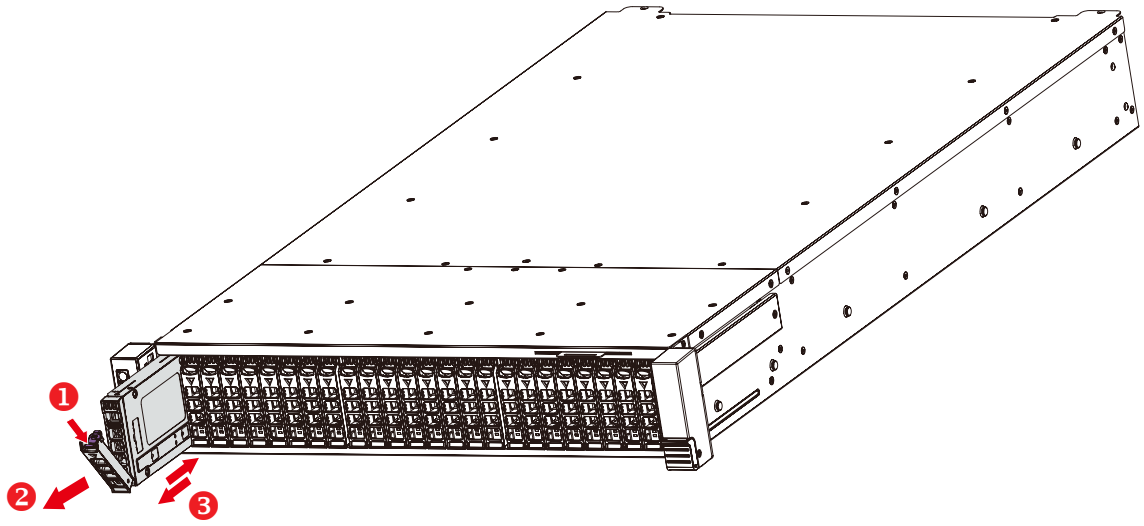
① Remove the node top cover. Please refer to Section 2.3.2 Top cover of the node.
② Loosen the captive screw.
③ Unplug the fan cables and connectors from the server board.
④ Pull the fan out of the chassis.



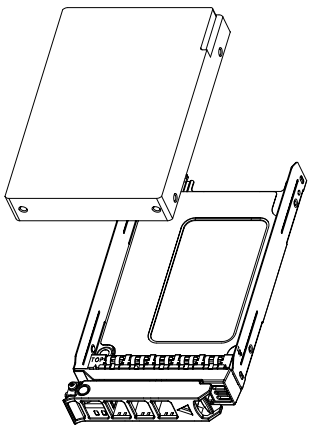
This information is provided for professional technicians only.

2.5 Drive

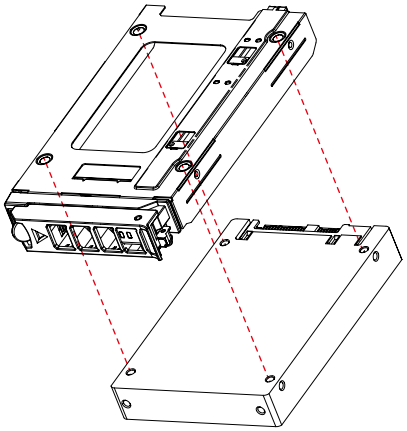
① Press the ejector on the tray to release the handle.
② Pull the tray handle completely outward.
③ Pull the drive tray out of the chassis.



④ Insert the drive into the tray. Ensure that the dimples on the tray match the drive. For additional assurance, fasten the screws*4 on the tray to secure the drive.



dimple placement



screw placement

⑤ Push the tray with the installed drive into the end of the drive slot in the chassis.
⑥ Close the tray handle.

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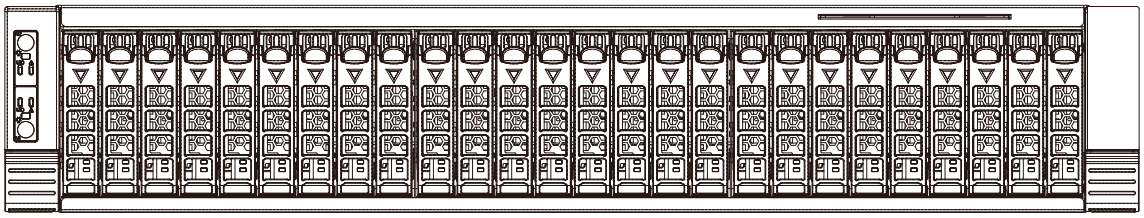
2.5.1 LED Indicator

Indicator	Color	Behavior	Description
SSD1~SSD26 Activity LED (DA1~DA26)	Blue	On	SSD is present and power on.
		Off	SSD is no present or power off.
		Blinking	SSD Activity.
SSD1~SSD26 Status LED (DST1~DST26)	Green	On	(User Definition)
		Off	Default Status
		Blinking	(User Definition)(Slow/Fast)
	Yellow	On	(User Definition)
		Off	Default Status
		Blinking	(User Definition) (Slow/Fast)

* For the user definition, please refer to the IPMI commands in the BMC “Special_IPMI_Commands_and_Sensors" document. (NetFn: 0x3A, Command: 0xC0)

2.5.2 Drive Slot Map

Front Panel with NVMe drive

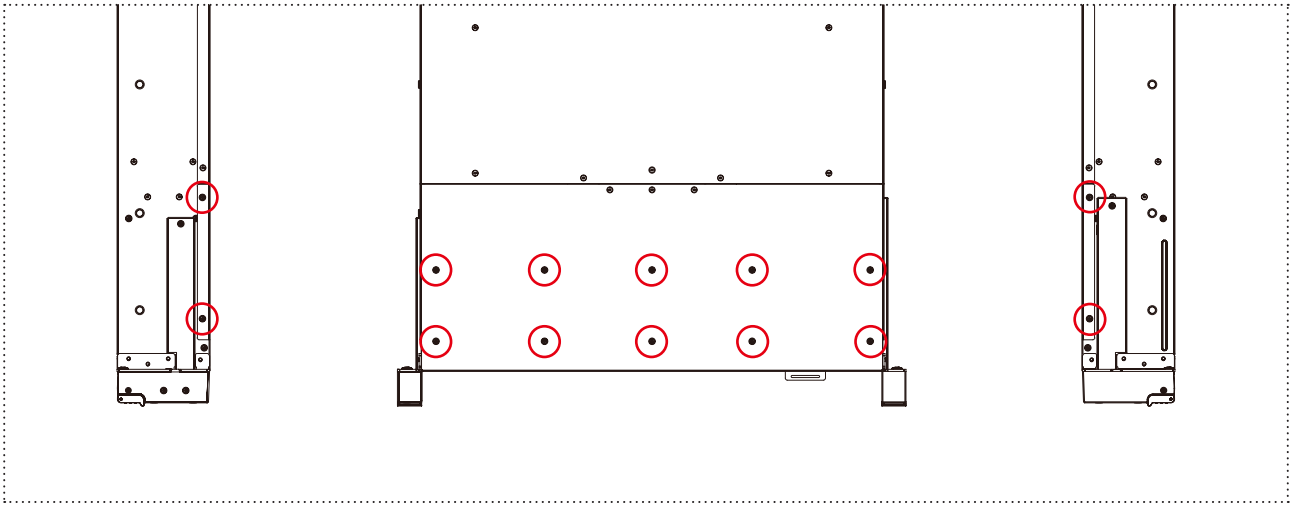


Drive Slot Number																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

2.6 Backplane

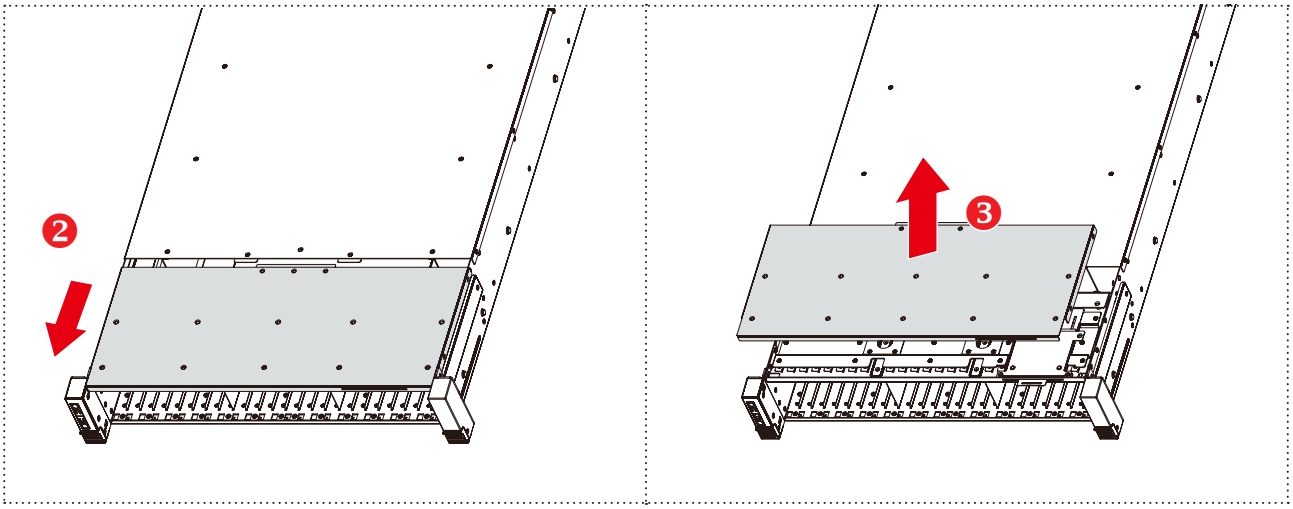
Remove the front top cover of the chassis

① Dislodge the screws on the top cover and the sides of chassis.



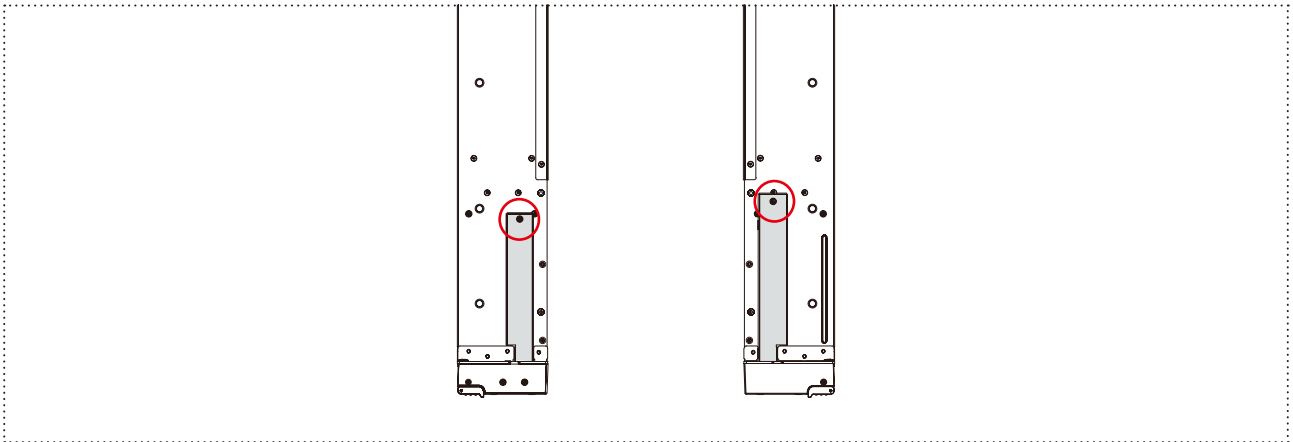
② Slide the top cover towards the front panel.

③ Lift the top cover upward to remove.



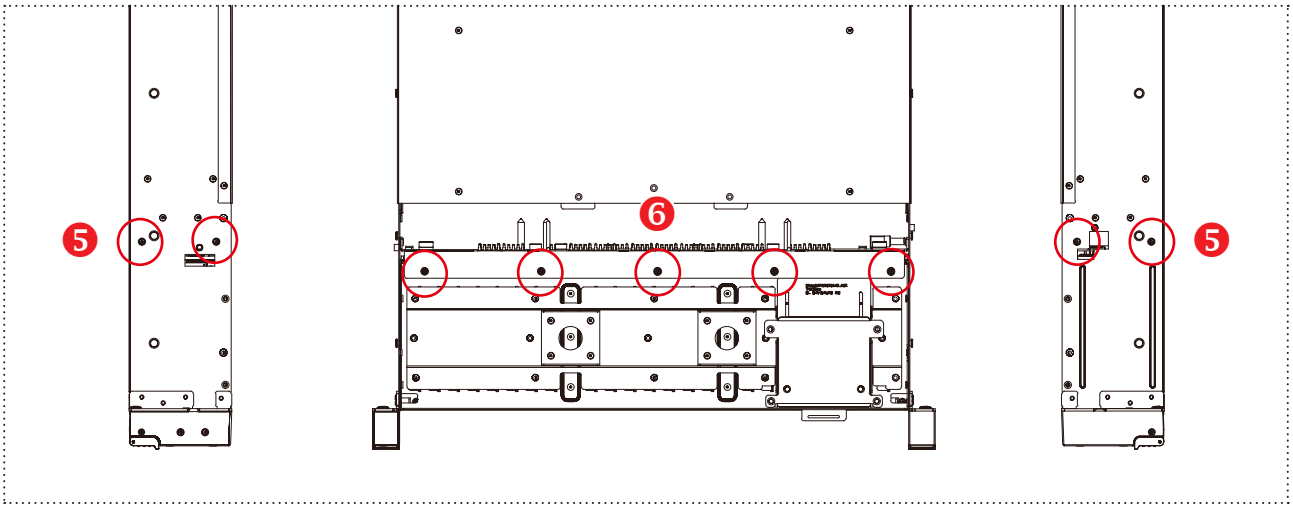
Remove the Backplane

④ Open the cable management cover on the both sides by removing the screws.

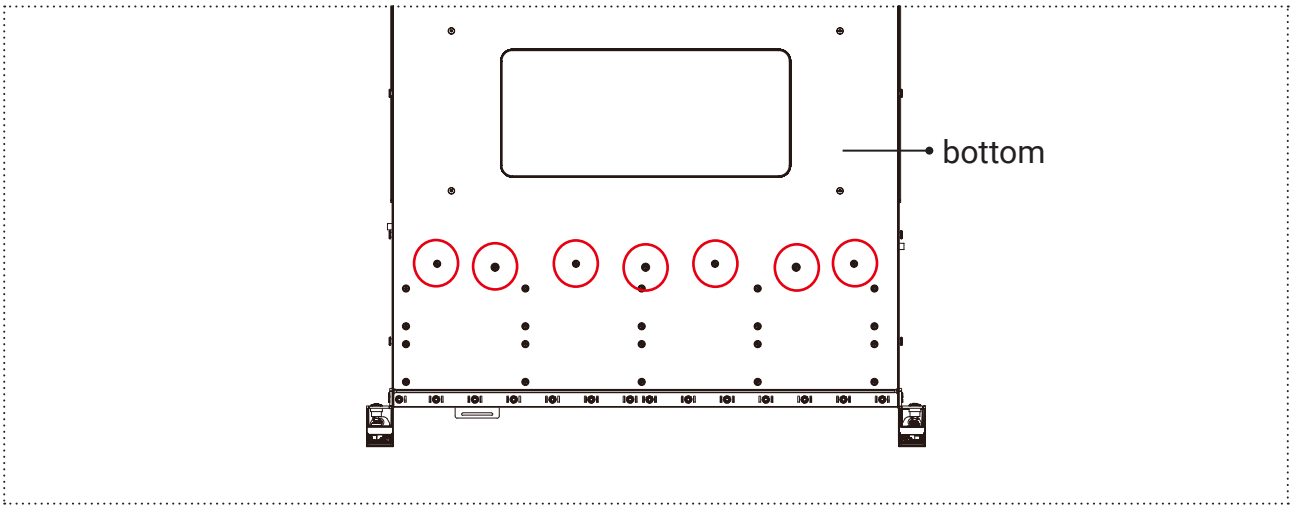


This information is provided for professional technicians only.

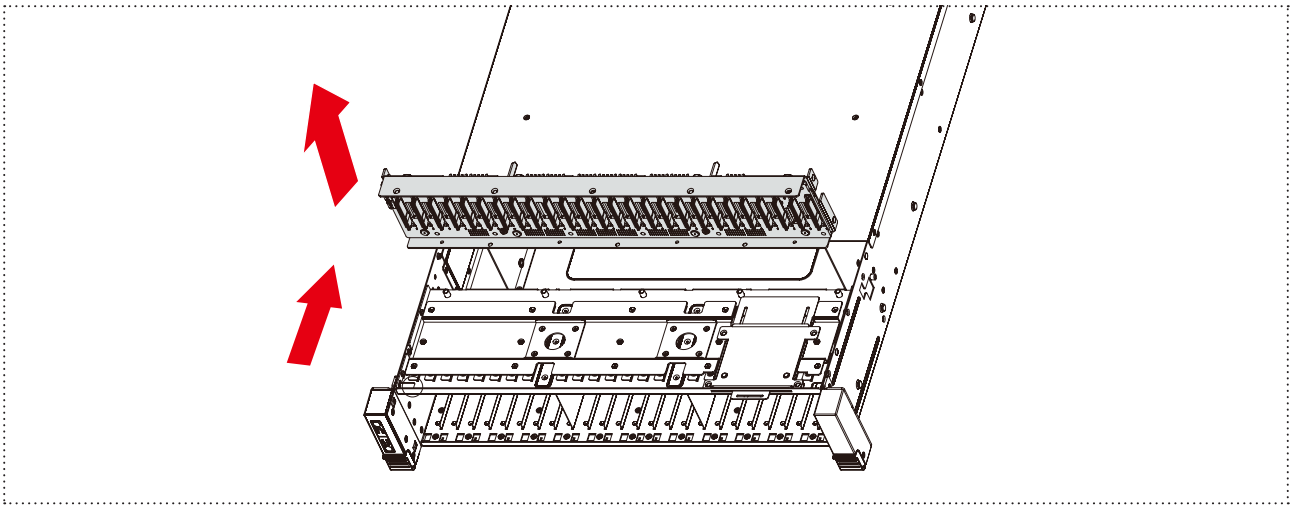
⑤ Dislodge the screws (two for each side) on both sides of chassis.
⑥ Dislodge the screws*5 on the backplane bracket.



⑦ Dislodge the screws*7 on the bottom of the chassis.



⑧ Gently pull the BP bracket (with BP) towards rear panel and lift upward to remove it.



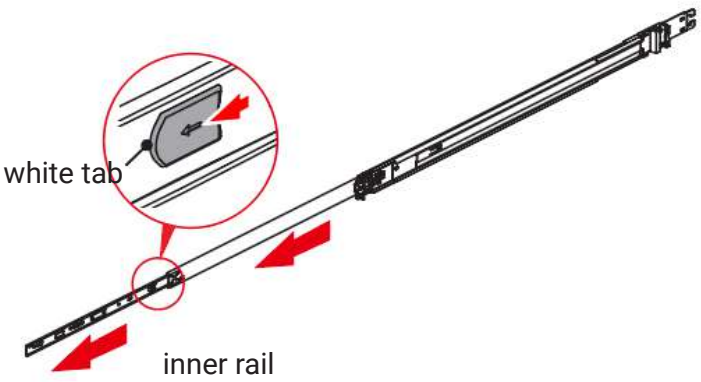
This information is provided for professional technicians only.

2.7 Slide Rail

NOTE
This section 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.

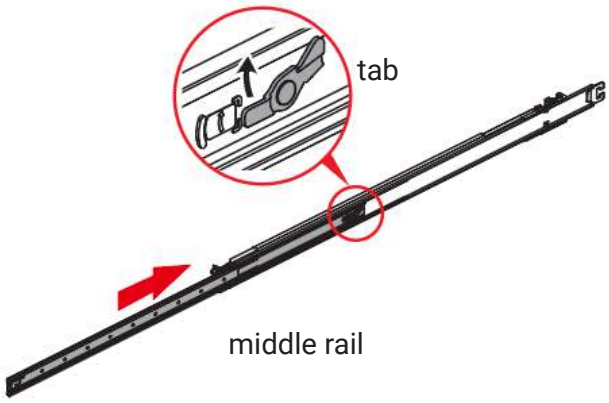
CAUTION
They rack may tilt and fall due to incorrect installation or placed on uneven grounds. The rack must be placed in a flat surface before you begin to slide the system barebone in for servicing.

1. Pull the inner rail out of the slide rail until it clicks.
2. Detach the inner rail completely from the slide rail by pulling the white tab forward.



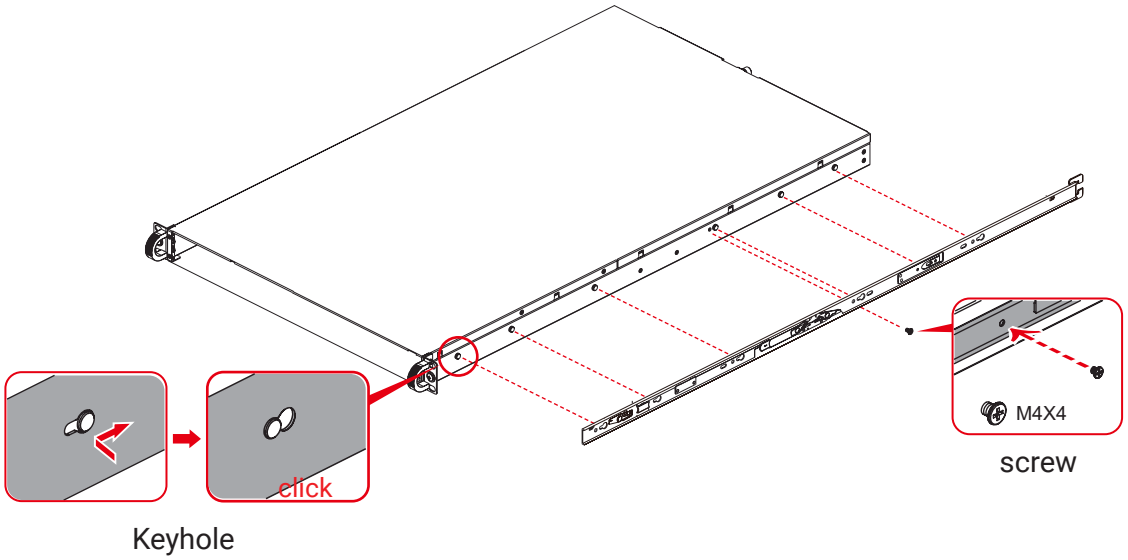


3. After the inner rail is dislodged, adjust the middle rail back to its original position by pushing the tab on the middle rail.

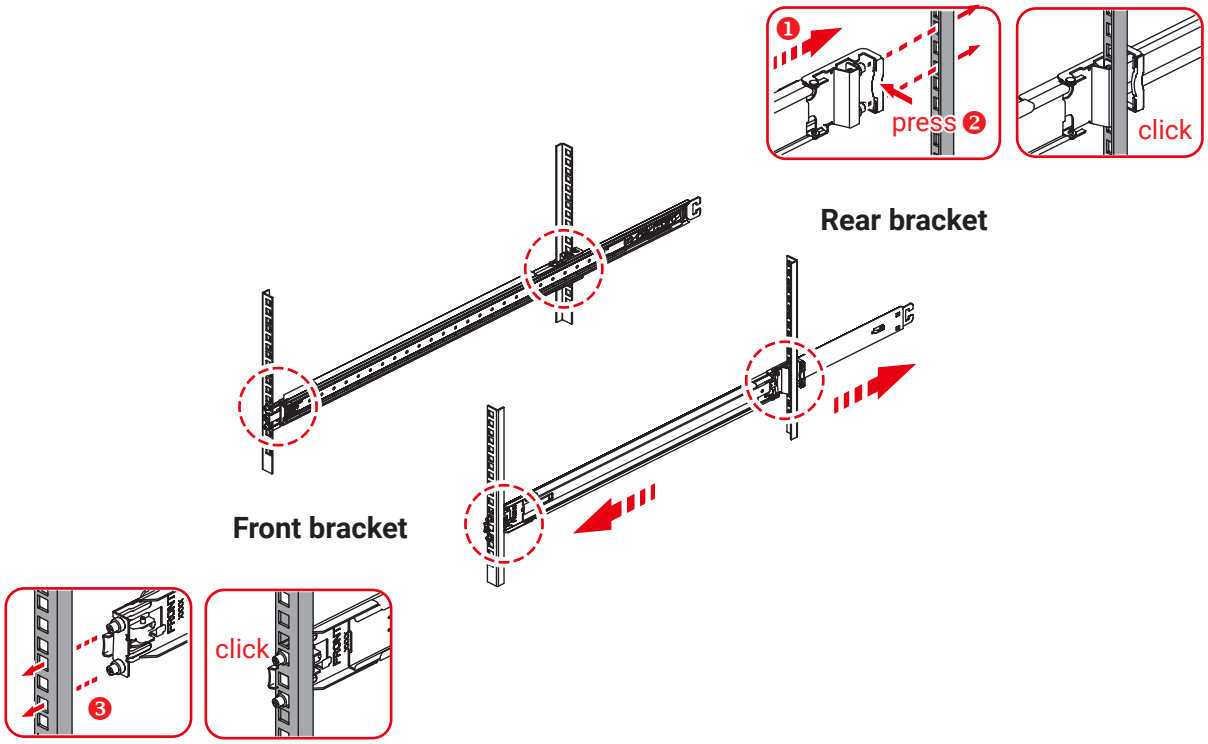




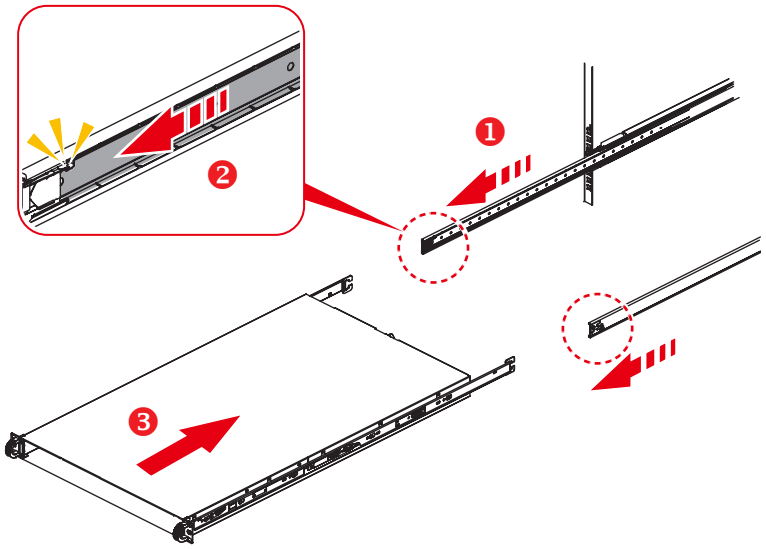
4. Install the inner rail onto the system barebone. Lock the keyholes and secure the screws on sides of the system.



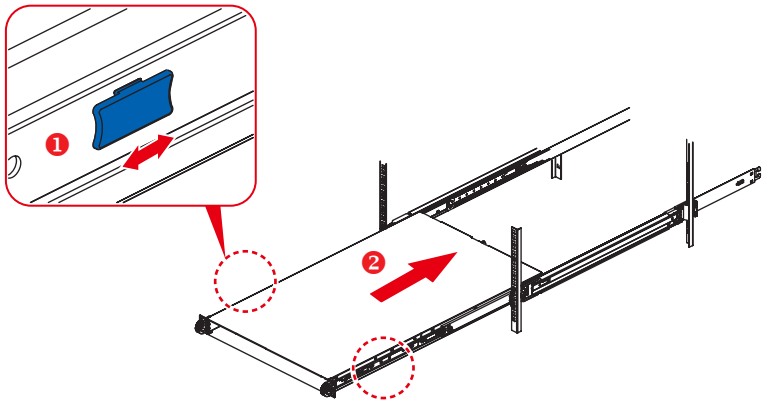
5. Continue installing the outer rail bracket to the mounting frame. Attach the outer rail assembling to the frame and press the bracket to form a rack on both ends. Repeat to fully mount the bracket assembly on the other side.



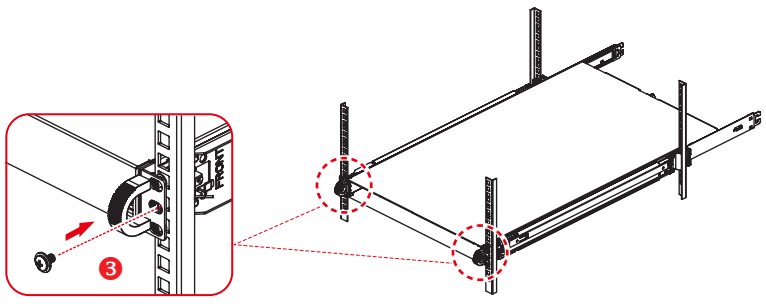
6. Pull the middle rail fully extended to lock position, make sure ball bearing retainer is located at the front of the middle rail.



7. Insert the chassis into middle-outer rails. When hit a stop, please pull/push the blue release tab on the outside of inner rail.



8. Fasten shipping screw.



Locking M5*9L

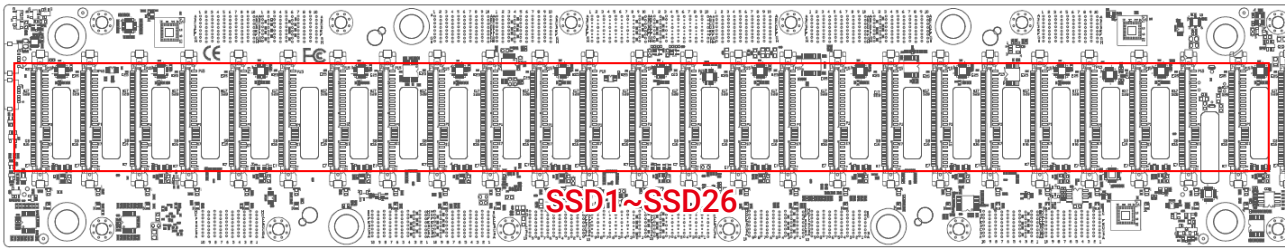
This information is provided for professional technicians only.

Chapter 3. Hardware Settings

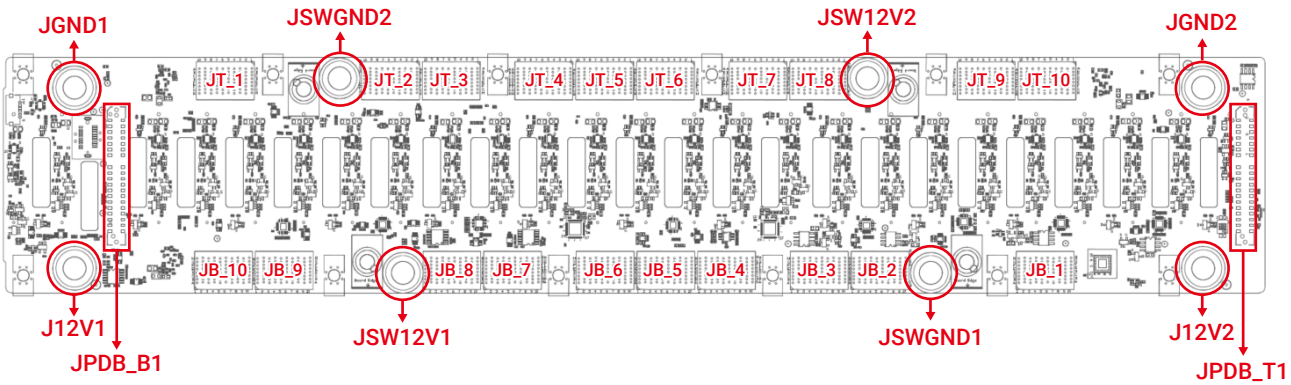
3.1 Drive Backplane: 26 Bay

3.1.1 Placement

Top view



Bottom view



3.1.2 Connector

External Connectors

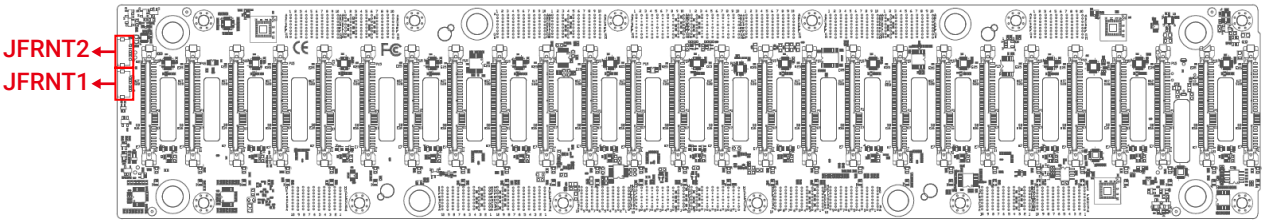
Connector	Description	Function
Switch Board connection (JB_1~JB_10)	EXAMAX 2 pair 80 Pin Connector	From Switch Board High Speed & Other GPIO & Power Signal
Switch Board connection (JT_1~JT_10)	EXAMAX 2 pair 80 Pin Connector	From Switch Board High Speed & Other GPIO & Power Signal
PDB Power Connection (J12V1,J12V2)	Crystal band 1Pin Socket	From PDB +12V
PDB GND Connection (JGNDV1,JGND)	Crystal band 1Pin Socket	From PDB Ground
Switch Board Power Connection (JSW12V1,JSW12V2)	Crystal band 1Pin Socket	To Switch Board +12V
Switch Board GND Connection (JSWGND1,JSWGND2)	Crystal band 1Pin Socket	To Switch Board Ground
Left Side PDB Connection (JPDB_B1)	2x20 Pin Box Header	Left side power board (Power & PSU & BBU* Related signal)
Right Side PDB Connection (JPDB_T1)	2x20 Pin Box Header	Right side power board (Power & PSU & BBU* Related signal)

*BBU is an optional sku.

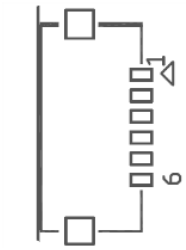
Internal Connectors

Connector	Description	Function
Front Panel Connection(JFRONT1)	1x6 Pin Box Header	Front Panel LED control & Power Button (For Secondary Switch Board)
Front Panel Connection(JFRONT2)	1x6 Pin Box Header	Front Panel LED control & Power Button (For Secondary Switch Board)

Top view

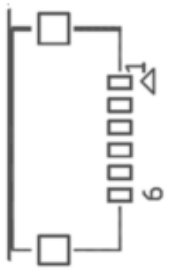


Front Panel Connection (JFRONT1)



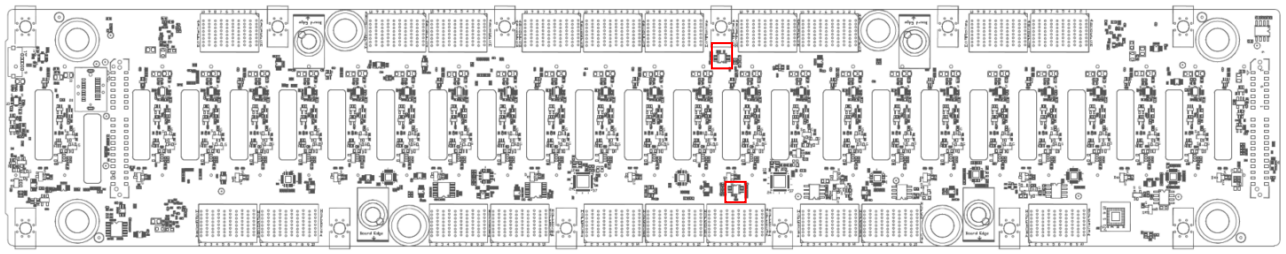
1	Primary Switch Board PWR_BTN#
2	Primary Switch Board Option LED Red
3	Primary Switch Board PWR LED Green
4	Primary Switch Board ID LED
5	Primary Switch Board System ALERT LED Red
6	X

Front Panel Connection (JFRONT2)



1	Secondary Switch Board PWR_BTN#
2	Secondary Switch Board Option LED Red
3	Secondary Switch Board PWR LED Green
4	Secondary Switch Board ID LED
5	Secondary Switch Board System ALERT LED Red
6	X

3.1.3 Sensor Location



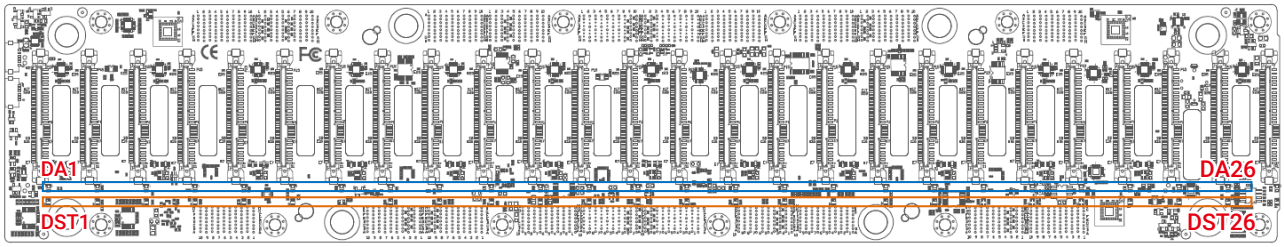
Sensor Definition

U650 TMP75AIDGKR(1001100x)	IC	Thermal sensor
U501 TMP75AIDGKR(1001101x)	IC	Thermal sensor

3.1.4 LED Indicator

Indicator	Color	Behavior	Description
SSD1~SSD26 Activity LED (DA1~DA26)	Blue	On	SSD is present and power on.
		Off	SSD is no present or power off.
		Blinking	SSD Activity.
SSD1~SSD26 Status LED (DST1~DST26)	Green	On	(User Definition)
		Off	Default Status
		Blinking	(User Definition)(Slow/Fast)
	Yellow	On	(User Definition)
		Off	Default Status
		Blinking	(User Definition) (Slow/Fast)

* For the user definition, please refer to the IPMI commands in the BMC “Special_IPMI_Commands_and_Sensors" document. (NetFn: 0x3A, Command: 0xC0)





Activity

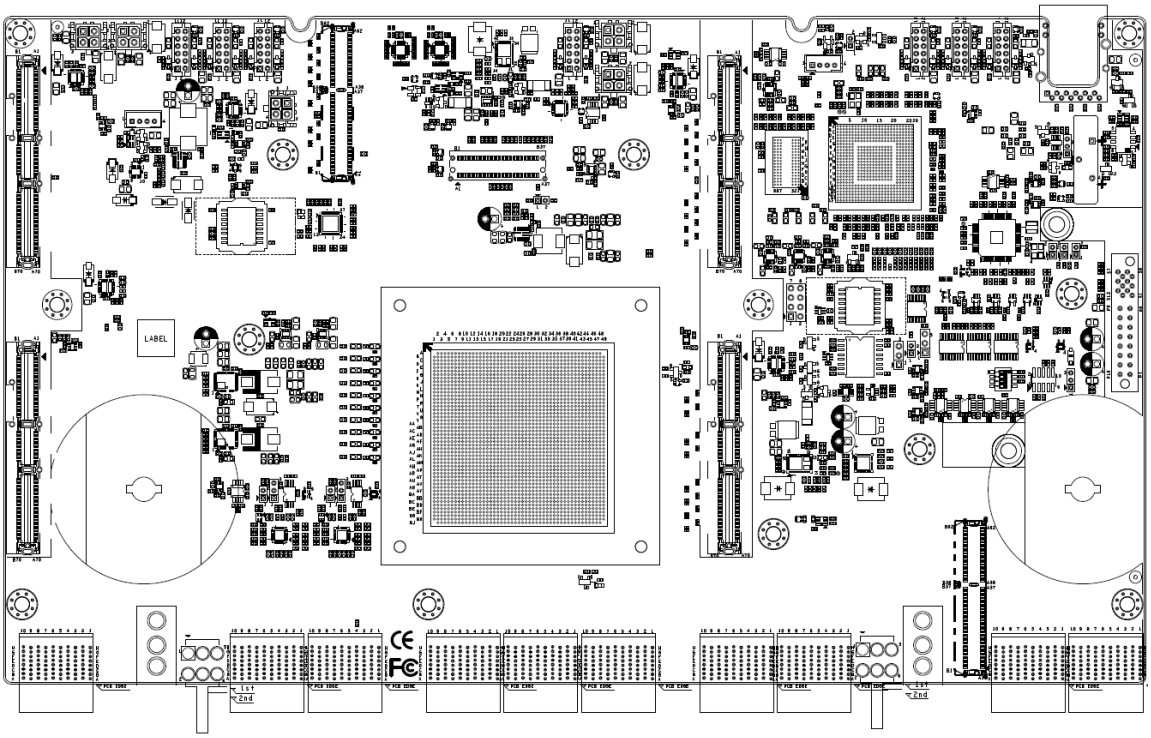


Status LED

3.2 Switch Board

3.2.1 Placement

Top view

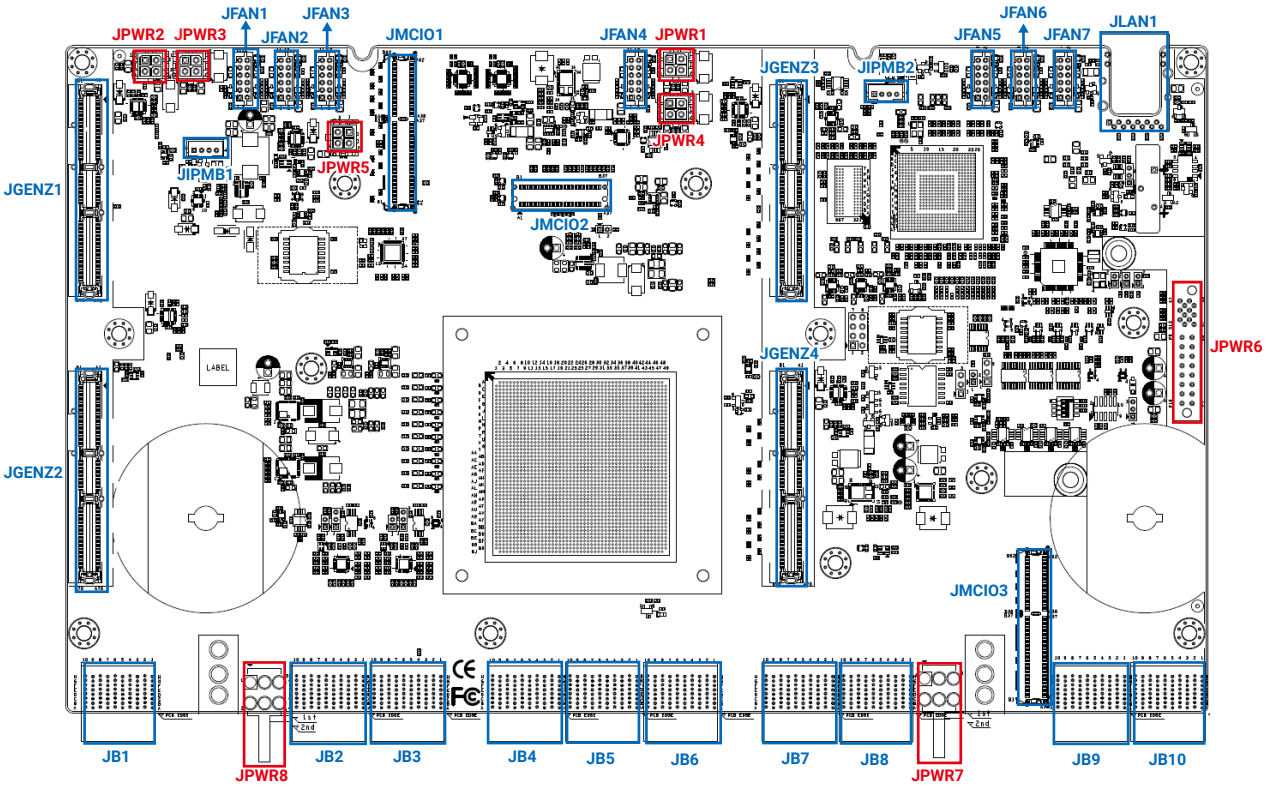


Bottom view



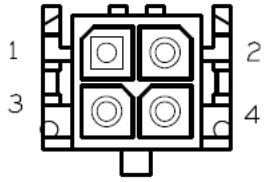
3.2.2 Connector

Placement



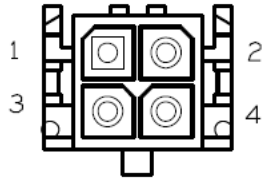
Connector	Description	Function
B2B (JB1~JB10)	EXAMAX 2X10	For Back Plane Connection
+12V Power Input (JPWR7)	Plug Connector, Male	From Back Plane
GND (JPWR8)	Plug Connector, Male	From Back Plane
+12V Power (JPWR2)	2x2 Micro Fit Header	For JGENZ1 External Power
+12V Power (JPWR3)	2x2 Micro Fit Header	For JGENZ2 External Power
+12V Power (JPWR1)	2x2 Micro Fit Header	For JGENZ3 External Power
+12V Power (JPWR4)	2x2 Micro Fit Header	For JGENZ4 External Power
+12V, +12VAUX Power (JPWR5)	2x2 Micro Fit Header	For VLAN Module (JMCIO1) Power
+12V, +12VSB Power (JPWR6)	16+12 pin High Power Card Edge	For ATX Power Module
PCIe5 x16 (JGENZ1~JGENZ4)	GENZ 4C	For PCIe card
PCIe5 x16 (JMCIO1)	MCIO x16	For VLAN Module
RGMII, SERDES, misc. (JMCIO2)	MCIO x8	For VLAN Module
PCIe5 x16 (JMCIO3)	MCIO x16	For NTB
SMBus (JIPMB1, JIPMB2)	1x4 Box Header, P2.0	Reserved for PCIe Riser
FAN (JFAN1~JFAN7)	2x6 Box Header, P2.0	
Management Port (JLAN1)	RJ45	

JPWR1



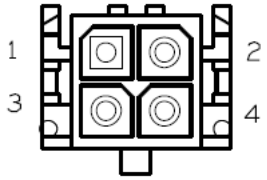
GND	1	2	GND
P12V _RC3	3	4	P12V_RC3

JPWR2



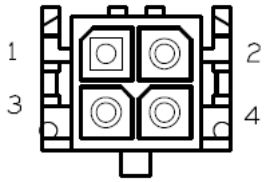
GND	1	2	GND
P12V _RC1	3	4	P12V_RC1

JPWR3



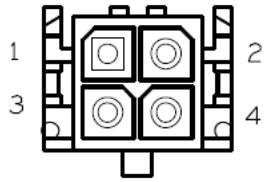
GND	1	2	GND
P12V _RC2	3	4	P12V_RC2

JPWR4



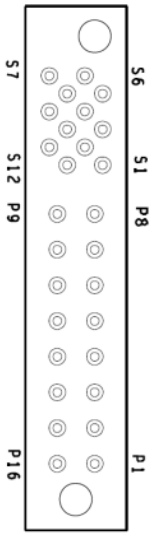
GND	1	2	GND
P12V _RC4	3	4	P12V_RC4

JPWR5



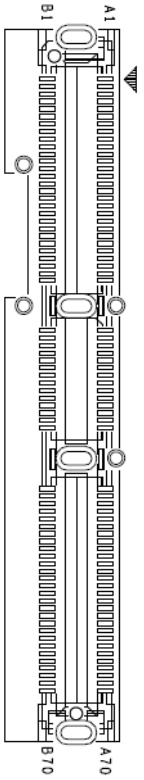
GND	1	2	GND
P12V_VLAN	3	4	P12V_AUX

JPWR6



P12V	P1	S1	P12V_STBY
P12V	P2	S2	P12V_STBY
P12V	P3	S3	GND
P12V	P4	S4	PWRBTN
GND	P5	S5	PSON
GND	P6	S6	PWRGD
GND	P7	S7	PRESENT
GND	P8	S8	PMBUS_ALERT#
GND	P9	S9	PMBUS_SDA
GND	P10	S10	PMBUS_SCL
GND	P11	S11	GND
GND	P12	S12	GND
P12V	P13		
P12V	P14		
P12V	P15		
P12V	P16		

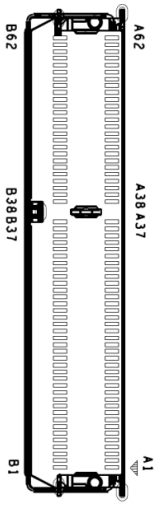
JGENZ1~JGENZ4



GND	A1	B1	12V
GND	A2	B2	12V
GND	A3	B3	12V
GND	A4	B4	12V
GND	A5	B5	12V
GND	A6	B6	12V
SMCLK	A7	B7	N.C.
SMDAT	A8	B8	N.C.
N.C.	A9	B9	N.C.
N.C.	A10	B10	PERST#
N.C.	A11	B11	3.3V_AUX
PRSNT1# (GND)	A12	B12	N.C.
GND	A13	B13	GND
SMCLK_RC	A14	B14	REFCLK-
SMDAT_RC	A15	B15	REFCLK+
GND	A16	B16	GND
PERN0	A17	B17	PETN0
PERP0	A18	B18	PETP0
GND	A19	B19	GND
PERN1	A20	B20	PETN1
PERP1	A21	B21	PETP1
GND	A22	B22	GND
PERN2	A23	B23	PETN2
PERP2	A24	B24	PETP2
GND	A25	B25	GND
PERN3	A26	B26	PETN3
PERP3	A27	B27	PETP3
GND	A28	B28	GND
GND	A29	B29	GND
PERN4	A30	B30	PETN4
PERP4	A31	B31	PETP4
GND	A32	B32	GND
PERN5	A33	B33	PETN5
PERP5	A34	B34	PETP5
GND	A35	B35	GND
PERN6	A36	B36	PETN6
PERP6	A37	B37	PETP6
GND	A38	B38	GND
PERN7	A39	B39	PETN7
PERP7	A40	B40	PETP7
GND	A41	B41	GND
3.3V_AUX_RC	A42	B42	PRSNT2#
GND	A43	B43	GND
PERN8	A44	B44	PETN8
PERP8	A45	B45	PETP8
GND	A46	B46	GND
PERN9	A47	B47	PETN9
PERP9	A48	B48	PETP9
GND	A49	B49	GND
PERN10	A50	B50	PETN10
PERP10	A51	B51	PETP10
GND	A52	B52	GND
PERN11	A53	B53	PETN11
PERP11	A54	B54	PETP11
GND	A55	B55	GND
PERN12	A56	B56	PETN12
PERP12	A57	B57	PETP12
GND	A58	B58	GND
PERN13	A59	B59	PETN13
PERP13	A60	B60	PETP13
GND	A61	B61	GND
PERN14	A62	B62	PETN14
PERP14	A63	B63	PETP14
GND	A64	B64	GND
PERN15	A65	B65	PETN15
PERP15	A66	B66	PETP15
GND	A67	B67	GND
N.C.	A68	B68	N.C.
N.C.	A69	B69	N.C.
N.C.	A70	B70	PRSNT3#

*Pin A14, A15, A42 are reserved for riser card on JGENZ1, JGENZ3 (JGENZ2, JGENZ4: N.C.)

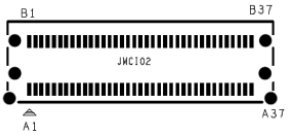
JMCIO1



GND	A1	B1	GND
PERP0	A2	B2	PETP0
PERN0	A3	B3	PETN0
GND	A4	B4	GND
PERP1	A5	B5	PETP1
PERN1	A6	B6	PETN1
GND	A7	B7	GND
P3V3_SMB_AUX	A8	B8	SMCLK
N.C.	A9	B9	SMDAT
GND	A10	B10	GND
REFCLK+	A11	B11	PERST#
REFCLK-	A12	B12	PRSNTA#
GND	A13	B13	GND
PERP2	A14	B14	PETP2
PERN2	A15	B15	PETN2
GND	A16	B16	GND
PERP3	A17	B17	PETP3
PERN3	A18	B18	PETN3
GND	A19	B19	GND
PERP4	A20	B20	PETP4
PERN4	A21	B21	PETN4
GND	A22	B22	GND
PERP5	A23	B23	PETP5
PERN5	A24	B24	PETN5
GND	A25	B25	GND
N.C.	A26	B26	SMCLK_FRU
N.C.	A27	B27	SMDAT_FRU
GND	A28	B28	GND
N.C.	A29	B29	N.C.
N.C.	A30	B30	PRSNTB#
GND	A31	B31	GND
PERP6	A32	B32	PETP6
PERN6	A33	B33	PETN6
GND	A34	B34	GND
PERP7	A35	B35	PETP7
PERN7	A36	B36	PETN7
GND	A37	B37	GND
GND	A38	B38	GND
PERP8	A39	B39	PETP8
PERN8	A40	B40	PETN8
GND	A41	B41	GND
PERP9	A42	B42	PETP9
PERN9	A43	B43	PETN9
GND	A44	B44	GND
PERP10	A45	B45	PETP10
PERN10	A46	B46	PETN10
GND	A47	B47	GND
PERP11	A48	B48	PETP11
PERN11	A49	B49	PETN11
GND	A50	B50	GND
PERP12	A51	B51	PETP12
PERN12	A52	B52	PETN12

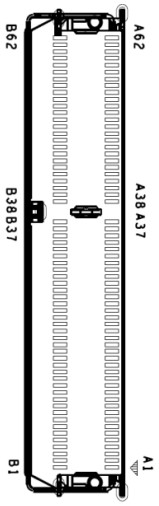
GND	A53	B53	GND
PERP13	A54	B54	PETP13
PERN13	A55	B55	PETN13
GND	A56	B56	GND
PERP14	A57	B57	PETP14
PERN14	A58	B58	PETN14
GND	A59	B59	GND
PERP15	A60	B60	PETP15
PERN15	A61	B61	PETN15
GND	A62	B62	GND

JMCIO2



GND	A1	B1	GND
SERDES_TX_DP0	A2	B2	SERDES_RX_DP0
SERDES_TX_DN0	A3	B3	SERDES_RX_DN0
GND	A4	B4	GND
SERDES_TX_DP1	A5	B5	SERDES_RX_DP1
SERDES_TX_DN1	A6	B6	SERDES_RX_DN1
GND	A7	B7	GND
MDC1	A8	B8	UART_GENZ1_TX
MDIO1	A9	B9	UART_GENZ1_RX
GND	A10	B10	GND
MDC4	A11	B11	UART_GENZ2_TX
MDIO4	A12	B12	UART_GENZ2_RX
GND	A13	B13	GND
N.C.	A14	B14	N.C.
N.C.	A15	B15	UIDBTN#
GND	A16	B16	GND
UART_GENZ4_TX	A17	B17	UART_GENZ3_TX
UART_GENZ4_RX	A18	B18	UART_GENZ3_RX
GND	A19	B19	GND
UART_PEX_SDB_RX	A20	B20	UART_BMC_RXD5
UART_PEX_SDB_TX	A21	B21	UART_BMC_TXD5
GND	A22	B22	GND
MDC2	A23	B23	PMBUS_SCL
MDIO2	A24	B24	PMBUS_SDA
GND	A25	B25	GND
RGMII2_LVC18_TXCTL	A26	B26	RGMII2_LVC18_RXCTL
RGMII2_LVC18_TXD0	A27	B27	RGMII2_LVC18_RXD0
RGMII2_LVC18_TXD1	A28	B28	RGMII2_LVC18_RXD1
RGMII2_LVC18_TXD2	A29	B29	RGMII2_LVC18_RXD2
RGMII2_LVC18_TXD3	A30	B30	RGMII2_LVC18_RXD3
GND	A31	B31	GND
RGMII2_LVC18_TXCLK	A32	B32	RGMII2_LVC18_R XCLK
CLKBUF_I2C_EN	A33	B33	IOBTN#
GND	A34	B34	GND
UIDLED#	A35	B35	P3V3_I2C4_AUX
IOLED#	A36	B36	P3V3_PMBUS_AUX
GND	A37	B37	GND

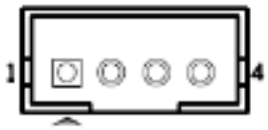
JMCIO3



GND	A1	B1	GND
PERP0	A2	B2	PETP0
PERN0	A3	B3	PETN0
GND	A4	B4	GND
PERP1	A5	B5	PETP1
PERN1	A6	B6	PETN1
GND	A7	B7	GND
N.C.	A8	B8	N.C.
N.C.	A9	B9	N.C.
GND	A10	B10	GND
N.C.	A11	B11	N.C.
N.C.	A12	B12	N.C.
GND	A13	B13	GND
PERP2	A14	B14	PETP2
PERN2	A15	B15	PETN2
GND	A16	B16	GND
PERP3	A17	B17	PETP3
PERN3	A18	B18	PETN3
GND	A19	B19	GND
PERP4	A20	B20	PETP4
PERN4	A21	B21	PETN4
GND	A22	B22	GND
PERP5	A23	B23	PETP5
PERN5	A24	B24	PETN5
GND	A25	B25	GND
N.C.	A26	B26	N.C.
N.C.	A27	B27	N.C.
GND	A28	B28	GND
N.C.	A29	B29	N.C.
N.C.	A30	B30	PRSNTB#
GND	A31	B31	GND
PERP6	A32	B32	PETP6
PERN6	A33	B33	PETN6
GND	A34	B34	GND
PERP7	A35	B35	PETP7
PERN7	A36	B36	PETN7
GND	A37	B37	GND
GND	A38	B38	GND
PERP8	A39	B39	PETP8
PERN8	A40	B40	PETN8
GND	A41	B41	GND
PERP9	A42	B42	PETP9
PERN9	A43	B43	PETN9
GND	A44	B44	GND
PERP10	A45	B45	PETP10
PERN10	A46	B46	PETN10
GND	A47	B47	GND
PERP11	A48	B48	PETP11
PERN11	A49	B49	PETN11
GND	A50	B50	GND
PERP12	A51	B51	PETP12
PERN12	A52	B52	PETN12

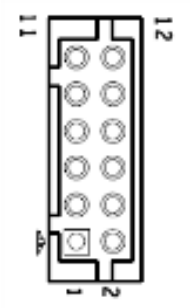
GND	A53	B53	GND
PERP13	A54	B54	PETP13
PERN13	A55	B55	PETN13
GND	A56	B56	GND
PERP14	A57	B57	PETP14
PERN14	A58	B58	PETN14
GND	A59	B59	GND
PERP15	A60	B60	PETP15
PERN15	A61	B61	PETN15
GND	A62	B62	GND

JIPMB1, JIPMB2



1	SMDAT
2	GND
3	SMCLK
4	N.C.

JFAN1~JFAN7

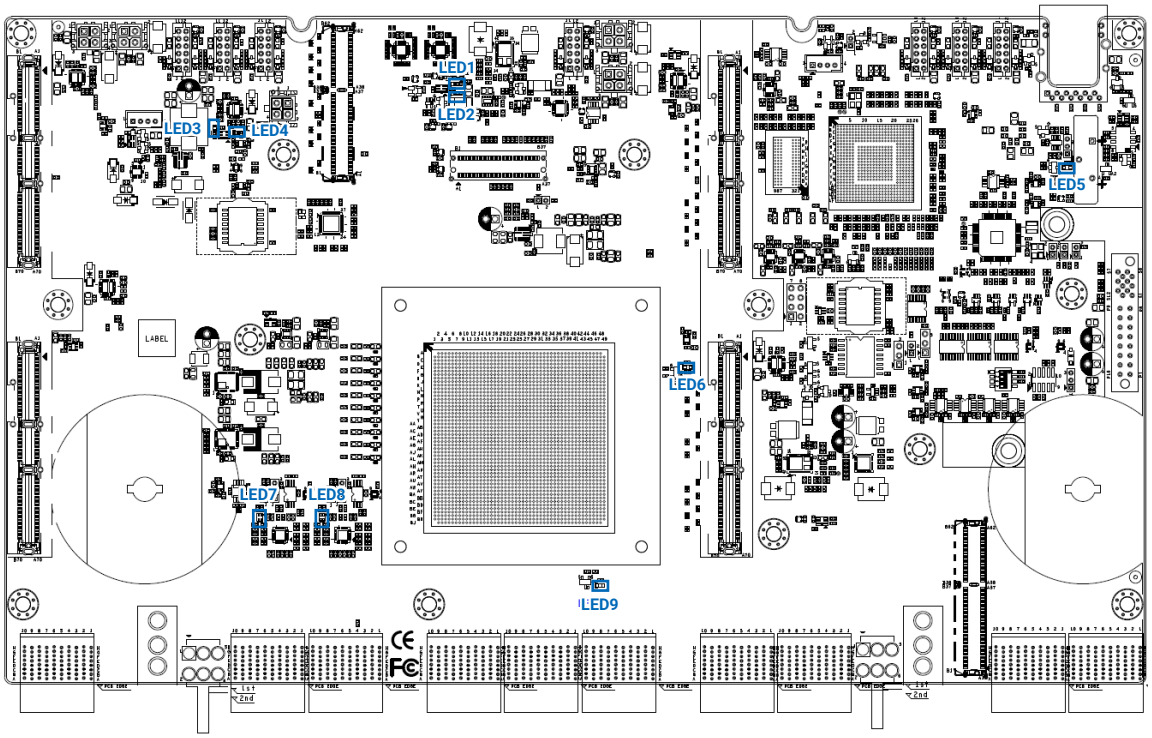


P12V_FAN	1	2	P12V_FAN
P12V_FAN	3	4	P12V_FAN
TACH_B	5	6	TACH_A
PWM_B	7	8	PWM_A
GND	9	10	GND
GND	11	12	GND

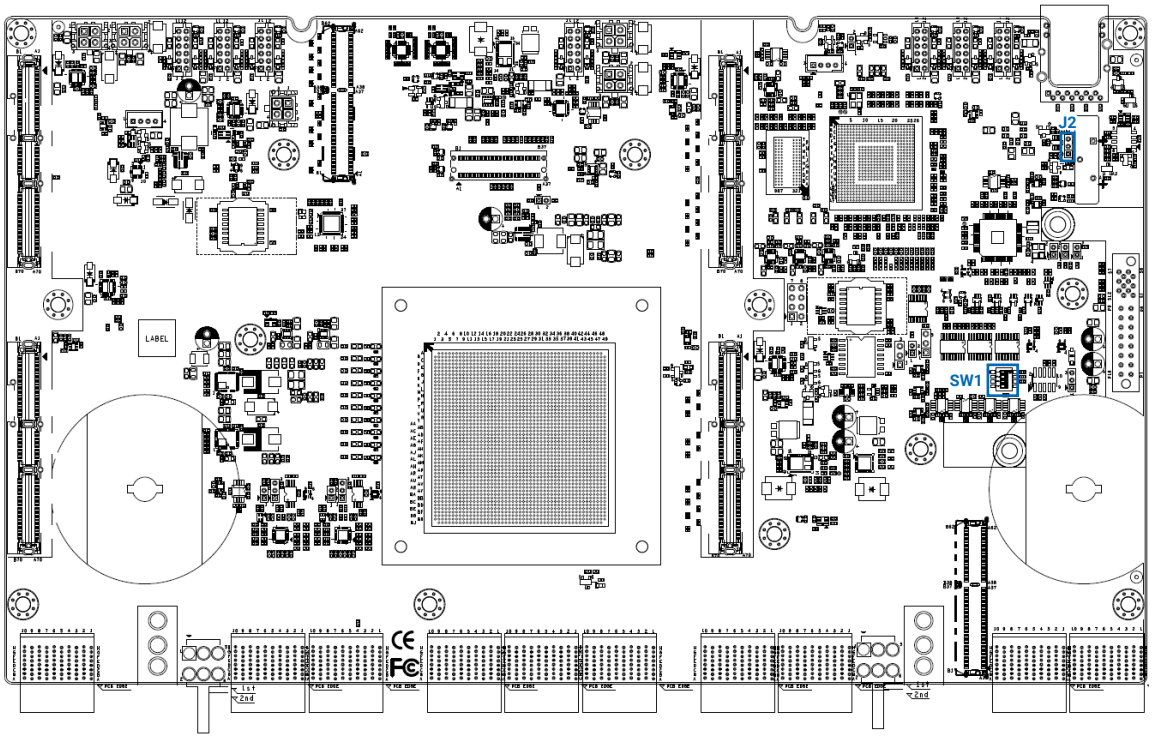
3.2.3 LED Indicator

Indicator	Color	Description
LED1	Green (On)	P0V8_PEX Power Good
	Off	P0V8_PEX Power Fail
LED2	Green (On)	P12V Power Good
	Off	P12V Power Fail
LED3	Green (On)	P3V3 Power Good
	Off	P3V3 Power Fail
LED4	Green (On)	P3V3_AUX Power Good
	Off	P3V3_AUX Power Fail
LED5	Green (Blinking)	BMC is active
	Green (On)	BMC is not active
LED6	Red	PCIe switch error detected
	Off	PCIe switch works normally
LED7	Green	SERDES 0 repeater EEPROM load passed
	Yellow	SERDES 0 repeater loss of signal
LED8	Green	SERDES 1 repeater EEPROM load passed
	Yellow	SERDES 1 repeater loss of signal
LED9	Green (Blinking)	PCIe switch is active
	Green (On)	PCIe switch is not active

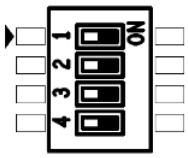
Placement



3.2.4 Mini Jumper and DIP Switch

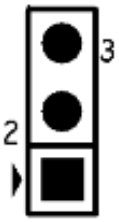


SW1



Pin1	On	Set U79 as the primary BMC ROM
	Off	Set JSPI1 as the primary BMC ROM (default)
Pin2	On	Set BMC password as default setting
	Off	Normal (default)
Pin3	On	Set BMC IP address as default setting
	Off	Normal (default)

J2

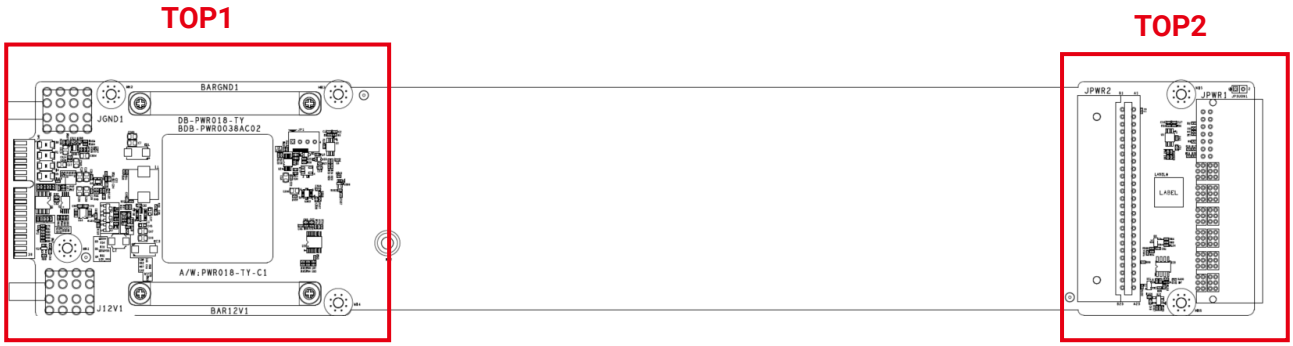


1-2 Shorted	Power on while AC plug in
2-3 Shorted	Press button to power on (default)

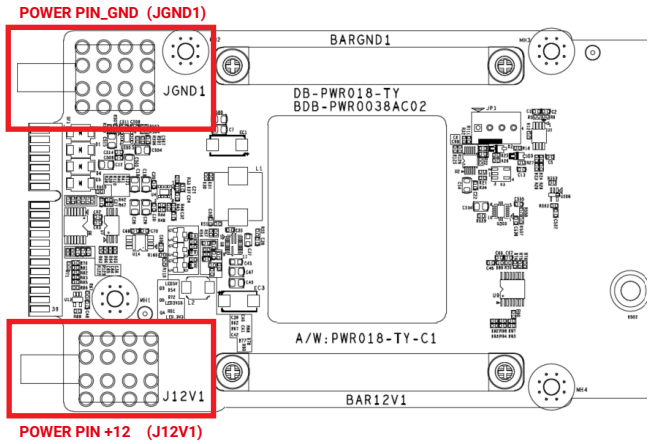
3.3 Power Distribution Boards (PDB)

3.3.1 Placement

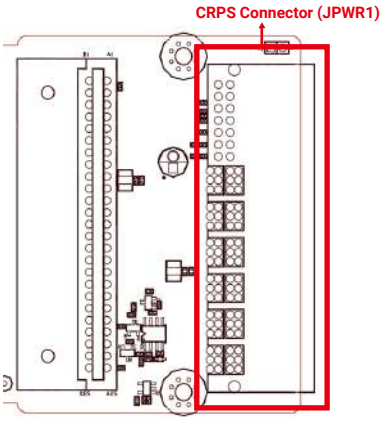
Top view



TOP1



TOP2



Bottom view



3.3.2 Connector

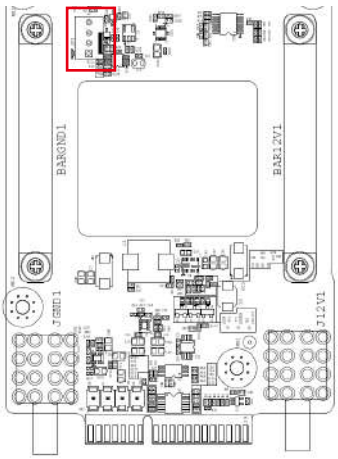
External Connectors

Connector	Description	Function
CRPS CONNECTOR (JPWR1)	86 Pin (CRPS CONNECTOR)	(Input)+12V 225A 2700W (MAX)
		(Input)+12V STBY 3A 36W (MAX)

Internal Connectors

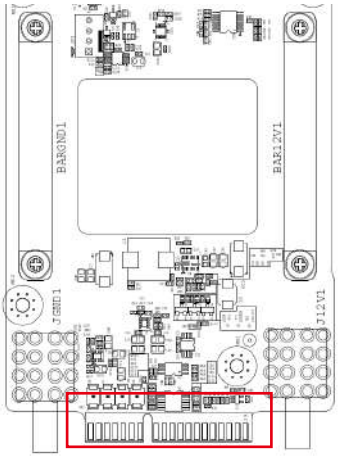
Connector	Description	Function
PLUG PIN (J12V1)	1 Pin	+12V 219.2A 2630 W (MAX)
PLUG PIN (JGND1)	1 Pin	GND
FAN Connector (JP1)	4 Pin (FAN CONNECTOR)	+12V 4A 48W

FAN Connector (JP1)



1	GND
2	+12V_FAN
3	FAN_TACH
4	FAN_PWM

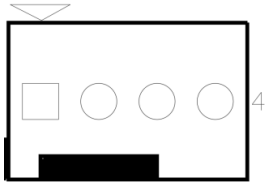
Gold Finger (GF1)



+12VSTBY_DUAL_D	1	2	+12VSTBY_DUAL_D
GND	3	4	GND
+3V3_D	5	6	+3VSTBY_D
+3V3_D	7	8	GND
GND	9	10	GND
GND	11	12	GND
+5V_D	13	14	+3V3_BP_I2C_C
Mechanical_Key	15	16	Mechanical_Key
GND	17	18	BBU_UART_TX
PDB_PRSNT_N	19	20	BBU_UART_RX
N/A	21	22	GND
PMBUS_SCL	23	24	PSU_CR_BUS
PMBUS_SDA	25	26	PSU_POK
MCU_I2C_C_SCL	27	28	PSU_ON_N
MCU_I2C_C_SDA	29	30	PSU_P3V3_EN
PSU_ALERT_N	31	32	PSU_P3V3_PG
PSU_ISHARE	33	34	PSU_PRSENT_N
LOCAL_PSU_AC_OK	35	36	ADDR_A0
PEER_PSU_AC_OK	37	38	12V_SENSE1+
PSU_AC_ALL_OK	39	40	12V_SENSE1-

*BBU is an optional sku.

FAN Connector (JP1)

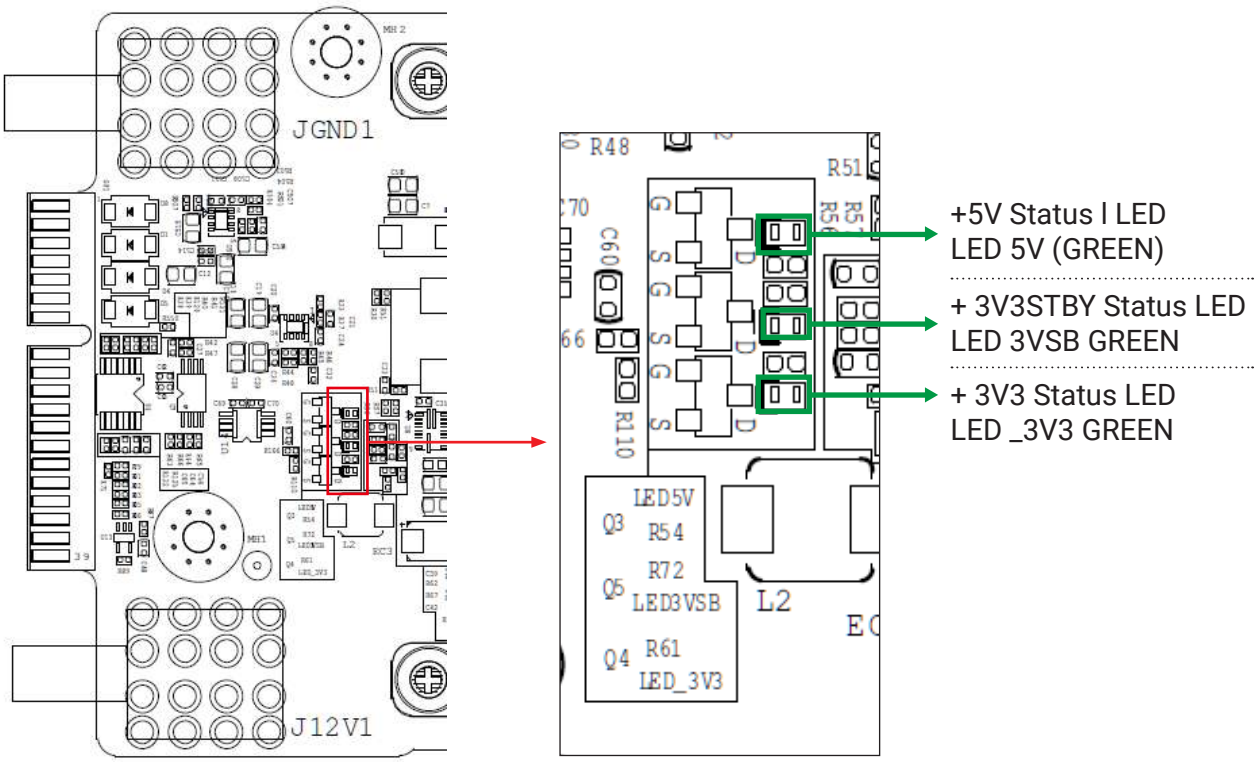


1	GND
2	+12V_FAN
3	FAN_TACH
4	FAN_PWM

3.3.3 LED Indicator

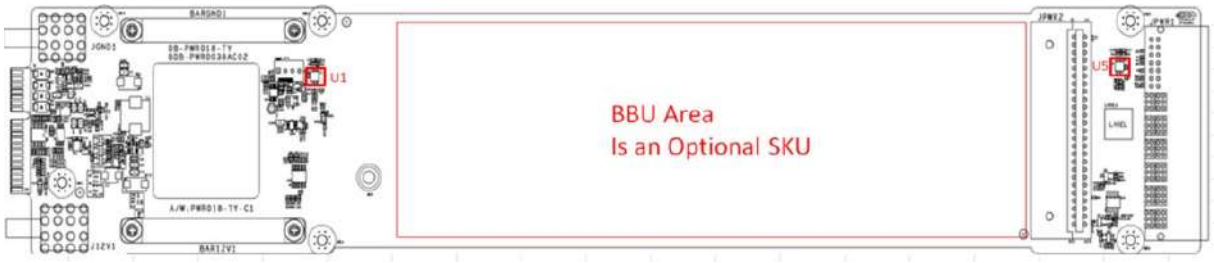
Indicator	Color	Description
+5V Status LED (LED5V)	Green (On)	+5V POWER OK
	Off	+5V POWER NOT OK
+ 3V3STBY Status LED (LED3VSB)	Green (On)	+3VSTBY POWER OK
	Off	+3VSTBY POWER NOT OK
+ 3V3 Status LED (LED_3V3)	Green (On)	+3V3 POWER OK
	Off	+3V3 POWER NOT OK

Placement



3.3.4 Thermal Sensor

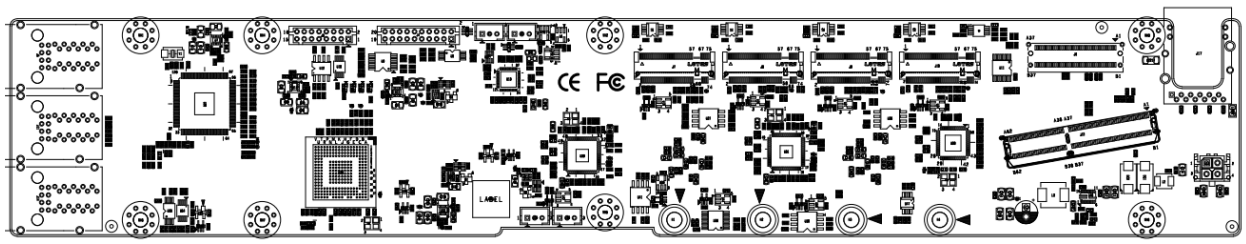
U1 – TMP75AIDGKR(1001 000x)	IC	Thermal Sensor
U5 – TMP75AIDGKR(1001 001x)	IC	Thermal Sensor



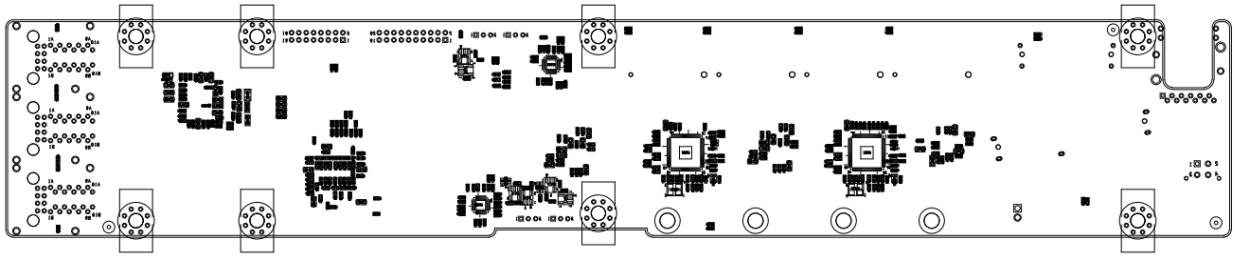
3.4 Module Board

3.4.1 Placement

Top view



Bottom view



3.4.2 Connector

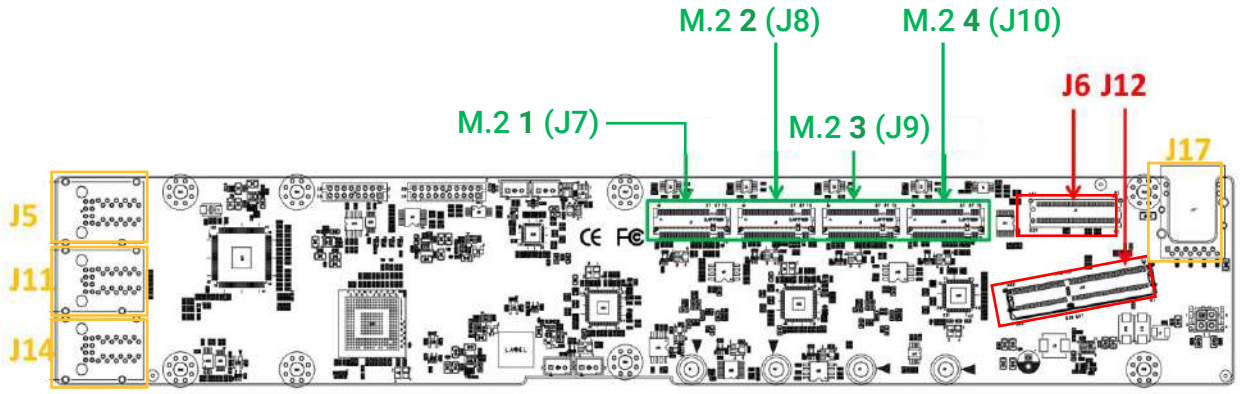
External Connectors

Connector	Description	Function
RJ45 (J5, J11, J14)	RJ45 connector	RJ45 connector

Internal Connectors

Connector	Description	Function
MCIO x8 (J6)	74pin MCIO x8 connector	PCIe Gen5 (for M.2 & I210)
MCIO x16 (J12)	124pin MCIO x16 connector	SerDes, UART, RGMII, Sideband singals
M.2 (J7, J8, J9, J10)	M.2 connector	M.2 connector (For BF3 use)
RJ45 (J17)	RJ45 connector	RJ45 connector (connected to SW board RJ45)

Location

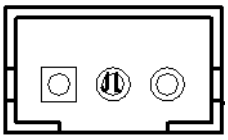


DPU to M.2	
Node 1/2 PCIe1 (JGENZ4)	M.2 **1** (J7)
Node 1/2 PCIe2 (JGENZ2)	M.2 **2** (J8)
Node 1/2 PCIe3 (JGENZ3)	M.2 **3** (J9)
Node 1/2 PCIe4 (JGENZ1)	M.2 **4** (J10)

3.4.3 Pin Header

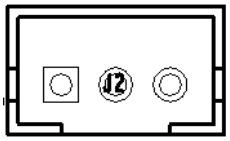
Function	Description	Comments
UART pin header (J1, J2, J15, J16)	1x3P pin header	Connected to BF3
Power, I2C, Sideband signals box header (J3)	2x8 P pin header	Connected to I/O board
UART box header (J4)	2x10 pin header	Connected to I/O board

1x 3P pin header (J1)



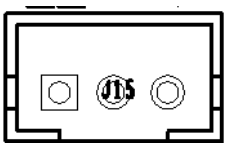
1	UART_GENZ1_RX
2	GND
3	UART_GENZ1_TX

1x 3P pin header (J2)



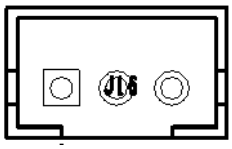
1	UART_GENZ3_RX
2	GND
3	UART_GENZ3_TX

1x 3P pin header (J15)



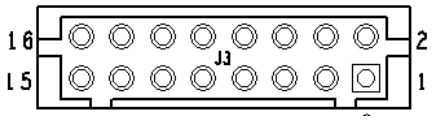
1	UART_GENZ4_RX
2	GND
3	UART_GENZ4_TX

1x 3P pin header (J16)



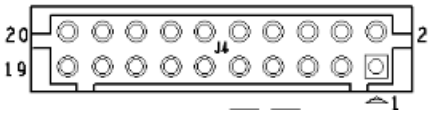
1	UART_GENZ2_RX
2	GND
3	UART_GENZ2_TX

2x 8P pin header (J3)



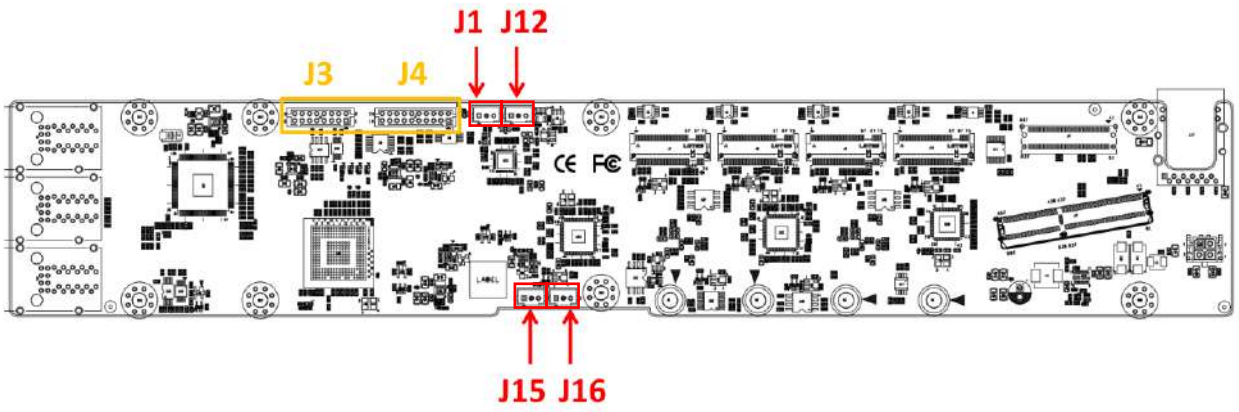
P3V3_AUX	1	2	P12V_AUX
P3V3_BP_PMBUS_AUX	3	4	FRU_IO1_I2C4_SDA
P3V3_AUX_I2C4	5	6	FRU_IO1_I2C4_SCL
FM_IO_BTN_N	7	8	GND
GND	9	10	I2C_PMBUS_IO_SDA
FM_UIDBTN_N	11	12	I2C_PMBUS_IO_SCL
FM_IO_UIDLED_N	13	14	GND
GND	15	16	FM_IO_LED_N

2x 10P pin header (J4)



GND	1	2	GND
UART_GENZ2_IO_RX_R2	3	4	UART_GENZ1_IO_RX_R2
UART_GENZ2_IO_TX_R2	5	6	UART_GENZ1_IO_T X_R2
GND	7	8	GND
UART_GENZ4_IO_RX_R2	9	10	UART_GENZ3_IO_RX_R2
UART_GENZ4_IO_TX_R2	11	12	UART_GENZ3_IO_T X_R2
GND	13	14	GND
UART_BMC_IO_RXD5_R16	15	16	UART_PEX_SDB_IO_RX_R
UART_BMC_IO_TXD5_R	17	18	UART_PEX_SDB_IO_TX_R
GND	19	20	GND

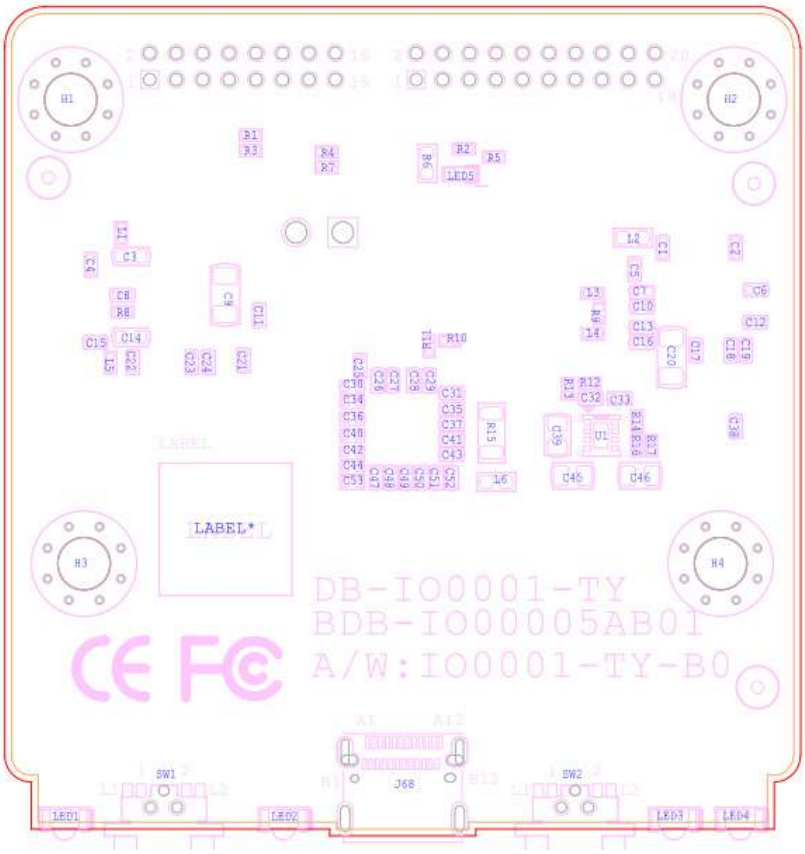
Location



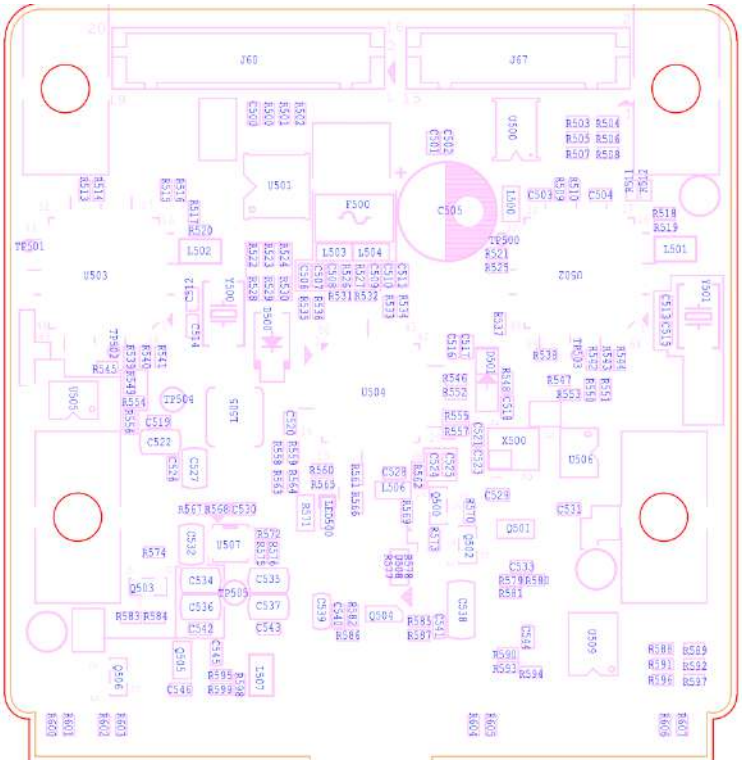
3.5 IO Board

3.5.1 Placement

Top view



Bottom view



3.5.2 Connector

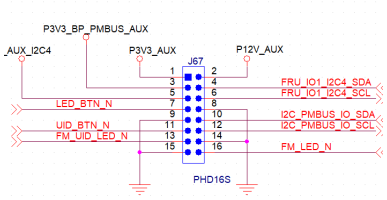
External Connectors

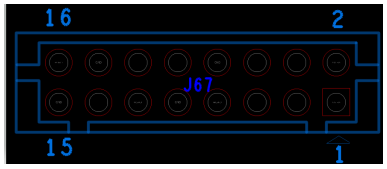
Connector	Description	Function
USB Type C(J68)	USB Type C	USB2.0
UID Button LED (SW1)	UID Button LED BLU	BMC UID Button LED (BLU)
UID Button LED (SW2)	UID Button LED GRN	Button LED (GRN) Reserved

Internal Connectors

Connector	Description	Function
2X8P Pin Headers (J67)	2X8P Pin Headers	UART
2X10P Pin Headers (J60)	2X10P Pin Headers	Sideband signals

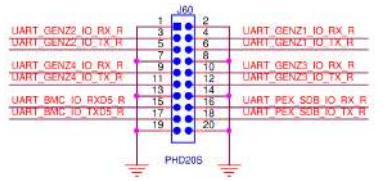
2x8P Header (J67)

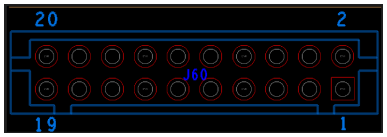




P3V3_AUX	1	2	P12V_AUX
P3V3_BP_PMBUS_AUX	3	4	FRU_IO1_I2C4_SDA
P3V3_AUX_I2C4	5	6	FRU_IO1_I2C4_SCL
LED_BTN_N	7	8	GND
GND	9	10	I2C_PMBUS_IO_SDA
UID_BTN_N	11	12	I2C_PMBUS_IO_SCL
FM_UID_LED_N	13	14	GND
GND	15	16	FM_LED_N

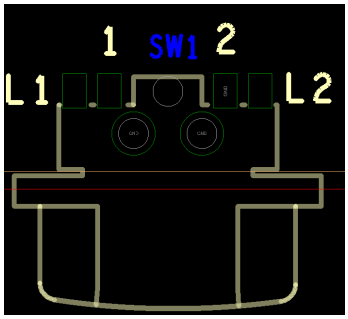
2x10P Header (J60)





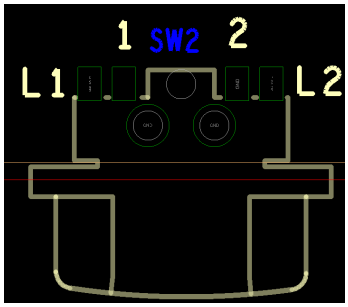
P3V3_AUX	1	2	P12V_AUX
P3V3_BP_PMBUS_AUX	3	4	FRU_IO1_I2C4_SDA
P3V3_AUX_I2C4	5	6	FRU_IO1_I2C4_SCL
LED_BTN_N	7	8	GND
GND	9	10	I2C_PMBUS_IO_SDA
UID_BTN_N	11	12	I2C_PMBUS_IO_SCL
FM_UID_LED_N	13	14	GND
GND	15	16	FM_LED_N
	17	18	
	19	20	

UID Button LED (SW1)



1	UID_SW_BTN_IN_N
2	GND
L1	UID_LED_SW_R
L2	UID_LED_SW_L
H1	NC
G1	GND
G2	GND

Button LED(reserved) (SW2)



1	LED_SW_BTN_IN_N
2	GND
L1	LED_SW_R
L2	LED_SW_L
H1	NC
G1	GND
G2	GND

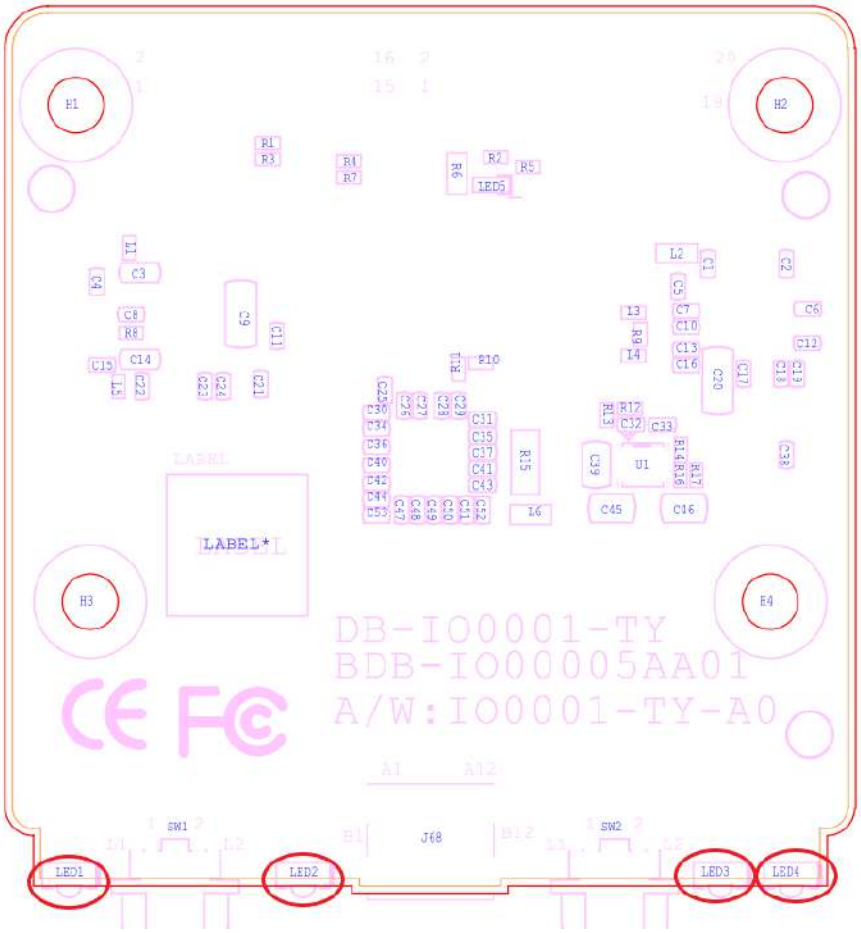
LED Button Definition

Item	Color	Description
UID Button LED BLU (SW1)	Blue (on)=UID Enabled Blue(off)=UID Disabled	On/off can be controlled by BMC
Button LED GRN (SW2)	Green (on) = Button LED Enabled Green (off) = Button LED Disabled	

3.5.3 LED Indicator

Indicator	Color	Description
LED1/LED2/LED3/LED4	Bi-Color LED (RED/GRN)	BF3 Status LED

Location



Chapter 4. BMC Configuration Settings

4.1 Introduction

4.1.1 Intoduction to the BMC Platform

The BMC (Baseboard Management Controller) permits remote networking access to multiple users situated in different locations. In addition to this, it facilitates remote system health monitoring and computer event management for system administrators.

4.1.2 Overview of the ASPEED AST2600 BMC

The ASPEED AST2600 BMC is ASPEED's 7th generation Server Management Processor. Adopting the Dual-core ARM Cortex A7 processor, AST2600 can optimize the performance and computing power; also lower the power consumption significantly. Also, AST2600 support Secure Boot mode and ARM Cortex A7 TrustZone, which can provide customers excellent information security protection.

The BMC contains a specialized processor with 2D graphic and logic control features. It facilitates remote monitoring and management of server systems, providing a flexible motherboard design. The AST2600 BMC also serves as the VGA for BMC Graphics.

4.1.3 AIC BMC Features

The BMC functions supported by AIC are as follows.

- Hardware monitoring
- Overall health status display on the main page
- Remote server power control
- Event Log support
- Automatic notifications and alerts (SNMP and email)
- Out-of-band management via shared or dedicated LAN
- Change LAN interface options at runtime
- VLAN
- SMASH/CLP
- Secure browser interface (Secure socket layer - SSL support)
- Lightweight Directory Access Protocol (LDAP) support
- Factory default settings from web support
- OS independent
- Backup and restore the configuration file
- Video quality settings
- Update firmware via browser and OS
- Redfish

4.2 Log In to the Remote Console

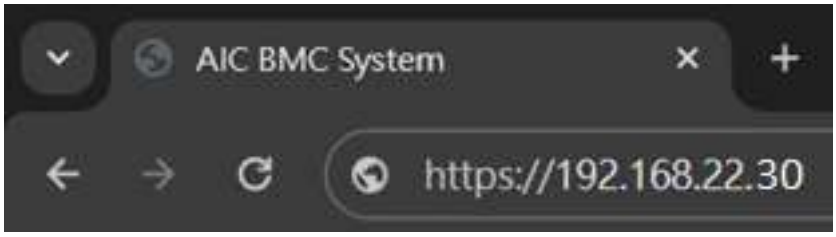
4.2.1 Required Browser Settings

NOTE
Cookies must be enabled in order to access the website.

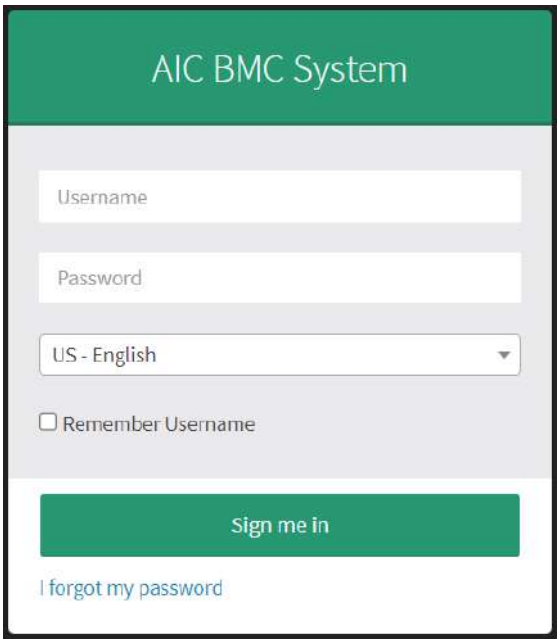
4.2.2 Username and Password

The computer and BMC need to be on the same subnet. After setting the static IP, they should be able to communicate. To establish a connection, follow the steps below.

1. Use the computer's terminal to ping the BMC IP address and ensure that it can be pinged.
2. If the BMC IP address is pingable, open a web browser on your computer, enter the BMC IP address in the URL bar.



3. Initial access prompts you to enter the User Name and Password. A sample screenshot of the login screen is given below.



The fields are explained as follows:

Fields Name	Description
Username	Enter your username in this field.
Password	Enter your password in this field.
Language Selection	Language selection drop-down will be populated based on supported languages in Web UI as a part of multi-language support feature. Drop-down option value will be selected based on the browser language. For example, if browser language is configured with Simplified Chinese language (ZH-CN), then option value will be auto selected as China. Default language will be selected as US-English if the browser configured language not supported by Web UI. Entire Web UI pages language strings will be displayed based on selected language from drop-down.
Remember Username	Check this option to remember your login Username. If you select this option, the browser will save your credentials internally in its memory, and when you open that site the next time, it will auto-fill Username for you.
Sign me in	After entering the required credentials, click the **Sign me in** to login.
I forgot my password	If you forget your password, you can generate a new password using this link.

4.2.3 Default User Name and Password

Default Username: **admin**

Default Password: **admin**

NOTE

The default user name and password are in lower-case characters. When you log in using the user name and password, you get full administrative rights. It is advised to change your password once you login.

Duplicate user names shouldn't exist across various authentication methods like AD, LDAP, RADIUS or IPMI since the privilege of one Authentication method is overwritten by another authentication method when login and hence the correct privilege can not be returned properly. Duplicate user names shouldn't be existed across different channels in IPMI.

Warning:

Once you login to the application, it is recommended not to use the following options.

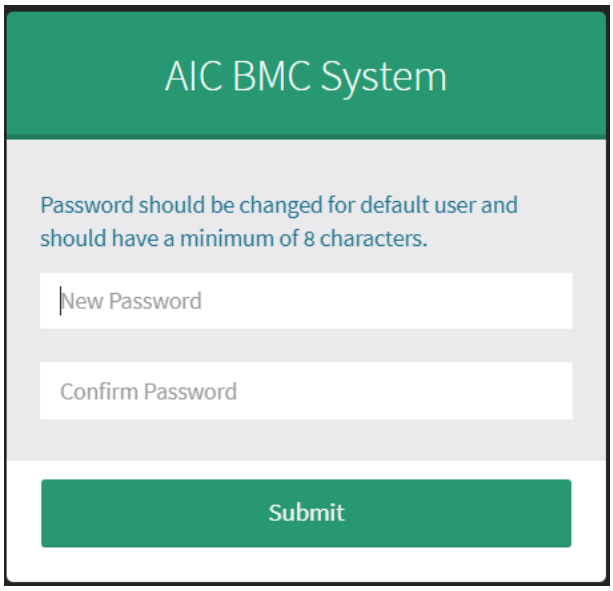
- Refresh button of the browser
- Refresh menu of the browser
- Back and Forward options of the browser
- F5 on the keyboard
- Backspace on the keyboard

The changes done in user account properties through IPMI/Redfish interfaces will not be reflected in current active web sessions.

4.2.4 Need to change password

It is mandatory to change the password for the default user at first successful login due to California Law SB-327 security fix. If the authentication is successful, then Web UI will prompt a new page which will ask to change the user password. Once the password is changed, login page will be reloaded. Enter the username and modified password to Login.

A sample screenshot is given below.



Default User's password can be changed using any of the following method.

- Web UI
- IPMI Tool
- Redfish (If Redfish Support is enabled)

NOTE
The last password used cannot be used to reset the password.

Password Change Required Case

1. When the BMC boots with factory firmware, user needs to change the default password on first boot.
2. When the user upgrades the BMC firmware without preserving the configuration, default pass word needs to be changed on the first boot.
3. When the user restores factory settings and restarts the BMC, the default password needs to be changed during the restart.
4. Whenever user detect the BMC conf corruption and restore the conf with factory setting, on next boot, default password needs to be changed.

Limitations

If the current Firmware in BMC is without CA law enabled and the default password is modified and user tries to preserve configuration and upgrade firmware with CA law enabled firmware image, BMC will still prompt to change the user password.

Reason

In BMC firmware default password is not preserved or stored anywhere, so it is not possible to check if the default password is modified or not. Default password can also be modified during Build time in PMCP file as required by OEM.

4.3 Web UI Common Features

The following content is a brief description of the menu bar. For further details about the BMC, please refer to **F2026-01-G5_BMC** Manual for reference.

4.4 Menu Bar and Quick Button

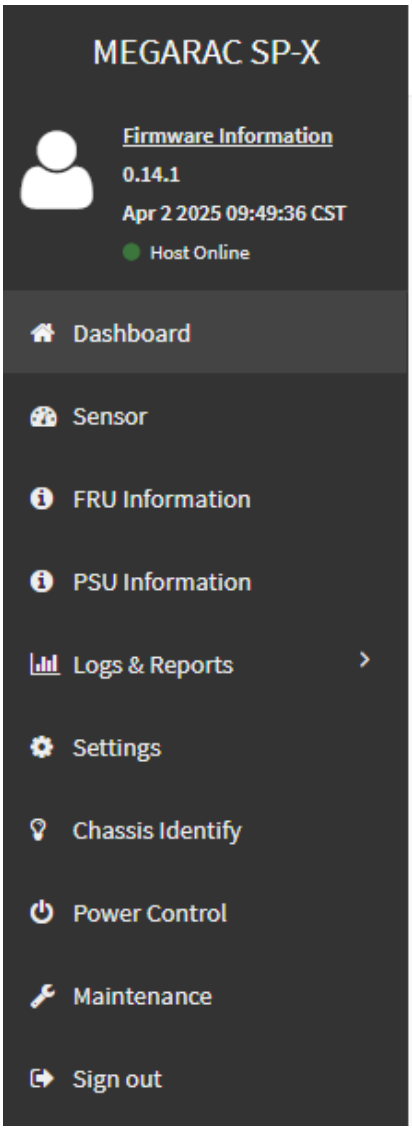
4.4.1 Menu Bar

The menu bar displays the following.

Firmware Information will be displayed with the latest version, date and time details.

Power Control Status will be displayed as Host Online. To change the Power Control Status, click Host Online link.

- Dashboard
- Sensor
- FRU Information
- PSU Information
- Logs & Reports
- Settings
- Chassis Identify
- Power Control
- Maintenance
- Sign out



4.4.2 Quick Button and Logged-in User

The user information and quick buttons are located at the top right. A screenshot of the logged-in user information is shown below.



The logged-in user information shows the logged-in user, his/her privilege and the four quick buttons allowing you to perform the following functions.

Message: Click the icon to view the event log alert messages. On clicking the messages, it will navigate to the Logs and Reports page.

Notification: Click to view the notification received.

Language Selection: Change the language to view the language strings in different languages.

Sync: Click the Sync icon to synchronize with Latest Sensor and Event Log updates.

Refresh: Click the Refresh icon or pressing key F5 to reload the current page.

Logged-in user and its privilege level

This option shows the logged-in user name and privilege. There are list of privileges mentioned as below.

1. **Administrator**: All BMC commands are allowed.
2. **User**: Only valid commands are allowed.
3. **Operator**: All BMC commands are allowed except for the configuration commands that can change the behavior of the out-of-hand interfaces.
4. **No Access**: Login access denied.
5. **OEM**: All OEM commands are allowed.

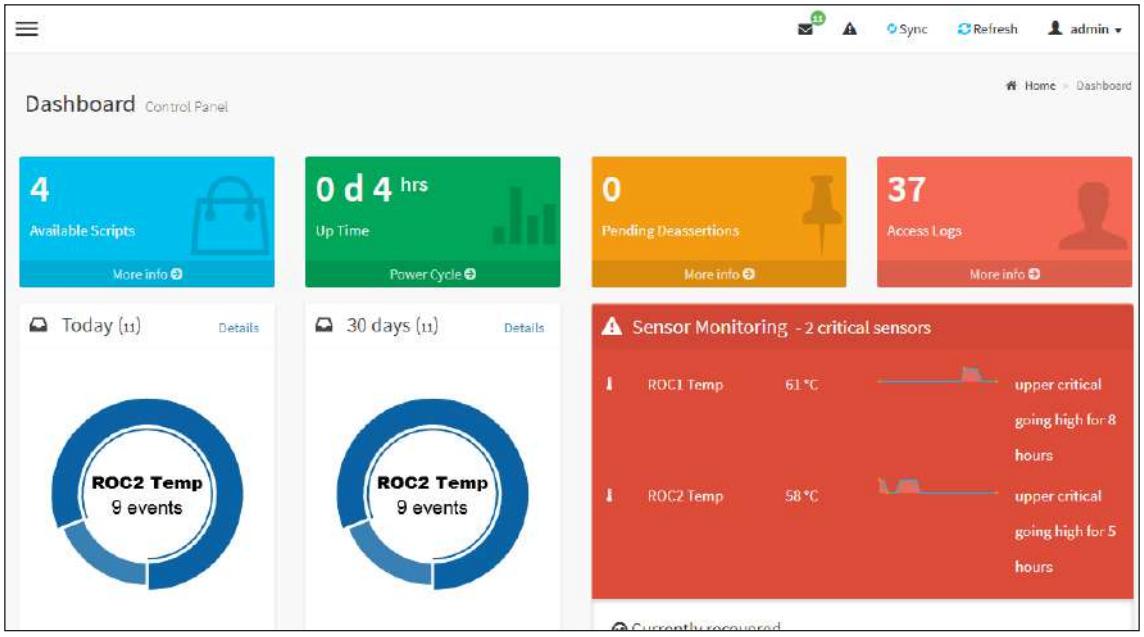
Sign out: Click the Sign out icon to log out of the MegaRAC GUI.

Help: The Help icon ( ) is Located at the top right of each page in MegaRAC GUI. Click this help icon to view more detailed field descriptions

4.5 Dashboard

The Dashboard page gives the overall information about the status of a device.

To open the Dashboard page, click Dashboard from the menu bar. A sample screenshot of the Dashboard page is shown below.

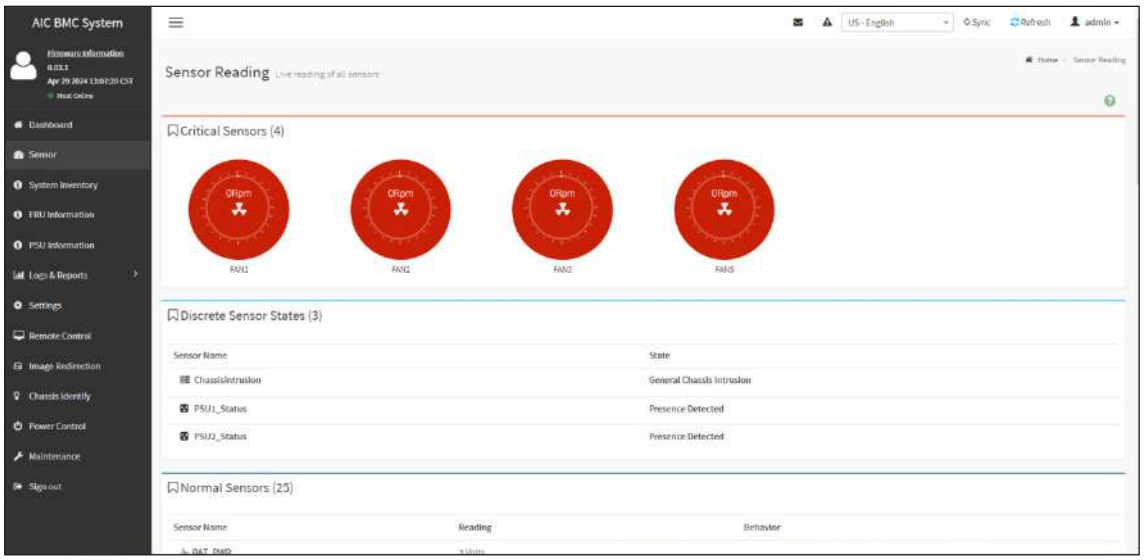


4.6 Sensor

The Sensor Reading page displays all the sensor related information.

To open the Sensor Reading page, click Sensor from the menu. Click on any sensor to show more information about that particular sensor, including thresholds and a graphical representation of all associated events.

A screenshot of Sensor Reading page is given below.



Sensor Readings Page

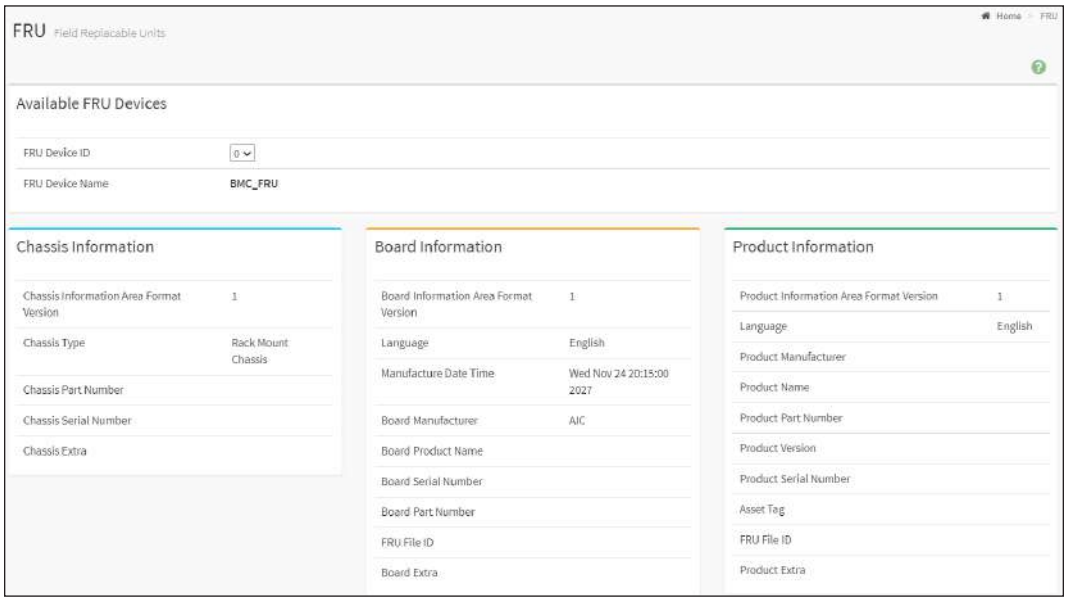
The Sensor Readings page contains the following information.

In this Sensor Reading page, Live readings for all the available sensors with details like Sensor Name, Status, Current Reading and Behavior will be appeared, else you can choose the sensor type that you want to display from the list. Some examples for sensors are Temperature Sensors, Fan Sensors, Watchdog Sensors and Voltage Sensors etc.

4.7 FRU Information

FRU Information page displays the BMC's FRU device information. FRU page shows information like Basic Information, Chassis Information, Board Information and Product Information of the FRU device.

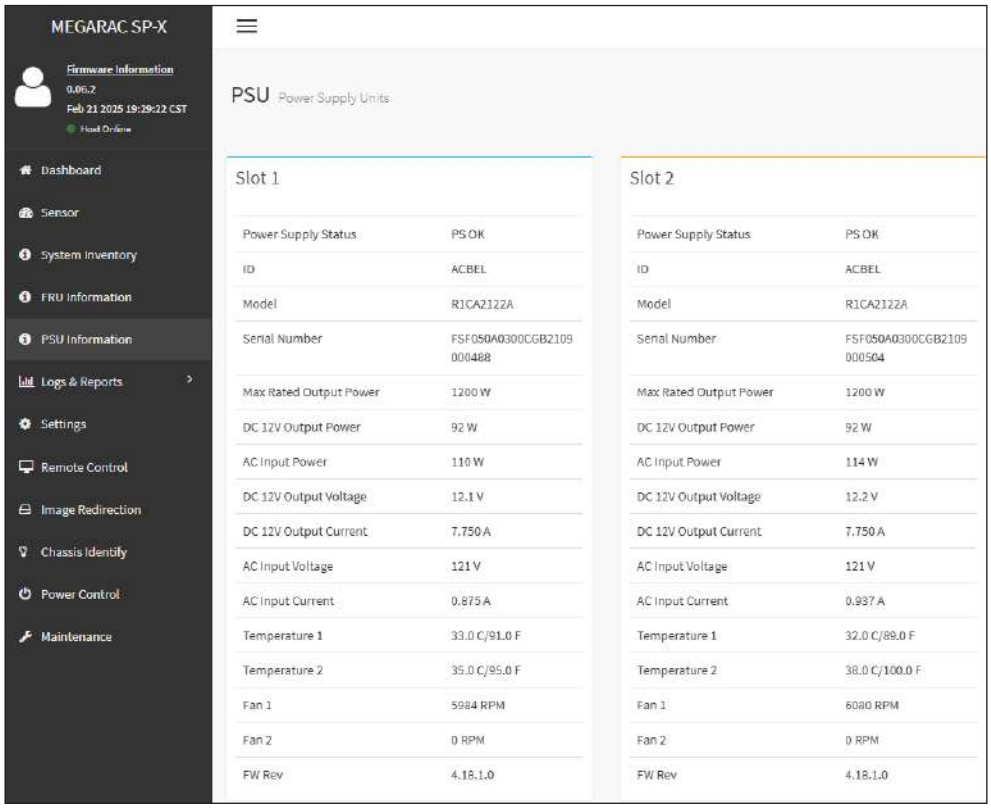
To open the FRU Information page, click FRU Information from the menu bar. Select a FRU Device ID from the FRU Information section to view the details of the selected device. A screenshot of FRU Information page is given below.



FRU Information Page

4.8 PSU Information

To open the PSU Information page, click PSU Information from the menu bar. A screenshot of PSU Information page is given below.

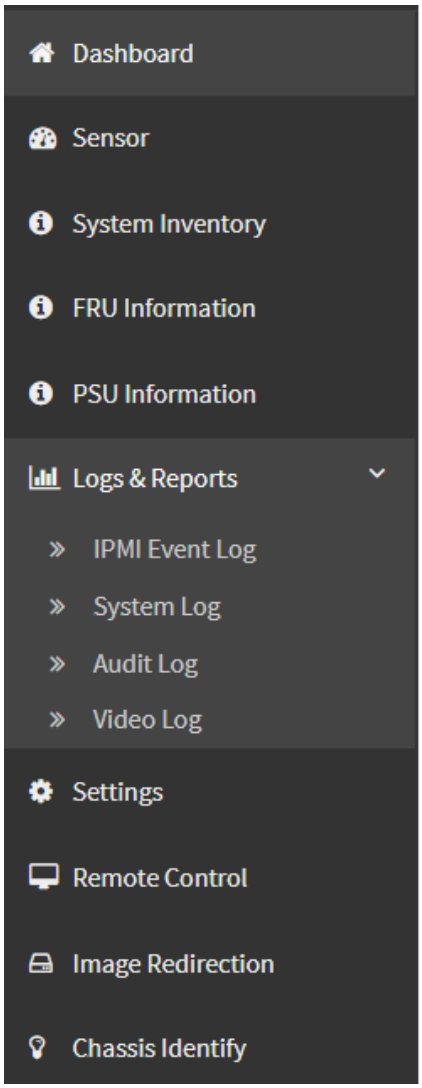


4.9 Logs & Reports

To open the Logs & Reports page, click Logs & Reports from the menu bar. The Logs & Reports page displays the following information.

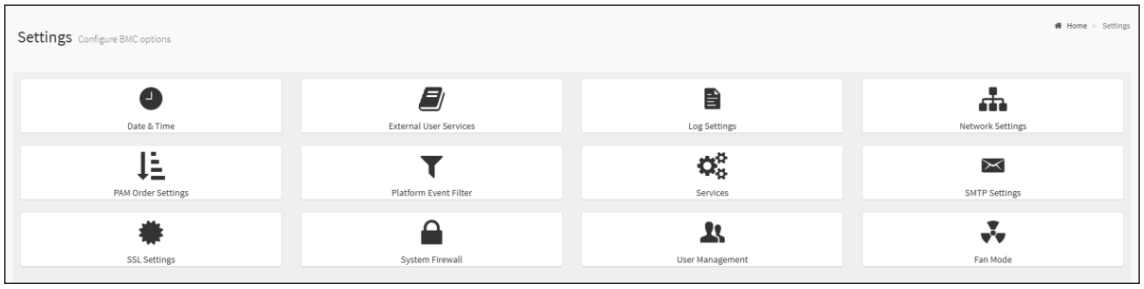
- IPMI Event Log
- System Log
- Audit Log
- Video Log

A screenshot displaying the menu items under Logs & Reports is shown below



4.10 Settings

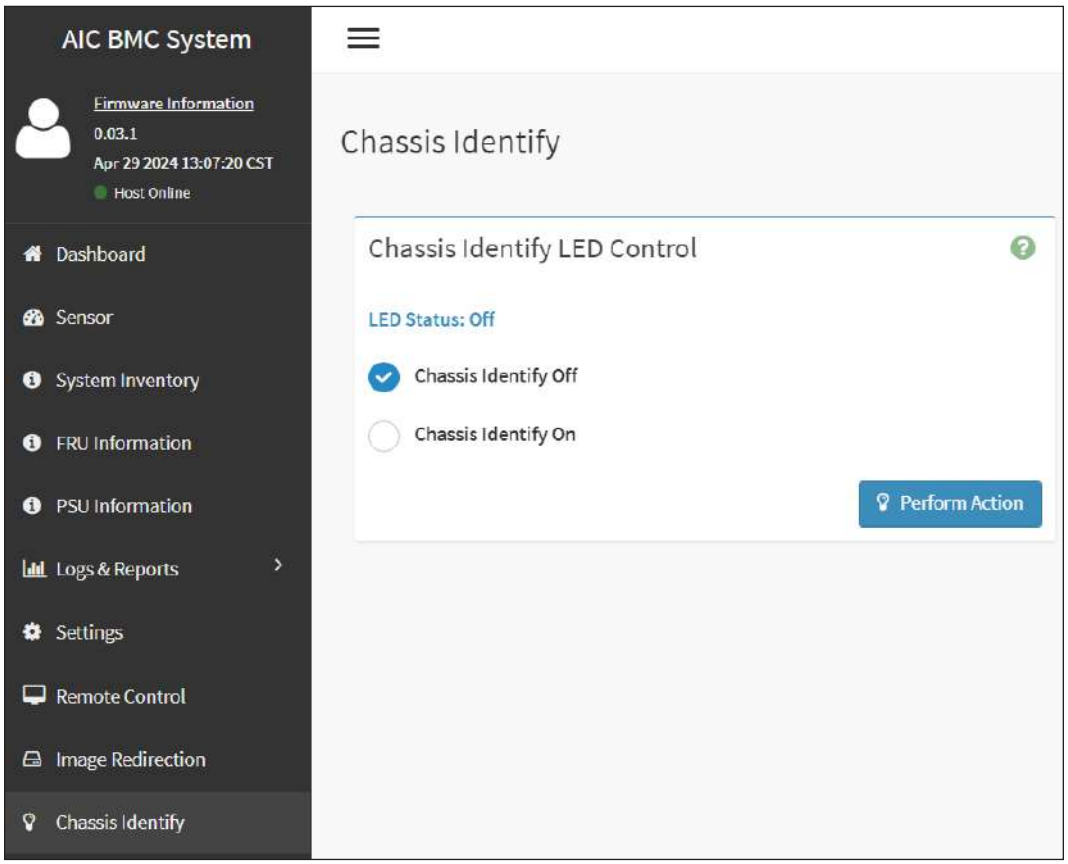
To open the Settings page, click Settings from the menu bar. This group of pages allows you to access various configuration settings. A screenshot of Configuration Group menu is shown below.



A detailed description of the Configuration menu is given below.

4.11 Chassis Identify

To open the Chassis Identify page, click Chassis Identify from the menu bar. A sample screenshot of the Chassis Identify page is shown below.



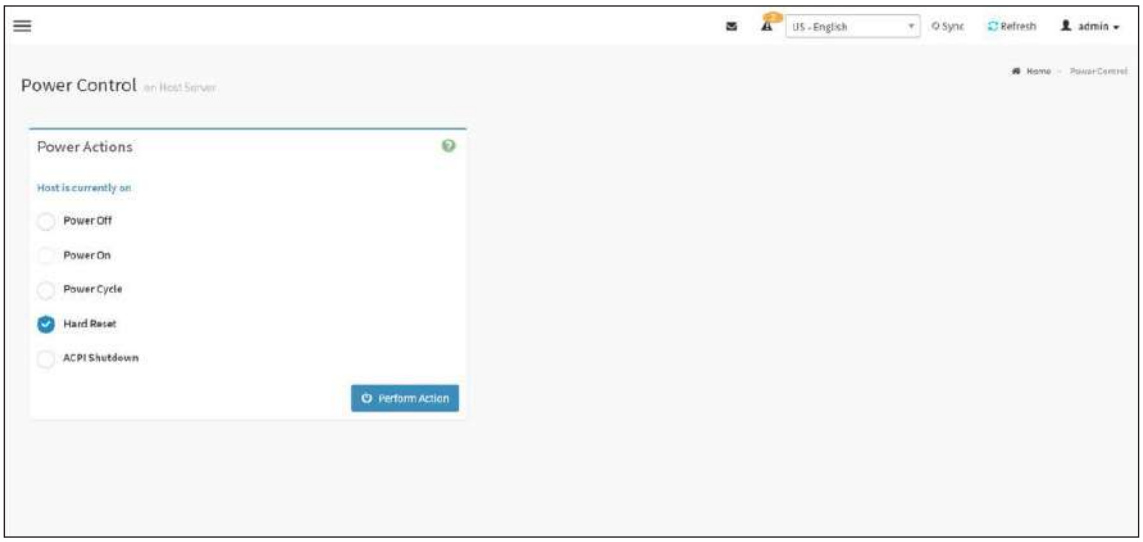
The various options of Chassis Identify LED Control are given below.

- **Chassis Identify Off**: This option will turn off the Chassis Identify LED.
- **Chassis Identify On**: This option will turn on the Chassis Identify LED.

4.12 Power Control

This page allows you to view and control the power of your server.

To open Power Control, click Power Control from the menu bar. A sample screenshot of Power Control is shown below.



The various options of Power Control are given below.

Power Off: To immediately power off the server.

Power On: To power on the server.

Power Cycle: This option will first power off, and then reboot the system (cold boot).

Hard Reset: This option will reboot the system without powering off (warm boot).

ACPI Shutdown: This option to initiate operating system shutdown prior to the shutdown.

Perform Action: Click this option to perform the selected operation.

Procedure

Select an action and click Perform Action to proceed with the selected action.

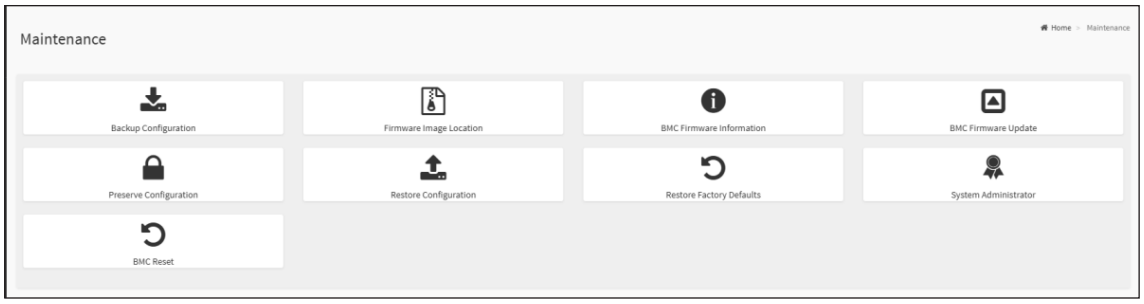
> **NOTE**
>
> During Execution you will be asked to confirm your choice. Upon confirmation, you will be informed about the status after few minutes.

4.13 Maintenance Group

To open the Maintenance page, click Maintenance from the menu bar. This group of pages allows you to do maintenance tasks on the device. The menu contains the following items:

- Backup Configuration
- Firmware Image Location
- BMC Firmware Information
- BMC Firmware Update
- Preserve Configuration
- Restore Configuration
- Restore Factory Defaults
- System Administrator
- BMC Reset

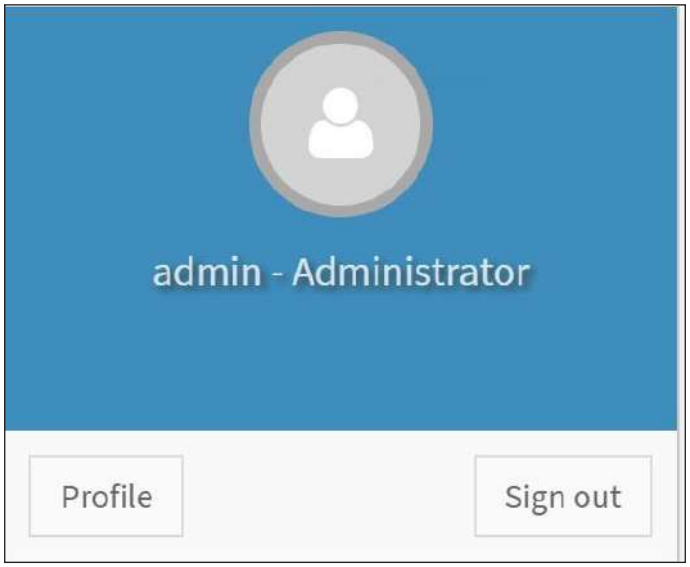
A sample screenshot of Maintenance page is displayed below.



Maintenance page

4.14 Sign Out

To log out from , click the admin on the top right corner of the screen. A sample screenshot of admin option is shown below.



Click Sign Out to perform log out. A Warning message will be prompted you to proceed further, click OK to log out or Cancel to retain the interface.

Chapter 5. Technical Support

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