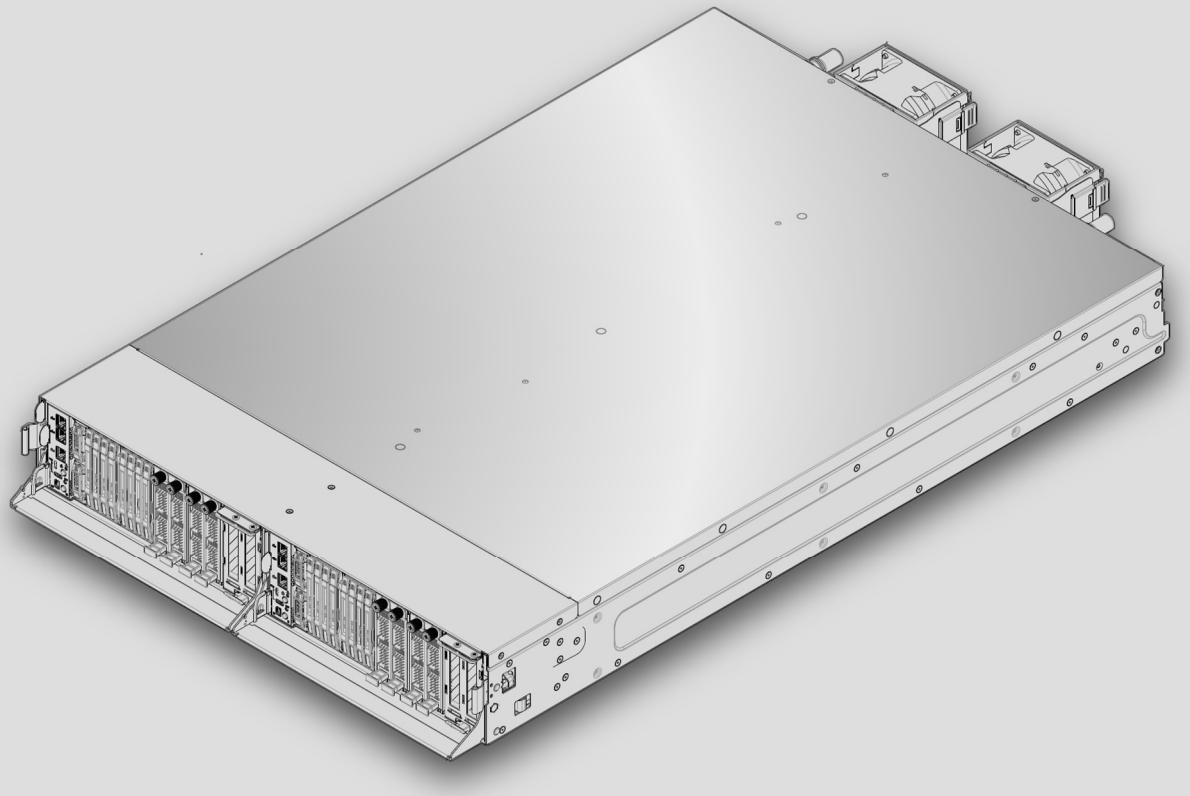
MS303 Server
Quick Installation Guide

Thank you for purchasing MS303-series Server.
The following information will help you assemble your System and install components.

This guide and other supporting documents are also available on the website at:
https://svr.pegatroncorp.com/product/MS303-4A1



PEGATRON·SVR

MS303-4A1
MS303-2B1
MS303-2T1
MS303-2G1
MS303-2S1

v1.0

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EMC and Safety Requirements

Warning

Read all caution and safety statements in this document before performing any of the instructions. Also see more details information at https://svr.pegatroncorp.com/product/MS303-4A1

Warning

Installation and service of the product is to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

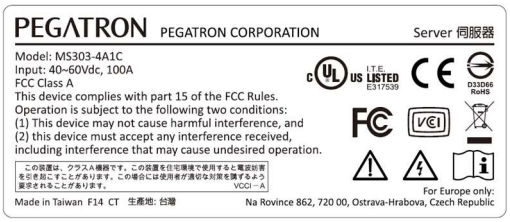
Caution

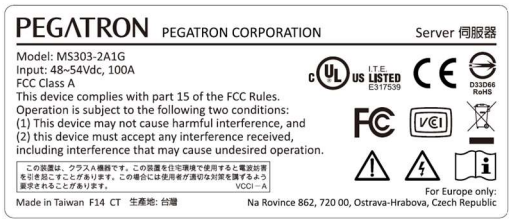
Observe normal ESD (Electrostatic Discharge) procedures during system integration to avoid possible damage to server board and/or other components.

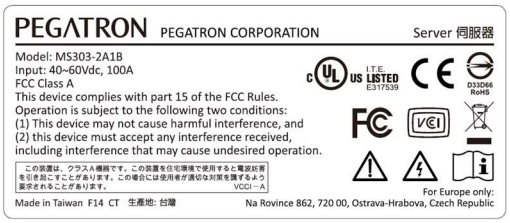
Tools Required

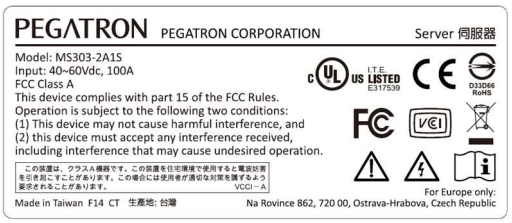
EMC and Safety Requirements

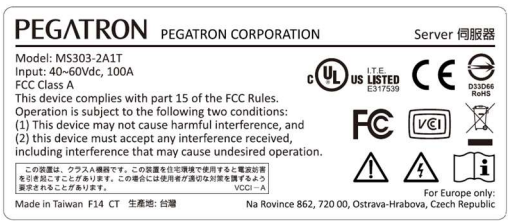
Rating Requirements :











Ambient Requirement : 35˚C

EMC and Safety Requirements

Warnings

Equipment is intended for installation in Restricted Access Area
Les matériels sont destinés à être installés dans des EMPLACEMENTS À ACCÈS RESTREINT

Only skilled personnel can remove the covers to access the inside of the system.

CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

ATTENTION: Risque d'explosion si la batterie est remplacée par un type incorrect. Mettre au rebus les batteries usagées selon les instructions

Ensure to connect the power cord to a socket-outlet with earthing connection

A prominent instruction is provided at each disconnect device giving adequate instructions for the removal of all power from the unit.


(60417-6042) and


(60417-6172)

"CAUTION - Shock hazard. Disconnect all power sources" or equivalent text

"ATTENTION - Danger de choc Déconnecter toutes les sources d'énergie" ou texte equivalent

Use certified Optical Fiber Transceiver Class I Laser Product.

Warning: Operation of this equipment in a residential environment could cause radio interference

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Cautions

- Before starting the equipment installation, ensure that a service personnel has attached an appropriate grounding lug to the grounding cable supplied.
- This equipment should be installed and operated with a minimum distance of _20_ cm between the radiator and your body.
- Suitable for installation in Information Technology Rooms in accordance with Article 645 of the National Electrical Code and NFPA 75."/"Peut êtreinstallé dans des salles de matériel de traitement de l'information conformément à l'article 645 du National Electrical Code et à la NFPA 75.

法規遵循與安全資訊

警告 如果電池更換不正確，有爆炸的危險。僅使用製造商推薦的相同或同等類型更換電池。按照製造商的說明處理廢舊電池。

警告 在操作與電源線連接的設備前，請摘下首飾（包括戒指、項鍊與手錶）。金屬物品連接在電源和接地之間時會變熱，可能會造成嚴重燒傷或者將金屬物品焊接到終端上。

警告 在開始安裝之前，請仔細閱讀壁式安裝說明。硬體使用不當或未遵循正確程式可能會使人員陷入危險並對系統造成損壞。

警告 請勿在發生雷電天氣期間使用系統或者連接或斷開電纜。

警告 連接系統到電源之前請閱讀安裝說明。

警告 本產品為受限制觸及區域使用，且僅受指導人員 & 技術人員使用

警告 電擊危害於維修該設備前需切斷所有電源

警告 為避免電磁干擾，本產品不應安裝或使用於住宅環境

報驗義務人
名稱：和碩聯合科技股份有限公司
住址：台北市北投區立功街96號

EMC and Safety Requirements

	設備名稱：Server Equipment name		型號（型式）：MS303-4A1C/2A1B/2A1T/2A1G/2A1S Type designation (Type)			
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr+6)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 diphenyl ethers (PBDE)
印刷電路板	-	○	○	○	○	○
外殼	-	○	○	○	○	○
機械部件	-	○	○	○	○	○
電源供應器	-	○	○	○	○	○
電線/連接器	-	○	○	○	○	○
儲存裝置	-	○	○	○	○	○

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。
Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3.〝-〞係指該項限用物質為排除項目。
Note 3：The “–” indicates that the restricted substance corresponds to the exemption.

Thermal Operation and Configuration Requirements

To keep the system operating within supported maximum thermal limits, the system must meet the following operating and configuration guidelines:

- Ambient in-let temperature cannot exceed 35°C/95°F and should not remain at this maximum level for long periods of time. Doing so may affect long term reliability of the system.
- All hard drive/SSD bays must be populated. Hard drive carriers either can be populated with a hard drive or supplied drive blank.
- The air duct must be installed at all times.
- The system top-cover must be installed at all times.

SKU Information

SKU	Model Name	SKU Name	Node / Processor
SKU2	MS303-4A1C	Cloud Server	2-Node, 2P/node
SKU3-1	MS303-2A1B	Budget Server	2-Node, 1P/node
SKU3-2	MS303-2A1T	Budget Server (Storage)	2-Node, 1P/node
SKU5	MS303-2A1G	GPU Server	1-Node, 2P/node
SKU6	MS303-2A1S	Storage Server	1-Node, 2P/node

SKU Configuration

Hot swap: Components that can be removed without open the top cover.

Cold swap: Components that require a full system shut down and open the top cover to remove

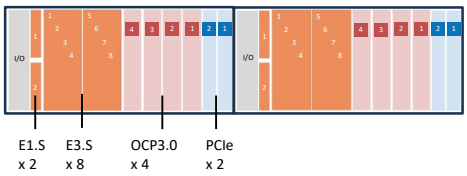
IMPORTANT!

E1.S is used for OS boot with RAID 0 or RAID 1 configured.

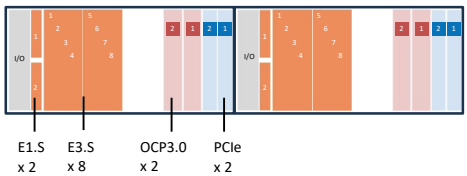
- *RAID 0: DO NOT hot-swap the E1.S.*
- *RAID 1: Only hot-swap one E1.S a time.*

2-Node

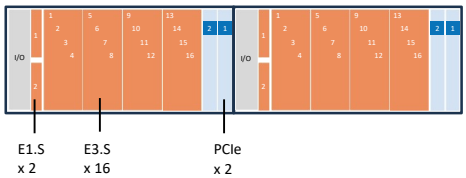
MS303-4A1C



MS303-2A1B

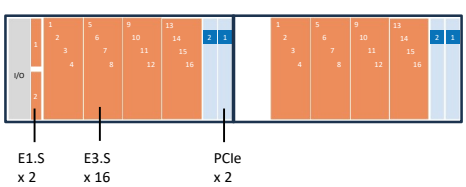


MS303-2A1T

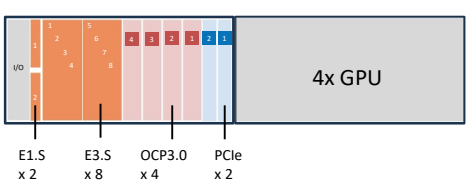


1-Node

MS303-2A1S



MS303-2A1G

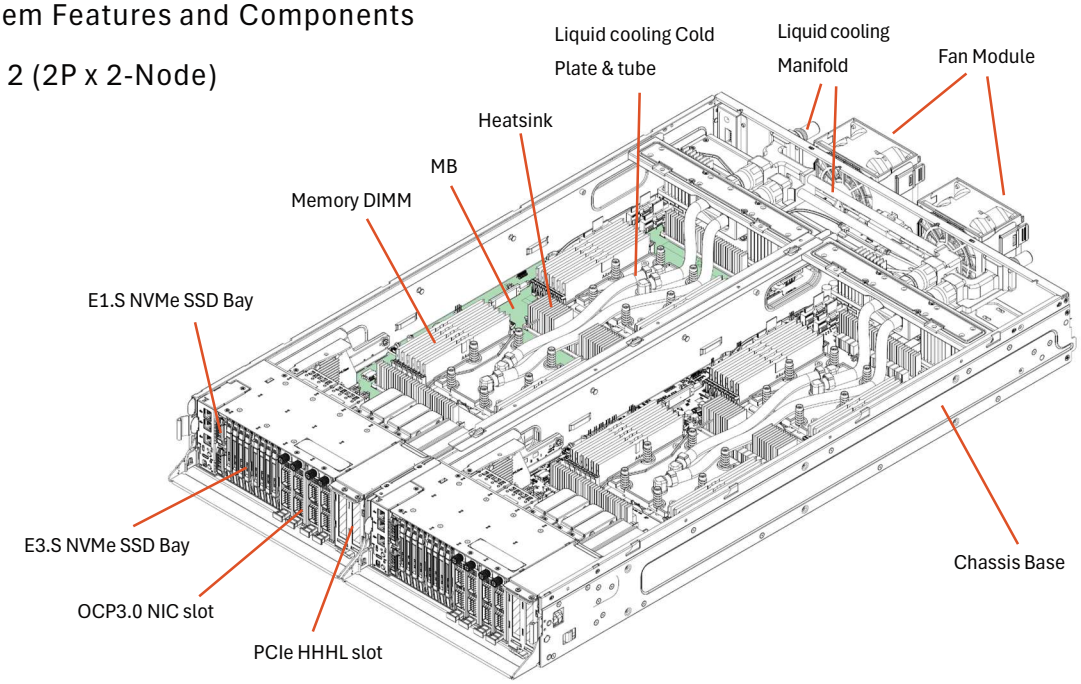


System Overview

MS303-4A1C

System Features and Components

SKU 2 (2P x 2-Node)



Product Specifications:

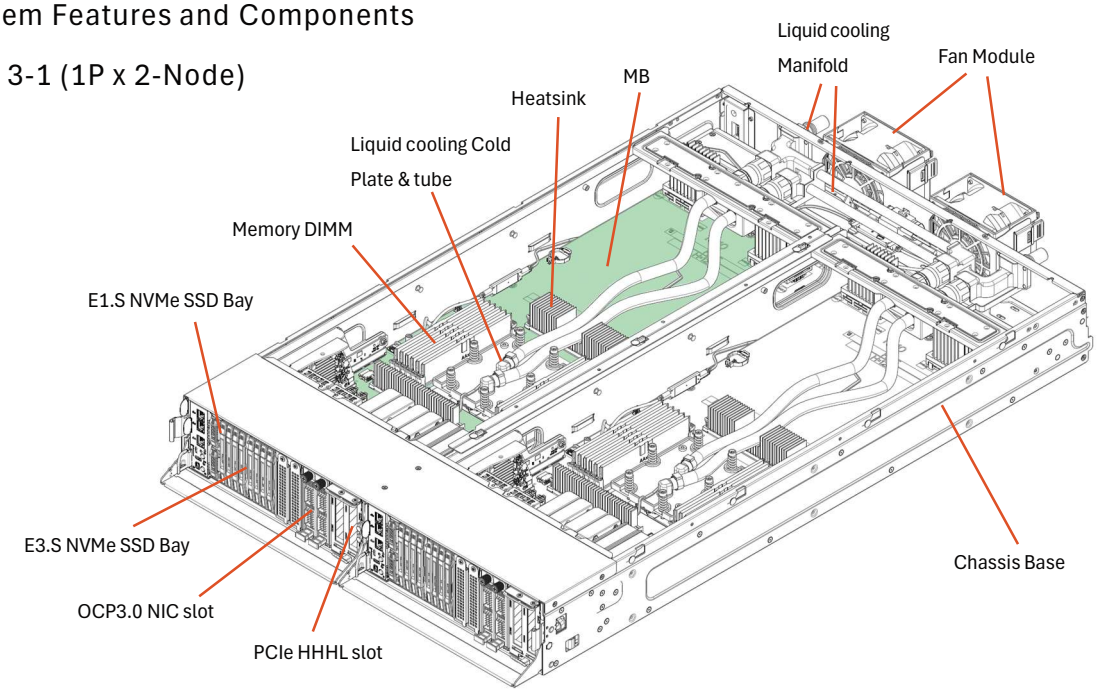
Specifications	
Form Factor / Dimension	OCP ORv3 2OU Chassis (W x H x D) : 537mm x 93.5mm x 809.25mm (w/o fan) MB dimension: 250mm x 540mm x 1.89mm
Processor (per node)	AMD EPYC 9005 Series (Turin), up to 192 Cores with TDP up to 500W 2-Socket (SP5)
System Memory (per node)	24 x DDR5 DIMM slots; 1DPC (1 DIMM per Channel) Up to 6400MT/s
Storage (per node)	2 x PCIe3 E1.S NVMe SSD (support hardware RAID for OS) 8 x PCIe5 E3.S 1T NVMe SSD
Expansion slots (per node)	4 x PCIe5 x16 OCP 3.0 NIC slot 2 x PCIe5 x16 Low Profile (HHHL) slot for Add-in Card
Management I/O Module, Front I/O (per node)	Via DC-SCM 2.0-like module • ASPEED AST 2600 BMC • 1 x BMC management RJ45 LAN port • 2 x GbE management RJ45 LAN port • System Status LED, UID Button/LED, BMC RESET Button, Power Button/LED • 1 x Micro USB • 1 x USB 2.0 Type-C • 1 x Mini Display Port
Security (per node)	TPM 2.0 PROT (Platform Root of Trust) module, PFR4.0 compliant (ASPEED AST1060)
Fan	2 x 9256 Fan module + Cold-Plate Liquid Cooling for CPU and GPU
Power Supply	Via ORv3 48VDC Busbar

System Overview

MS303-2A1B

System Features and Components

SKU 3-1 (1P x 2-Node)



Product Specifications:

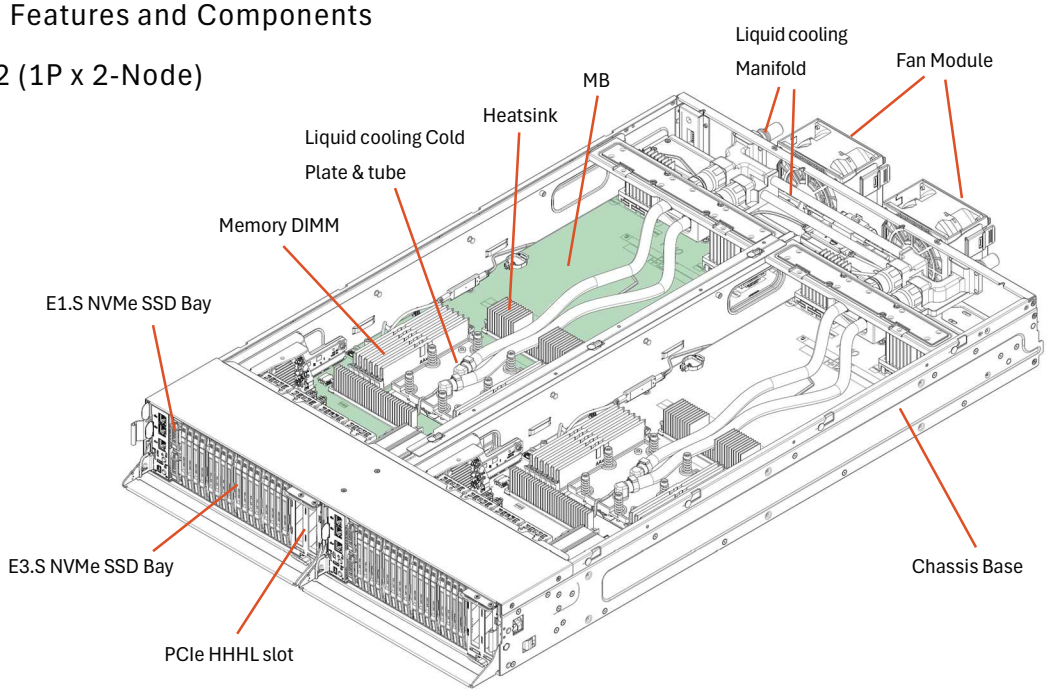
Specifications	
Form Factor / Dimension	OCP ORv3 2OU Chassis (W x H x D) : 537mm x 93.5mm x 809.25mm (w/o fan) MB dimension: 250mm x 540mm x 1.89mm
Processor (per node)	AMD EPYC 9005 Series (Turin), up to 192 Cores with TDP up to 400W 1-Socket (SP5)
System Memory (per node)	12 x DDR5 DIMM slots; 1DPC (1 DIMM per Channel) Up to 6400MT/s
Storage (per node)	2 x PCIe3 E1.S NVMe SSD (support hardware RAID for OS) 8 x PCIe5 E3.S 1T NVMe SSD
Expansion slots (per node)	2 x PCIe5 x16 OCP 3.0 NIC slot 2 x PCIe5 x8 Low Profile (HHHL) slot for Add-in Card
Management I/O Module, Front I/O (per node)	Via DC-SCM 2.0-like module • ASPEED AST 2600 BMC • 1 x BMC management RJ45 LAN port • 2 x GbE management RJ45 LAN port • System Status LED, UID Button/LED, BMC RESET Button, Power Button/LED • 1 x Micro USB • 1 x USB 2.0 Type-C • 1 x Mini Display Port
Security (per node)	TPM 2.0 PROT (Platform Root of Trust) module, PFR4.0 compliant (ASPEED AST1060)
Fan	2 x 9256 Fan module + Cold-Plate Liquid Cooling for CPU and GPU
Power Supply	Via ORv3 48VDC Busbar

System Overview

MS303-2A1T

System Features and Components

SKU 3-2 (1P x 2-Node)



Product Specifications:

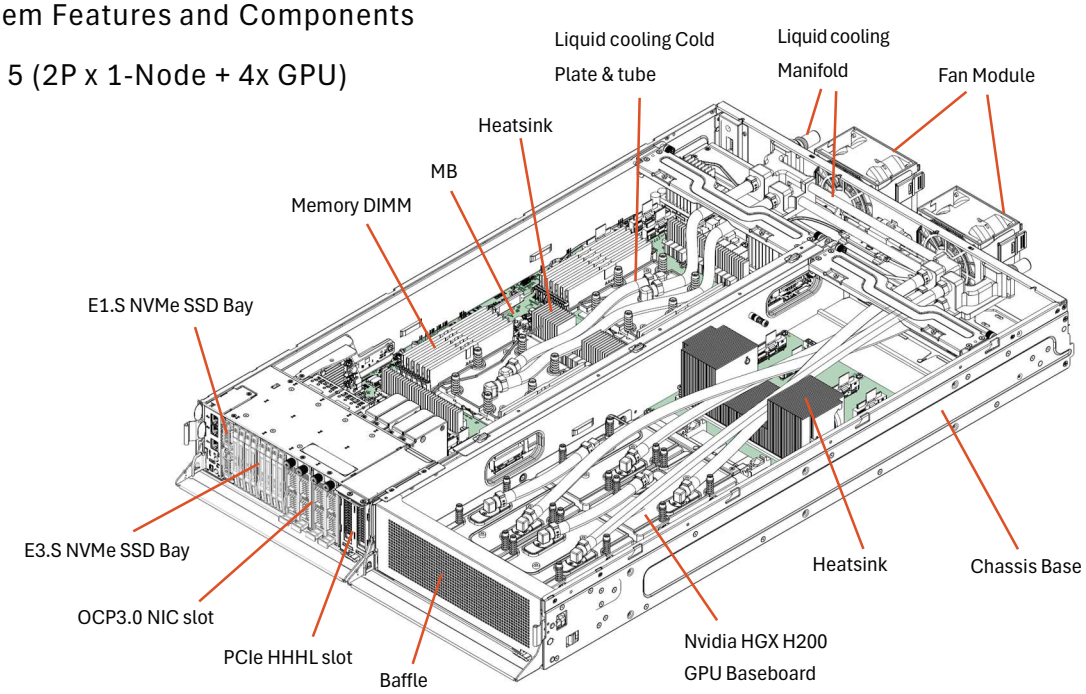
Specifications	
Form Factor / Dimension	OCP ORv3 2OU Chassis (W x H x D) : 537mm x 93.5mm x 809.25mm (w/o fan) MB dimension: 250mm x 540mm x 1.89mm
Processor (per node)	AMD EPYC 9005 Series (Turin), up to 192 Cores with TDP up to 400W 1-Socket (SP5)
System Memory (per node)	12 x DDR5 DIMM slots; 1DPC (1 DIMM per Channel) Up to 6400MT/s
Storage (per node)	2 x PCIe3 E1.S NVMe SSD (support hardware RAID for OS) 16 x PCIe5 E3.S 1T NVMe SSD
Expansion slots (per node)	2 x PCIe5 x16 Low Profile (HHHL) slot for Add-in Card
Management I/O Module, Front I/O (per node)	Via DC-SCM 2.0-like module • ASPEED AST 2600 BMC • 1 x BMC management RJ45 LAN port • 2 x GbE management RJ45 LAN port • System Status LED, UID Button/LED, BMC RESET Button, Power Button/LED • 1 x Micro USB • 1 x USB 2.0 Type-C • 1 x Mini Display Port
Security (per node)	TPM 2.0 PROT (Platform Root of Trust) module, PFR4.0 compliant (ASPEED AST1060)
Fan	2 x 9256 Fan module + Cold-Plate Liquid Cooling for CPU and GPU
Power Supply	Via ORv3 48VDC Busbar

System Overview

MS303-2A1G

System Features and Components

SKU 5 (2P x 1-Node + 4x GPU)



Product Specifications:

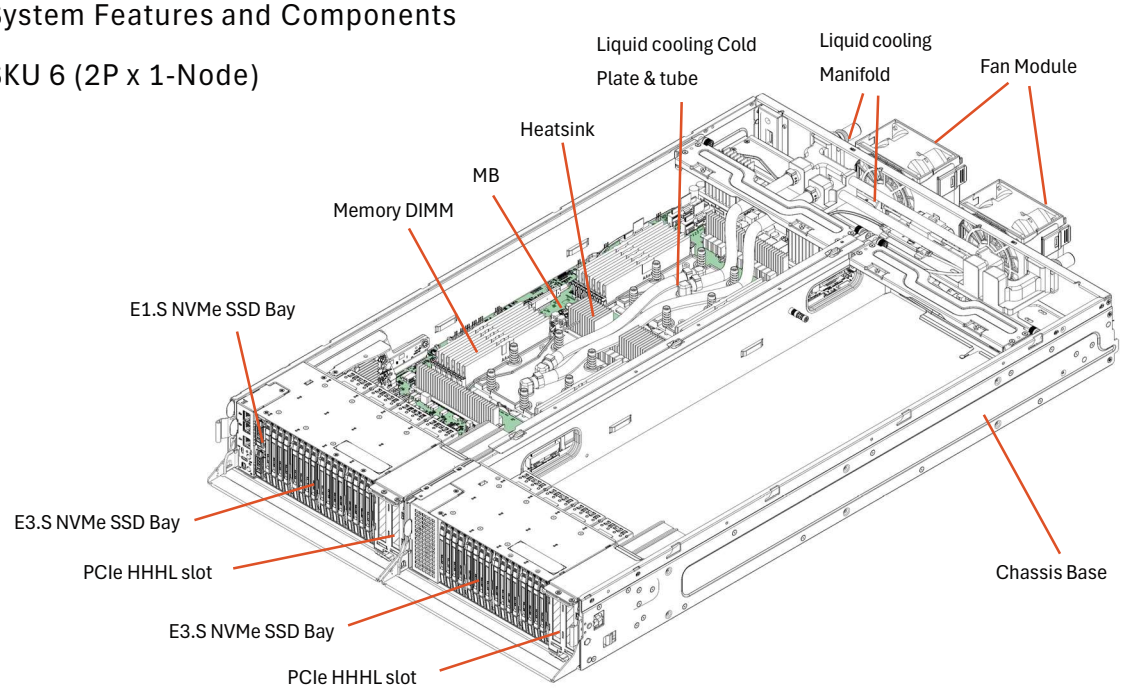
Specifications	
Form Factor / Dimension	OCP ORv3 2OU Chassis (W x H x D) : 537mm x 93.5mm x 809.25mm (w/o fan) MB dimension: 250mm x 540mm x 1.89mm
Processor	AMD EPYC 9005 Series (Turin), up to 192 Cores with TDP up to 400W, 2-Socket (SP5)
GPU	Nvidia HGX H200 4-GPU
System Memory	24 x DDR5 DIMM slots; 1DPC (1 DIMM per Channel), Up to 6400MT/s
Storage	2 x PCIe3 E1.S NVMe SSD (support hardware RAID for OS) 8 x PCIe5 E3.S 1T NVMe SSD
Expansion slots	2 x PCIe5 x16 OCP 3.0 NIC slot 2 x PCIe5 x8 OCP 3.0 NIC slot 2 x PCIe5 x16 Low Profile (HHHL) slot for Add-in Card
Management I/O Module, Front I/O	Via DC-SCM 2.0-like module • ASPEED AST 2600 BMC • 1 x BMC management RJ45 LAN port • 2 x GbE management RJ45 LAN port • System Status LED, UID Button/LED, BMC RESET Button, Power Button/LED • 1 x Micro USB • 1 x USB 2.0 Type-C • 1 x Mini Display Port
Security	TPM 2.0 PROT (Platform Root of Trust) module, PFR4.0 compliant (ASPEED AST1060)
Fan	2 x 9256 Fan module + Cold-Plate Liquid Cooling for CPU and GPU
Power Supply	Via ORv3 48VDC Busbar

System Overview

MS303-2A1S

System Features and Components

SKU 6 (2P x 1-Node)



Product Specifications:

Specifications	
Form Factor / Dimension	OCP ORv3 2OU Chassis (W x H x D) : 537mm x 93.5mm x 809.25mm (w/o fan) MB dimension: 250mm x 540mm x 1.89mm
Processor	AMD EPYC 9005 Series (Turin), up to 192 Cores with TDP up to 500W 2-Socket (SP5)
System Memory	24 x DDR5 DIMM slots; 1DPC (1 DIMM per Channel) Up to 6400MT/s
Storage	2 x PCIe3 E1.S NVMe SSD (support hardware RAID for OS) 32 x PCIe5 E3.S 1T NVMe SSD
Expansion slots	4 x PCIe5 x16 Low Profile (HHHL) slot for Add-in Card
Management I/O Module, Front I/O	Via DC-SCM 2.0-like module • ASPEED AST 2600 BMC • 1 x BMC management RJ45 LAN port • 2 x GbE management RJ45 LAN port • System Status LED, UID Button/LED, BMC RESET Button, Power Button/LED • 1 x Micro USB • 1 x USB 2.0 Type-C • 1 x Mini Display Port
Security	TPM 2.0 PROT (Platform Root of Trust) module, PFR4.0 compliant (ASPEED AST1060)
Fan	2 x 9256 Fan module + Cold-Plate Liquid Cooling for CPU and GPU
Power Supply	Via ORv3 48VDC Busbar

General Installation Process

The installation instructions in this section are for common components of the MS303 Server System series.

Minimum Hardware Requirements

To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:

- Processor: AMD EPYC 9005-series (pre-installed)
- Memory Type: DDR5 RDIMM 32GB or above
- Need to insert:
  1. 1x E1.S SSD as boot drive
  2. 1x DC-SCM module for server management
  3. Bus bar to supply power

For a complete list of compatible processors, memory, network card, see Qualified List on: https://svr.pegatroncorp.com/product/MS303-4A1

1 Preparing the System

Observe normal ESD (Electrostatic Discharge) procedures.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his expense.

Place your MS303 Server System on a flat anti-static surface to perform the following integration procedures. Observe ESD procedures before reaching inside to make server board connections or install components.

2 Unpacking the System

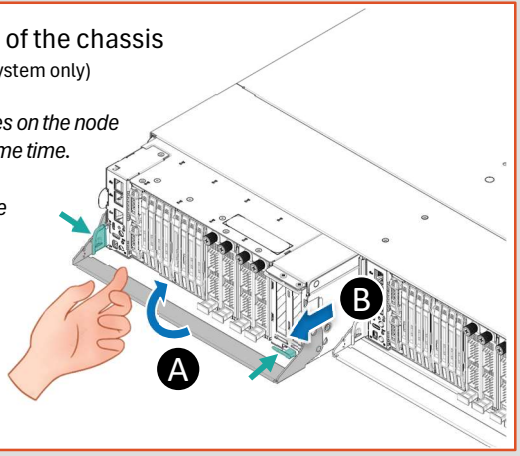
Inspect the box of MS303 shipped in and note if it was damaged in any way. If any equipment appears damaged, please file a damage claim with the carrier who delivered it.
Decide on a suitable location on the rack unit that will hold the server. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.

3 Take the Node out of the chassis

(Applicable for 2-Node system only)

Push the two release latches on the node and rotate handle at the same time.

Hold the handle and pull the node out of the chassis to access inner components.



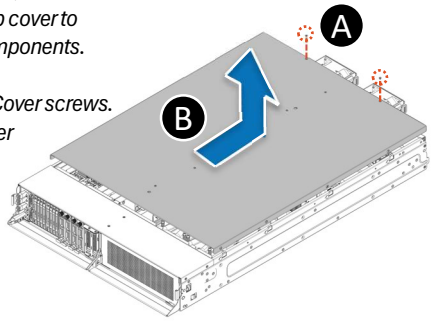
⚠ CAUTION:

SKU5 and SKU6 is 1-node only. Skip this step and follow the instruction in Step 4.

4 Remove the Top Cover

For 1-node system, it's needed to remove the top cover to access inner components.

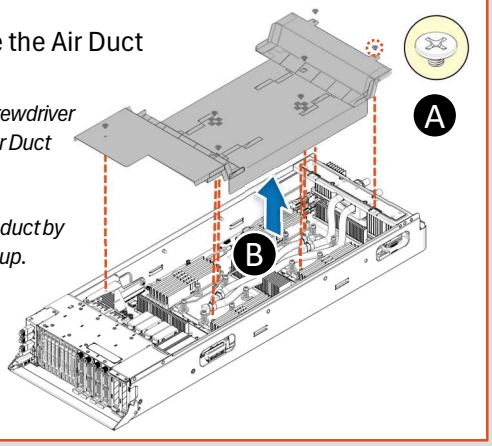
Loosen the Top Cover screws. Slide the top cover backward and lift up the top cover



5 Remove the Air Duct

Use a PH#2 screwdriver to loosen the Air Duct screws.

Remove the air duct by lifting it straight up.

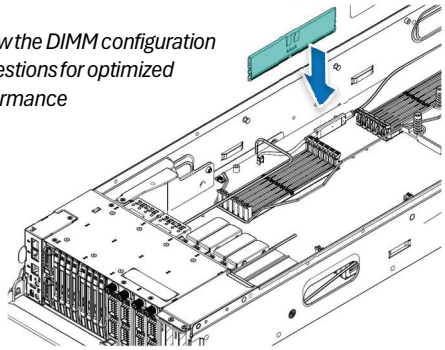


General Installation Process

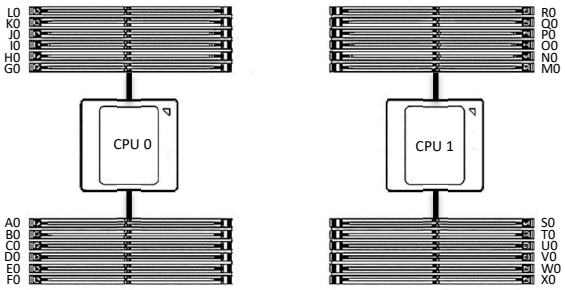
6 Install Memory DIMMs

Insert the Memory DIMMs in the slots

Follow the DIMM configuration suggestions for optimized performance

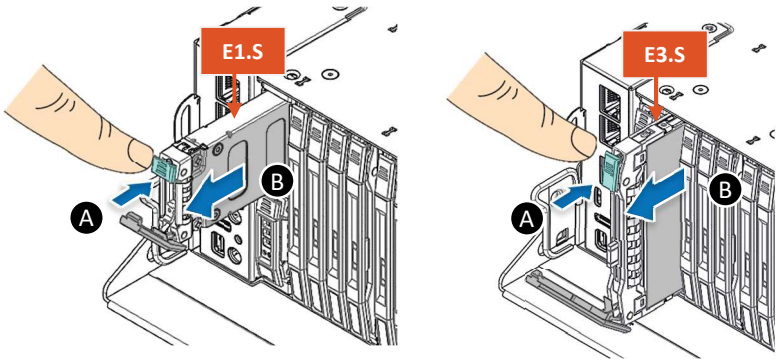


Configuration	Sequence
Memory optimized	All 12 slots inserted for each CPU
Memory 10 DIMMS or lower (1/2/4/6/8/10)	AGCIBHEKDJ (CPU0), SMUOTNWQVP (CPU1)



7 Install SSD

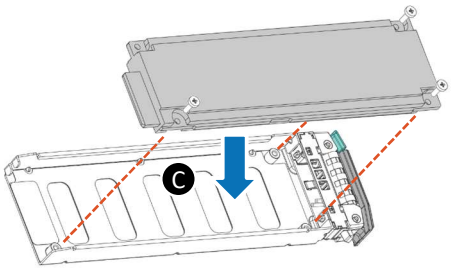
Remove the drive carrier by release latch.
Slide the carrier out of the server chassis.



Install SSD module into the Carrier

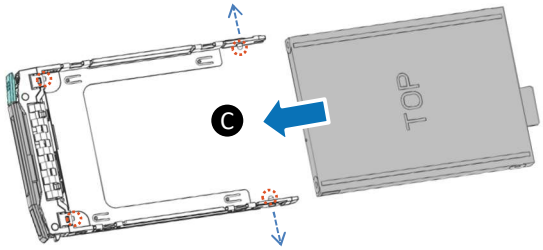
E1.S

Put the E1.S module in the carrier and fix by screws.



E3.S

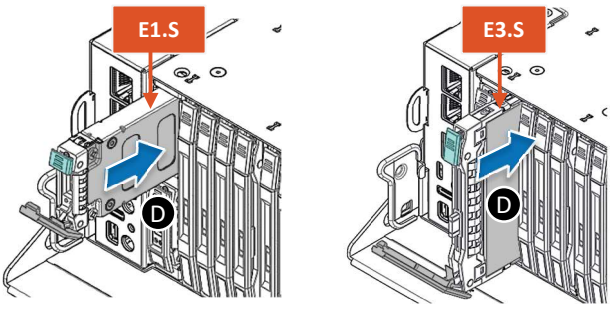
Slightly expand the holder of the carrier and slide in the E3.S module into the carrier.
Make sure the 4 position pillars fit in the holes on the E3.S module.



Install SSD Carrier into the Chassis

Ensure the locking lever is in the open position.
Insert the SSD carrier in the bay. Ensure it is flush in the chassis.
Close the release lever to lock the SSD in the chassis.

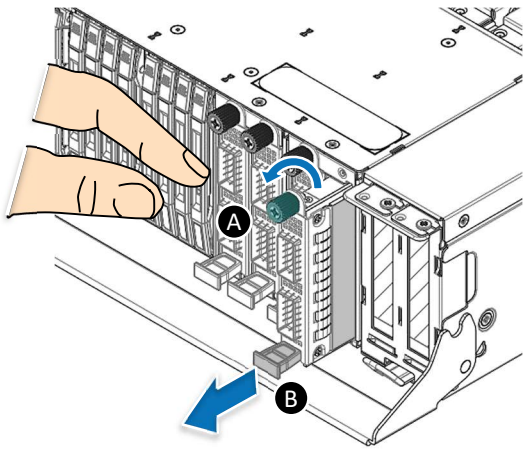
> ⚠ CAUTION:
>
> *If a drive is not installed, the empty bay must have a blank installed in its place to maintain system cooling.*



General Installation Process

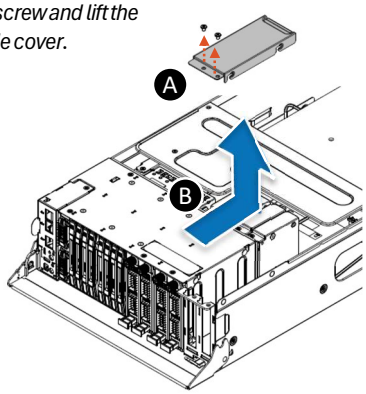
8 Install OCP 3.0 NIC

Loosen the thumbscrews to release the OCP 3.0 NIC
Slide the NIC out of the chassis.

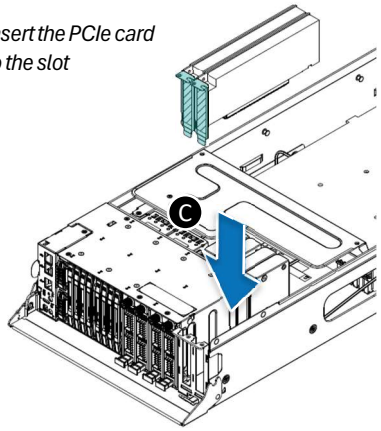


9 Install PCIe Cards

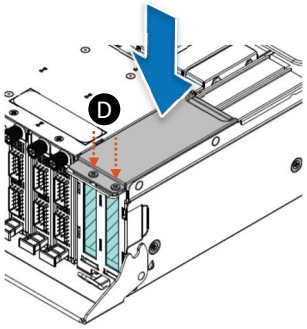
Unscrew and lift the PCIe cover.



Insert the PCIe card to the slot

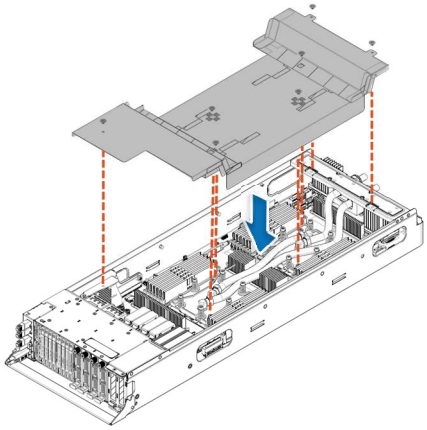


Put the PCIe cover on the PCIe card and screw to fix it to the chassis



10 Install the Air Duct

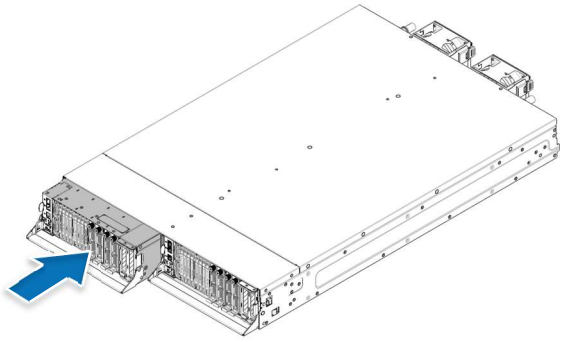
Align the air duct with the chassis and screw to install it.



11 Install the Node

(Applicable for 2-Node system only)

Insert the node back into the chassis and slide it in until you hear a click sound.



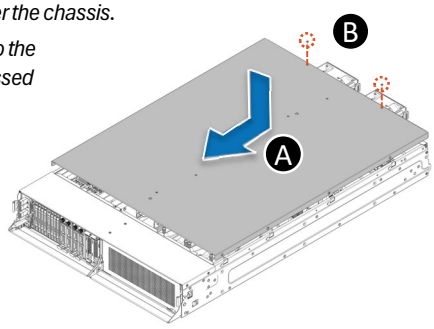
General Installation Process

12 Install the Top Cover

Align the top cover over the chassis.

Slide the top cover into the chassis until the recessed front edge is flush in the chassis.

Screw to fix the top cover on the chassis



13 Finishing Up

Before installing the operating system, complete the system installation, connect cables, and clip the Busbar.

1. Verify the system top cover is installed.

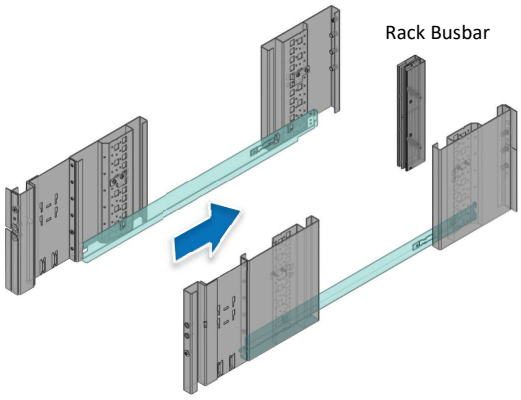
2. Connect all necessary cables and devices. Then mount the server to the ORv3 rack and connect to the manifold and Busbar for power supply.

Warning:

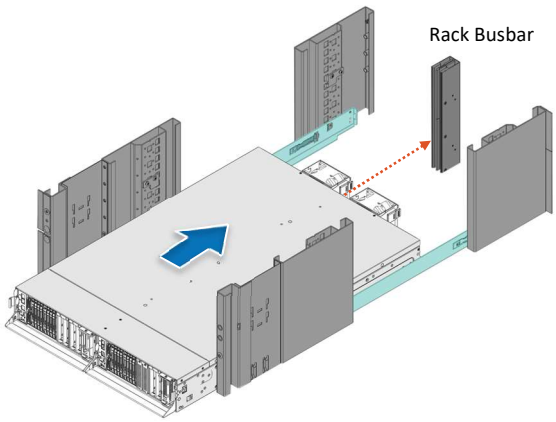
This system must be operated with the TOP COVER installed to ensure proper cooling.

14 Mount Server to the ORv3 Rack

Install the two Slide Rails into the Rack.
Make sure the Rails' latches are securely engaged with the rack.



Put the Server on the rack and slide into the rail until the busbar clip on the rear wall engaged into the Rack Busbar.

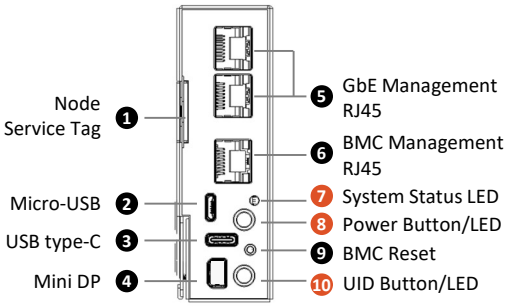


General Installation Process

15

LED Information

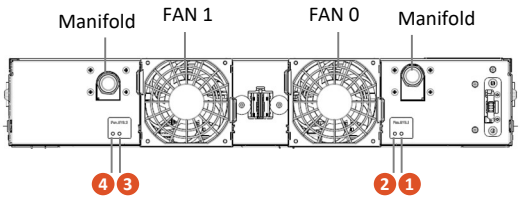
Front-Panel



	LED	Color	Status	Description
8	Power Button/LED	Green	On	Indicates the system is powered on
		NA	Off	System is not powered on or in ACPI S5 state (power off)
10	UID Button/LED	Blue	On	System identification is active
		NA	Off	System identification is disabled
7	System Status LED	Green	Solid On	System is operating normally
		Amber	Solid On	Critical condition, e.g. Fan failure, Temperature and voltage in critical situation
			Blink	Non-critical condition, e.g. Redundant power module failure, Temperature and voltage in non-critical situation
		NA	Off	System is not ready, may indicate: POST error NMI error Processor

* Please check the user manual for more detailed LED behavior definition

Rear View



LED #	LED Name	Color	Status	Description
1	Node Status LED	Green	On	Node 0 power on
		Amber	Off	Node 0 power off
2	Fan Status LED	Green	On	Fan module 0 normal
		Amber	Off	Fan module 0 fail
3	Node Status LED	Green	On	Node 1 power on
		Amber	Off	Node 1 power off
4	Fan Status LED	Green	On	Fan module 1 normal
		Amber	Off	Fan module 1 fail

Reference

Software BIOS and Operating System Installation

Software - Loading and Activating Virtual Media on BMC

1: Find BMC IP from BIOS Post Screen
1. Power on the server.
2. Observe the BIOS post screen during the boot process.
3. Identify the BMC IP address, which is typically displayed in the format BMC IPv4 Address: <address>.

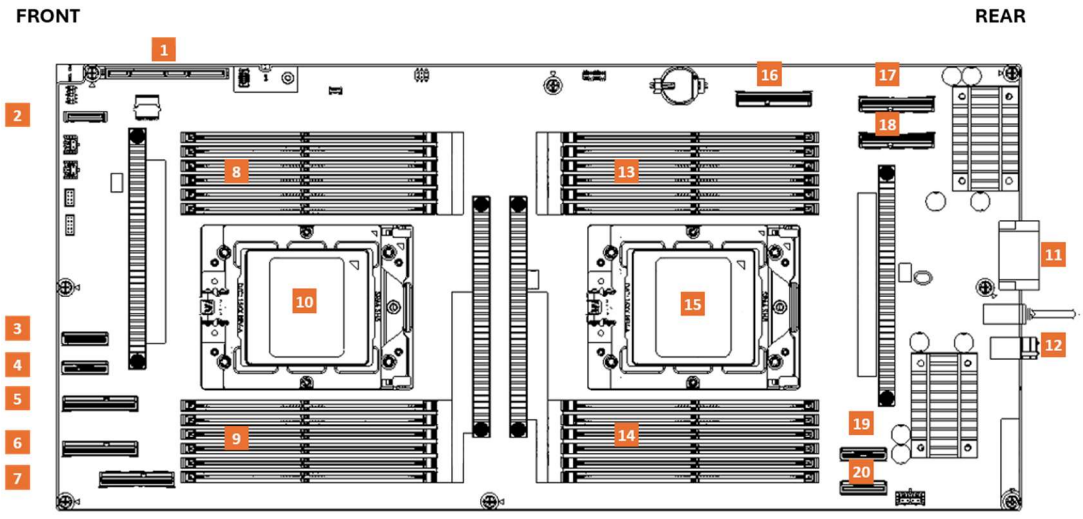
2: Load Virtual Media
1. After entering the remote KVM screen, there are CD/HD Image settings in the upper right corner of the web page. Select the iso, then press “Start Media”..
2. Could see USB CD/DVD:UEFI: AMI Virtual CDROM0 1.00 from the BIOS boot order menu..
3. After setting Boot Option #1 to AMI Virtual CDROM0 1.00, press “F10” and select “Yes”. You will then enter the OS installation screen.

3: Configure Server to Boot from Virtual Media
1. Access the BIOS/UEFI menu by pressing the designated key during the boot process (e.g., ESC)
2. Navigate to the "Boot Manager" menu (e.g., F11)
3. Select the "UEFI OpenBMC Virtual Media Device" option to boot from the activated ".ISO" image.

Mainboard Components

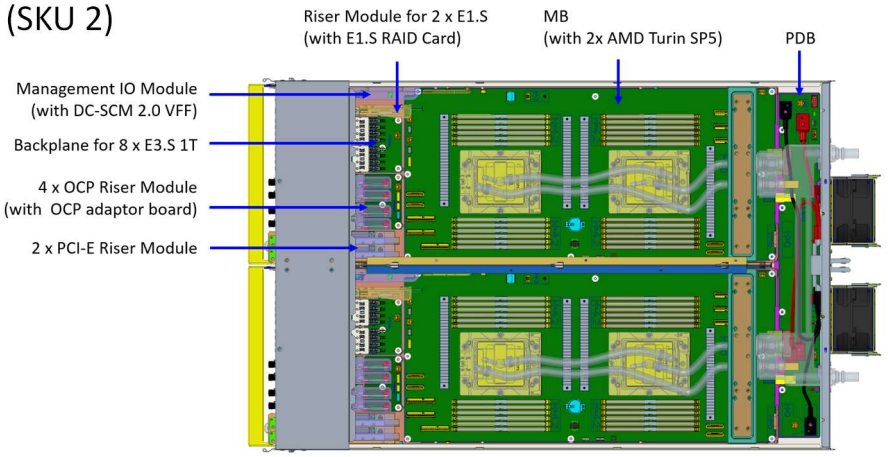
1. DC-SCM CONN	6. MCIO 1	11. PDB 48V CONN	16. MCIO 5
2. GenZ 1C CONN	7. MCIO 0	12. PDB Sideband CONN	17. MCIO 6
3. MCIO 3	8. DIMM_P0_G0~L0	13. DIMM_P1_M0~R0	18. MCIO 9
4. MCIO 2	9. DIMM_A0~F0	14. DIMM_P1_S0~X0	19. MCIO 7
5. MCIO 4	10. CPU0	15. CPU1	20. MCIO 8

Note: Connectors 13-20 are not used on MS303-2A1B, MS303-2A1T

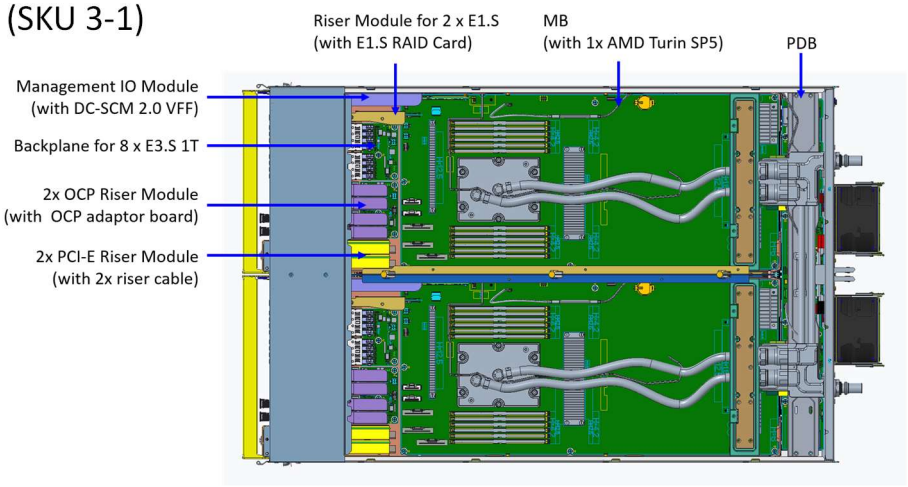


System Top View

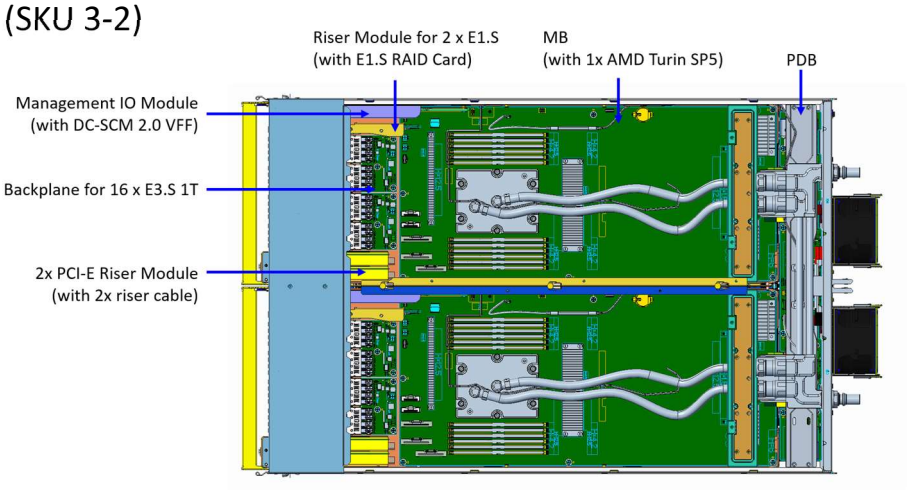
MS303-4A1C (SKU 2)



MS303-2A1B (SKU 3-1)



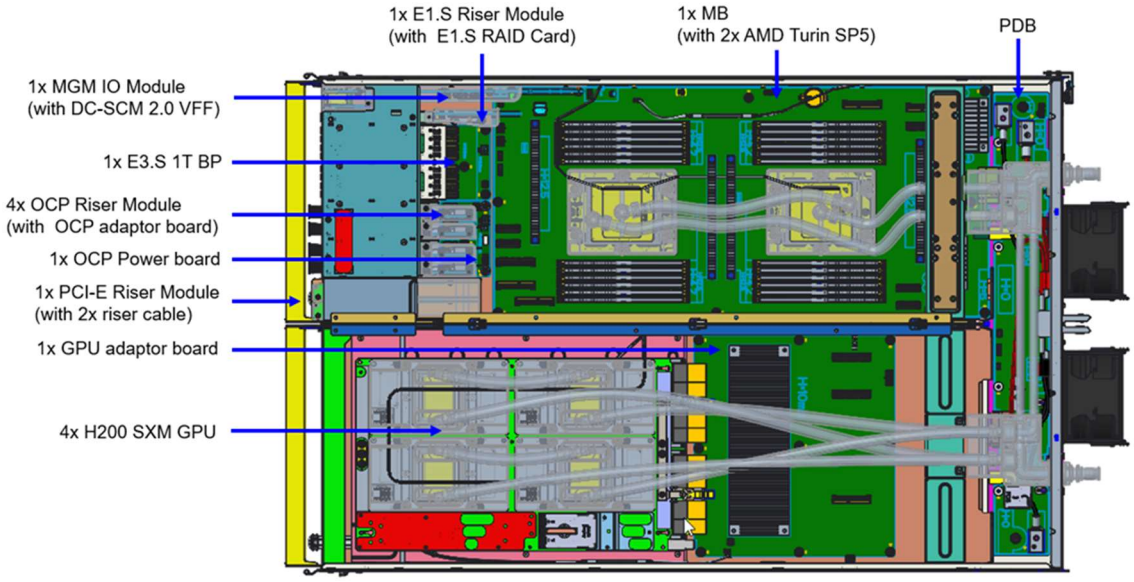
MS303-2A1T (SKU 3-2)



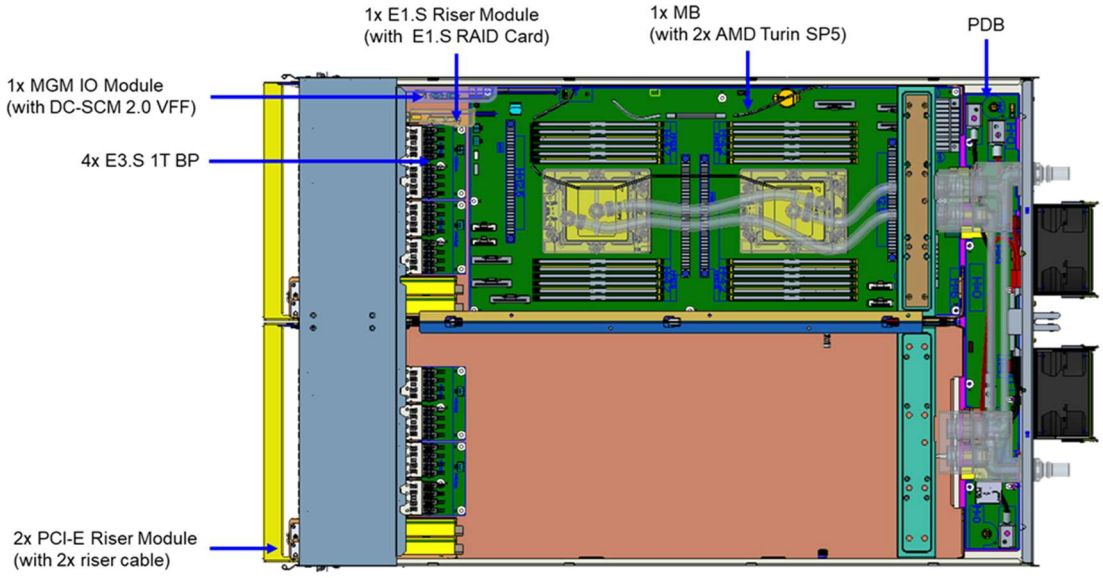
Reference

System Top View

MS303-2A1G (SKU 5)

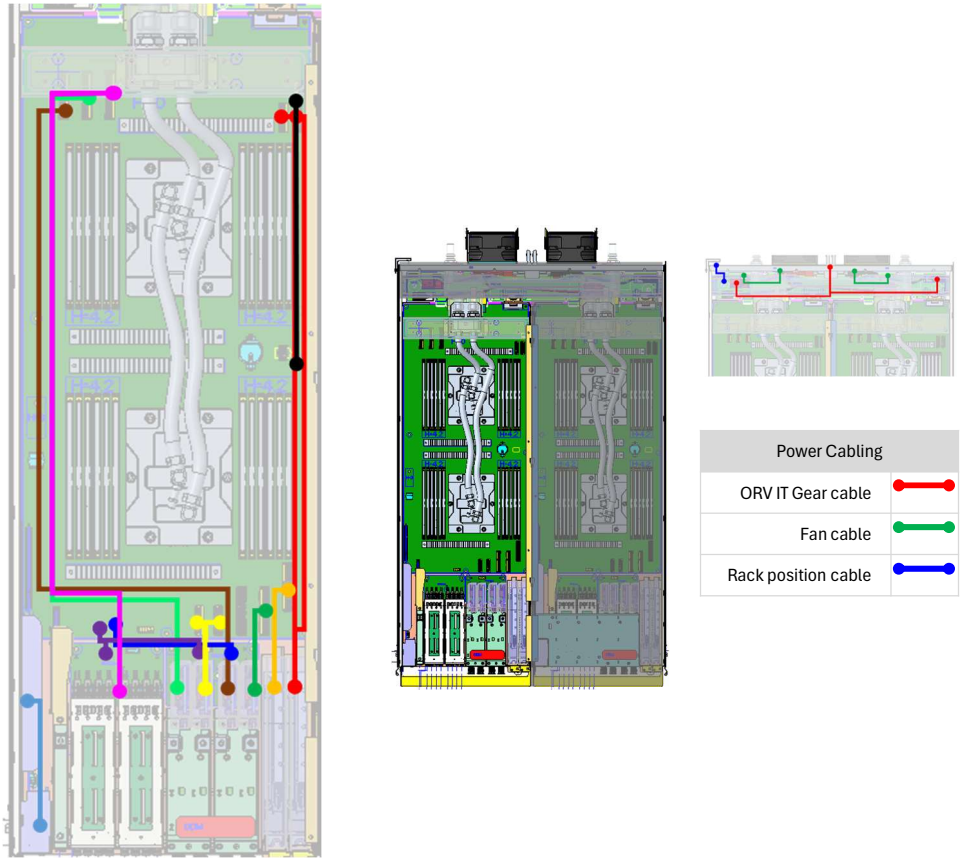


MS303-2A1S (SKU 6)



System Cabling Diagram

MS303-4A1C (SKU 2)

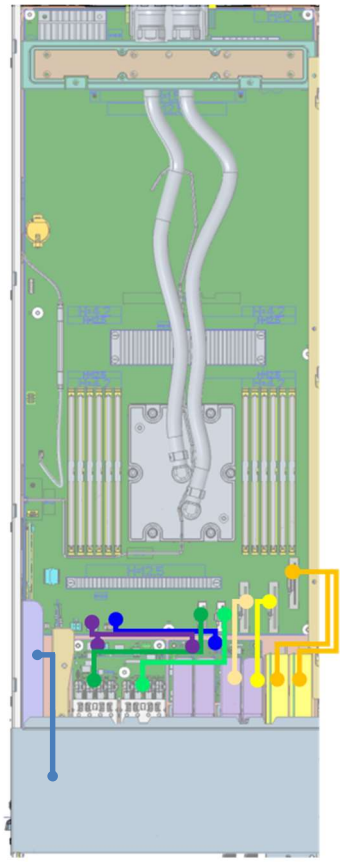


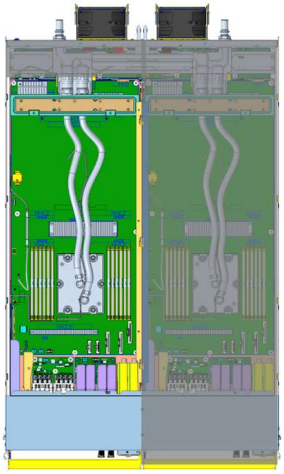
Power Cabling	
ORV IT Gear cable	
Fan cable	
Rack position cable	

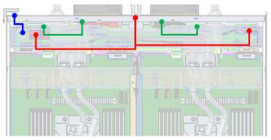
Node Cabling		Cable Function
DA X16 CEM Cable_1		connect MB to CEM
DA X16 CEM Cable_4		connect MB to CEM
Riser power extension cable (2-in-1)		connect MB to CEM power(2 in 1)
OCP MCIO cable-1		connect MB to OCP 3.0 NIC power board
OCP MCIO cable-1		connect MB to OCP 3.0 NIC power board
OCP MCIO cable-2		connect MB to OCP 3.0 NIC power board
OCP MCIO cable-3		connect MB to OCP 3.0 NIC power board
E3.S signal cable-1 (8-in-1)		connect MB to E3.S board
BP power extension cable-1 (2-in-1)		connect MB to OCP 3.0 NIC power board, E3.S 1T BP
OCP NCSI cable		connect MB to OCP 3.0 NIC power board
Front IO LED cable		connect DC-SCM to LED board

System Cabling Diagram

MS303-2A1B (SKU 3-1)





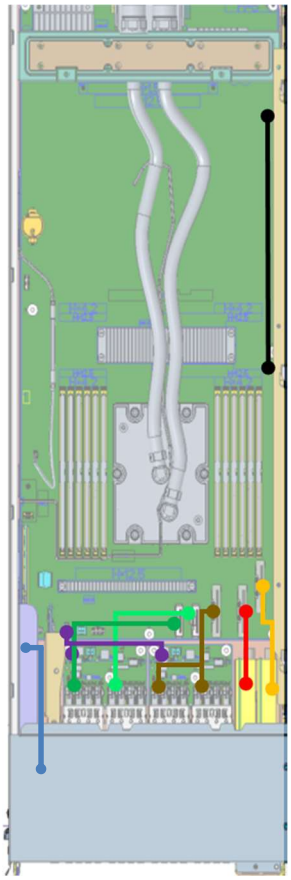


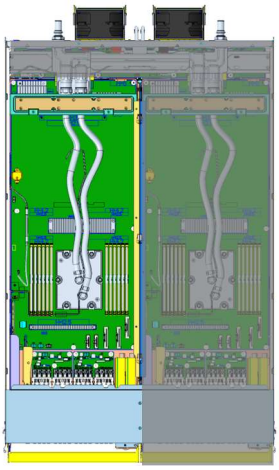
Power Cabling	
ORV IT Gear cable	
Fan cable	
Rack position cable	

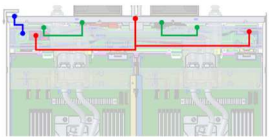
Node Cabling		Cable Function
DA X16 CEM Cable_5		connect MB to CEM
OCP MCIO cable-2		connect MB to OCP 3.0 NIC power board
OCP MCIO cable-2		connect MB to OCP 3.0 NIC power board
E3.S signal cable (4-in-1)		connect MB to E3.S 1T BP
E3.S signal cable (4-in-1)		connect MB to E3.S 1T BP
BP power extension cable-1 (2-in-1)		connect MB to OCP 3.0 NIC power board, E3.S 1T BP
OCP NCSI cable		connect MB to OCP 3.0 NIC power board
Front IO LED cable		connect DC-SCM to LED board

System Cabling Diagram

MS303-2A1B (SKU 3-2)





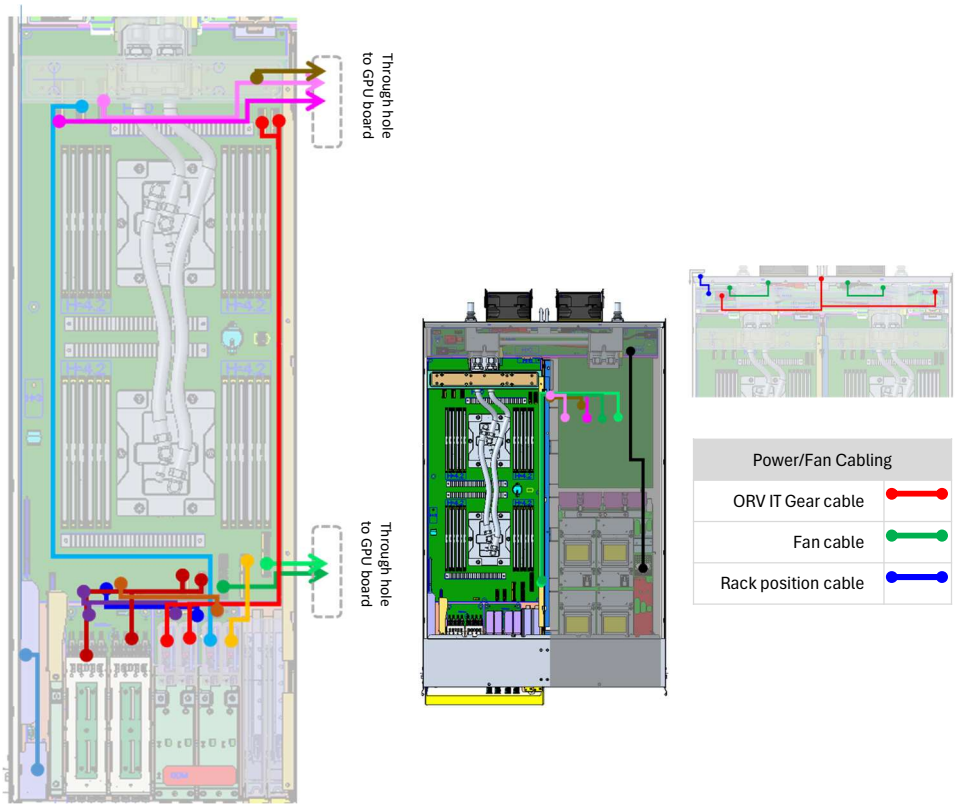


Power Cabling	
ORV IT Gear cable	
Fan cable	
Rack position cable	

Node Cabling		Cable Function
DA X16 CEM Cable_4		connect MB to CEM
DA X16 CEM cable-4		connect MB to CEM
Riser power extension cable (2-in-1)		connect MB to CEM power(2 in 1)
E3.S signal cable (4-in-1)		connect MB to E3.S 1T BP
E3.S signal cable (4-in-1)		connect MB to E3.S 1T BP
BP power extension cable-1 (2-in-1)		connect MB to OCP 3.0 NIC power board, E3.S 1T BP
E3.S signal cable_7 (8-in-1)		connect MB to E3.S 1T BP
Front IO LED cable		connect DC-SCM to LED board

System Cabling Diagram

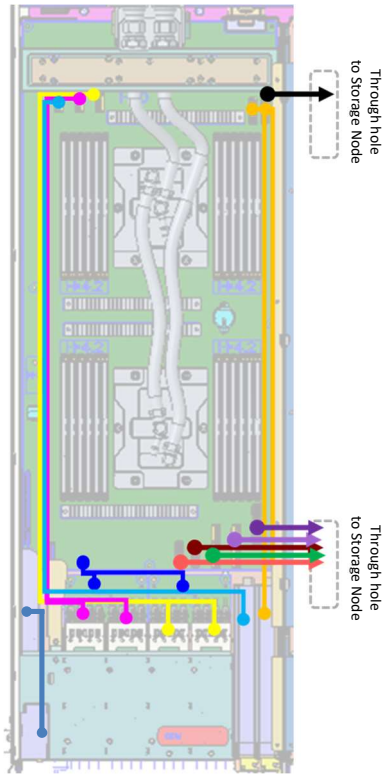
MS303-2A1G (SKU 5)

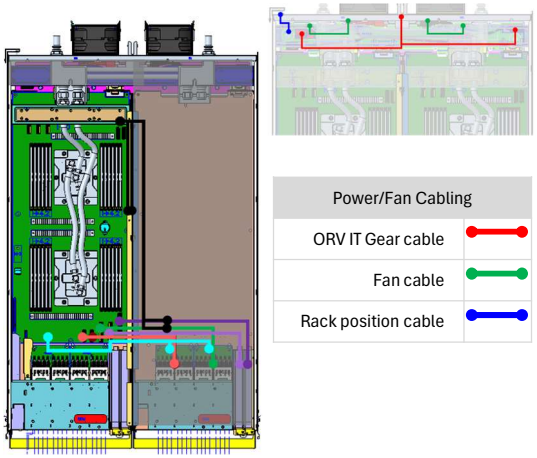


Node Cabling		Cable Function
OCP MCIO cable-1		connect MB to OCP 3.0 NIC power board
OCP MCIO cable-2		connect MB to OCP 3.0 NIC power board
OCP X8 MCIO cable-4		connect MB to OCP 3.0 NIC power board
GPU signal cable-1		connect MB to GPU adaptor board
GPU signal cable-1		connect MB to GPU adaptor board
GPU signal cable-2		connect MB to GPU adaptor board
GPU signal cable-2		connect MB to GPU adaptor board
E3.S signal cable (4-in-1)		connect MB to E3.S 1T BP
E3.S signal cable (4-in-1)		connect MB to E3.S 1T BP
GPU baseboard power cable		connect PDB to GPU adaptor board
GPU 12V power cable		connect MB to GPU adaptor board
BP power extension cable-1 (2-in-1)		connect MB to OCP 3.0 NIC power board, E3.S 1T BP
OCP NCSI cable		connect MB to OCP 3.0 NIC power board
Front IO LED cable		connect DC-SCM to LED board

System Cabling Diagram

MS303-2A1S (SKU 6)





Power/Fan Cabling	
ORV IT Gear cable	
Fan cable	
Rack position cable	

Node Cabling		Cable Function
DA X16 CEM cable_1		connect MB to CEM
DA X16 CEM cable_2		connect MB to CEM
DA X16 CEM cable_3		connect MB to CEM
DA X16 CEM cable_3		connect MB to CEM
Riser power extension cable		connect MB to CEM power(2 in 1)
E3.S signal cable-1 (8-in-1)		connect MB to E3.S 1T BP
E3.S signal cable-2 (8-in-1)		connect MB to E3.S 1T BP
E3.S signal cable-3 (8-in-1)		connect MB to E3.S 1T BP
E3.S signal cable-5 (4-in-1)		connect MB to E3.S 1T BP
E3.S signal cable-5 (4-in-1)		connect MB to E3.S 1T BP
BP power extension cable-1 (2-in-1)		connect MB to OCP 3.0 NIC power board, E3.S 1T BP
E3.S BP power extension cable-2 (2-in-1)		connect MB to E3.S 1T BP
Front IO LED cable		connect DC-SCM to LED board

PEGATRON SVR

Visit the product website at
https://svr.pegatroncorp.com/product/MS303-4A1 or
scan the QR code for detailed instructions on server
installation, initial setup, and hardware configuration access.

v1.0