



ThinkSystem SC777 V4 Neptune Tray Internal Cable Routing Guide



Machine Type: 7DMP, 7DKA

Note

Before using this information and the product it supports, be sure to read and understand the safety information and the safety instructions, which are available at:

https://pubs.lenovo.com/safety_documentation/

In addition, be sure that you are familiar with the terms and conditions of the Lenovo warranty for your server, which can be found at:

<http://datacentersupport.lenovo.com/warrantylookup>

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Safety

Before installing this product, read the Safety Information.

قبل تركيب هذا المنتج، يجب قراءة الملاحظات الأمنية

Antes de instalar este produto, leia as Informações de Segurança.

在安裝本产品之前，请仔细阅读 Safety Information（安全信息）。

安裝本產品之前，請先閱讀「安全資訊」。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

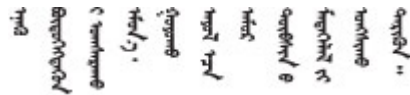
A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.



Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto, lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

ཐོན་ཁུངས་འདི་བདེ་སྤྱད་མ་བྱས་གོང་། སྐྱོར་གྱི་ཡིད་གཟབ་
བྱ་འདྲ་མིན་ཡིད་པའི་འོད་མེར་བཟང་དགོས།

Bu ürünü kurmadan önce güvenlik bilgilerini okuyun.

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canjbinj soengq cungj vahgangj ancien siusik.

Safety inspection checklist

Use the information in this section to identify potentially unsafe conditions with your server. As each machine was designed and built, required safety items were installed to protect users and service technicians from injury.

Note: The product is not suitable for use at visual display workplaces according to §2 of the Workplace Regulations.

Note: The set-up of the server is made in the server room only.

CAUTION:

This equipment must be serviced by trained personnel, as defined by the IEC 62368-1, the standard for Safety of Electronic Equipment within the Field of Audio/Video, Information Technology and Communication Technology. Lenovo assumes you are qualified in the servicing of equipment and trained in recognizing hazards energy levels in products. Equipment must be installed in a restricted access location and access to the equipment is controlled by the authority responsible for the location.

Important: Electrical grounding of the server is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

Use the following checklist to verify that there are no potentially unsafe conditions:

1. Make sure that the power is off and the power cord is disconnected.
2. Check the power cord.
 - Make sure that the third-wire ground connector is in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
 - Make sure that the power cord is the correct type.

To view the power cords that are available for the server:

- a. Go to:

<http://dcsc.lenovo.com/#/>

- b. Click **Preconfigured Model** or **Configure to order**.
 - c. Enter the machine type and model for your server to display the configurator page.
 - d. Click **Power → Power Cables** to see all line cords.
- Make sure that the insulation is not frayed or worn.
3. Check for any obvious non-Lenovo alterations. Use good judgment as to the safety of any non-Lenovo alterations.
4. Check inside the server for any obvious unsafe conditions, such as metal filings, contamination, water or other liquid, or signs of fire or smoke damage.
5. Check for worn, frayed, or pinched cables.
6. Make sure that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

Internal cable routing

Identifying connectors

See this section to locate and identify the connectors on the electric boards.

GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration

The following illustrations show the internal connectors on the system-board assembly for the dual CX8 mezzanine module configuration.

GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration

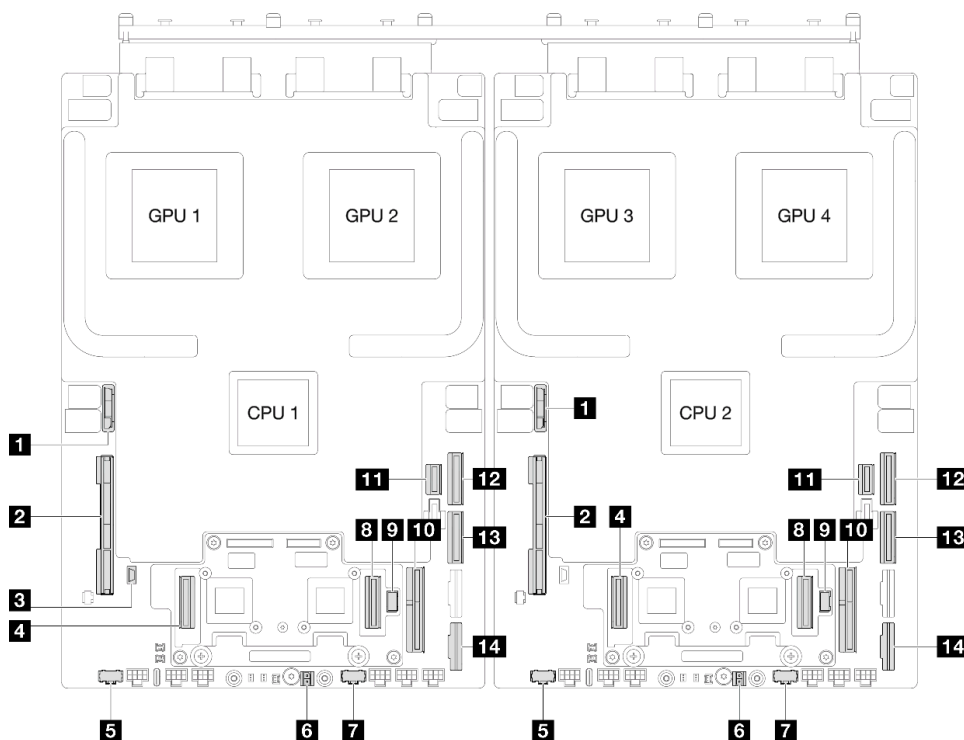


Figure 1. GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration

Table 1. GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration

1 CMOS battery CMOS battery is only installed in the primary GB200-NVL4 board (left-side GB200-NVL4 board).	8 MCIO x8 connector for E3.S drive
2 HMC module connector	9 OSFP board sideband cable connector
3 TPM module connector	10 GB200-NVL4 MCIO x16 C-Link cable connector
4 MCIO x8 connector for E3.S drive	11 GB200-NVL4 MCIO x4 host board or switch board connector
5 NCSI connector (reserved)	12 GB200-NVL4 MCIO x8 connector for PCIe adapter
6 GB200-NVL4 12V_STBY power connector	13 GB200-NVL4 MCIO x8 connector for PCIe adapter
7 Sideband connector	14 DCSCI connection between primary and secondary GB200-NVL4 boards

GB200-NVL4 board connectors – MCIO breakout board configuration

The following illustrations show the internal connectors on the system-board assembly for MCIO breakout board configuration.

GB200-NVL4 board connectors – MCIO breakout board configuration

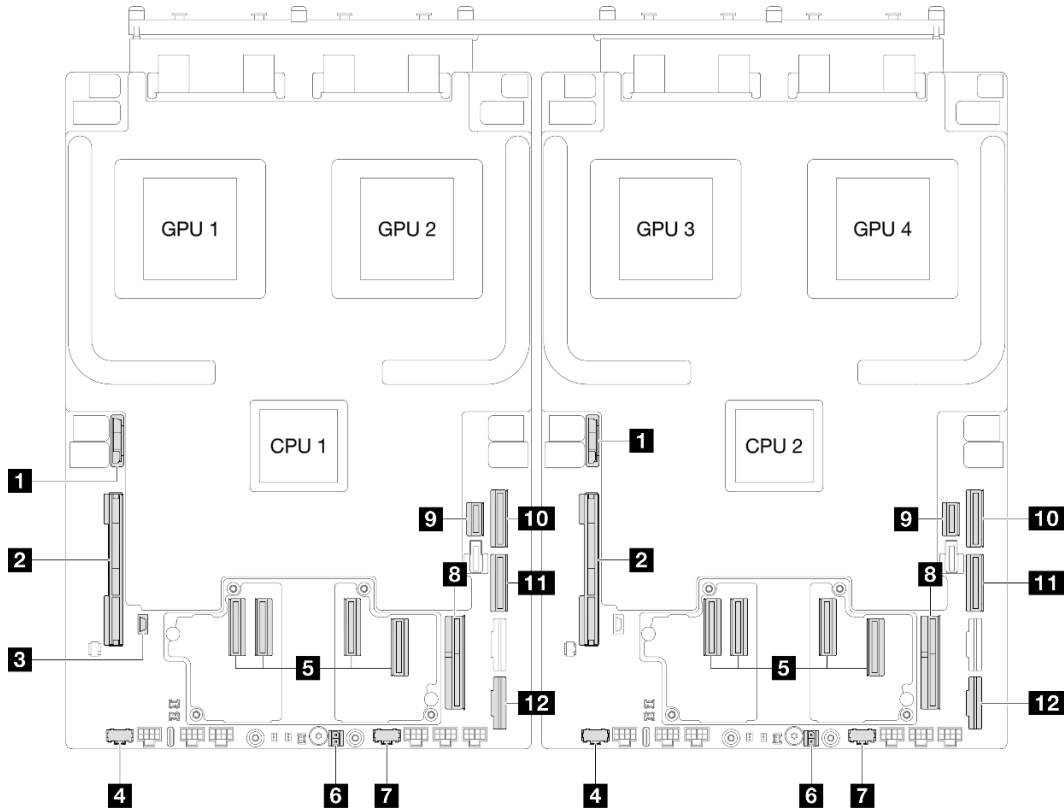


Figure 2. GB200-NVL4 board connectors – MCIO breakout board configuration

Table 2. GB200-NVL4 board connectors – MCIO breakout board configuration

1 CMOS battery CMOS battery is only installed in the primary GB200-NVL4 board (left-side GB200-NVL4 board).	7 Sideband connector
2 HMC module connector	8 GB200-NVL4 MCIO x16 C-Link cable connector
3 TPM module connector	9 GB200-NVL4 MCIO x4 host board or switch board connector
4 NCSI connector (reserved)	10 GB200-NVL4 MCIO x8 connector for PCIe adapter or E3.S drive
5 MCIO x8 connector for PCIe adapter or E3.S drive	11 GB200-NVL4 MCIO x8 connector for PCIe adapter or E3.S drive
6 GB200-NVL4 12V_STBY power connector	12 DCSCI connection between primary and secondary GB200-NVL4 boards

Host board connectors

The following illustrations show the internal connectors on the host board.

Host board connectors

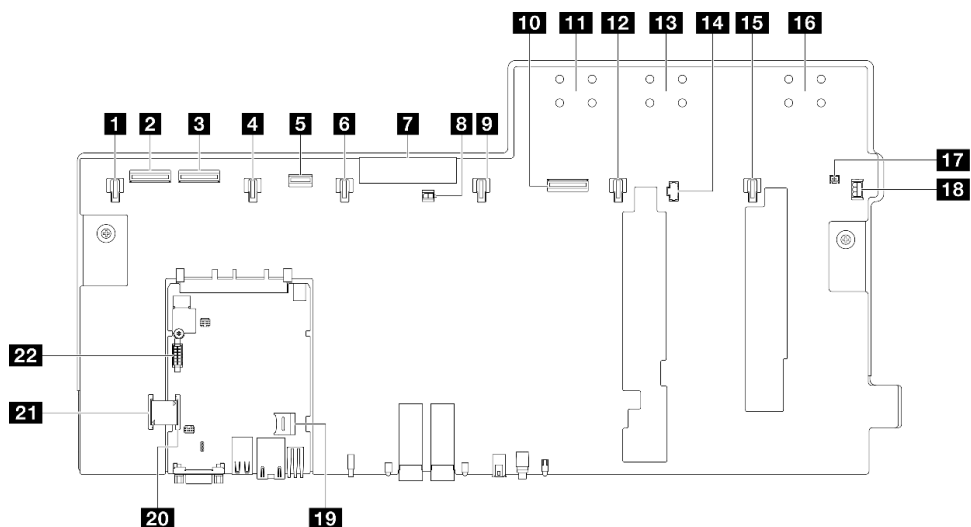


Figure 3. Host board connectors

Table 3. Host board connectors

1 PCIe riser 1 power connector or E3.S drive power connector	13 GB200-NVL4 12V_A power bus bar connector
2 HMC connector 1	14 Sideband connector to GB200-NVL4
3 HMC connector 2	15 PCIe riser 6 power connector or E3.S drive power connector
4 PCIe riser 2 power connector	16 System 48V power bus bar IN
5 MCIO x4 connector for GB200-NVL4 HPM board connection	17 Tray power fast shutdown connector
6 PCIe riser 3 power connector	18 Leakage sensor connector
7 B2B connector for E3.S switch board sideband	19 MicroSD card socket (reserved)
8 GB200-NVL4 12V_STBY power connector	20 PHY connector (for cable linking system I/O board and host board)
9 PCIe riser 4 power connector	21 Host board FPC connector
10 MCIO x8 sideband cable to SMM3 connector	22 Serial log connector
11 GB200-NVL4 12V_B power bus bar connector	
12 PCIe riser 5 power connector	

E3.S switch board connectors

The following illustrations show the internal connectors on the E3.S switch board.

E3.S switch board connectors

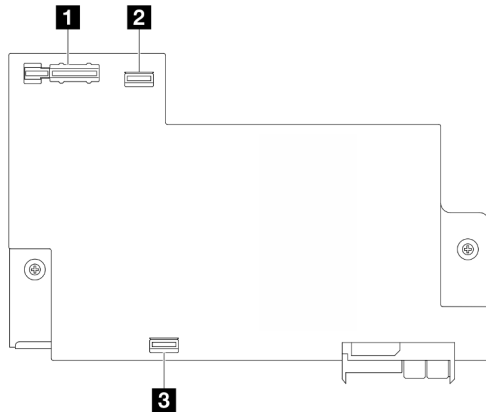


Figure 4. E3.S switch board connectors

Table 4. E3.S switch board connectors

1 PCIe x8 Gen 5 E3.S signal and sideband cable connector
2 MCIO x4 connector for secondary (right-side) GB200-NVL4 board connection
3 MCIO x4 connector for host board connection

Riser and E3.S drive cable routing and configuration matrix

See this section to identify the riser and E3.S drive cable routing required for each configurations of the system.

Riser and E3.S drive cable routing and configuration matrix

Configurations	PCIe riser cable routing	E3.S drive cable routing
Configuration 1-1	“ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration” on page 20	“E3.S drive 0/1 cable routing” on page 29
Configuration 1-2	“ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration” on page 20	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34
Configuration 1-3	“ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration” on page 20	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34
Configuration 1-4	“ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration” on page 20	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34
Configuration 1-5	“ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration” on page 20	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34
Configuration 1-6	“ConnectX-8 XDR cable routing in MCIO configuration” on page 22	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34
Configuration 1-XDR	“ConnectX-8 XDR cable routing in MCIO configuration” on page 22	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34
Configuration 1-XDR + NDR	• “ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration” on page 20 • “ConnectX-8 XDR cable routing in MCIO configuration” on page 22	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing” on page 34

Configurations	PCIe riser cable routing	E3.S drive cable routing
Configuration 2	• “ConnectX-7 200 and ConnectX-7 400 cable routing in Dual CX8 Mezzanine Module configuration” on page 25 • “OSFP module cable routing” on page 27	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in Dual CX8 Mezzanine Module configuration” on page 37
Configuration 2-1	• “ConnectX-7 200 and ConnectX-7 400 cable routing in Dual CX8 Mezzanine Module configuration” on page 25 • “OSFP module cable routing” on page 27	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in Dual CX8 Mezzanine Module configuration” on page 37
Configuration 2 XDR	• “ConnectX-8 XDR cable routing in Dual CX8 Mezzanine Module configuration” on page 26 • “OSFP module cable routing” on page 27	• “E3.S drive 0/1 cable routing” on page 29 • “E3.S 2/3, 4/5, 6/7, and 8/9 drives in Dual CX8 Mezzanine Module configuration” on page 37

Bus bar connector sideband cable routing

Use this information to route the bus bar sideband cable.

Bus bar connector sideband cable routing

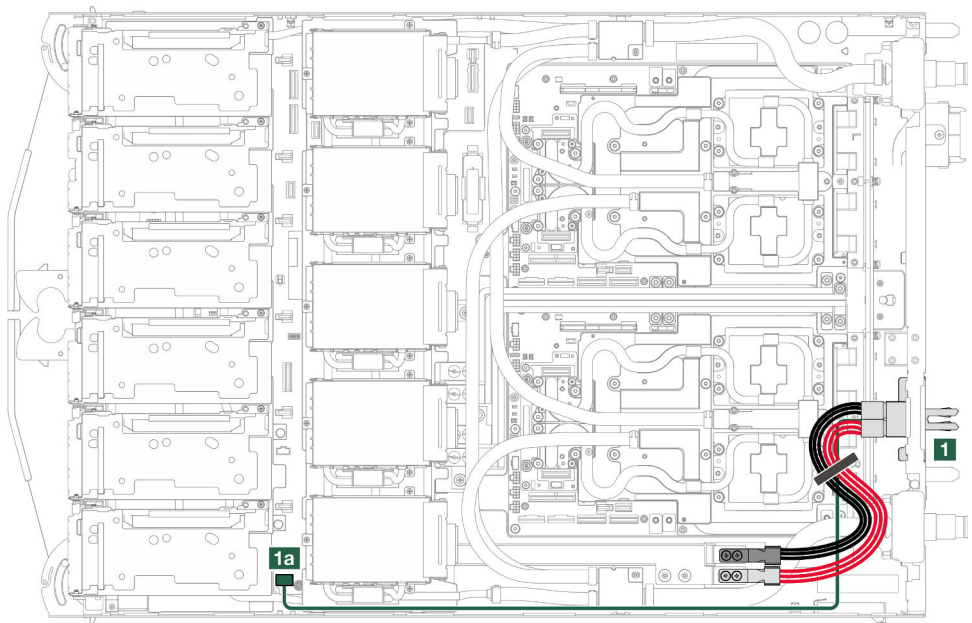


Figure 5. Bus bar connector sideband cable routing

Table 5. Bus bar connector sideband cable routing

From	To
1 Bus bar connector module	1a Tray power fast shutdown connector Location: host board, see Host board connectors .

HMC module cable routing

Use this information to route the cables for the HMC module.

HMC module cable routing

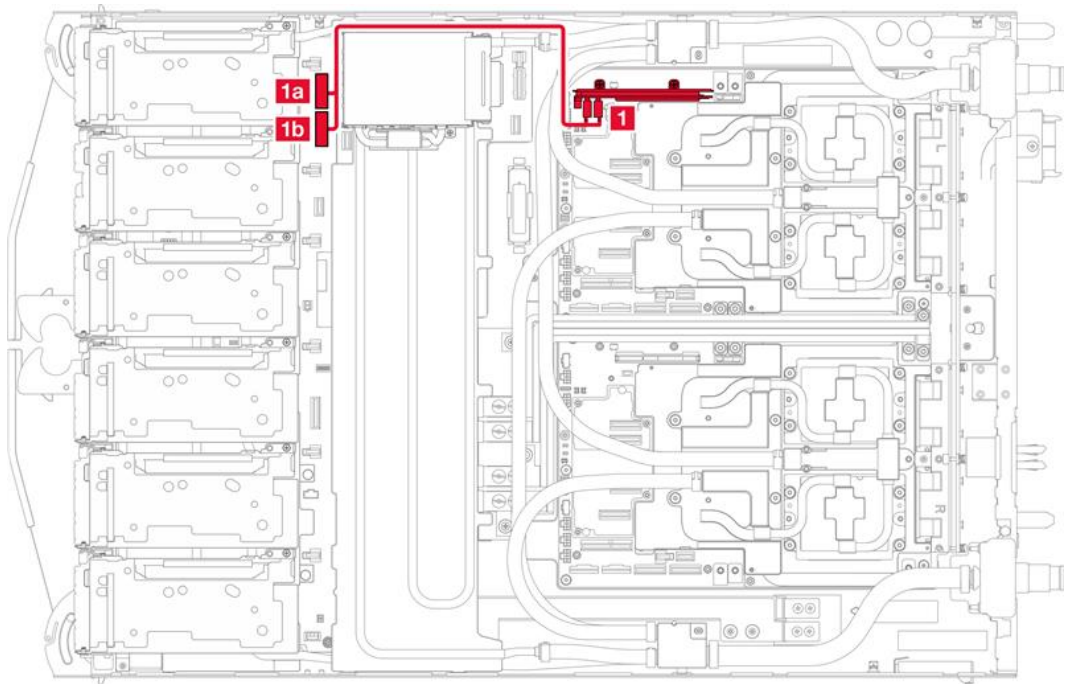


Figure 6. HMC module cable routing

Table 6. HMC module cable routing

From	To
1 HMC module Location: left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .	1a HMC connector 1 Location: host board View the connector location at Host board connectors .
	1b HMC connector 2 Location: host board View the connector location at Host board connectors .

System management sideband cable routing

Use this information to route the cables for the sideband cable (SMM3 cable).

System management sideband cable routing

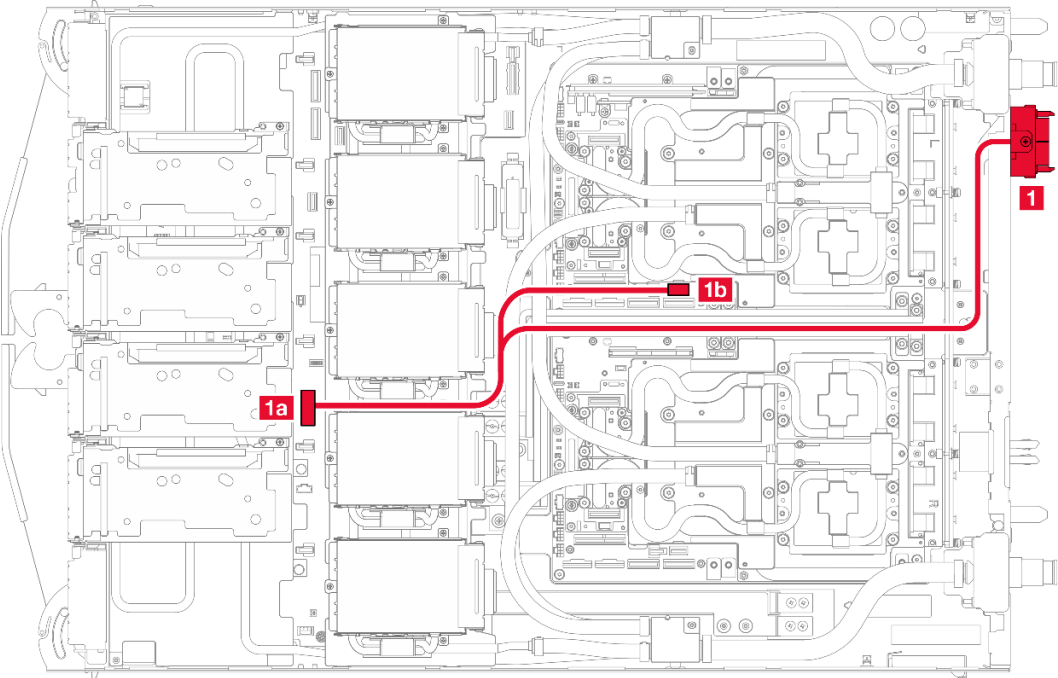


Figure 7. System management sideband cable routing

Table 7. System management sideband cable routing

From (sideband cable)	To
1 System management sideband cable (SMM3 cable)	1a MCIO x8 sideband cable to SMM3 connector Location: host board View the connector location at Host board connectors .
	1b GB200-NVL4 MCIO x4 host board or switch board connector Location: Left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .

GB200-NVL4 cable routing

Use this information to route the cables connecting to the GB200-NVL4 board.

Sideband cable routing

Use this information to route the sideband cable.

Sideband cable routing

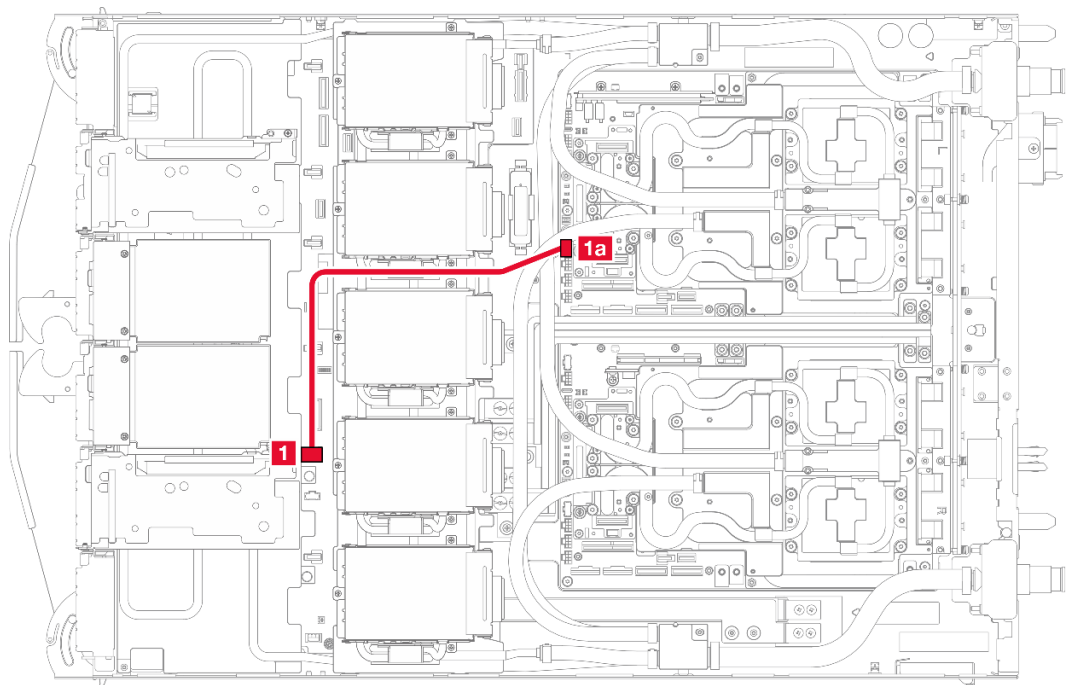


Figure 8. Sideband cable routing

Table 8. Sideband cable routing

From	To
1 Sideband connector to GB200-NVL4 Location: host board, see “Host board connectors” on page 3.	1a Sideband connector Location: Left-side GB200-NVL4 View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration.

12V power connector cable routing

Use this information to route the 12V power connector control cable.

12V power connector cable routing

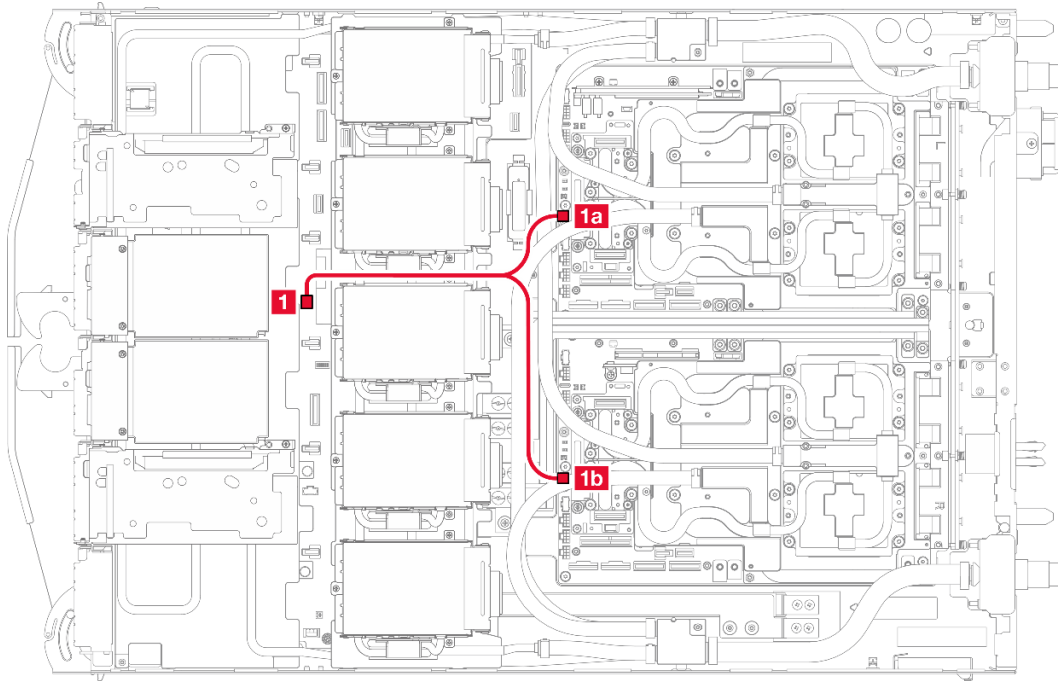


Figure 9. 12V power connector cable routing

Table 9. 12V power connector cable routing

From	To
1 GB200-NVL4 12V_STBY power connector Location: host board, see “Host board connectors” on page 3 .	1a GB200-NVL4 12V_STBY power connector Location: Left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
	1b GB200-NVL4 12V_STBY power connector Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .

GB200-NVL4 boards cross-link HMC connection cable routing

Use this information to route the cables for the GB200-NVL4 boards cross-link HMC connection cable.

GB200-NVL4 boards cross-link HMC connection cable routing

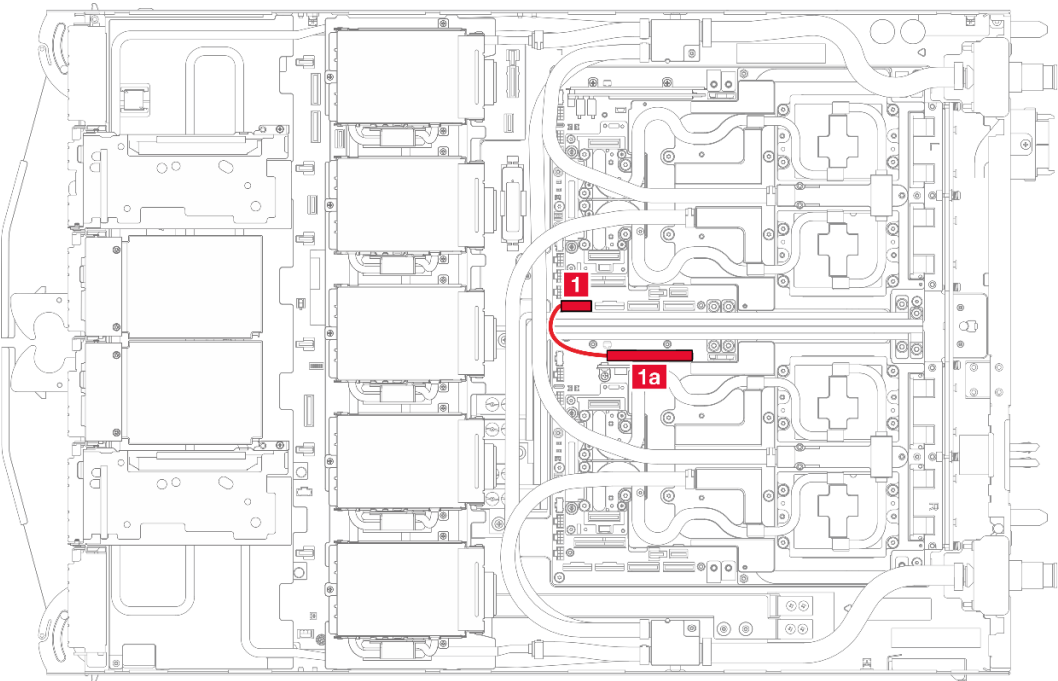


Figure 10. GB200-NVL4 boards cross-link HMC connection cable routing

Table 10. GB200-NVL4 boards cross-link HMC connection cable routing

From	To
1 DCSCI connection between primary and secondary GB200-NVL4 boards Location: Left-side host board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .	1a HMC module connector Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .

GB200-NVL4 boards cross-link MCIO connection cable routing

Use this information to route the GB200-NVL4 boards cross-link MCIO connection cable.

GB200-NVL4 boards cross-link HMC connection cable routing

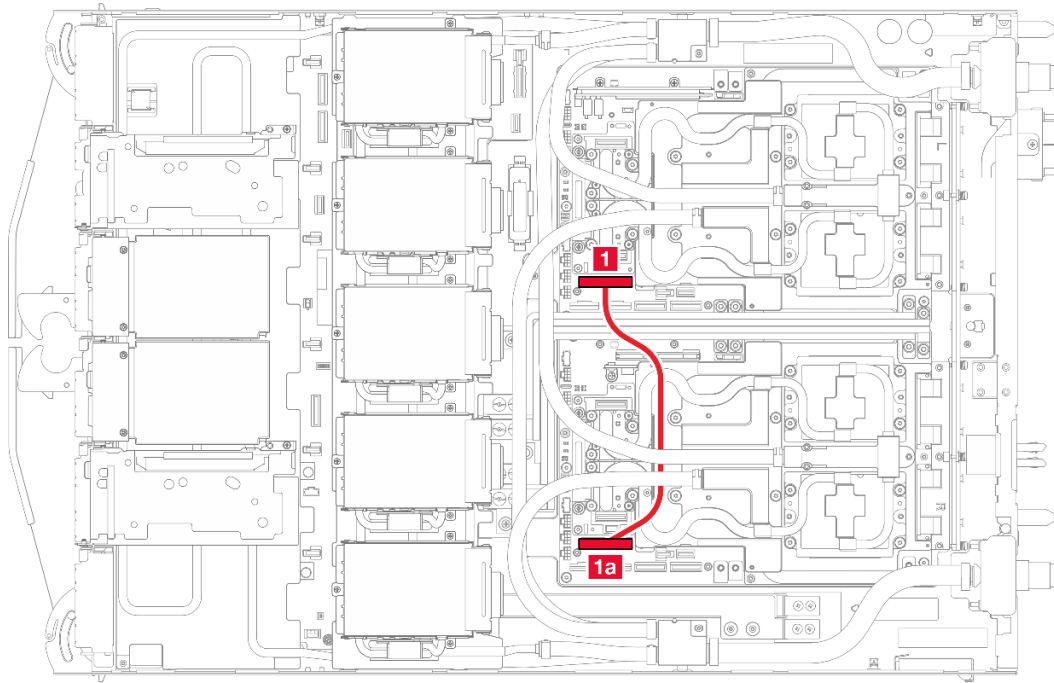


Figure 11. GB200-NVL4 boards cross-link HMC connection cable routing

Table 11. GB200-NVL4 boards cross-link HMC connection cable routing

From	To
1 GB200-NVL4 MCIO x16 C-Link cable connector Location: Left-side host board	1a GB200-NVL4 MCIO x16 C-Link cable connector Location: Right-side GB200-NVL4 board
View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .	

GB200-NVL4 to host board connection cable routing

Use this information to route the cables for GB200-NVL4 to host board connection.

This section contains cable routing of two different configurations, *with* and *without* the E3.S switch board.

- [“GB200-NVL4 to host board connection – without E3.S switch board” on page 17](#)
- [“GB200-NVL4 to host board connection – with E3.S switch board” on page 18](#)

GB200-NVL4 to host board connection – without E3.S switch board

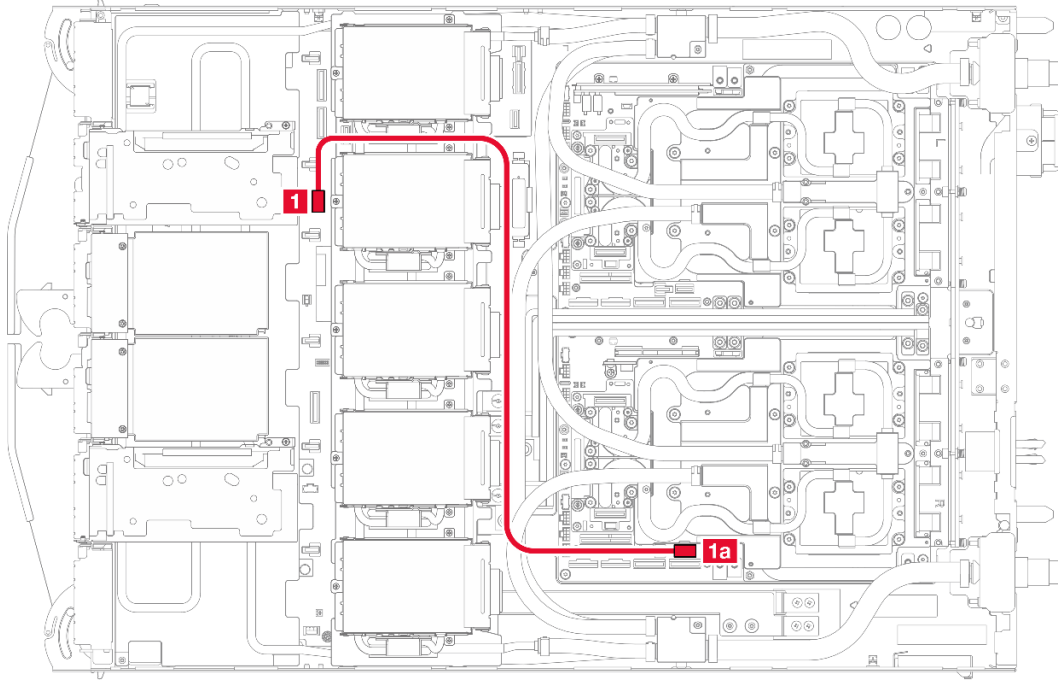


Figure 12. GB200-NVL4 to host board connection – without E3.S switch board

Table 12. GB200-NVL4 to host board connection – without E3.S switch board

From	To
1 MCIO x4 connector for GB200-NVL4 HPM board connection Location: host board View the connector location at Host board connectors.	1a GB200-NVL4 MCIO x4 host board or switch board connector Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration.

GB200-NVL4 to host board connection – with E3.S switch board

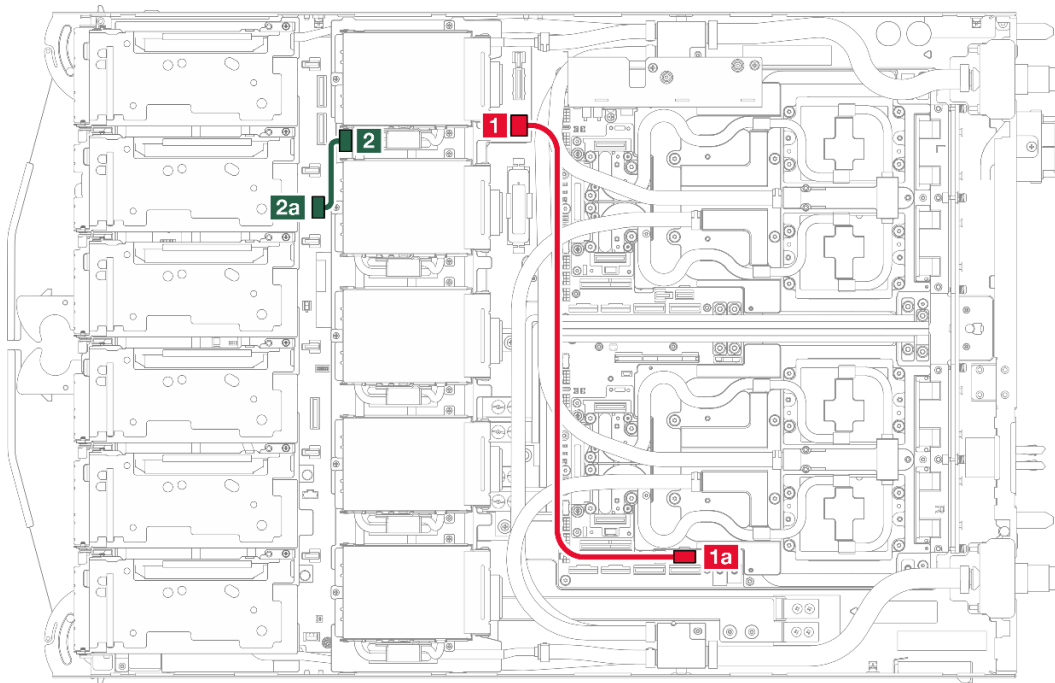


Figure 13. GB200-NVL4 to host board connection – with E3.S switch board

Table 13. GB200-NVL4 to host board connection – with E3.S switch board

From	To
1 MCIO x4 connector for secondary (right-side) GB200-NVL4 board connection Location: E3.S switch board View the connector location at E3.S switch board connectors .	1a GB200-NVL4 MCIO x4 host board or switch board connector Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
2 MCIO x4 connector for host board connection Location: E3.S switch board View the connector location at E3.S switch board connectors .	2a MCIO x4 connector for GB200-NVL4 HPM board connection Location: host board. View the connector location at Host board connectors .

PCIe riser cable routing in MCIO Configuration

Use this information to route the PCIe riser cables in the MCIO configuration.

ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration

Use this information to route the cables for the ConnectX-7 200 and ConnectX-7 400 adapters.

ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration

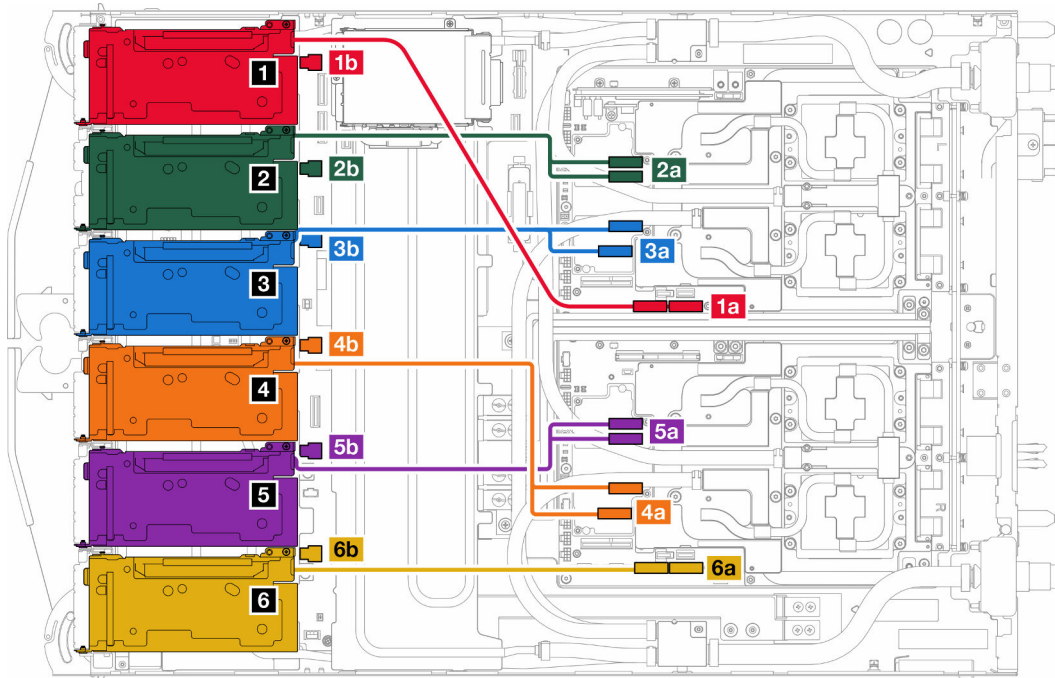


Figure 14. ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration

Table 14. ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration

From	To
1 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 1	1a GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
	1b PCIe riser 1 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .
2 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 2	2a MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	2b PCIe riser 2 power connector Location: host board View the connector location at Host board connectors .

Table 14. ConnectX-7 200 and ConnectX-7 400 cable routing in MCIO configuration (continued)

From	To
3 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 3	3a MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	3b PCIe riser 3 power connector Location: host board View the connector location at Host board connectors .
4 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 3	4a MCIO x8 connector for E3.S drive Location: Right-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	4b PCIe riser 4 power connector Location: host board View the connector location at Host board connectors .
5 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 5	5a MCIO x8 connector for E3.S drive Location: Right-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	5b PCIe riser 5 power connector Location: host board View the connector location at Host board connectors .
6 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 6	6a GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
	6b PCIe riser 6 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .

ConnectX-8 XDR cable routing in MCIO configuration

Use this information to route the cables for the ConnectX-8 XDR adapters in MCIO configuration.

ConnectX-8 XDR cable routing in MCIO configuration

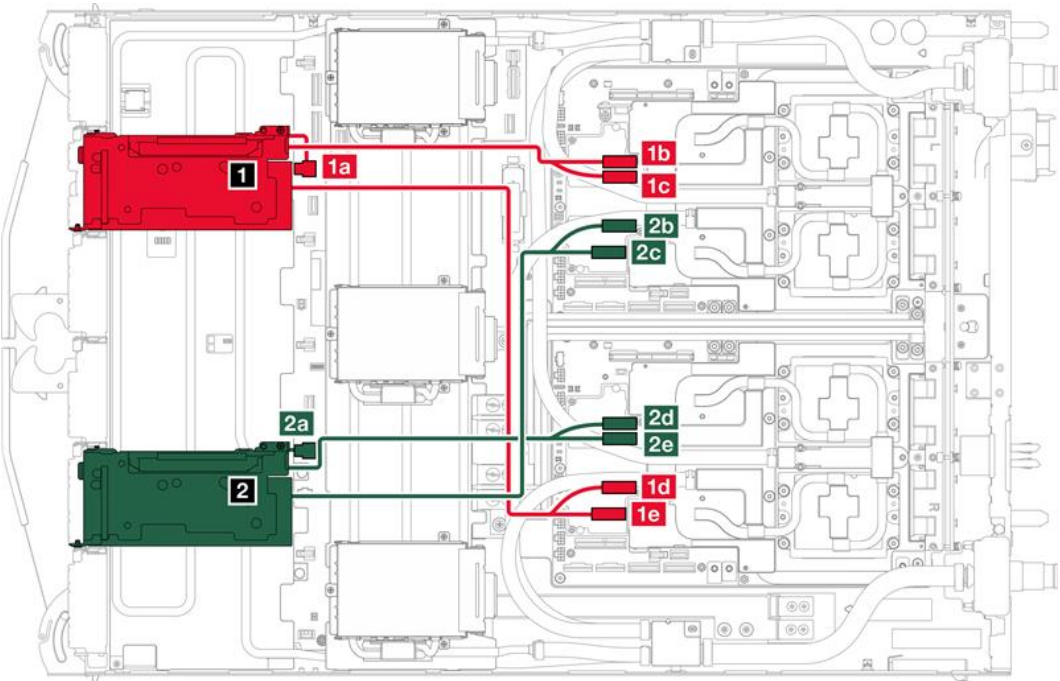


Figure 15. ConnectX-8 XDR cable routing in MCIO configuration

Table 15. ConnectX-8 XDR cable routing in MCIO configuration

From	To
1 ConnectX-8 XDR adapter installed in PCIe slot 2	1a PCIe riser 2 power connector Location: host board View the connector location at Host board connectors .
	1b 1c MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	1d 1e MCIO x8 connector for E3.S drive Location: Right-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
2 ConnectX-8 XDR adapter installed in PCIe slot 5	2a PCIe riser 5 power connector Location: host board View the connector location at Host board connectors .

Table 15. ConnectX-8 XDR cable routing in MCIO configuration (continued)

From	To
	2b 2c MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	2d 2e MCIO x8 connector for E3.S drive Location: Right-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .

PCIe riser cable routing in Dual CX8 mezzanine module configuration

Use this information to route the PCIe riser cables in the Dual CX8 mezzanine module configuration.

ConnectX-7 200 and ConnectX-7 400 cable routing in Dual CX8 Mezzanine Module configuration

Use this information to route the cables for the ConnectX-7 200 and ConnectX-7 400 adapters in the Dual CX8 Mezzanine Module configuration.

ConnectX-7 200 and ConnectX-7 400 cable routing in Dual CX8 Mezzanine Module configuration

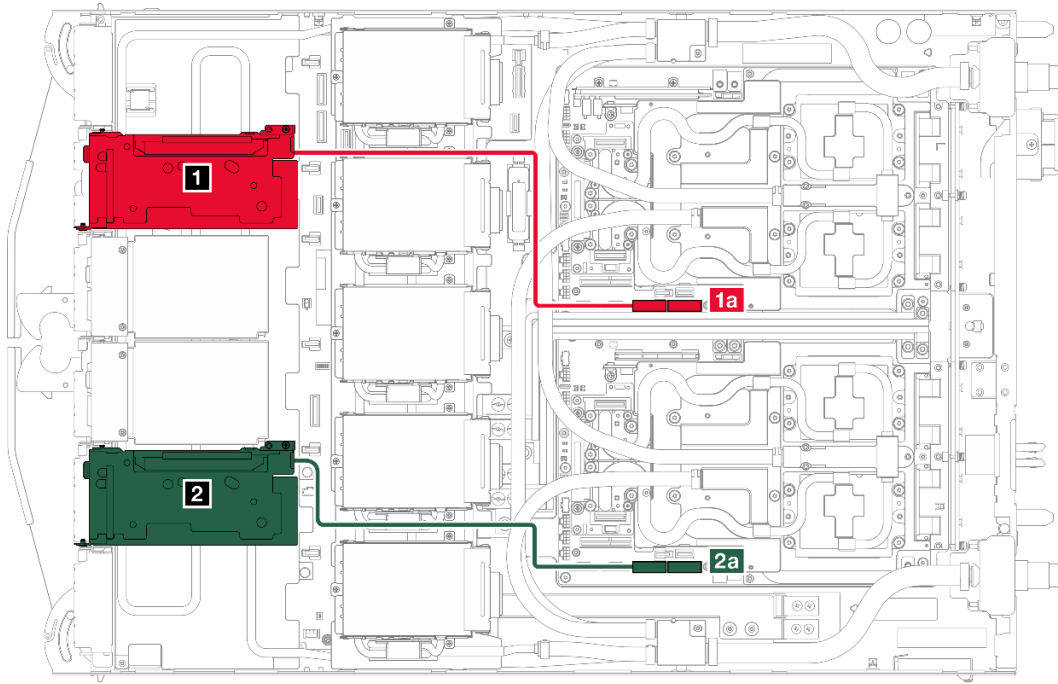


Figure 16. ConnectX-7 200 and ConnectX-7 400 cable routing in Dual CX8 Mezzanine Module configuration

Table 16. ConnectX-7 200 and ConnectX-7 400 cable routing in Dual CX8 Mezzanine Module configuration

From	To
1 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 2	1a GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
2 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 5	2a GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .

ConnectX-8 XDR cable routing in Dual CX8 Mezzanine Module configuration

Use this information to route the cables for the ConnectX-8 XDR adapters in the Dual CX8 Mezzanine Module configuration.

ConnectX-8 XDR routing in Dual CX8 Mezzanine Module configuration

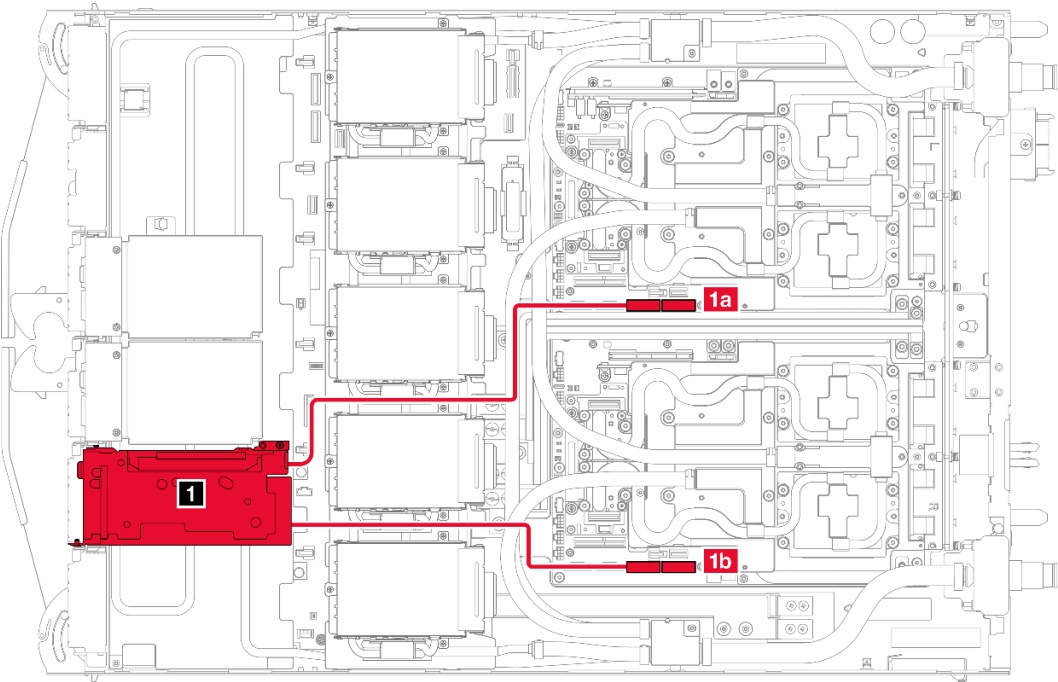


Figure 17. ConnectX-8 XDR cable routing in Dual CX8 Mezzanine Module configuration

Table 17. ConnectX-8 XDR cable routing in Dual CX8 Mezzanine Module configuration

From	To
1 ConnectX-7 200 / ConnectX-7 400 riser assembly in PCIe slot 5	1a GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	1b GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .

OSFP module cable routing

Use this information to route the cables for the OSFP.

OSFP module cable routing

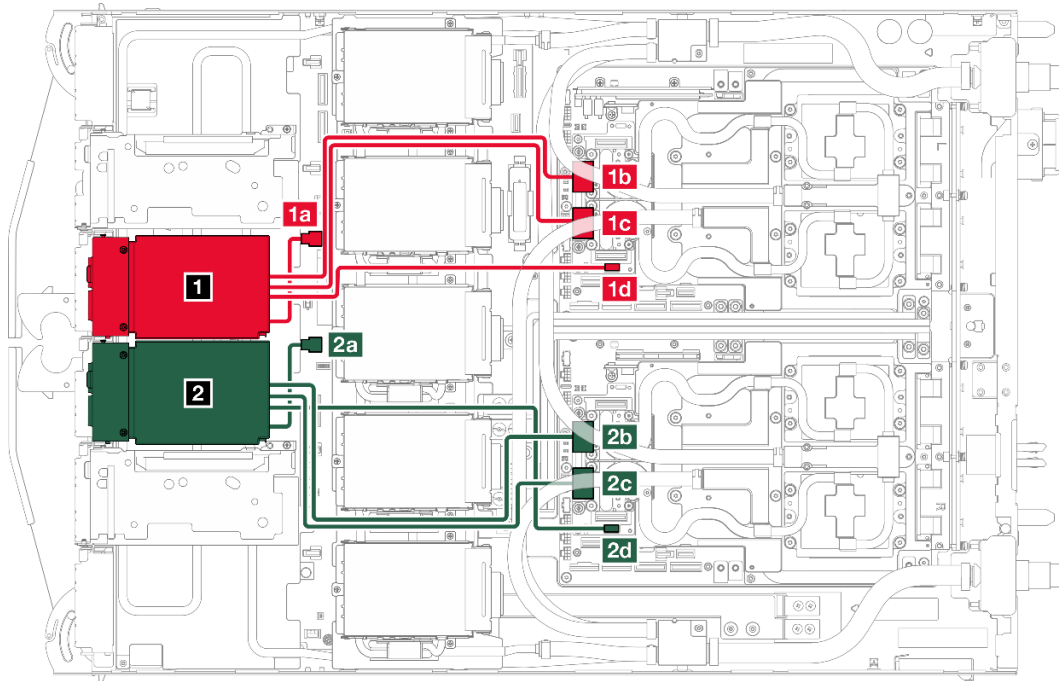


Figure 18. OSFP module cable routing

Table 18. OSFP module cable routing

From	To
9 OSFP module installed in PCIe slot 3	1a PCIe riser 3 power connector Location: host board View the connector location at Host board connectors .
	1b Ultra-pass fly over connector
	1c Ultra-pass fly over connector
	1d OSFP board sideband cable connector Location: Left-side CX8 Mezzanine Module View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration .
10 OSFP module installed in PCIe slot 4	2a PCIe riser 4 power connector Location: host board View the connector location at Host board connectors .

Table 18. OSFP module cable routing (continued)

From	To
	2b Ultra-pass fly over connector 2c Ultra-pass fly over connector 2d OSFP board sideband cable connector Location: Right-side CX8 mezzanine module View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration.

E3.S drive 0/1 cable routing

Use this information to route the cables for the E3.S drive 0 / 1.

E3.S drive 0/1 cable routing

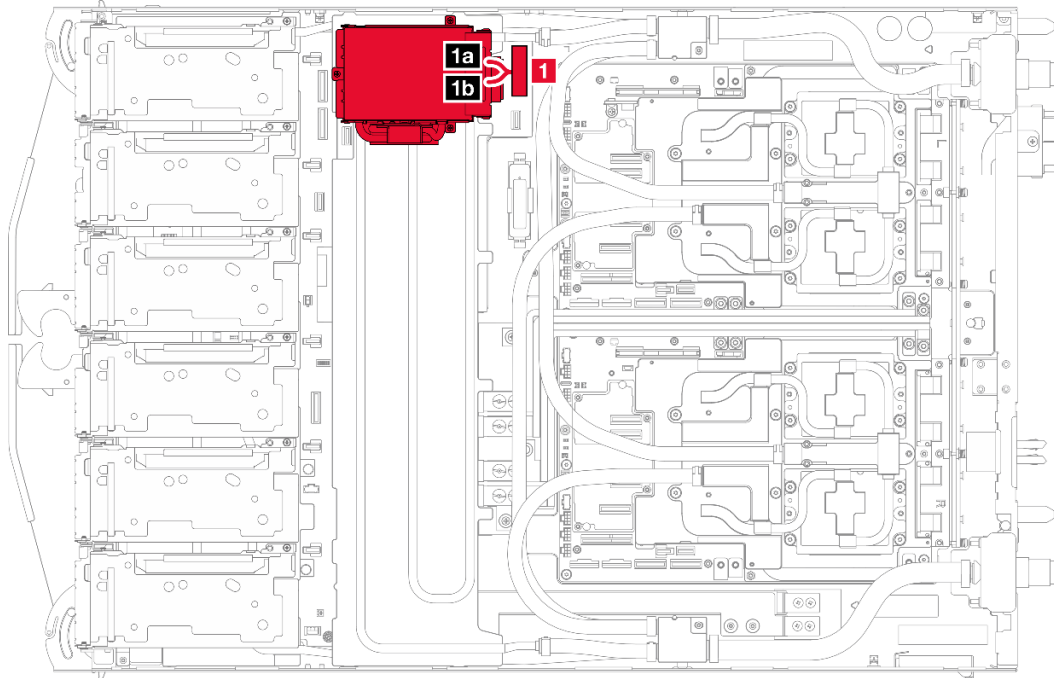


Figure 19. E3.S drive 0/1 cable routing

Table 19. E3.S drive 0/1 cable routing

From	To
1 PCIe x8 Gen 5 E3.S signal and sideband cable connector Location: E3.S switch board View the connector location at E3.S switch board connectors .	1a E3.S drive 0
	1b E3.S drive 1

E3.S drive cable routing in MCIO Configuration

Use this information to route the E3.S drive cables in the MCIO configuration.

E3.S drive 2/3 in MCIO configuration cable routing

Use this information to route the cables for E3.S drive 2/3 in MCIO configuration.

E3.S drive 2/3 in MCIO configuration cable routing

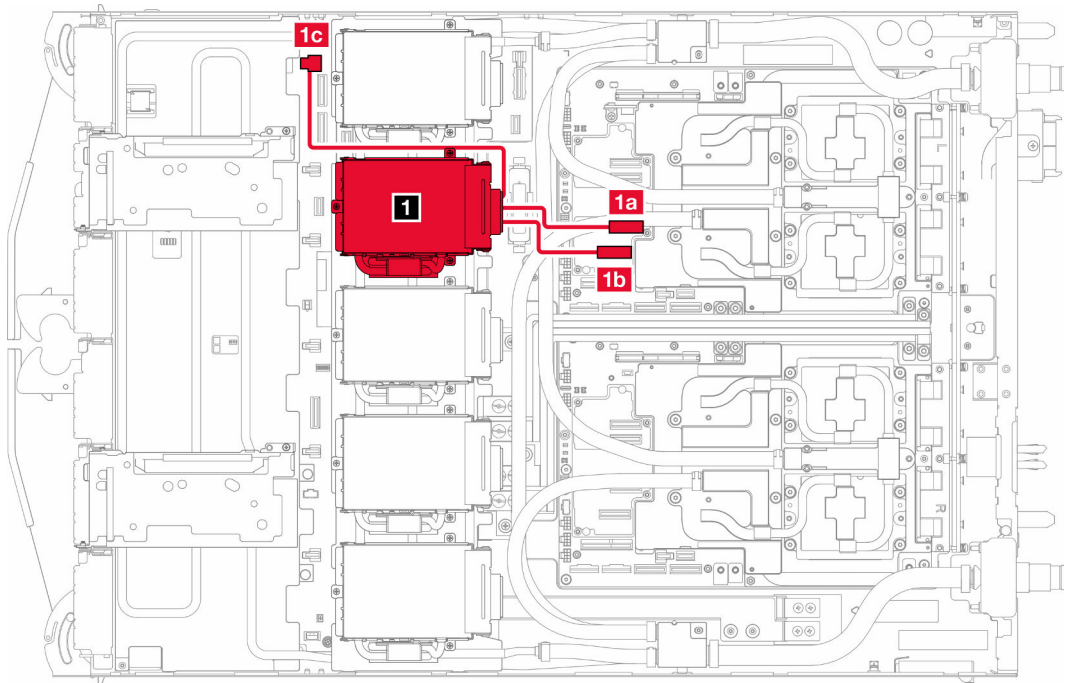


Figure 20. E3.S drive 2/3 in MCIO configuration cable routing

Table 20. E3.S drive 2/3 in MCIO configuration cable routing

From	To
1 E3.S drive 2/3	1a MCIO x8 connector for E3.S drive 1b MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	1c PCIe riser 1 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .

E3.S drive 2 and 6 in MCIO configuration cable routing

Use this information to route the cables for E3.S drive 2 and 6 in MCIO configuration.

E3.S drive 2 and 6 in MCIO configuration cable routing

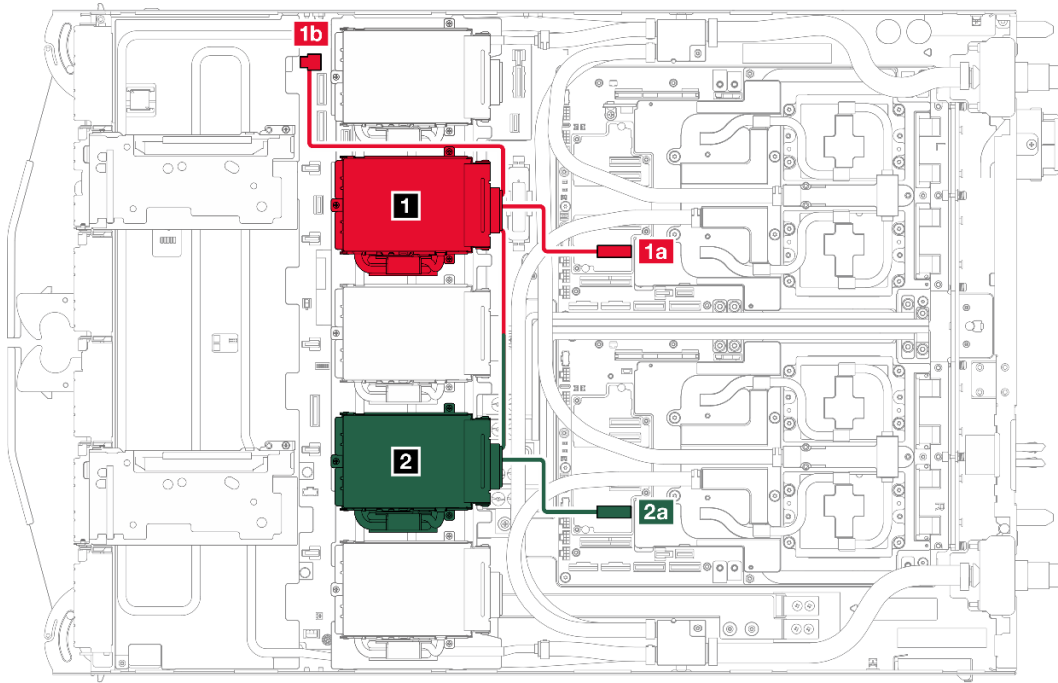


Figure 21. E3.S drive 2 and 6 in MCIO configuration cable routing

Table 21. E3.S drive 2 and 6 in MCIO configuration cable routing

From	To
1 E3.S drive 2	1a MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
	1b PCIe riser 1 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .
2 E3.S drive 6	2a MCIO x8 connector for E3.S drive Location: Right-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .

E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration cable routing

Use this information to route the cables for E3.S 2/3, 4/5, 6/7, and 8/9 drives in MCIO configuration.

When installing four E3.S drives in MCIO configuration, follow the grouping rule below:

- E3.S drive 2/3 and E3.S drive 6/7
- E3.S drive 4/5 and E3.S drive 8/9

This section provides information on cable routing of the two drive groups:

- [“E3.S 2/3 and 6/7 drives in MCIO configuration cable routing” on page 35](#)
- [“E3.S drive 4/5 and 8/9 in MCIO configuration cable routing” on page 36](#)

E3.S 2/3 and 6/7 drives in MCIO configuration cable routing

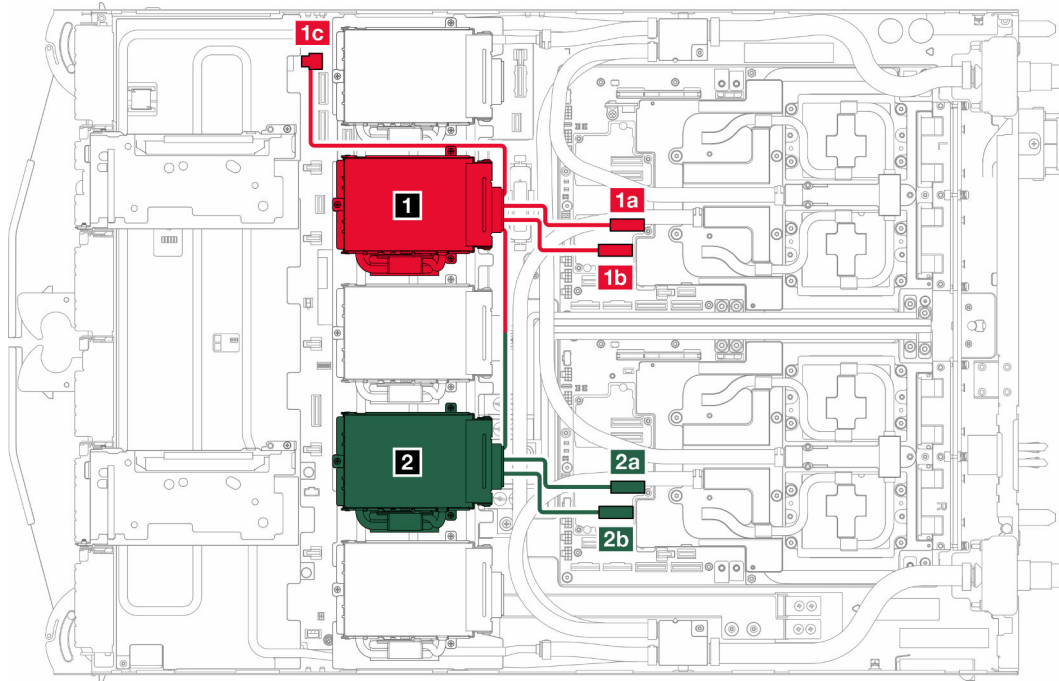


Figure 22. E3.S 2/3 and 6/7 drives in MCIO configuration cable routing

Table 22. E3.S 2/3 and 6/7 drives in MCIO configuration cable routing

From	To
1 E3.S drive 2/3	1a 1b MCIO x8 connector for E3.S drive Location: Left-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .
	1c PCIe riser 1 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .
2 E3.S drive 6/7	2a 2b MCIO x8 connector for E3.S drive Location: Right-side MCIO breakout board View the connector location at GB200-NVL4 board connectors – MCIO breakout board configuration .

E3.S drive 4/5 and 8/9 in MCIO configuration cable routing

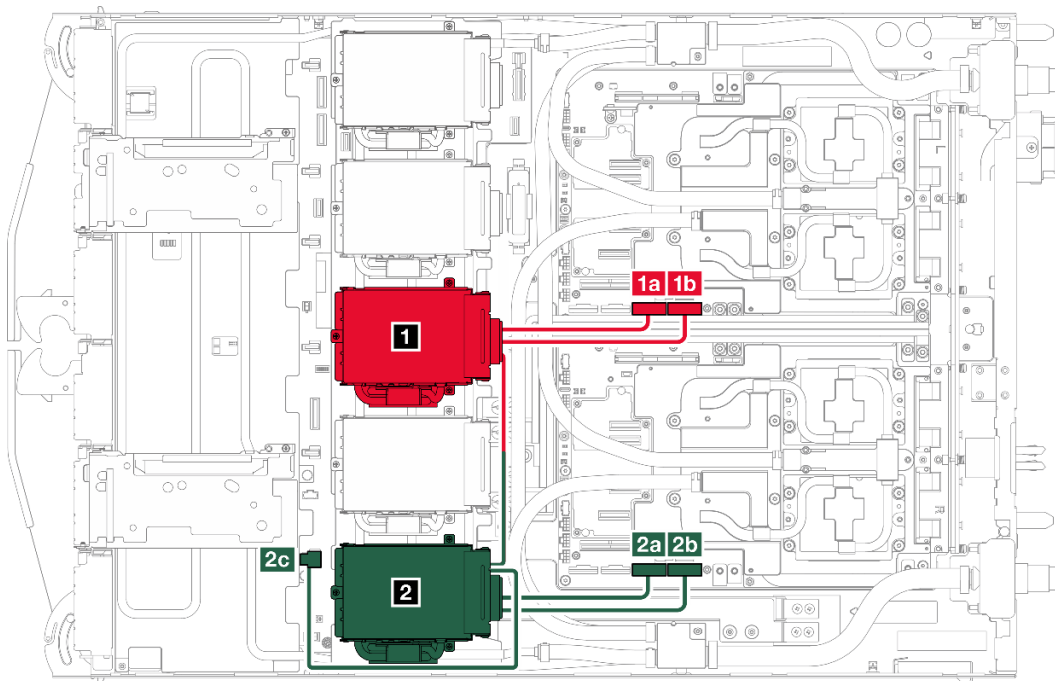


Figure 23. E3.S drive 4/5 and 8/9 in MCIO configuration cable routing

Table 23. E3.S drive 4/5 and 8/9 in MCIO configuration cable routing

From	To
1 E3.S drive 4/5	1a 1b GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Left-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
2 E3.S drive 8/9	2a 2b GB200-NVL4 MCIO x8 connector for PCIe adapter Location: Right-side GB200-NVL4 board View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration or GB200-NVL4 board connectors – MCIO breakout board configuration .
	2c PCIe riser 6 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .

E3.S 2/3, 4/5, 6/7, and 8/9 drives in Dual CX8 Mezzanine Module configuration

Use this information to route the cables for installing four E3.S drives in the Dual CX8 Mezzanine Module configuration.

When installing two E3.S drives in Dual CX8 Mezzanine Module configuration, follow the grouping rule below:

- E3.S drive 2/3 and E3.S drive 6/7
- E3.S drive 4/5 and E3.S drive 8/9

This section provides information on cable routing of the two drive groups:

- [“E3.S drive 2/3 and 6/7 in Dual CX8 Mezzanine Module configuration cable routing” on page 37](#)
- [“E3.S drive 4/5 and 8/9 in Dual CX8 Mezzanine Module configuration cable routing” on page 38](#)

E3.S drive 2/3 and 6/7 in Dual CX8 Mezzanine Module configuration cable routing

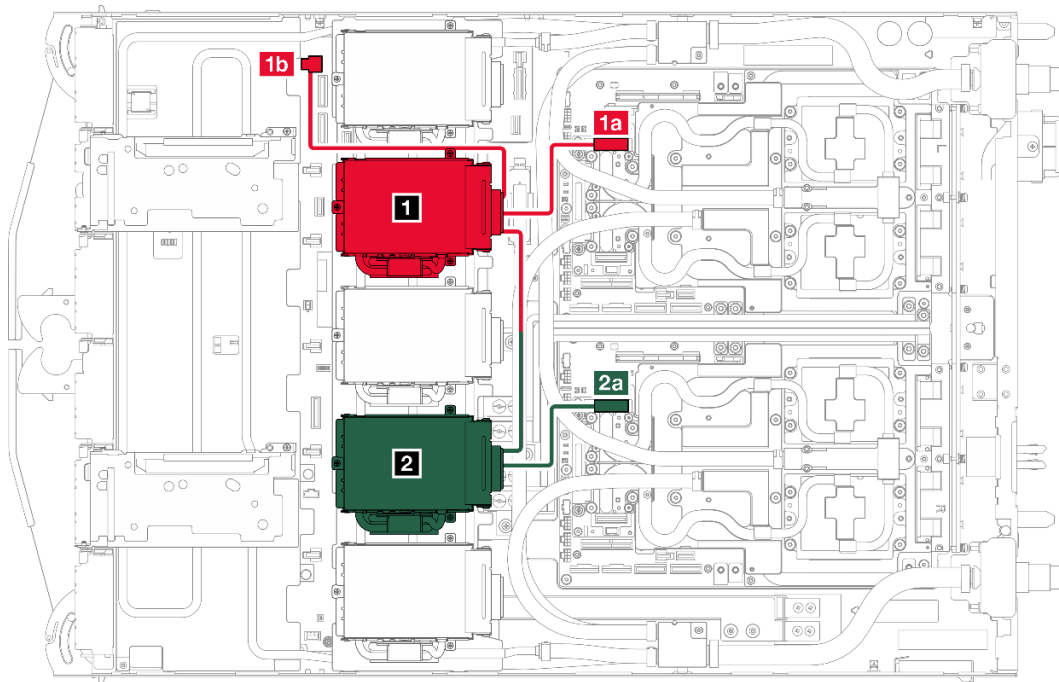


Figure 24. E3.S drive 2/3 and 6/7 in Dual CX8 Mezzanine Module configuration cable routing

Table 24. E3.S drive 2/3 and 6/7 in Dual CX8 Mezzanine Module configuration cable routing

From	To
1 E3.S drive 2/3	1a MCIO x8 Gen 5 connector Location: Left-side ConnectX-8 I/O module View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration .
	1b PCIe riser 1 power connector Location: host board View the connector location at Host board connectors .
2 E3.S drive 6/7	2a MCIO x8 Gen 5 connector Location: Right-side ConnectX-8 I/O module View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration .

E3.S drive 4/5 and 8/9 in Dual CX8 Mezzanine Module configuration cable routing

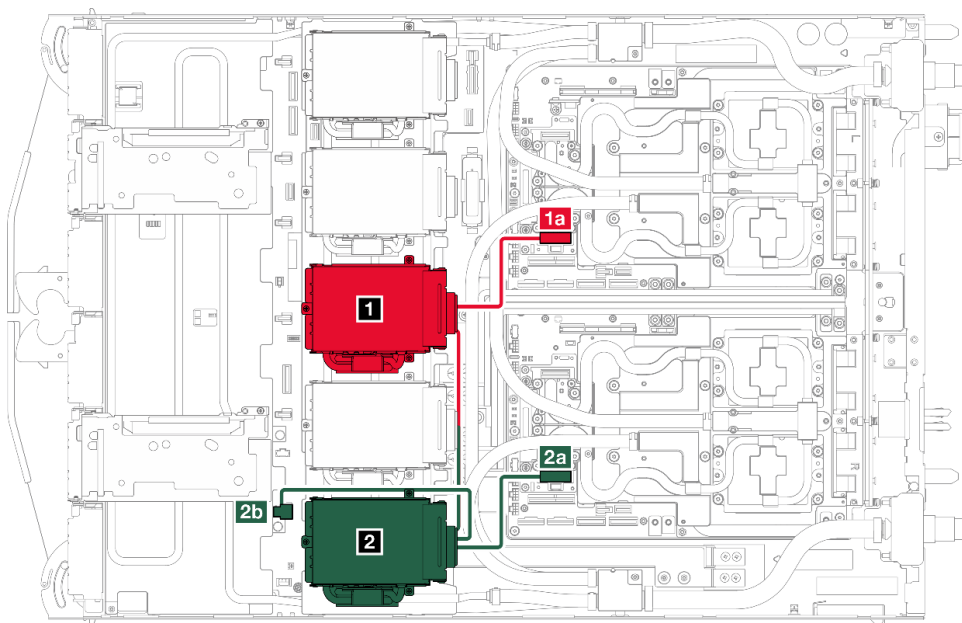


Figure 25. E3.S drive 4/5 and 8/9 in Dual CX8 Mezzanine Module configuration cable routing

Table 25. E3.S drive 4/5 and 8/9 in Dual CX8 Mezzanine Module configuration cable routing

From	To
1 E3.S drive 4/5	1a MCIO x8 connector for E3.S drive Location: Left-side CX8 Mezzanine Module View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration .
2 E3.S drive 8/9	2a MCIO x8 connector for E3.S drive Location: Right-side CX8 Mezzanine Module View the connector location at GB200-NVL4 board connectors – Dual CX8 mezzanine module configuration .

Table 25. E3.S drive 4/5 and 8/9 in Dual CX8 Mezzanine Module configuration cable routing (continued)

From	To
	2b PCIe riser 6 power connector or E3.S drive power connector Location: host board View the connector location at Host board connectors .

Appendix A. Documents and supports

This section provides handy documents, driver and firmware downloads, and support resources.

Documents download

This section provides introduction and download link for handy documents.

Documents

Download the following product documentations at:

https://pub.lenovo.com/sc777-v4/pdf_files

- ***Rail Installation Guide for 13U Enclosure***
 - Rail installation in a rack
- ***SC777 V4 Neptune DWC Tray User Guide***

Complete overview, system configuration, hardware components replacing, and troubleshooting.
- ***SC777 V4 Messages and Codes Reference***

XClarity Controller, LXPM, and uEFI events
- ***UEFI Manual***
 - UEFI setting introduction

Notes: SC750 V4 tray can be installed in the N1380 13U enclosure, which can be installed in the ThinkSystem Heavy Duty Full Depth Rack Cabinets. The documentations below are available for download:

- *N1380 Enclosure User Guide*
- *ThinkSystem Heavy Duty Full Depth Rack Cabinets User Guide*

Support websites

This section provides driver and firmware downloads and support resources.

- Drivers and Software download website
 - <https://datacentersupport.lenovo.com/tw/en/products/servers/thinksystem/sc777v4/downloads/driver-list/>
- https://forums.lenovo.com/t5/Datacenter-Systems/ct-p/sv_eg
- Lenovo Data Center Support
 - <https://datacentersupport.lenovo.com/products/servers/thinksystem/sc777v4/>
- <https://datacentersupport.lenovo.com/documents/Invo-eula>
- <https://lenovopress.lenovo.com/> (Product Guides/Datasheets/White papers)
- <https://www.lenovo.com/privacy>
- https://datacentersupport.lenovo.com/product_security/home
- <http://datacentersupport.lenovo.com/warrantylookup>
- <https://datacentersupport.lenovo.com/solutions/server-os>
- <https://serverproven.lenovo.com> (Options compatibility lookup)
-

- <https://support.lenovo.com/servicerequest> (Service request)
- <https://datacentersupport.lenovo.com/solutions/ht509500> (Stay up to date on firmware updates)

