



ThinkSystem SC750 V4 Neptune Tray Internal Cable Routing Guide



Machine Type: 7DDJ

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.

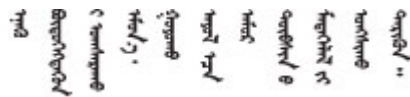
A termék telepítése előtt olvassa el a Biztonsági előírásokat!

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་ཐུང་འདི་བདེ་སྤྱད་མ་བྱས་གོང་། སྐྱར་གྱི་ཡིད་གཟབ་
བྱ་འདྲ་མིན་ཡིད་པའི་འོད་མེར་བཟླ་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

Front drive cable routing

Use this information to route the cables for the front drives.

Front drive cable routing

This illustration shows Node B as an example.

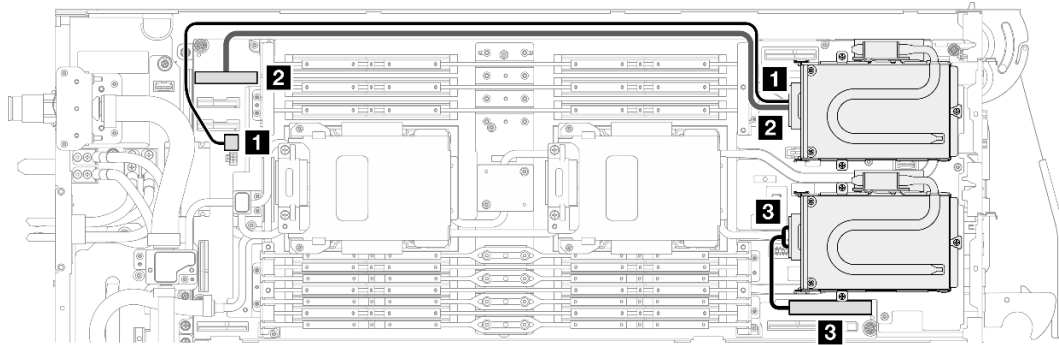


Figure 1. Front drive cable routing

Table 1. Front drive cable routing

From	To
1 Drive 0/2 in slot 2	1 Drive 0/2 power connector on system board
2 Drive 0/2 in slot 2	2 Drive 0/2 connector on system board
3 Drive 1/3 in slot 1	3 Drive 1/3 connector on system board

Middle drive cable routing

Use this information to route the cables for the middle drives.

Middle drive cable routing

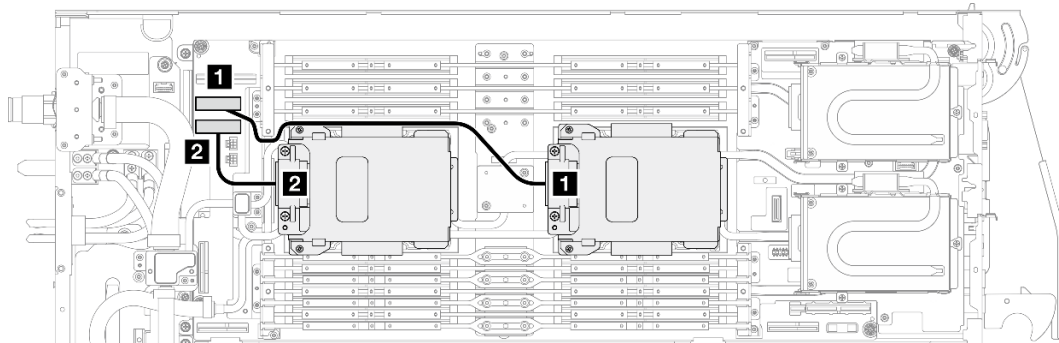


Figure 2. Middle drive cable routing

Table 2. Middle drive cable routing

From	To
1 Drive 4 – Drive on top of processor 1	1 Drive 4 connector on system board
2 Drive 5 – Drive on top of processor 2	2 Drive 5 connector on system board

PCIe adapter cable routing

Use this information to route the cables for the PCIe adapters.

Note: SC750 V4 supports three PCIe configurations: standalone, socket direct, and shared I/O. Check which configuration is supported by the PCIe adapter installed in the node before working on cable routing.

- [“Standalone configuration cable routing” on page 2](#)
- [“Socket direct configuration cable routing” on page 2](#)
- [“Shared I/O configuration cable routing” on page 3](#)

Standalone configuration cable routing

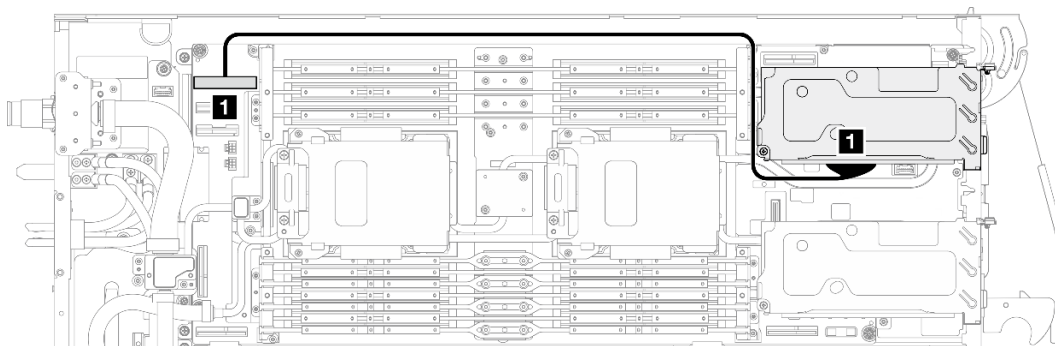


Figure 3. Standalone configuration cable routing

Table 3. Standalone configuration cable routing

From	To
1 Cabled riser on the riser cage in slot 2	1 PCIe riser 2 PCIe x16 connector on system board

Socket direct configuration cable routing

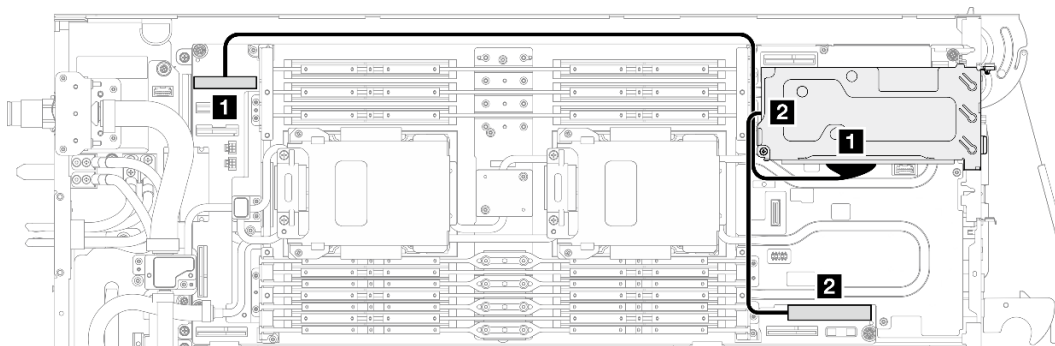


Figure 4. Socket direct configuration cable routing

Table 4. Socket direct configuration cable routing

From	To
1 Cabled riser on the riser cage in slot 2	1 PCIe riser 2 PCIe x16 connector on system board
2 PCIe adapter in slot 2	2 PCIe riser 1 PCIe x16 connector on system board

Shared I/O configuration cable routing

Attention:

- Shared I/O configuration requires specific nodes power-on sequence. When powering on the system, power on **Node B** first; then, power on **Node A**.
- In shared I/O configuration, when the **Node B** performs virtual reset, **Node A**'s XCC web GUI will show the warning message FQXSFI0021J to indicate that PCIe error recovery has occurred and the adapter may not operate correctly. To solve this issue, restart **Node A**. For additional user actions, see [Event Message: FQXSFI0021J](#).

Note:

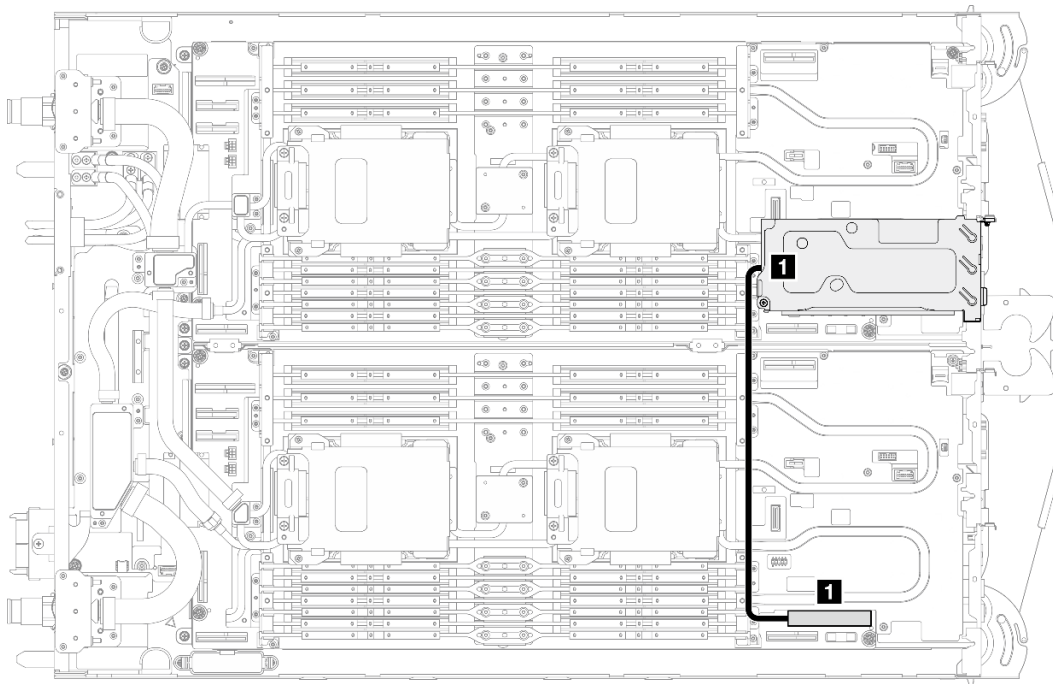


Figure 5. Shared I/O configuration cable routing

Table 5. Shared I/O configuration cable routing

From	To
1 PCIe adapter in slot 1 in Node B	1 PCIe riser 1 PCIe x16 connector on system board in Node A

Sideband cable routing

Use this information to route the cables for the sideband cable.

Sideband cable routing

Notes:

1. To prevent damaging the cable, make sure to hold down the cables near the sideband module when routing the sideband cables through the water loop.

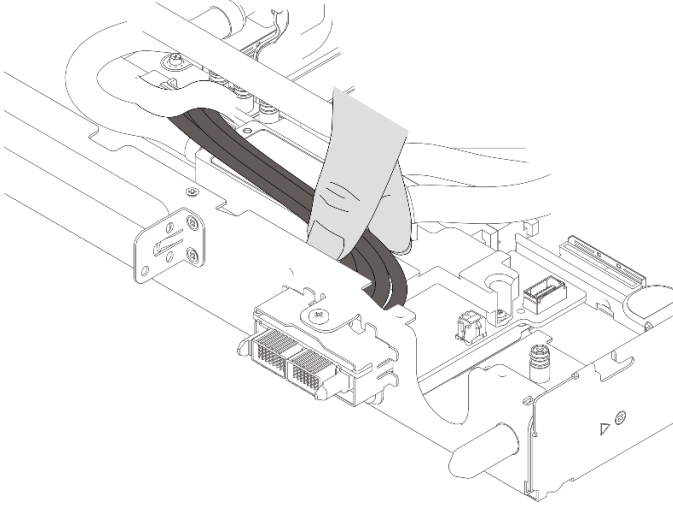


Figure 6. Holding down sideband cables

2. Keep the cables slightly above the cold plate. Do not insert the cables into the gap between the cold plate and the tray wall.

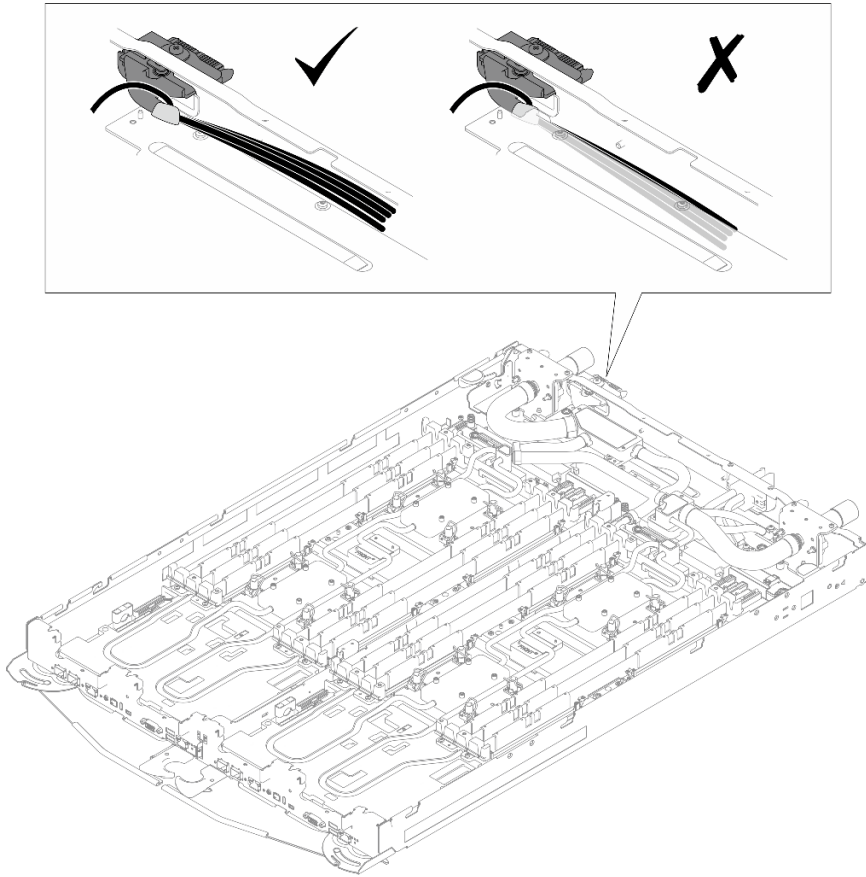


Figure 7. Sideband cable placement rear tray wall

Attention: Make sure the cables are clear off the restricted area.

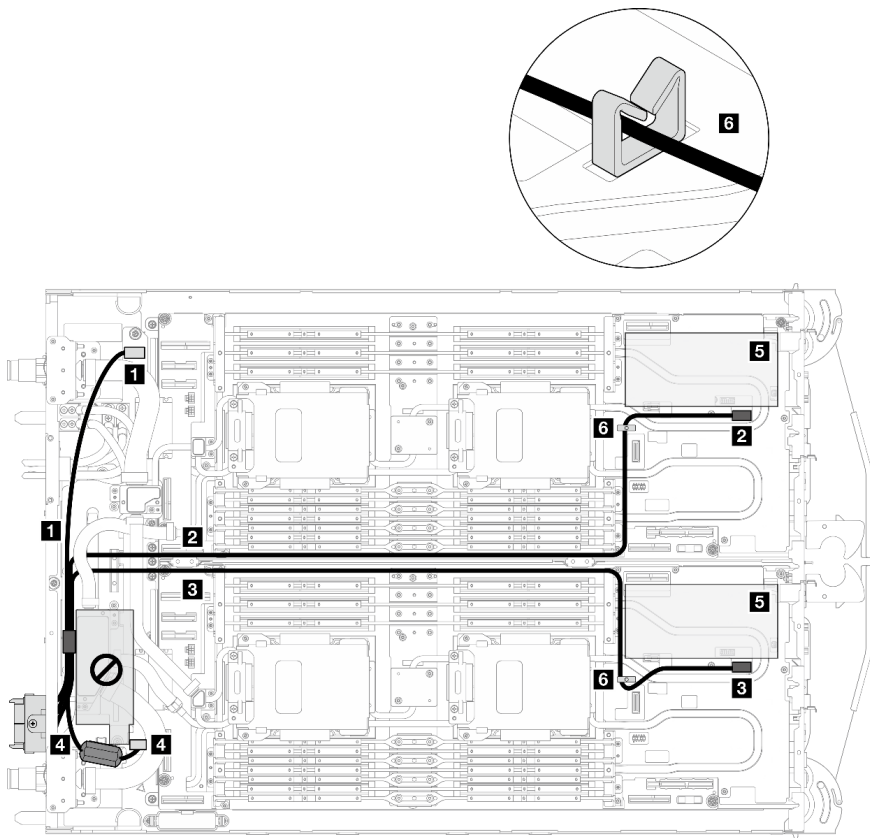


Figure 8. Sideband cable routing

Table 6. Sideband cable routing

From (sideband cable)	To
1 Cable with plugger marked as P3	1 P3 connector on the power distribution board
2 Cable with plugger marked as Node B (routed beneath the water tubes)	2 Sideband connector on the system board of Node B
3 Cable with plugger marked as Node A (routed beneath the water tubes)	3 Sideband connector on the system board of Node A
4 Cable with plugger marked as P2	4 P2 connector on the power distribution board
Note: 5: Slot 2 for PCIe riser or drives in Node A or Node B 6: Cable clips	

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/sc750-v4/pdf_files

- ***Rail Installation Guide for 13U Enclosure***
 - Rail installation in a rack
- ***SC750 V4 Neptune DWC Tray User Guide***
 - Complete overview, system configuration, hardware components replacing, and troubleshooting.
- ***SC750 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/products/servers/thinksystem/sc750v4/7ddj/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/sc750v4/7ddj>
- <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://pubs.lenovo.com/thinksystem#os-installation>

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

