

# **JBOD Enclosure**

**TL-D400S**  
**TL-D800S**  
**TL-D1600S**

**User Guide**

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# 1. Preface





## About This Guide

This guide provides information on the QNAP TL-D400S, TL-D800S, and TL-D1600S JBOD enclosures and step-by-step instructions on installing the hardware. It also provides instructions on basic operations and troubleshooting information.

## Audience

This document is intended for consumers and storage administrators. This guide assumes that the user has a basic understanding of storage and backup concepts.

## Document Conventions

Symbol	Description
	Notes provide default configuration settings and other supplementary information.
	Important notes provide information on required configuration settings and other critical information.
	Tips provide recommendations or alternative methods of performing tasks or configuring settings.
	Warnings provide information that, when ignored, may result in potential loss, injury, or even death.

## 2. Product Overview

This chapter provides basic information about the QNAP TL-D400S, TL-D800S, and TL-D1600S JBOD enclosures.

### About QNAP JBOD Enclosures

QNAP JBOD enclosures increase the capacity and utility of your NAS or computer and provide a wide range of storage applications. Drives installed in JBOD enclosures can be managed independently or be configured as software RAID by the host device. The TL-D400S, TL-D800S, and TL-D1600S feature SFF-8088 ports to ensure quick and efficient data transfer between the JBOD enclosure and the host device.

### Hardware Specifications



#### Warning






If your QNAP product has hardware defects, return the product to QNAP or a QNAP-authorized service center for maintenance or replacement. Any attempt to repair or perform maintenance procedures on the product by you or an unauthorized third-party invalidates the warranty.

QNAP is not responsible for any damage or data loss caused by unauthorized modifications and installation of unsupported third-party applications.

For details, see the [QNAP Warranty Terms and Conditions](#).

#### Expansion Enclosures

Component	TL-D400S	TL-D800S	TL-D1600S
Ordering Information			
Ordering P/N	TL-D400S	TL-D800S	TL-D1600S
Storage			
Drive bays	4 x 3.5-inch SATA 6 Gbps	8 x 3.5-inch SATA 6 Gbps	<ul style="list-style-type: none"> <li>• 12 x 3.5-inch SATA 6 Gbps bays</li> <li>• 4 x 2.5-inch SATA 6 Gbps bays</li> </ul>
Drive compatibility	<ul style="list-style-type: none"> <li>• 3.5-inch SATA hard disk drives</li> <li>• 2.5-inch SATA hard disk drives</li> <li>• 2.5-inch SATA solid-state drives</li> </ul>		<ul style="list-style-type: none"> <li>• 3.5-inch bays:               <ul style="list-style-type: none"> <li>• 3.5-inch SATA hard disk drives</li> <li>• 2.5-inch SATA hard disk drives</li> <li>• 2.5-inch SATA solid-state drives</li> </ul> </li> <li>• 2.5-inch bays:               <ul style="list-style-type: none"> <li>• 2.5-inch SATA solid-state drives</li> </ul> </li> </ul>
Drive tray type	Key lock		
Hot-swapping	Supported		
External I/O Ports & Expansion Slots			

Component	TL-D400S	TL-D800S	TL-D1600S
SFF ports	1 x SFF-8088 (drive bays 1-4)	2 x SFF-8088 <ul style="list-style-type: none"> <li>• Port 1: Drive bays 1-4</li> <li>• Port 2: Drive bays 5-8</li> </ul>	4 x SFF-8088 <ul style="list-style-type: none"> <li>• Port 1: 3.5-inch drive bays 1-4</li> <li>• Port 2: 3.5-inch drive bays 5-8</li> <li>• Port 3: 3.5-inch drive bays 9-12</li> <li>• Port 4: 2.5-inch drive bays 1-4</li> </ul>
	 <b>Important</b> <ul style="list-style-type: none"> <li>• Each SFF-8088 port supports four SATA 6 Gb/s lanes.</li> <li>• These ports are only for connecting the host bus adapter to a JBOD enclosure.</li> </ul>		
Interface			
Switches	<ul style="list-style-type: none"> <li>• Power</li> </ul>  <b>Important</b> <p>QNAP recommends waiting at least two seconds after powering off the JBOD enclosure before powering it on again.</p> <ul style="list-style-type: none"> <li>• Fan speed</li> <li>• Audio alert</li> </ul>		
Dimensions			
Form factor	Tower		
Dimensions (H x W x D)	168.5 x 160.2 x 219.0 mm (6.63 x 6.31 x 8.62 in)	188.2 x 329.3 x 279.6 mm (7.41 x 12.96 x 11.01 in)	303.8 x 369.9 x 319.8 mm 11.96 x 14.56 x 12.59 in
Net weight	3.66 kg (8.06 lbs)	6.17 kg (13.6 lbs)	11.59 kg (25.5 lbs)
Other			
Power supply unit	65W, 100-240V AC, 50/60 Hz	250W, 100-240V AC, 50/60 Hz	250W, 100-240V AC, 50/60 Hz
	 <b>Warning</b> <p>To reduce the risk of fire or electric shock, ensure that you only connect the power cord to a properly grounded electrical outlet.</p>		
Sound level	19.7 db(A)	21 db(A)	25 db(A)
	 <b>Note</b> <p>The sound level was tested at a bystander position, which is within one meter of the JBOD enclosure. The test device operated at low speed with the maximum number of drives installed.</p>		
Fans	System: 1 x 12 cm, 12V DC smart fan	System: 2 x 12 cm, 12V DC smart fans	System: 3 x 9.2 cm, 12V DC smart fans
	 <b>Warning</b> <p>To avoid potential injury or damage to the components, do not touch the fans while the device is connected to a power source.</p>		

Component	TL-D400S	TL-D800S	TL-D1600S
Operating temperature	0°C to 40°C (32°F to 104°F)		
Relative humidity	<ul style="list-style-type: none"> <li>• Non-condensing relative humidity: 5% to 95%</li> <li>• Wet-bulb temperature: 27°C (80.6°F)</li> </ul>		
Security slot	Kensington security slot		

#### Host Bus Adapters

Component	QXP-400eS-A1164	QXP-800eS-A1164	QXP-1600eS
Interface	PCIe Gen3 x2 (16Gbps)	PCIe Gen3 x4 (32Gbps)	PCIe Gen3 x8 (64Gbps)
Form factor	Low-profile	Low-profile	Low-profile
Dimensions (H x W x D)	104.65 x 68.9 x 12 mm 4.12 x 2.71 x 0.47 in	119.65 x 68.9 x 12 mm 4.71 x 2.71 x 0.47 in	119.65 x 68.9 x 12mm 4.71 x 2.71 x 0.47 in



#### Tip

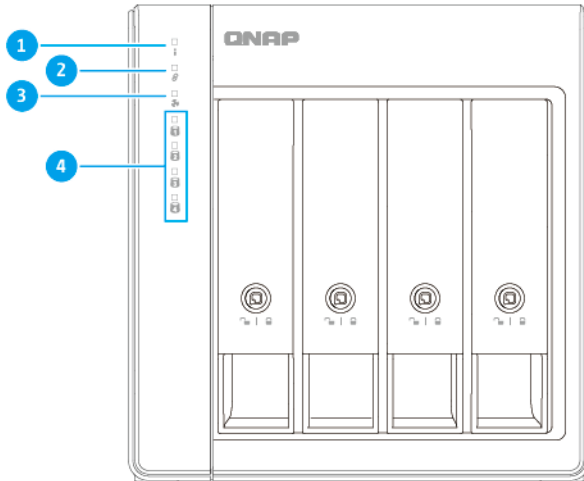
Model specifications are subject to change without prior notice. To see the latest specifications, go to <https://www.qnap.com>.

## Package Contents

Item	Quantity
JBOD enclosure	1
AC power adapter	TL-D400S: 1
Power cord	1
Connector cables	<ul style="list-style-type: none"> <li>• TL-D400S: 1 x SFF-8088</li> <li>• TL-D800S: 2 x SFF-8088</li> <li>• TL-D1600S: 4 x SFF-8088 to SFF-8644</li> </ul>
QXP host bus adapter	<ul style="list-style-type: none"> <li>• TL-D400S: QXP-400eS-A1164</li> <li>• TL-D800S: QXP-800eS-A1164</li> <li>• TL-D1600S: QXP-1600eS</li> </ul>
Drive tray keys	2
Screws for 2.5-inch drives	<ul style="list-style-type: none"> <li>• TL-D400S: 12</li> <li>• TL-D800S: 24</li> <li>• TL-D1600S: 48</li> </ul>
Screws for 3.5-inch drives	<ul style="list-style-type: none"> <li>• TL-D400S: 16</li> <li>• TL-D800S: 32</li> <li>• TL-D1600S: 64</li> </ul>
Quick Installation Guide (QIG)	1

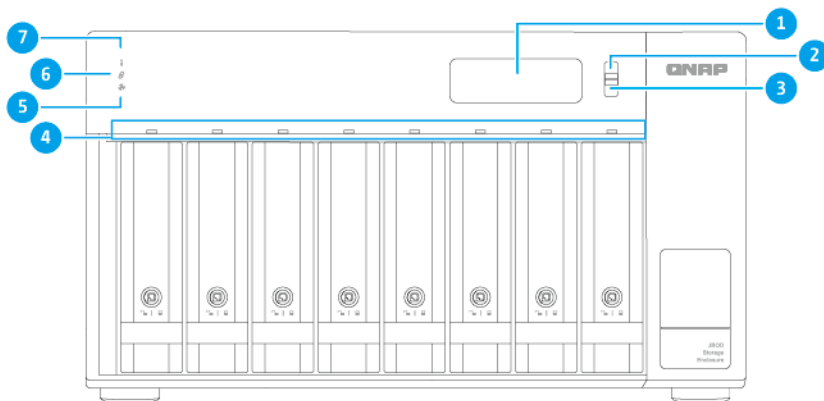
## Components

### Front Panel



#### TL-D400S

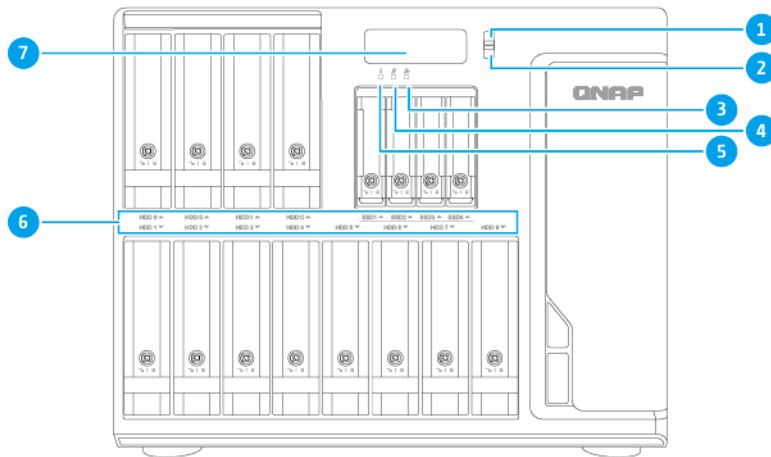
No.	Component	No.	Component
1	Status LED	3	Fan error LED
2	Link LED	4	Drive LEDs



#### TL-D800S

No.	Component	No.	Component
1	LCD panel	5	Fan error LED

No.	Component	No.	Component
2	Enter button	6	Link LED
3	Select button	7	Status LED
4	Drive LEDs	-	-

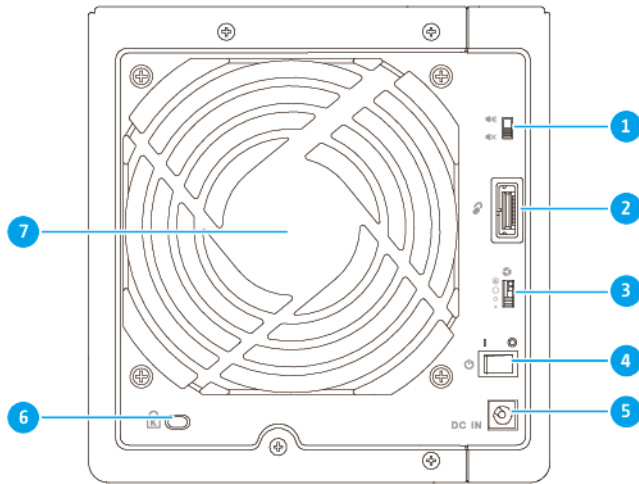


**TL-D1600S**

No.	Component	No.	Component
1	Enter button	5	Status LED
2	Select button	6	Drive LEDs
3	Fan error LED	7	LCD panel
4	Link LED	-	-

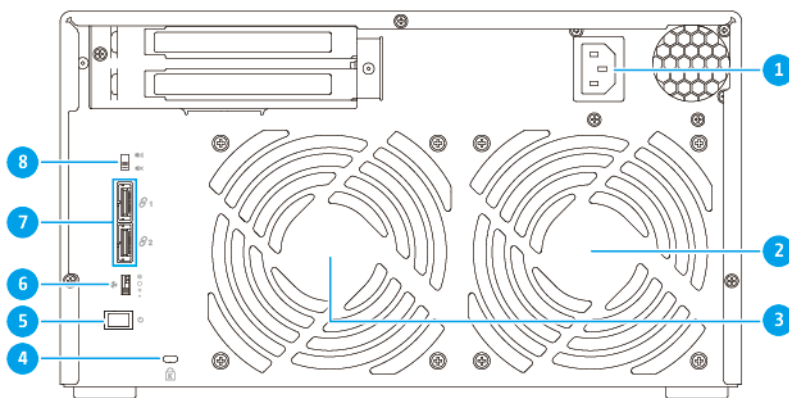


## Rear Panel



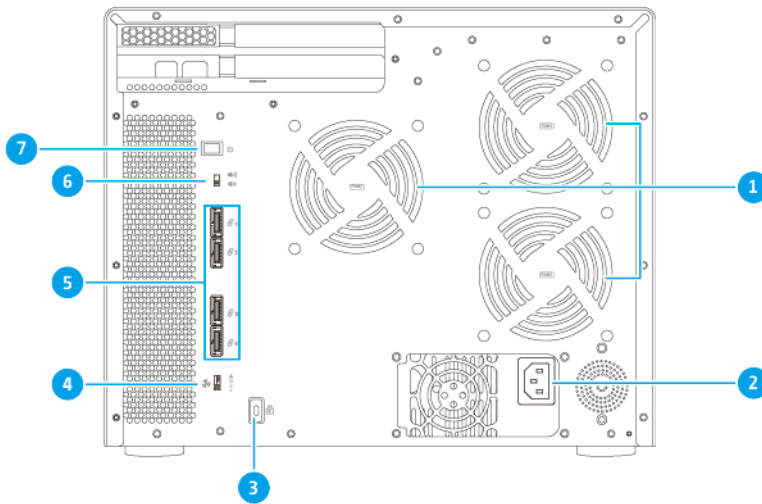
### TL-D400S

No.	Component	No.	Component
1	Audio alert switch	5	Power input
2	SFF-8088 port (drive bays 1-4)	6	Kensington security slot
3	Fan speed switch	7	System fan
4	Power switch	-	-



### TL-D800S

No.	Component	No.	Component
1	Power input	5	Power switch
2	System fan 1	6	Fan speed switch
3	System fan 2	7	SFF-8088 ports <ul style="list-style-type: none"> <li>• Port 1: Drive bays 1-4</li> <li>• Port 2: Drive bays 5-8</li> </ul>
4	Kensington security slot	8	Audio alert switch



**TL-D1600S**

No.	Component	No.	Component
1	System fans	5	SFF-8088 ports <ul style="list-style-type: none"> <li>• Port 1: 3.5-inch drive bays 1-4</li> <li>• Port 2: 3.5-inch drive bays 5-8</li> <li>• Port 3: 3.5-inch drive bays 9-12</li> <li>• Port 4: 2.5-inch drive bays 1-4</li> </ul>
2	Power input	6	Audio alert switch
3	Kensington security slot	7	Power switch
4	Fan speed switch	-	-

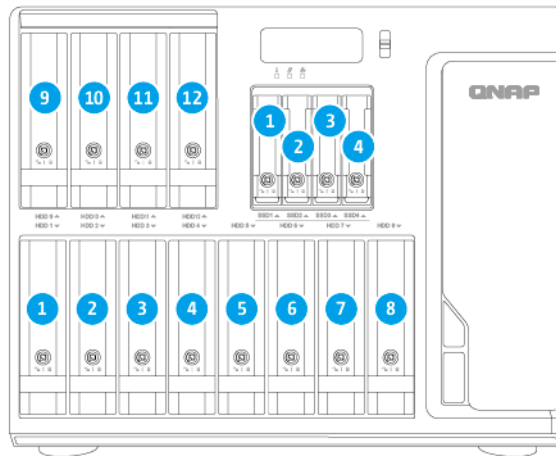
## Drive Numbering



### TL-D400S



### TL-D800S



## TL-D1600S

### Safety Information

The following instructions help ensure personal safety and environmental safety. Read these instructions carefully before performing any operations.

#### General Instructions

- The device should be stored in a secure location with restricted access, controlled through the use of a tool, lock and key, or any means of security.
- Only qualified, skilled, and authorized persons with knowledge of all restrictions, safety precautions, and installation and maintenance procedures should have physical access to the device.
- To avoid potential injury or damage to components, ensure that the drives and other internal system components have cooled before touching them.
- Observe electrostatic discharge (ESD) procedures to avoid potential injury or damage to components.

#### Power

- To reduce the risk of fire or electric shock, ensure that you only connect the power cord to a properly grounded electrical outlet.



Devices with redundant power supply may have one or more power supply unit (PSU) cords. To avoid serious injuries, a trained service technician must disconnect all PSU cords from the device before installing or replacing system components.

#### System Battery

- To avoid potential battery explosion, causing injury or damage to components, ensure that you replace the existing battery with a battery of the same type.

- Dispose of used batteries properly according to local regulations or the instructions of the battery manufacturer.

### Moving Parts

•



**Moving fan blades:** Keep your body parts away from moving fan blades while the device is connected to a power source.



•



**Moving components:** Keep your body parts away from other moving components.

### Installation Requirements

Category	Item
Environment	<ul style="list-style-type: none"> <li>• Room temperature: 0°C to 40°C (32°F to 104°F)</li> <li>• Non-condensing relative humidity: 5% to 95%</li> <li>• Wet-bulb temperature: 27°C (80.6°F)</li> <li>• Flat, anti-static surface without exposure to direct sunlight, liquids, or chemicals</li> </ul> <p><b>Important</b></p> <ul style="list-style-type: none"> <li>• The device should be stored in a secure location with restricted access, controlled through the use of a tool, lock, and key, or any means of security.</li> <li>• Only qualified, trained, and authorized administrators with knowledge of all restrictions, safety precautions, and installation and maintenance procedures should have physical access to the device.</li> </ul>

Category	Item
Hardware and peripherals	<ul style="list-style-type: none"> <li>• NAS or computer</li> <li>• Storage drives</li> </ul> <p> <b>Tip</b> For the list of compatible drive models, go to <a href="https://www.qnap.com/compatibility">https://www.qnap.com/compatibility</a>.</p> <ul style="list-style-type: none"> <li>• One or more SFF-8088 connector cables</li> <li>• QXP host bus adapter</li> </ul> <p> <b>Important</b> A QNAP QXP host bus adapter is required for connecting the JBOD enclosure to a host device. Third-party host bus adapters may not be compatible with QNAP JBOD enclosures.</p>
Tools	<ul style="list-style-type: none"> <li>• Phillips #1 or #2 screwdriver</li> <li>• Anti-static wrist strap</li> </ul>

## Setting Up the JBOD Enclosure

1. Place the JBOD enclosure in an environment that meets the requirements.  
For details, see [Installation Requirements](#).
2. Install the drives.  
For details, see the following topics:
  - [Installing 3.5-inch Drives on 3.5-inch Trays](#)
  - [Installing 2.5-inch Drives on 3.5-inch Trays](#)
  - [Installing Solid-State Drives on Solid-State Drive Trays](#)
3. Connect the power cord.
4. Connect the JBOD enclosure to your NAS or computer.  
For details, see the following topics:
  - [Connecting the JBOD Enclosure to a NAS](#)
  - [Connecting the JBOD Enclosure to a Computer](#)
5. Power on the JBOD enclosure.

## 3. Hardware Installation

This section provides information on installing drives and connecting the JBOD enclosure to a NAS or computer.

### Drive Installation

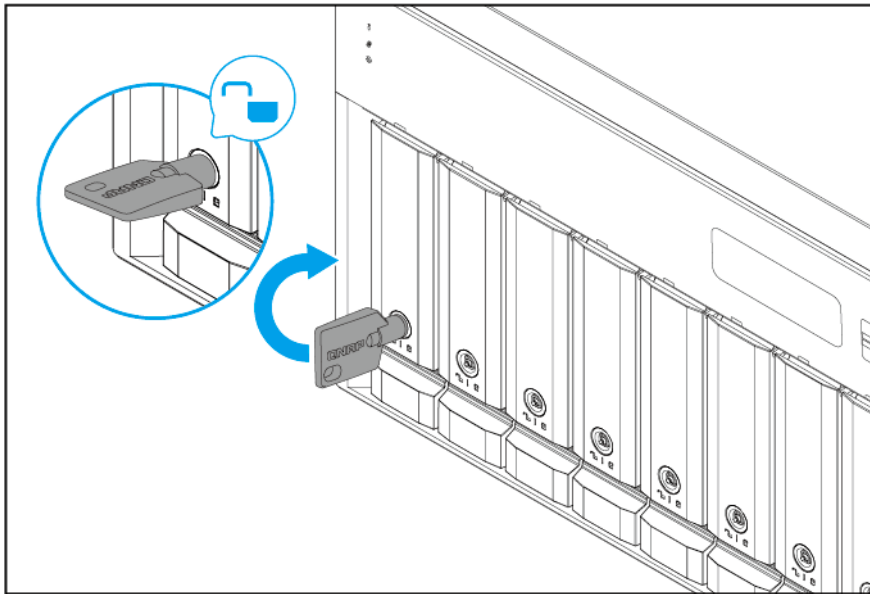
QNAP JBOD enclosures are compatible with 3.5-inch and 2.5-inch hard drives and 2.5-inch solid-state drives.

#### Installing 3.5-inch Drives on 3.5-inch Trays

**Warning**

Observe electrostatic discharge (ESD) procedures to avoid damage to components.

1. Power off the JBOD enclosure.
2. Remove a drive tray.
  - a. Optional: Unlock the tray.

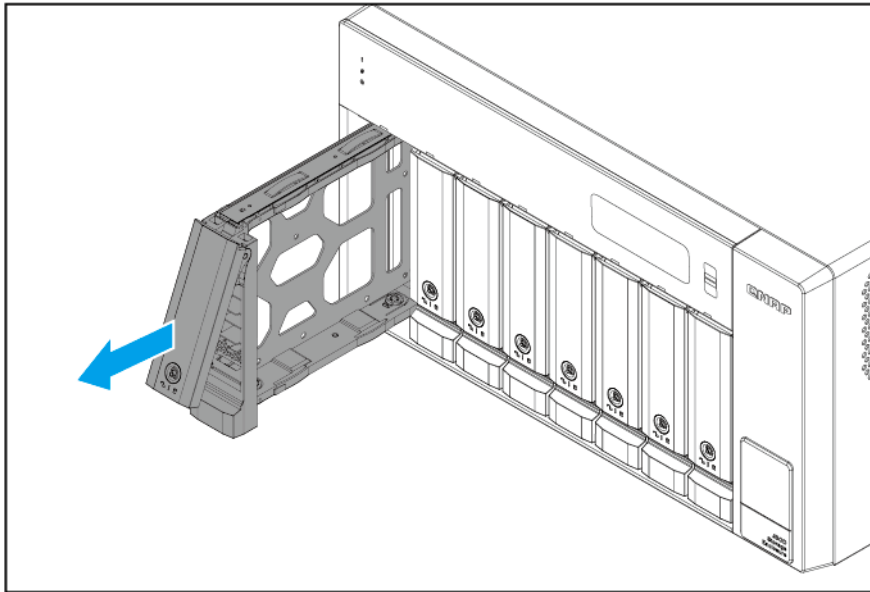
**Note**

The preinstalled drive trays come unlocked.

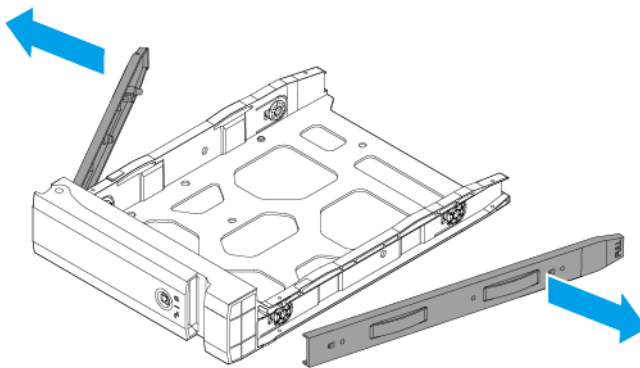
**Important**

Ensure that the drive tray keys are stored in a safe place.

- b. Pull the handle to release the tray.
- c. Pull the tray out.

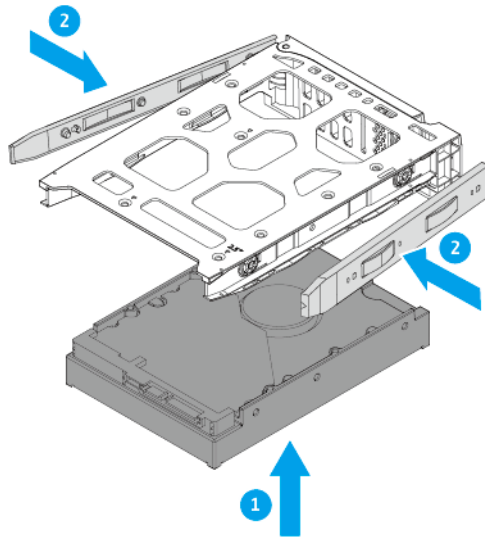


3. Install a drive on the tray.
  - a. Remove the fastening panels from the sides of the tray.

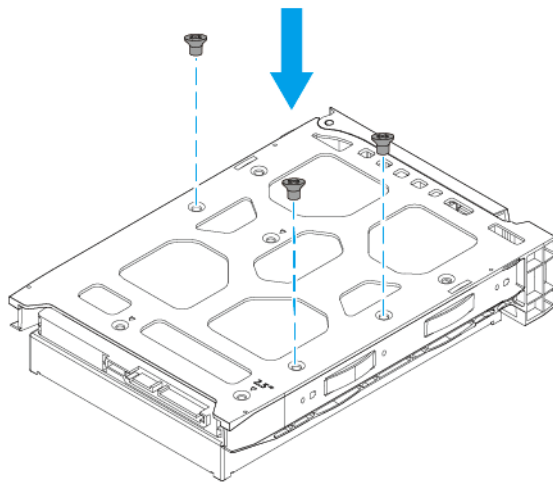


- b. Place the drive on the tray so that the holes on the sides of the drive are aligned with the holes on the sides of the tray.
    - c. Attach the fastening panels.





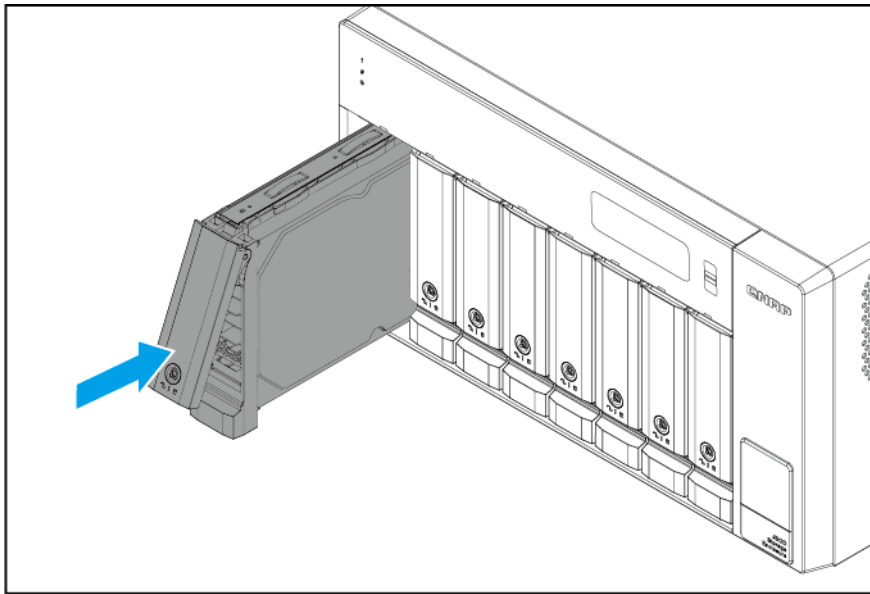
d. Optional: Attach the screws to further secure the drive.



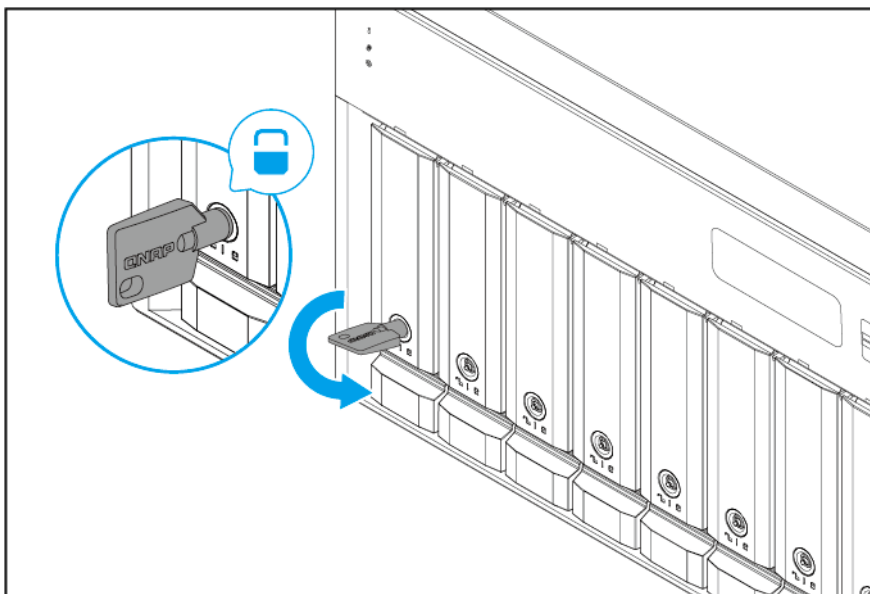
**Important**

QNAP recommends attaching the screws to the drive trays when transporting the device.

4. Load the tray into the drive bay.
  - a. Insert the tray into the bay.
  - b. Push the handle.



c. Optional: Lock the tray.



5. Power on the JBOD enclosure.



**Note**

The JBOD enclosure may take up to 30 seconds to detect the new drive.

## Installing 2.5-inch Drives on 3.5-inch Trays



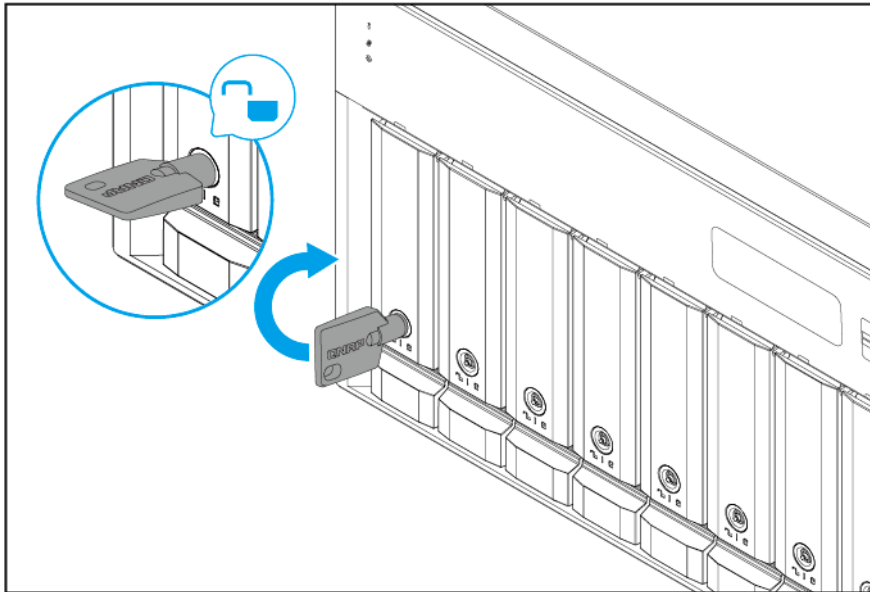
**Warning**

Observe electrostatic discharge (ESD) procedures to avoid damage to components.

1. Power off the JBOD enclosure.

2. Remove a drive tray.

a. Optional: Unlock the tray.



**Note**

The preinstalled drive trays come unlocked.

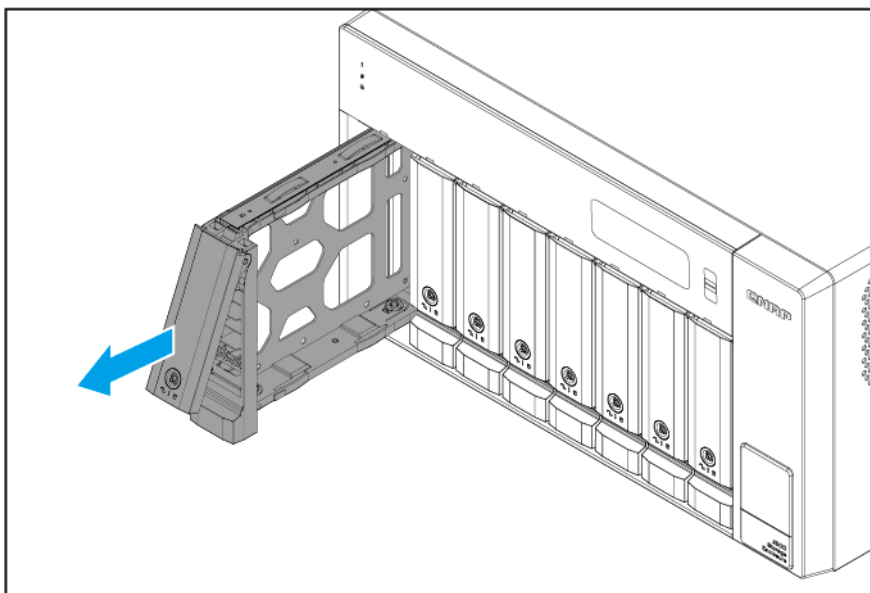


**Important**

Ensure that the drive tray keys are stored in a safe place.

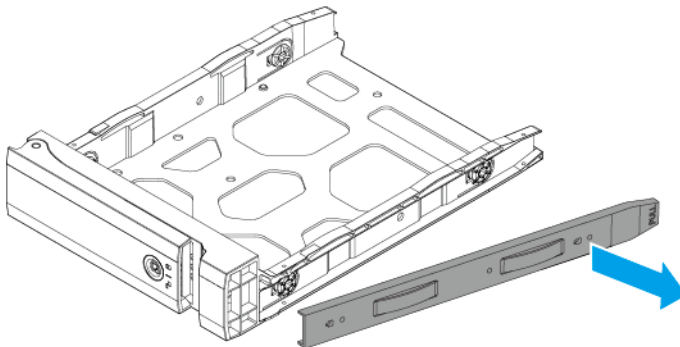
b. Pull the handle to release the tray.

c. Pull the tray out.

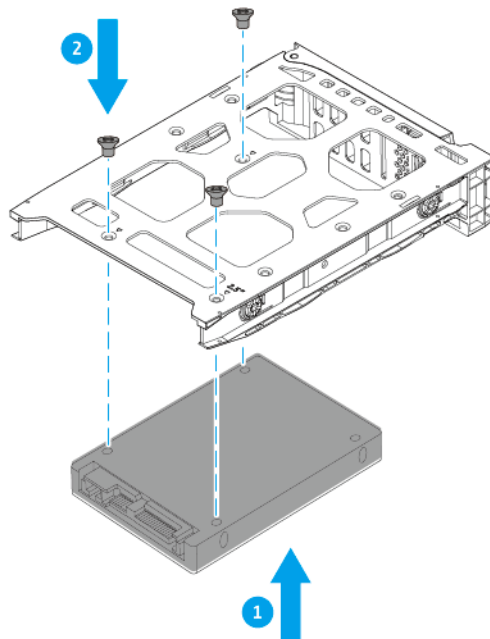


3. Install a drive on the tray.

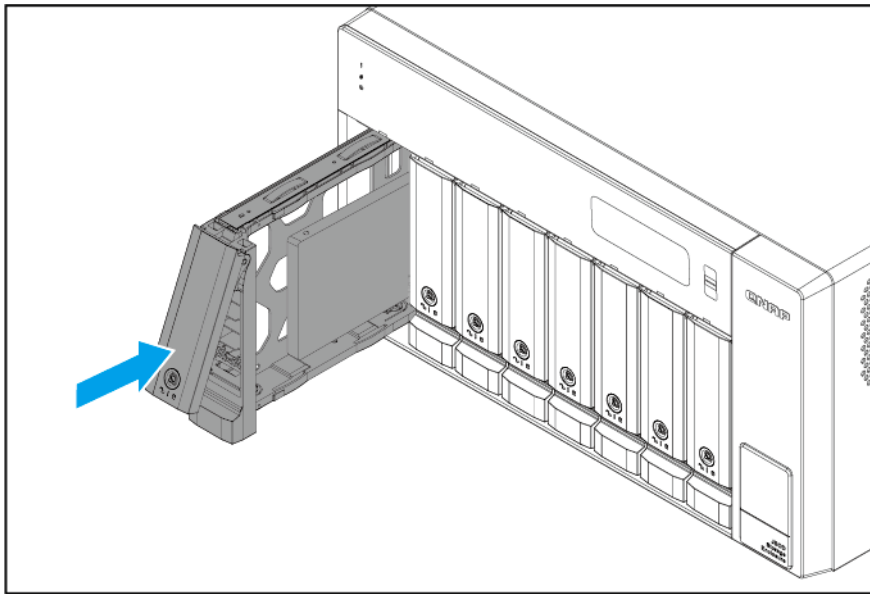
- a. Remove the right fastening panel from the tray.



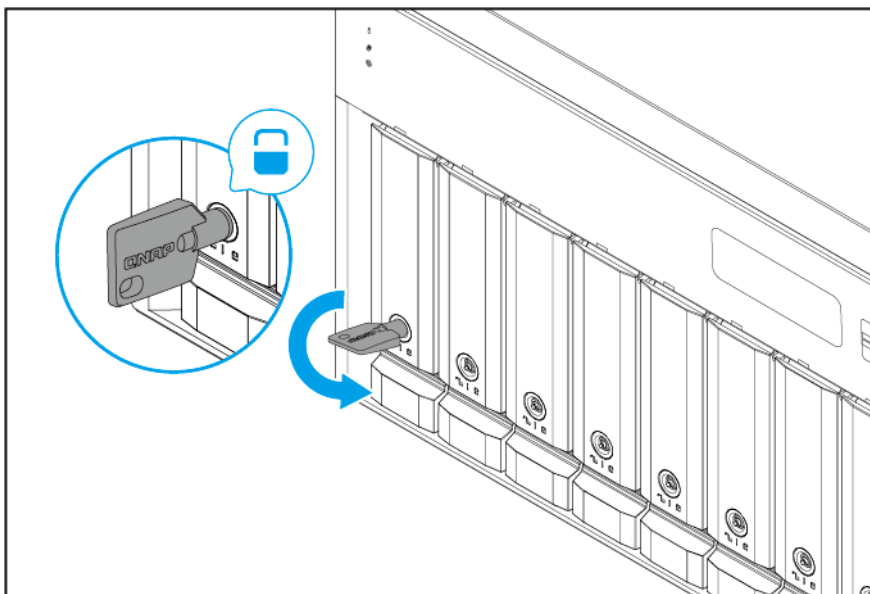
- b. Place the drive on the tray so that the holes on the bottom of the drive are aligned with the holes on the bottom of the tray.
- c. Attach the screws.



4. Load the tray into the drive bay.
  - a. Insert the tray into the bay.
  - b. Push the handle.



c. Optional: Lock the tray.



5. Power on the JBOD enclosure.



**Note**

The JBOD enclosure may take up to 30 seconds to detect the new drive.

## Installing Solid-State Drives on Solid-State Drive Trays

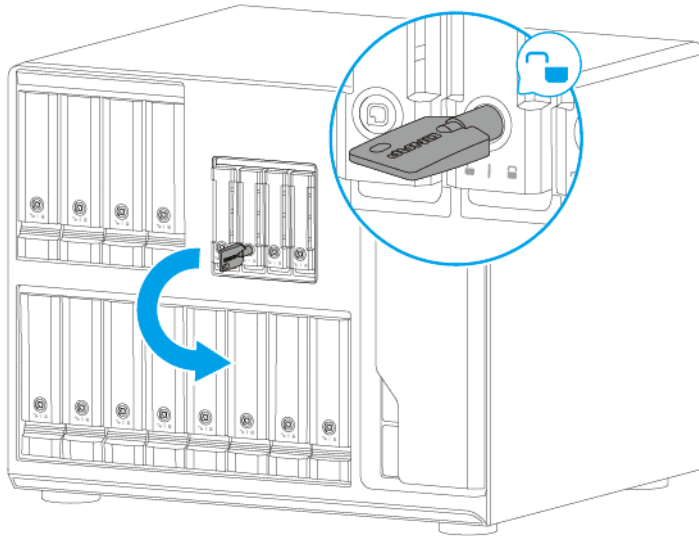


**Warning**

Observe electrostatic discharge (ESD) procedures to avoid damage to components.

1. Power off the JBOD enclosure.

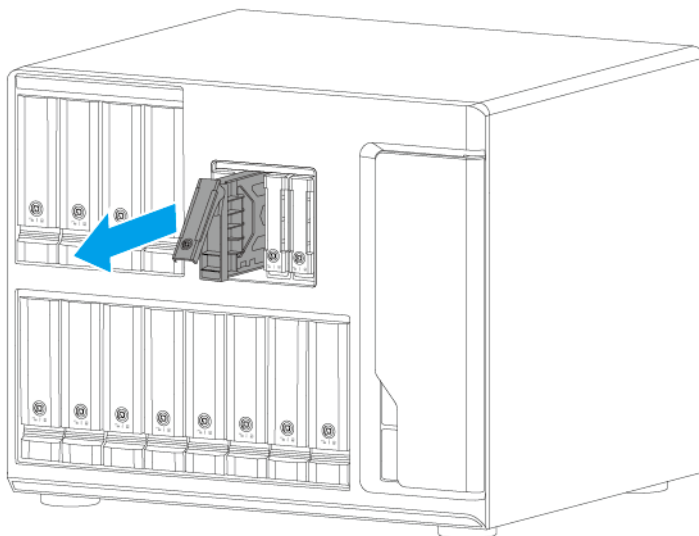
2. Remove the drive tray.
  - a. Optional: Unlock the tray.



**Note**  
The preinstalled drive trays come unlocked.

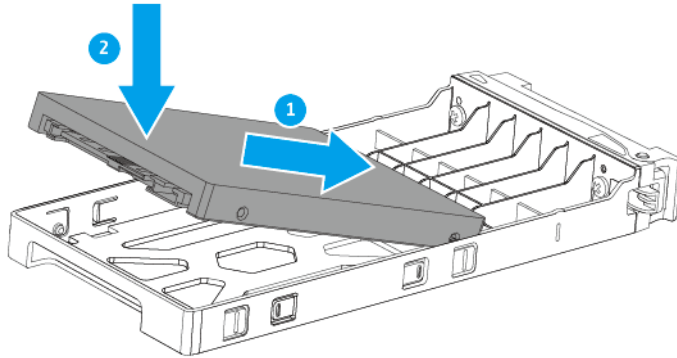
**Important**  
Ensure that the drive tray keys are stored in a safe place.

- b. Pull the tray handle outward.
- c. Pull the tray out.

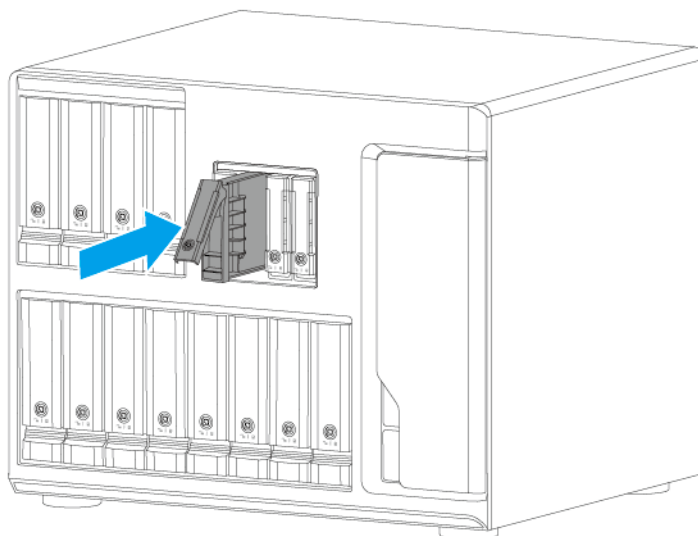


3. Install a drive on the tray.

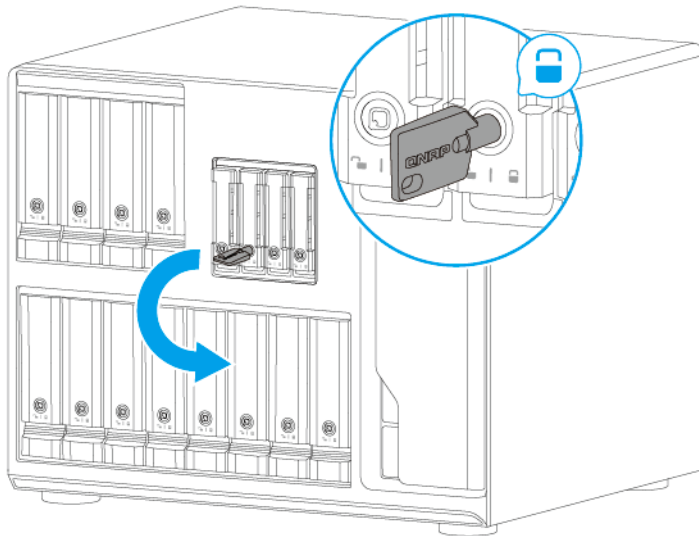
- a. Align the SATA connector on the drive with the opening at the end of the tray.
- b. Place the drive on the tray.



4. Load the tray into the drive bay.
  - a. Insert the tray into the bay.
  - b. Push the handle.



- c. Optional: Lock the tray.



5. Power on the JBOD enclosure.



#### Note

The JBOD enclosure may take up to 30 seconds to detect the new drive.

## Connecting the JBOD Enclosure to a NAS



#### Important

- QTS can support a maximum of two JBOD enclosures.
- QNAP JBOD enclosures cannot be connected to more than one host at a time.

1. Power off the NAS.
2. Power off the JBOD enclosure.
3. Connect the JBOD enclosure to the NAS.
  - a. Connect one or more SFF-8088 connector cables to the SFF-8088 ports on the JBOD enclosure.
  - b. Connect one or more SFF-8088 connector cables to the SFF-8088 or SFF-8644 ports on the host bus adapter installed in the NAS.



#### Note

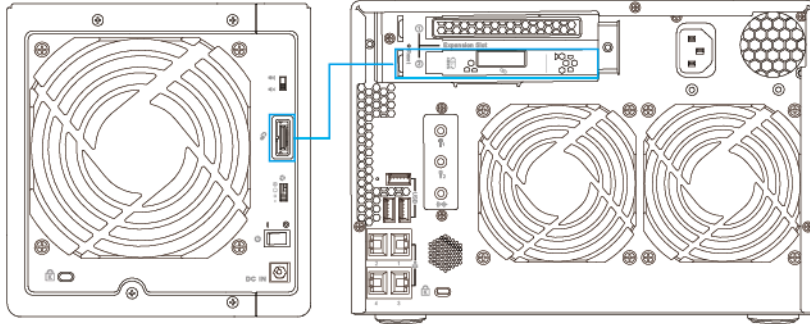
Refer to the hardware installation section of the NAS user guide for instructions on installing expansion cards.



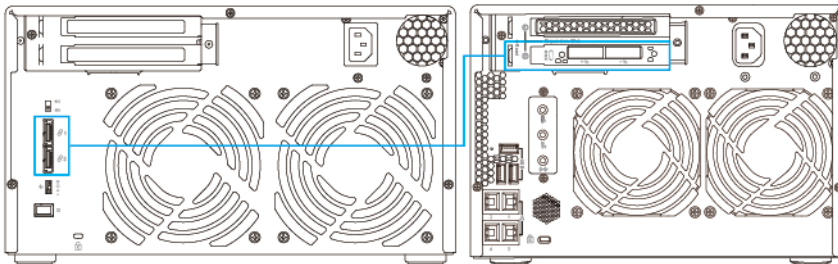
#### Important

The QNAP QXP host bus adapter is required for connecting the JBOD enclosure to a host device. Third-party host bus adapters may not be compatible with QNAP JBOD enclosures.

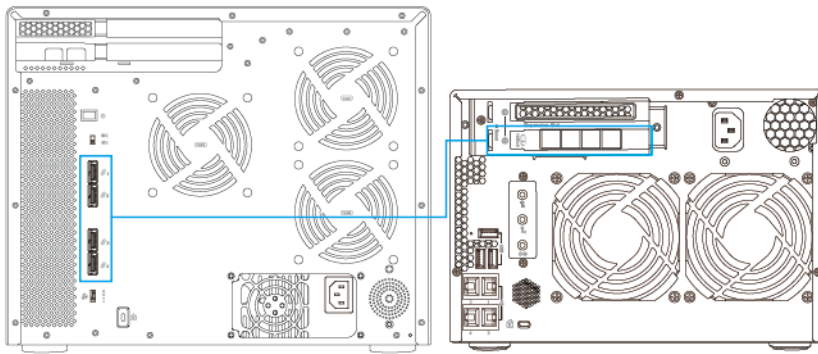




**TL-D400S**



**TL-D800S**



### TL-D1600S

4. Power on the JBOD enclosure.
5. Power on the NAS.
6. Verify that the JBOD enclosure is recognized by the NAS.
  - a. Log on to QTS as administrator.
  - b. Go to **Main Menu > Storage & Snapshots > Overview > Storage** .
  - c. Verify that the JBOD enclosure are listed.



#### Note

The NAS may take up to 30 seconds to detect the JBOD enclosure and the installed drives.

## Connecting the JBOD Enclosure to a Computer



#### Important

QNAP JBOD enclosures cannot be connected to more than one host at a time.

1. Power off the computer.
2. Power off the JBOD enclosure
3. Connect the JBOD enclosure to the computer.
  - a. Connect one or more SFF-8088 connector cables to the SFF-8088 ports on the JBOD enclosure.
  - b. Connect one or more SFF-8088 connector cables to the SFF-8088 or SFF-8644 ports on the host bus adapter installed in the computer.



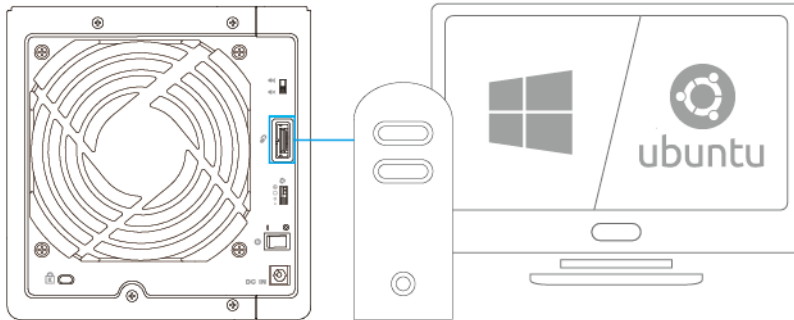
#### Note

Refer to the hardware installation instructions for the computer for information on installing expansion cards.

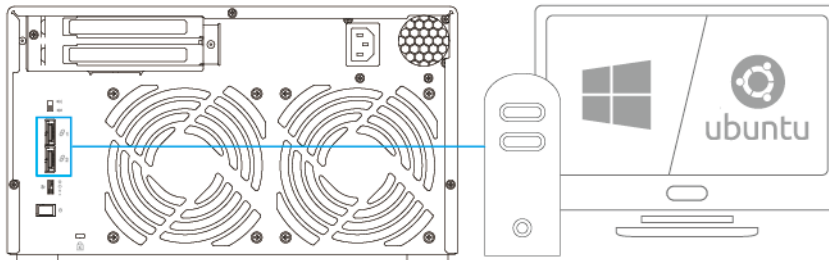


**Important**

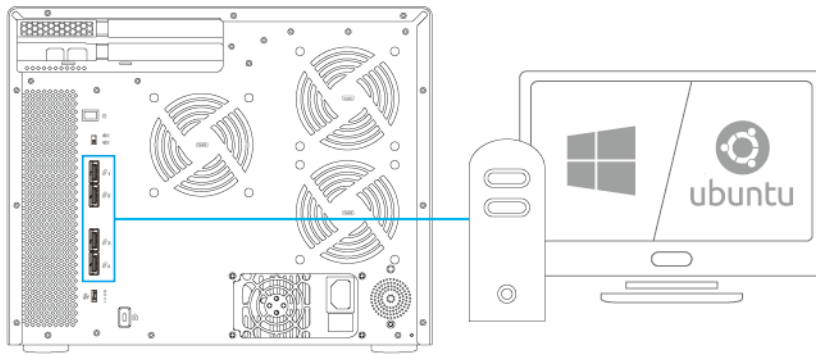
The QNAP QXP host bus adapter is required for connecting the JBOD enclosure to a host device. Third-party host bus adapters may not be compatible with QNAP JBOD enclosures.



**TL-D400S**



**TL-D800S**



### TL-D1600S

4. Power on the JBOD enclosure.
5. Power on the computer.
6. Verify that the JBOD enclosure is recognized by the computer.
  - a. Go to your computer's disk management utility or open QNAP JBOD Manager in Microsoft Windows or Linux Ubuntu.



#### Note

To download QNAP JBOD Manager, go to <https://download.qnap.com>.

- b. Verify that the JBOD enclosure is listed.

## 4. Basic Operations

This chapter describes basic operations of the JBOD enclosure.

### LCD Panel




Some JBOD enclosures have an LCD panel that allows you to view status information.



#### Tip

- Press **Enter** to view the JBOD enclosure name and firmware version.
- Press **Select** to browse status messages.

Message Type	System Message	Description
System Status	System Booting	The JBOD enclosure is booting.
	SFF8088 Port {1} {2}	A host is connected to the port. <ul style="list-style-type: none"> <li>• {1}: Port ID</li> <li>• {2}: Host server name</li> </ul>
	SFF8088 Port {1} Unknown Host	A host is connected to the port but the host cannot be identified. {1}: Port ID
	SFF8088 Port {1} ---	No host is connected to the port. {1}: Port ID
	Model Name {1}	{1}: JBOD enclosure model name
	Fan Speed Set To {1}	{1}: Fan speed setting: <ul style="list-style-type: none"> <li>• Auto</li> <li>• High</li> <li>• Medium</li> <li>• Low</li> </ul>
	Storage Mode {1}	{1}: Storage mode: <ul style="list-style-type: none"> <li>• External Storage</li> <li>• NAS Storage</li> </ul>

Message Type	System Message	Description
Event	Port {1} Connected To {2}	A host was connected to the port. <ul style="list-style-type: none"> <li>• {1}: Port ID</li> <li>• {2}: Host server name</li> </ul>
	Fan Speed Set To {1}	The fan speed setting was changed. {1}: Fan speed setting: <ul style="list-style-type: none"> <li>• Auto</li> <li>• High</li> <li>• Medium</li> <li>• Low</li> </ul>
Error	Port {1} Disconn. From {2}	A host was disconnected from the port. <ul style="list-style-type: none"> <li>• {1}: Port ID</li> <li>• {2}: Host server name</li> </ul>
	Fan {1} Error	The fan is not functioning normally. {1}: Fan ID
	Temp. Warning	The JBOD enclosure is overheated. <div style="display: flex; align-items: center;">  <div> <p><b>Note</b></p> <p>The default temperature warning threshold is 65°C.</p> </div> </div>
	Temp. Critical	The JBOD enclosure is critically overheated. <div style="display: flex; align-items: center;">  <div> <p><b>Note</b></p> <p>The temperature critical threshold is 70°C.</p> </div> </div>
Confirmation	Clear messages?	Clear event and error messages. <div style="display: flex; align-items: center;">  <div> <p><b>Tip</b></p> <ul style="list-style-type: none"> <li>• Press <b>Select</b> to toggle between <b>Yes</b> and <b>No</b>.</li> <li>• Press <b>Enter</b> to confirm.</li> </ul> </div> </div>

## LEDs

LEDs indicate system status and related information when the device is powered on. The following LED information applies only when the drive is correctly installed and when the device is connected to the network or to a host.

For details on the location of the LEDs, see [Front Panel](#).

LED	Status	Description
System Status	Green	The device is ready.
	Red	<ul style="list-style-type: none"> <li>The system fan is not functioning.</li> <li>The system temperature is over the threshold.</li> </ul>
Link	Green	The device is connected to the host.
	Off	The device is not connected to the host.
Fan error	Red	The system fan is not functioning.
Drive	Green	<ul style="list-style-type: none"> <li>The device is powered on.</li> <li>The drive can be accessed.</li> </ul>
	Flashes green and red alternately every 0.5 seconds	Data is being accessed.
	Red	<ul style="list-style-type: none"> <li>A drive read/write error occurred.</li> <li>The drive temperature is over the threshold.</li> </ul>

### Audio Alert



**Note**

The audio alert can be toggled on and off by using the audio alert switch on the rear panel.

Duration	Frequency	Description
Short beep (0.5 seconds)	1	<ul style="list-style-type: none"> <li>The link is up.</li> <li>The link is down.</li> </ul>
Long beep (2 seconds)	3 (every 5 minutes)	<ul style="list-style-type: none"> <li>The system fan is not functioning.</li> <li>The system temperature is over the threshold.</li> </ul> <div style="border-left: 2px solid #0070C0; padding-left: 10px; margin-top: 10px;"> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>The default temperature warning threshold is 65°C. You can set the threshold to a temperature between 55°C and 69°C using QNAP JBOD Manager.</li> <li>The temperature critical threshold is 70°C.</li> </ul> </div>

### Fan Speed Switch

The rear panel includes a fan speed switch for manually configuring the speed of the system fans.

Fan speed settings:

- Auto  
When set to Auto, the fan speed changes automatically according to the internal temperature of the device.
- High

- Medium
- Low



## 5. Troubleshooting

This chapter describes basic troubleshooting information.

### Forcing Storage & Snapshots or QNAP JBOD Manager to Recognize the JBOD Enclosure

If Storage & Snapshots or QNAP JBOD Manager is unable to locate the JBOD enclosure during operation, the drives or data may be faulty.

1. Power off the JBOD enclosure.
2. Remove all drives.
3. Power on the JBOD enclosure.
4. Locate the JBOD enclosure using Storage & Snapshots or QNAP JBOD Manager.
5. Reinsert the drives.
6. Continue with operation.

### Hot-Swapping Failed Drives

The JBOD enclosure supports hot-swapping of drives in the following situations:

- RAID 1: One member drive fails
- RAID 5: One member drive fails
- RAID 10:
  - One member drive fails
  - Two member drives fail (one in bay 1 or 2 and one in bay 3 or 4)

1. Log on to QTS.
2. Go to **Main Menu > Storage & Snapshots > Storage > External Storage** .
3. Locate the failed drive.
4. Prepare a new hard drive with a capacity that is the same as or larger than the failed hard drive.
5. Remove the failed drive from the JBOD enclosure.
6. Wait for 30 seconds or until the JBOD enclosure beeps.
7. Remove the failed drive from the drive tray.
8. Insert the new drive into the drive tray.
9. Install the new drive.  
The JBOD enclosure beeps.
10. Wait for 30 seconds or until the JBOD enclosure beeps.
11. Go to **Main Menu > Storage & Snapshots > Storage > Storage/Snapshots** .

12. Locate the volume that contains the new drive and then verify that the status is `Rebuilding`.

## Support and Other Resources

QNAP provides the following resources:

Resource	URL
Documentation	<a href="https://docs.qnap.com">https://docs.qnap.com</a>
Service Portal	<a href="https://service.qnap.com">https://service.qnap.com</a>
Downloads	<a href="https://download.qnap.com">https://download.qnap.com</a>
Community Forum	<a href="https://forum.qnap.com">https://forum.qnap.com</a>

## 6. Glossary

### **QTS**

QNAP NAS operating system

### **QNAP JBOD Manager**

Software utility for Windows, Linux, and macOS that allows you to view and configure QNAP JBOD enclosures

### **Storage & Snapshots**

QTS utility that allows you to view and configure QNAP JBOD enclosures connected to a QNAP NAS

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Version 3, 29 June 2007

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## END OF TERMS AND CONDITIONS

### FCC Notice

#### FCC Class B Notice



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.



#### Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.



#### Important

Any modifications made to this device that are not approved by QNAP Systems, Inc. may void the authority granted to the user by the FCC to operate this equipment.

### CE Notice



This QNAP NAS complies with CE Compliance Class B.

## SJ/T 11364-2006



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壳体	0	0	0	0	0	0
显示	0	0	0	0	0	0
印刷电路板	0	0	0	0	0	0
金属螺帽	0	0	0	0	0	0
电缆组装	0	0	0	0	0	0
风扇组装	0	0	0	0	0	0
电力供应组装	0	0	0	0	0	0
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