

The QNAP logo is displayed in white, bold, uppercase letters within a blue rounded rectangular box in the top-left corner of the page.

QNAP

HS-264

User Guide

A decorative graphic at the bottom of the page features a complex network of interconnected nodes and lines. The nodes are represented by small circles in various colors (white, blue, black, red), and the lines are thin, light-colored lines that create a sense of depth and connectivity. The background is a gradient of light blue to white.

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1. Important Information

Original Packaging

Please keep the original packaging and packaging materials. If you want to return the product or send it for repairs, please use the original packaging to avoid damage.

QNAP reserves the right not to provide a refund or warranty service for products that are damaged due to improper packaging.

Hardware Defects

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](#).

Safety information

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

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.

WARNING



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

WARNING



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



To avoid serious injuries, a trained service technician must disconnect all PSU cords from the device before installing or replacing system components.

Moving Parts

WARNING



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



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

The device is not suitable for use in locations where children are likely to be present.

System Battery

WARNING



INGESTION HAZARD

- This product may contain a button battery.
- Keep batteries out of reach of children.
- If swallowed, a lithium button battery can cause severe or fatal injuries within 2 hours.
- If you think batteries may have been swallowed or placed inside any part of the body, seek immediate medical attention.

- 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.

- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- For information on the type and voltage of the button battery in your device, please see the hardware specification table.
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat, or incinerate. Doing so may result in injury due to venting, leakage, or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, or different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

Rail Kits

Rackmount models may require rail kits for installation onto a server rack or cabinet.

To ensure equipment and personal safety, please carefully read the installation instructions for your rail kit before you install the rail kit and mount your device.

To check if your device is a rackmount unit, see the hardware specification table.

WARNING

- When the rail kit is installed on the server rack, do not fully extend and unlatch the rails except when mounting or unmounting a device.
- Leaving the rails fully extended out and unlatched may cause heavy equipment to fall. This can cause equipment damage and severe or even fatal injuries.
- Before you prepare the rails for device mounting or unmounting, please carefully read and ensure you understand the installation instructions.
- Do not place any objects or add any extra load onto the device or rails when mounting or unmounting a device.
- When mounting a device, slide the device all the way into the server rack to fully latch the rails and secure the device to the server rack.

2. Product Overview

This chapter provides basic information about the QNAP device.

About the HS-264

Designed as a multimedia center for digital homes, the HS-264 provides various apps and utilities (such as QuMagie, Video Station, Music Station, and Plex Media Server) for storing and enjoying all your photos, videos, and music. High performance and streaming quality are ensured by an Intel® Celeron® N5105 quad-core processor and two 2.5GbE ports, while the dual HDMI (4K @60Hz) output enables you to use the HS-264 as a Home Theater PC for an amazing entertainment experience.

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](#).

Tip

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

Component	HS-264
Processor	
CPU	Intel® Celeron® N5105
Frequency	4-core/4-thread 2.9 GHz burst
Architecture	x86 64-bit
Encryption engine	AES-NI
Memory	
Pre-installed memory	8 GB RAM DDR4 (not expandable)

Component	HS-264
Flash memory	4 GB (dual-boot OS protection)
Storage	
Drive bays	2 x 3.5-inch SATA 6 Gbps Tip The drive bays are backward compatible with SATA 3 Gbps drives.
Drive compatibility	<ul style="list-style-type: none"> • 3.5-inch SATA hard disk drives • 2.5-inch SATA hard disk drives • 2.5-inch SATA solid-state drives Tip <ul style="list-style-type: none"> • For the list of compatible drive models, go to https://www.qnap.com/compatibility. • To avoid excess vibration and heat generation, use: 5400 RPM hard drives; low-temperature, low-noise hard drives; or low-temperature SSDs.
SSD cache acceleration support	This device supports SSD cache acceleration for all drives.
Hot-swapping	This device supports hot-swapping for all drives.
Network	
2.5 Gigabit network interface	2 x 2.5 GbE RJ45 Note The 2.5 Gigabit Ethernet port supports the following network connectivity speeds: 2.5 GbE, 1 GbE, 100 Mb, and 10 Mb.
External I/O Ports & Expansion Slots	
USB ports	2 x USB 3.2 Gen 2 Type-A
HDMI ports	2 x HDMI
Interface	

Component	HS-264
Buttons	<ul style="list-style-type: none"> • Power • Reset
IR sensor	<p>1</p> <div style="background-color: #e6f2ff; padding: 10px; border: 1px solid #d9e1f2;"> <p>Note</p> <ul style="list-style-type: none"> • The HS-264 supports the QNAP RM-IR004 remote control, which is sold separately. For purchasing options, see the QNAP Store. • The RM-IR004 remote control can be used with certain QTS multimedia or streaming apps including HybridDesk Station. • The RM-IR004 provides four colored buttons with user-defined functions allowing you to customize the functionality of the remote control. To configure these buttons, install and use QButton from the App Center. </div>
Dimensions	
Form factor	Compact
Dimensions (H x W x D)	41.3 × 302 × 220 mm (1.62 x 11.89 x 8.66 in)
Net weight	1.56 kg (3.44 lbs)
Others	
Power supply unit	External 60W adapter, 100-240V DC
System battery	CR2032 lithium battery (3V, 225 mAh) <div style="background-color: #ffe6e6; padding: 10px; border: 1px solid #f2d2d2; margin-top: 10px;"> <p>Warning</p> <p>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.</p> </div>
Operating temperature	0°C to 40°C (32°F to 104°F)
Relative humidity	<ul style="list-style-type: none"> • Non-condensing relative humidity: 5% to 95% • Wet-bulb temperature: 27°C (80.6°F)

Tip

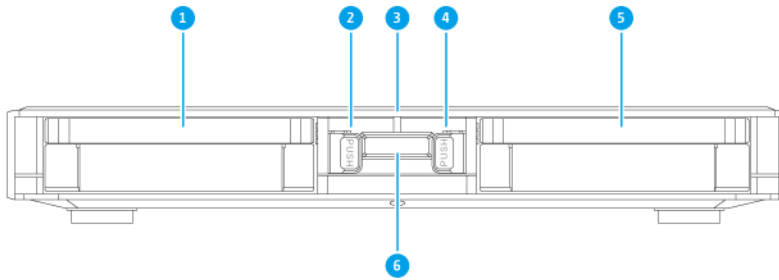
Model specifications are subject to change without prior notice. To see the latest specifications, go to <https://www.qnap.com>.

Package Contents

Item	Quantity
HS-264	1
AC power adapter	1
Power cord	1
Ethernet cables	1
Screws for 3.5-inch drives	8
Screws for 2.5-inch drives	6
Quick Installation Guide (QIG)	1

Components

Front Panel

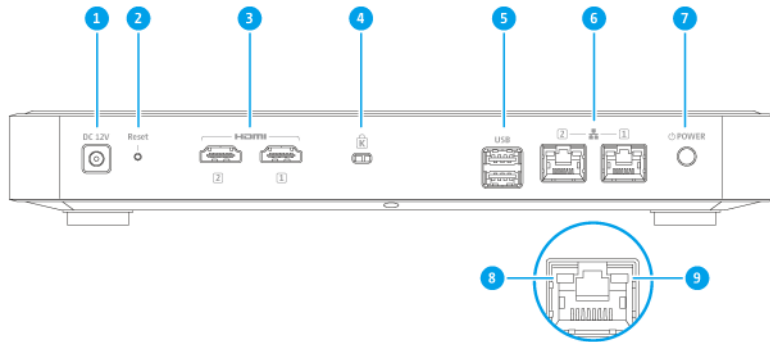


Note

This image shows the HS-264 without the front cover attached.

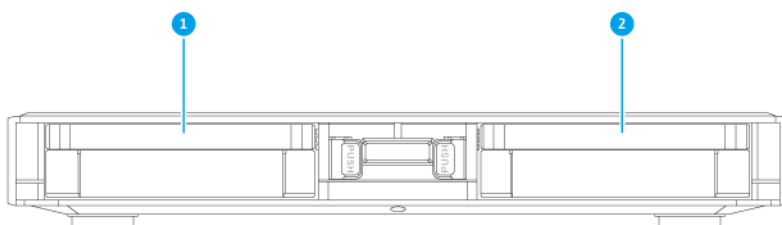
No.	Component	No.	Component
1	Drive bay 1	4	Drive bay latch
2	Drive bay latch	5	Drive bay 2
3	Status LED	6	IR sensor

Rear Panel



No.	Component	No.	Component
1	Power input	6	2.5 Gigabit Ethernet ports (RJ45)
2	Reset button	7	Power button
3	HDMI ports	8	2.5 Gigabit Ethernet activity LED
4	Kensington security slot	9	2.5 Gigabit Ethernet speed LED
5	USB 3.2 Gen 2 Type-A ports	-	-

Drive Numbering



Note

This image shows the HS-264 without the front cover attached.

Installation Requirements

Category	Item
Environment	<ul style="list-style-type: none"> • Room temperature: 0°C to 40°C (32°F to 104°F) • Non-condensing relative humidity: 5% to 95% • Wet-bulb temperature: 27°C (80.6°F) • Flat, anti-static surface without exposure to direct sunlight, liquids, or chemicals • Free from objects that may obstruct NAS ventilation or apply pressure to the NAS or power cord
Hardware and peripherals	<ul style="list-style-type: none"> • Storage drives For the list of compatible drive models, go to https://www.qnap.com/compatibility. • Network cable

Category	Item
Tools	<ul style="list-style-type: none"> • Phillips #1 or #2 screwdriver • Anti-static wrist strap

Setting Up the NAS

Important

Read all safety requirements and information carefully before setting up the NAS or installing NAS components.

1. Place your NAS device in an environment that meets the requirements.
For details, see [Installation Requirements](#).
2. Install the drives.
For details, see [Drive Installation](#).

Tip

For the list of compatible drive models, go to <https://www.qnap.com/compatibility>.

3. Connect the Expansion Units.
[Connecting USB Expansion Units](#)
4. Connect the power cord and all applicable cables.
5. Power on the NAS.
For details, see [Power Button](#).
6. Install QTS.
For details, see [QTS Installation](#).
7. Log on to QTS.

3. Installation and Configuration

This chapter provides specific hardware and firmware installation and configuration steps.

Hardware Installation

This section provides information on installing drives and USB expansion units.

Drive Installation

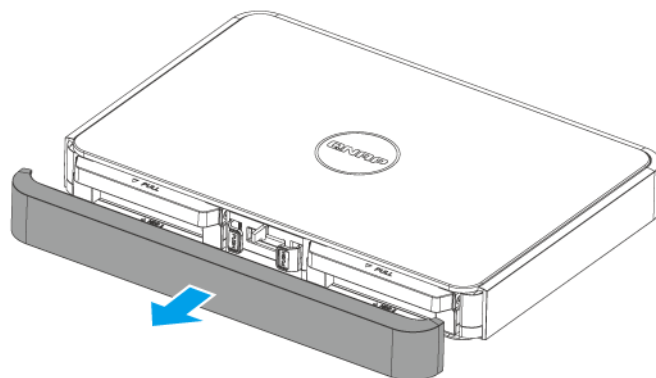
The HS-264 is compatible with 3.5-inch and 2.5-inch hard drives, and 2.5-inch solid-state drives.

Installing 3.5-inch Drives on 3.5-inch Trays

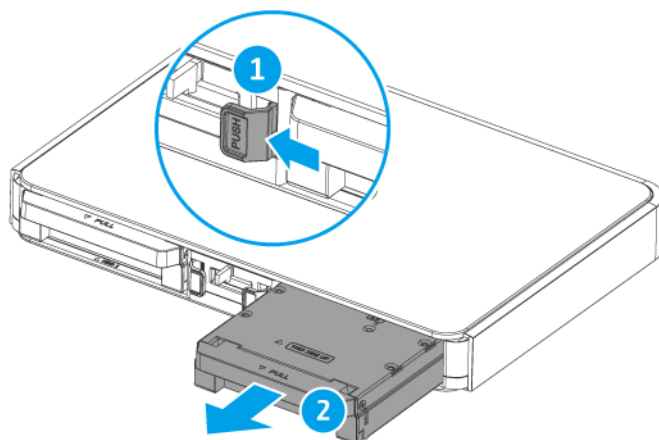
Warning

- Installing a drive deletes all data on the drive.
- Observe electrostatic discharge (ESD) procedures to avoid damage to components.

1. Power off the NAS.
2. Remove the front cover.

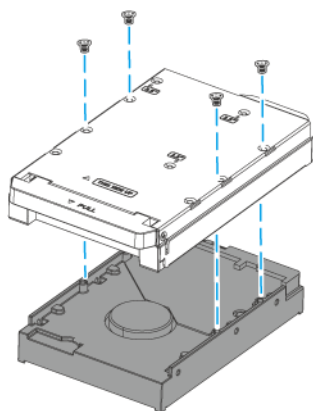


3. Remove a drive tray by simultaneously pressing the latch and pulling the tray.

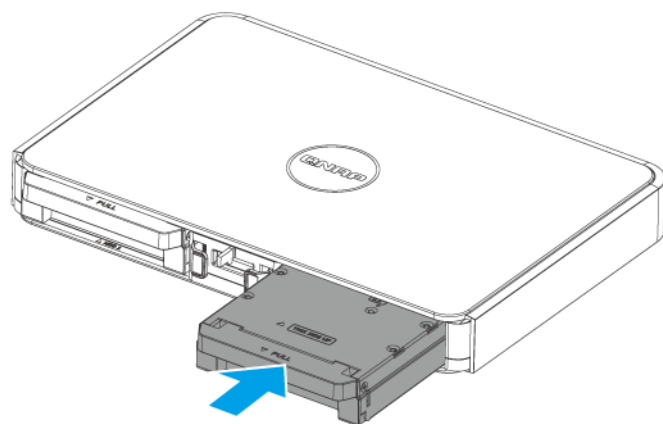


4. Install a drive on the tray.

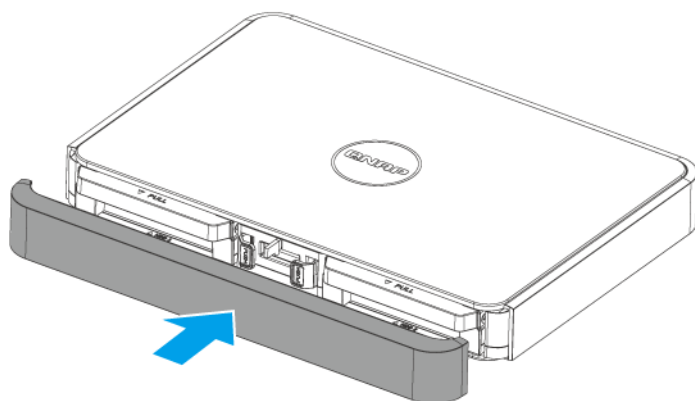
- a. Place the drive on the tray so that the holes on the bottom of the drive are aligned with the holes on the bottom of the tray.
- b. Attach the screws.



5. Insert the tray into the bay.



6. Attach the front cover.



7. Power on the NAS.

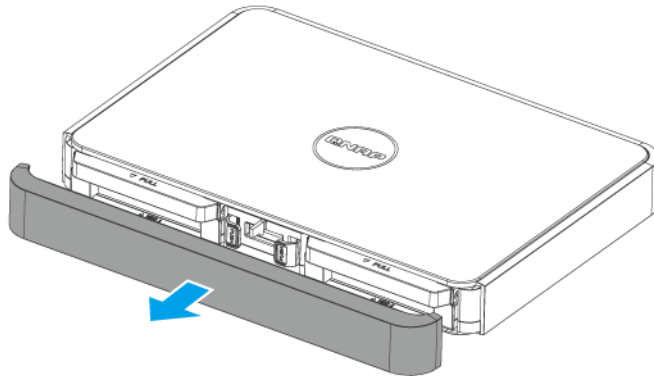
Installing 2.5-inch Drives on 3.5-inch Trays

Warning

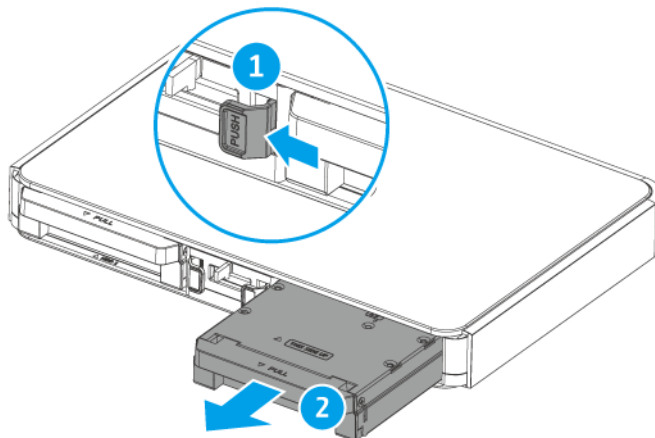
- Installing a drive deletes all data on the drive.
- Observe electrostatic discharge (ESD) procedures to avoid damage to components.

1. Power off the NAS.

2. Remove the front cover.



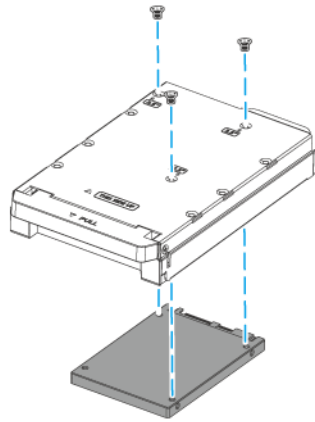
3. Remove a drive tray by simultaneously pressing the latch and pulling the tray.



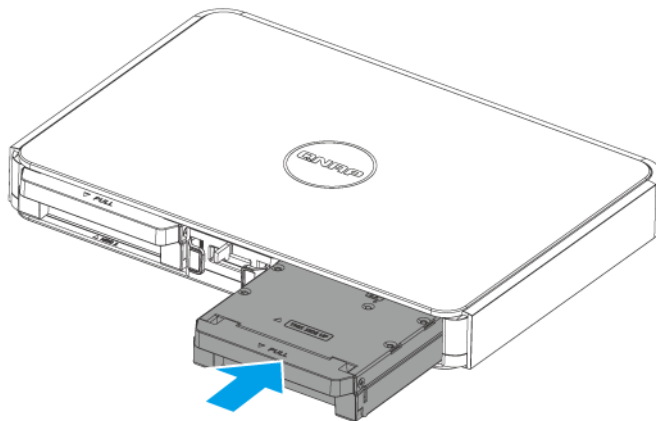
4. Install a drive on the tray.

- a. 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.

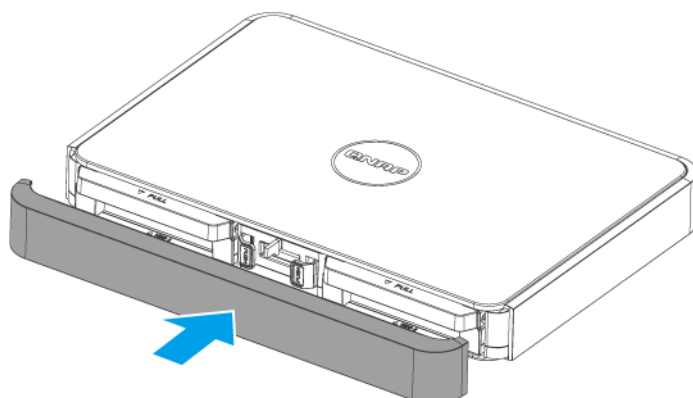
- b.** Attach the screws.



- 5.** Insert the tray into the bay.



6. Attach the front cover.



7. Power on the NAS.

Connecting USB Expansion Units

The device supports USB expansion units. For details, please see the table below.

You can purchase storage expansion accessories from QNAP or an authorized reseller.

For details, go to <https://shop.qnap.com/>.

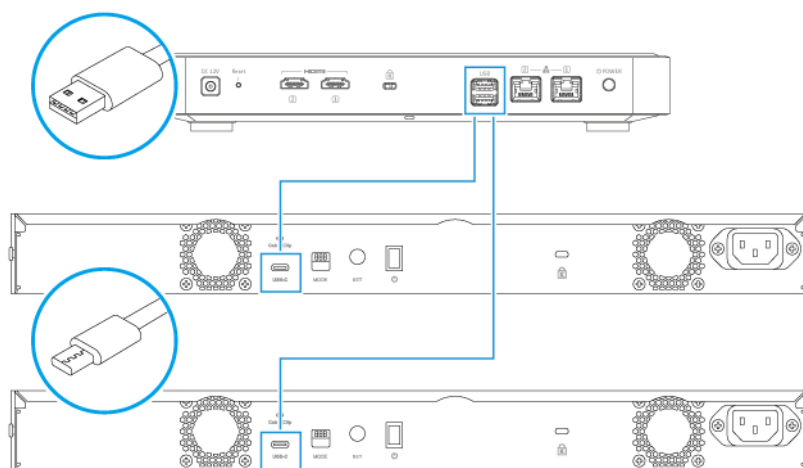
For the list of compatible expansion units and the maximum number of applicable expansion units, go to <https://www.qnap.com/go/compatibility-expansion>.

Expansion Unit Model	Description	Required Accessories
TR-002	<ul style="list-style-type: none"> • Uses a USB 3.2 Gen 2 Type-C interface • Supports SATA HDD/SDD 	USB 3.2 Gen 2 Type-A to Type-C cable
TR-004	<ul style="list-style-type: none"> • Uses a USB 3.2 Gen 1 Type-C interface • Supports SATA HDD/SDD 	USB 3.2 Gen 2 Type-A to Type-C cable
TR-004U	<ul style="list-style-type: none"> • Uses a USB 3.2 Gen 1 Type-C interface • Supports SATA HDD/SDD 	<ul style="list-style-type: none"> • USB 3.2 Gen 1 Type-A to Type-C cable • RAIL-B02
TL-D800C	<ul style="list-style-type: none"> • Uses a USB 3.2 Gen 2 Type-C interface • Supports SATA HDD/SDD 	USB 3.2 Gen 2 Type-A to Type-C cable

Expansion Unit Model	Description	Required Accessories
TL-R1200C-RP	<ul style="list-style-type: none"> • Uses a USB 3.2 Gen 2 Type-C interface • Supports SATA HDD/SDD 	<ul style="list-style-type: none"> • USB 3.2 Gen 2 Type-A to Type-C cable • RAIL-B02

To connect the device to a USB expansion unit, a USB Type-A to USB Type-C cable is required.

1. Verify that the NAS is powered off.
2. Connect the expansion unit to the NAS.
 - a. Connect the USB cable to the USB Type-C port on the expansion unit.
 - b. Connect the USB cable to a USB 3.2 Gen 2 Type-A port on the NAS.



Note

This image shows the HS-264 connected to two TR-004U USB expansion units.

3. Power on the expansion units.
4. Power on the NAS.
5. Verify that the expansion units are recognized by the NAS.
 - a. Log on to QTS as administrator.
 - b. Go to **Main Menu > Storage & Snapshots > Overview > System**.
 - c. Verify that the expansion units are listed.

QTS Installation

The HS-264 uses the QNAP QTS operating system. You can install QTS using any of the following methods.

Method	Description	Requirements
Qfinder Pro installation (Recommended)	<p>If the NAS is connected to your local area network, you can do the following:</p> <ul style="list-style-type: none"> • Locate the NAS using Qfinder Pro. • Complete the steps in the Smart Installation Guide wizard. <p>For details, see Installing QTS Using Qfinder Pro.</p>	<ul style="list-style-type: none"> • Computer • Network cable • Qfinder Pro installer
Cloud installation	<p>If the NAS is connected to the internet, you can do the following:</p> <ul style="list-style-type: none"> • Scan the QR code on the NAS. • Log into your myQNAPcloud account. • Use myQNAPcloud Link to remotely access your NAS. • Complete the steps in the Smart Installation Guide wizard. <p>For details, see Installing QTS Using the Cloud Key.</p>	<ul style="list-style-type: none"> • Computer or mobile device • Network cable • myQNAPcloud account • Cloud Key

Installing QTS Using Qfinder Pro

Warning

Installing QTS deletes all data on the drives. Back up your data before proceeding.

Important

To protect your NAS from brute force attacks, create a new system administrator account during QTS installation to disable the default "admin" account.

1. Power on the NAS.
2. Connect the NAS to your local area network.

- Run Qfinder Pro on a computer that is connected to the same local area network.

Note

To download Qfinder Pro, go to <https://www.qnap.com/utilities>.

- Click **Next**.

The QNAP **Warranty Service** page opens in the default web browser.

- Click **Check warranty**.

The QNAP **Warranty Service** window opens in a new web page.

Important

You can check your device warranty policy or purchase an extended warranty plan at [QNAP Warranty Service](#).

- Close the warranty page.

The **Smart Installation Guide** opens in the default web browser.

- Click **Next**.

The **Enter the NAS name and administrator's password** screen appears.

- Specify the following information.

- **NAS name:** Specify a name with 1 to 14 characters. The name supports letters (A to Z, a to z), numbers (0 to 9), and hyphens (-), but cannot end with a hyphen.
- **Username:** Specify an administrator username that contains 1 to 32 characters. The name supports letters (A to Z, a to z), numbers (0 to 9), and hyphens (-), multi-byte Chinese, Japanese, Korean, and Russian characters.
The username cannot contain the following special characters: grave accent (`), asterisk (*), equal sign (=), plus sign (+), square brackets ([]), slash (/), vertical bar (|), semicolon (;), colon (:), apostrophe ('), quotation mark ("), comma (,), less than sign (<), greater than sign (>), backslash (\), question mark (?), percent sign (%)
- **Password:** Specify an administrator password with 1 to 64 characters. The password supports all ASCII characters.
- **Confirm Password:** Enter the new administrator password again.

- Click **Next**.

The **Set the date and time** screen appears.

- Specify the time zone, date, and time using any of the following methods:

Tip

QNAP recommends connecting to an NTP server to ensure that the NAS follows the Coordinated Universal Time (UTC) standard.

Methods	User Actions
Synchronize with computer or device time	Select Same as the computer/device time The NAS time will be the same as your computer or device used to configure the time.
Enter manually	<ol style="list-style-type: none"> a. Select Input Manually. b. Specify the date and time. The NAS date and time will be the same as the configured time.
Synchronize with an Internet time server automatically	Click Synchronize with an Internet time server automatically . The NAS time will be the same as the NTP server.

11. Click Next.

The **Configure the network settings** screen appears.

12. Configure the network settings using any of the following methods.

Methods	User Actions
Obtain an IP address automatically (DHCP)	Select Obtain an IP address automatically (DHCP) The system automatically detects and configures the IP address settings.
Use static IP address	<ol style="list-style-type: none"> a. Select Use static IP address. The IP address configuration page appears. b. Specify the following IP address configurations: <ul style="list-style-type: none"> • Interface • IP Address • Subnet Mask • Default Gateway • Primary DNS server • Secondary DNS server

13. Click Next.

The **Thunderbolt Connection** page appears.

Note

This page only appears if your device supports Thunderbolt. You will need to connect your device to a computer using a Thunderbolt cable.

14. Click **Next**.
The **Summary** screen appears.
15. Review the settings.
16. Click **Apply**.
A confirmation message appears.

Warning

Clicking **Confirm** deletes all data on the drive before installing QTS.

17. Click **Confirm**.
QTS is installed.

Installing QTS Using the Cloud Key

Warning

Installing QTS deletes all data on the drives. Back up your data before proceeding.

Important

To protect your NAS from brute force attacks, create a new system administrator account during QTS installation to disable the default "admin" account.

1. Power on the NAS.
2. Connect the NAS to the internet.
3. Go to the QNAP Cloud Installation page using one of the following methods:
 - On your computer, go to your respective region's site to download QTS:
 - China: <https://install.qnap.com.cn>
 - Global: <https://install.qnap.com>
 - Scan the QR code on the NAS using a mobile device.

The web page lists all the uninitialized QNAP NAS devices on the local network.

4. Find your NAS from the list and then click **Initialize**.

Note

If your NAS is not listed, follow the instructions on the web page to specify the Cloud Key on the NAS.

The installation wizard opens in the default web browser

5. Create an account or sign in to myQNAPcloud.

Note

You must return to this page to complete the installation after creating an account.

6. Specify the myQNAPcloud device name for the NAS.

Note

- The myQNAPcloud device name is used when remotely accessing the NAS.
- For security purposes, the myQNAPcloud Link remote connection service will be disabled on your NAS after initialization. You can enable it by connecting to QTS through LAN and then installing myQNAPcloud Link.

7. Click **Next**.

The QNAP **Warranty Service** page opens in the default web browser.

8. Click **Check warranty**.

The QNAP **Warranty Service** window opens in a new web page.

Important

You can check your device warranty policy or purchase an extended warranty plan at [QNAP Warranty Service](#).

9. Close the warranty page.

The **Smart Installation Guide** opens in the default web browser.

10. Specify the following information.

- **NAS name:** Specify a name with 1 to 14 characters. The name supports letters (A to Z, a to z), numbers (0 to 9), and hyphens (-), but cannot end with a hyphen.
- **Username:** Specify an administrator username that contains 1 to 32 characters. The name supports letters (A to Z, a to z), numbers (0 to 9), and hyphens (-), multi-byte Chinese, Japanese, Korean, and Russian characters.
The username cannot contain the following special characters: grave accent (`), asterisk (*), equal sign (=), plus sign (+), square brackets ([]), slash (/), vertical bar (|), semicolon (;), colon (:), apostrophe ('), quotation mark ("), comma (,), less than sign (<), greater than sign (>), backslash (\), question mark (?), percent sign (%), or "admin".
- **Password:** Specify an administrator password with 1 to 64 characters. The password supports all ASCII characters.
- **Confirm Password:** Enter the new administrator password again.

11. Click **Next**.

The **Set the date and time** screen appears.

12. Specify the time zone, date, and time using any of the following methods:

Tip

QNAP recommends connecting to an NTP server to ensure that the NAS follows the Coordinated Universal Time (UTC) standard.

Methods	User Actions
Synchronize with computer or device time	Select Same as the computer/device time The NAS time will be the same as your computer or device used to configure the time.
Enter manually	<p>a. Select Input Manually.</p> <p>b. Specify the date and time. The NAS date and time will be the same as the configured time.</p>
Synchronize with an Internet time server automatically	Click Synchronize with an Internet time server automatically. The NAS time will be the same as the NTP server.

13. Click **Next**.

The **Configure the network settings** screen appears.

14. Configure the network settings using any of the following methods.

Methods	User Actions
Obtain an IP address automatically (DHCP)	Select Obtain an IP address automatically (DHCP) The system automatically detects and configures the IP address settings.
Use static IP address	<p>a. Select Use static IP address. The IP address configuration page appears.</p> <p>b. Specify the following IP address configurations:</p> <ul style="list-style-type: none"> • Interface • IP Address • Subnet Mask • Default Gateway • Primary DNS server • Secondary DNS server

15. Click **Next**.
The **Thunderbolt Connection** page appears.

Note

This page only appears if your device supports Thunderbolt. You will need to connect your device to a computer using a Thunderbolt cable.

16. Click **Next**.
The **Summary** screen appears.
17. Review the settings.
18. Click **Apply**.
A confirmation message appears.

Warning

Clicking **Confirm** deletes all data on the drive before installing QTS.

19. Click **Confirm**.
QTS is installed.

4. Basic Operations

This chapter describes basic NAS operations.

Power Button

Operation	User Action	Result
Power on	Press the button once.	The device powers on.
Power off	Press and hold the button for 1.5 seconds.	The device powers off.
Force power off	Press and hold the button for 5 seconds.	The device powers off. Important Use this method only when the device is unresponsive.

Reset Button

Important

To protect your device from brute force attacks, QNAP recommends disabling the default `admin` account after a system reset. To disable the default `admin` account, you must first create a new administrator account, log out of the `admin` account, and then log in with the new account.

Operation	User Action	Result
Basic system reset	Press and hold the button for 3 seconds.	<p>The following settings are reset to default:</p> <ul style="list-style-type: none"> • The <code>admin</code> account is automatically enabled. • System administrator password: For details on the default password, see this FAQ. • TCP/IP configuration: <ul style="list-style-type: none"> • Obtain IP address settings automatically via DHCP • Disable jumbo frames • If port trunking is enabled (multi-LAN models only), the port trunking mode is reset to "Active Backup (Failover)". • System port: 8080 (system service port) • Security level: Low (Allow all connections) • VLAN: Disabled
Advanced system reset	Press and hold the button for 15 seconds.	<p>The default factory settings are restored. To retrieve old data after an advanced system reset, recreate the previous folder structure on the NAS.</p>

LEDs

LEDs indicate the 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 [Components](#).

LED	Status	Description
System Status	Flashes green and red alternately every 0.5 seconds	<ul style="list-style-type: none"> • The drive is being formatted. • The NAS is being initialized. • The operating system is being updated. • RAID rebuilding is in progress. • Online RAID Capacity Expansion is in progress. • Online RAID Level Migration is in progress.

LED	Status	Description
System Status	Red	<ul style="list-style-type: none"> The drive is invalid. The disk volume has reached its full capacity. The disk volume is about to reach its full capacity. An error occurred when accessing (read/write) the data. A bad sector is detected on the hard drive. The NAS is in degraded read-only mode (two member drives failed in RAID 5 or RAID 6 but the data can still be read). A hardware self-test error occurred.
	Flashes red every 0.5 seconds	The NAS is in degraded mode (one member drive failed in RAID 1, RAID 5, or RAID 6).
	Flashes green every 0.5 seconds	<ul style="list-style-type: none"> The NAS is starting up. The NAS is not configured. A drive is not formatted.
	Green	The NAS is ready.
	Off	All drives are in standby mode.
2.5 Gigabit Ethernet speed	Green	The network connection is operating at 2.5 Gbps.
	Orange	The network connection is operating at 1 Gbps.
	Off	<ul style="list-style-type: none"> The network connection is operating at 10 Mbps. There is no network connection.
2.5 Gigabit Ethernet activity	Orange	A network connection has been established.
	Flashes orange	The device is being accessed from the network.
	Off	There is no network connection.

Audio Alert

Duration	Frequency	Description
Short beep (0.5 seconds)	1	<ul style="list-style-type: none"> The NAS is starting up. When the reset button is pressed for 3 seconds, the NAS resets configurations. When the reset button is pressed for 15 seconds, the NAS resets configurations and reboots. The operating system was updated.
	3	<ul style="list-style-type: none"> The NAS data cannot be copied to the external storage device connected to the front USB port.
Long beep (1.5 seconds)	2	<ul style="list-style-type: none"> The disk volume is about to reach its full capacity. The disk volume has reached its full capacity. The drives are in degraded mode. The drive is rebuilding. A drive is plugged in or out.
	1	<ul style="list-style-type: none"> The NAS is powering off. The NAS was powered on successfully and is ready.

5. NAS Migration

You can migrate data and settings from your current NAS to another NAS model with minimal disruptions by installing all the hard drives from the source NAS to the destination NAS. RAID configuration and other settings are retained on the destination NAS after migration.

NAS Migration Requirements

You can only migrate drives to specific NAS models, depending on your source NAS. For the list of NAS models compatible with direct NAS migration, see <https://www.qnap.com/go/nas-migration>.

Your device must meet the following requirements:

- QTS NAS supports several types of NAS migration:
 - ARM NAS to an ARM NAS
 - x86 NAS to an x86 NAS
 - ARM NAS to an x86 NAS

Note

You cannot migrate from an x86 NAS to an ARM NAS.

- The destination NAS must run on the same QTS version as the source NAS (or later).
- The destination NAS must have sufficient free drive bays to accommodate all the drives that you are migrating from the source NAS.

For NAS models that do not support NAS migration, you can migrate existing data using HBS 3. For details, see [Migrating NAS Data Using HBS 3](#).

Status and Setting Changes after NAS Migration

The status of NAS data and settings varies after migration.

Data and Settings	After NAS Migration
Registered myQNAPcloud name	Your registered myQNAPcloud name is not migrated.

Data and Settings	After NAS Migration
Encrypted disk volumes	<p>If the NAS does not support file system encryption, encrypted disk volumes are not migrated.</p> <p>Warning</p> <p>To prevent data loss, back up and save the encryption keys of encrypted disk volumes in a safe place. You can also choose to decrypt disk volumes before migration.</p>
Shared folders	<p>All shared folders and the downloaded files stored in them are retained.</p> <p>Warning</p> <p>To prevent data loss, back up and save encryption keys or passwords of encrypted shared folders in a safe place before migration.</p> <p>Important</p> <p>Folder permissions on the destination NAS must be reconfigured after migration.</p>
Network	<ul style="list-style-type: none"> • If the number of network ports or network port specifications on the destination NAS is different from the source NAS, the following network and virtual settings may change and require reconfiguration: port trunking, virtual machines, Thunderbolt, USB QuickAccess, and more. • You must reconfigure network settings when the source NAS is running on QTS 4.3.5 or earlier versions.
Windows AD configuration	Windows AD configurations must be reconfigured.
Licenses	<p>Licenses are not migrated.</p> <p>Warning</p> <p>To prevent losing all your software licenses, QNAP recommends deactivating licenses on the source NAS before data migration.</p>
Applications	If the destination NAS has less RAM than the source NAS, the following features and applications might not function: Virtualization Station, Qsirch, and Snapshots.
Services	Only services supported by the destination NAS are available.

Data and Settings	After NAS Migration
Multimedia features	Some multimedia features are disabled by default.

Migrating a NAS

Important

Before performing NAS migration, ensure that you understand all requirements and possible changes after migration.

For details see the following topics:

- [NAS Migration Requirements](#)
- [Status and Setting Changes After NAS Migration](#)

1. Power off the source NAS and the destination NAS.
2. Remove the drives.

Important

QNAP recommends following the source NAS drive order when installing the drives. Take note of the drive tray order when removing the drives.

- a. Remove the drives from the source NAS.
 - b. Remove the drive trays from the destination NAS.
3. Install the drives.
 - a. Install source NAS drives onto the destination NAS drive trays.
 - b. Insert the drive trays into the destination NAS.
 4. Power on the destination NAS.
 5. Log on to QTS as an administrator on the destination NAS.
The destination NAS automatically checks for the latest firmware update.

Migrating NAS Data Using HBS 3

For NAS models that do not support direct migration, you can initialize the destination NAS then copy data from the source NAS to the destination NAS using HBS 3.

Preparing the Destination NAS

1. Log on to QTS.

2. Create one or more storage pools.
For details, see the [Creating a Storage Pool](#) topic in the QTS user guide.
3. Create one or more volumes.
For details, see the [Volume Creation](#) topic in the QTS user guide.
4. Create shared folders on the destination NAS.
For details, see the [Creating a Shared Folder](#) topic in the QTS user guide.
5. Install HBS 3 onto the destination NAS.
 - a. Go to **App Center**.
 - b. Search for HBS 3.
 - c. Click **Install**.
HBS 3 is installed on the destination NAS.
6. Enable the remote server settings on the destination NAS.
 - a. Go to **App Center > HBS 3 > Services > RTRR Server**.
 - b. Click **Enable RTRR Server**.
The RTRR server settings window appears.
 - c. Specify the **RTRR Server** settings.


Setting	Description
Password	Specify a password that contains 1 to 16 characters from any of the following groups: <ul style="list-style-type: none"> • Letters: A to Z, a to z • Numbers: 0 to 9 • Special characters: . - _ ~ ! @ # \$ % ^ & () { } • Does not start or end with a space.
Port	Specify a port number to access the RTRR server.

7. Click **Apply**.
A confirmation window appears.
8. Click **OK**.
The remote server settings are completed.

Creating a One-Way Sync Job

1. On the source NAS, go to **App Center > HBS 3 > Sync**.
2. Click **Sync Now**.
3. Select **One-way Sync Job**.
The **Create a Sync Job** window appears.

4. Click **Remote NAS**.
5. Click **Add New Account**.
The **Create a Storage Space** window appears.
6. Select the destination NAS as the destination storage space and specify the following:

Setting	Description
Name	The name used to identify the storage space.
IP address / Host name	The IP address or hostname used to access the storage space. Tip Click  to scan for available devices.
Port	The port number used to access the storage space. This value must be between 1 to 65535.
Password	The password used to access the storage space.
Use SSL connection	Requires SSL connection when accessing the remote NAS.


7. Optional: Test the connection.

Test	Description
Detect Server	Tests the accessibility of the selected storage space.
Speed Test	Tests the network connection speed of the selected storage space.

8. Click **Create**.
9. Click **Select**.
10. Select the paired folders.

Important

- All subfolders and files in the selected folder are selected.
- You can only sync up to 16 paired folders per job.

- a. Under the source, click .
A dialog box opens.
- b. Select a folder.
- c. Click **OK**.
The dialog box closes.

- d. Under the destination, click **+**.
A dialog box opens.
 - e. Select a folder.
 - f. Click **OK**.
 - g. Optional: Add more paired folders if necessary.
11. Click **Next**.
The **Schedule** screen appears.
 12. Select **Sync now**.
 13. Click **Next**.
The **Rules** screen appears.
 14. Optional: Configure job rules.
 15. Click **Next**.
The **Summary** screen appears.
 16. Review the job summary.
 17. Click **Create**.
The source NAS runs the created one-way sync job.

Note

It may take several minutes to migrate shared folders from the source NAS to the destination NAS.

Importing Local Users or Group Settings to the Destination NAS

1. Power on the source NAS.
2. Back up the users or group settings from the source NAS.
 - a. Log on to QTS.
 - b. Go to **Control Panel > Privilege > Users**.
 - c. Click **Create**, and then click **Import/Export Users**.
The **Import/Export Users** window appears.
 - d. Select **Export user and user group settings**.
 - e. Click **Next**.
The NAS user and user group settings are exported as a file and downloaded onto your computer.
3. Import user settings on the source NAS to the destination NAS.
 - a. On the destination NAS, log on to QTS.

- b.** Go to **Control Panel > Privilege > Users**.
- c.** Click **Create**, and then click **Import/Export Users**.
- d.** Select **Import user and user group settings**.

Note

You can select whether to send a notification mail to newly created users or overwrite duplicate users.

- e.** On your computer, select the user settings file exported from the source NAS.
The source NAS user settings file is imported to the destination NAS.

6. Troubleshooting

This chapter describes basic troubleshooting information.

Forcing Qfinder Pro or myQNAPcloud to Locate the NAS

If Qfinder Pro or myQNAPcloud is unable to locate the NAS during QTS installation, the drives or data may be faulty.

1. Power off the NAS.
2. Remove all drives.
3. Power on the NAS.
4. Locate the NAS using Qfinder Pro or myQNAPcloud.
5. Reinsert the drives.
6. Continue with the QTS installation.

Hot-swapping Failed Drives

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

RAID Type	Situation
RAID 1	One member drive fails.

1. Log on to QTS.
2. Go to **Main Menu > Storage & Snapshots > Storage > Disks/VJBOD**.
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 device.
6. Wait for 20 seconds or until the device beeps twice.
7. Remove the failed drive from the drive tray.
8. Insert the new drive into the drive tray.
9. Install the new drive.
The NAS beeps twice.
10. Go to **Main Menu > Storage & Snapshots > Storage > Storage/Snapshots**.
11. Locate the volume that contains the new drive and then verify that the status is *Rebuilding*.

Recovering Unintentionally Removed Hard Drives

The NAS supports exclusive RAID recovery technology to recover failed RAID disk volumes from unintentional disconnection or removal of drives. Users can recover an inactive RAID 1, RAID 5, RAID 6, RAID 10, RAID 50, or RAID 60 volume from degraded mode.

Disk Volume	RAID Recovery Support	Number of Disks	Maximum Number of Removed Drives
Single	No	1	N/A
JBOD	Yes	2	N/A
RAID 0	Yes	2	N/A
RAID 1	Yes	2	1

Support and Other Resources

QNAP provides the following resources:

Resource	URL
Documentation	https://download.qnap.com
Compatibility List	https://www.qnap.com/compatibility
NAS Migration Compatibility	https://www.qnap.com/go/nas-migration
Expansion Unit Compatibility	https://www.qnap.com/go/compatibility-expansion
Service Portal	https://service.qnap.com
Product Support Status	https://www.qnap.com/go/product/eol.php
Downloads	https://download.qnap.com
Community Forum	https://forum.qnap.com
QNAP Accessories Store	https://shop.qnap.com

7. Glossary

Cloud Key

Unique 8-digit code assigned to each NAS device

myQNAPcloud

Provides various remote access services such as DDNS and myQNAPcloud Link

myQNAPcloud Link

Enables you to access QNAP devices over the internet without configuring complex port forwarding settings

Qfinder Pro

QNAP utility that lets you locate and access QNAP NAS devices in your local area network

QNAP ID

User account that enables you to use myQNAPcloud remote access and other QNAP services

QTS

QNAP NAS operating system

8. Notices

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Version 3, 29 June 2007

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END OF TERMS AND CONDITIONS

CE notice



This device complies with CE Compliance Class B.

UKCA notice



This device complies with the UKCA requirements for products sold in Great Britain.

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.

VCCI notice

VCCI-B

BSMI notice

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
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