

The QNAP logo is displayed in white, bold, uppercase letters within a blue rounded rectangular box in the top-left corner of the page. The background of the entire page is a light blue gradient with a network of white and blue dots connected by thin lines, creating a digital or data network aesthetic.

QNAP

TS-x31K

TS-131K

TS-231K

TS-431K

User Guide

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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 TS-x31K NAS.

About the TS-x31K

The TS-x31K is powered by Annapurna Labs Alpine AL-214 ARMv7 processors for multi-tasking. The TS-x31K ensures data security and performance with built-in AES 256-bit encryption engines. It features a USB One Touch Copy port for quick and convenient backup and data transfer. The TS-x31K is available in 1-drive bay, 2-drive bay, and 4-drive bay models that support SATA 6 Gbps data transfer. The TS-x31K series NAS with the exception of the 1-drive bay model, offers two Gigabit Ethernet ports (two GbE RJ45 ports) for optimal throughput and streaming multimedia content while on the move.

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](#).

Ordering P/N	Drive bays	Memory	Power supply
TS-131K	1	1 GB	Single
TS-231K	2	1 GB	Single
TS-431K	4	1 GB	Single

Component	TS-131K	TS-231K	TS-431K
Processor	Annapurnalabs Labs Alpine AL-214 ARMv7		
CPU	Annapurnalabs Labs Alpine AL-214 ARMv7		
Frequency	4-core 1.7 GHz		
Architecture	ARM 32-bit		

Component	TS-131K	TS-231K	TS-431K
Encryption engine	AES-256		
Memory			
Pre-installed memory	1 GB RAM: 1GB DDR3		
	<p>Note This memory is not expandable.</p>		
Maximum memory	1 GB RAM: 1GB		
Flash memory	512 MB (Dual boot OS protection)		
Storage			
Drive bays	1 x 3.5-inch SATA 6 Gbps	2 x 3.5-inch SATA 6 Gbps	4 x 3.5-inch SATA 6 Gbps
Drive compatibility	3.5-inch bays: <ul style="list-style-type: none"> 3.5-inch SATA hard disk drives 2.5-inch bays: <ul style="list-style-type: none"> 2.5-inch SATA hard disk drives 2.5-inch SATA solid-state drives 		
SSD cache acceleration support	<ul style="list-style-type: none"> 3.5-inch drive bays:1 	<ul style="list-style-type: none"> 3.5-inch drive bays:1 to 2 	<ul style="list-style-type: none"> 3.5-inch drive bays:1 to 4
Hot-swapping	Supported		
Network			
Gigabit Ethernet ports	1 x GbE RJ45	2 x GbE RJ45	
External I/O Ports & Expansion Slots			

Component	TS-131K	TS-231K	TS-431K
USB ports	Front: 1 x USB 3.2 Gen 1 (5 Gbps) <div style="border: 1px solid #ccc; border-radius: 10px; padding: 5px; margin: 10px 0;"> <p>Note This USB port supports One Touch Copy.</p> </div> Rear: 1 x USB 3.2 Gen 1 (5 Gbps)		
Interface			
Buttons	<ul style="list-style-type: none"> • Power • Reset • USB One Touch Copy 		
Dimensions			
Form factor	Tower		
Dimensions (H x W x D)	169 x 73 x 219 mm 6.65 x 2.87 x 8.62 in	169 x 102 x 219 mm 6.65 x 4.02 x 8.62 in	169 x 160 x 219 mm 6.65 x 6.3 x 8.62 in
Net weight	1.04 kg (2.29 lbs)	1.28 kg (2.82 lbs)	3 kg (6.61 lbs)
Others			
Power supply unit	36W, 100-240V DC, 50/60 Hz	60W, 100-240V DC, 50/60 Hz	90W, 100-240V DC, 50/60 Hz
System battery	CR2032 lithium battery (3V, 225 mAh)		
Sound level	16.0 dB(A)	22.1 dB(A)	23.2 dB(A)
	<div style="border: 1px solid #ccc; border-radius: 10px; padding: 10px;"> <p>Note The sound level was tested at a bystander position, which is within one meter of the NAS. The test NAS operated at low speed with the maximum number of drives installed.</p> </div>		
Fans	System: 1 x 50 mm, 12V DC smart fan	System: 1 x 70 mm, 12V DC smart fan	System: 1 x 120 mm, 12V DC smart fan

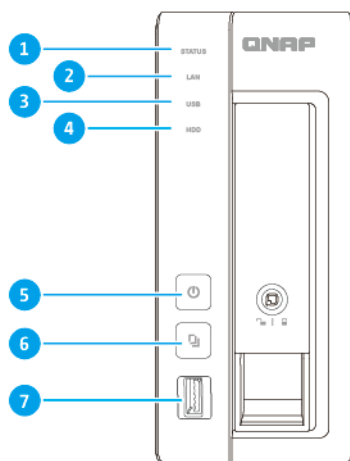
Component	TS-131K	TS-231K	TS-431K
Operating temperature	0°C to 40°C (32°F to 104°F)		
Relative humidity	<ul style="list-style-type: none"> • Non-condensing relative humidity: 5% to 95% • Wet-bulb temperature: 27°C (80.6°F) 		
Security slot	Kensington security slot		

Package Contents

Item	Quantity
TS-x31K	1
AC power adapter	1
Power cord	1
Ethernet cable	1 x 1GbE (Cat 5e)
Screws for 3.5-inch drives	<ul style="list-style-type: none"> • TS-131K:4 • TS-231K:8 • TS-431K:16
Screws for 2.5-inch drives	<ul style="list-style-type: none"> • TS-131K:3 • TS-231K:6 • TS-431K:12
Quick Installation Guide (QIG)	1

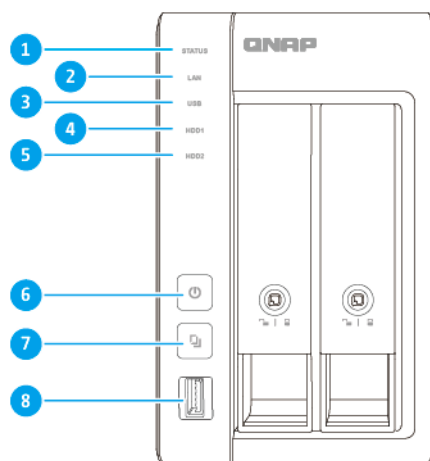
Components

Front Panel



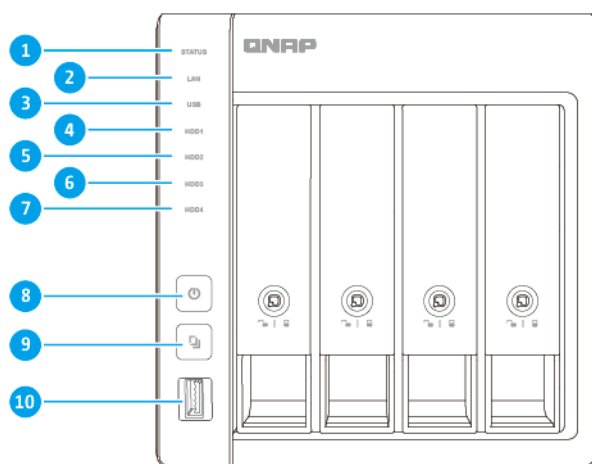
TS-131K

No.	Component	No.	Component
1	Status LED	5	Power button
2	LAN LED	6	USB One Touch Copy button
3	USB LED	7	USB 3.2 Gen 1 One Touch Copy Type-A port
4	Drive LED	-	-



TS-231K

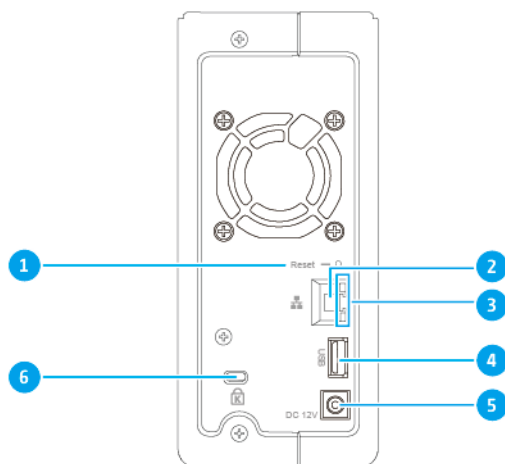
No.	Component	No.	Component
1	Status LED	5	Drive 2 LED
2	LAN LED	6	Power button
3	USB LED	7	USB One Touch Copy button
4	Drive 1 LED	8	USB 3.2 Gen 1 One Touch Copy Type-A port



TS-431K

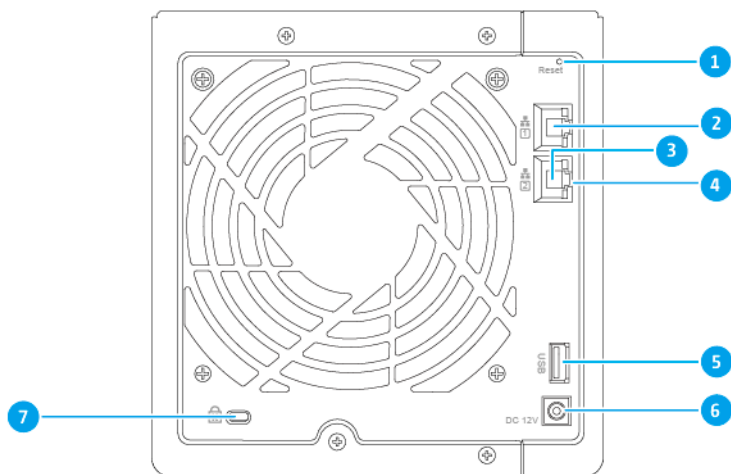
No.	Component	No.	Component
1	Status LED	6	Drive 3 LED
2	LAN LED	7	Drive 4 LED
3	USB LED	8	Power button
4	Drive 1 LED	9	USB One Touch Copy button
5	Drive 2 LED	10	USB 3.2 Gen 1 One Touch Copy Type-A port

Rear Panel



TS-131K

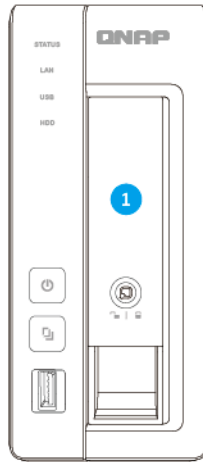
No.	Component	No.	Component
1	Reset button	4	USB 3.2 Gen 1 Type-A port
2	Gigabit Ethernet Port (RJ45)	5	Power input
3	Gigabit Ethernet LEDs	6	Kensington security slot



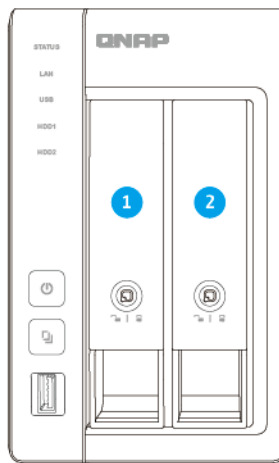
TS-231K, TS-431K

No.	Component	No.	Component
1	Reset button	5	USB 3.2 Gen 1 Type-A port
2	Gigabit Ethernet Port 1 (RJ45)	6	Power input
3	Gigabit Ethernet Port 2 (RJ45)	7	Kensington security slot
4	Gigabit Ethernet LEDs	-	-

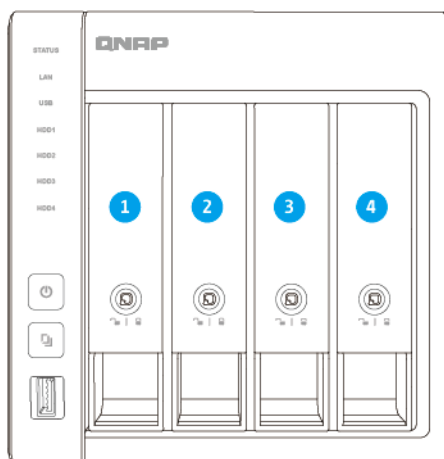
Drive Numbering



TS-131K



TS-231K



TS-431K

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
Tools	<ul style="list-style-type: none"> • Phillips #1 or #2 screwdriver • Flat head 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 the following topics:
 - [Installing 3.5-inch Hard Drives on 3.5-inch Trays](#)
 - [Installing 2.5-inch Hard Drives or Solid-State Drives on 3.5-inch Trays](#)For the list of compatible drive models, go to <https://www.qnap.com/compatibility>.
3. Connect the NAS to the network.
4. Optional: Connect USB expansion units.
For details, see [Connecting USB Expansion Units](#).
5. Connect the power cord and all applicable cables.
6. Power on the NAS.
For details, see [Front Panel](#).
7. Install QTS.
For details, see [QTS Installation](#).

3. Installation and Configuration

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

Hardware Installation

This section provides information on installing drives, memory modules, and expansion cards.

Drive Installation

The TS-x31K is compatible with 3.5-inch hard drives, 2.5-inch hard drives, and 2.5-inch solid-state drives.

Installing 3.5-inch Drives on a 3.5-inch Tray

Warning

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



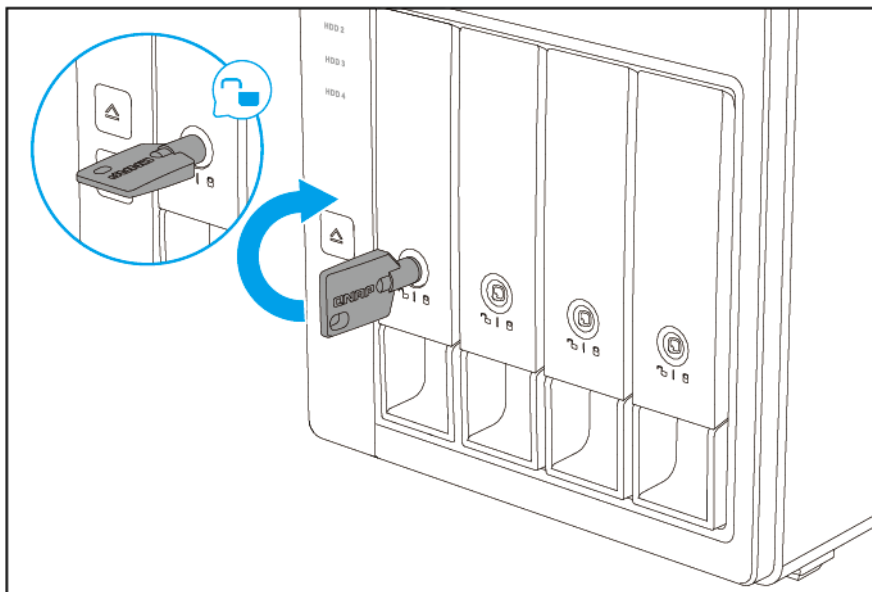
Moving fan blades: Keep your hands and other body parts away from moving fan blades.



Other moving components: Keep your hands and other body parts away from other moving components.

1. Power off the NAS.

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

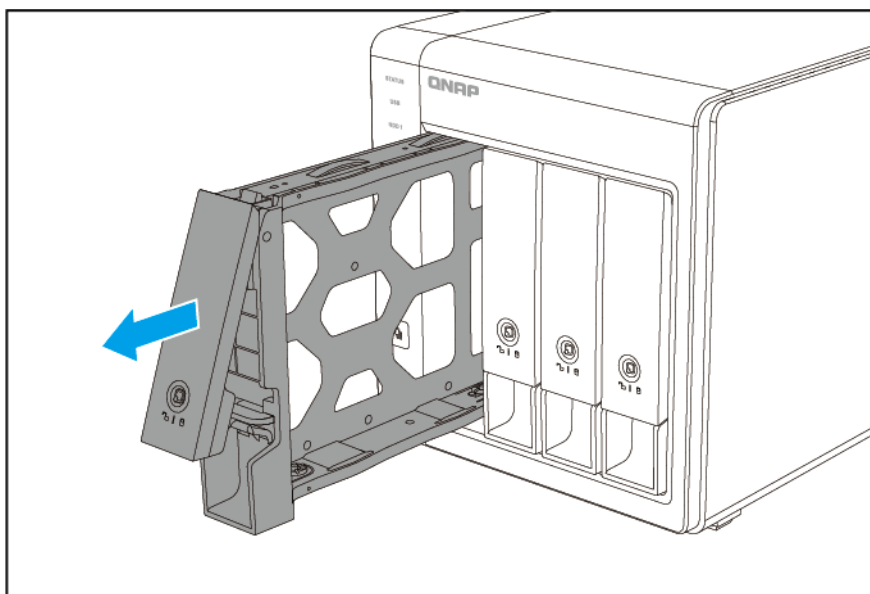
**Note**

The preinstalled drive trays come unlocked.

Important

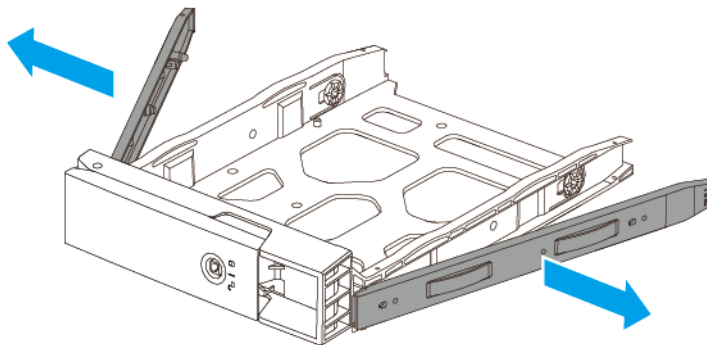
Ensure the drive tray keys are stored in a safe place.

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



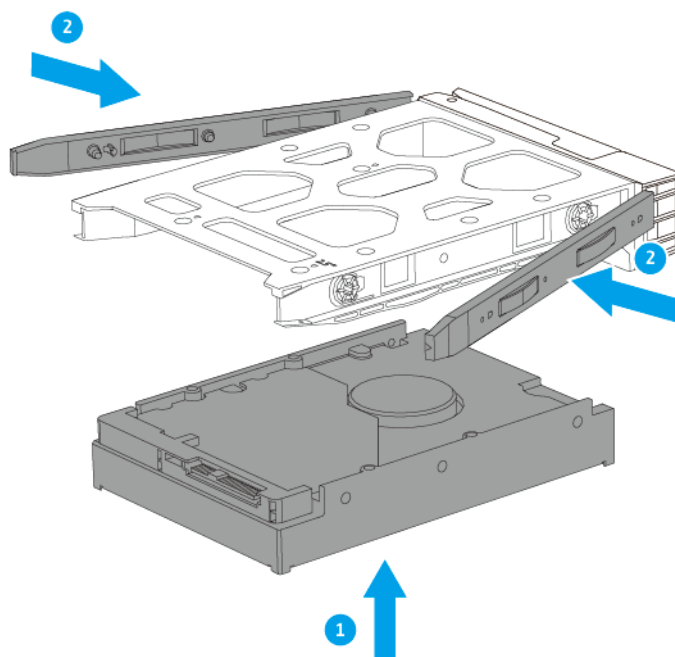
3. Install a drive on the tray.

- a. Remove the fastening panels from the sides of the drive tray.**

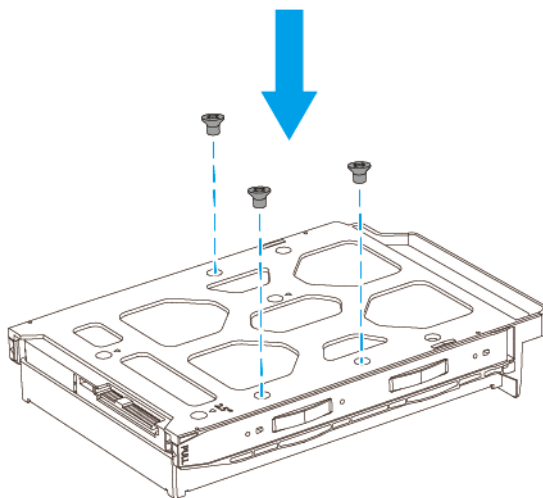


- b. Place the drive on the tray so that the holes on the sides of the drive are aligned with the holes on the sides of the tray.**

- c. Attach the fastening panels.**

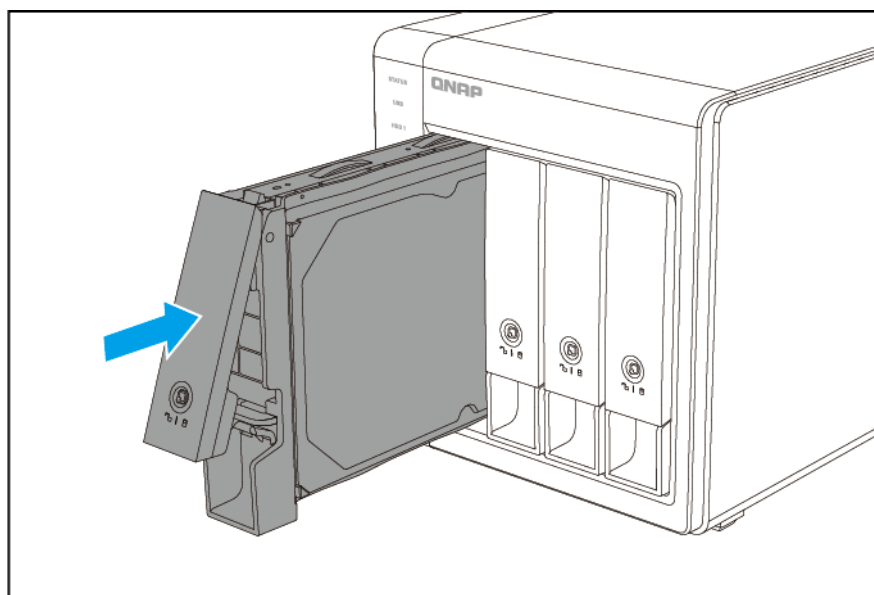


- d.** Optional: Attach the screws to further secure the drive.

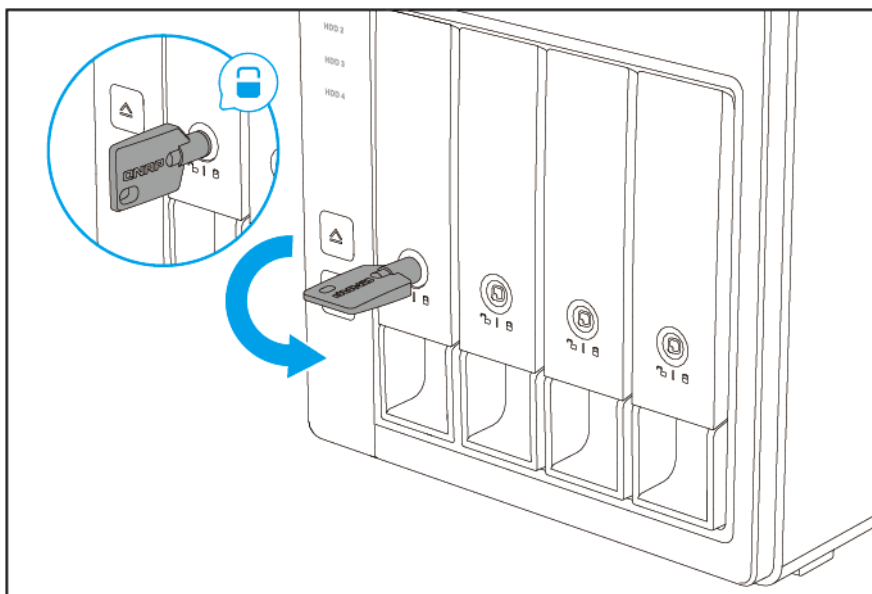


- 4.** Load the tray into the bay.

- a.** Insert the tray into the bay.
b. Push the handle.



c. Optional: Lock the tray.



5. Power on the NAS.

Installing 2.5-inch Hard Drives and Solid-State 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.



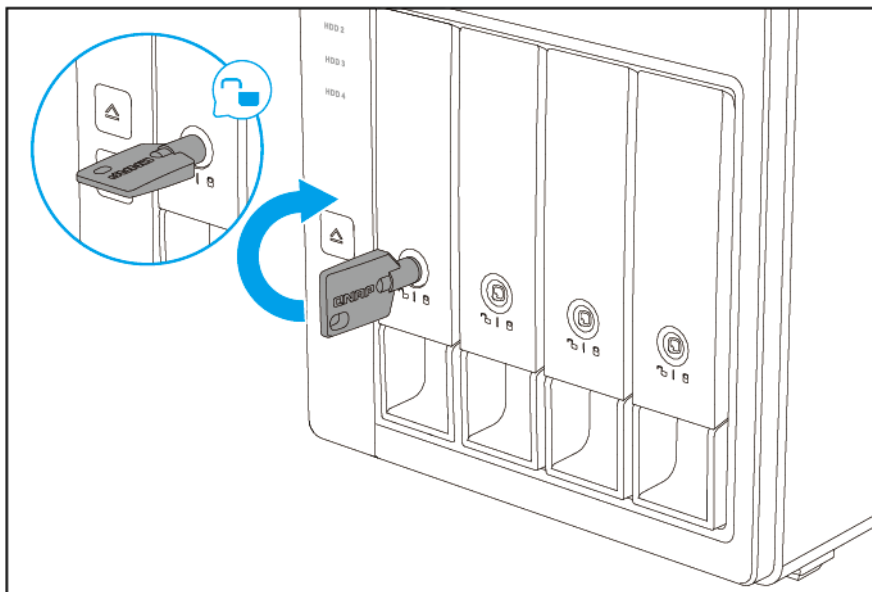
Moving fan blades: Keep your hands and other body parts away from moving fan blades.



Other moving components: Keep your hands and other body parts away from other moving components.

1. Power off the NAS.

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

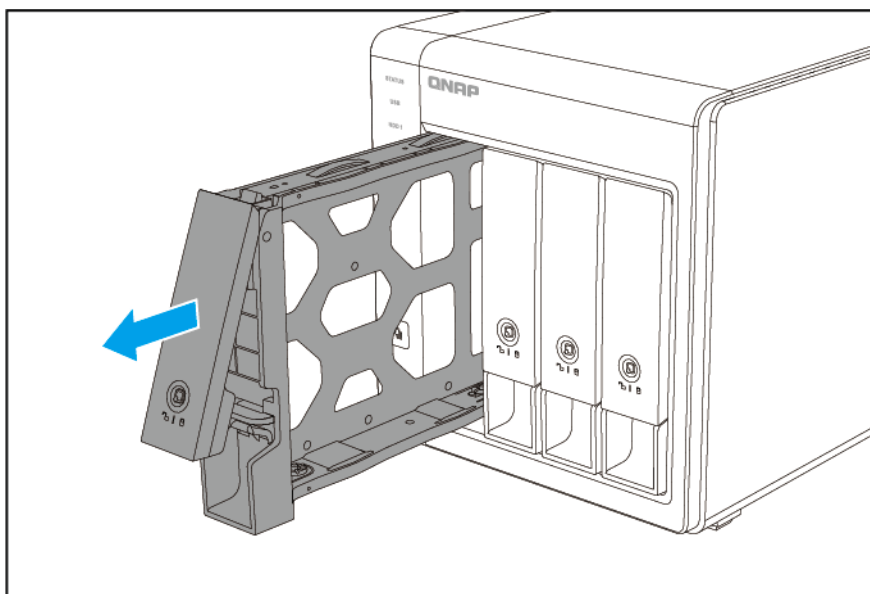
**Note**

The preinstalled drive trays come unlocked.

Important

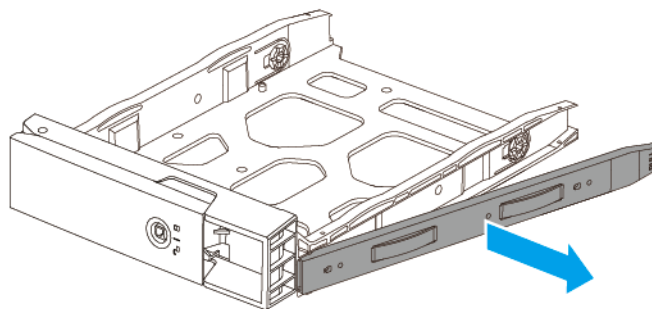
Ensure the drive tray keys are stored in a safe place.

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



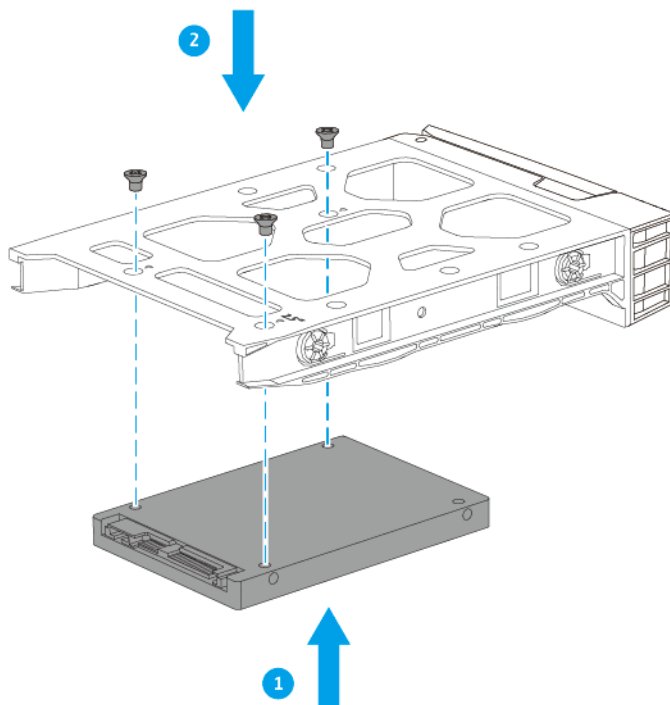
3. Install a drive on the tray.

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



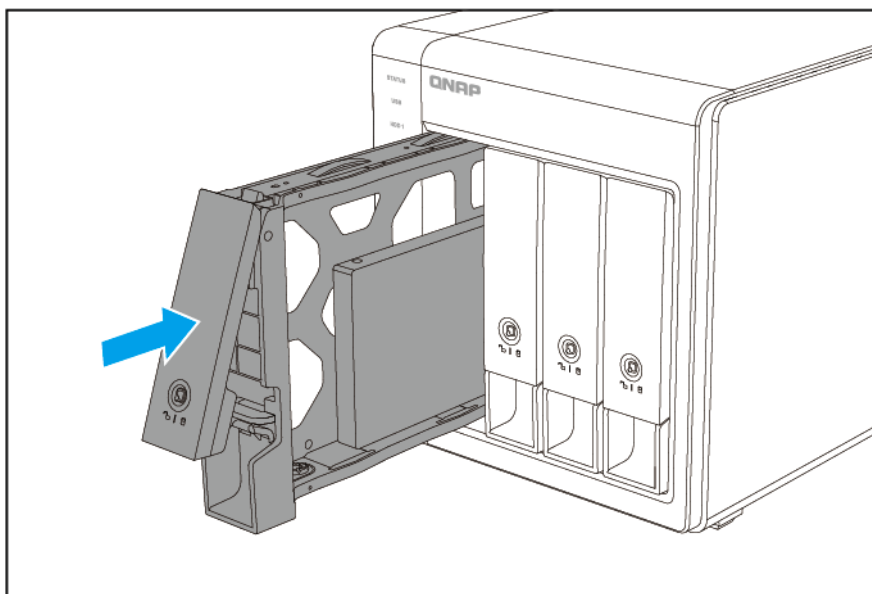
- b.** Place the drive on the tray so that the holes on the sides of the drive are aligned with the holes on the sides of the tray.

- c.** Attach the screws.

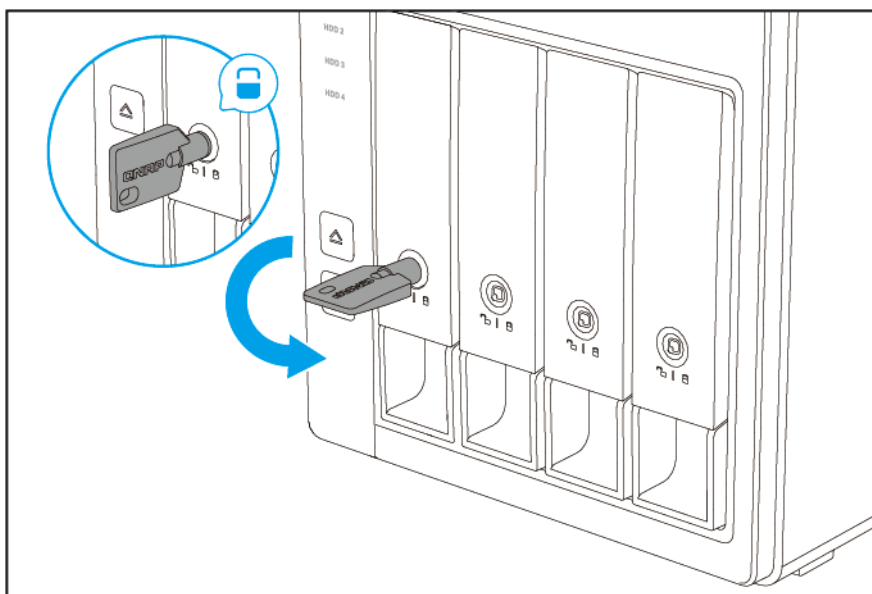
**4. Load the tray into the bay.**

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

b. Push the handle.



c. Optional: Lock the tray.



Connecting USB Expansion Units

The TS-x31K supports USB expansion units. For details, please see table below.

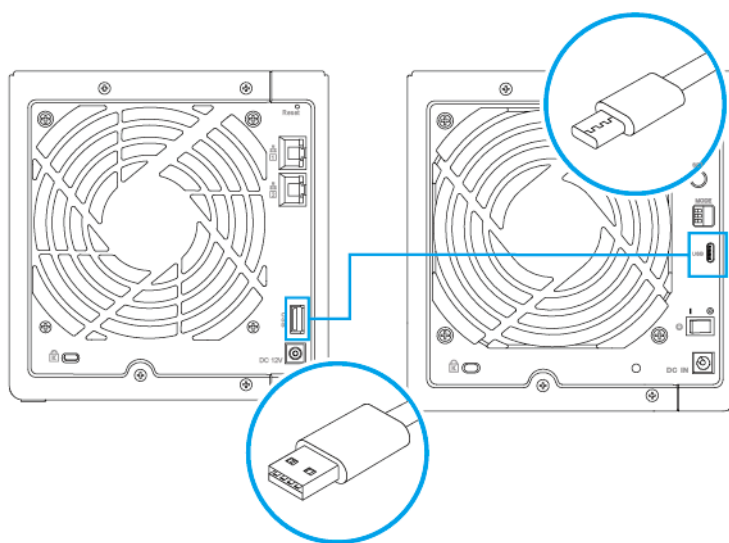
You can purchase storage expansion accessories from QNAP or an authorized reseller.

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 <http://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 	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 	USB 3.2 Gen 1 Type-A to Type-C cable
TL-D800C	<ul style="list-style-type: none"> • Uses a USB 3.2 Gen 2 Type-C interface • Supports SATA 	USB 3.2 Gen 2 Type-A to Type-C cable

1. Connect the expansion unit to the NAS.
 - a. Connect the USB cable to the USB Type-B or USB Type-C port on the expansion unit.
 - b. Connect the USB cable to a USB 3.2 Gen 1 Type-A port on the NAS.



2. Power on the expansion units.
3. 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

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. 	<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. • Specify the Cloud Key. • Log into your myQNAPcloud account. • Use myQNAPcloud Link to remotely access your NAS. • Complete the steps in the Smart Installation Guide wizard. 	<ul style="list-style-type: none"> • Computer or mobile device • myQNAPcloud account • Cloud Key

Installing QTS Using Qfinder Pro

Warning

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

1. Power on the NAS.
2. Connect the NAS to your local area network.
3. 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>.

4. Locate the NAS in the list and then double-click the name or IP address.
5. Perform any of the following actions.
 - To check for the latest available version, click **Start**.

The wizard downloads the latest available version, and then the NAS restarts after the download is complete. If a newer version is not available, the wizard automatically displays the **Smart Installation Guide**.

- To install the out-of-the-box version, click **Skip**.

6. Click **Start Smart Installation Guide**.

7. 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.
- **Password:** Specify an administrator password with 1 to 64 characters. The password supports all ASCII characters.

8. Click **Next**.

9. Specify the time zone, date, and time.

Tip

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

10. Click **Next**.

11. Select **Obtain an IP address automatically (DHCP)**.

12. Click **Next**.

13. Select the types of devices that you will use to access shared folders on the NAS.

14. Click **Next**.

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.

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 <http://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**.

8. Perform any of the following actions.

- To check for the latest available version, click **Start**.
The wizard downloads the latest available version, and then the NAS restarts after the download is complete. If a newer version is not available, the wizard automatically displays the **Smart Installation Guide**.
- To install the out-of-the-box version, click **Skip**.

9. Click **Start Smart Installation Guide**.

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.
- **Password:** Specify an administrator password with 1 to 64 characters. The password supports all ASCII characters.

11. Click **Next**.
12. Specify the time zone, date, and time.

Tip

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

13. Click **Next**.
14. Select **Obtain an IP address automatically (DHCP)**.
15. Click **Next**.
16. Select the types of devices that you will use to access shared folders on the NAS.
17. Click **Next**.
18. Review the settings.
19. Click **Apply**.
A confirmation message appears.

Warning

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

20. 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 3 seconds.	The device powers off.
Force power off	Press and hold the button for 10 seconds.	The device powers off. <div style="background-color: #fff9c4; padding: 10px; border: 1px solid #ccc;"> <p>Important Use this method only when the device is unresponsive.</p> </div>

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) • LCD panel password: (blank) • VLAN: Disabled
Advanced system reset	Press and hold the button for 15 seconds.	<p>The default factory settings are restored.</p> <ul style="list-style-type: none"> • To retrieve old data after an advanced system reset, recreate the previous folder structure on the NAS.

LEDs

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

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.
	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. The system fan is not functioning. 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.
LAN	Orange	A read/write error occurred while another device is accessing data.
	Flashes orange	The NAS is being accessed from the network.
Drive	Flashes red	The drive is being accessed and a read/write error occurs during the process.

LED	Status	Description
Drive	Red	A drive read/write error has occurred.
	Flashes green	The data is being accessed.
	Green	The drive can be accessed.
USB	Flashes blue every 0.5 sec	<ul style="list-style-type: none"> A USB device (connected to the front USB port) is detected. A USB device (connected to the front USB port) is being removed from the NAS. A USB device (connected to the front USB port of the NAS) is being accessed. Data is being copied to or from a USB or eSATA device.
	Blue	A USB device is being detected in the front USB port.
	Off	<ul style="list-style-type: none"> No USB device is detected. The NAS has finished copying data to or from the USB device connected to the front USB port.

USB One Touch Copy Button

The USB One Touch Copy button allows you to copy data backups from a USB device to the NAS or from the NAS to a USB device.

This feature supports incremental backups. The NAS only copies files that were modified or added after the last backup.

Audio Alert

Duration	Frequency	Description
Short beep (0.5 seconds)	1	<ul style="list-style-type: none"> The NAS is starting up. The NAS is being reset (reset button).
	3	The firmware was updated.
Long beep (1.5 seconds)	1	<ul style="list-style-type: none"> The NAS was powered on successfully and is ready. When the power button is pressed for 3 seconds, the NAS powers off.

Duration	Frequency	Description
Long beep (1.5 seconds)	2	<ul style="list-style-type: none"> • The NAS was powered off by force shutdown (hardware shutdown). • 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.
	3 (every 5 minutes)	The system fan is not functioning.

5. Troubleshooting

This chapter describes basic troubleshooting information.

Hot-swapping Failed Drives

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

- RAID 1: One member drive fails
- RAID 5: One member drive fails
- RAID 6: One or two member drives fail

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 NAS.
6. Wait for 20 seconds or until the NAS 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 Space**.
11. Locate the volume that contains the new drive and then verify that the status is `Rebuilding`.

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.

Recovering Unintentionally Removed Healthy 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, or RAID 6 volume to degraded mode, or an inactive RAID 0 and JBOD configuration to normal.

Disk Volume	RAID Recovery Support	Maximum Number of Removed Drives
Single	No	N/A
JBOD	Yes	1
RAID 0	Yes	1
RAID 1	Yes	1
RAID 5	Yes	2
RAID 6	Yes	3
RAID 10	No	N/A

Support and Other Resources

QNAP provides the following resources:

Resource	URL
Documentation	https://docs.qnap.com
Service Portal	https://service.qnap.com
Downloads	https://download.qnap.com
Community Forum	https://forum.qnap.com

6. Glossary

Cloud Key

Unique 8-digit code assigned to each NAS device

myQNAPcloud Link

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

myQNAPcloud

Provides various remote access services such as DDNS and myQNAPcloud Link

myQNAPcloud ID

Email address that was used to register for a myQNAPcloud account

Qfinder Pro

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

QTS

QNAP NAS operating system

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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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部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
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
电池	0	0	0	0	0	0
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