



TS-364

User Guide

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1. Preface

About This Guide

This guide provides information about the device 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 device.

About the TS-364

The TS-364 is equipped with an Intel® Celeron® N5105/N5095 quad-core processor (up to 2.9 GHz burst) and can support up to 16 GB of DDR4 memory. The HDMI connections provide 4k multimedia output and the USB One Touch Copy feature allows for easy data backup and synchronization. In addition to its two memory slots, the TS-364 comes with two M.2 PCIe SSD slots to accommodate your data management needs.

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	Memory
TS-364-N5095-4G	4 GB

Component	TS-364-N5095-4G
Processor	
CPU	Intel® Celeron® N5105/N5095
Frequency	4-core/4-thread up to 2.90 GHz burst
Architecture	64-bit x86
Encryption engine	AES-NI
Graphics	Intel® UHD Graphics
Memory	
Pre-installed memory	4 GB RAM: 1 x 4 GB DDR4 SODIMM
Memory slots	2 x DDR4 SODIMM  Important Use only QNAP memory modules to maintain system performance and stability. For NAS devices with more than one memory slot, use QNAP modules with identical specifications. Using unsupported modules may degrade performance, cause errors, or prevent the operating system from starting.
Maximum memory	16 GB RAM: 2 x 8 GB
Flash memory	5 GB (dual-boot OS protection)
Storage	
Drive bays	3 x 3.5-inch SATA 6 Gbps

Component	TS-364-N5095-4G
Drive compatibility	• 3.5-inch SATA hard disk drives • 2.5-inch SATA hard disk drives • 2.5-inch SATA solid-state drives  Note TS-364 drive tray caddies require additional drive tray bases for installing 2.5-inch SATA drives. You can purchase tray bases from QNAP or an authorized reseller. For details, go to https://shop.qnap.com/.
Hot-swapping	The device supports hot-swapping drives except for the following: • M.2 SSDs
M.2 SSD slots	2 x M.2 PCIe Gen 3 x2 NVMe
M.2 SSD form factor	2280
SSD cache acceleration support	M.2 Slots 1 to 2
Network	
2.5 Gigabit network interface	1 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	• Front: 1 x USB 3.2 Gen 1 Type-A  Note This USB port supports One Touch Copy. • Rear: 2 x USB 3.2 Gen2 Type-A
HDMI ports	1 x HDMI 1.4b (up to 4096 x 2160 @ 30Hz)
Interface	
Buttons	• Power • Reset • USB One Touch Copy
Dimensions	
Form factor	Tower
Dimensions (H x W x D)	142 x 150 x 260.1 mm (5.59 x 5.90 x 10.24 in)
Net weight	1.64 kg (3.62 lbs)
Others	
Power supply unit	65W, 100-240V AC, 50/60 Hz

Component	TS-364-N5095-4G
System battery	CR2032 lithium battery (3V, 225 mAh)  Warning 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.
Sound level	20.5 dB(A)  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.
Fans	System: 1 x 92 mm, 12V DC smart fan  Warning  To avoid potential injury or damage to components, do not touch the fans while the NAS is connected to a power source.
Operating temperature	0°C to 40°C (32°F to 104°F)
Relative humidity	- Non-condensing relative humidity: 5% to 95% - Wet-bulb temperature: 27°C (80.6°F)
Security slot	Kensington security slot

**Tip**

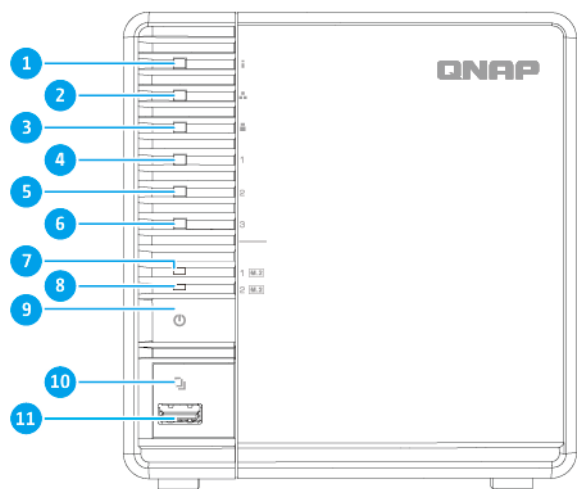
Model specifications are subject to change without prior notice. To see the latest specifications, go to <https://www.qnap.com>.

Package Contents

Item	Quantity
TS-364	1
Drive tray caddy pins	3
AC power adapter	1
Power cord	1
Cat 5e Ethernet cable	1
Quick Installation Guide (QIG)	1

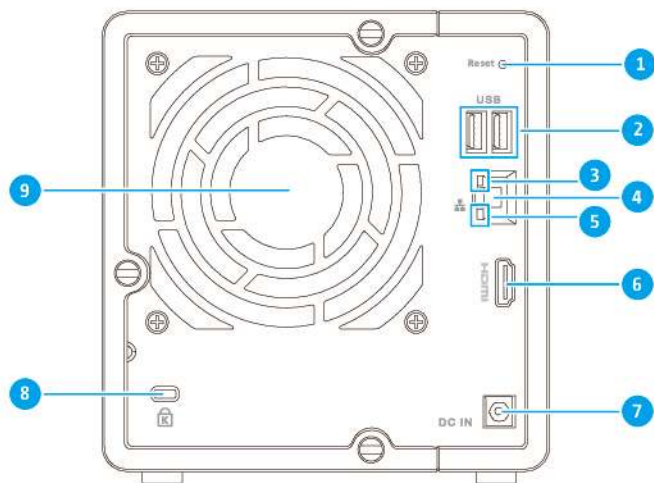
Components

Front Panel



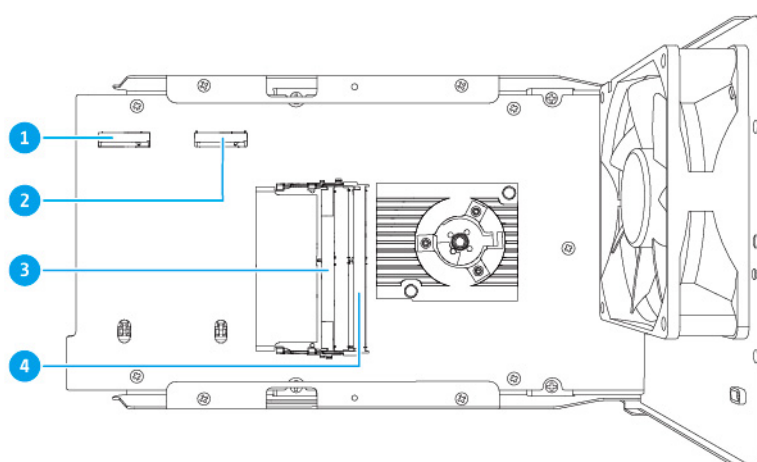
No.	Component	No.	Component
1	Status LED	7	M.2 SSD 1 LED
2	LAN LED	8	M.2 SSD 2 LED
3	USB LED	9	Power button
4	Drive 1 LED	10	USB One Touch Copy button
5	Drive 2 LED	11	USB 3.2 Gen 1 One Touch Copy Type-A port
6	Drive 3 LED	-	-

Rear Panel



No.	Component	No.	Component
1	Reset button	6	HDMI 1.4b port
2	USB 3.2 Gen 2 Type-A ports	7	Power input
3	2.5 Gigabit Ethernet activity LED	8	Kensington security slot
4	2.5 Gigabit Ethernet port (RJ45)	9	System fan
5	2.5 Gigabit Ethernet speed LED	-	-

System Board

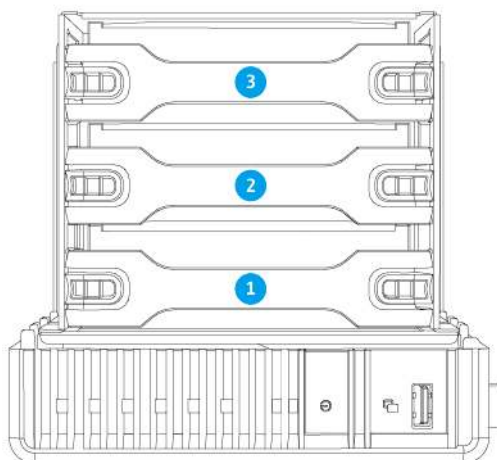


Note

This image does not include the chassis.

No.	Component	No.	Component
1	M.2 SSD slot 1	3	Memory slot 1
2	M.2 SSD slot 2	4	Memory slot 2

Front Drive Numbering



Note

This image shows the NAS positioned on its left side.

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.
- 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.
- 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	• 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	• Storage drives For the list of compatible drive models, go to https://www.qnap.com/compatibility. • Network cable
Tools	• 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 Drives on 3.5-inch Trays](#)

- [Installing M.2 Solid-State Drives](#)

3. Optional: Connect the expansion units.
For details, see [Connecting USB Expansion Units](#).
4. Connect the power cord and all applicable cables.
5. Power on the NAS.
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 replacing memory modules.

Drive Installation

The TS-364 is compatible with 3.5-inch and 2.5-inch hard drives, 2.5-inch solid-state drives, and M.2 solid-state drives.

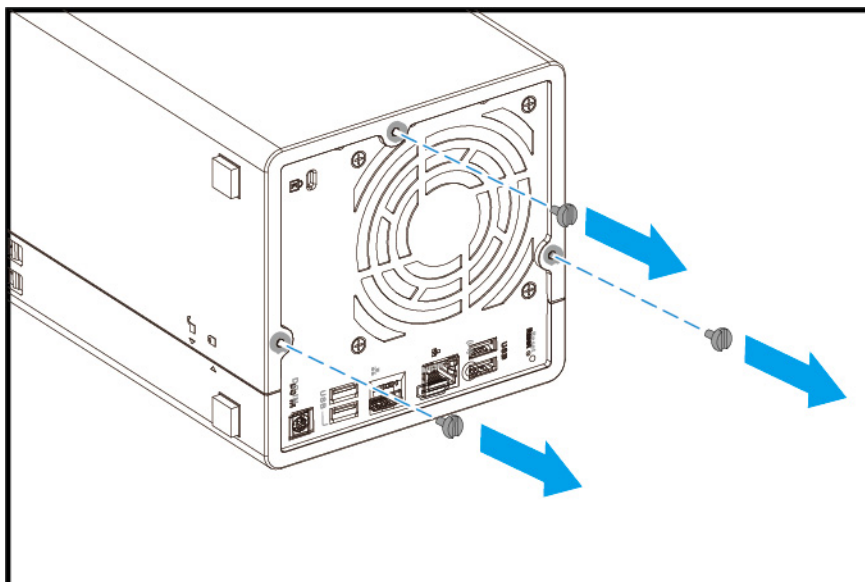
Installing 3.5-inch Hard Drives on 3.5-inch Trays



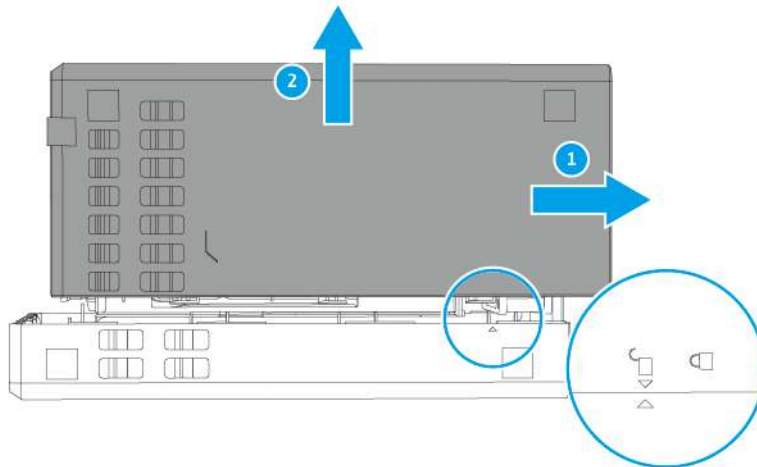
Warning

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

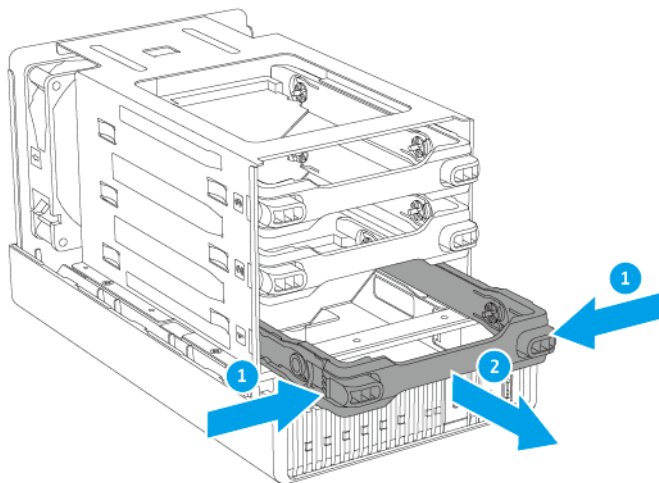
1. Power off the NAS.
2. Remove the case cover.
 - a. Position the NAS on its left side.
 - b. Remove the screws that secure the case cover to the chassis.



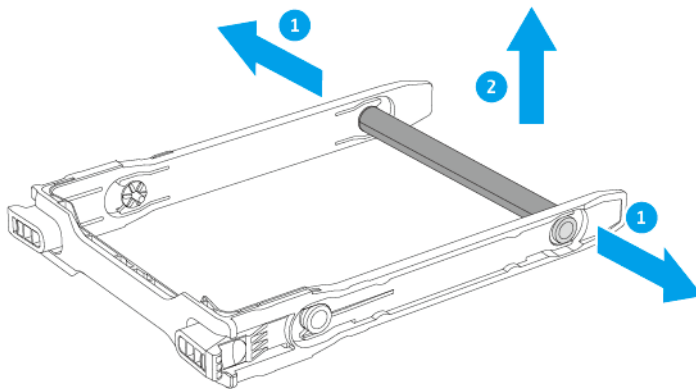
- c. Slide the cover to the right to detach it from the chassis.
- d. Lift the cover off the NAS.



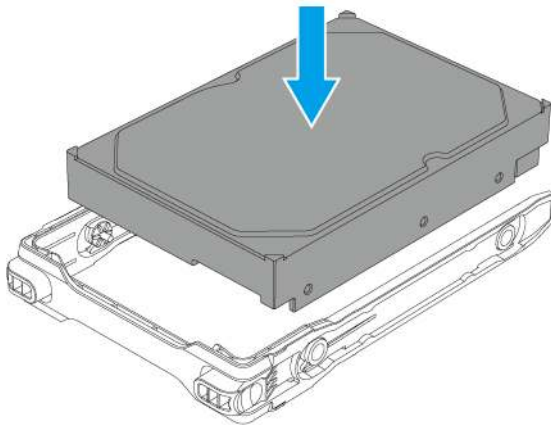
3. Remove the drive tray.
 - a. Squeeze the clips.
 - b. Pull out the caddy.



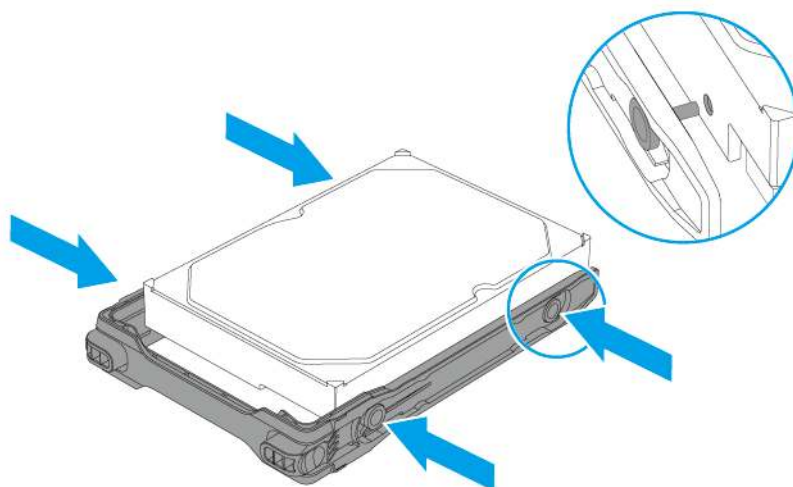
4. Install a drive on the tray.
 - a. Gently pull the sides of the drive tray caddy to release the rod.
 - b. Remove the rod.



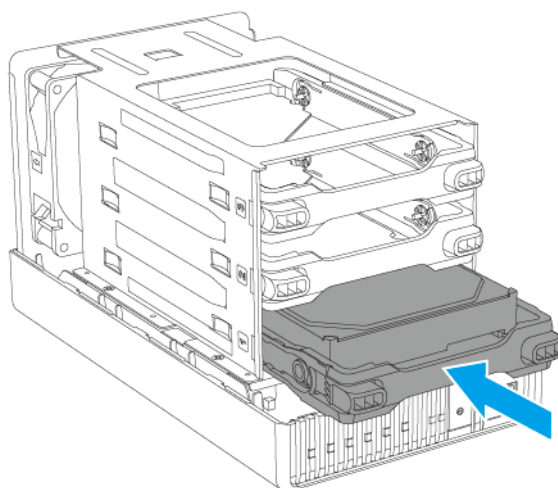
- c.** Place the drive in the caddy.



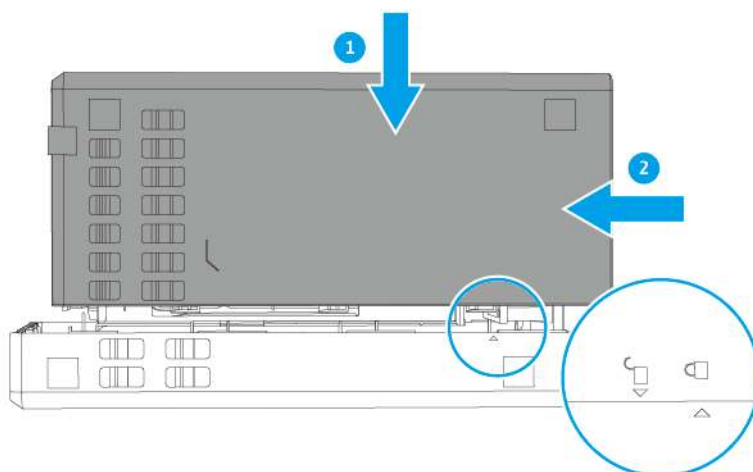
- d.** Place the drive on the tray so that the holes on the sides of the drive are aligned with the holes on the sides of the tray.
- e.** Attach the fastening pins to lock the drive to the tray.



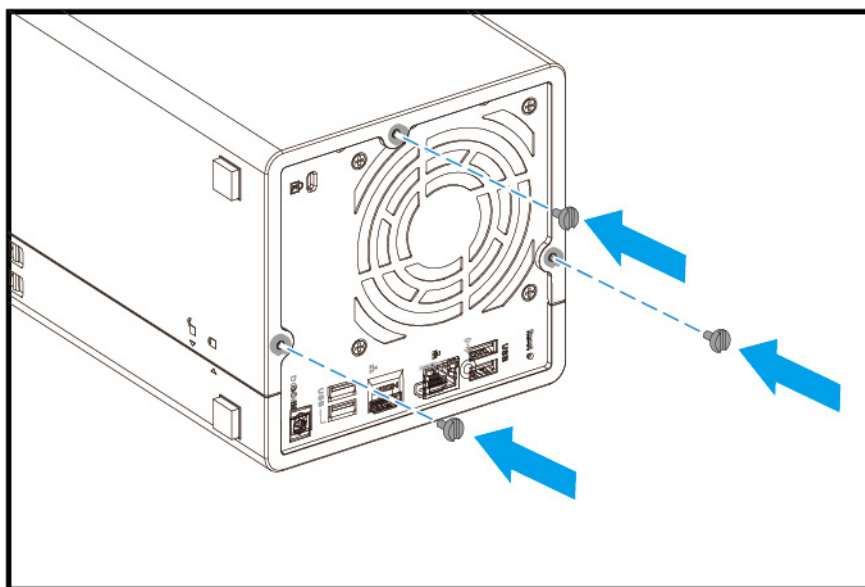
- 5.** Slide the drive tray caddy into the drive bay.



- 6.** Attach the case cover.
- a.** Place the cover on the NAS.
 - b.** Align the cover with the grooves on the case.
 - c.** Slide the cover to the left to secure it to the chassis.



- d. Attach the screws to the back of the NAS.



- e. Place the NAS in its normal upright position.

7. Power on the NAS.

Installing 2.5-inch Drives on 3.5-inch Trays



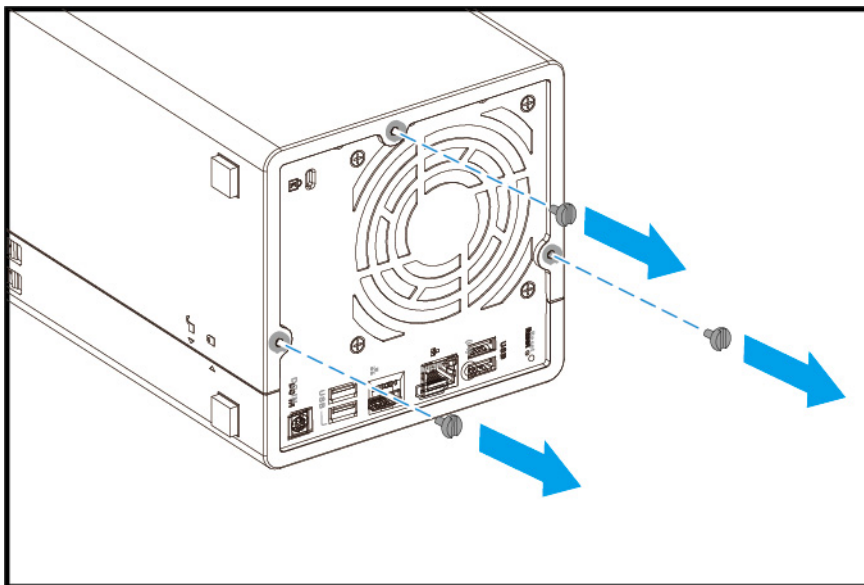
Important

TS-364 drive tray caddies require additional 2.5-inch drive tray bases for installing 2.5-inch drives. Tray bases are an optional, separate purchase and are not included in the packaging for the TS-364. Tray bases can be purchased from QNAP or an authorized reseller. For details, go to <https://shop.qnap.com/>.

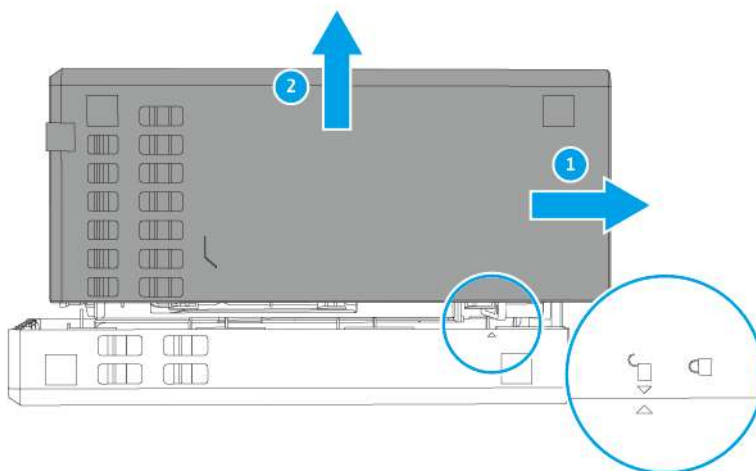
**Warning**

- 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 case cover.
 - a. Position the NAS on its left side.
 - b. Remove the screws that secure the case cover to the chassis.

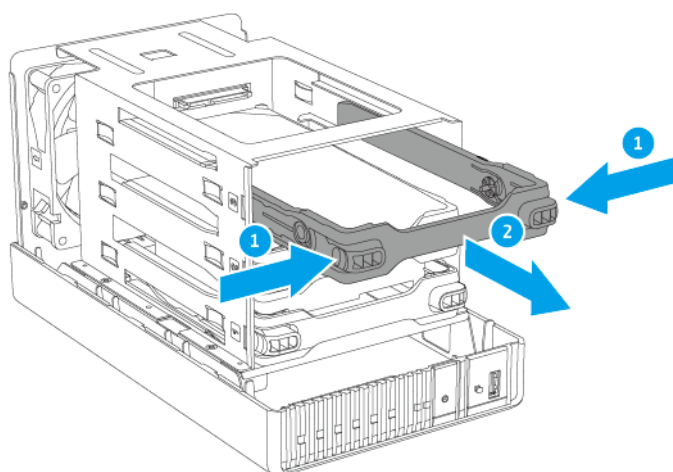


- c. Slide the cover to the right to detach it from the chassis.
- d. Lift the cover off the NAS.



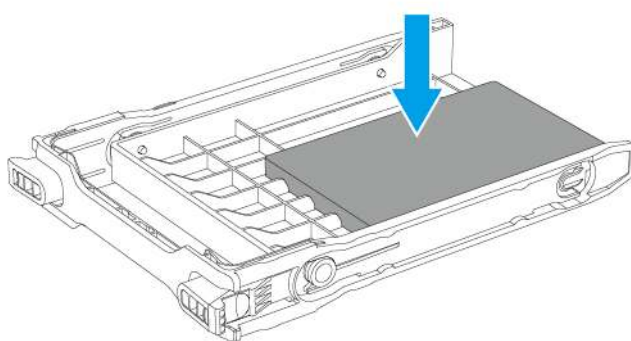
3. Remove a drive tray caddy.

- a.** Squeeze the clips.
- b.** Pull out the caddy.

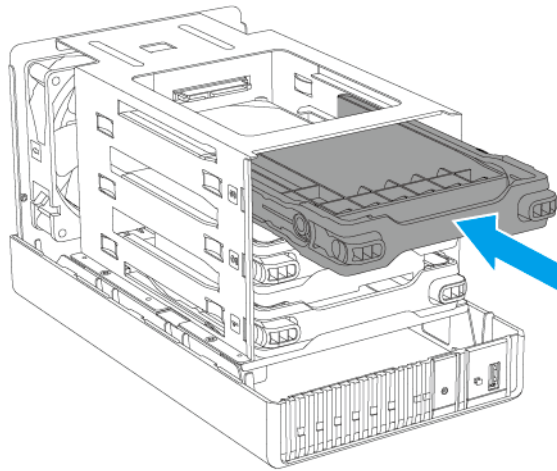


4. Attach a 2.5-inch drive tray base.
For details, see [Attaching 2.5-inch Drive Tray Bases](#).

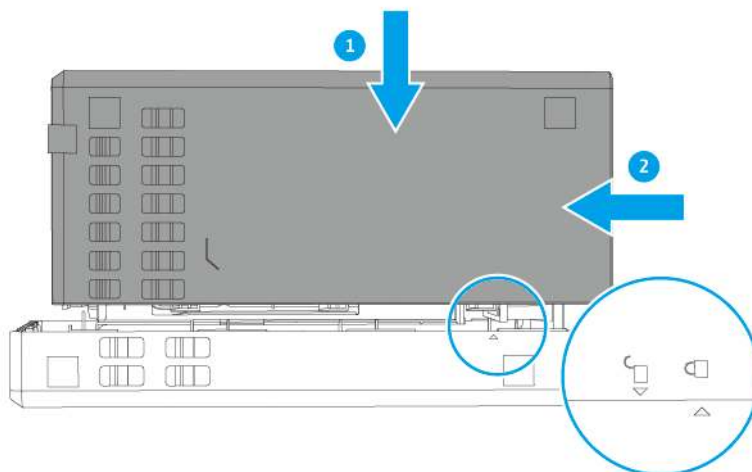
5. Install a drive on the tray.



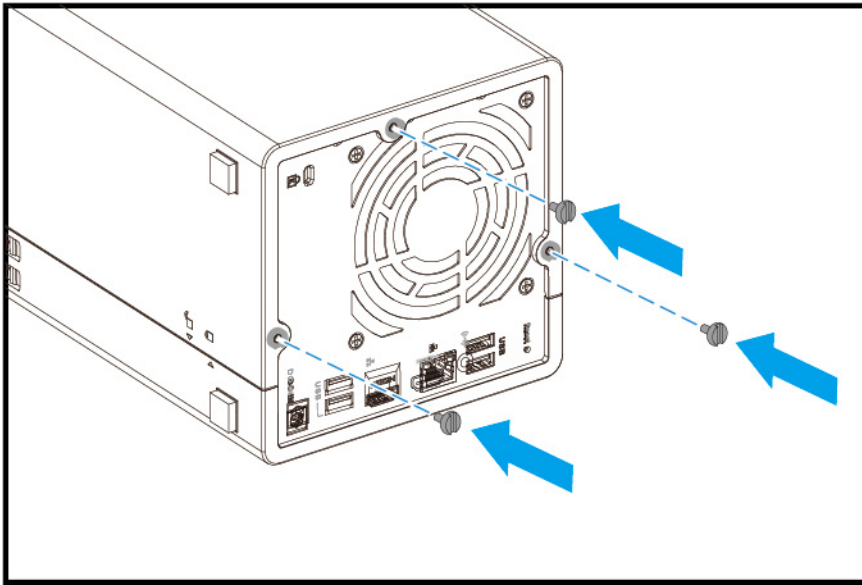
6. Insert the tray into the bay.



- 7. Attach the case cover.**
- a.** Place the cover on the NAS.
 - b.** Align the cover with the grooves on the case.
 - c.** Slide the cover to the left to secure it to the chassis.



- d.** Attach the screws to the back of the NAS.

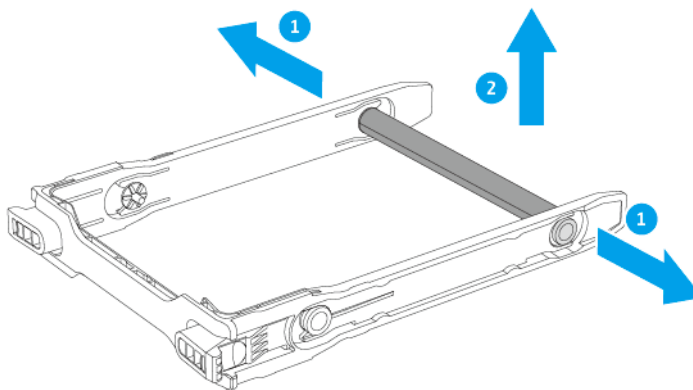


e. Place the NAS in its normal upright position.

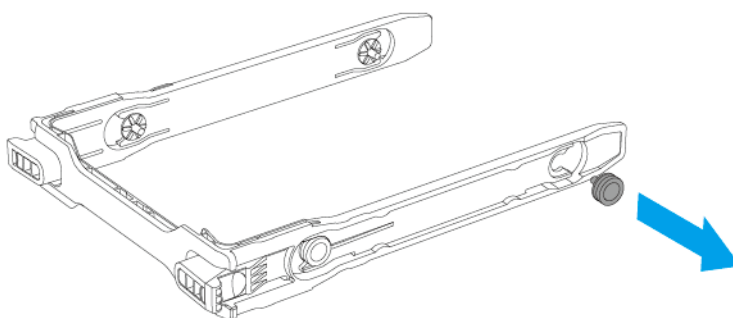
8. Power on the NAS.

Attaching 2.5-inch Drive Tray Bases

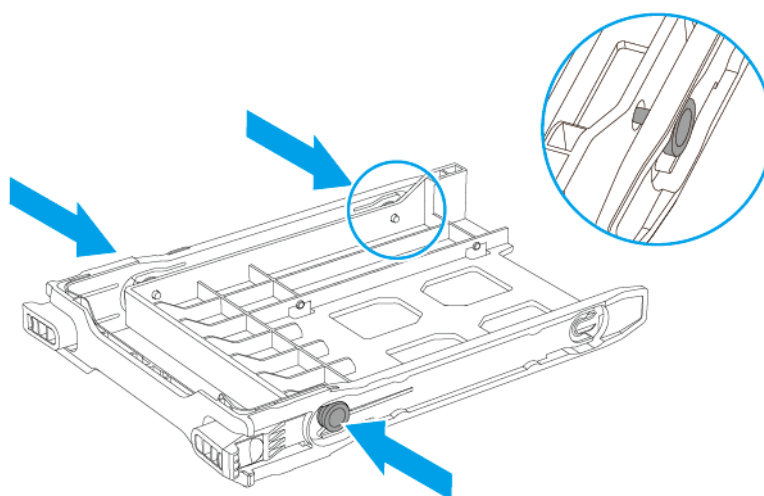
1. Gently pull the sides of the drive tray caddy to release the rod.
2. Remove the rod.



3. Remove the rear right pin from the tray caddy.

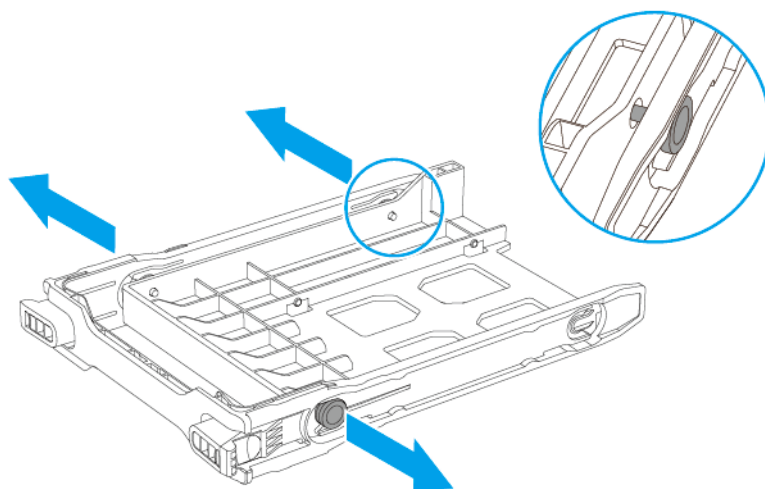


4. Align the holes on the tray base with the pins on the caddy.
5. Attach the pins to the tray base.

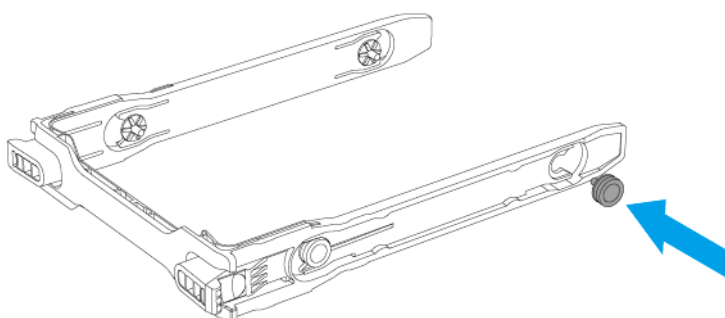


Removing 2.5-inch Drive Tray Bases

1. Gently pull the sides of the drive tray caddy to remove the pins from the tray base.



2. Attach the rear right pin to the tray caddy.



Installing M.2 Solid-State Drives



Warning

- Only qualified personnel should perform the following steps. Failure to follow instructions can result in serious injury or death.
- 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.



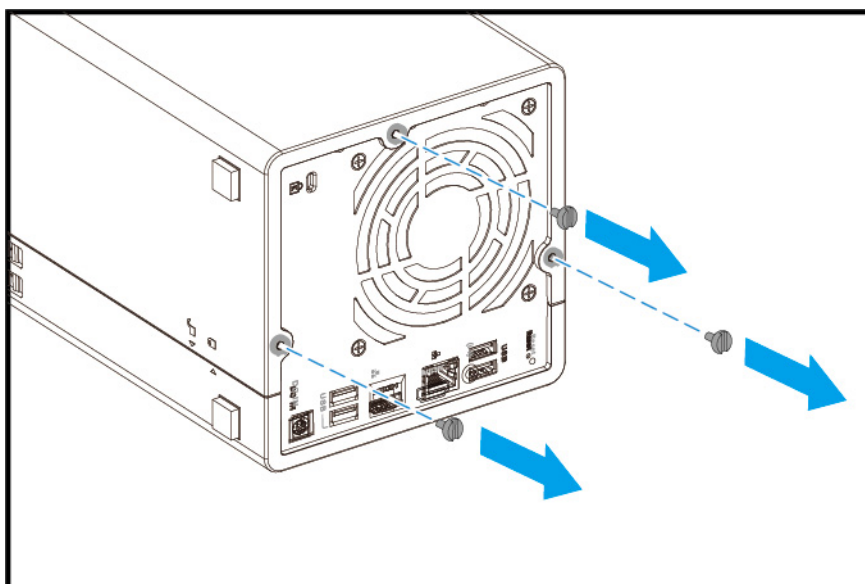
Other moving components: Keep your hands and other body parts away from other moving components.



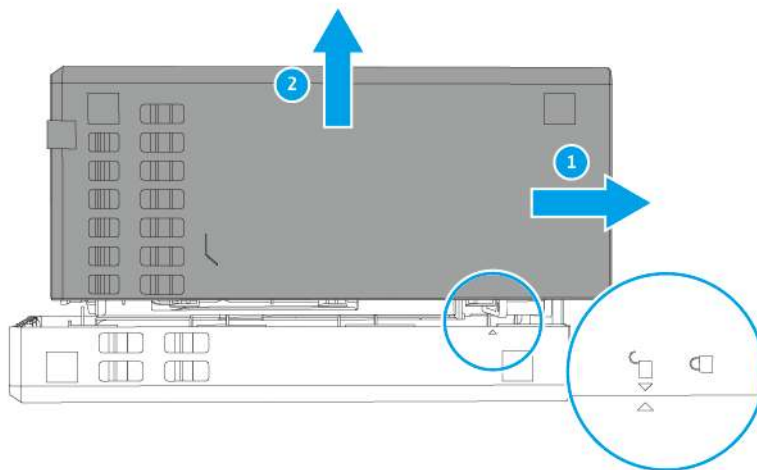
Important

- The TS-364 has two M.2 SSD slots. For a list of compatible M.2 SSDs, go to <https://www.qnap.com/compatibility>.
- QNAP recommends installing heatsinks on the M.2 SSD controllers to enhance cooling efficiency and to ensure consistent performance.
- Before installing non-QNAP heatsinks, ensure that they are of the appropriate size and shape.

1. Power off the NAS.
2. Disconnect the power cord from the electrical outlet.
3. Disconnect all cables and external attachments.
4. Remove the case cover.
 - a. Position the NAS on its left side.
 - b. Remove the screws that secure the case cover to the chassis.

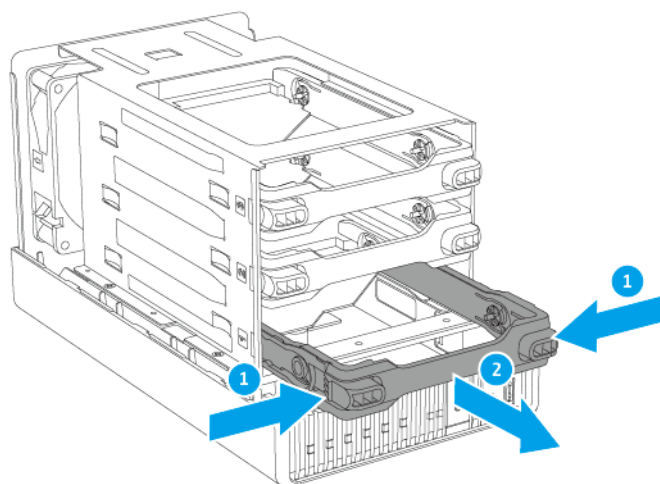


- c. Slide the cover to the right to detach it from the chassis.
- d. Lift the cover off the NAS.



5. Remove each drive tray caddy.

- a.** Squeeze the clips.
- b.** Pull out the caddy.



6. Install a heatsink on the M.2 SSD.

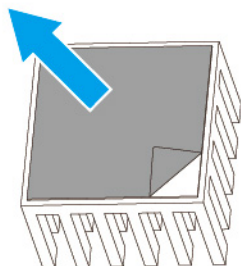
- a.** Locate the controller on the M.2 SSD.



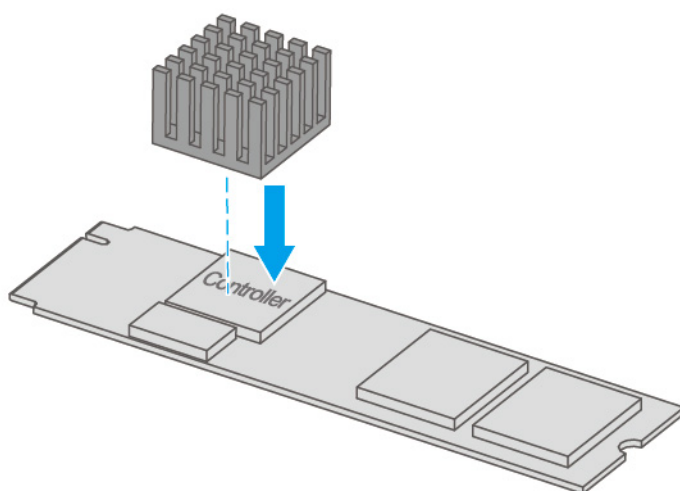
Note

The controller location varies depending on the model and manufacturer of the M.2 SSD. For details, refer to the documentation or contact the manufacturer.

- b.** Remove the protective film from the heatsink.



- c. Install the heatsink on the controller.



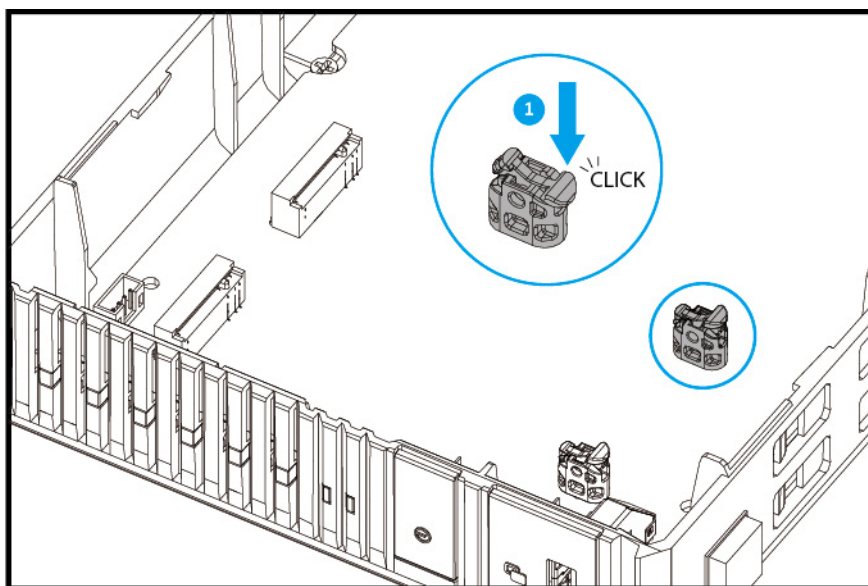
7. Install the M.2 SSD.



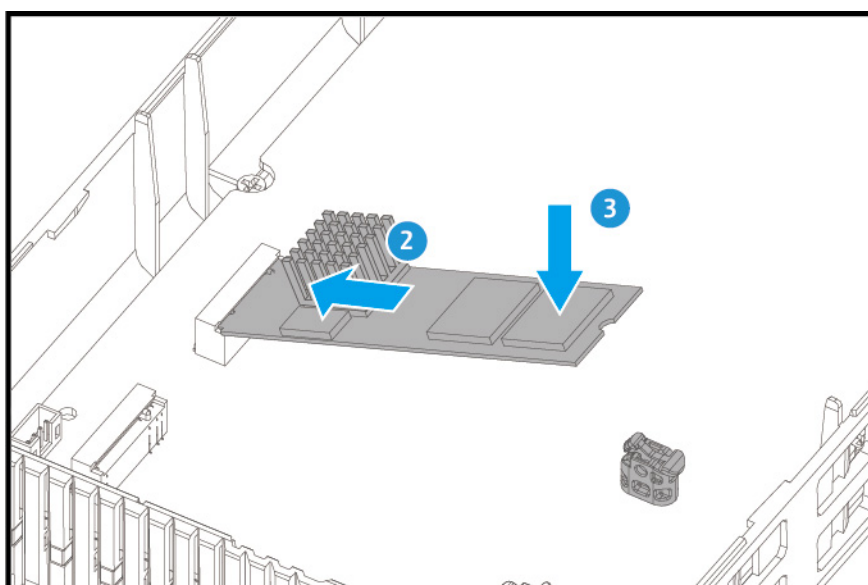
Note

The following installation images do not include the chassis.

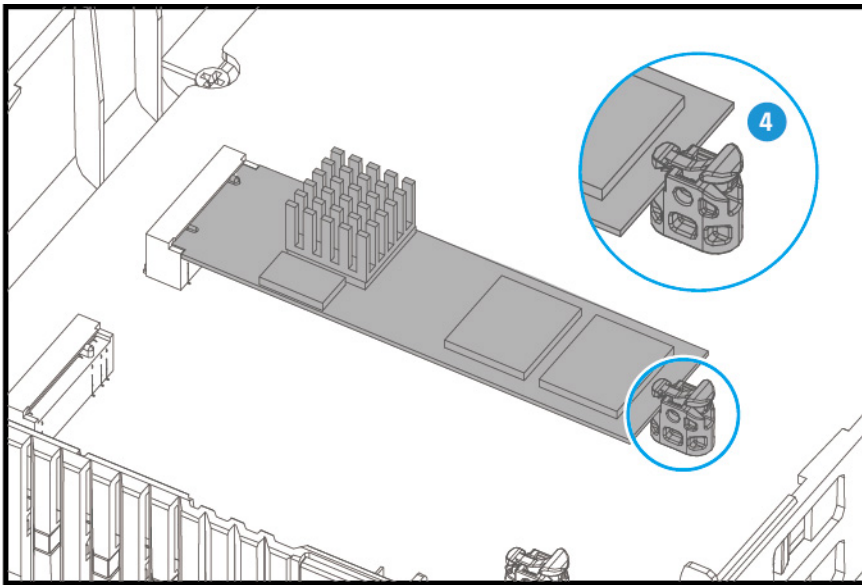
- a. Unlock the M.2 spacer by pushing down on its edge.



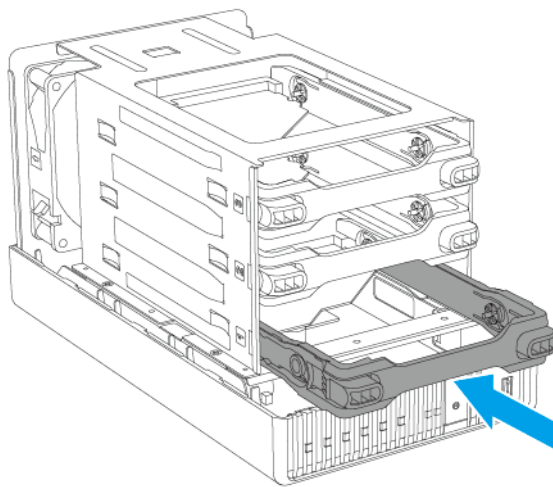
- b.** Insert the M.2 SSD into the slot.
- c.** Carefully press the M.2 SSD down until the spacer locks the drive into place.



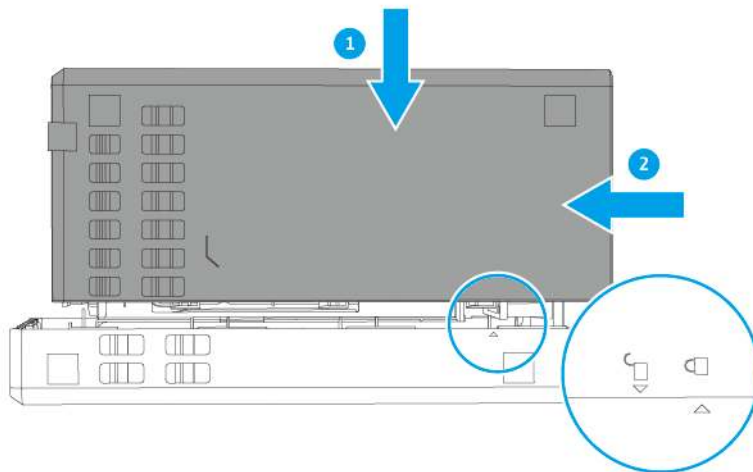
- d.** Verify that the M.2 spacer is firmly locking the M.2 SSD into place.



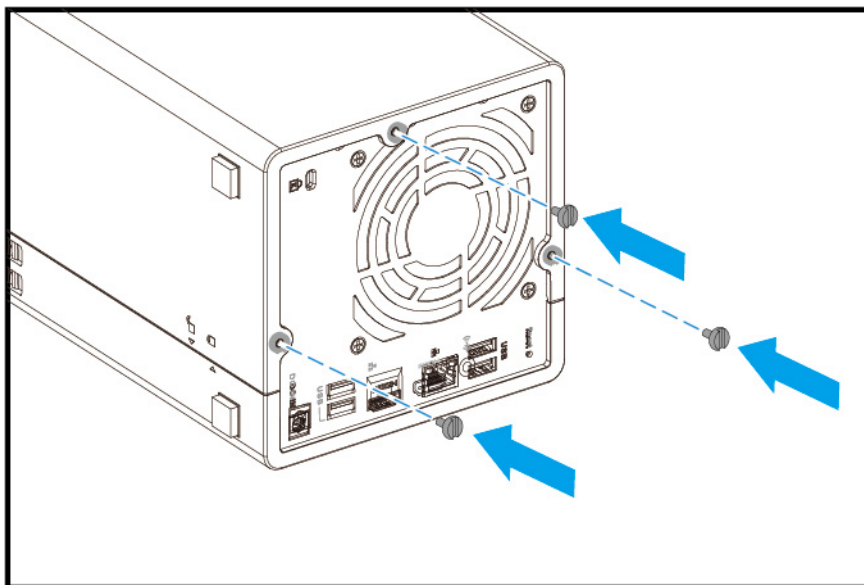
8. Optional: Install an additional M.2 SSD.
9. Slide each drive tray caddy back into the NAS.



10. Attach the case cover.
 - a. Place the cover on the NAS.
 - b. Align the cover with the grooves on the case.
 - c. Slide the cover to the left to secure it to the chassis.



d. Attach the screws to the back of the NAS.



e. Place the NAS in its normal upright position.

- 11.** Connect all cables and external attachments.
- 12.** Connect the power cord to the electrical outlet.
- 13.** 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.

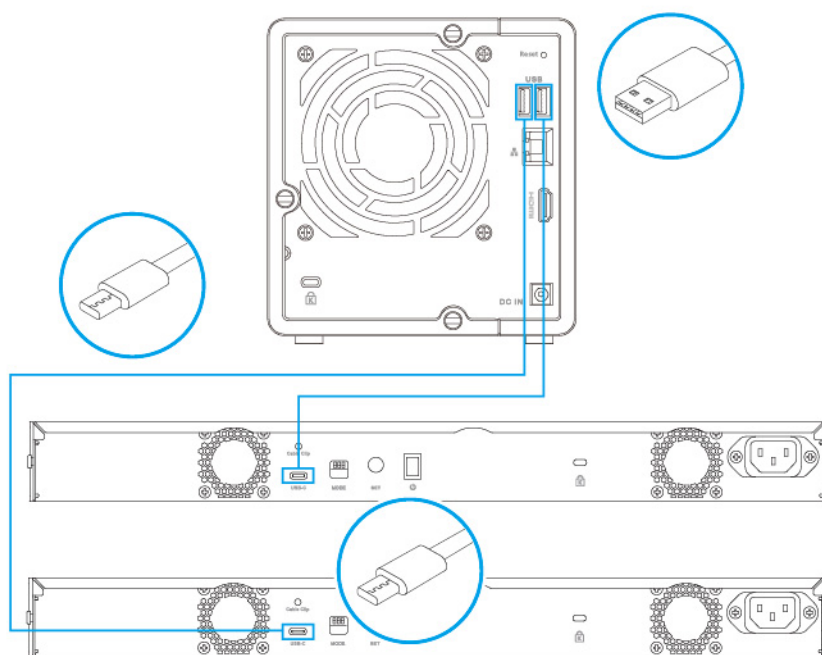
For details, go to <https://shop.qnap.com/>.

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

Expansion Unit Model	Description	Required Accessories
TR-002	• 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	• 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	• Uses a USB 3.2 Gen 1 Type-C interface • Supports SATA HDD/SDD	• USB 3.2 Gen 1 Type-A to Type-C cable • RAIL-B02
TL-D800C	• 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
TL-R1200C-RP	• 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 • RAIL-B02

To connect the device to USB expansion units, USB Type-A to USB Type-C cables or USB Type-C to USB Type-C cables are 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 TS-364 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.

Replacing Memory Modules

The TS-364 has two memory slots. You can increase the memory capacity of the NAS by upgrading the memory modules. When using two modules, use only QNAP modules of the same type and capacity to maintain system performance and stability. You can purchase QNAP memory modules from authorized resellers.



Important

The TS-364 comes with one memory module pre-installed in memory slot 1. When installing only one module, ensure that you install it in memory slot 1. A NAS with only one memory module installed in memory slot 2 will not function.

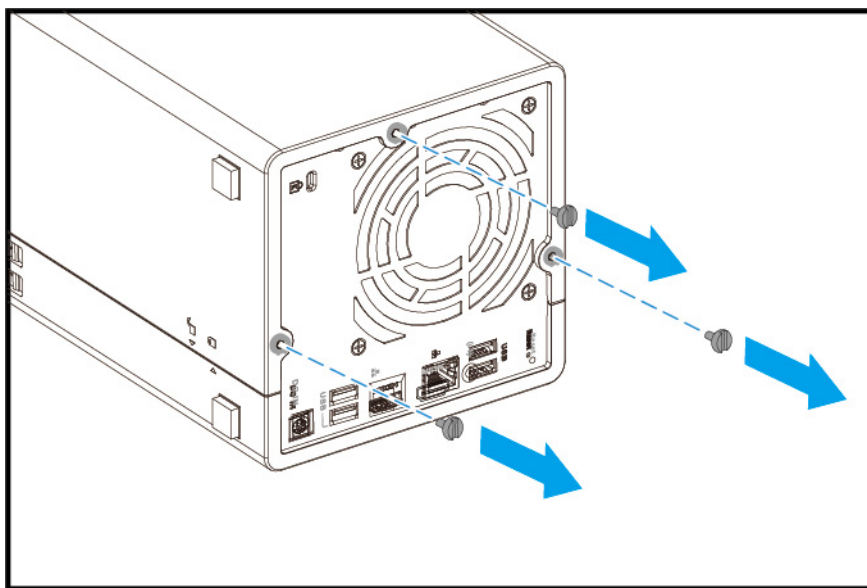


Warning

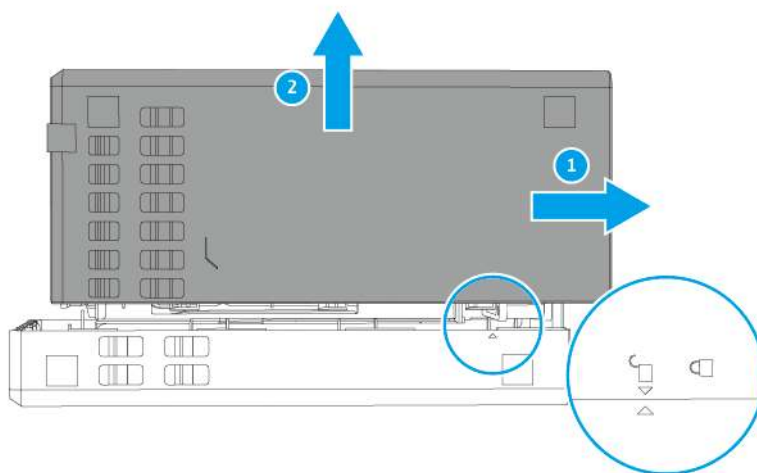
- Only qualified personnel should perform the following steps. Failure to follow instructions can result in serious injury or death.

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

1. Power off the NAS.
2. Disconnect the power cord from the electrical outlet.
3. Disconnect all cables and external attachments.
4. Remove the case cover.
 - a. Position the NAS on its left side.
 - b. Remove the screws that secure the case cover to the chassis.

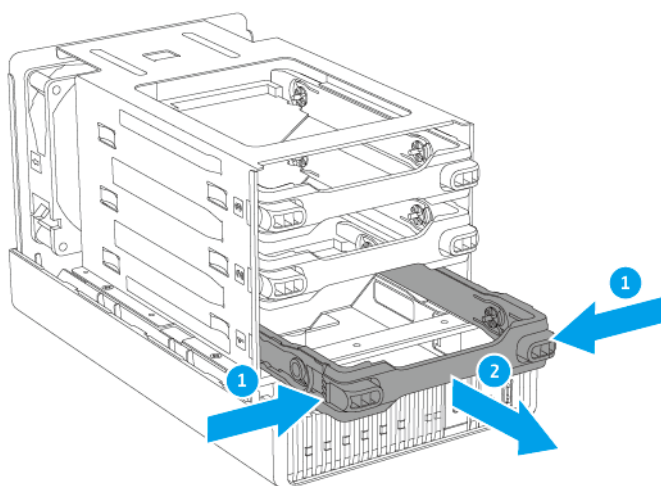


- c. Slide the cover to the right to detach it from the chassis.
- d. Lift the cover off the NAS.



5. Remove each drive tray caddy.

- a. Squeeze the clips.
- b. Pull out the caddy.



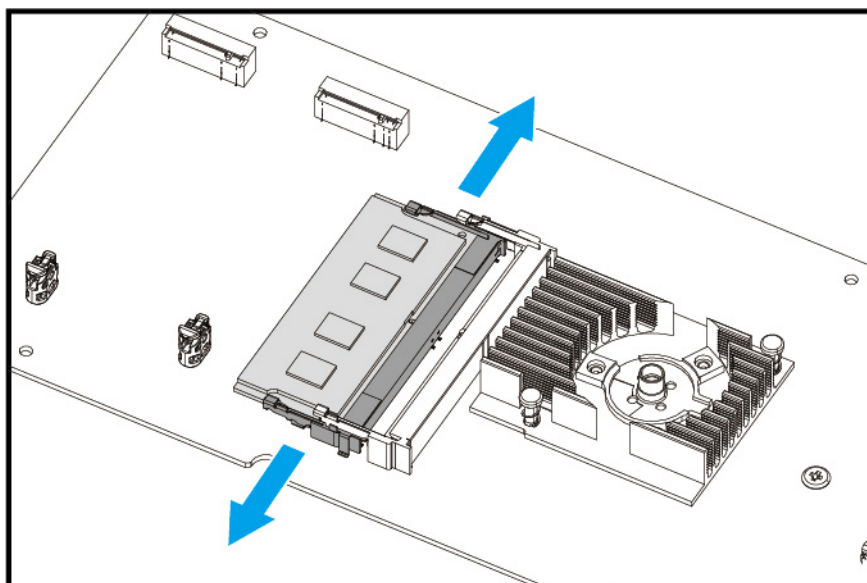
6. Remove an existing module.



Note

The following installation images do not include the chassis.

- a. Push the retention clips outward simultaneously to release the module.

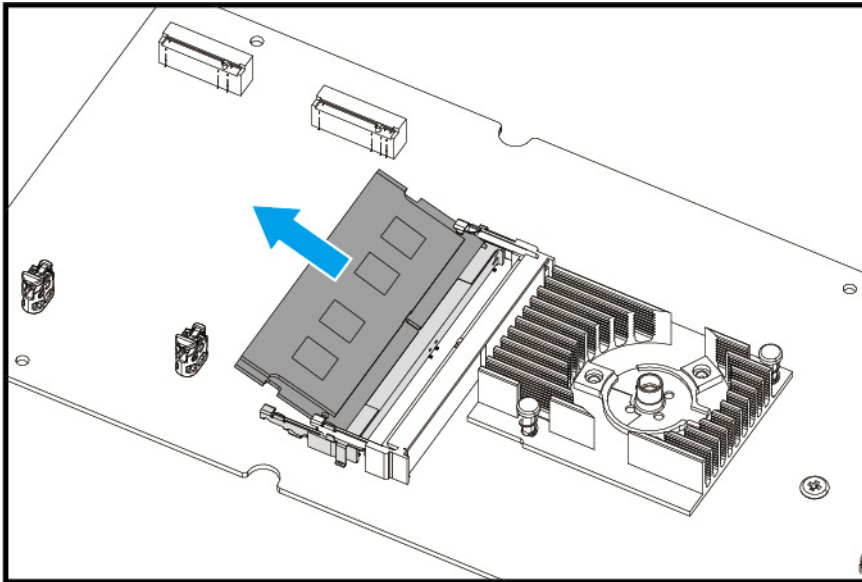


- b. Verify that the module has tilted upward and is completely released from the slot.

**Warning**

Attempting to remove a module that is not completely released may damage the module and the motherboard.

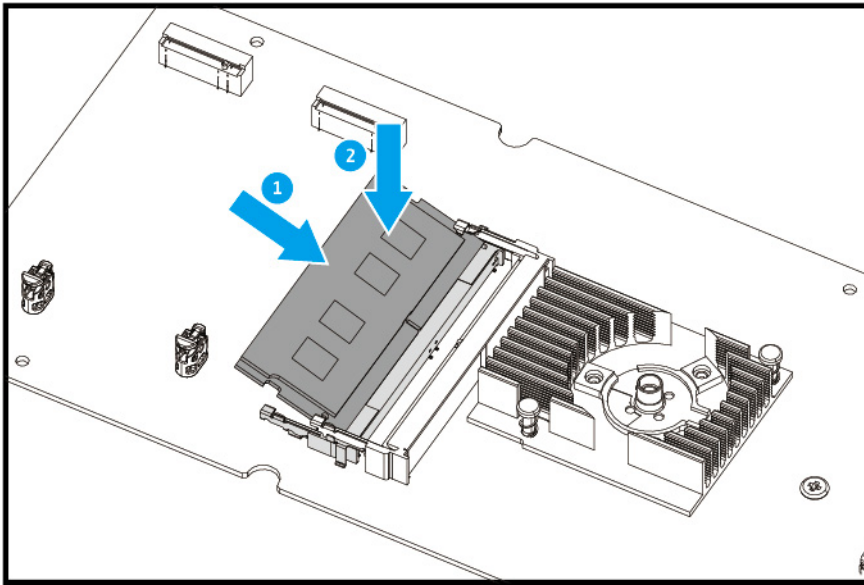
- c. Hold the module by the edges.
- d. Carefully slide the module out of the slot.

**Warning**

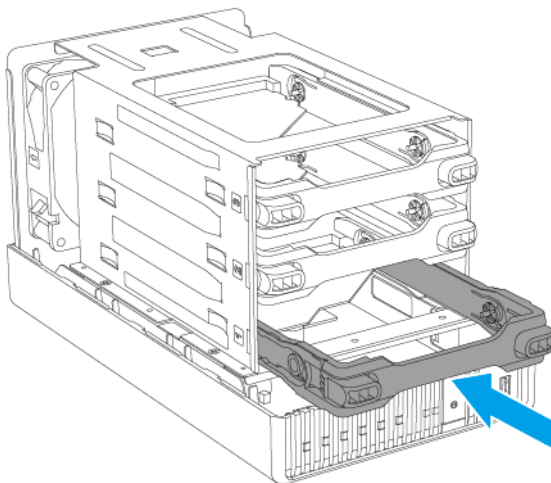
- Do not touch the internal components, particularly the metal connectors.
- Do not bend the module.

7. Install a new module.

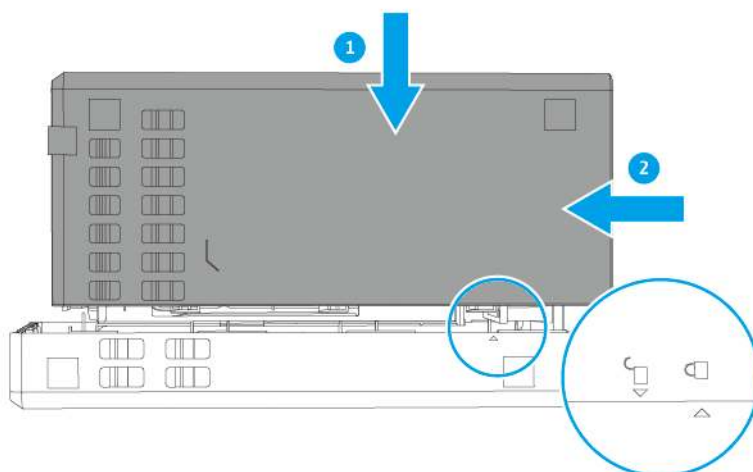
- a. Align the notch with the ridge in the slot.
- b. Insert the module into the slot.
- c. Verify that the metal connectors are completely inserted into the slot.
- d. Carefully press down on the module until the retention clips lock the module into place.



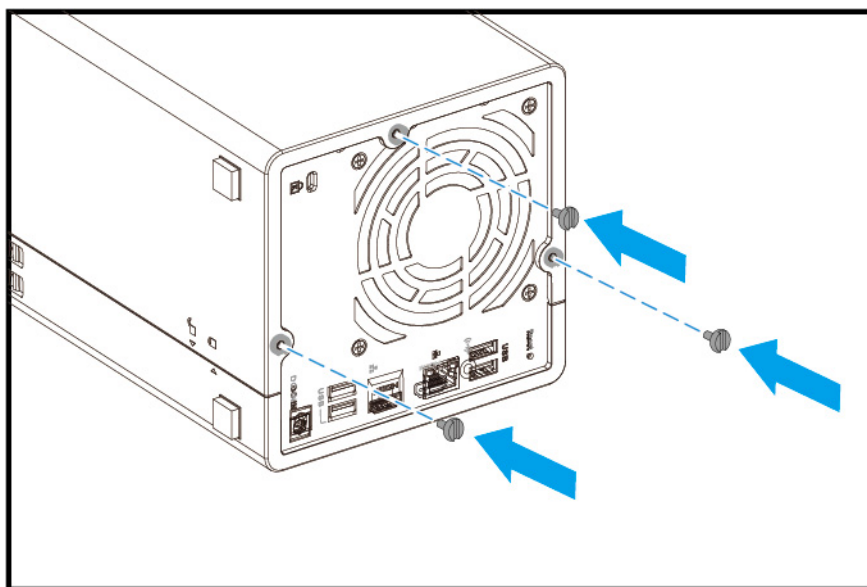
- 8.** Slide each drive tray caddy back into the NAS.



- 9.** Attach the case cover.
- a.** Place the cover on the NAS.
 - b.** Align the cover with the grooves on the case.
 - c.** Slide the cover to the left to secure it to the chassis.



d. Attach the screws to the back of the NAS.



e. Place the NAS in its normal upright position.

10. Connect all cables and external attachments.

11. Connect the power cord to the electrical outlet.

12. Power on the NAS.

13. Verify that the module is recognized by the device.

a. Log on to QTS as administrator.

b. Go to **Control Panel > System > System Status > Hardware Information**.

- c. Check the value for **Total memory**.

QTS Installation

The TS-364 uses the QNAP QTS operating system. You can install QTS using any of the following methods.

Method	Description	Requirements
Qfinder Pro installation (Recommended)	If the NAS is connected to your local area network, you can do the following: • Locate the NAS using Qfinder Pro. • Complete the steps in the Smart Installation Guide wizard. For details, see Installing QTS Using Qfinder Pro.	• Computer • Network cable • Qfinder Pro installer
Cloud installation	If the NAS is connected to the internet, you can do the following: • 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. For details, see Installing QTS Using the Cloud Key.	• Computer or mobile device • Network cable • myQNAPcloud account • Cloud Key
Local installation	If the NAS supports HDMI output, you can do the following: • Connect the NAS to the required hardware. • Complete the steps in the Smart Installation Guide wizard. For details, see Installing QTS Using an HDMI Connection.	• Monitor • HDMI cable • USB keyboard or Remote control (not available on all models)

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.
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. Click **Next**.
The **QNAP Warranty Service** page opens in the default web browser.
5. 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](#).

6. Close the warranty page.
The **Smart Installation Guide** opens in the default web browser.
7. Click **Next**.
The **Enter the NAS name and administrator's password** screen appears.
8. 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.
9. Click **Next**.
The **Set the date and time** screen appears.
10. 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.

Methods	User Actions
Enter manually	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	a. Select Use static IP address. The IP address configuration page appears. b. Specify the following IP address configurations: • 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	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.

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.

Methods	User Actions
Use static IP address	a. Select Use static IP address. The IP address configuration page appears. b. Specify the following IP address configurations: • 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.

Installing QTS Using an HDMI Connection

**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. Connect an HDMI display to the NAS.
2. Connect a USB keyboard to the NAS or prepare the QNAP IR remote control (not available on all models).
3. Power on the NAS.
The **Welcome** screen of the Smart Installation Guide appears.
4. Select **Start Smart Installation Guide**.
The **Enter the NAS name and administrator's password** screen appears.

5. 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.

6. 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.

7. Click **Next**.

The **Summary** screen appears.

8. Review the settings.

9. Click **Next**.

The **Confirm** screen appears.



Warning

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

10. Click **Next**.

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.	 Important Use this method only when the device is unresponsive.

Reset Button

Operation	User Action	Result
Basic system reset	Press and hold the button for 3 seconds.	The following settings are reset to default: - System administrator password: The default password is the first MAC address in uppercase letters without special characters. For example, if the first MAC address is 00-08-9B-F6-15-75, then the admin password would be 00089BF61575.  Tip You can find the first MAC address with Qfinder Pro or attached to a label on the device listed as MAC1. - The admin account is automatically enabled - TCP/IP configuration: - 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.	The default factory settings are restored. To retrieve old data after an advanced system reset, recreate the previous folder structure on the NAS.

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.

To configure the behavior of the button when an external device is connected to the button's USB port, install and use Hybrid Backup Sync on your QNAP operating system. For details, see the [Hybrid Backup Sync](#) documentation.

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 [Front Panel](#).

LED	Status	Description
M.2 SSD	Flashes red	The data is being accessed and a read/write error occurs during the process.
	Red	A drive read/write error occurred.
	Flashes green	Data is being accessed.
	Green	The drive is ready.
	Off	No drive was detected.
Multi-Gigabit speed	Green	The network connection is operating at 2.5 Gbps.
	Orange	- The network connection is operating at 1 Gbps. - The network connection is operating at 100 Mbps.
	Off	The network connection is operating at 10 Mbps.
Multi-Gigabit activity	Orange	A network connection has been established.
	Flashes orange	The device is being accessed on this network.
	Off	There is no network connection.
USB One Touch Copy	Flashes blue every 0.5 seconds	- A USB device connected to the USB One Touch Copy port is detected. - A USB device connected to the front USB port is being removed from the device. - A USB device connected to the front USB port is being accessed.
	Blue	A USB device is detected in the front USB port.
	Off	No USB device is detected.

Audio Alert

Duration	Frequency	Description
Short beep (0.5 seconds)	1	- The NAS is starting up. - The NAS is shutting down. - 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
	3	- The operating system was updated. - The NAS data cannot be copied to the external storage device connected to the front USB port.
Long beep (1.5 seconds)	3 (every 5 minutes)	The system fan is not functioning.
	2	- 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	- The NAS was powered off by force shutdown (hardware shutdown). - 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.
Encrypted disk volumes	If the NAS does not support file system encryption, encrypted disk volumes are not migrated.  Warning 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.

Data and Settings	After NAS Migration
Shared folders	All shared folders and the downloaded files stored in them are retained.  Warning To prevent data loss, back up and save encryption keys or passwords of encrypted shared folders in a safe place before migration.  Important Folder permissions on the destination NAS must be reconfigured after migration.
Network	- 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	Licenses are not migrated.  Warning To prevent losing all your software licenses, QNAP recommends deactivating licenses on the source NAS before data migration.
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.
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: • 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.

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

Creating a One-Way Sync Job

- On the source NAS, go to **App Center > HBS 3 > Sync**.
- Click **Sync Now**.
- Select **One-way Sync Job**.
The **Create a Sync Job** window appears.
- Click **Remote NAS**.
- Click **Add New Account**.
The **Create a Storage Space** window appears.
- 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.

- 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.

- Click **Create**.
- 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.
RAID 5	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
RAID 5	Yes	≥ 3	1
RAID 6	Yes	≥ 4	2
RAID 10	No	≥ 4 (Must be an even number)	One or two member drives in two different pairs fail.

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

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Version 3, 29 June 2007

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FCC Notice

FCC Class B Notice



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2. This device must accept any interference received, including interference that may cause undesired operation.

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- 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.

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VCCI Notice

VCCI-B

BSMI Notice

SJ/T 11364-2006



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	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
O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。						
X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。						