



QNAP

TBS-453DX

User Guide



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Contents

1. Preface

About This Guide.....	3
Audience.....	3
Document Conventions.....	3

2. Product Overview

About the TBS-453DX.....	4
Hardware Specifications.....	4
Package Contents.....	6
Components.....	6
Front Panel.....	7
Rear Panel.....	7
Right Panel.....	8
System Board.....	9
M.2 Solid-state Drive Numbering.....	9
Safety Information.....	9
Installation Requirements.....	11
Setting Up the NAS.....	11

3. Installation and Configuration

Hardware Installation.....	12
Installing M.2 Solid-state Drives.....	12
Replacing Memory Modules.....	17
QTS Installation.....	22
Installing QTS Using Qfinder Pro.....	22
Installing QTS Using the Cloud Key.....	23
Installing QTS Using an HDMI Connection.....	25

4. Basic Operations

Power Button.....	26
Reset Button.....	26
USB One Touch Copy Button.....	26
LEDs.....	27
Audio Alert.....	28

5. Troubleshooting

Forcing Qfinder Pro or myQNAPcloud to Locate the NAS.....	29
Replacing Failed Drives.....	29
Support and Other Resources.....	30

6. Glossary

CloudKey.....	31
CloudLink.....	31
myQNAPcloud.....	31
myQNAPcloud ID.....	31
Qfinder Pro.....	31
QTS.....	31

7. Notices

Limited Warranty.....	32
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Disclaimer..... 32
GNU Public License..... 32
FCC Notice..... 40
CE Notice..... 40
SJ/T 11364-2006..... 41

1. Preface





About This Guide

This guide provides information on the QNAP TBS-453DX NAS 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 TBS-453DX NAS.

About the TBS-453DX

The TBS-453DX is a compact NAS powered by an Intel® Celeron® J4115 4-core 1.8 GHz processor or an Intel® Celeron® J4105 4-core 1.5 GHz processor and supports up to 8 GB of DDR4 memory. It has both a Gigabit and 10 Gigabit Ethernet port for enhanced connectivity and provides multimedia support through its HDMI connection. In addition to its four M.2 SATA SSD slots, the TBS-453DX features USB One Touch Copy for easy and efficient data transfer.

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](#).

Component	TBS-453DX
Ordering Information	
Ordering P/N	<ul style="list-style-type: none"> • TBS-453DX-4G • TBS-453DX-8G
Processor	
CPU	Intel® Celeron® J4115 Intel® Celeron® J4105
Frequency	4-core/4-thread 1.8 GHz base/2.5 GHz burst 4-core/4-thread 1.5 GHz base/2.5 GHz burst
Architecture	x86 64-bit
Encryption engine	AES-NI
Memory	
Pre-installed memory	<ul style="list-style-type: none"> • 4 GB RAM: 2 x 2 GB SODIMM DDR4 • 8 GB RAM: 2 x 4 GB SODIMM DDR4
Memory slots	2 x SODIMM DDR4
	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> </div> <div> <p>Important</p> <ul style="list-style-type: none"> • 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. </div> </div>

Component	TBS-453DX
Maximum memory	8 GB RAM: 2 x 4 GB
Flash memory	4 GB eMMC
Storage	
M.2 SSD slots	4 x SATA 6 Gbps
M.2 SSD form factor	2280
Network	
10 Gigabit Ethernet ports	1 x 10 GbE RJ45 (supports 5 GbE, 2.5 GbE, and 1 GbE)
Gigabit Ethernet ports	1 x GbE RJ45
External I/O Ports & Expansion Slots	
USB ports	<ul style="list-style-type: none"> • Front: 2 x USB 3.0 Type-A <div style="border-left: 2px solid #0070C0; padding-left: 10px; margin-top: 10px;">  Note The left port supports USB One Touch Copy. </div> <ul style="list-style-type: none"> • Rear: 4 x USB 2.0 Type-A • Right panel: 1 x USB 3.0 Type-A
HDMI ports	1 x HDMI 2.0 (up to 3840 x 2160 resolution at 60 Hz)
Audio ports	<ul style="list-style-type: none"> • 2 x 3.5 mm dynamic microphone jacks • 1 x 3.5 mm line-out jack • 2 x speakers <div style="border-left: 2px solid #0070C0; padding-left: 10px; margin-top: 10px;">  Note You cannot use speakers and line-out jacks simultaneously. </div>
Interface	
Buttons	<ul style="list-style-type: none"> • Power • Reset • USB One Touch Copy • Audio volume
IR sensor	1 <div style="border-left: 2px solid #0070C0; padding-left: 10px; margin-top: 10px;">  Note The TBS-453DX supports the QNAP RM-IR004 remote control, which is an optional separate purchase. </div>
Dimensions	
Form factor	Compact
Dimensions (H x W x D)	25 x 230 x 165 mm (0.98 x 9.06 x 6.50 in)
Net weight	0.8 kg (1.72 lbs)
Others	
Power supply unit	65W, 10-20V DC, 50/60 Hz

Component	TBS-453DX
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	15.8 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 Compact internal 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	<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

**Tip**

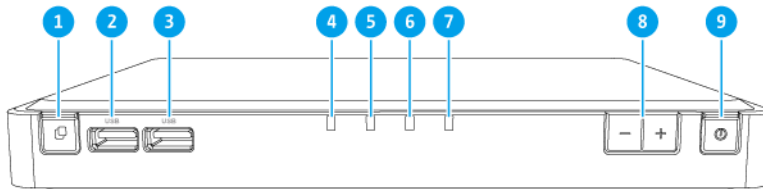
Model specifications are subject to change without prior notice. To see the latest specifications, go to <https://www.qnap.com>.

Package Contents

Item	Quantity
TBS-453DX NAS	1
AC power adapter	1
Power cord	1
Ethernet cables	2
Screws for M.2 SSDs	6
Heatsinks for M.2 SSDs	4
Thermal pads for M.2 SSDs	12
Quick Installation Guide (QIG)	1

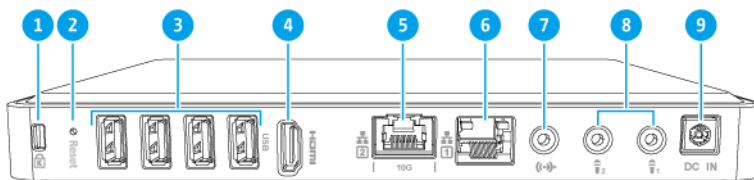
Components

Front Panel



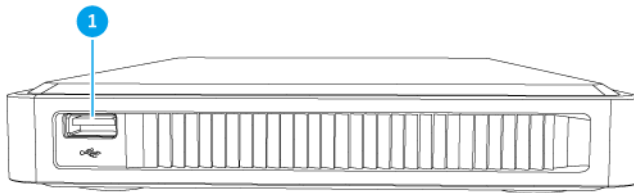
No.	Component	No.	Component
1	USB One Touch Copy button	6	Drive 3 LED
2	USB 3.0 One Touch Copy Type-A port	7	Drive 4 LED
3	USB 3.0 Type-A port	8	Audio volume buttons
4	Drive 1 LED	9	Power button
5	Drive 2 LED	-	-

Rear Panel



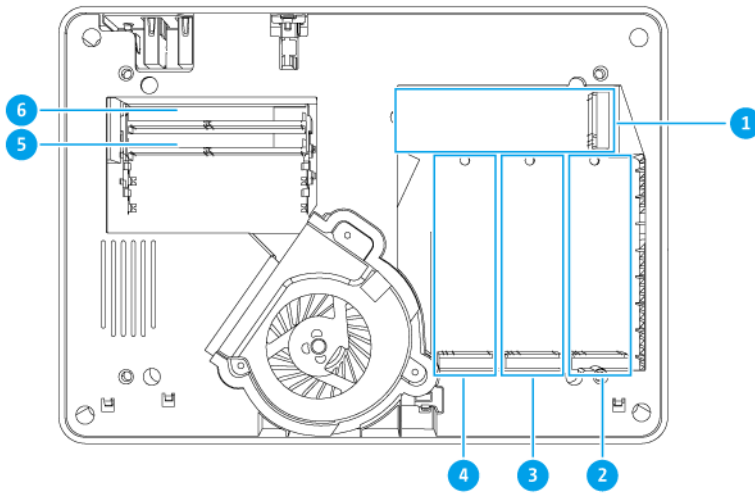
No.	Component	No.	Component
1	Kensington security slot	6	Ethernet port 1 (GbE RJ45)
2	Reset button	7	3.5 mm line-out jack
3	USB 2.0 Type-A ports	8	3.5 mm dynamic microphone jacks
4	HDMI 2.0 port	9	Power input
5	Ethernet port 2 (10 GbE RJ45)	-	-

Right Panel



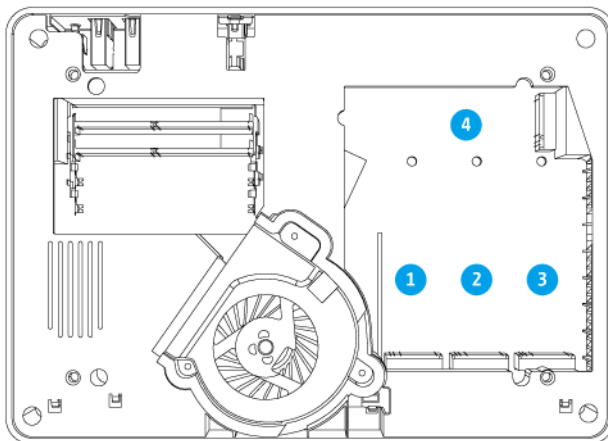
No.	Component	No.	Component
1	USB 3.0 Type-A port	-	-

System Board



No.	Component	No.	Component
1	M.2 SSD slot 4	4	M.2 SSD slot 1
2	M.2 SSD slot 3	5	Memory slot 1
3	M.2 SSD slot 2	6	Memory slot 2

M.2 Solid-state Drive Numbering



Safety Information

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

General Instructions

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

Power

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



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

System Battery

- To avoid potential battery explosion, causing injury or damage to components, ensure that you replace the existing battery with a battery of the same type.
- Dispose of used batteries properly according to local regulations or the instructions of the battery manufacturer.

Moving Parts



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



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

Installation Requirements

Category	Item
Environment	<ul style="list-style-type: none"> • 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
Hardware and peripherals	<ul style="list-style-type: none"> • Storage drives For details on compatible drives, go to https://www.qnap.com/compatibility/. • Network cable
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 in [Safety 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 [Installing M.2 Solid-state Drives](#).
3. Connect the power cord and all applicable cables.
4. Power on the NAS.
5. Install QTS.
For details, see [QTS Installation](#).
6. 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.

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.



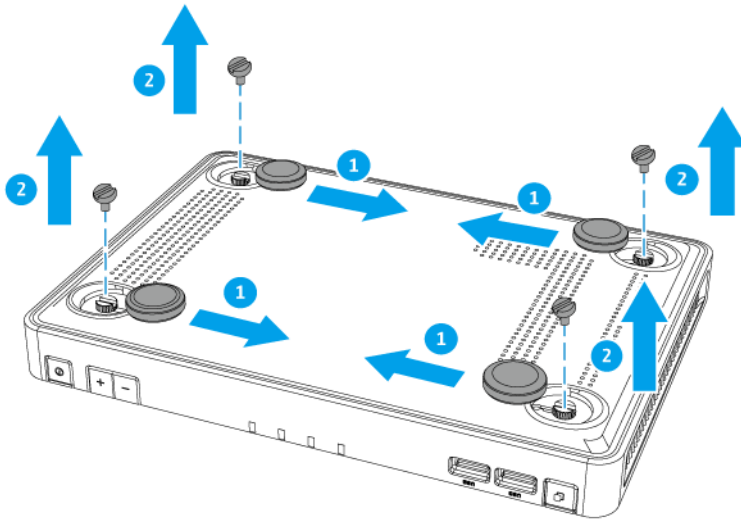
Other moving components: Keep your hands and other body parts away from other moving components.



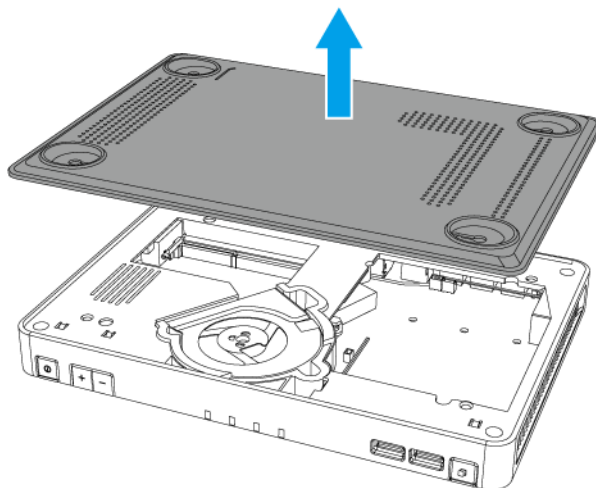
Note

- The TBS-453DX has four M.2 SSD slots. For a list of compatible M.2 SSDs, go to <https://www.qnap.com/compatibility>.
- QNAP recommends installing heatsinks and thermal pads on the M.2 SSD controllers to enhance cooling efficiency and ensure consistent performance.

1. Power off the NAS.
2. Disconnect the power cord from the electrical outlet.
3. Disconnect all cables and external attachments.
4. Remove the bottom cover.
 - a. Turn the NAS upside down.
 - b. Remove the rubber feet.
 - c. Remove the screws.

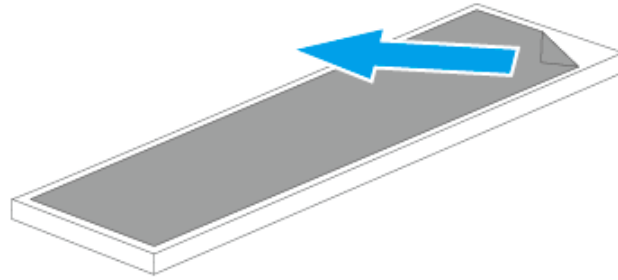


d. Lift the bottom cover off the NAS.

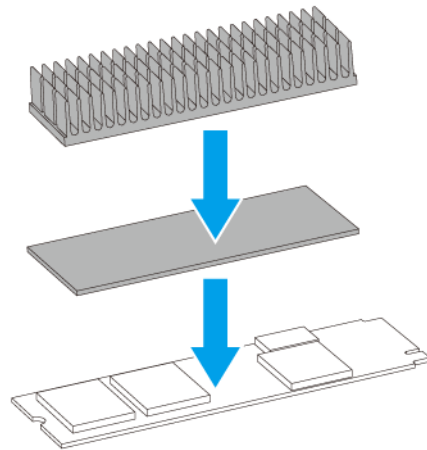


5. Install a heatsink and thermal pad on the M.2 SSD controller.

- a. Locate the controller on the M.2 SSD.
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 bottom of the thermal pad.



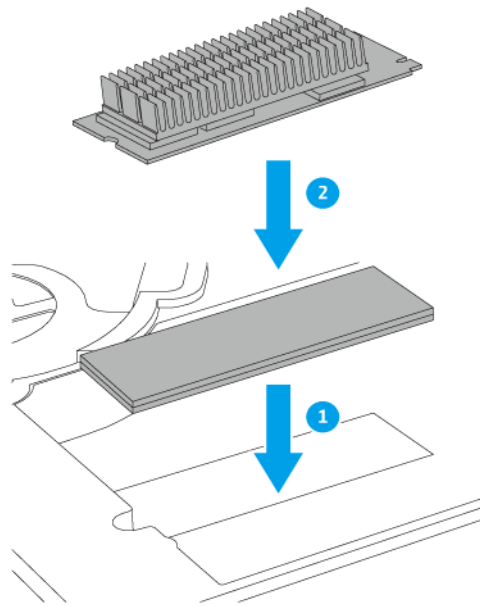
- c. Install the heatsink and thermal pad on the controller.



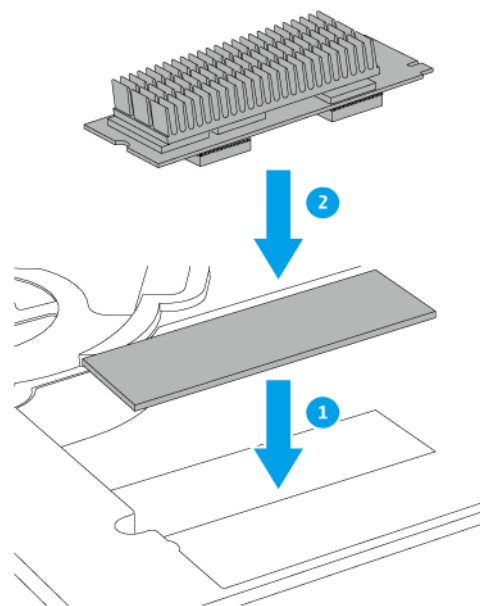
6. Install thermal pads on the system board.

**Note**

Single-sided M.2 SSDs have components (e.g., controllers, flash ICs) mounted only on the top side, and double-sided M.2 SSDs have components mounted on both sides. Apply two thermal pads for single-sided M.2 SSDs and one thermal pad for double-sided M.2 SSDs.

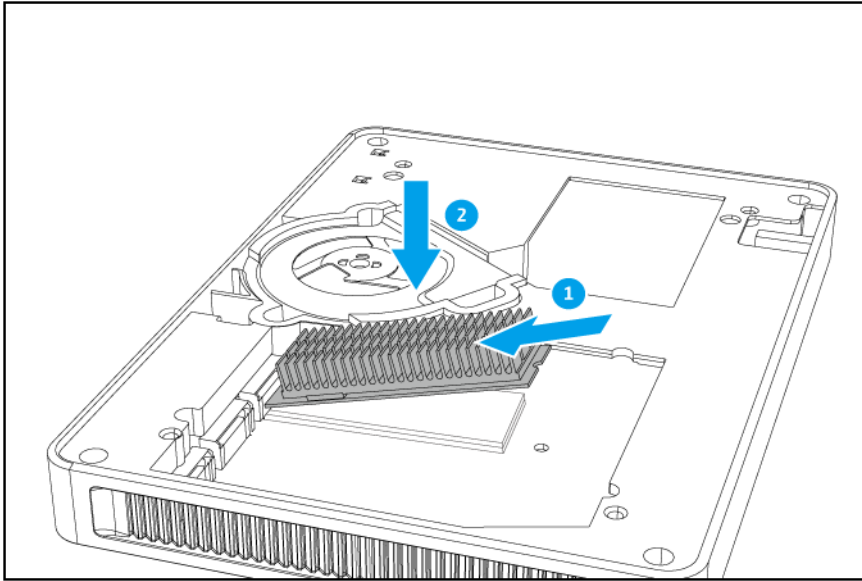


Single-sided M.2 SSD

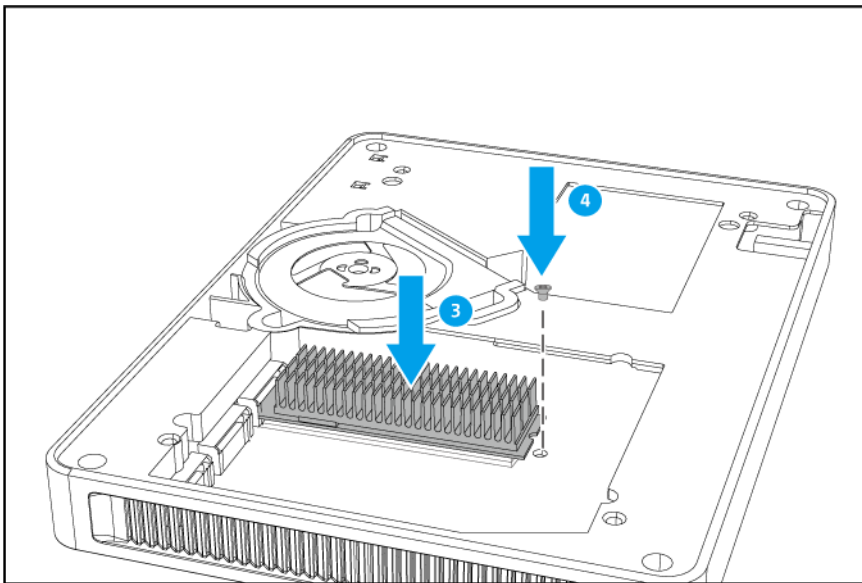


Double-sided M.2 SSD

7. Install the M.2 SSD.
 - a. Insert the M.2 SSD into the slot.

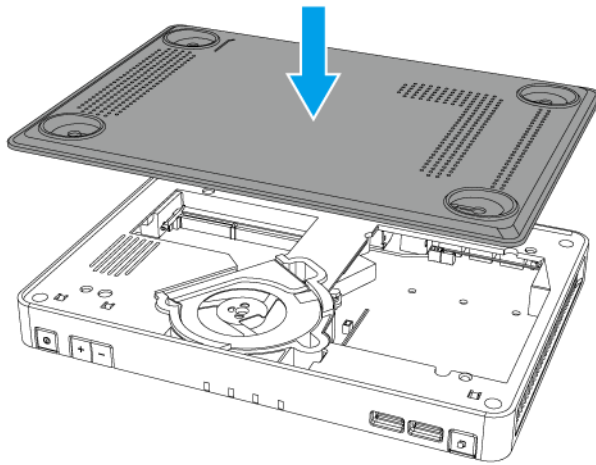


- b. Apply the M.2 SSD firmly to the thermal pads on the system board, and then attach the screw.

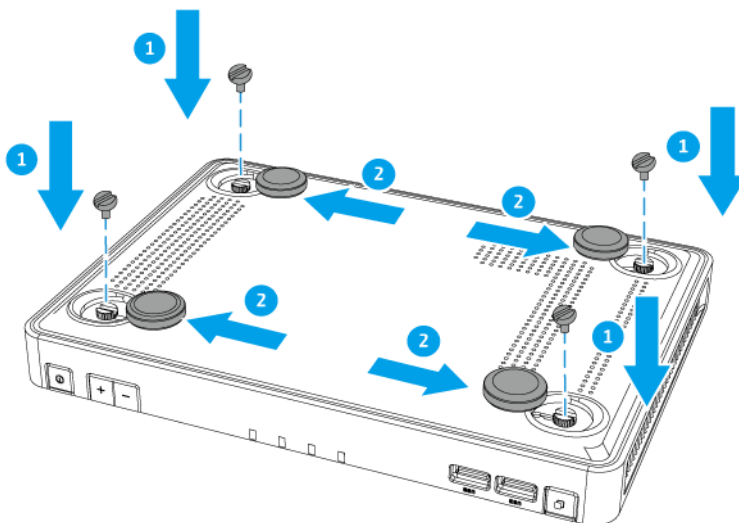


8. Attach the bottom cover.

- a. Place the bottom cover on the NAS.



- b. Attach the screws.
- c. Attach the rubber feet.



- d. Place the NAS in its normal upright position.
9. Connect all cables and external attachments.
 10. Connect the power cord to the electrical outlet.
 11. Power on the NAS.

Replacing Memory Modules

The TBS-453DX 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.



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.

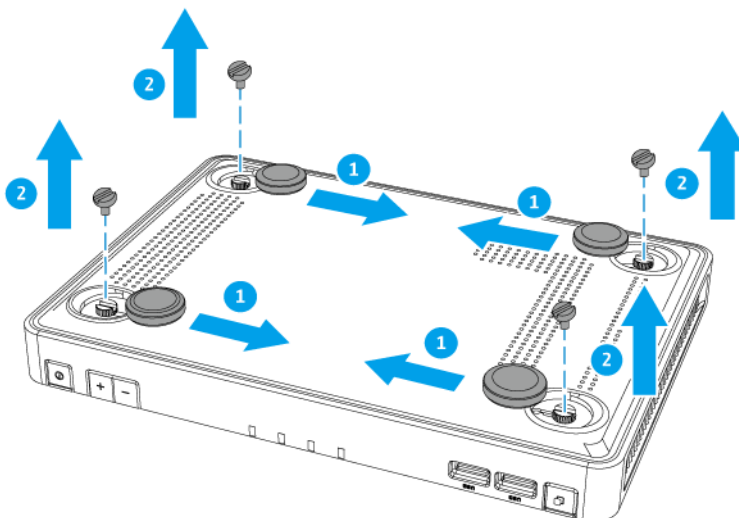


Moving fan blades: Keep your hands and other body parts away from moving fan blades.

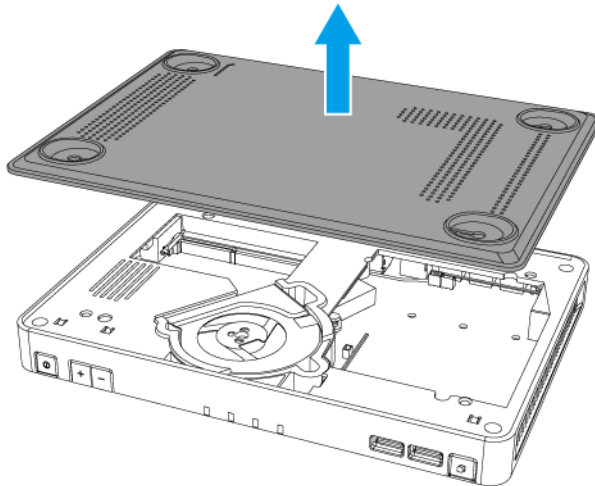


Other moving components: Keep your hands and other body parts away from other moving components.

1. Power off the NAS.
2. Disconnect the power cord from the electrical outlet.
3. Disconnect all cables and external attachments.
4. Remove the bottom cover.
 - a. Turn the NAS upside down.
 - b. Remove the rubber feet.
 - c. Remove the screws.

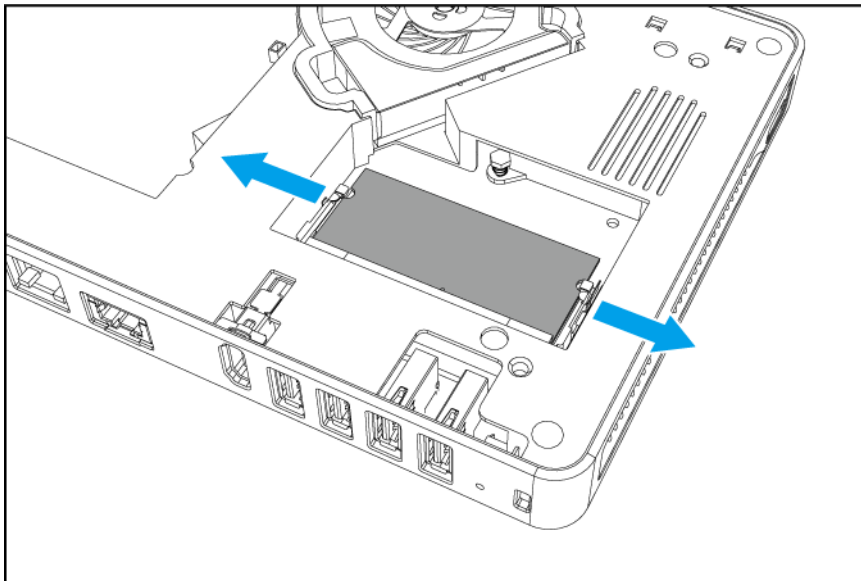


- d. Lift the bottom cover off the NAS.



5. Remove an existing module.

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

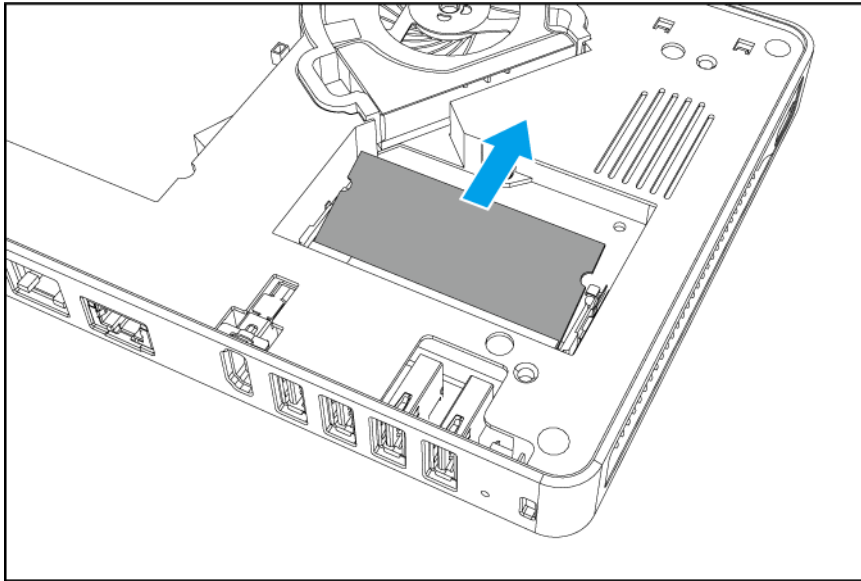


- b. Verify that the module has tilted upward and is completely released from the slot.

**Warning**

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

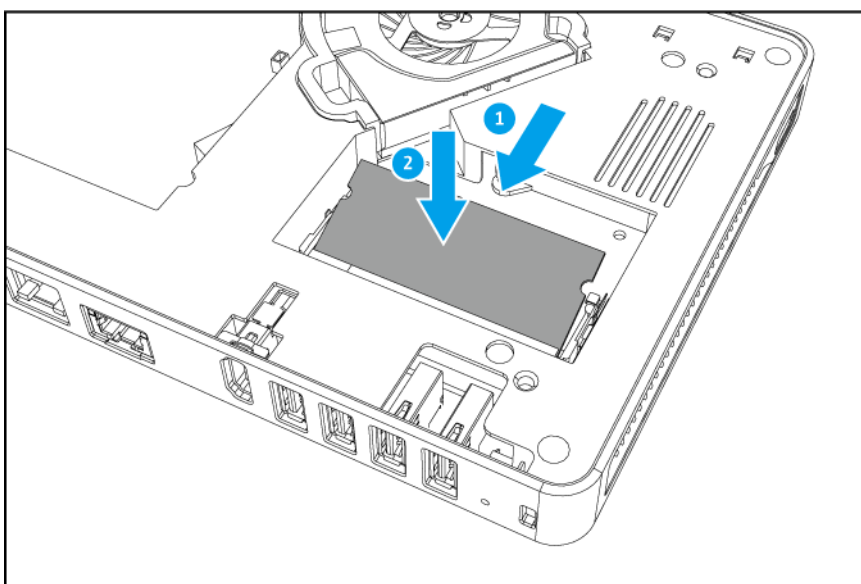
- c. Hold the edges of the module and carefully pull it out of the slot.



Warning

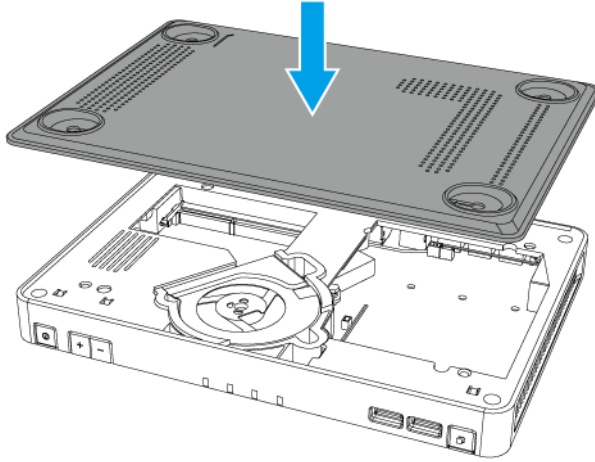
- Do not touch the internal components, particularly the metal connectors.
- Do not bend the module.

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



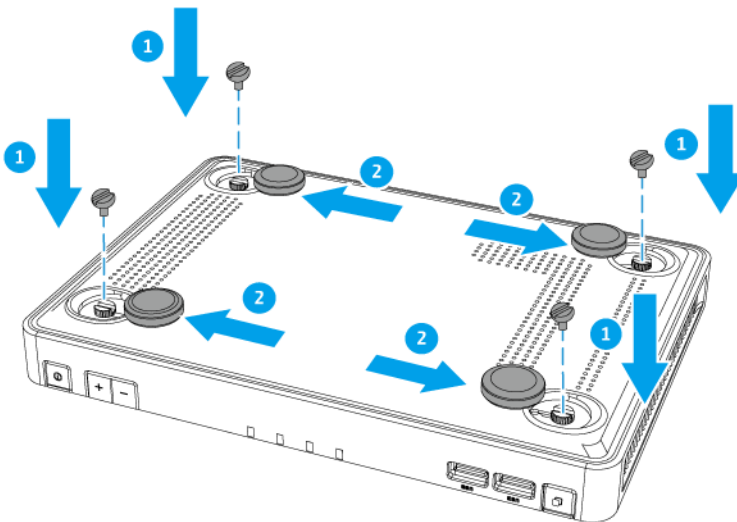
7. Attach the bottom cover.

- a. Place the bottom cover on the NAS.



- b. Attach the screws.

- c. Attach the rubber feet.



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

8. Connect all cables and external attachments.

9. Connect the power cord to the electrical outlet.

10. Power on the NAS.

11. Verify that the module is recognized by the NAS.

- 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 TBS-453DX 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 CloudLink 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
Local installation	<p>If the NAS supports HDMI output, you can do the following:</p> <ul style="list-style-type: none"> • Connect the NAS to the required hardware. • Complete the steps in the Smart Installation Guide wizard. <p>For details, see Installing QTS Using an HDMI Connection.</p>	<ul style="list-style-type: none"> • Monitor • HDMI cable • USB keyboard or Remote control (not available on all models)

Installing QTS Using Qfinder Pro



Warning

Installing QuTS 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.
The **Smart Installation Guide** opens in the default web browser.
5. Click **Start Smart Installation Guide**.
6. 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.
7. Click **Next**.
8. 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.

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

**Warning**

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

16. Click **Confirm**.
QTS is installed.

Installing QTS Using the Cloud Key

**Warning**

Installing QuTS 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 CloudLink remote connection service will be disabled on your NAS after initialization. You can enable it by connecting to QTS through LAN and then installing CloudLink.

7. Click **Next**.

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

8. Click **Start Smart Installation Guide**.

9. 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.

10. Click **Next**.

11. 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.

12. Click **Next**.

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

14. Click **Next**.

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

16. Click **Next**.

17. Review the settings.

18. Click **Apply**.

A confirmation message appears.



Warning

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

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

Installing QTS Using an HDMI Connection



Warning

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

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**.
5. Select **No, skip this process**.
Enabling the multimedia functions allows you to install multimedia applications after configuring the disks in Storage & Snapshots.
For details on enabling multimedia functions on QTS, see the System Administration section of the QTS User Guide.
6. Select **Configure later**.
For details on configuring disks, see the Storage & Snapshots section of the QTS User Guide.
7. Review the settings.
8. Click **Next**.
9. Review the settings.
10. Click **Next**.
The **Confirm** screen appears.



Warning


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

11. 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 NAS powers on.
Power off	Press and hold the button for 1.5 seconds.	The NAS powers off.
Force power off	Press and hold the button for 5 seconds.	The NAS shuts down.  Important Use this method only when the NAS 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: <ul style="list-style-type: none"> • System administrator password: admin • 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.	The default factory settings are restored. <ul style="list-style-type: none"> • 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.

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). Hardware self-test error
	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 data is being accessed and a read/write error occurs during the process.
	Red	A drive read/write error occurred.
	Flashes green	The data is being accessed.
	Green	The drive can be accessed.

LED	Status	Description
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 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.

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 shutting down (software shutdown). • The user pressed the Reset button. • The operating system was updated.
	3	The user tried to copy the NAS data to the external storage device from the front USB port, but the data cannot be copied.
Long beep (1.5 seconds)	3 (every 5 minutes)	The system fan is not functioning.
	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 user started the drive rebuilding process. • A drive is plugged in or out.
	1	<ul style="list-style-type: none"> • The NAS was powered off by force shutdown (hardware shutdown). • The NAS was powered on successfully and is ready.

5. 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.

Replacing Failed Drives

The TBS-453DX supports replacing 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



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. Log on to QTS.
2. Go to **Main Menu > Storage & Snapshots > Storage > Disks/VJBOD** .
3. Locate the failed drive.
4. Prepare a new drive with a capacity that is the same as or larger than the failed drive.
5. Power off the NAS.
6. Remove the failed drive from the drive slot.
7. Insert the new drive into the drive slot.
8. Power on the NAS.
9. Log on to QTS.
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*.

Support and Other Resources

QNAP provides the following resources:

Resource	URL
Documentation	http://docs.qnap.com
Helpdesk	http://helpdesk.qnap.com
Downloads	http://download.qnap.com
Community Forum	http://forum.qnap.com

6. Glossary

CloudKey

Unique 8-digit code assigned to each NAS device

CloudLink

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 CloudLink

myQNAPcloud ID

Email address that was used to register for a myQNAPcloud account

Qfinder Pro

Enables you to locate and access the QNAP NAS devices in your local area network

QTS

QNAP NAS operating system

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THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

17. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

18. Interpretation of Sections 16 and 17.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

FCC Notice

FCC Class B Notice



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

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



Note

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

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



Important

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

CE Notice



This QNAP NAS complies with CE Compliance Class B.

SJ/T 11364-2006



本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有“环境友好使用期限”的标签，此期限是估算这些物质“不会有泄漏或突变”的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

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
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。						