



**QNAP**

# TS-832X

用户指南



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# 1. 前言





## 关于本指南

本指南提供有关 QNAPTS-832X NAS 的信息以及有关硬件安装的分步说明。此外，还提供了有关基本操作和故障排除信息的说明。

## 受众

本文档的目标读者为用户和存储管理员。本指南假定用户已对存储和备份概念有基本了解。

## 文档约定

符号	描述
	注释，提供默认配置设置和其他补充信息。
	重要注释，提供有关所需配置设置的信息以及其他关键信息。
	提示，提供有关执行某项任务或配置设置的建议或备选方法。
	警告，提供警告信息，如果忽略此信息，可能会导致潜在损失、伤害甚至死亡。

## 2. 产品概述

本章提供有关 QNAPTS-832X NAS 的基本信息。

### 关于 TS-832X

TS-832X NAS 是需要高性价比存储、备份、恢复和私有云解决方案的成长型企业的理想之选。TS-832X 特别配备了两个 10GbE SFP+ 端口和两个 1GbE RJ45 端口，能够根据现代网络的需求进行扩展。TS-832X 最多可支持八个存储硬盘，可在紧凑的机身内存储海量数据。TS-832X 还配有四核 ARM 处理器，特有硬件加速加密引擎来确保数据安全无忧。

### 硬件规格



#### 重要

修改 QNAP 产品的硬件或软件会使保修失效。对于因未经授权进行的修改和安装不受支持的第三方应用程序而造成的任何损坏或数据丢失，QNAP 概不负责。

组件	TS-832X
订购信息	
订购部件号	<ul style="list-style-type: none"> <li>• TS-832X-2G</li> <li>• TS-832X-8G</li> </ul>
处理器	
CPU	Annapurna Labs Alpine AL-324 四核 ARM® Cortex-A57 1.7GHz 处理器
架构	64 位
加密引擎	AES-256
内存	
预安装内存	<ul style="list-style-type: none"> <li>• 2 GB RAM: 1 x 2 GB DDR4</li> <li>• 8 GB RAM: 1 x 8 GB DDR4</li> </ul> <p>请仅使用 QNAP 内存模块，以保证系统性能和稳定性。对于有多个内存插槽的 NAS 设备，请使用规格相同的 QNAP 模块。</p> <div style="display: flex; align-items: center;"> <div> <p><b>重要</b></p> <p>使用不受支持的模块可能导致性能下降、引发错误或使操作系统无法启动。</p> </div> </div>
内存插槽总数	1 x SODIMM DDR4
最大内存	16 GB (1 x 16 GB)
闪存	512 MB
存储	
硬盘架	<ul style="list-style-type: none"> <li>• 8 x 3.5 英寸 SATA 6 Gbps 硬盘架</li> </ul>
硬盘兼容性	<ul style="list-style-type: none"> <li>• 3.5 英寸 SATA 机械硬盘</li> <li>• 2.5 英寸 SATA 机械硬盘</li> <li>• 2.5 英寸 SATA 固态硬盘</li> </ul>
可热插拔	是
网络	
10 Gb 以太网端口	2 x 10 Gb SFP+

组件	TS-832X
千兆位以太网端口	2 x 千兆位 RJ45
外部 I/O 端口和扩展插槽	
PCIe 插槽	<ul style="list-style-type: none"> <li>• 1 x PCIe 2.0 x1</li> <li>• 1 x PCIe 2.0 x2</li> </ul>
USB 端口	<ul style="list-style-type: none"> <li>• 正面：1 x USB 3.0 A 型</li> </ul> <p> <b>注</b> 您可以将一键复制按钮与此端口搭配使用。</p> <ul style="list-style-type: none"> <li>• 背面：2 x USB 3.0 A 型</li> </ul>
音频	<ul style="list-style-type: none"> <li>• 1 个 3.5 mm 线路输出插孔</li> <li>• 1 x 扬声器</li> </ul> <p> <b>注</b> 扬声器和线路输出插孔不能同时使用。</p>
接口	
按钮	<ul style="list-style-type: none"> <li>• 电源</li> <li>• USB 一键复制</li> <li>• 重置</li> </ul>
尺寸	
外形规格	立式
尺寸（高 x 宽 x 深）	188.2 x 329.3 x 279.6 mm 7.41 x 12.96 x 11.01 英寸
净重	6.52 kg（14.37 磅）
其他	
电源单元	250W, 100-240V AC, 50/60Hz
系统电池	CR2032 锂电池（3V, 225mAh）
	<p> <b>警告</b> 更换系统电池时，请仅使用现有电池的同型电池，以免爆炸。</p>
风扇	2 x 120 mm, 12V DC
	<p> <b>警告</b> 为避免受到严重伤害，NAS 连接电源时，切勿触及风扇。</p>
工作温度	0 至 40°C（32 至 104°F）
相对湿度	<ul style="list-style-type: none"> <li>• 无冷凝相对湿度：5 至 95%</li> <li>• 湿球温度：27°C (80.6°F)</li> </ul>
安全锁孔	Kensington 安全锁孔



#### 提示

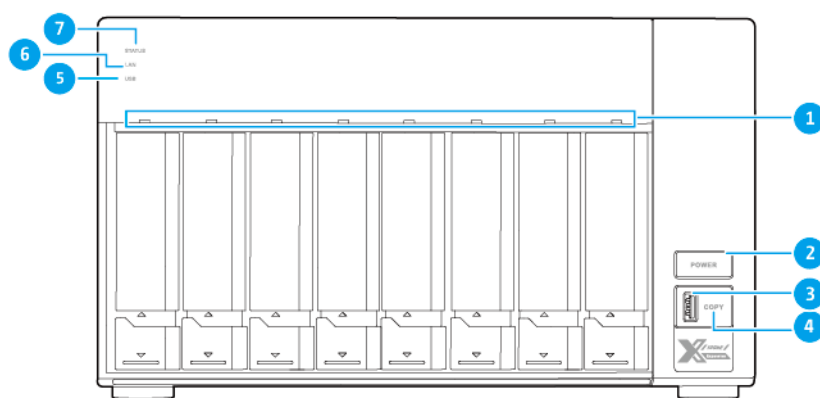
型号规格如有更改，恕不另行通知。要查看最新规格，请转到 <https://www.qnap.com>。

## 包装内容

项目	数量
TS-832X NAS	1
交流电源适配器	1
电源线	1
以太网线	2
适用于 2.5 英寸硬盘的螺丝	24
适用于 3.5 英寸硬盘的螺丝	32
《快速安装指南 (QIG)》	1

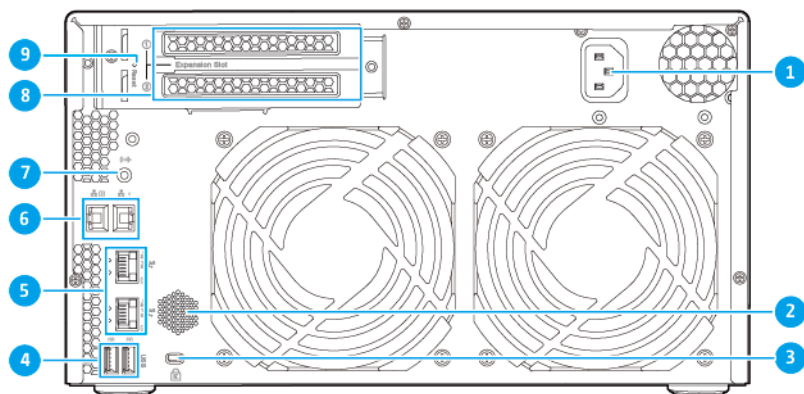
## 组件

### 前面板



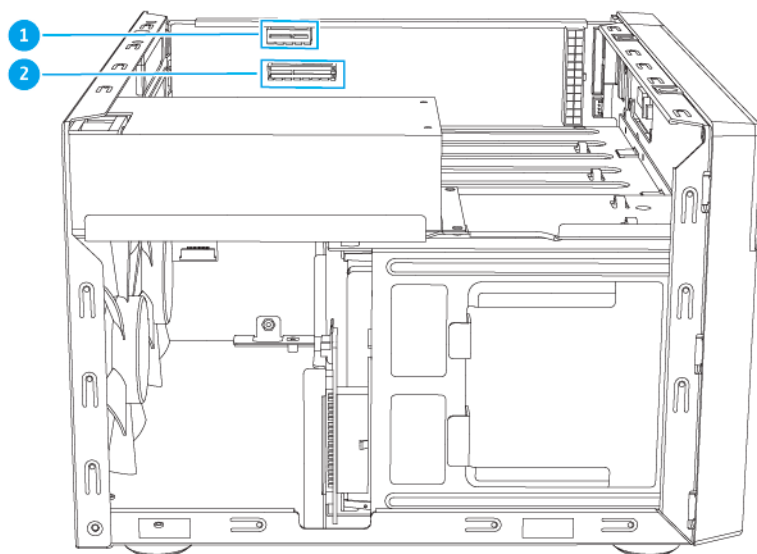
编号	组件	编号	组件
1	硬盘 LED	5	USB LED
2	电源按钮	6	LAN LED
3	USB 3.0 一键复制端口	7	状态 LED
4	USB 一键复制按钮	-	-

## 后面板



编号	组件	编号	组件
1	电源输入	6	千兆位以太网 RJ45 端口
2	扬声器	7	3.5 mm 音频插孔
3	Kensington 安全锁孔	8	带盖板的 PCIe 插槽
4	USB 3.0 A 型端口	9	重置按钮
5	10 GB 以太网 SFP+ 端口	-	-

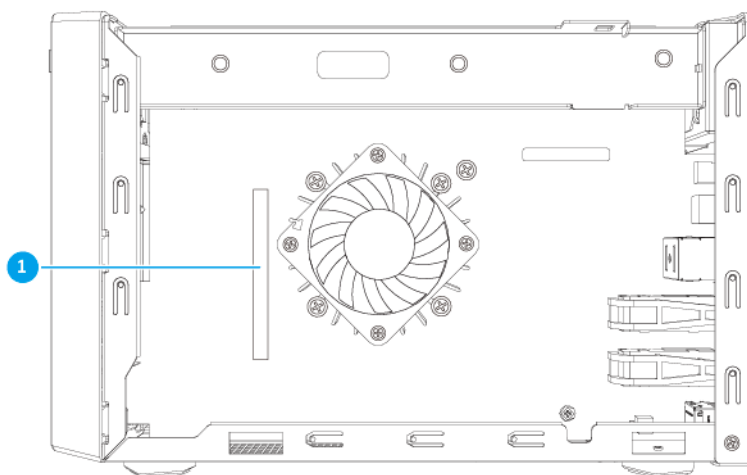
## 左面板





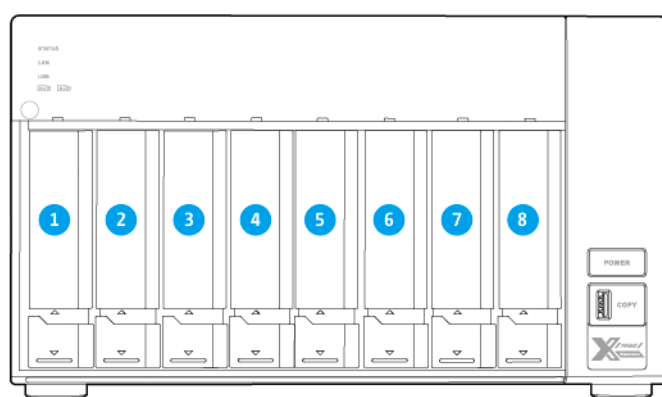
编号	组件	编号	组件
1	PCIe 2.0 x1 插槽	2	PCIe 2.0 x2 插槽

## 右面板



编号	组件	编号	组件
1	内存插槽 1	-	-

## 硬盘编号



## 安装要求

类别	项目
环境	<ul style="list-style-type: none"> <li>• 室温：0 至 40°C（32 至 104°F）</li> <li>• 无冷凝相对湿度：5 至 95%</li> <li>• 湿球温度：27°C (80.6°F)</li> <li>• 平坦的防静电表面，无直射阳光、液体和化学药剂</li> </ul>
硬件和外围设备	<ul style="list-style-type: none"> <li>• 存储硬盘 有关兼容硬盘的详细信息，请转到 <a href="https://www.qnap.com/compatibility/">https://www.qnap.com/compatibility/</a>。</li> <li>• 网线</li> </ul>
工具	<ul style="list-style-type: none"> <li>• 1 号或 2 号十字螺丝刀</li> <li>• 防静电腕带</li> </ul>

## 设置 NAS

1. 将 NAS 设备置于符合要求的环境中。  
有关详细信息，请参见 [安装要求](#)。
2. 安装硬盘。  
有关详细信息，请参见以下主题：
  - [在 3.5 英寸托盘上安装 3.5 英寸硬盘](#)
  - [在 3.5 英寸托盘上安装 2.5 英寸硬盘或固态硬盘](#)
3. 连接电源线和所有适用的线缆。
4. 启动 NAS 电源。
5. 安装 QTS。  
有关详细信息，请参见 [QTS 安装](#)。
6. 登录 QTS。

## 3. 安装和配置

本章提供了具体的硬件和固件安装与配置步骤。

### 硬件安装

本节提供有关安装硬盘、内存模块和扩展卡的信息。

### 硬盘安装

TS-832X 兼容 3.5 英寸和 2.5 英寸硬盘以及 2.5 英寸固态硬盘。

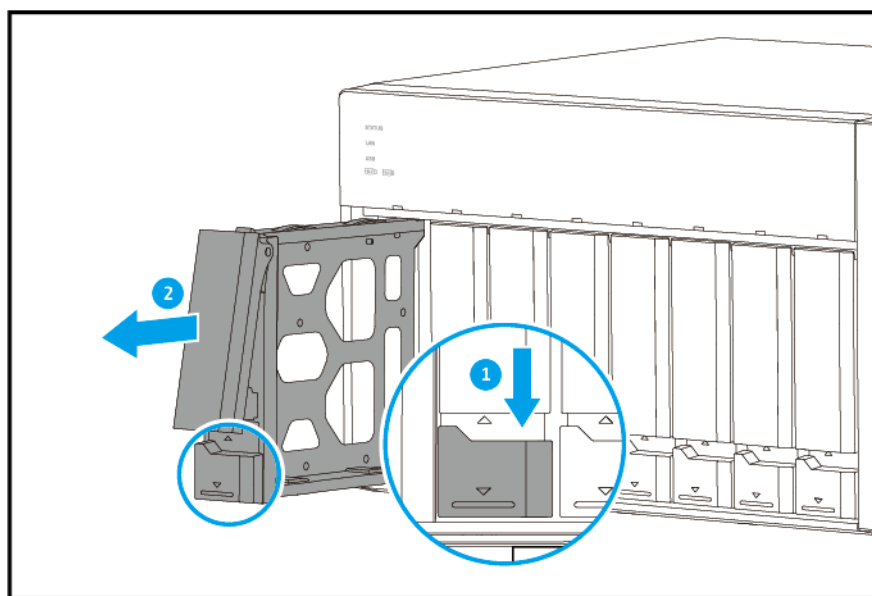
#### 在 3.5 英寸托盘上安装 3.5 英寸硬盘



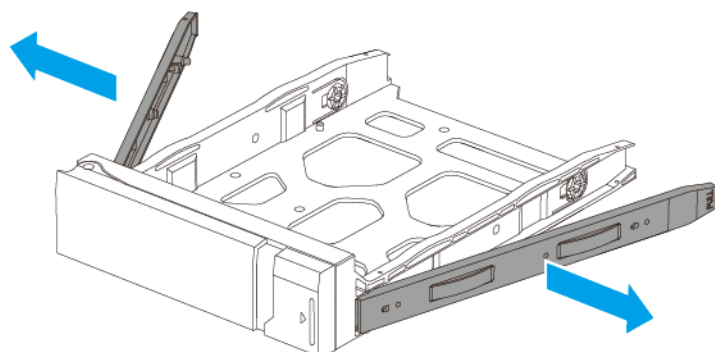
#### 警告

- 安装硬盘将删除硬盘上的所有数据。
- 请执行静电放电 (ESD) 规程，以避免组件损坏。

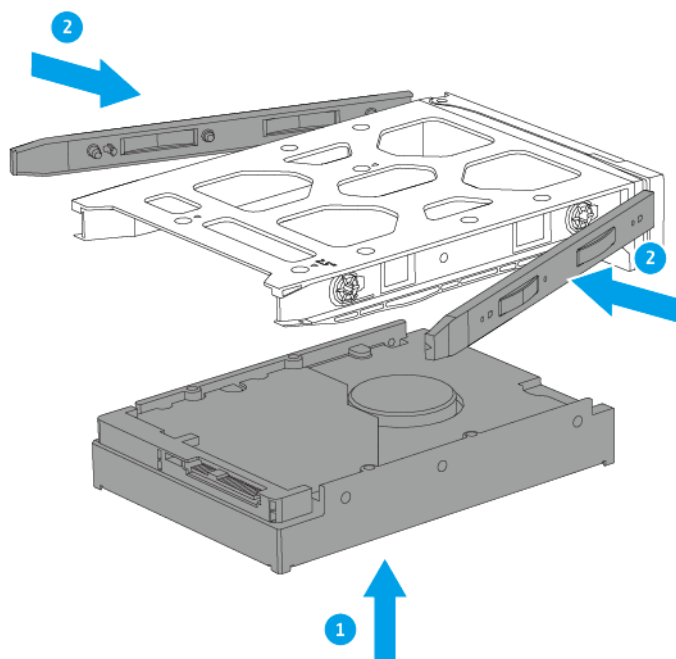
1. 关闭 NAS 电源。
2. 取下硬盘托盘。
  - a. 向下滑动锁扣。
  - b. 向外拉动托盘手柄。
  - c. 拉出托盘。



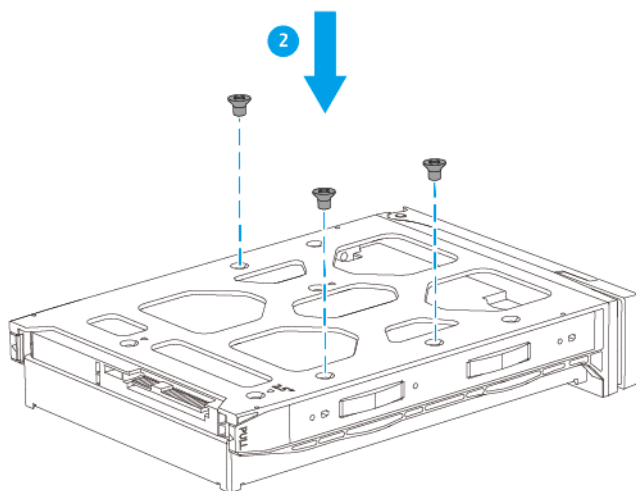
3. 将硬盘安装到托盘上。
  - a. 取下硬盘托盘两侧的固定面板。



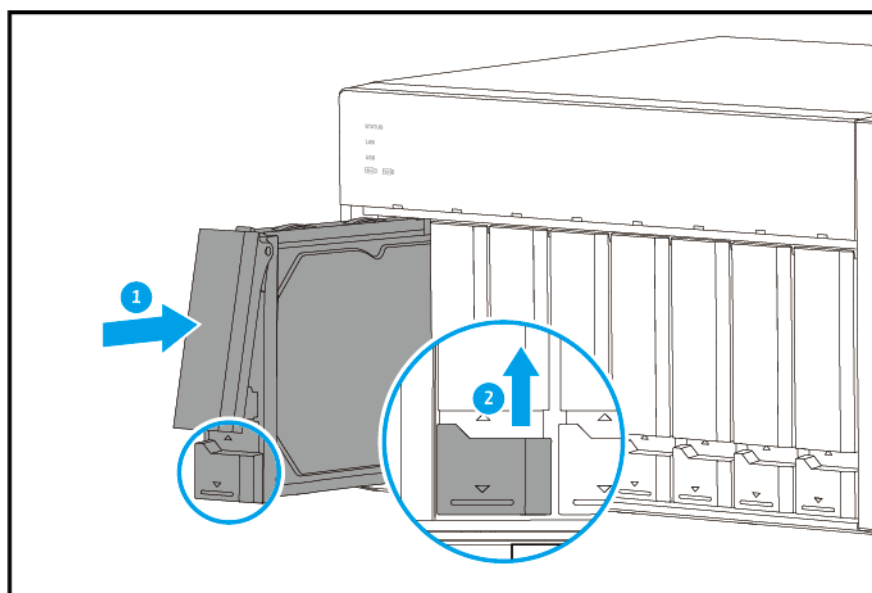
- b. 将硬盘放在托盘上，使硬盘两侧的孔与托盘两侧的孔对齐。
- c. 装上固定面板，将硬盘锁定在托盘上。



- d. 可选: 装上螺丝，进一步固定硬盘。



4. 将托盘装入硬盘架。
  - a. 将托盘滑入硬盘架。
  - b. 推动手柄。
  - c. 向上滑动锁扣。



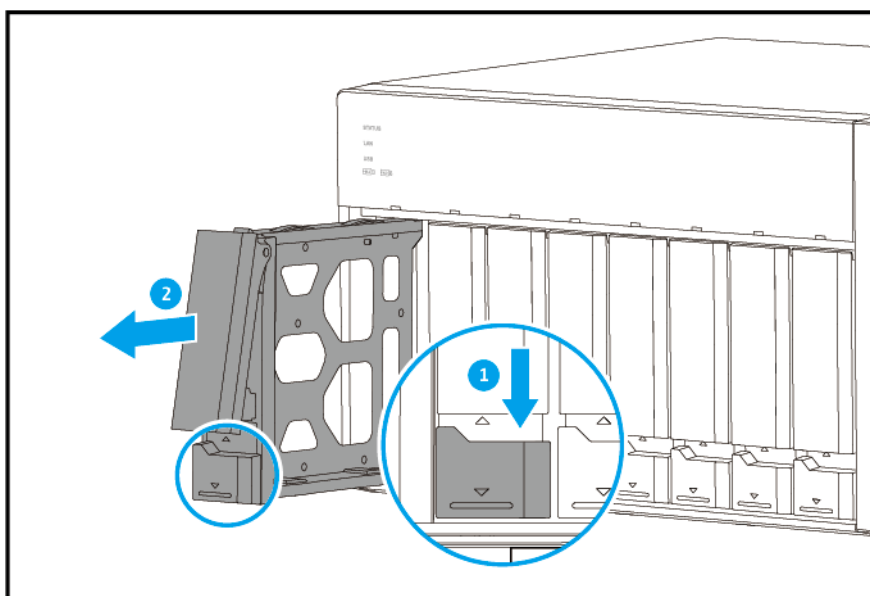
5. 启动 NAS 电源。

在 3.5 英寸托盘上安装 2.5 英寸硬盘或固态硬盘

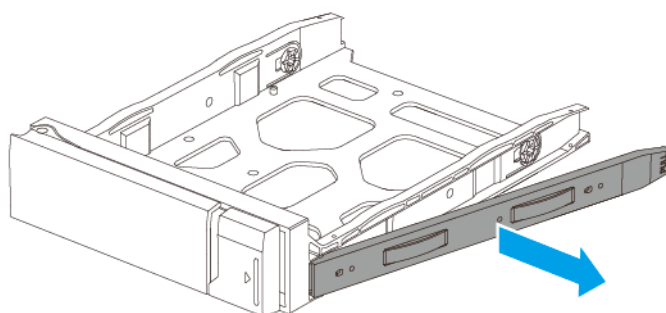


- 安装硬盘将删除硬盘上的所有数据。
- 请执行静电放电 (ESD) 规程，以避免组件损坏。

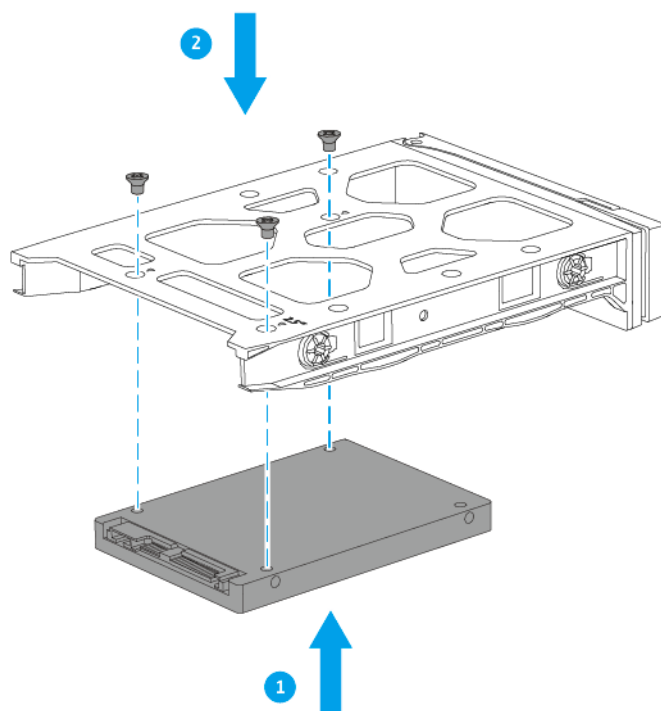
1. 关闭 NAS 电源。
2. 取下硬盘托盘。
  - a. 向下滑动锁扣。
  - b. 向外拉动托盘手柄。
  - c. 拉出托盘。



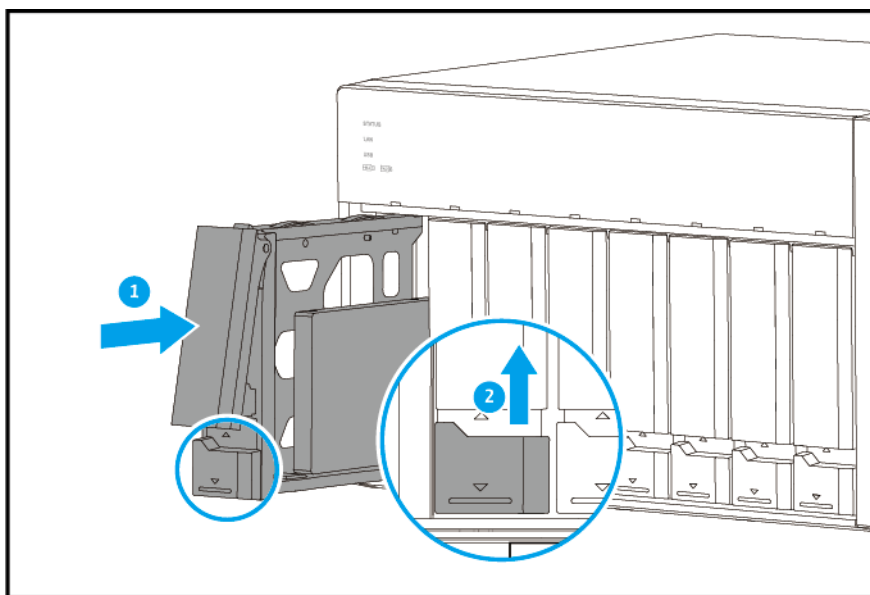
3. 将硬盘安装到托盘上。
  - a. 取下硬盘托盘右侧的固定面板。



- b. 将硬盘放在托盘上，使硬盘底部的孔与托盘底部的孔对齐。
- c. 装上螺丝，将硬盘锁定在托盘上。



4. 将托盘装入硬盘架。
  - a. 将托盘滑入硬盘架。
  - b. 推动手柄。
  - c. 向上滑动锁扣。



## 5. 启动 NAS 电源。

### 安装扩展卡

NAS 支持精选的扩展卡，其中一些需要 QNAP PCIe 支架。从公司网站购买的 QNAP 品牌扩展卡随附有适合所有 QNAP NAS 型号的支架。



#### 警告

- 只有合格人员才能执行以下步骤。不遵守说明可能会导致重伤或死亡。
- 请执行静电放电 (ESD) 规程，以避免组件损坏。

#### 1. 在 QNAP 网站上查看您的型号支持的扩展卡和支架。

- a. 转到 [www.qnap.com/compatibility](http://www.qnap.com/compatibility)。
- b. 单击依 NAS 检索。
- c. 指定 NAS 的硬盘架数量和具体型号。
- d. 在**装置类型**下，选择组件或设备类型。
- e. 在列表中找到具体的组件或设备机型。
- f. 可选: 单击相应的**备注**图标可查看更多信息。

#### 2. 关闭 NAS 电源。

#### 3. 从插座上拔下电源线。

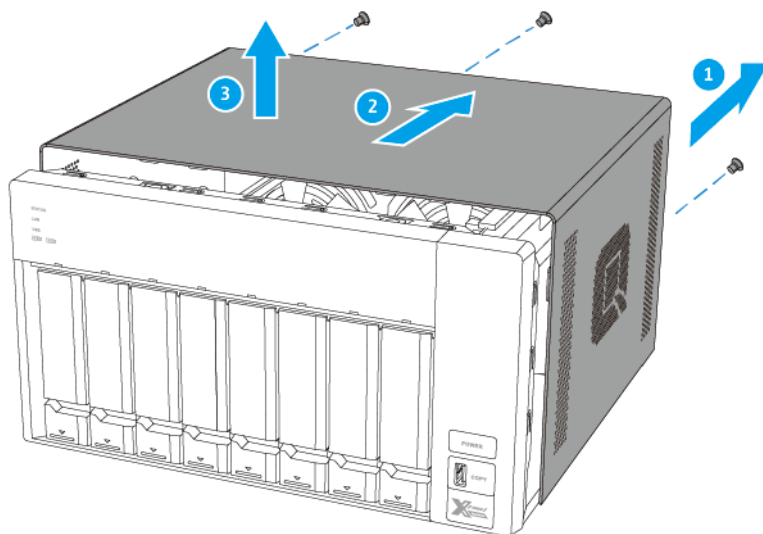
#### 4. 拔掉所有线缆和外接部件。

#### 5. 取下外壳盖。

- a. 卸下用于将盖板固定到机箱的螺丝。

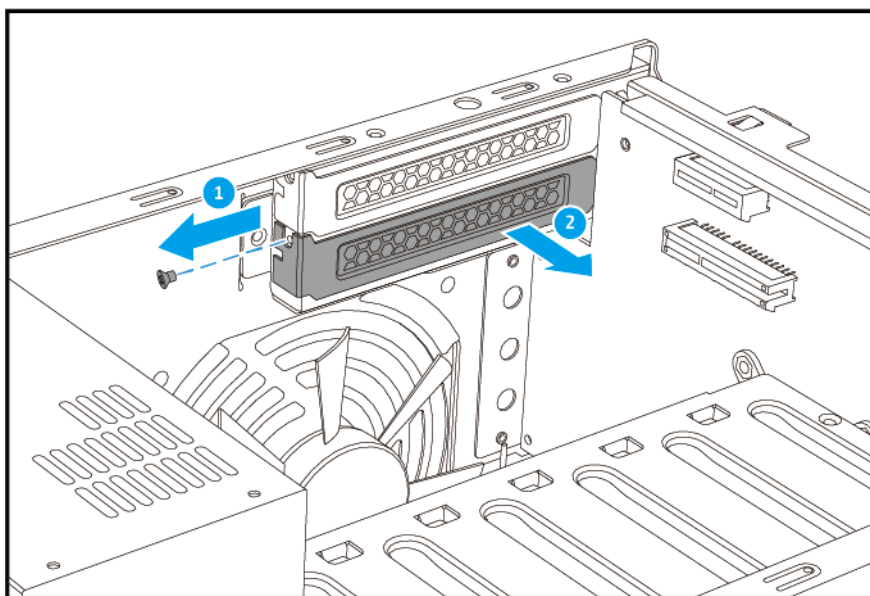


- b. 将盖板向后滑动。
- c. 向上拉起盖板，使其完全脱离机箱。



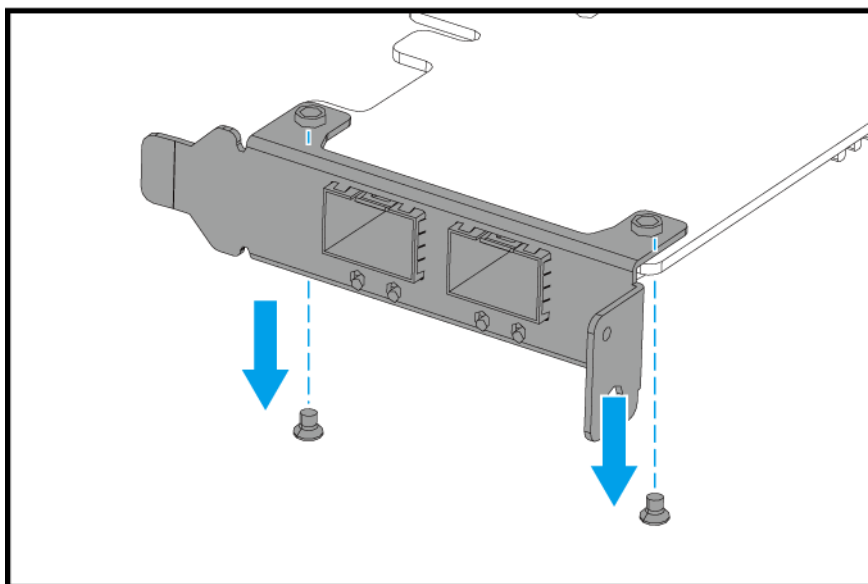
#### 6. 取下 PCIe 盖板。

- a. 卸下用于将盖板固定到机箱的螺丝。
- b. 将盖板从插槽中拉出。

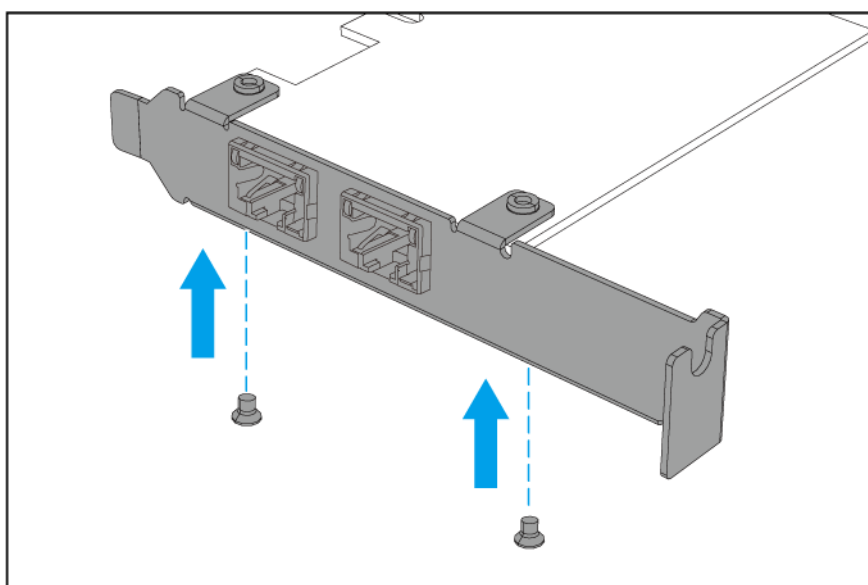


#### 7. 可选: 将 QNAP 支架安装到扩展卡上。

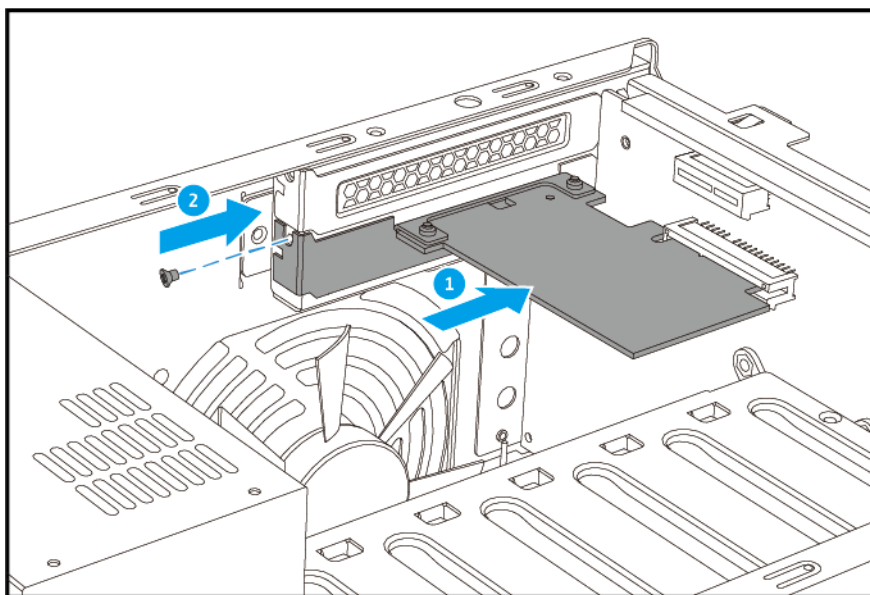
- a. 卸下现有支架的所有螺丝。



- b. 小心地从扩展卡取下支架。
- c. 使用相同的螺丝将 QNAP 支架安装到扩展卡上。

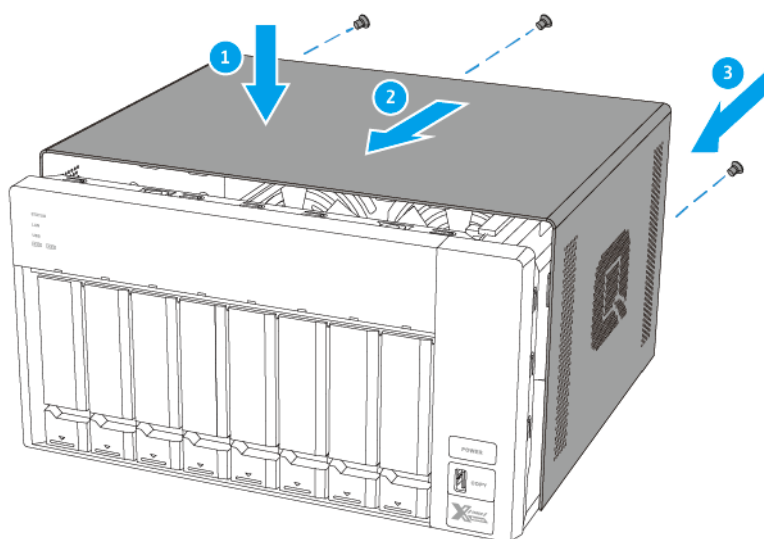


- d. 确认支架不会移动。
8. 安装扩展卡。
- a. 握住卡片边缘。
  - b. 将其插入插槽中。
  - c. 安装螺丝。



### 9. 安装外壳盖。

- a. 向下滑动盖板，使其完全触及机箱。
- b. 将盖板向前滑动。
- c. 安装外壳背面的螺丝。



10. 连接所有线缆和外接部件。
11. 将电源线连接到插座。
12. 启动 NAS 电源。

## 更换内存模块

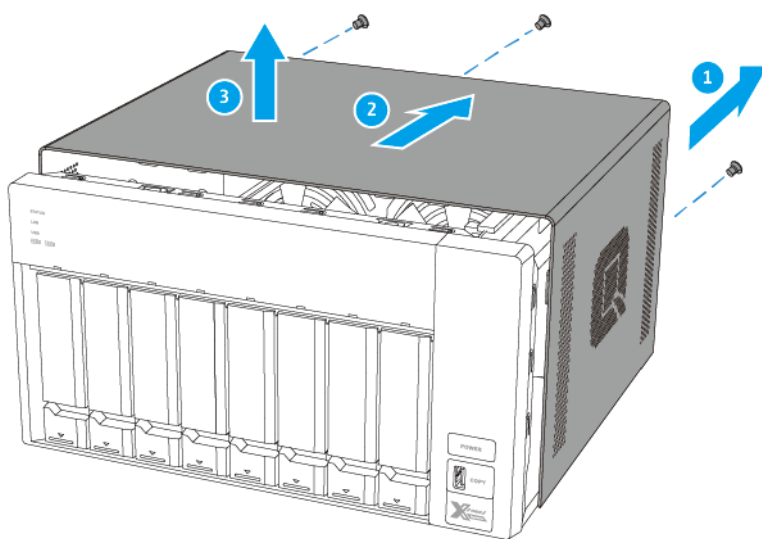
NAS 有一个内存插槽。您可以通过升级内存模块来增加 NAS 的内存容量。可以从授权经销商处购买 QNAP 内存模块。



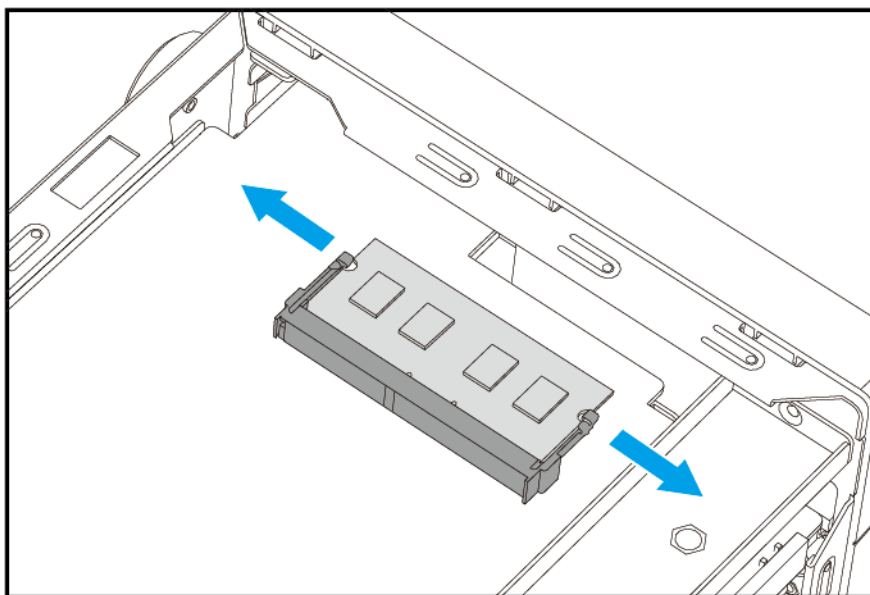
### 警告

- 只有合格人员才能执行以下步骤。不遵守说明可能会导致重伤或死亡。
- 请执行静电放电 (ESD) 规程，以避免组件损坏。

1. 关闭 NAS 电源。
2. 从插座上拔下电源线。
3. 拔掉所有线缆和外接部件。
4. 取下外壳盖。
  - a. 卸下用于将盖板固定到机箱的螺丝。
  - b. 将盖板向后滑动。
  - c. 向上拉起盖板，使其完全脱离机箱。



5. 取下现有模块。
  - a. 同时向外推动固定夹以释放模块。

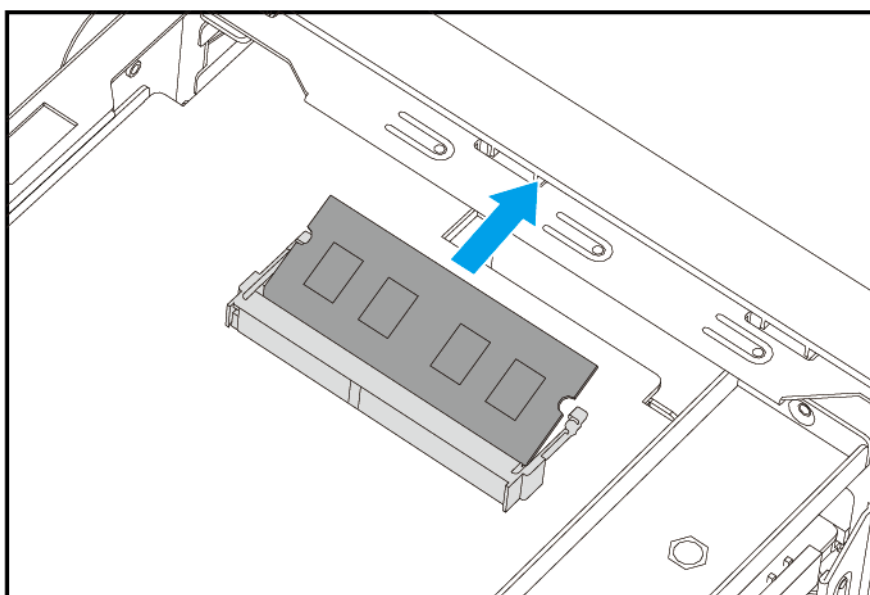


b. 握住模块边缘，然后小心地将其从插槽中滑出。



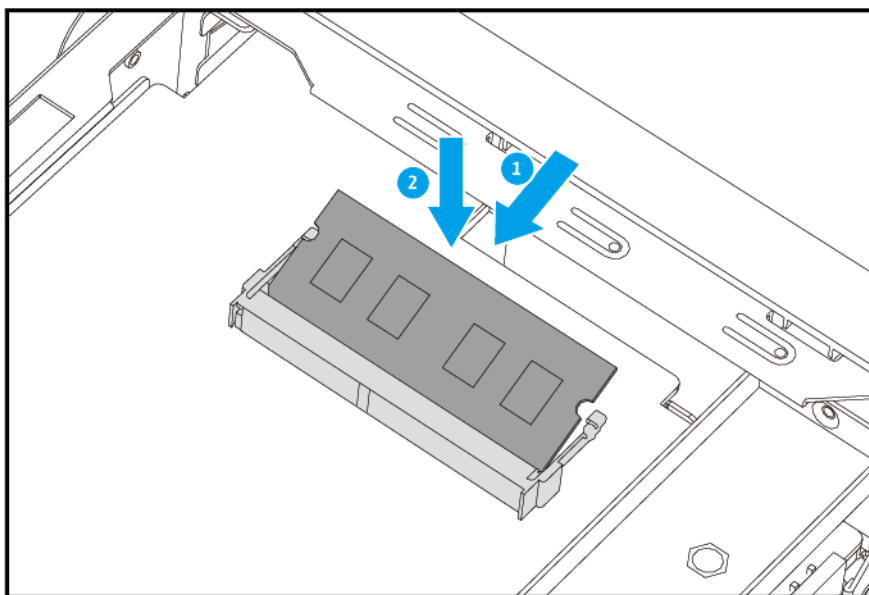
**警告**

如果尝试在模块尚未完全脱离时将其取出，可能会损坏模块和主板。



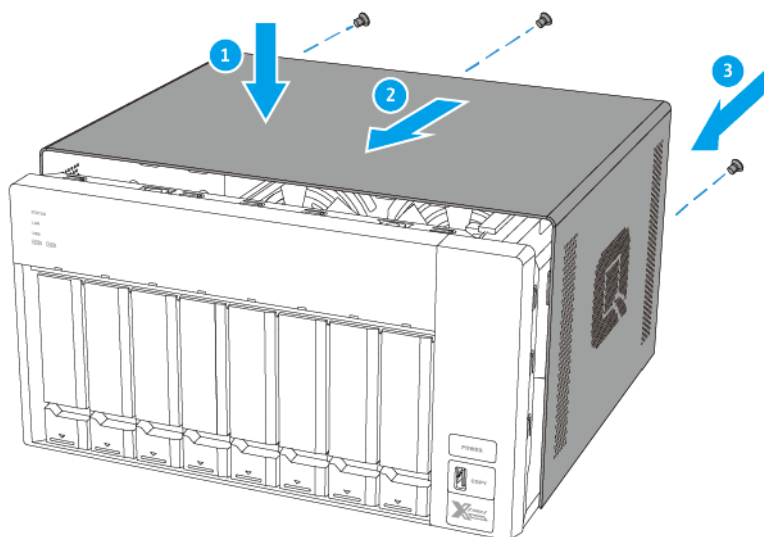
**6. 安装新模块。**

- a. 将凹口与插槽内的凸起对齐。
- b. 将模块插入插槽中。
- c. 确认金属接头已完全插入插槽中。



## 7. 安装外壳盖。

- a. 向下滑动盖板，使其完全触及机箱。
- b. 将盖板向前滑动。
- c. 安装外壳背面的螺丝。



8. 连接所有线缆和外接部件。
9. 将电源线连接到插座。
10. 启动 NAS 电源。
11. 确认 NAS 能够识别该模块。

- a. 以管理员身份登录 QTS。
- b. 转到 **控制台 > 系统 > 系统状态 > 硬件信息**。
- c. 检查内存总容量值。

## QTS 安装

TS-832X 使用 QNAP QTS 操作系统。可以使用以下任一方法安装 QTS。

方法	描述	要求
Qfinder Pro 安装 (推荐)	<p>如果 NAS 已连接到您的局域网，可以执行以下操作：</p> <ul style="list-style-type: none"> <li>• 使用 Qfinder Pro 定位 NAS。</li> <li>• 完成“智能安装指南”向导中的步骤。</li> </ul> <p>有关详细信息，请参见<a href="#">使用 Qfinder Pro 安装 QTS</a>。</p>	<ul style="list-style-type: none"> <li>• 计算机</li> <li>• 网线</li> <li>• Qfinder Pro 安装程序</li> </ul>
云安装	<p>如果 NAS 已连接到 Internet，可以执行以下操作：</p> <ul style="list-style-type: none"> <li>• 扫描 NAS 上的二维码。</li> <li>• 登录您的 myQNAPcloud 帐户。</li> <li>• 使用 CloudLink 远程访问 NAS。</li> <li>• 完成“智能安装指南”向导中的步骤。</li> </ul> <p>有关详细信息，请参见<a href="#">使用 Cloud Key 安装 QTS</a>。</p>	<ul style="list-style-type: none"> <li>• 计算机或移动设备</li> <li>• 网线</li> <li>• myQNAPcloud 帐户</li> <li>• CloudKey</li> </ul>

## 使用 Qfinder Pro 安装 QTS



### 警告

安装 QTS 将删除硬盘上的所有数据。请先备份您的数据，然后再继续。

1. 启动 NAS 电源。
2. 将 NAS 连接到您的局域网中。
3. 在已连接到同一局域网的计算机上运行 Qfinder Pro。



### 注

要下载 Qfinder Pro，请转到 <https://www.qnap.com/utilities>。

4. 在列表中找到 NAS，然后双击名称或 IP 地址。
5. 执行以下任一操作。
  - 要检查是否有可供使用的最新版本，单击**开始**。向导会下载可供使用的最新版本，下载完成后，NAS 会重新启动。如果没有更新的版本，向导会自动显示**智能安装指南**。

- 要安装立即可用的版本，单击**跳过**。

6. 单击**启动智能安装指南**。

7. 指定以下信息。

- **NAS 名称**: 指定 1 至 14 个字符的名称。名称支持字母（A 到 Z、a 到 z）、数字（0 到 9）和连字符 (-)，但不能以连字符结尾。
- **密码**: 指定 1 至 64 个字符的管理员密码。密码支持所有 ASCII 字符。

8. 单击**下一步**。

9. 指定时区、日期和时间。



#### 提示

QNAP 建议连接到 NTP 服务器，以确保 NAS 遵循协调世界时 (UTC) 标准。

10. 单击**下一步**。

11. 选择**自动获取 IP 地址(DHCP)**。

12. 单击**下一步**。

13. 选择将用于访问 NAS 上共享文件夹的设备类型。

14. 单击**下一步**。

15. 配置磁盘设置。

- 选择卷类型。
- 选择要用于创建 RAID 组的磁盘。
- 可选: 选择 RAID 类型。



#### 注

智能安装指南会根据所选磁盘的数量自动选择最佳的 RAID 类型。

- 可选: 选择**加密磁盘卷和坏块扫描**。

16. 单击**下一步**。

17. 检查设置。

18. 单击**应用**。  
此时将出现确认消息。



#### 警告

单击**确认**后，将先删除硬盘上的所有数据，然后再安装 QTS。

19. 单击**确认**。  
QTS 即安装完毕。

## 使用 Cloud Key 安装 QTS



#### 警告

安装 QTS 将删除硬盘上的所有数据。请先备份您的数据，然后再继续。



1. 启动 NAS 电源。
2. 将 NAS 连接到 Internet。
3. 使用以下方法之一转到“QNAP 云端安装程序”页面：

- 在您的计算机上，转到 <http://install.qnap.com/>。
- 使用移动设备扫描 NAS 上的二维码。

网页中会列出本地网络上所有尚未初始化的 QNAP NAS 设备。

4. 从列表中找到您的 NAS，然后单击**初始化**。

**注**

如果未列出您的 NAS，请按网页上的说明指定 NAS 上的 Cloud Key。

安装向导将在默认 Web 浏览器中打开。

5. 创建帐户或登录 myQNAPcloud。

**注**

创建帐户后，您必须返回此页面才能完成安装。

6. 为 NAS 指定 myQNAPcloud 设备名称。

**注**

myQNAPcloud 设备名称用于远程访问 NAS。

7. 可选: 选择 **CloudLink**。

**注**

- 使用 **CloudLink**，可以远程访问 NAS，而无需在路由器上配置端口转发。您可以通过登录 QTS 或使用移动应用来远程访问 NAS。
- 还可以通过在 NAS 上安装 **CloudLink** 应用来启用 **CloudLink**。

8. 单击**下一步**。

9. 执行以下任一操作。

- 要检查是否有可供使用的最新版本，单击**开始**。  
向导会下载可供使用的最新版本，下载完成后，NAS 会重新启动。如果没有更新的版本，向导会自动显示**智能安装指南**。
- 要安装立即可用的版本，单击**跳过**。

10. 单击**启动智能安装指南**。

11. 指定以下信息。

- **NAS 名称**: 指定 1 至 14 个字符的名称。名称支持字母（A 到 Z、a 到 z）、数字（0 到 9）和连字符 (-)，但不能以连字符结尾。
- **密码**: 指定 1 至 64 个字符的管理员密码。密码支持所有 ASCII 字符。

12. 单击**下一步**。

13. 指定时区、日期和时间。

**提示**

QNAP 建议连接到 NTP 服务器，以确保 NAS 遵循协调世界时 (UTC) 标准。

14. 单击下一步。
15. 选择**自动获取 IP 地址(DHCP)**。
16. 单击下一步。
17. 选择将用于访问 NAS 上共享文件夹的设备类型。
18. 单击下一步。
19. 配置磁盘设置。
  - a. 选择卷类型。
  - b. 选择要用于创建 RAID 组的磁盘。
  - c. 可选: 选择 RAID 类型。

**注**

智能安装指南会根据所选磁盘的数量自动选择最佳的 RAID 类型。

- d. 可选: 选择**加密磁盘卷**和**坏块扫描**。
20. 单击下一步。
21. 检查设置。
22. 单击**应用**。  
此时将出现确认消息。

**警告**

单击**确认**后，将先删除硬盘上的所有数据，然后再安装 QTS。


23. 单击**确认**。  
QTS 即安装完毕。

## 4. 基本操作

本章介绍 NAS 的基本操作。

### 电源按钮

操作	用户操作	结果
启动电源	按下此按钮一次。	NAS 开机。
关闭电源	按住此按钮 1.5 秒钟。	NAS 关机。
强制关机	按住此按钮 5 秒钟。	NAS 关闭。



**重要**  
仅当 NAS 无响应时才能使用此方法。

### 重置按钮

操作	用户操作	结果
基本系统重置	按住此按钮 3 秒钟。	以下设置将重置为默认值： <ul style="list-style-type: none"> <li>• 系统管理员密码：admin</li> <li>• TCP/IP 配置：               <ul style="list-style-type: none"> <li>• 通过 DHCP 自动获取 IP 地址设置</li> <li>• 禁用巨型帧</li> <li>• 如果启用端口中继（仅限多局域网型号），则端口中继模式将重置为“主动备份(故障转移)”。</li> </ul> </li> <li>• 系统端口：8080（系统服务端口）</li> <li>• 安全等级：低（允许所有连接）</li> <li>• LCD 面板密码：（空白）</li> <li>• VLAN：禁用</li> </ul>
高级系统重置	按住此按钮 15 秒钟。	恢复默认出厂设置。 <ul style="list-style-type: none"> <li>• 要在高级系统重置后检索旧数据，请在 NAS 上重新创建先前的文件夹结构。</li> </ul>

### USB 一键复制按钮

使用 USB 一键复制按钮，可以将数据备份从 USB 设备复制到 NAS，或将数据备份从 NAS 复制到 USB 设备。

此功能支持增量备份。NAS 只会复制在上次备份后修改或添加的文件。

有关配置 USB 一键复制的详细信息，请参见《QTS 用户指南》。

## LED

开启 NAS 电源后，LED 指示灯会指示系统状态和相关信息。以下 LED 信息仅适用于硬盘已正确安装并且 NAS 已连接到网络的情况。

有关 LED 位置的详细信息，请参见[组件](#)。

LED	状态	描述
系统状态	红绿交替闪烁，间隔 0.5 秒	<ul style="list-style-type: none"> <li>• 硬盘正在格式化。</li> <li>• NAS 正在初始化。</li> <li>• 操作系统正在更新。</li> <li>• RAID 正在重建。</li> <li>• 正在进行在线 RAID 容量扩展。</li> <li>• 正在进行在线 RAID 级别迁移。</li> </ul>
	红色	<ul style="list-style-type: none"> <li>• 硬盘无效。</li> <li>• 磁盘卷的容量已满。</li> <li>• 磁盘卷的容量即将被占满。</li> <li>• 系统风扇故障。</li> <li>• 访问（读/写）数据时出错。</li> <li>• 在硬盘上检测到坏扇区。</li> <li>• NAS 处于降级只读模式（RAID 5 或 RAID 6 中的两个成员硬盘出现故障，但仍可读取数据）。</li> <li>• 硬件自检错误</li> </ul>
	闪烁红色，间隔 0.5 秒	NAS 处于降级模式（RAID 1、RAID 5 或 RAID 6 中的一个成员硬盘出现故障）。
	闪烁绿色，间隔 0.5 秒	<ul style="list-style-type: none"> <li>• NAS 正在启动。</li> <li>• NAS 未配置。</li> <li>• 硬盘未格式化。</li> </ul>
	闪烁绿色，间隔 2 秒	NAS 处于 S3 睡眠模式。
	绿色	NAS 已准备就绪。
	熄灭	所有硬盘都处于待机模式。
LAN	橙色	另一台设备访问数据期间发生了读/写错误。
	闪烁橙色	正在从网络访问 NAS。
硬盘	闪烁红色	正在访问数据，但在此过程中发生读/写错误。
	红色	发生硬盘读/写错误。
	闪烁绿色	正在访问数据。
	绿色	硬盘可供访问。

LED	状态	描述
USB	闪烁蓝色，间隔 0.5 秒	<ul style="list-style-type: none"> <li>检测到 USB 设备（已连接到前 USB 端口）。</li> <li>正在从 NAS 移除 USB 设备（已连接到前 USB 端口）。</li> <li>正在访问 USB 设备（已连接到 NAS 的前 USB 端口）。</li> <li>正在与 USB 或 eSATA 设备间复制数据。</li> </ul>
	蓝色	在前 USB 端口中检测到 USB 设备。
	熄灭	<ul style="list-style-type: none"> <li>未检测到 USB 设备。</li> <li>NAS 已经完成与连接到前 USB 端口的 USB 设备间的数据复制。</li> </ul>

## 提示音警报

持续时间	频率	描述
短提示音（0.5 秒）	1	<ul style="list-style-type: none"> <li>NAS 正在启动。</li> <li>NAS 正在关闭（软件关闭）。</li> <li>用户已按下“重置”按钮。</li> <li>操作系统已更新。</li> </ul>
	3	用户尝试从前面的 USB 端口将 NAS 数据复制到外部存储设备，但无法复制数据。
长提示音（1.5 秒）	3（每 5 分钟）	系统风扇故障。
	2	<ul style="list-style-type: none"> <li>磁盘卷的容量即将被占满。</li> <li>磁盘卷的容量已满。</li> <li>硬盘处于降级模式。</li> <li>用户已启动硬盘重建过程。</li> <li>插入或抽出硬盘。</li> </ul>
	1	<ul style="list-style-type: none"> <li>NAS 已通过强制关闭关机（硬件关闭）。</li> <li>NAS 已成功开机并准备就绪。</li> </ul>

## 5. 故障排除

本章介绍基本故障排除信息。

### 强制 Qfinder Pro 或 myQNAPcloud 定位 NAS

如果在 QTS 安装过程中 Qfinder Pro 或 myQNAPcloud 无法定位 NAS，则硬盘或数据可能有故障。

1. 关闭 NAS 电源。
2. 取下所有硬盘。
3. 启动 NAS 电源。
4. 使用 Qfinder Pro 或 myQNAPcloud 定位 NAS。
5. 重新插入硬盘。
6. 继续安装 QTS。

### 热插拔故障硬盘

在以下情况下，NAS 支持热插拔硬盘：

- RAID 1：一个成员硬盘有故障
- RAID 5：一个成员硬盘有故障
- RAID 6：一个或两个成员硬盘有故障

1. 登录 QTS。
2. 转到主菜单 > 存储空间总管 > 存储 > 磁盘/VJBOD。
3. 找到发生故障的硬盘。
4. 准备一个与故障硬盘具有相同或更大容量的新硬盘。
5. 从 NAS 中取下故障硬盘。
6. 等待 20 秒或 NAS 发出两声提示音。
7. 从硬盘托盘中取下故障硬盘。
8. 将硬盘插入硬盘托盘中。
9. 安装新硬盘。  
此时 NAS 会发出两声提示音。
10. 转到主菜单 > 存储空间总管 > 存储空间。
11. 找到包含新硬盘的卷，然后确认状态为正在重建。

### 恢复被意外移除的正常硬盘

NAS 支持独有的 RAID 恢复技术，可以从意外断开或移除的硬盘中恢复发生故障的 RAID 磁盘卷。用户可以将处于非活动状态的 RAID 1、RAID 5 或 RAID 6 卷恢复到降级模式，或将处于非活动状态的 RAID 0 和 JBOD 配置恢复为正常配置。

磁盘卷	RAID 恢复支持	被移除硬盘的最大数量
单个	否	不适用
JBOD	是	1
RAID 0	是	1
RAID 1	是	1
RAID 5	是	2
RAID 6	是	3
RAID 10	否	不适用

## 支持和其他资源

QNAP 提供了以下资源：

资源	URL
文档	<a href="http://docs.qnap.com">http://docs.qnap.com</a>
服务台	<a href="http://helpdesk.qnap.com">http://helpdesk.qnap.com</a>
下载	<a href="http://download.qnap.com">http://download.qnap.com</a>
社区论坛	<a href="http://forum.qnap.com">http://forum.qnap.com</a>

## 6. 术语表

### **CloudKey**

分配给每个 NAS 设备的唯一 8 位数代码

### **CloudLink**

可用于通过 Internet 访问 NAS，而且不必配置复杂的端口转发设置。

### **myQNAPcloud**

提供各种远程访问服务，如 DDNS 和 CloudLink

### **myQNAPcloud ID**

用于注册 myQNAPcloud 帐户的电子邮件地址

### **Qfinder Pro**

使您能够定位和访问局域网中的 QNAP NAS 设备。

### **QTS**

QNAP NAS 操作系统



## 7. 声明

本章提供有关保修、免责声明、许可和联邦法规的信息。

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如果退回 QNAP 产品 (例如 NAS, 网络连接存储) 包装中的任何组件进行退款或维修，请务必妥善包装以便运输。对于因包装不当而造成的任何形式的损坏，QNAP 将不予赔偿。

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Version 3, 29 June 2007

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### FCC B 类声明



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## SJ/T 11364-2006



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壳体	0	0	0	0	0	0
显示	0	0	0	0	0	0
印刷电路板	0	0	0	0	0	0
金属螺帽	0	0	0	0	0	0
电缆组装	0	0	0	0	0	0
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