



QNAP

TS-332X

用户指南

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1. 前言





关于本指南

本指南提供有关 QNAP TS-332X 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 QNAP TS-332X NAS 的基本信息。

关于 TS-332X

TS-332X 配有 AL-324 四核 1.7 GHz ARM® Cortex-A57 处理器，最多可支持 16 GB DDR4 内存。TS-332X 特有 USB 一键复制功能，可实现无缝备份和同步。除两个千兆位以太网端口外，TS-332X 还配有一个 10 GB 以太网端口来增强连接性，配备三个 M.2 SSD 插槽，可以更好地管理数据。

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-332X
订购信息	
订购部件号	<ul style="list-style-type: none"> • TS-332X-2G • TS-332X-4G
处理器	
CPU	Annapurna Labs Alpine AL-324
频率	4 核 1.7 GHz
架构	64 位 ARM
加密引擎	AES-256
内存	
预安装内存	<ul style="list-style-type: none"> • 2 GB RAM: 1 x 2 GB DDR4 • 4 GB RAM: 1 x 4 GB DDR4 <div style="margin-top: 10px;"> 重要 <ul style="list-style-type: none"> • 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。 • 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。 </div>
内存插槽总数	1 x SODIMM DDR4
最大内存	16 GB RAM: 1 x 16 GB
闪存	512 MB NAND
存储	
硬盘架	3 x 3.5 英寸 SATA 6 Gbps

组件	TS-332X
硬盘兼容性	<ul style="list-style-type: none"> • 3.5 英寸 SATA 机械硬盘 • 2.5 英寸 SATA 机械硬盘 • 2.5 英寸 SATA 固态硬盘 <p> 注 TS-332X 配有 1 个硬盘托盘底座，可用于安装 2.5 英寸 SATA 机械硬盘。 您可以从 QNAP 或授权经销商处增购托盘底座。有关详细信息，请转到 https://shop.qnap.com/。</p>
可热插拔	是
M.2 SSD 类型	3 x SATA 6 Gbps
M.2 SSD 外形规格	2280
SSD 缓存加速支持	是 <p> 注</p> <ul style="list-style-type: none"> • SSD 缓存硬盘不可热插拔。 • M.2 SSD 不可热插拔。
网络	
10 Gb 以太网端口	1 x 10 Gb SFP+
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	
USB 端口	<ul style="list-style-type: none"> • 正面：1 x USB 3.0 A 型 <p> 注 此 USB 端口支持一键复制。</p> <ul style="list-style-type: none"> • 背面：2 x USB 3.0 A 型
音频	<ul style="list-style-type: none"> • 1 个 3.5 mm 线路输出插孔 • 1 x 扬声器 <p> 注 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"> • 电源 • 重置 • USB 一键复制
尺寸	
外形规格	立式
尺寸（高 x 宽 x 深）	142 x 150 x 260 mm (5.59 x 5.90 x 10.24 英寸)
净重	1.64 kg (3.62 磅)
其他	
电源单元	90W, 200-240V AC, 50/60 Hz

组件	TS-332X
系统电池	CR2032 锂电池 (3V, 225 mAh)  警告 为避免潜在伤害或组件的损坏, 请确保使用同型电池更换现有电池。
噪声声级	20.4 dB(A)  注 噪声声级在距 NAS 一米以内的旁观者位置测得。测试 NAS 安装了最大数量的硬盘以低速运行。
风扇	系统: 1 x 90 mm, 12V DC 智能风扇  警告 为避免潜在伤害或组件的损坏, NAS 连接电源时, 切勿触及风扇。
工作温度	0°C 至 40°C (32 至 104°F)
相对湿度	<ul style="list-style-type: none"> 无冷凝相对湿度: 5% 至 90% 湿球温度: 27°C (80.6°F)
安全锁孔	Kensington 安全锁孔

**提示**

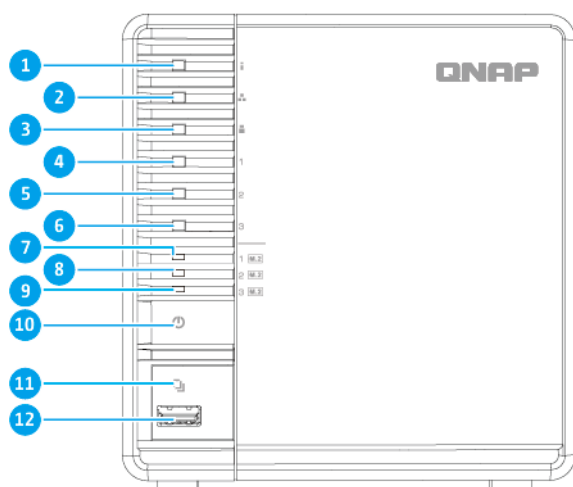
型号规格如有更改, 恕不另行通知。要查看最新规格, 请转到 <https://www.qnap.com>。

包装内容

项目	数量
TS-332X NAS	1
2.5 英寸硬盘托盘底座	1
硬盘托盘架销钉	3
交流电源适配器	1
电源线	1
以太网线	2
M.2 SSD 散热片	3
《快速安装指南 (QIG)》	1

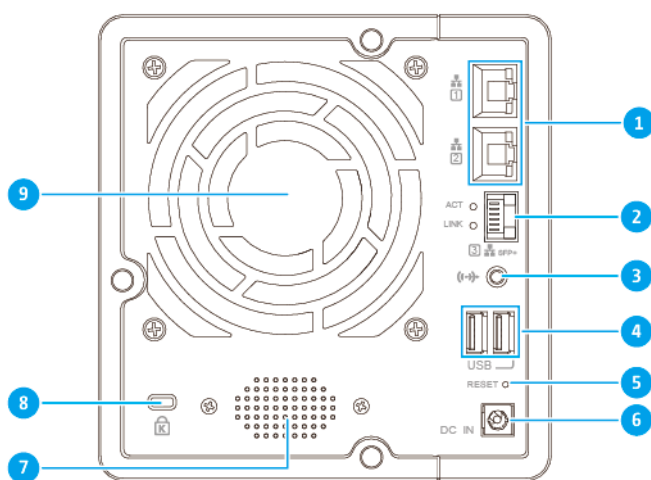
组件

前面板



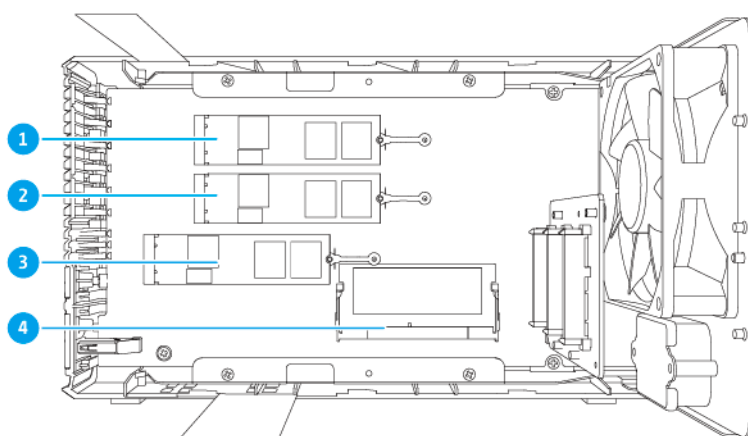
编号	组件	编号	组件
1	状态 LED	7	M.2 SSD 1 LED
2	LAN LED	8	M.2 SSD 2 LED
3	USB LED	9	M.2 SSD 3 LED
4	硬盘 1 LED	10	电源按钮
5	硬盘 2 LED	11	USB 一键复制按钮
6	硬盘 3 LED	12	USB 一键复制端口

后面板



编号	组件	编号	组件
1	千兆位以太网 RJ45 端口	6	电源输入
2	10 GB 以太网 SFP+ 端口	7	扬声器
3	3.5 毫米线路输出插孔	8	Kensington 安全锁孔
4	USB 3.0 A 型端口	9	智能风扇
5	重置按钮	-	-

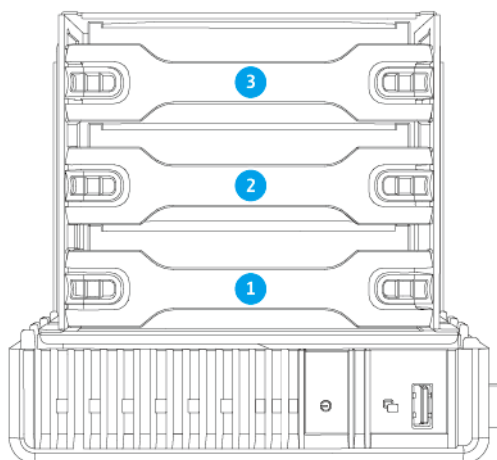
右面板



注
此图不含机箱。

编号	组件	编号	组件
1	M.2 SSD 1	3	M.2 SSD 3
2	M.2 SSD 2	4	内存插槽

正面硬盘编号



注

此图所示为左侧向下放置的 NAS。

安全信息

以下说明有助于确保个人安全和环境安全。在执行任何操作之前，请仔细阅读这些说明。

一般说明

- NAS 应存放在通过器具、锁和钥匙或任何安保措施限制进入的安全场所。
- 只有经过授权并掌握技能的合格人员才能实际接触 NAS，相关人员需了解所有限制措施、安全预防措施和安装维护流程。
- 为避免潜在伤害或组件的损坏，请务必等硬盘和其他内部系统组件冷却后再触碰。
- 请执行静电放电 (ESD) 规程，以避免可能的人员受伤或组件受损。

电源

- 为降低失火或触电风险，请确保只将电源线连接到接地良好的电源插座。



配备冗余电源的设备可能有一条或多条电源单元 (PSU) 线。为避免受到严重伤害，安装或更换系统组件前，必须由经培训的维修技师从设备拔下所有 PSU 线。

系统电池

- 为避免潜在的电池爆炸、导致人员受伤或组件受损，请确保使用同型电池更换现有电池。
- 请按当地法规或电池制造商的指示正确处置使用过的电池。

运动的部件

•



转动的风扇叶片： 在设备连接到电源时，使您的身体各部位远离正在转动的风扇叶片。

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运动的组件： 使您的身体各部位远离正在运动的其他组件。

安装要求

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

设置 NAS



重要

在设置 NAS 或安装 NAS 组件之前，请仔细阅读[安全信息](#)中的所有安全要求和信息。

1. 将 NAS 设备置于符合要求的环境中。
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](#)
 - [安装 M.2 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和更换内存模块的信息。

硬盘安装

TS-332X 兼容 3.5 英寸和 2.5 英寸硬盘以及 2.5 英寸固态硬盘和 M.2 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。

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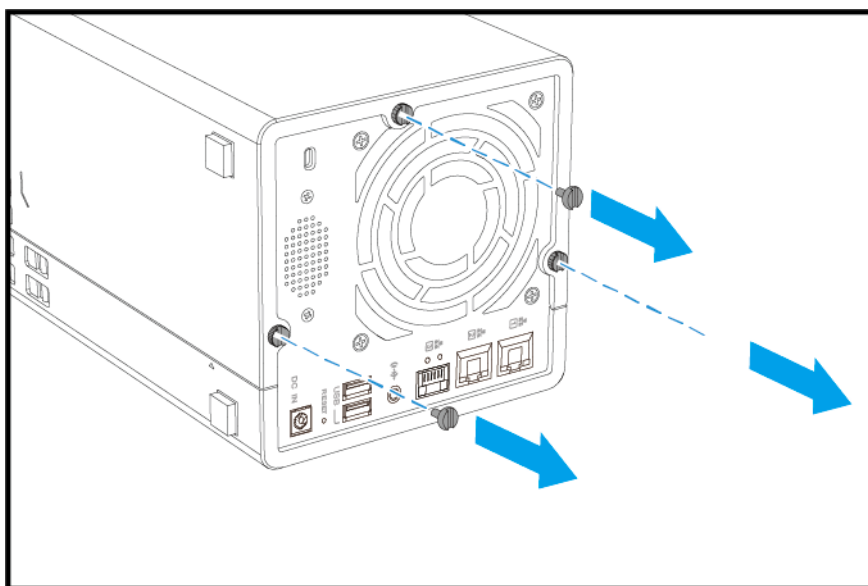
转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

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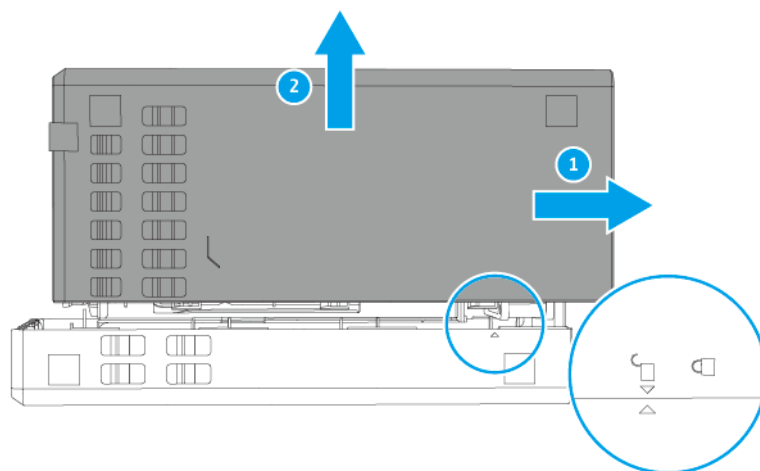


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

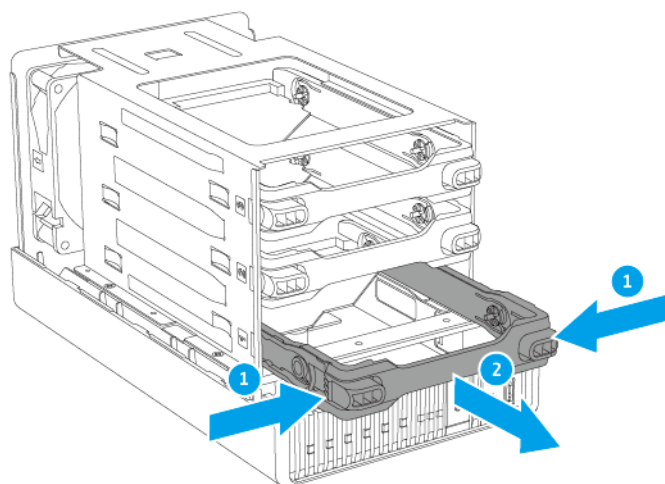
1. 关闭 NAS 电源。
2. 取下外壳盖。
 - a. 将 NAS 左侧朝下放置。
 - b. 卸下用于将外壳盖固定到机箱的螺丝。



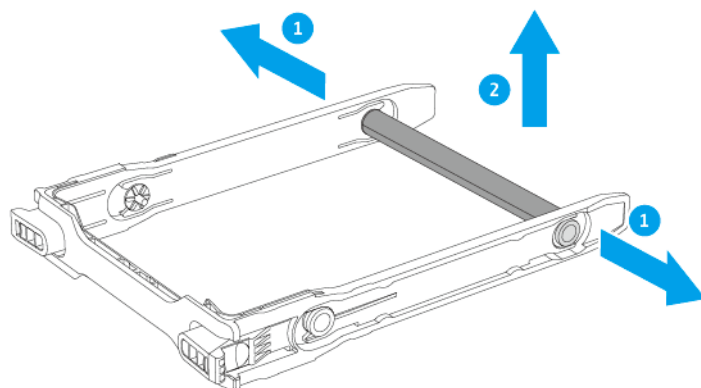
- c. 将盖板向右滑动，使其完全脱离机箱。
- d. 从 NAS 上提起盖板。



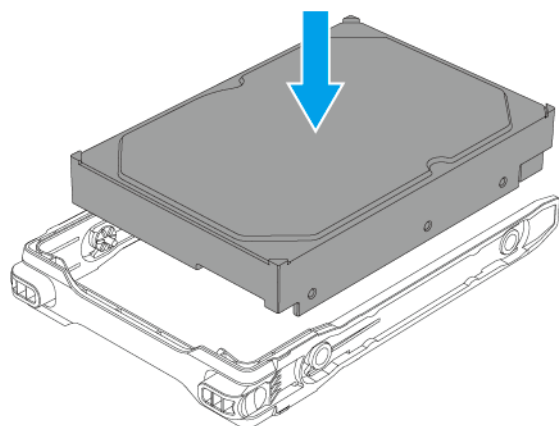
- 3. 取下硬盘托盘架。
 - a. 捏紧固定夹。
 - b. 拉出托盘架。



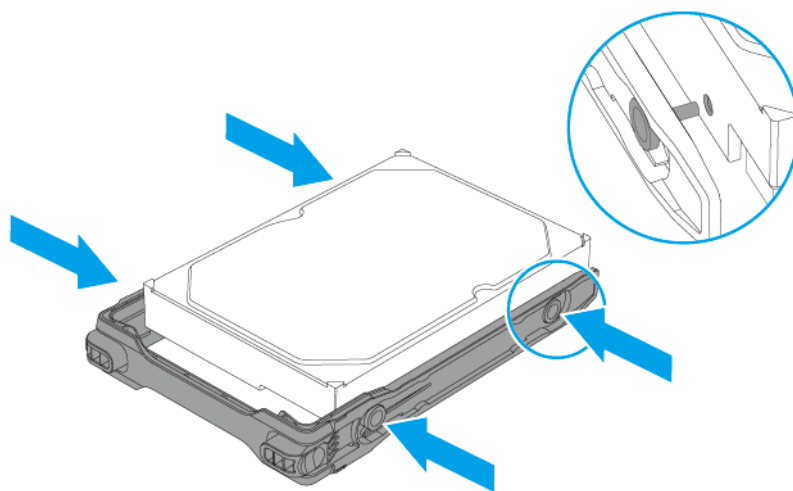
4. 将硬盘安装到硬盘托盘架上。
 - a. 轻拉托盘架的两侧，释放连杆。
 - b. 取下连杆。



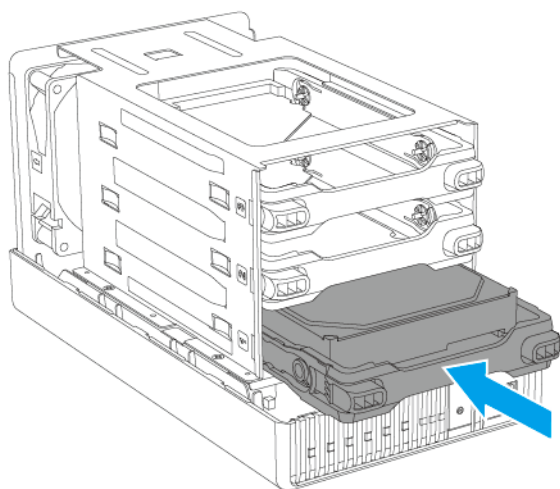
- c. 将硬盘放在托盘架中。



- d. 将硬盘上的孔对准托盘架销钉。
- e. 插入销钉。

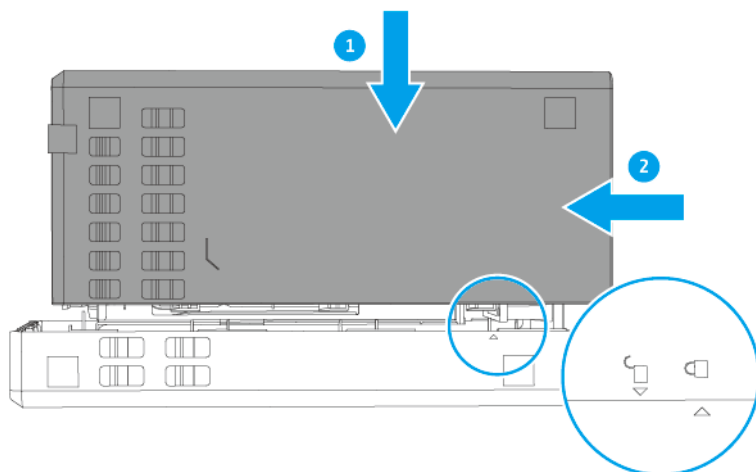


- 5. 将硬盘托盘架滑入硬盘架。

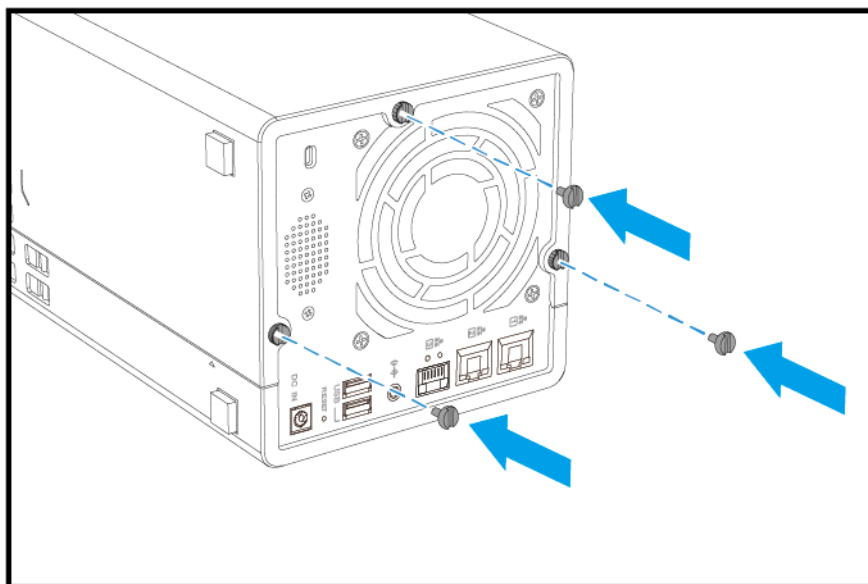


6. 安装外壳盖。

- a. 将盖板放在 NAS 上。
- b. 将盖板与外壳上的凹槽对齐。
- c. 将盖板向左滑动，将其固定到机箱。



- d. 安装 NAS 背面的螺丝。



e. 将 NAS 正常直立放置。

7. 启动 NAS 电源。

在 3.5 英寸托盘上安装 2.5 英寸硬盘



重要

TS-332X 硬盘托盘架需要另配 2.5 英寸硬盘托盘底座才能安装 2.5 英寸硬盘。托盘底座是可选件，需单独购买，TS-332X 包装中不含此部件。您可以从 QNAP 或授权经销商处购买托盘底座。有关详细信息，请转到 <https://shop.qnap.com/>。



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。



转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。



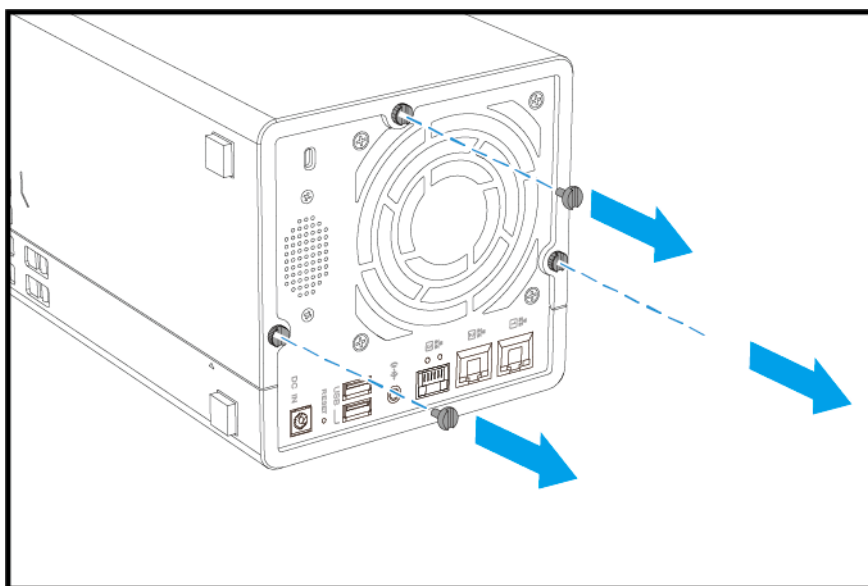
其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

1. 关闭 NAS 电源。

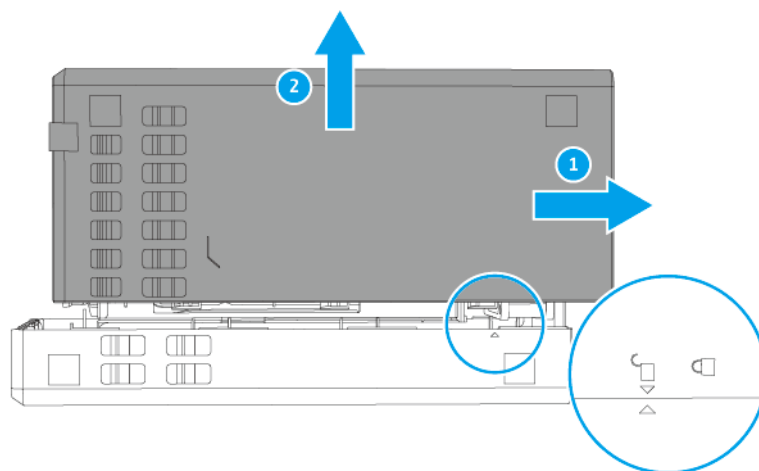
2. 取下外壳盖。

a. 将 NAS 左侧朝下放置。

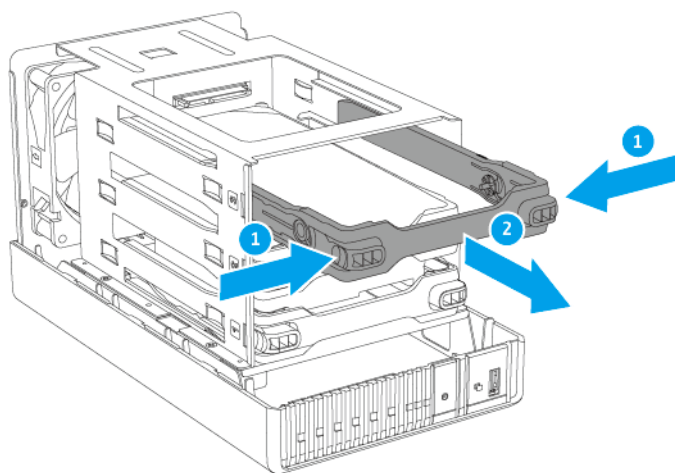
b. 卸下用于将外壳盖固定到机箱的螺丝。



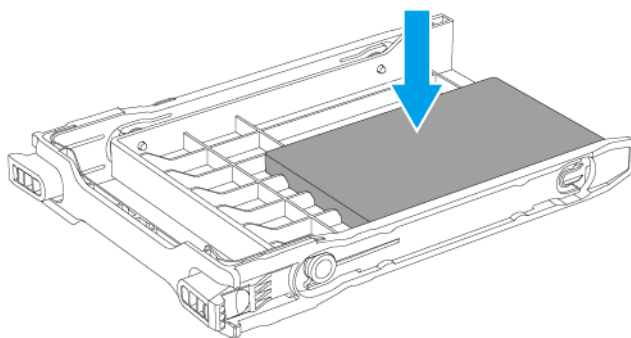
- c. 将盖板向右滑动，使其完全脱离机箱。
- d. 从 NAS 上提起盖板。



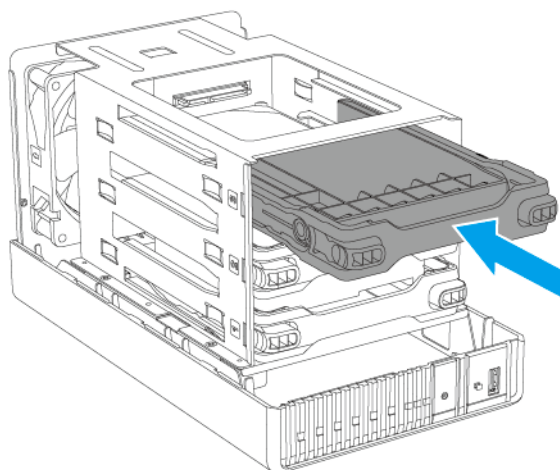
- 3. 取下硬盘托盘架。
 - a. 捏紧固定夹。
 - b. 拉出托盘架。



4. 安装 2.5 英寸硬盘托盘底座。
有关详细信息，请参见[安装 2.5 英寸硬盘托盘底座](#)。
5. 将硬盘安装在托盘上。

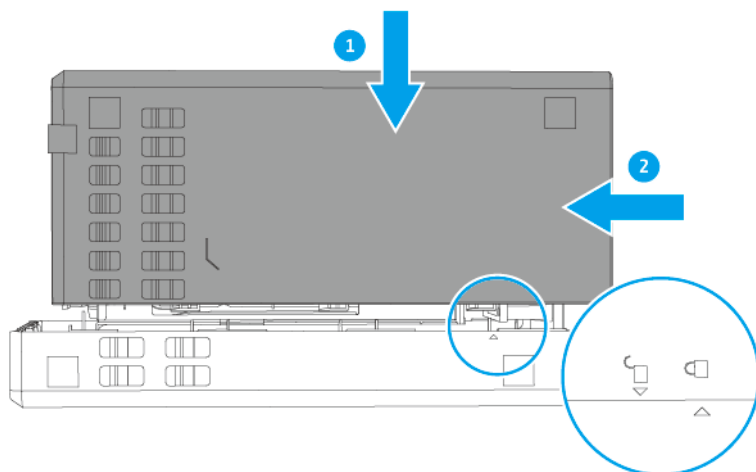


6. 将托盘滑入硬盘架。

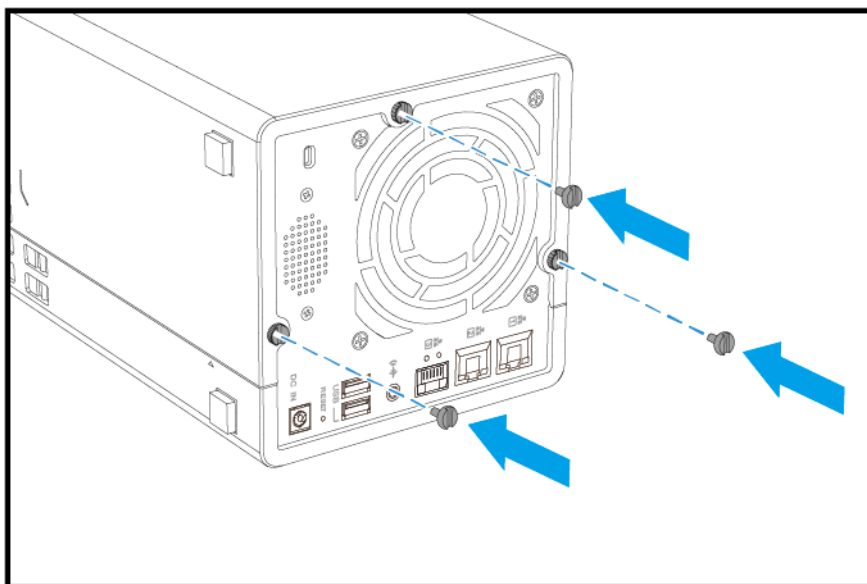


7. 安装外壳盖。

- a. 将盖板放在 NAS 上。
- b. 将盖板与外壳上的凹槽对齐。
- c. 将盖板向左滑动，将其固定到机箱。



- d. 安装 NAS 背面的螺丝。



e. 将 NAS 正常直立放置。

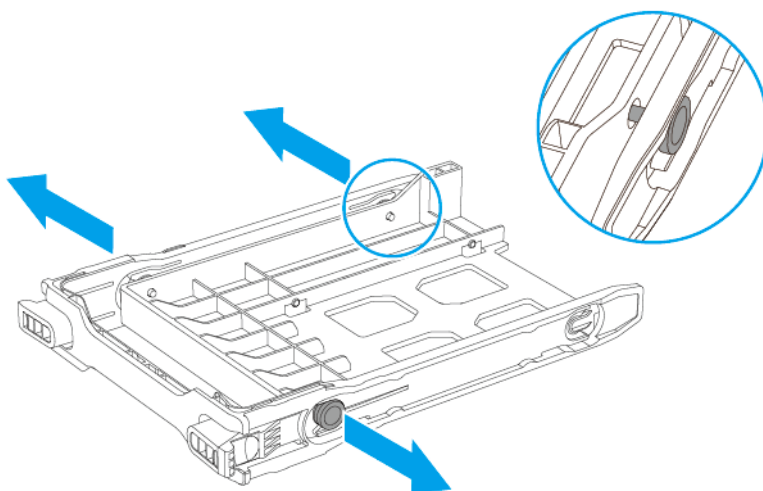
8. 启动 NAS 电源。

取下 2.5 英寸硬盘托盘底座

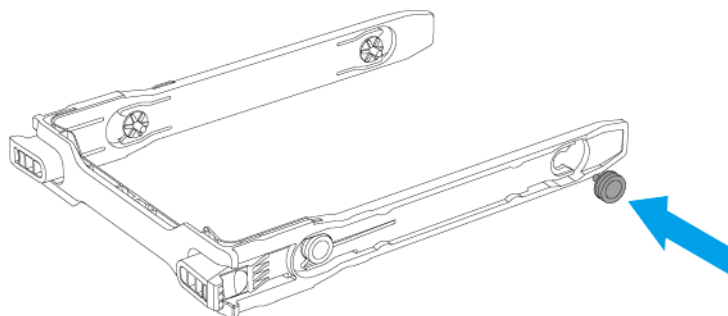
TS-332X 配有三个硬盘托盘架和一个托盘底座，可用于安装 2.5 英寸硬盘。

您可以从 QNAP 或授权经销商处增购托盘底座。有关详细信息，请转到 <https://shop.qnap.com/>。

1. 轻拉硬盘托盘架的两侧，从托盘底座上取下销钉。



2. 将右后方的销钉插入托盘架。

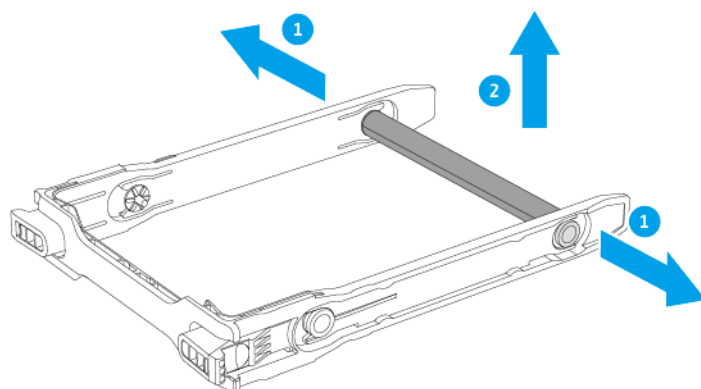


安装 2.5 英寸硬盘托盘底座

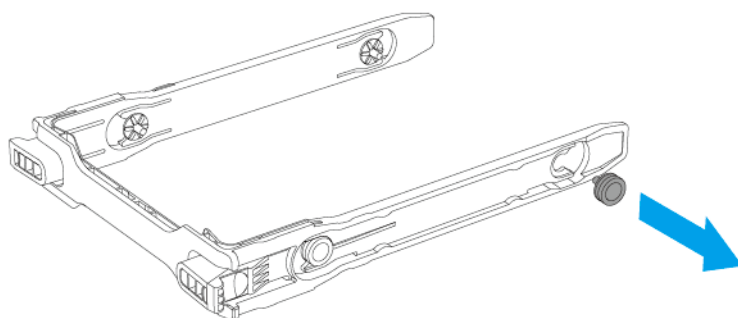
TS-332X 配有三个硬盘托盘架和一个托盘底座，可用于安装 2.5 英寸硬盘。

您可以从 QNAP 或授权经销商处增购托盘底座。有关详细信息，请转到 <https://shop.qnap.com/>。

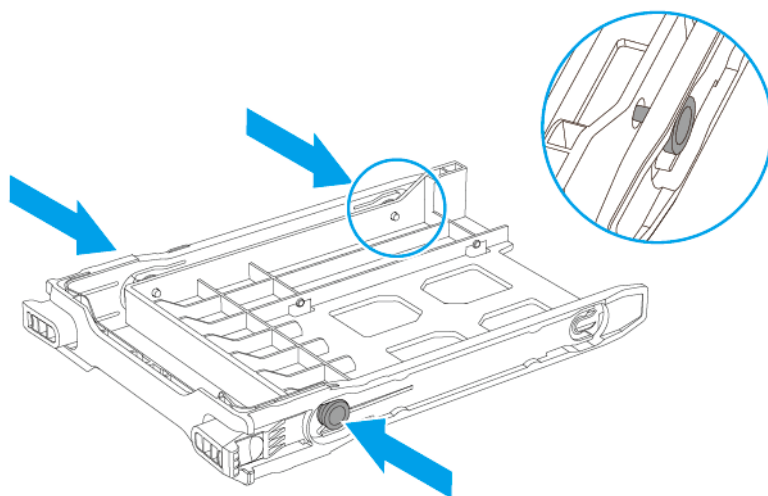
1. 轻拉硬盘托盘架的两侧，释放连杆。
2. 取下连杆。



3. 取下托盘架右后方的销钉。



4. 将托盘底座上的孔对准托盘架销钉。
5. 将销钉插入托盘底座。



安装 M.2 固态硬盘

TS-332X 有三个 M.2 SSD 插槽。有关兼容的 M.2 SSD 的列表，请转到 <https://www.qnap.com/compatibility>。

QNAP 建议在 M.2 SSD 控制器上安装散热片，以提高散热效果并确保性能稳定。

安装非 QNAP 出品的散热片前，请确保该散热片的尺寸和外形合适。



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。

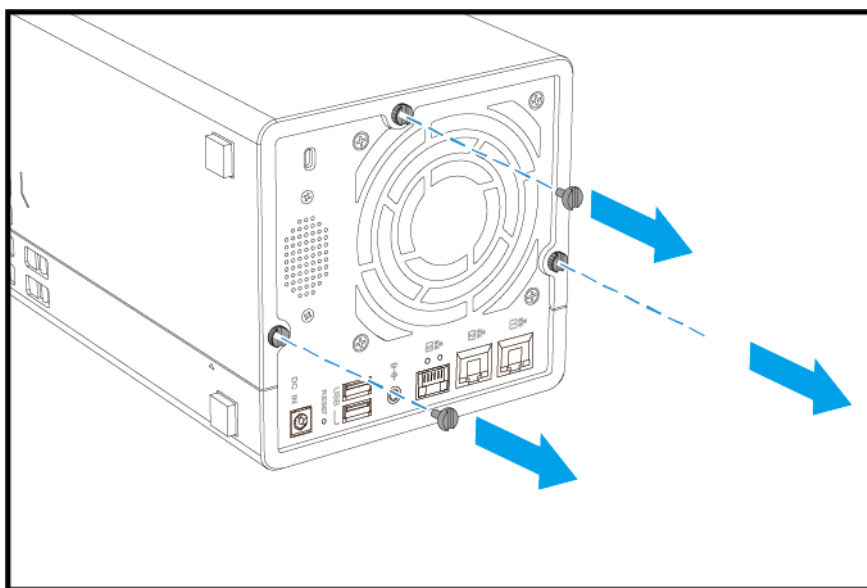


转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

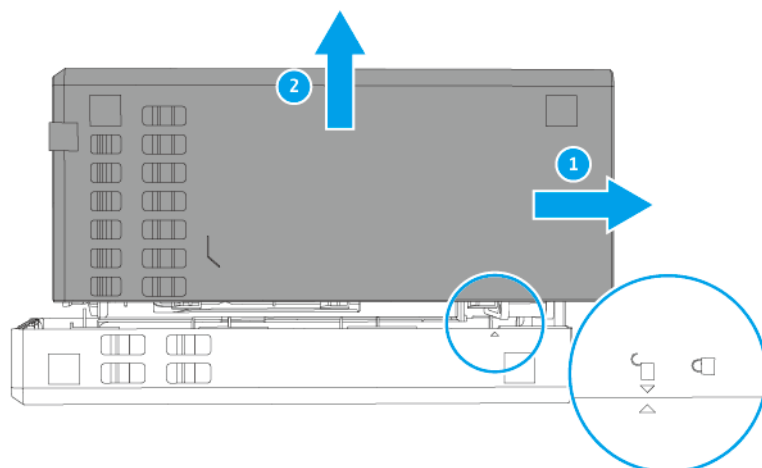


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

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. 将 NAS 左侧朝下放置。
 - b. 卸下用于将外壳盖固定到机箱的螺丝。

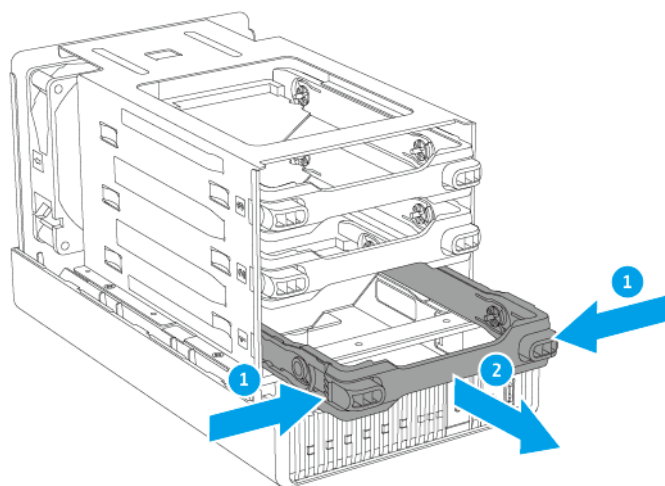


- c. 将盖板向右滑动，使其完全脱离机箱。
- d. 从 NAS 上提起盖板。



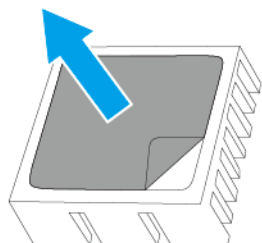
5. 取下每个硬盘托盘架。

- a. 捏紧固定夹。
- b. 拉出托盘架。

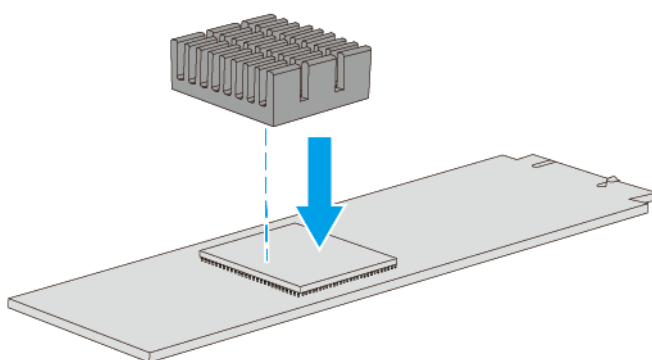


6. 在 M.2 SSD 控制器上安装散热片。

- a. 在 M.2 SSD 上找到控制器。
控制器位置因 M.2 SSD 的型号和制造商而异。
有关详细信息，请参阅文档或联系制造商。
- b. 取下散热片底部的保护膜。



c. 将散热片安装到控制器上。

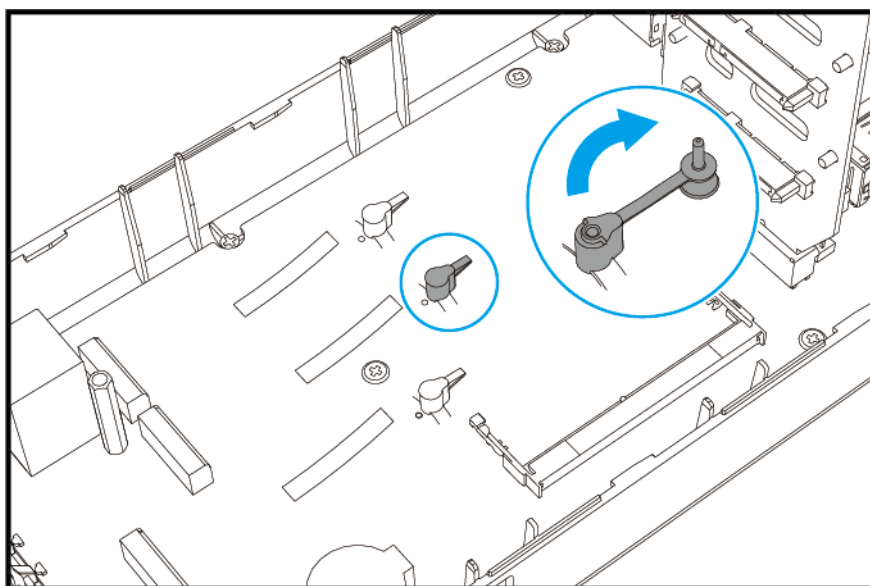


7. 安装 M.2 SSD。

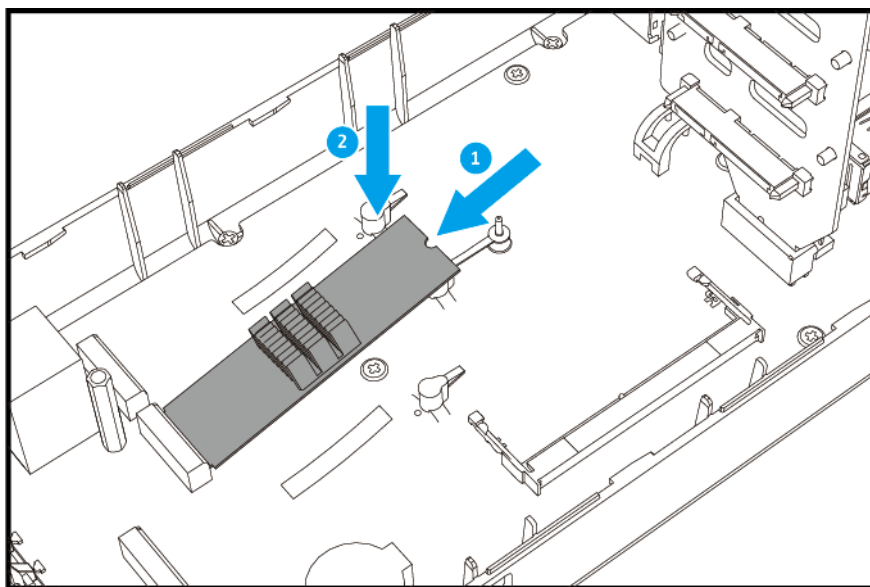


注
以下安装图不含机箱。

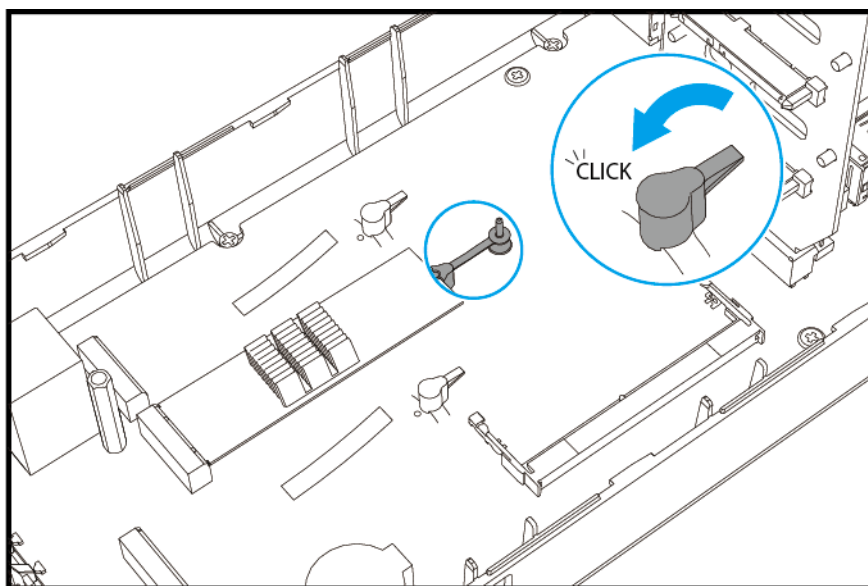
a. 拉开固定扣。



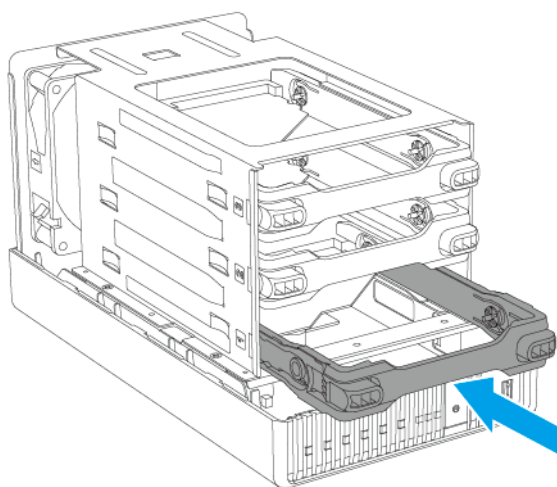
b. 插入 M.2 SSD。



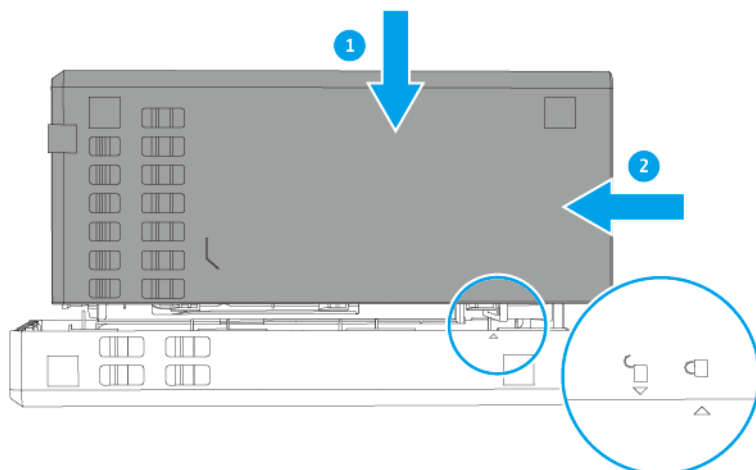
c. 插入固定扣，固定硬盘。



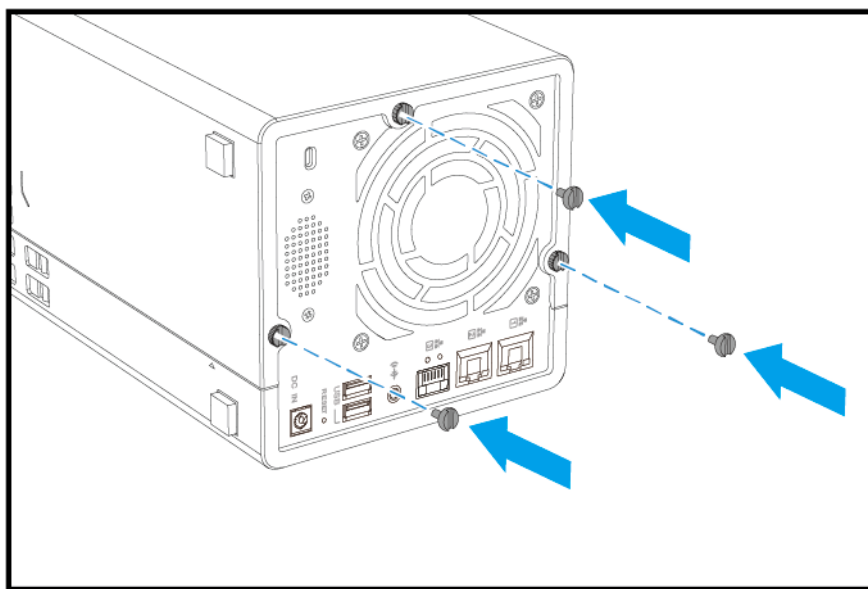
8. 可选: 安装其他 M.2 SSD。
9. 将每个硬盘托盘架滑入 NAS。



10. 安装外壳盖。
 - a. 将盖板放在 NAS 上。
 - b. 将盖板与外壳上的凹槽对齐。
 - c. 将盖板向左滑动, 将其固定到机箱。



d. 安装 NAS 背面的螺丝。



e. 将 NAS 正常直立放置。

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

更换内存模块

TS-332X 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。QNAP 内存模块可以从授权经销商处购买。



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。

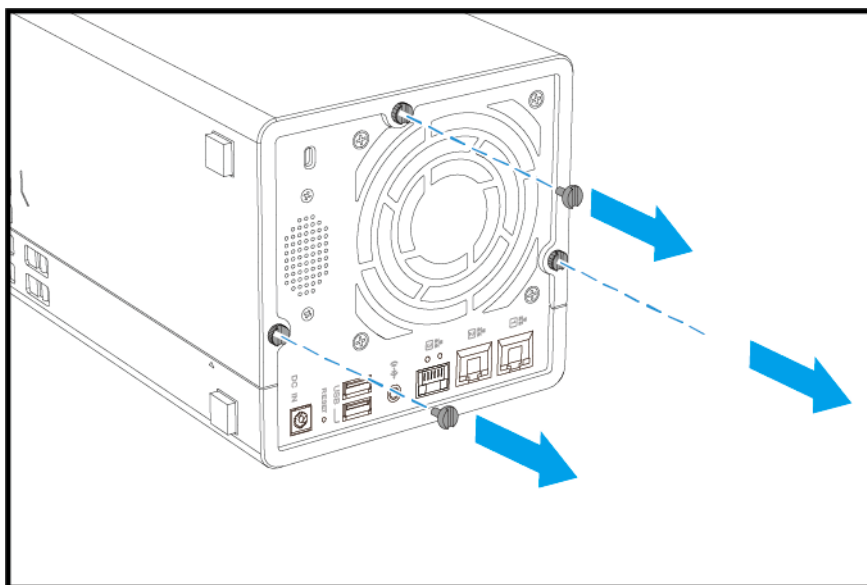


转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

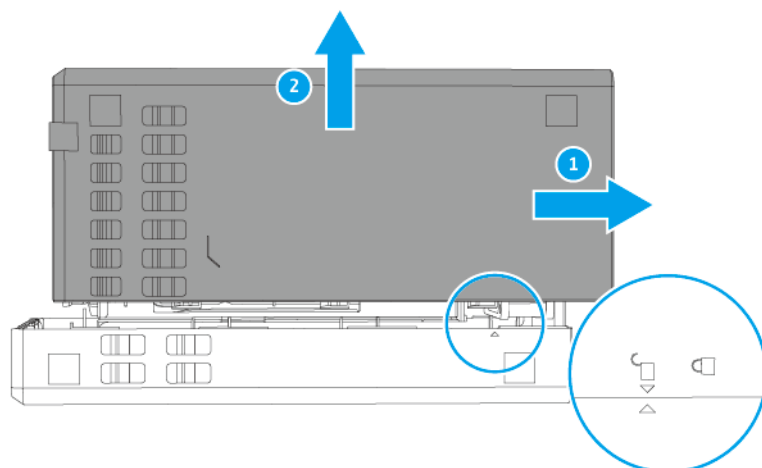


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

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. 将 NAS 左侧朝下放置。
 - b. 卸下用于将外壳盖固定到机箱的螺丝。

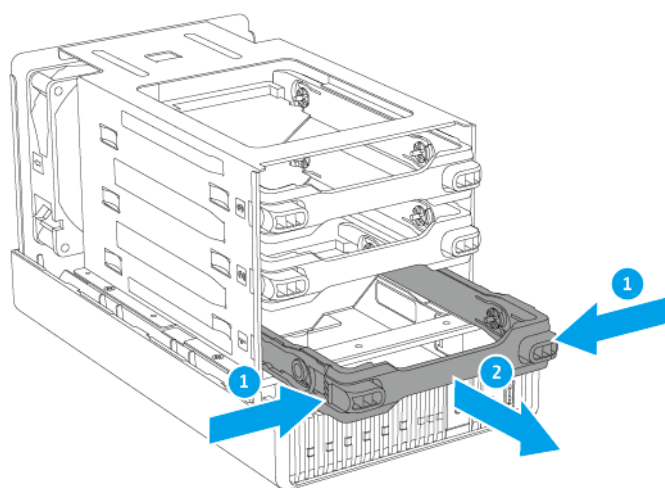


- c. 将盖板向右滑动，使其完全脱离机箱。
- d. 从 NAS 上提起盖板。



5. 取下每个硬盘托盘架。

- a. 捏紧固定夹。
- b. 拉出托盘架。

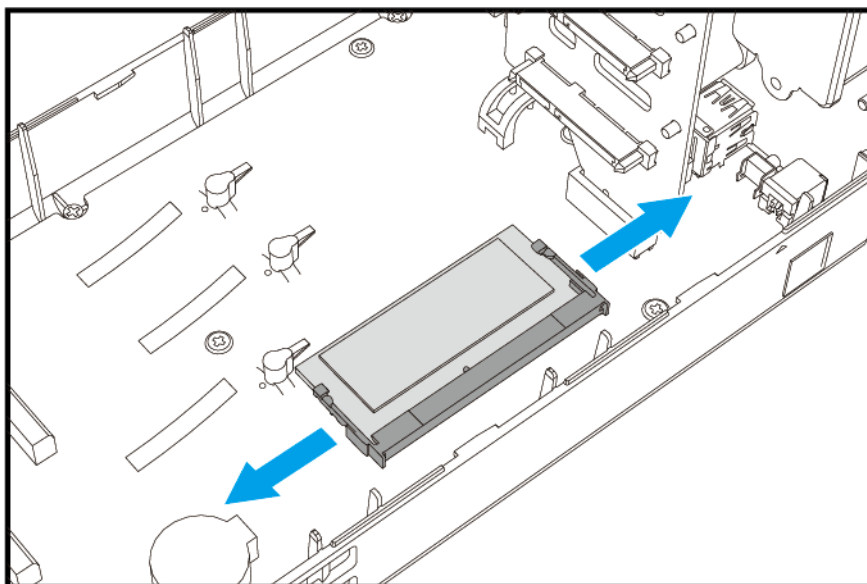


6. 取下现有模块。



注
以下安装图不含机箱。

- a. 同时向外推动固定夹以释放模块。



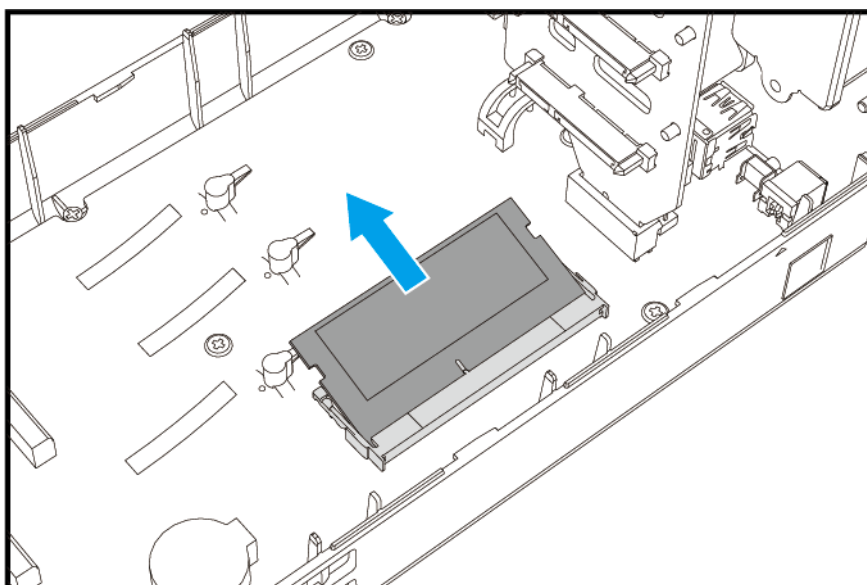
b. 确认模块向上倾斜并已完全脱离插槽。



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。

c. 握住模块边缘，然后小心地将其从插槽中拔出。



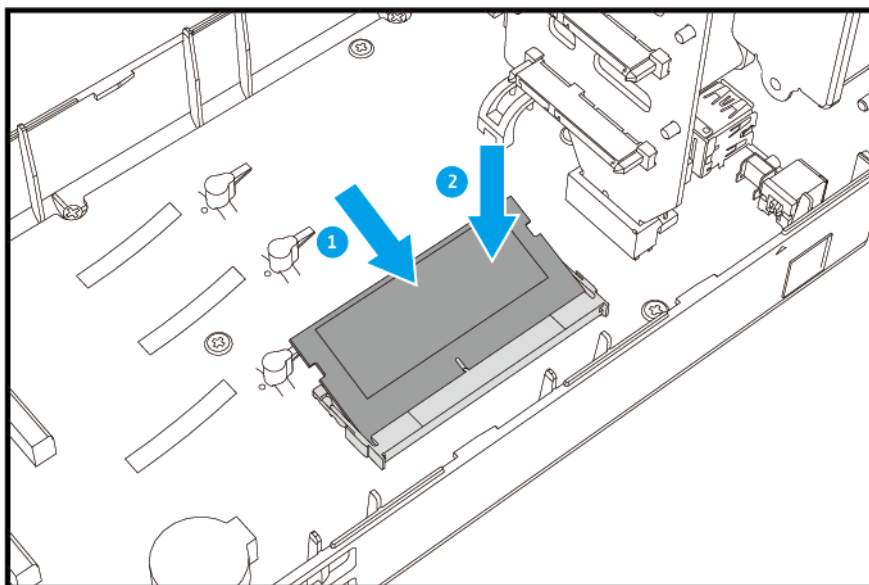
警告

- 请勿触摸组件，特别是金属接头。
- 不要折弯模块。

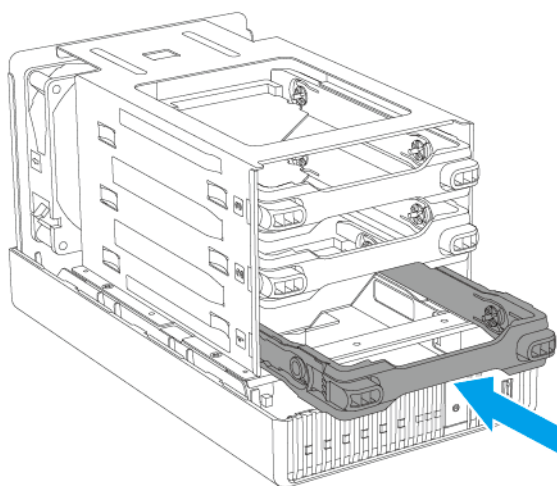
7. 安装新模块。

a. 将凹口与插槽内的凸起对齐。

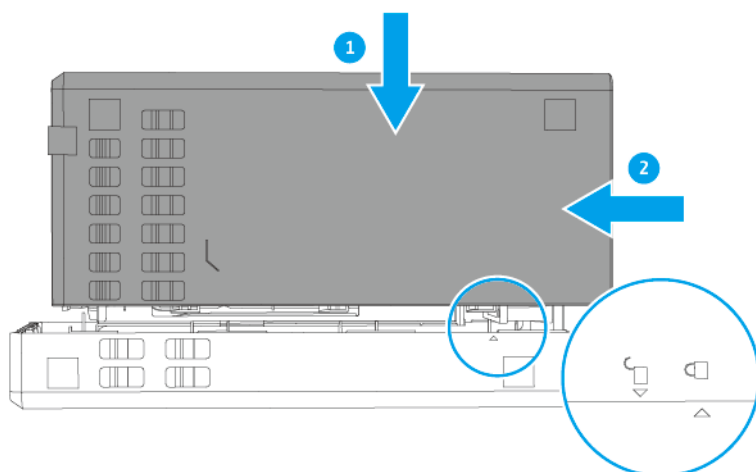
- b. 插入模块。
- c. 确认金属接头已完全插入。
- d. 小心地向下按压模块，直到固定夹将模块锁定到位。



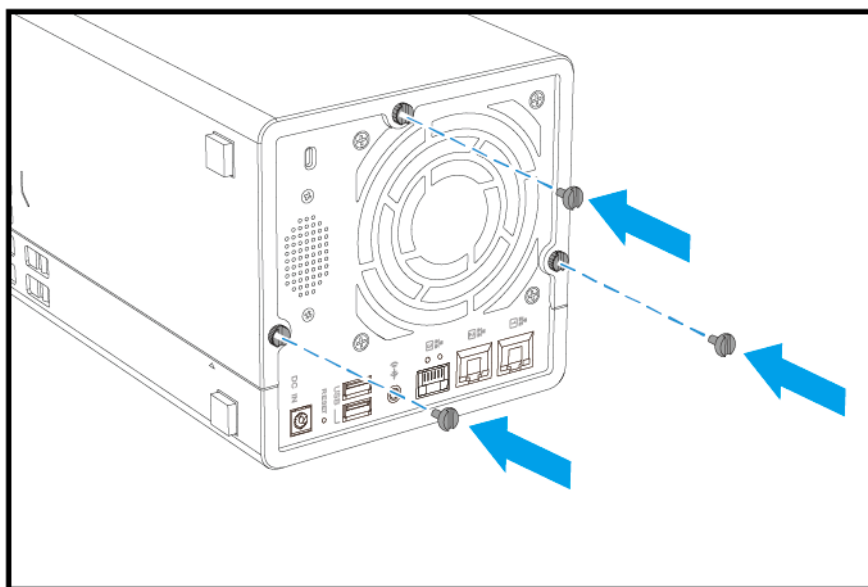
8. 将每个硬盘托盘架滑入 NAS。



9. 安装外壳盖。
 - a. 将盖板放在 NAS 上。
 - b. 将盖板与外壳上的凹槽对齐。
 - c. 将盖板向左滑动，将其固定到机箱。



d. 安装 NAS 背面的螺丝。



e. 将 NAS 正常直立放置。

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。
13. 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-332X 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"> • 使用 Qfinder Pro 定位 NAS。 • 完成“智能安装指南”向导中的步骤。 <p>有关详细信息，请参见使用 Qfinder Pro 安装 QTS。</p>	<ul style="list-style-type: none"> • 计算机 • 网线 • Qfinder Pro 安装程序
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"> • 扫描 NAS 上的二维码。 • 登录您的 myQNAPcloud 帐户。 • 使用 CloudLink 远程访问 NAS。 • 完成“智能安装指南”向导中的步骤。 <p>有关详细信息，请参见使用 Cloud Key 安装 QTS。</p>	<ul style="list-style-type: none"> • 计算机或移动设备 • 网线 • myQNAPcloud 帐户 • CloudKey

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。

- 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。

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"> • 系统管理员密码：admin • TCP/IP 配置： <ul style="list-style-type: none"> • 通过 DHCP 自动获取 IP 地址设置 • 禁用巨型帧 • 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)”。 • 系统端口：8080（系统服务端口） • 安全等级：低（允许所有连接） • LCD 面板密码：（空白） • VLAN：禁用
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"> • 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。

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"> • 硬盘正在格式化。 • NAS 正在初始化。 • 操作系统正在更新。 • RAID 正在重建。 • 正在进行在线 RAID 容量扩展。 • 正在进行在线 RAID 级别迁移。
	红色	<ul style="list-style-type: none"> • 硬盘无效。 • 磁盘卷的容量已满。 • 磁盘卷的容量即将被占满。 • 系统风扇故障。 • 访问数据期间发生了读/写错误。 • 在硬盘上检测到坏扇区。 • 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）。 • 硬件自检错误
	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"> • NAS 未配置。 • 硬盘未格式化。
	绿色	<ul style="list-style-type: none"> • NAS 正在启动。 • 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"> 检测到 USB 设备（已连接到前 USB 端口）。 正在从 NAS 移除 USB 设备（已连接到前 USB 端口）。 正在访问 USB 设备（已连接到 NAS 的前 USB 端口）。 正在与 USB 或 eSATA 设备间复制数据。
	蓝色	在前 USB 端口中检测到 USB 设备。
	熄灭	<ul style="list-style-type: none"> 未检测到 USB 设备。 NAS 已经完成与连接到前 USB 端口的 USB 设备间的数据复制。

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"> NAS 正在启动。 NAS 正在关闭（软件关闭）。 用户已按下“重置”按钮。 操作系统已更新。
	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"> 磁盘卷的容量即将被占满。 磁盘卷的容量已满。 硬盘处于降级模式。 用户已启动硬盘重建过程。 插入或抽出硬盘。
	1	<ul style="list-style-type: none"> NAS 已通过强制关闭关机（硬件关闭）。 NAS 已成功开机并准备就绪。

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 > 存储与快照总管 > 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 > 存储与快照总管 > 存储 > 存储/快照
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	http://docs.qnap.com
服务台	http://helpdesk.qnap.com
下载	http://download.qnap.com
社区论坛	http://forum.qnap.com

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

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Version 3, 29 June 2007

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FCC 声明

FCC B 类声明



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SJ/T 11364-2006



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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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电池	0	0	0	0	0	0

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