



QNAP

TS-251D

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-251D 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-251D NAS 的基本信息。

关于 TS-251D

TS-251D 由 Intel® Celeron® J4005 双核 2.0 GHz 处理器提供支持，该处理器的脉冲频率高达 2.7 GHz。TS-251D 最多可支持 8 GB DDR4 RAM，并且特有 USB 一键复制、千兆位 LAN 端口，以及 PCIe 插槽。TS-251D 配有 Intel® AES-NI 256 硬件加速加密引擎，确保了敏感数据的安全性，可保护 NAS 上存储的重要信息。

硬件规格







警告

- 如果您的 QNAP 产品有硬件方面的缺陷，请将产品退回 QNAP 或 QNAP 授权的服务中心进行维修或更换。您本人或未经授权的第三方对产品进行的任何维修或维护流程均会使保修失效。
- 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。有关详细信息，请参见 [QNAP 保修条款和条件](#)。

订购部件号	CPU	内存	电源
TS-251D-2G	Intel® Celeron® J4005	2 GB	单一
TS-251D-4G	Intel® Celeron® J4005	4 GB	单一

组件	TS-251D-2G	TS-251D-4G
处理器		
CPU	Intel® Celeron® J4005	
频率	双核/2 线程 2.0 GHz 基本/2.7 GHz 脉冲	
架构	x86 64 位	
加密引擎	AES-NI	
内存		
预安装内存	2 GB RAM: 1 x 2 GB SODIMM DDR4	4 GB RAM: 1 x 4 GB SODIMM DDR4
内存插槽	2 x SODIMM DDR4	
	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。 	
最大内存	8 GB RAM: 2 x 4 GB	
闪存	4 GB（双重引导操作系统保护）	
存储		

组件	TS-251D-2G	TS-251D-4G
硬盘架	2 x 3.5 英寸 SATA 6 Gbps  提示 硬盘架向后兼容 3.5 英寸 SATA 3 Gbps 硬盘。	
硬盘兼容性	3.5 英寸硬盘架： <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 	
SSD 缓存加速支持	3.5 英寸硬盘架 1 至 2	
热插拔	支持	
网络		
千兆位以太网端口	1 x GbE RJ45	
外部 I/O 端口和扩展插槽		
PCIe 插槽	1 x PCIe 2.0 x4  提示 有关兼容扩展卡的列表，请转到 https://www.qnap.com/compatibility 。	
USB 端口	正面： 1 x USB 3.0 A 型  注 此 USB 端口支持一键复制。 背面： <ul style="list-style-type: none"> • 3 x USB 2.0 A 型 • 1 x USB 3.0 A 型 	
HDMI 端口	1 x HDMI 2.0 (60Hz 时分辨率最高 3840 x 2160)	
接口		
红外传感器	1  注 QNAP RM-IR004 遥控器是可选配件，需另购。	
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)	168 x 105 x 226 mm (6.61 x 4.13 x 8.90 英寸)	
净重	1.48 kg (3.26 磅)	
其他		

组件	TS-251D-2G	TS-251D-4G
电源单元	65W, 100-240V AC, 50/60 Hz  警告 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。	
系统电池	CR2032 锂电池 (3V, 225 mAh)  警告 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。  重要 请按当地法规或电池制造商的指示处置使用过的电池。	
噪声声级	16.7 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 70 mm, 12V DC 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 95% 湿球温度: 27°C (80.6°F) 	

**提示**

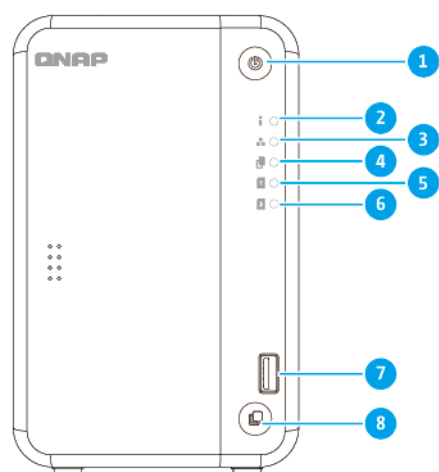
型号规格如有更改, 恕不另行通知。要查看最新规格, 请转到 <https://www.qnap.com>。

包装内容

项目	数量
TS-251D	1
交流电源适配器	1
电源线	1
以太网线	Cat5e 线缆: 1
适用于 3.5 英寸硬盘的螺丝	8
适用于 2.5 英寸硬盘的螺丝	6
快速安装指南 (QIG)	1

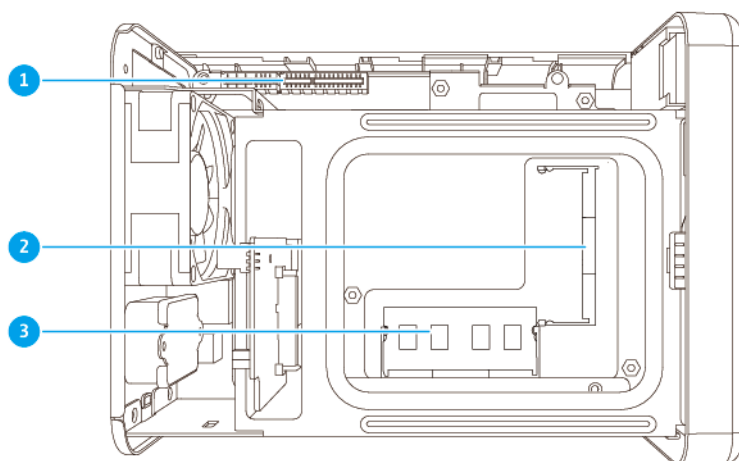
组件

前面板



编号	组件	编号	组件
1	电源按钮	5	硬盘 1 LED
2	状态 LED	6	硬盘 2 LED
3	LAN LED	7	USB 3.0 一键复制 A 型端口
4	USB 一键复制 LED	8	USB 一键复制按钮

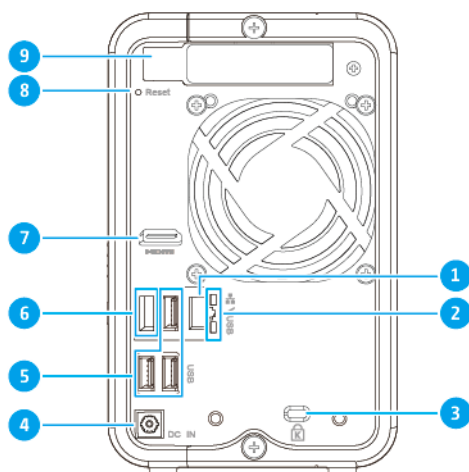
左面板



编号	组件	编号	组件
1	PCIe 2.0 x4 插槽	3	内存插槽 1

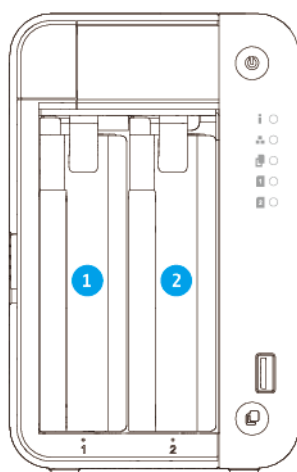
编号	组件	编号	组件
2	内存插槽 2	-	-

后面板



编号	组件	编号	组件
1	以太网端口 (RJ45)	6	USB 3.0 A 型端口
2	千兆位以太网 LED	7	HDMI 2.0 端口
3	Kensington 安全锁孔	8	重置按钮
4	电源输入	9	PCIe 半高盖板
5	USB 2.0 A 型端口	-	-

硬盘编号



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

- 设备应存放在通过器具、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设备，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。

•



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 • 无可能阻塞 NAS 通风或者压住 NAS 或电源线的物品
硬件和外围设备	<ul style="list-style-type: none"> • 存储硬盘 有关兼容硬盘型号的列表，请转到 https://www.qnap.com/compatibility。 • 网线
工具	<ul style="list-style-type: none"> • 1 号或 2 号十字螺丝刀 • 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。
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-251D 兼容 3.5 英寸硬盘、2.5 英寸硬盘以及 2.5 英寸固态硬盘。

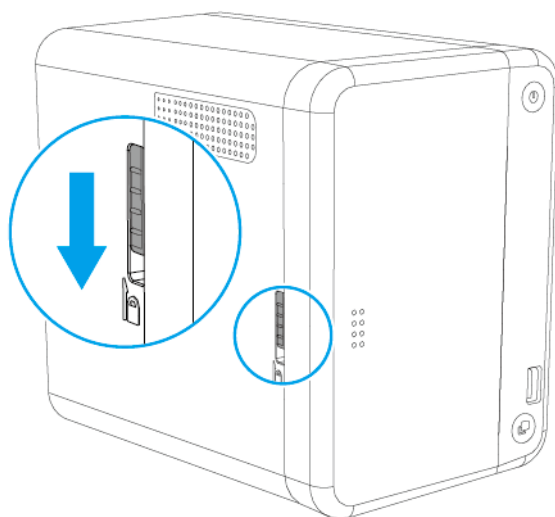
在 3.5 英寸托盘上安装 3.5 英寸硬盘



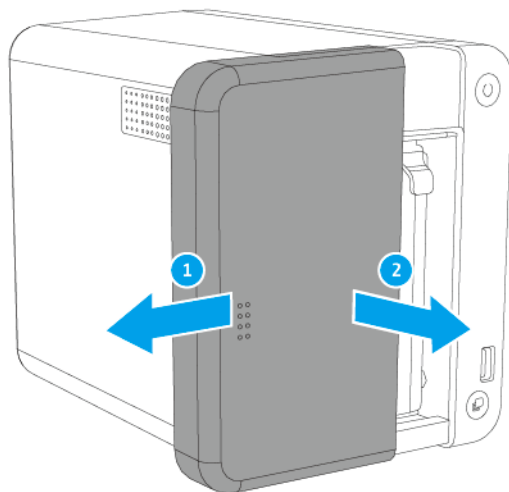
警告

- 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。

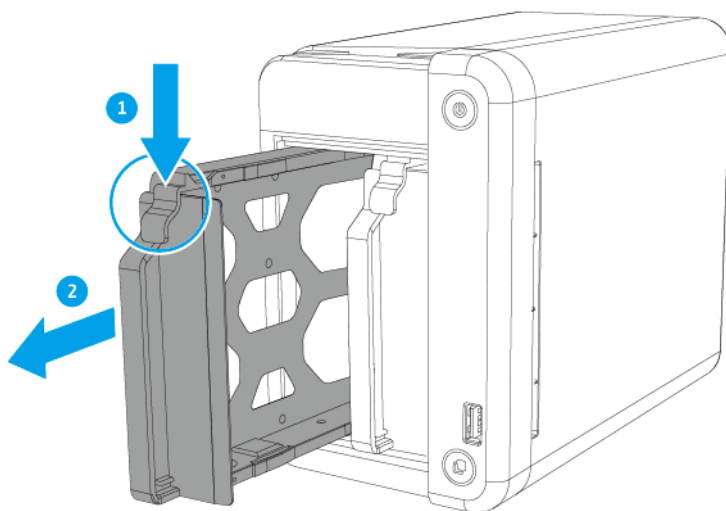
1. 关闭 NAS 电源。
2. 取下前盖。
 - a. 找到 NAS 左侧的锁紧机构。
 - b. 向下滑动锁扣以释放前盖。



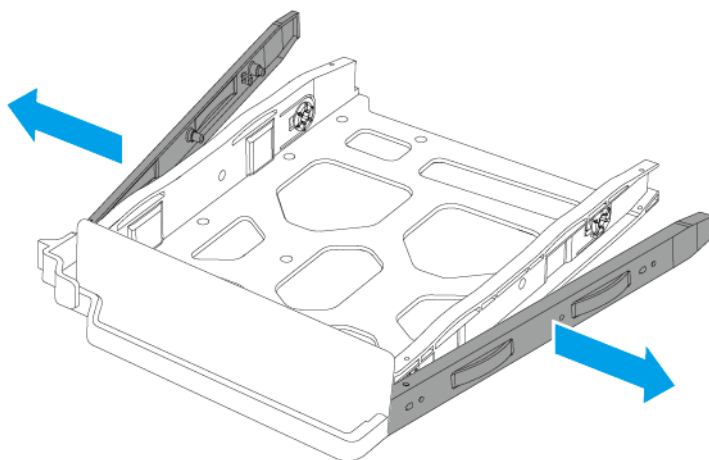
- c. 将前盖向左滑动，然后拉出。
- d. 然后取下盖子。



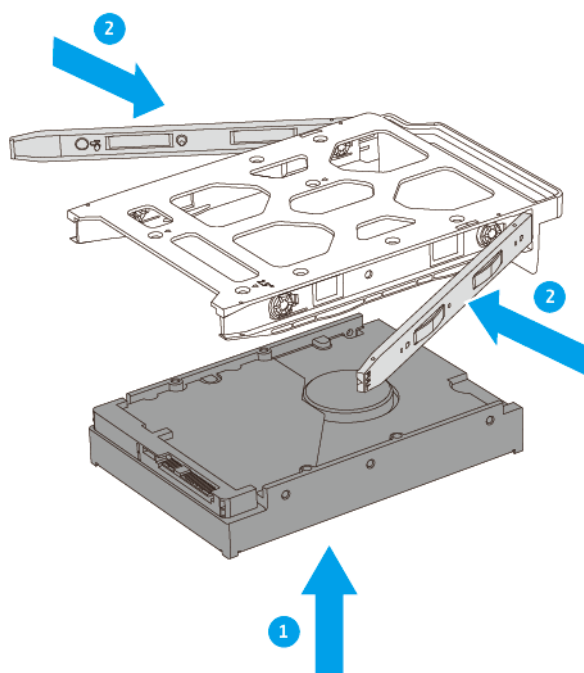
3. 按压门锁的同时拉出硬盘托盘，取下该托盘。



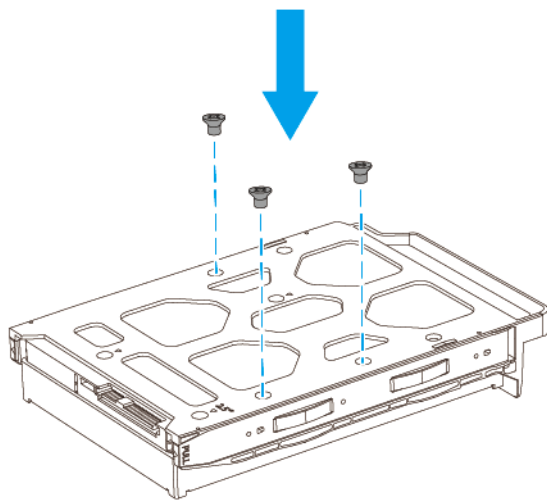
4. 将硬盘安装到托盘上。
 - a. 取下硬盘托盘两侧的固定面板。



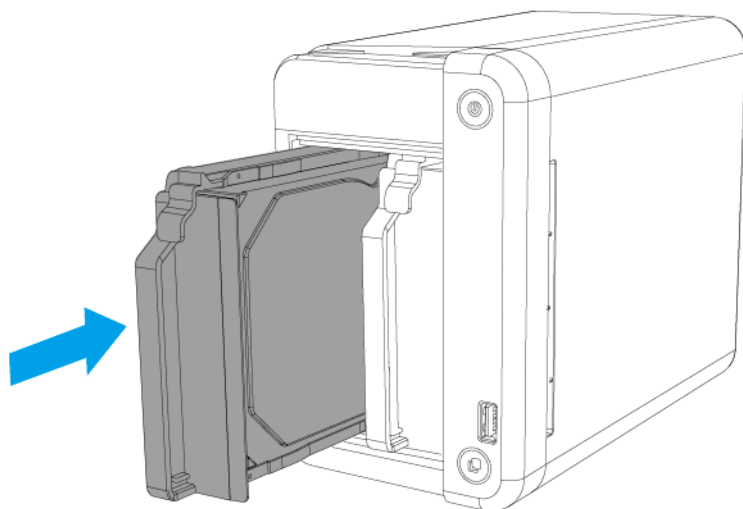
b. 装上固定面板，将硬盘锁定在托盘上。



c. 安装螺丝。

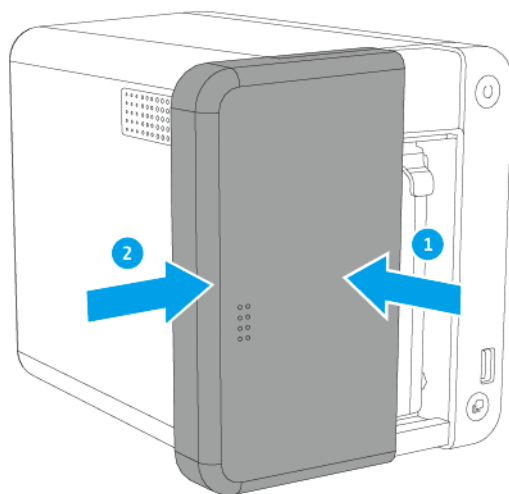


5. 将托盘滑入硬盘架。

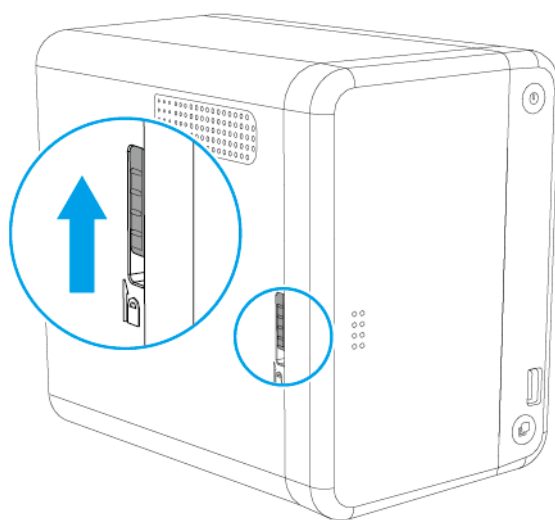


6. 安装前盖。

- a. 将前盖与外壳上的凹槽对齐，然后向右滑动。



b. 向上滑动锁扣，固定前盖。



7. 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

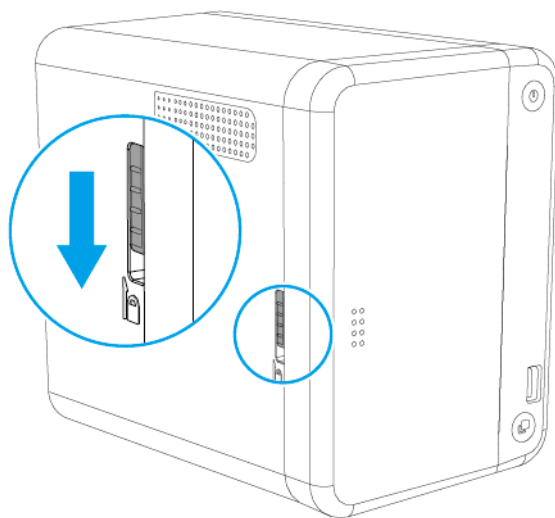


警告

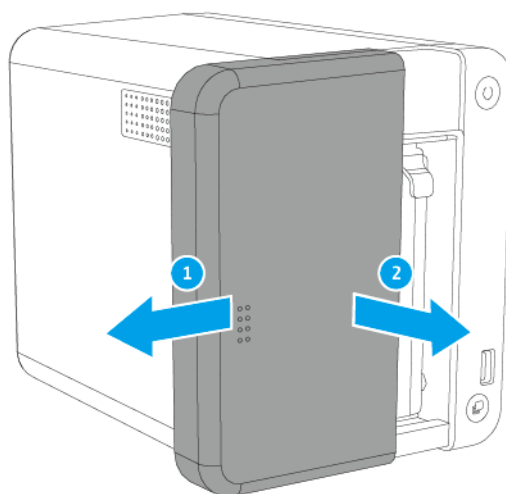
- 安装硬盘将删除硬盘上的所有数据。
- 请执行静电放电 (ESD) 规程，以避免组件损坏。

1. 关闭 NAS 电源。
2. 取下前盖。

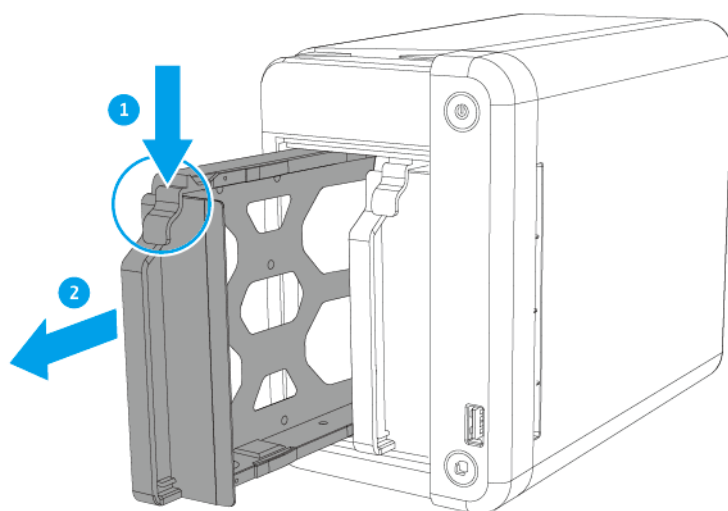
- a. 找到 NAS 左侧的锁紧机构。
- b. 向下滑动锁扣以释放前盖。



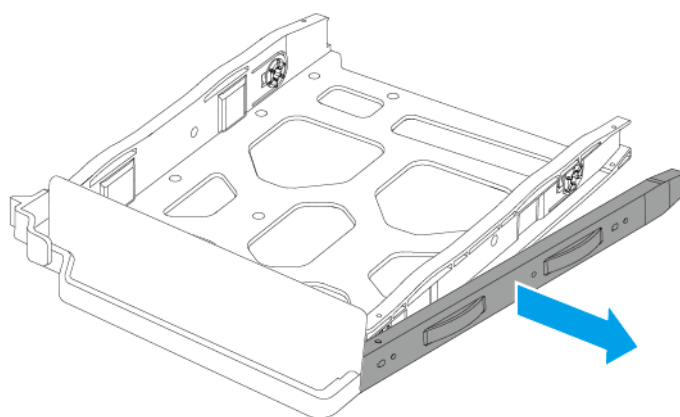
- c. 将前盖向左滑动，然后拉出。
- d. 然后取下盖子。



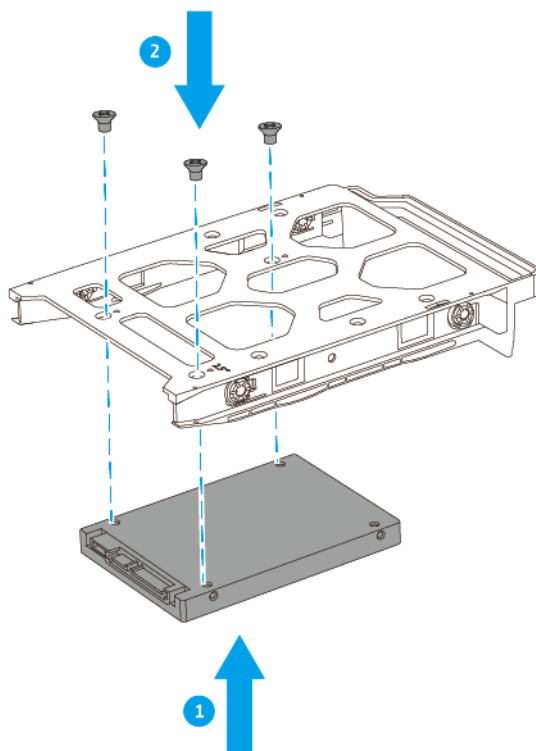
3. 按压门锁的同时拉出硬盘托盘，取下该托盘。



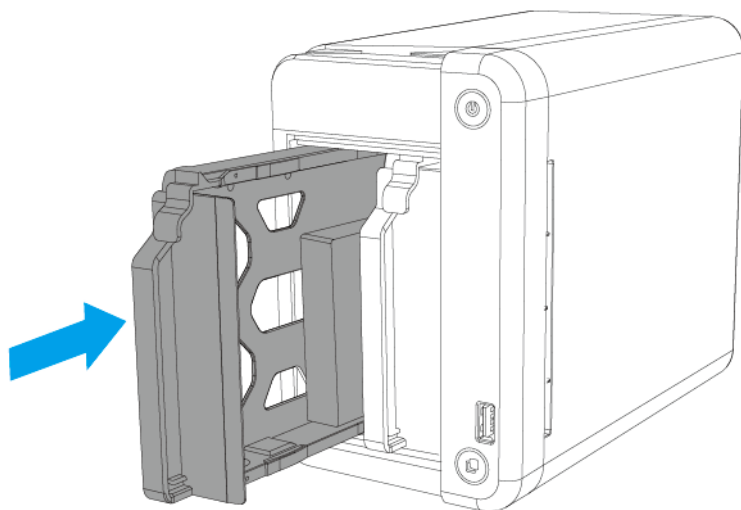
4. 将硬盘安装到托盘上。
- a. 取下硬盘托盘右侧的固定面板。



- 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。

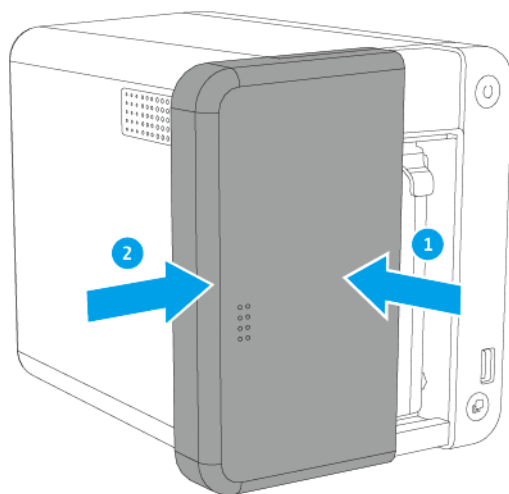


5. 将托盘滑入硬盘架。

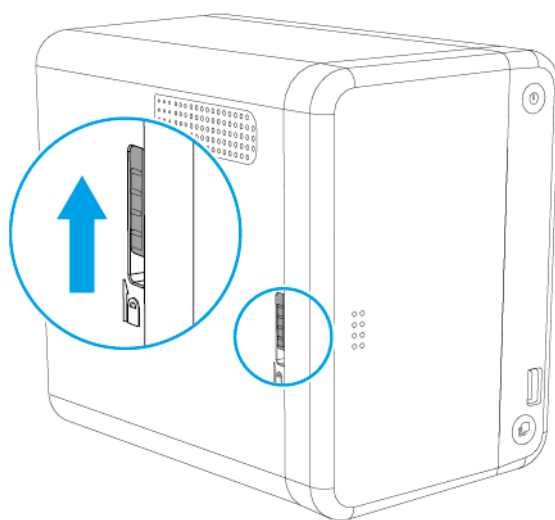


6. 安装前盖。

a. 将前盖与外壳上的凹槽对齐，然后向右滑动。



b. 向上滑动锁扣，固定前盖。



安装扩展卡

TS-251D 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。TS-251D 系列采用半高扁平支架。



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。

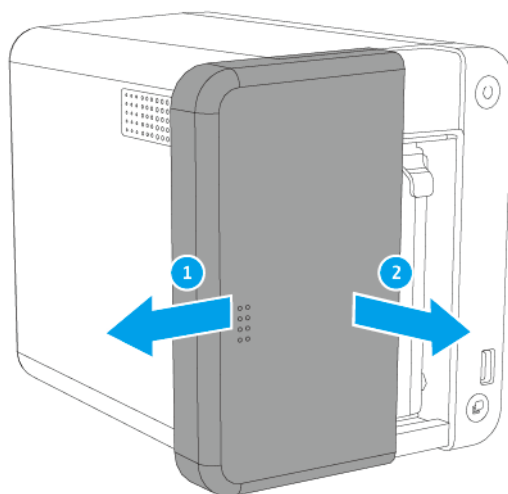


转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

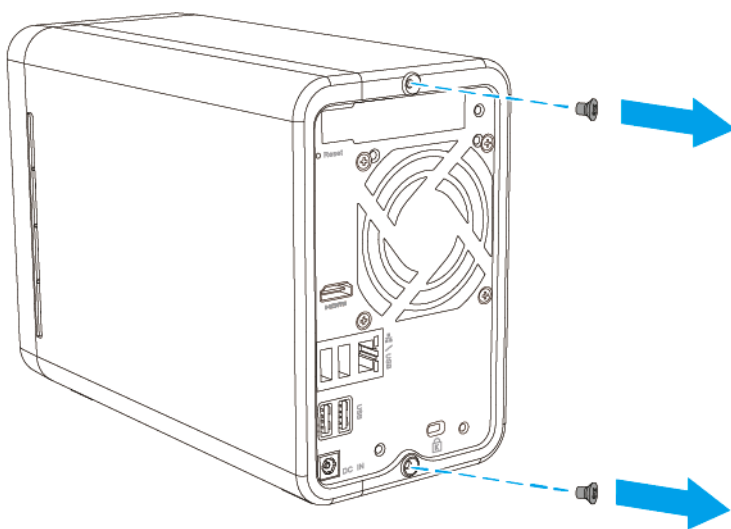


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

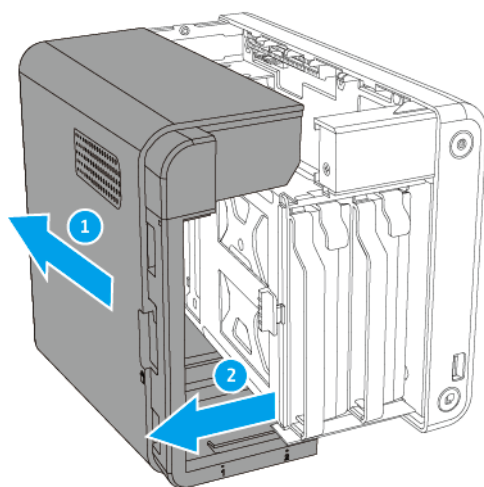
1. 关闭 NAS 电源。
2. 从插座上拔下电源线。
3. 拔掉所有线缆和外接部件。
4. 取下前盖。
 - a. 找到 NAS 左侧的锁紧机构。
 - b. 向下滑动锁扣，解除对前盖的锁定。
 - c. 将前盖向左滑动，然后拉出。



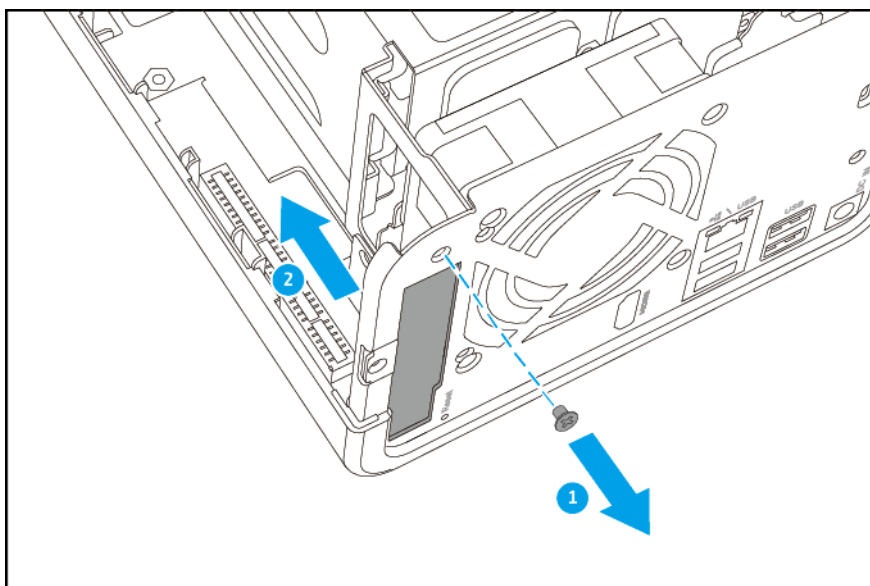
5. 取下外壳盖。
 - a. 卸下用于将外壳盖固定到机箱的螺丝。



- b. 将盖板向后滑动，使其完全脱离机箱。
- c. 将盖板滑到左侧，将其取出。

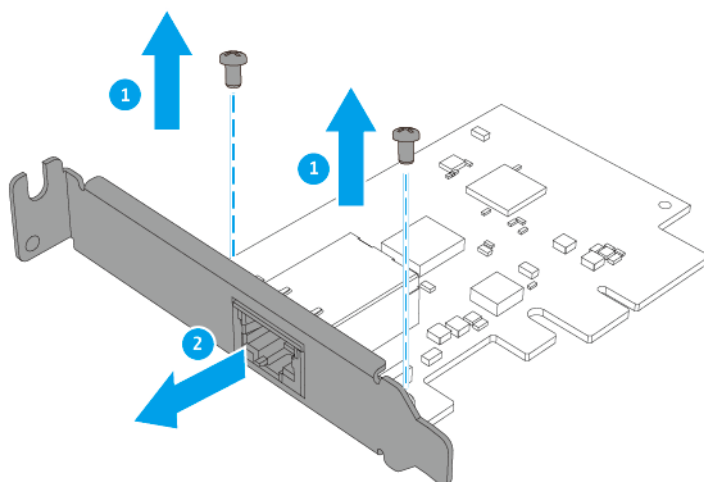


- 6. 将 NAS 右侧朝下放置。
- 7. 取下 PCIe 插槽盖板。
 - a. 取下螺丝。
 - b. 将盖板从插槽中取出。

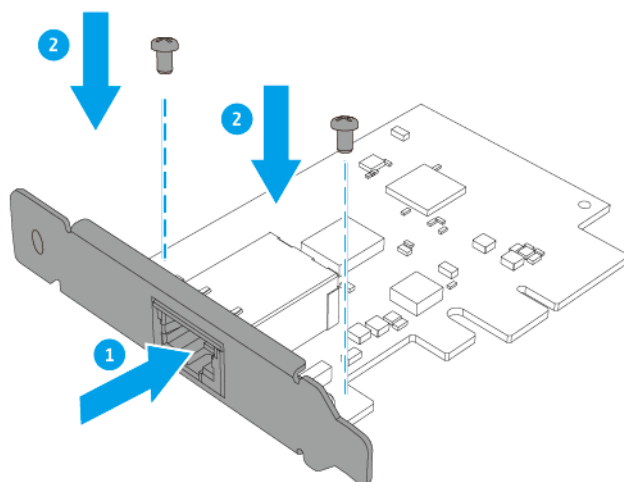


8. 可选: 将 QNAP 半高扁平支架安装到扩展卡上。

- a. 卸下现有支架的所有螺丝。
- b. 小心地从扩展卡取下支架。



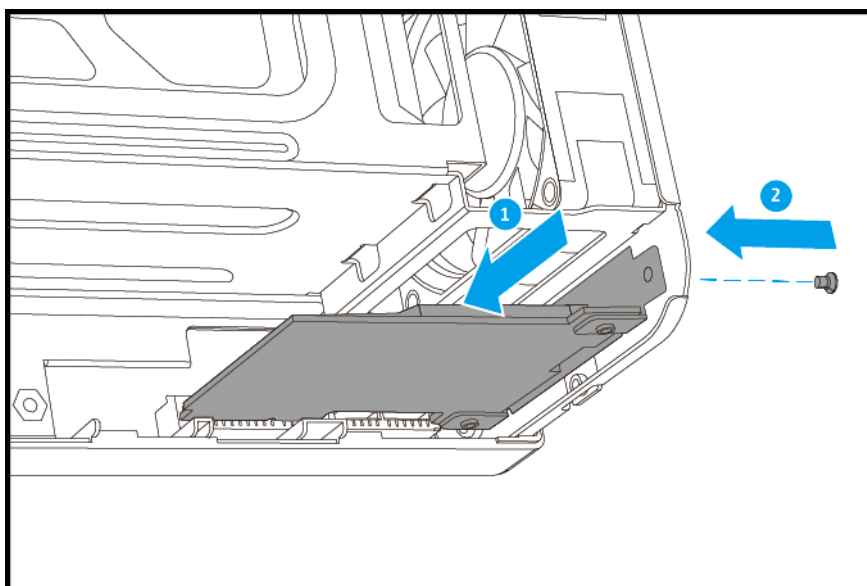
c. 使用相同的螺丝将 QNAP 支架安装到扩展卡上。



d. 确认支架不会移动。

9. 安装扩展卡。

- a. 握住扩展卡边缘。
- b. 将其插入插槽中。
- c. 安装螺丝。

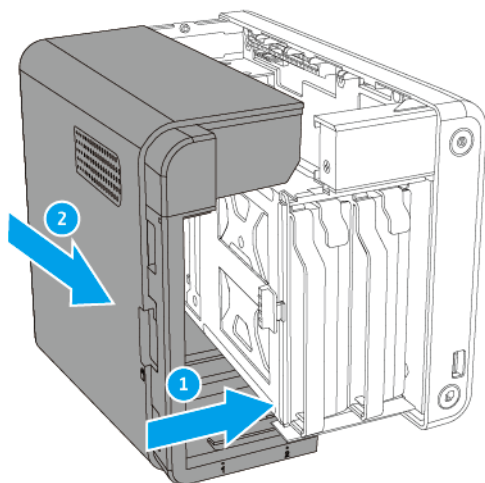


10. 将 NAS 正常直立放置。

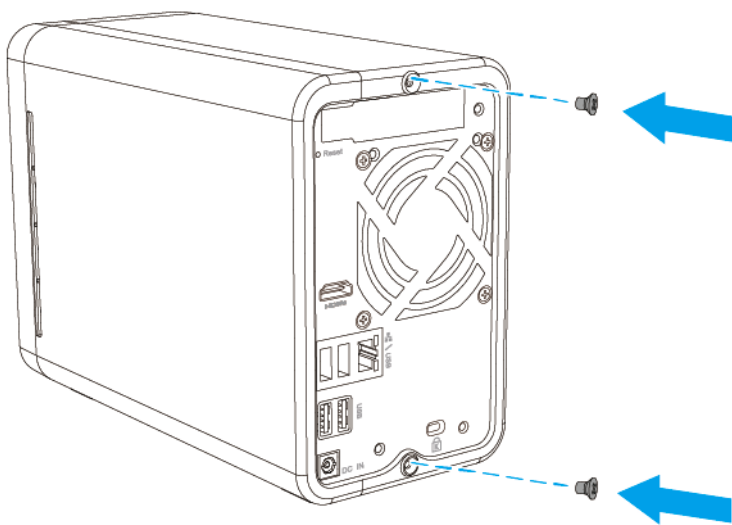
11. 安装外壳盖。

- a. 将盖板向右侧推动，将其固定到机箱。

- b. 向前滑动盖板，将其固定。

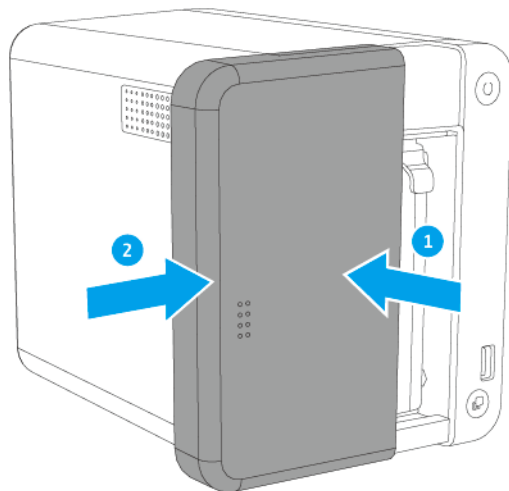


- c. 安装 NAS 背面的螺丝。

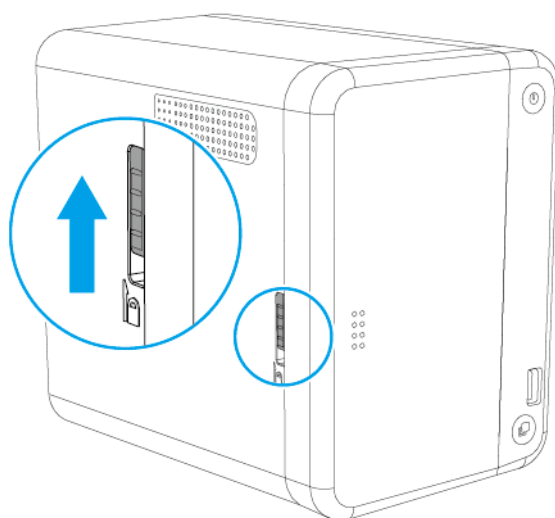


12. 安装前盖。

- a. 将盖板与外壳上的凹槽对齐。
- b. 将盖板滑到右侧。



c. 向上滑动锁扣。



13. 连接所有线缆和外接部件。

14. 启动 NAS 电源。

更换内存模块

TS-251D 有两个内存插槽。您可以通过升级内存模块来增加 NAS 的内存容量。使用两个模块时，只能使用类型 and 容量均相同的 QNAP 模块，以保持系统性能和稳定性。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。

-



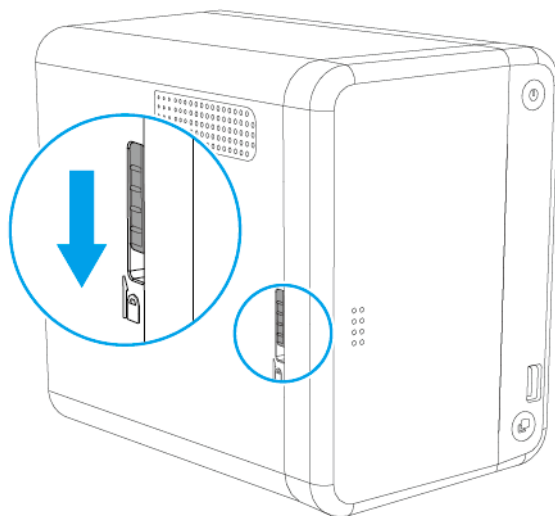
转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

-

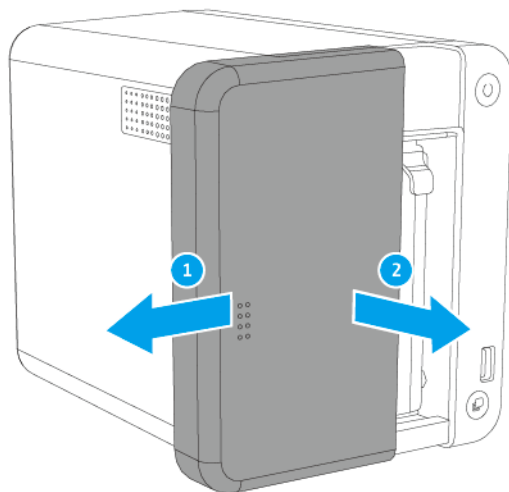


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

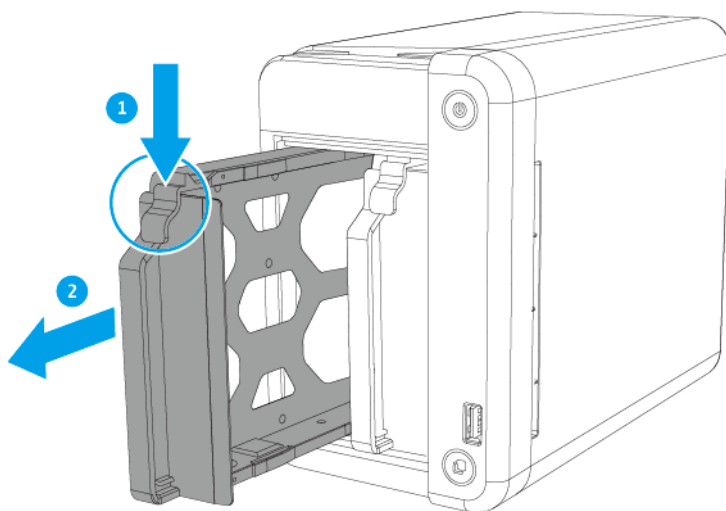
1. 关闭 NAS 电源。
2. 从插座上拔下电源线。
3. 拔掉所有线缆和外接部件。
4. 取下前盖。
 - a. 找到 NAS 左侧的锁紧机构。
 - b. 向下滑动锁扣，解除对前盖的锁定。



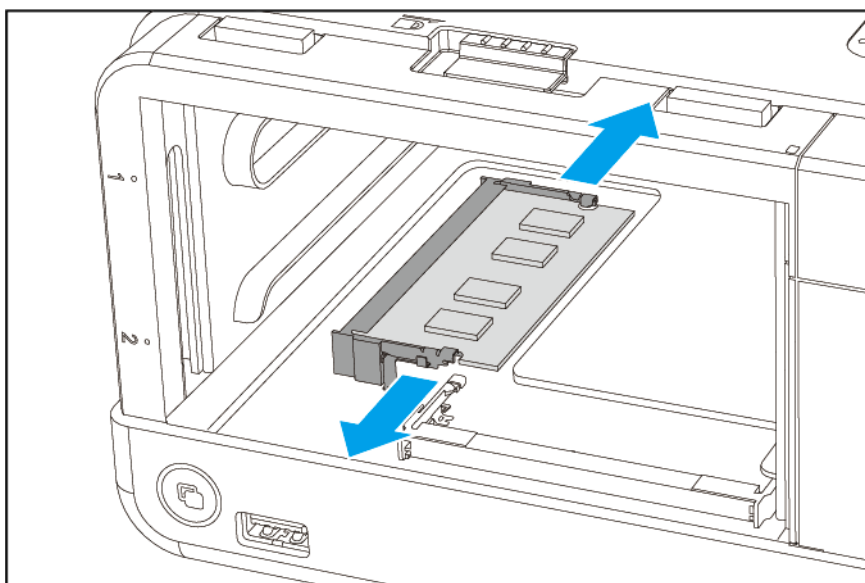
- c. 将前盖向左滑动，然后拉出。



5. 按压门锁的同时拉出硬盘托盘，取下每个托盘。



6. 将 NAS 右侧朝下放置。
7. 可选: 取下现有模块。
 - a. 同时向外推动固定夹以释放模块。



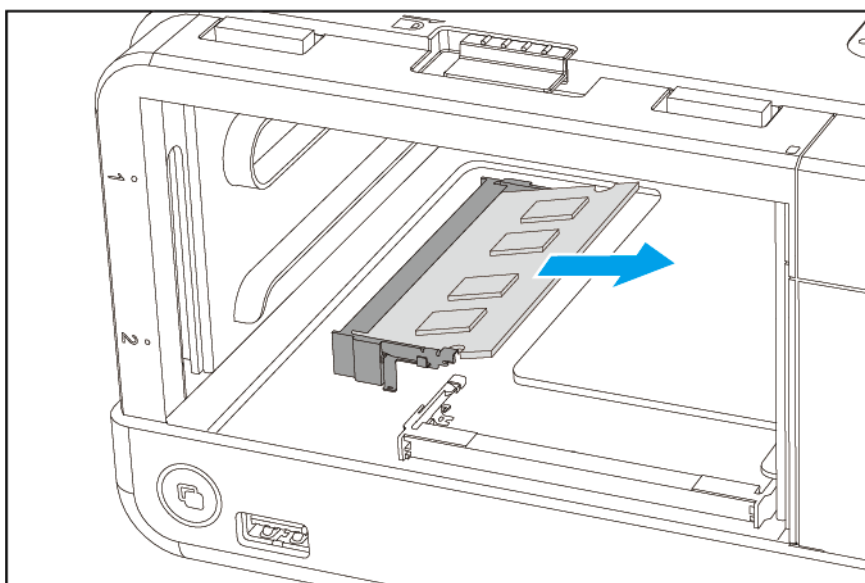
b. 确认模块向上倾斜并已完全脱离插槽。



警告

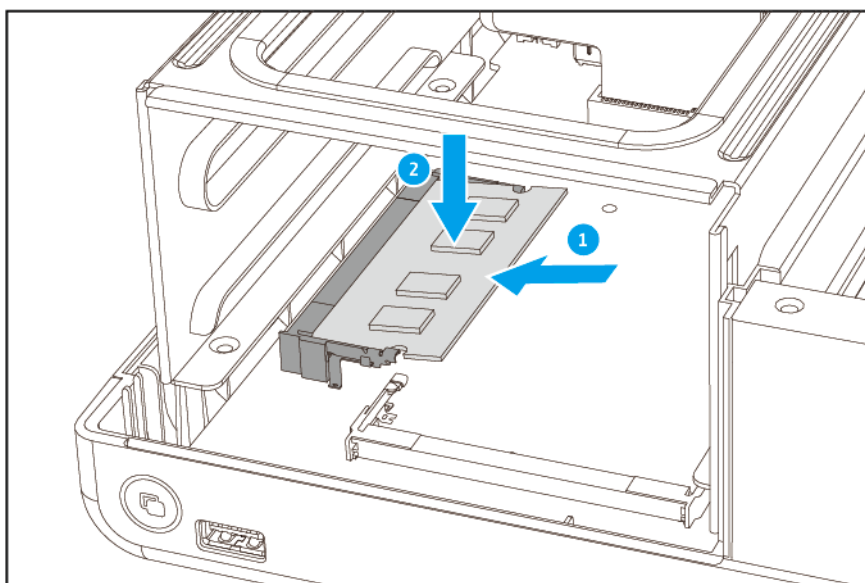
如果尝试在模块尚未完全脱离时将其取出，可能会损坏模块和主板。

8. 握住模块边缘，然后小心地将其从插槽中滑出。

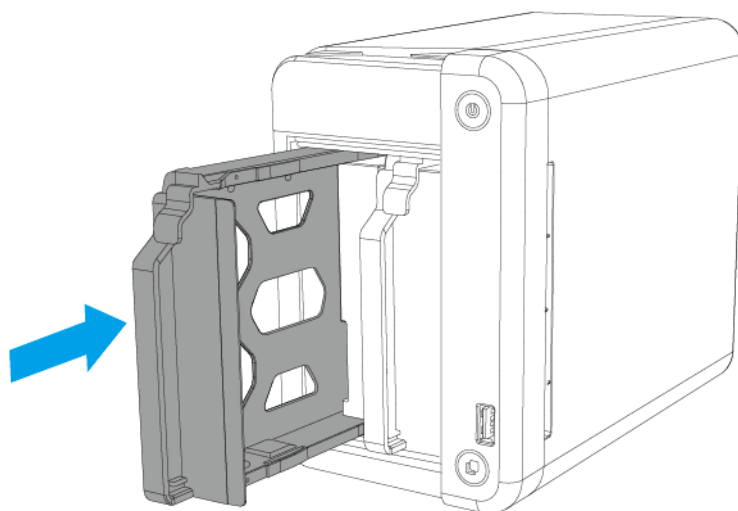


9. 安装新模块。

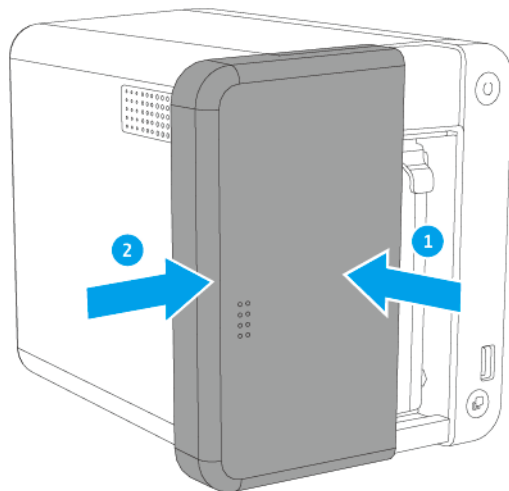
- a. 将凹口与插槽内的凸起对齐。
- b. 将模块插入插槽中。
- c. 确认金属接头已完全插入插槽中。
- d. 小心地向下按压模块，直到固定夹将模块锁定到位。



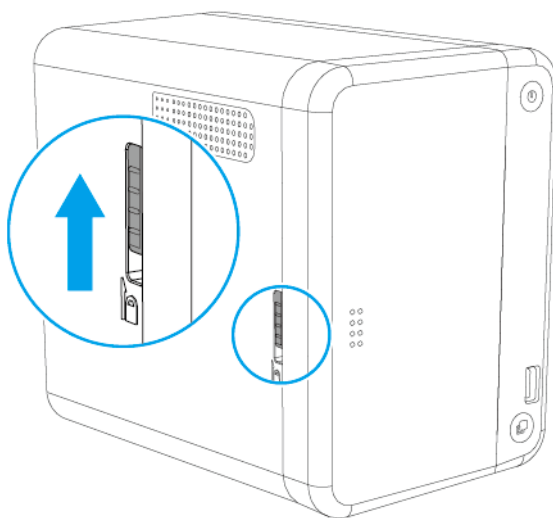
10. 将 NAS 正常直立放置。
11. 将硬盘托盘装回 NAS。



12. 安装前盖。
 - a. 将盖板与外壳上的凹槽对齐。
 - b. 将盖板滑到右侧。



c. 向上滑动锁扣。



13. 连接所有线缆和外接部件。

14. 启动 NAS 电源。

QTS 安装

方法	描述	要求
Qfinder Pro 安装 (推荐)	如果 NAS 已连接到您的局域网，可以执行以下操作： <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。 	<ul style="list-style-type: none"> • 计算机 • 网线 • Qfinder Pro 安装程序
云安装	如果 NAS 已连接到 Internet，可以执行以下操作： <ul style="list-style-type: none"> • 扫描 NAS 上的二维码。 • 指定 Cloud Key。 • 登录您的 myQNAPcloud 帐户。 • 使用 myQNAPcloud Link 远程访问 NAS。 • 完成“智能安装指南”向导中的步骤。 	<ul style="list-style-type: none"> • 计算机或移动设备 • myQNAPcloud 帐户 • CloudKey
本地安装	如果 NAS 支持 HDMI 输出，可以执行以下操作： <ul style="list-style-type: none"> • 将 NAS 连接到所需的硬件。 • 完成“智能安装指南”向导中的步骤。 	<ul style="list-style-type: none"> • 监视器 • HDMI 线缆 • USB 键盘或遥控器（仅部分型号提供）

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。
智能安装指南将在默认 Web 浏览器中打开。
5. 单击启动智能安装指南。
6. 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。

7. 单击下一步。
8. 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。

9. 单击下一步。
10. 选择自动获取 IP 地址(DHCP)。
11. 单击下一步。
12. 选择将用于访问 NAS 上共享文件夹的设备类型。
13. 单击下一步。
14. 检查设置。
15. 单击应用。
此时会出现确认消息。



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。

16. 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 Cloud 安装”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。
- 因安全原因，在您的 NAS 上初始化 myQNAPcloud Link 远程连接服务后，会将其禁用。通过 LAN 连接到 QTS，然后安装 myQNAPcloud Link 可启用此服务。

- 单击下一步。
智能安装指南将在默认 Web 浏览器中打开。
- 单击启动智能安装指南。
- 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。
- 单击下一步。
- 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。

- 单击下一步。
- 选择自动获取 IP 地址(DHCP)。
- 单击下一步。
- 选择将用于访问 NAS 上共享文件夹的设备类型。
- 单击下一步。
- 检查设置。
- 单击应用。
此时会出现确认消息。

**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。

- 单击确认。
QTS 即安装完毕。

使用 HDMI 连接安装 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。

- 将 HDMI 显示器连接到 NAS。
- 将 USB 键盘连接到 NAS 或准备好 QNAP 红外遥控器（仅部分型号提供）。
- 启动 NAS 电源。
此时会出现“智能安装指南”的欢迎屏幕。

4. 选择**启动智能安装指南**。
5. 选择**否，跳过此过程**。
启用多媒体功能后，可以在“存储与快照总管”中配置磁盘后安装多媒体应用程序。
有关在 QTS 上启用多媒体功能的详细信息，请参见《QTS 用户指南》的“系统管理”一节。
6. 选择**稍后配置**。
有关配置磁盘的详细信息，请参见《QTS 用户指南》的“存储与快照总管”一节。
7. 检查设置。
8. 单击**下一步**。
9. 检查设置。
10. 单击**下一步**。
此时会出现**确认**屏幕。

**警告**

单击**下一步**后，将先删除硬盘上的所有数据，然后再安装 QTS。

11. 单击**下一步**。
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。	<p>以下设置将重置为默认值：</p> <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。	<p>恢复默认出厂设置。</p> <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。

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[前面板](#)。

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（读/写）数据时出错。 • 在硬盘上检测到坏扇区。 • 在采用除 RAID 1 外的 RAID 配置时一个硬盘故障。 • 两个硬盘故障。 • 硬件自检发生错误。
	闪烁红色，间隔 0.5 秒	NAS 处于降级模式（RAID 1 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 正在启动。 • NAS 未配置。 • 硬盘未格式化。
	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"> 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。

警告音

时长	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

当 RAID 1 中的一个成员硬盘出现故障时，NAS 支持热插拔硬盘。

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. 将新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 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/磁盘群组	RAID 恢复支持	被移除硬盘的最大数量
单盘	否	不适用
JBOD	是	1
RAID 0	是	1

磁盘/磁盘群组	RAID 恢复支持	被移除硬盘的最大数量
RAID 1	是	1

支持和其他资源

资源	URL
文档	https://docs.qnap.com
服务门户	https://service.qnap.com
下载	https://download.qnap.com
社区论坛	https://forum.qnap.com

6. 术语表

CloudKey

分配给每个 NAS 设备的唯一 8 位数代码

myQNAPcloud Link

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 myQNAPcloud Link

myQNAPcloud ID

用于注册 myQNAPcloud 帐户的电子邮件地址

Qfinder Pro

一种 QNAP 实用工具，可用于查找和访问局域网中的 QNAP NAS 设备

QTS

QNAP NAS 操作系统

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Version 3, 29 June 2007

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2. 本设备必须承受受到的干扰，包括可能导致运行异常的干扰。



注

经测试，本设备符合 FCC 规则第 15 部分中针对 B 类数字设备的限制标准。这些限制标准旨在提供合理的保护，以防止在住宅区安装设备时产生有害干扰。本设备会产生、使用并可发出射频能量，如果不按说明安装和使用，可能会对无线电通信产生有害干扰。但是，并不保证在特定安装中不会产生此类干扰。如果本设备确实对收音机或电视机接收造成有害干扰（可通过打开和关闭本设备来判定），建议用户尝试采取下列一项或多项措施来消除干扰：

- 改变接收天线的方向或位置。
- 增加本设备与接收设备之间的间距。
- 将本设备与接收设备分别接入不同回路的电源插座。
- 请咨询经销商或经验丰富的收音机/电视机技术人员以寻求帮助。



重要

若未经 QNAP Systems, Inc. 批准对本设备进行改动，可能会导致用户失去 FCC 授予的操作本设备的资格。

VCCI 公告



VCCI - B

BSMI 公告



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。