



QNAP

TVS-x72XU

TVS-1672XU-RP

TVS-2472XU-RP

用户指南

内容

1. 前言

关于本指南.....	3
受众.....	3
文档约定.....	3

2. 产品概述

关于 TVS-x72XU.....	4
硬件规格.....	4
包装内容.....	6
组件.....	7
前面板.....	7
后面板.....	7
系统主板.....	9
硬盘编号.....	10
安全信息.....	11
安装要求.....	12
设置 NAS.....	12

3. 安装和配置

硬件安装.....	14
硬盘安装.....	14
安装扩展单元.....	19
热插拔冗余电源单元.....	20
取下扩展卡.....	22
安装扩展卡.....	26
导轨套件.....	31
更换内存模块.....	32
QTS 安装.....	36
使用 Qfinder Pro 安装 QTS.....	37
使用 Cloud Key 安装 QTS.....	38

4. 基本操作

电源按钮.....	41
重置按钮.....	41
LED.....	41
提示音警报.....	43

5. 故障排除

强制 Qfinder Pro 或 myQNAPcloud 定位 NAS.....	44
热插拔故障硬盘.....	44
支持和其他资源.....	44

6. 术语表

CloudKey.....	46
CloudLink.....	46
myQNAPcloud.....	46
myQNAPcloud ID.....	46
Qfinder Pro.....	46
QTS.....	46

7. 声明

有限保修.....	47
免责声明.....	47
BSMI 公告.....	47
CE 声明.....	48
FCC 声明.....	48
GNU Public License.....	48
SJ/T 11364-2006.....	56
VCCI 公告.....	56

1. 前言





关于本指南

本指南提供有关 QNAP TVS-x72XU 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 TVS-x72XU NAS 的基本信息。

关于 TVS-x72XU

TVS-x72XU 是一款企业级系列 NAS，配有 Intel® Core™ i3-8100 处理器。此产品支持不同的磁盘存储配置，可以更好地满足您的虚拟化和数据存储需求。它还特有四个 Long-DIMM 内存插槽，最高可扩展至 64GB 内存、多个扩展卡插槽和各种输入/输出 (I/O) 端口，具有更强的可扩展性和灵活性。

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
TVS-1672XU-RP-I3-8G	Intel®Core™ i3-8100	8 GB	冗余
TVS-2472XU-RP-I5-8G	Intel®Core™ i5-8500	8 GB	冗余

组件	TVS-1672XU-RP	TVS-2472XU-RP
处理器		
CPU	Intel® Core™ i3-8100	Intel® Core™ i5-8500
频率	4 核 3.6 GHz	6 核 3.0 GHz
架构	x86 64 位	
加密引擎	AES-256	
内存		
预安装内存	8 GB RAM: 2 x 4 GB DDR4	
内存插槽	4 x Long-DIMM DDR4	
	 重要 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	64 GB RAM: 4 x 16 GB	
闪存	4 GB (双重引导操作系统保护)	
存储		
硬盘架	16 x 3.5 英寸 SATA 6 Gbps 硬盘架	24 x 3.5 英寸 SATA 6 Gbps 硬盘架

组件	TVS-1672XU-RP	TVS-2472XU-RP
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> 重要 2.5 英寸硬盘托盘仅支持最大高度为 9.5 mm 的硬盘。</p>	
网络		
10 Gb 以太网端口	2 x 10 GbE SFP+ SmartNIC	
千兆位以太网端口	4 x GbE RJ45	
外部 I/O 端口和扩展插槽		
PCIe 插槽	<ul style="list-style-type: none"> • 1 x PCIe 2.0 (x4) • 1 x PCIe 3.0 (x8) • 2 x PCIe 3.0 (x4) <p> 注 PCIe 3.0 插槽 4 预装了双端口 10 GbE SFP+ 网络扩展卡。</p>	<ul style="list-style-type: none"> • 1 x PCIe 3.0 (x8) • 1 x PCIe 3.0 (x4) • 3 x PCIe 2.0 (x4) <p> 注 PCIe 2.0 插槽 5 预装了双端口 10 GbE SFP+ 网络扩展卡。</p>
	<p> 提示 有关兼容扩展卡的列表，请转到 https://www.qnap.com/compatibility。</p>	
USB 端口	<ul style="list-style-type: none"> • 2 x USB 3.1 Gen2 (10Gbps) 5V/3A C 型 • 4 x USB 3.1 Gen2 (10Gbps) 5V/1A A 型 	
HDMI 端口	1 x HDMI 2.0 (60 Hz 时分辨率最高 3840 x 2160)	
接口		
按钮	<ul style="list-style-type: none"> • 电源 • 重置 	
尺寸		
外形规格	3U 机架式	4U 机架式
尺寸 (高 x 宽 x 深)	130 x 481 x 573.5 mm (5.12 x 18.94 x 22.56 英寸)	176.15 x 481.04 x 672.02 mm (6.94 x 18.94 x 26.46 英寸)
净重	15.35 kg (33.84 磅)	20.67 kg (45.57 磅)
其他		
导轨兼容性	RAIL-A03-57	RAIL-A02-90
	<p> 注</p> <ul style="list-style-type: none"> • 导轨套件未随 NAS 提供，必须单独购买。有关详细信息，请联系授权经销商或转到 http://shop.qnap.com。 • 有关导轨套件安装的信息，可在导轨套件包装随附的安装指南中找到。 	

组件	TVS-1672XU-RP	TVS-2472XU-RP
电源单元	2 x 500W, 100-240V AC, 50/60Hz	2 x 800W, 100-240V AC, 50/60Hz
	 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	49.7 db(A)	36.3 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：4 x 92 mm, 12V DC	
	 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) 	

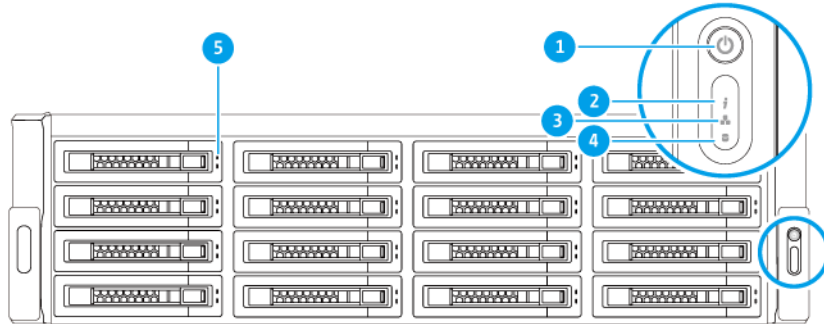
**提示**

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
TVS-x72XU NAS	1
电源线	<ul style="list-style-type: none"> TVS-1672XU-RP: 2 TVS-2472XU-RP: 2
以太网线	2
适用于 2.5 英寸硬盘的螺丝	TVS-1672XU-RP: 64 TVS-2472XU-RP: 96
适用于 3.5 英寸硬盘的螺丝	TVS-1672XU-RP: 64 TVS-2472XU-RP: 96
快速安装指南 (QIG)	1

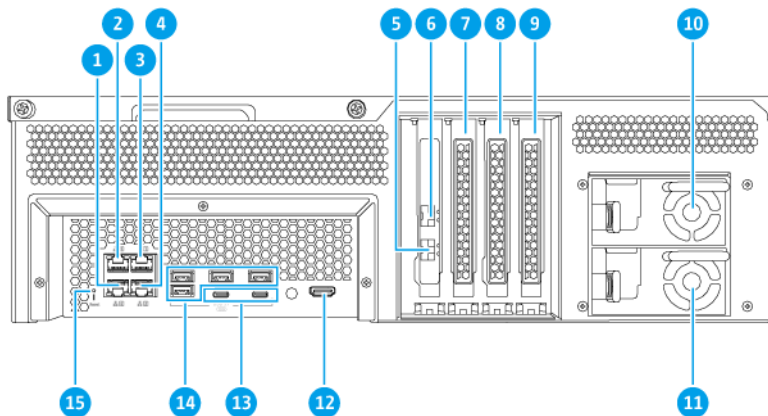
组件 前面板



TVS-1672XU-RP、TVS-2472XU-RP

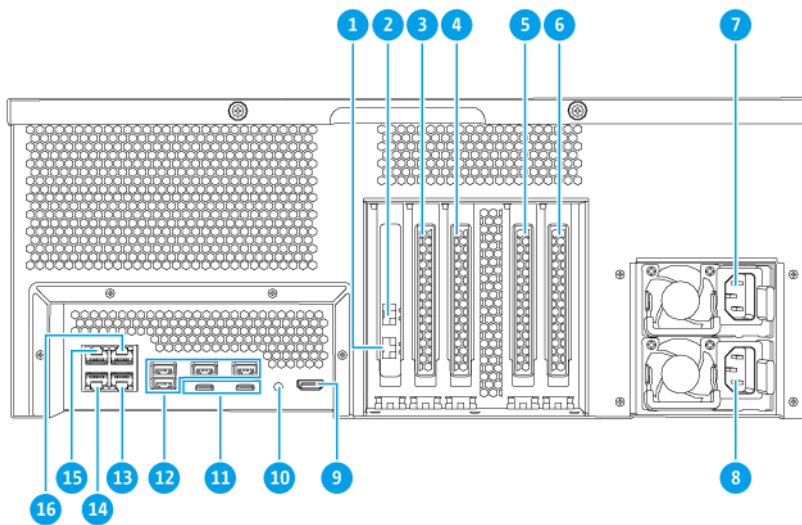
编号	组件	编号	组件
1	电源按钮	4	扩展单元 LED
2	状态 LED	5	硬盘 LED
3	LAN LED	-	-

后面板



TVS-1672XU-RP

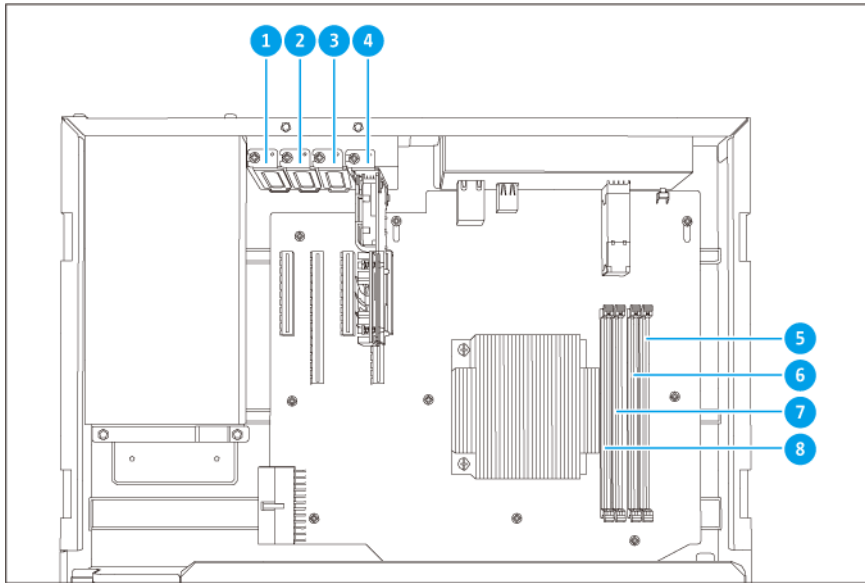
编号	组件	编号	组件
1	以太网端口 4 (GbE RJ45)	9	PCIe 2.0 插槽 1 (x4)
2	以太网端口 3 (GbE RJ45)	10	电源单元 1
3	以太网端口 1 (GbE RJ45)	11	电源单元 2
4	以太网端口 2 (GbE RJ45)	12	HDMI 端口
5	以太网端口 6 (10 GbE SFP+)	13	USB 3.1 Gen 2 C 型端口
6	以太网端口 5 (10 GbE SFP+)	14	USB 3.1 Gen 2 A 型端口
7	PCIe 3.0 插槽 3 (x4)	15	重置按钮
8	PCIe 3.0 插槽 2 (x8)	-	-



TVS-2472XU-RP

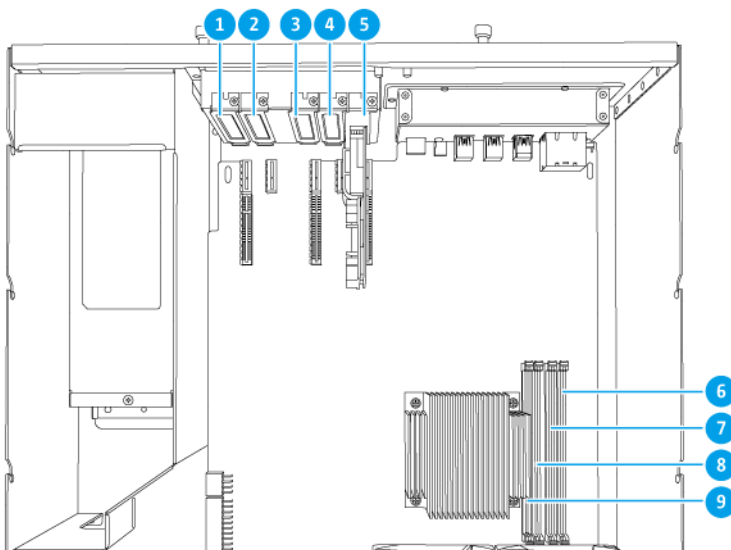
编号	组件	编号	组件
1	以太网端口 6 (10 GbE SFP+)	9	HDMI 端口
2	以太网端口 5 (10 GbE SFP+)	10	重置按钮
3	PCIe 3.0 插槽 4 (x8)	11	USB 3.1 Gen 2 C 型端口
4	PCIe 2.0 插槽 3 (x4)	12	USB 3.1 Gen 2 A 型端口
5	PCIe 3.0 插槽 2 (x4)	13	以太网端口 2 (GbE RJ45)
6	PCIe 2.0 插槽 1 (x4)	14	以太网端口 4 (GbE RJ45)
7	电源单元 1	15	以太网端口 3 (GbE RJ45)
8	电源单元 2	16	以太网端口 1 (GbE RJ45)

系统主板




TVS-1672XU-RP

编号	组件	编号	组件
1	PCIe 2.0 插槽 1 (x4)	5	内存插槽 1
2	PCIe 3.0 插槽 2 (x8)	6	内存插槽 2
3	PCIe 3.0 插槽 3 (x4)	7	内存插槽 3
4	PCIe 3.0 插槽 4 (x4)	8	内存插槽 4
 注 此 PCIe 插槽预装了双端口 10 GbE SFP+ 网络扩展卡。			

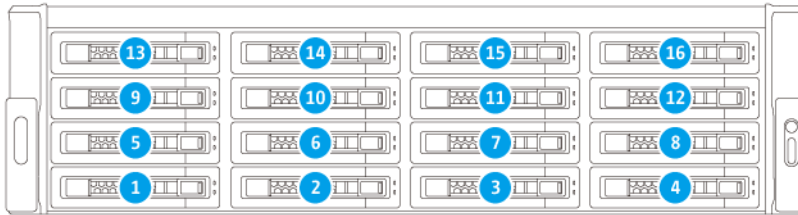


TVS-2472XU-RP

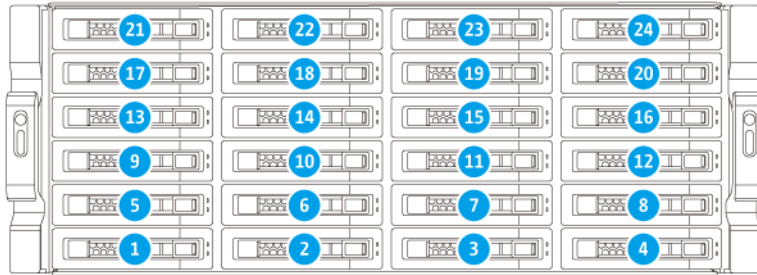
编号	组件	编号	组件
1	PCIe 2.0 插槽 1 (x4)	6	内存插槽 1
2	PCIe 3.0 插槽 2 (x4)	7	内存插槽 2
3	PCIe 2.0 插槽 3 (x4)	8	内存插槽 3
4	PCIe 3.0 插槽 4 (x8)	9	内存插槽 4
5	PCIe 2.0 插槽 5 (x4)	-	-

 **注**
此 PCIe 插槽预装了双端口 10 GbE SFP+ 网络扩展卡。

硬盘编号



TVS-1672XU-RP



TVS-2472XU-RP

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
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"> • 1 号或 2 号十字螺丝刀 • 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

TVS-x72XU 兼容 3.5 英寸和 2.5 英寸硬盘以及 2.5 英寸固态硬盘。

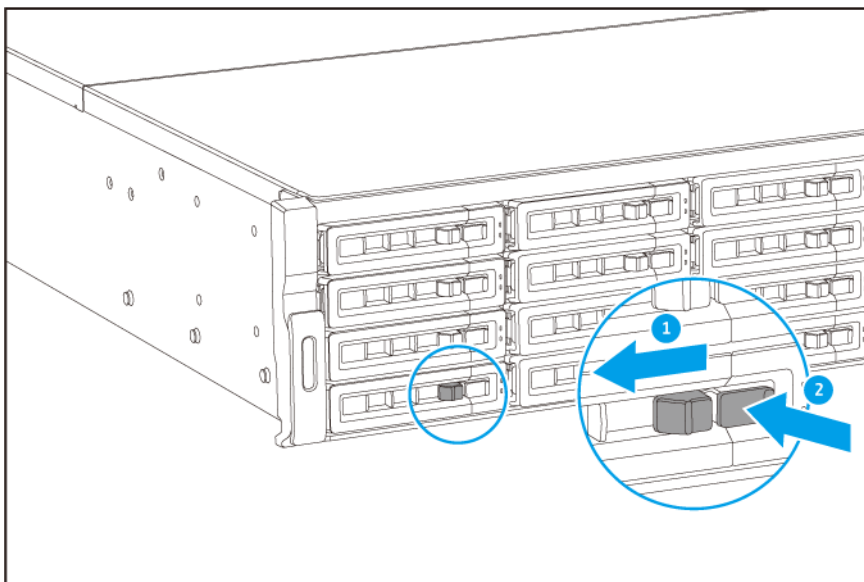
在 3.5 英寸托盘上安装 3.5 英寸硬盘



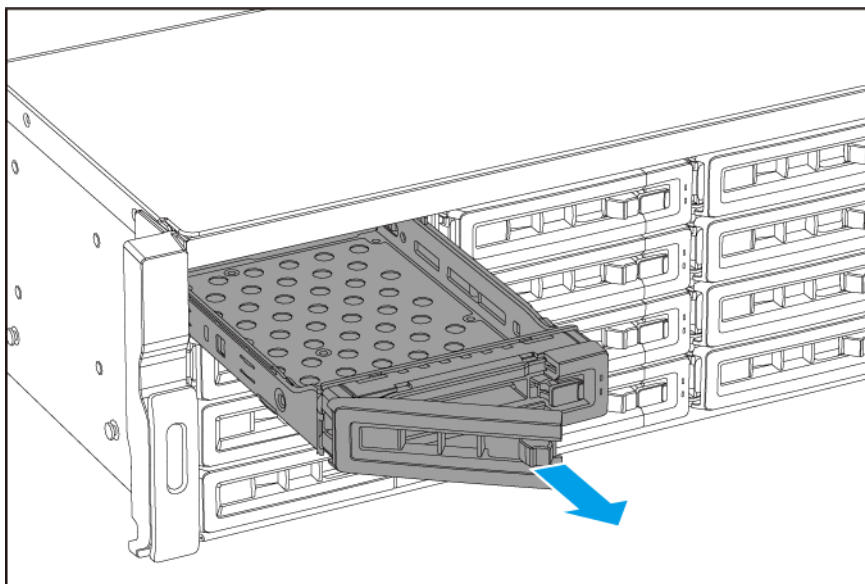
警告

- 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. 找到锁。
 - b. 将锁滑到左侧。

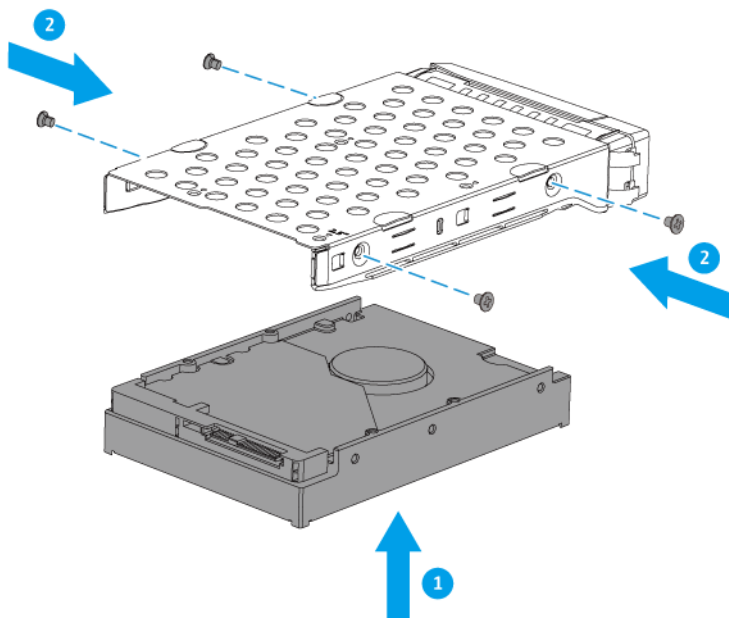


- c. 按下灰色按钮以松开手柄。
- d. 拉出托盘。



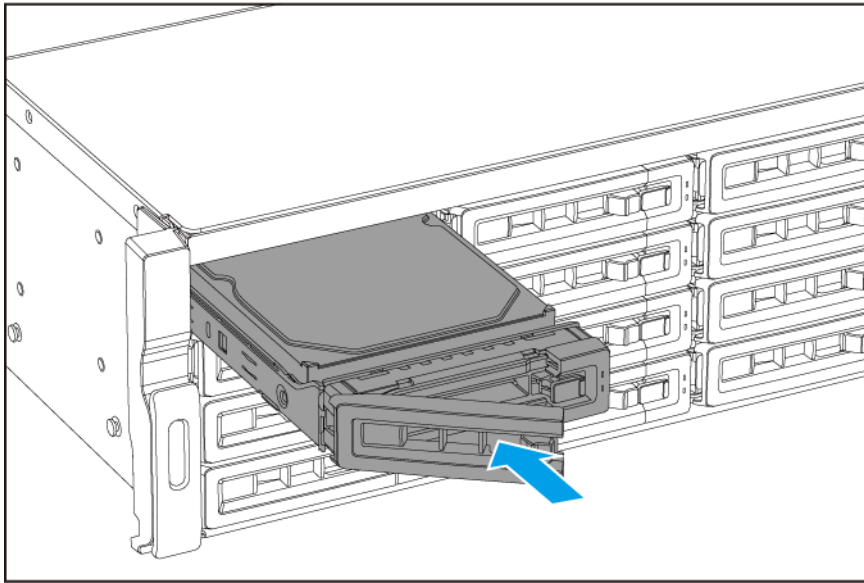
3. 将硬盘安装到托盘上。

- a. 将硬盘放在托盘上，使硬盘两侧的孔与托盘两侧的孔对齐。
- b. 装上螺丝，将硬盘锁定在托盘上。

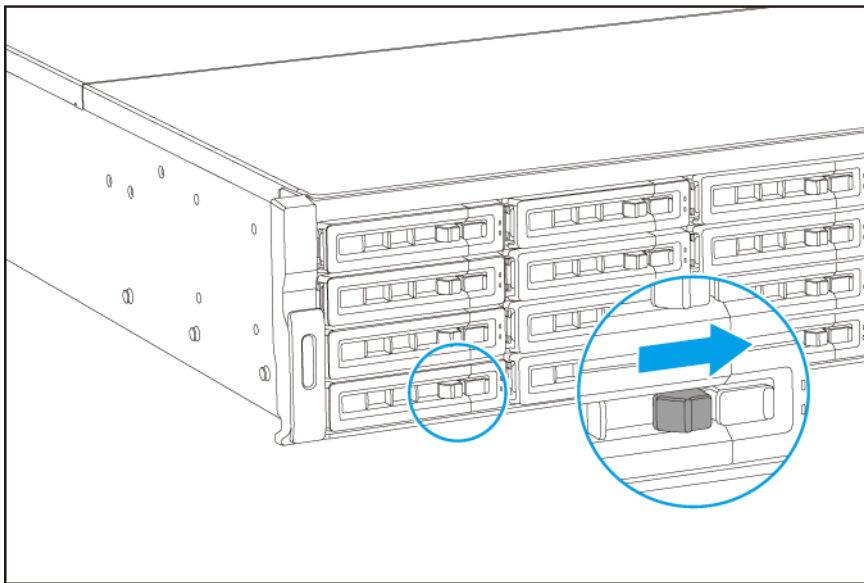


4. 将托盘装入硬盘架。

- a. 将托盘插入硬盘架。
- b. 推动手柄。



c. 将锁滑到右侧。



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

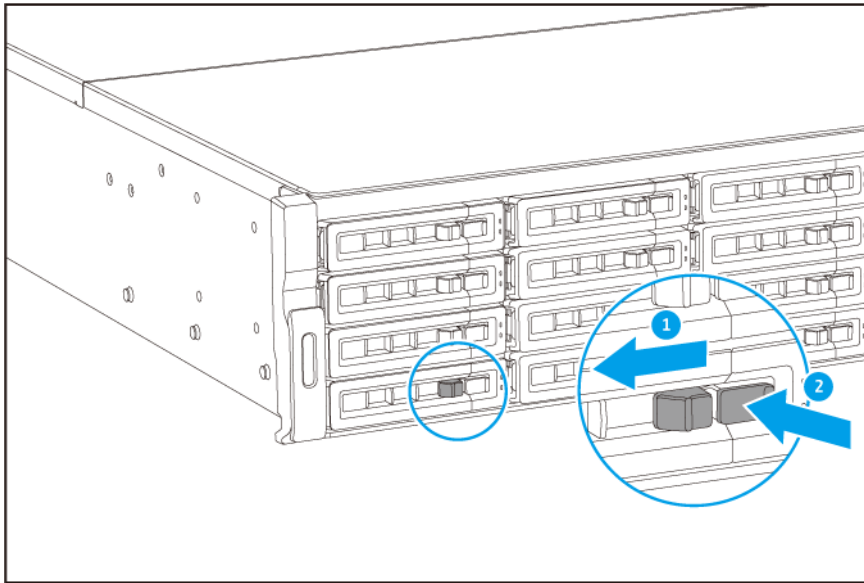


警告

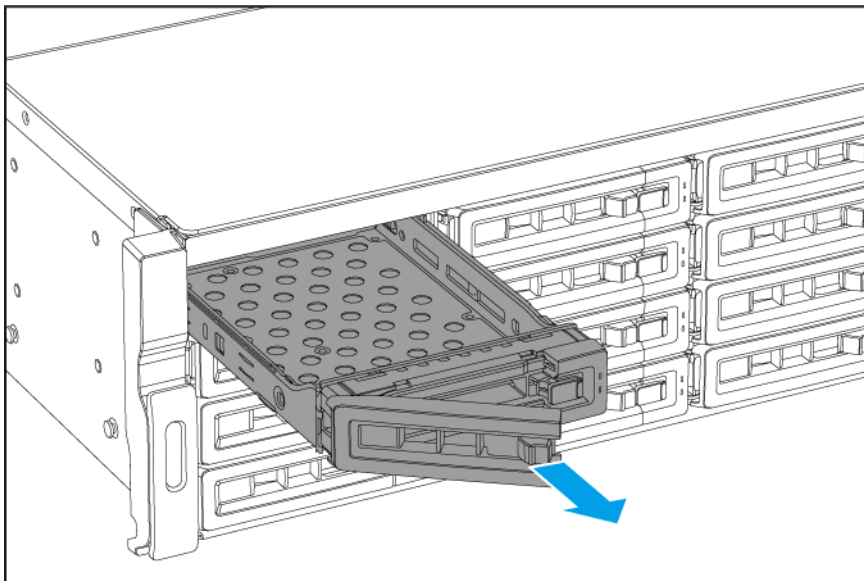
- 安装硬盘将删除硬盘上的所有数据。
- 请执行静电放电 (ESD) 规程，以避免组件损坏。

1. 关闭 NAS 电源。
2. 取下硬盘托盘。

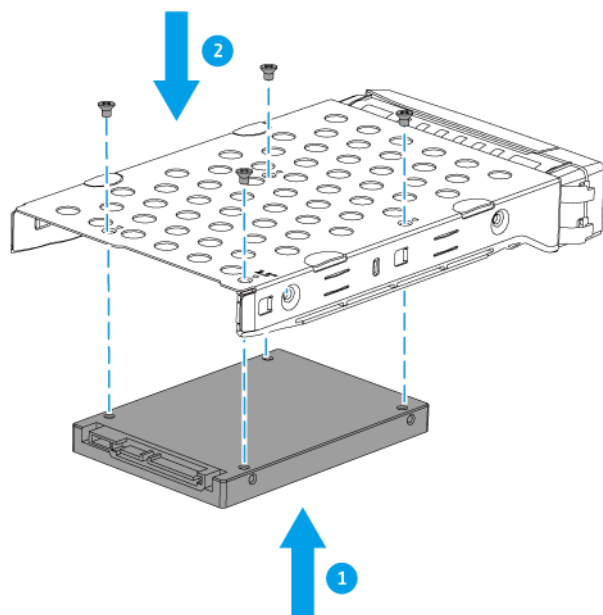
- a. 找到锁。
- b. 将锁滑到左侧。



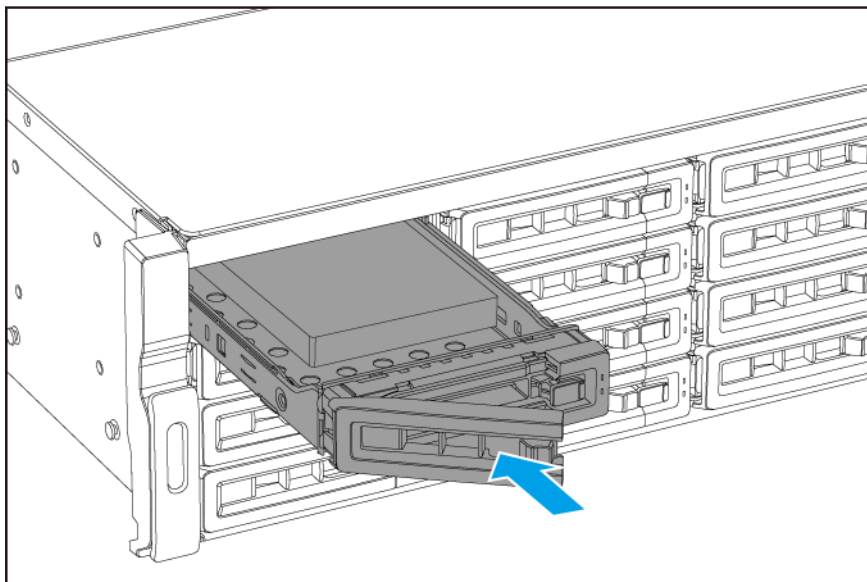
- c. 按下灰色按钮以松开手柄。
- d. 拉出托盘。



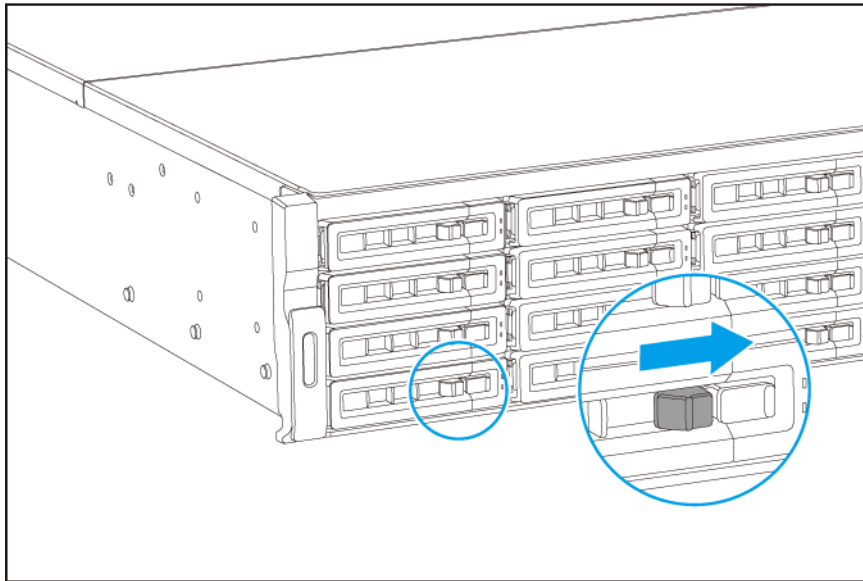
3. 将硬盘安装到托盘上。
 - a. 将硬盘放在托盘上，使硬盘两侧的孔与托盘两侧的孔对齐。
 - b. 装上螺丝，将硬盘锁定在托盘上。



4. 将托盘装入硬盘架。
 - a. 将托盘插入硬盘架。
 - b. 推动手柄。



- c. 将锁滑到右侧。



5. 启动 NAS 电源。

安装扩展单元

TVS-x72XU 支持 SAS 扩展单元。

类型	描述	所需配件
SAS	<ul style="list-style-type: none"> 使用 SAS 12 Gbps 接口 最多支持八个扩展单元 支持 SAS/SATA HDD/SSD 	<ul style="list-style-type: none"> SAS-12G2E 存储扩展卡 mini-SAS SFF-8644 线缆 RAIL-A03-57 导轨套件

连接 SAS 扩展单元

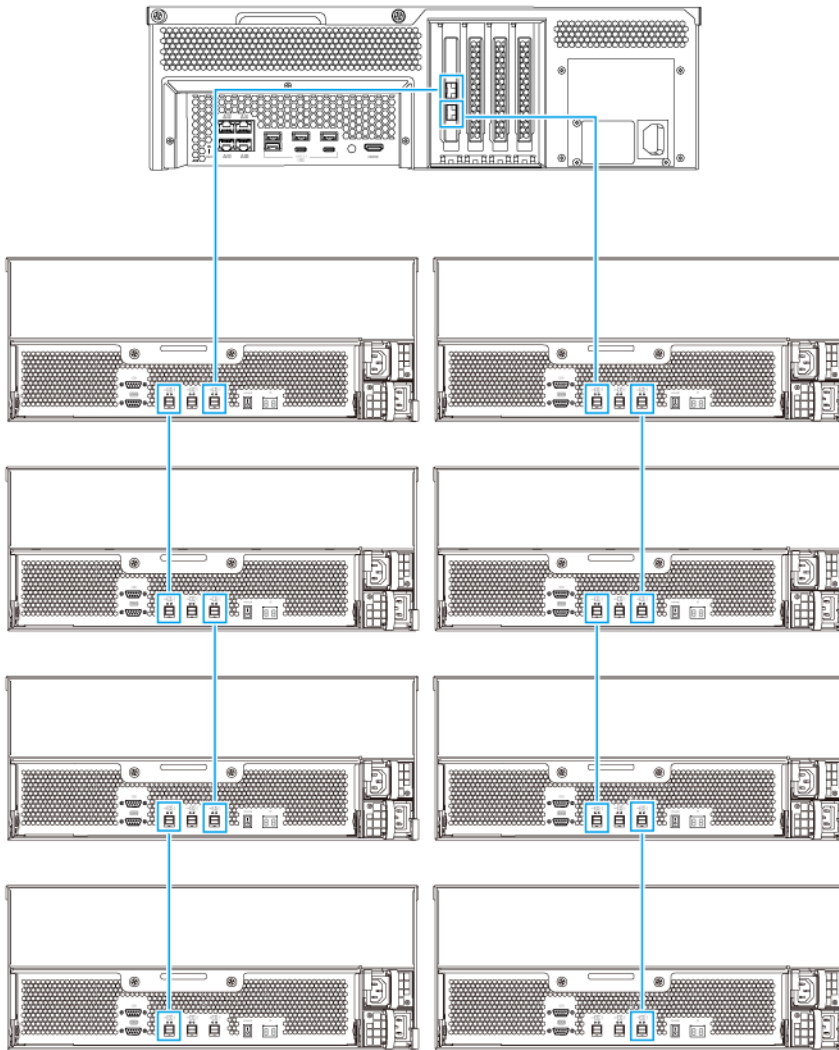
TVS-x72XU 最多支持八个 SAS 扩展单元，兼容以下型号：

- REXP-1210U-RP
- REXP-1220U-RP
- REXP-1610U-RP
- REXP-1620U-RP

要使用 SAS 扩展卡，必须在 NAS 上安装 SAS-12G2E 存储扩展卡，然后使用 mini-SAS SFF-8644 线缆连接扩展单元。您可以从 QNAP 或授权经销商处购买存储扩展配件。

有关详细信息，请转到 <https://shop.qnap.com/>。

1. 在 PCIe 插槽上安装存储扩展卡。
有关详细信息，请参见 [安装扩展卡](#)
2. 按以下拓扑将扩展单元连接到 NAS。



3. 为扩展单元接通电源。
4. 确认 NAS 能够识别扩展单元。
 - a. 以管理员身份登录 QTS。
 - b. 转到主菜单 > 存储与快照总管 > 概述 > 系统。
 - c. 确认扩展单元已列出。

热插拔冗余电源单元

配有冗余电源单元 (PSU) 的 NAS 设备支持热插拔。

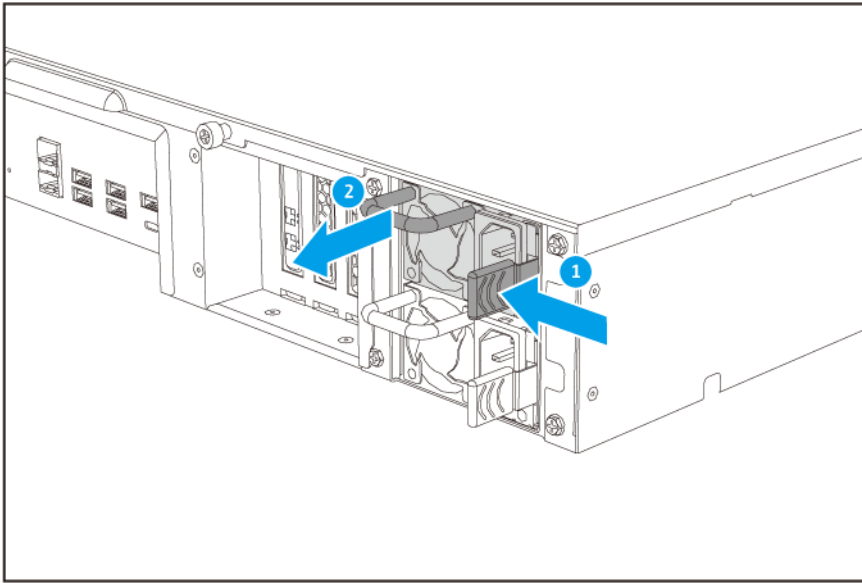


警告

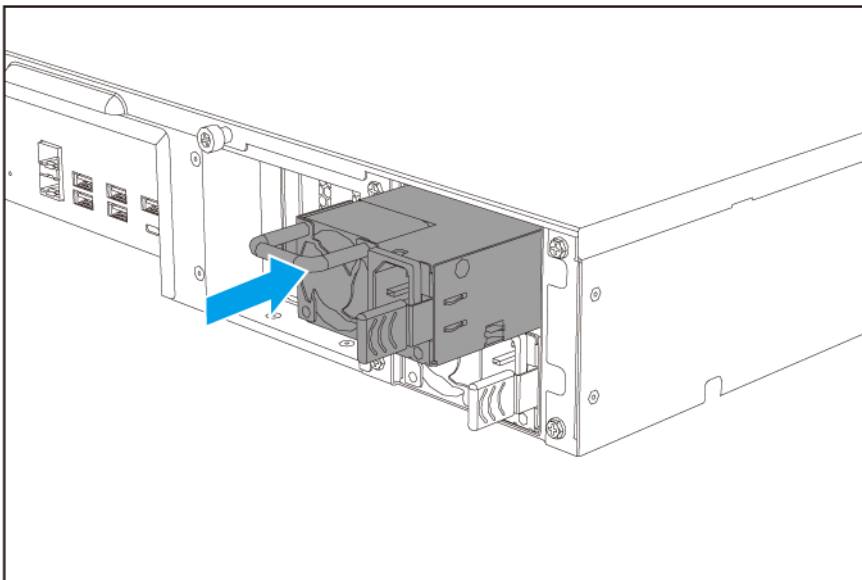


NAS 可能有一条或多条冗余电源单元 (PSU) 线。为避免受到严重伤害，安装或更换系统组件前，必须由经培训的维修技师拔下所有 PSU 线。

1. 关闭 NAS 电源。
2. 从插座和要更换的 PSU 上拔下电源线。
3. 向手柄方向紧按门锁并拉出 PSU。



4. 插入新 PSU。



5. 将电源线连接到 PSU 和插座。

6. 启动 NAS 电源。
7. 启用 PSU 故障警报。
 - a. 以管理员身份登录 QTS。
 - b. 转到**控制台 > 系统 > 硬件 > 一般设置**。
 - c. 选择**启用冗余电源模式**。
 - d. 单击**全部应用**。

取下扩展卡

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。



注

对于 TVS-1672XU-RP，PCIe 3.0 插槽 4 预装了双端口 10 GbE SFP+ 网络扩展卡。
对于 TVS-2472XU-RP，PCIe 3.0 插槽 5 预装了双端口 10 GbE SFP+ 网络扩展卡。



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。

•



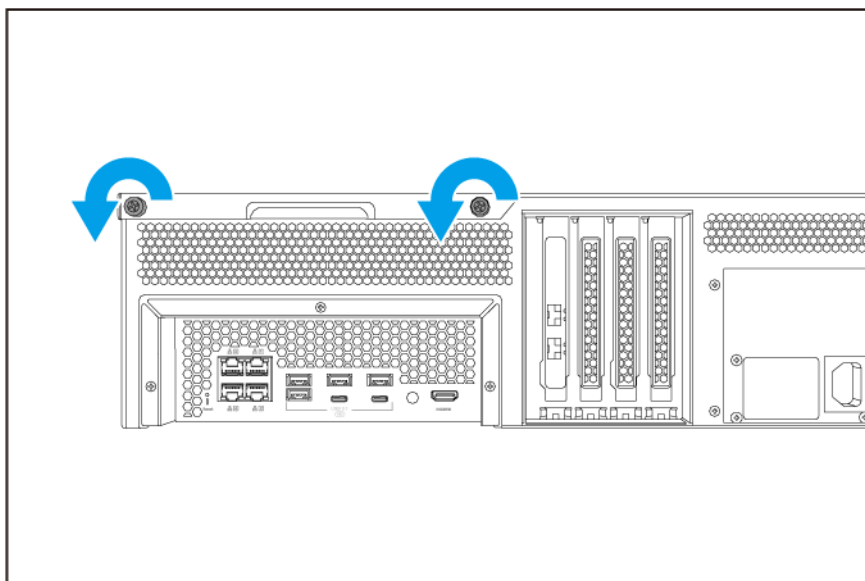
转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

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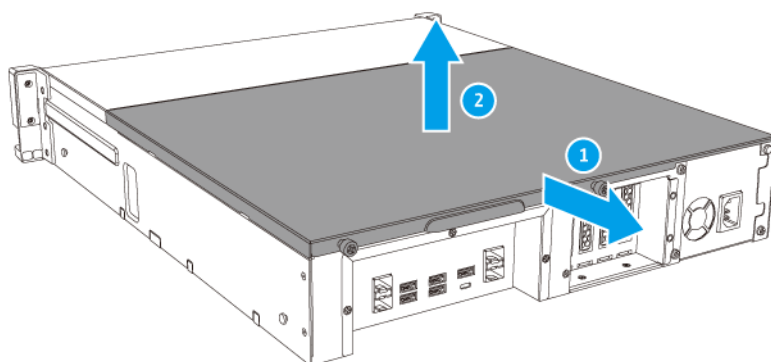


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

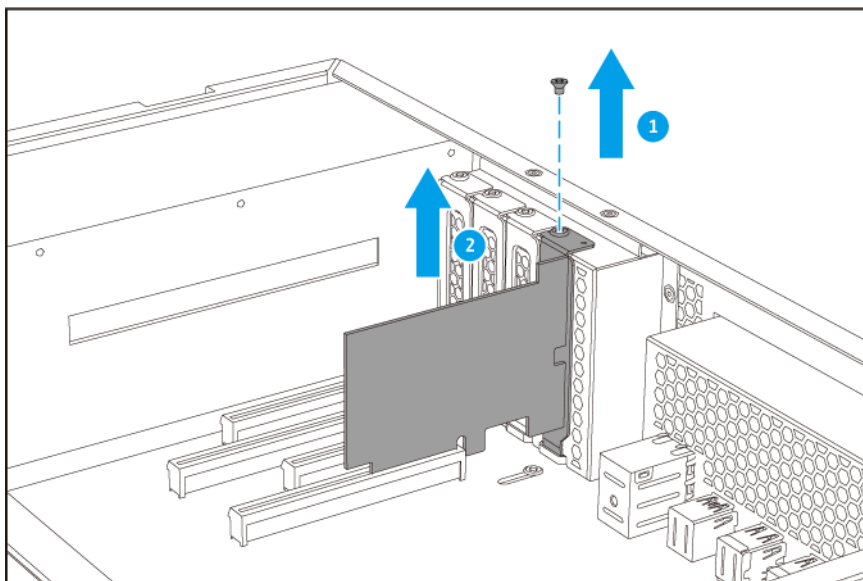
1. 关闭 NAS 电源。
2. 从插座上拔下电源线。
3. 拔掉所有线缆和外接部件。
4. 取下顶盖。
 - a. 松开顶盖后面的两个螺丝。



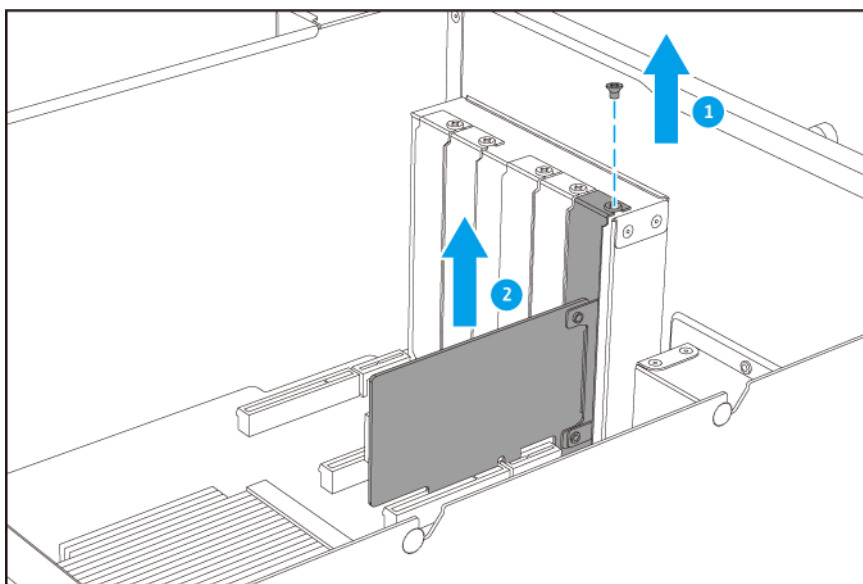
- b. 按住手柄将顶盖向后滑动。
- c. 将顶盖提起。



5. 取下现有扩展卡。
 - a. 取下将 PCIe 支架固定到机箱的螺丝。
 - b. 握住扩展卡边缘，然后小心地将其从插槽中拔出。

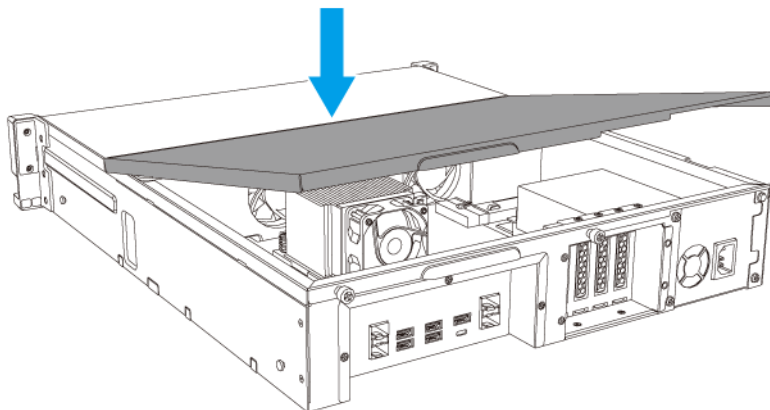


TVS-1672XU-RP

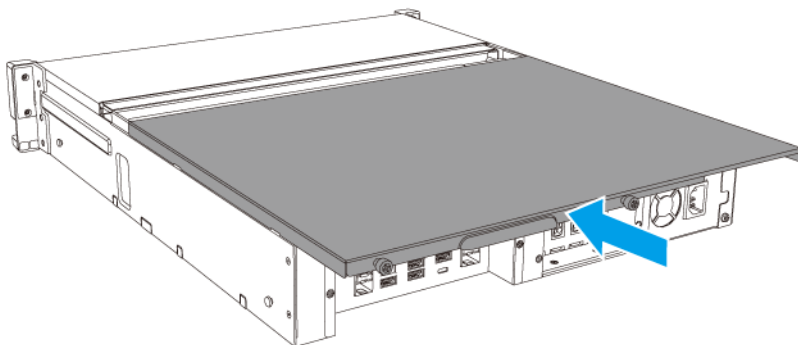


TVS-2472XU-RP

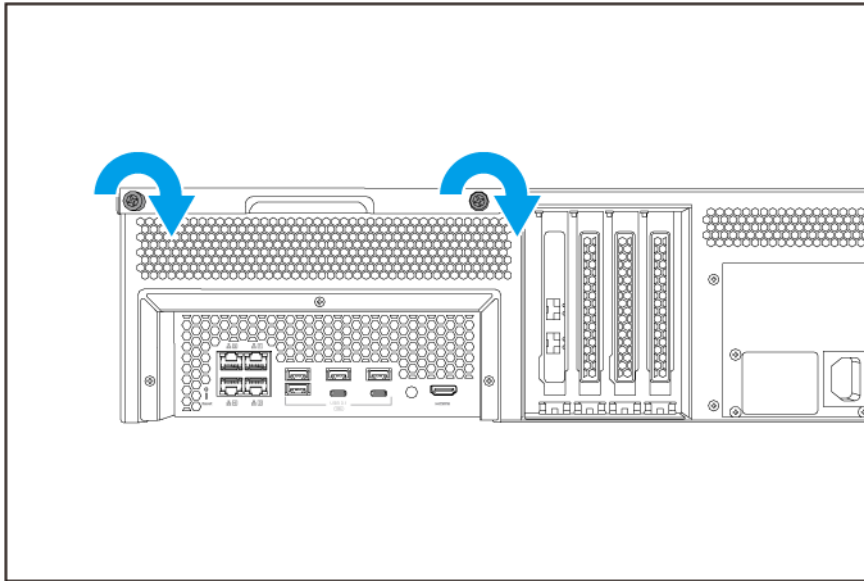
6. 可选: 安装新的扩展卡。有关详细信息, 请参见[安装扩展卡](#)。
7. 安装顶盖。
 - a. 将顶盖放在 NAS 上。



b. 将顶盖向前滑动。



c. 拧紧螺丝。



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。

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。



注

对于 TVS-1672XU-RP，PCIe 3.0 插槽 4 预装了双端口 10 GbE SFP+ 网络扩展卡。
对于 TVS-2472XU-RP，PCIe 3.0 插槽 5 预装了双端口 10 GbE SFP+ 网络扩展卡。



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。



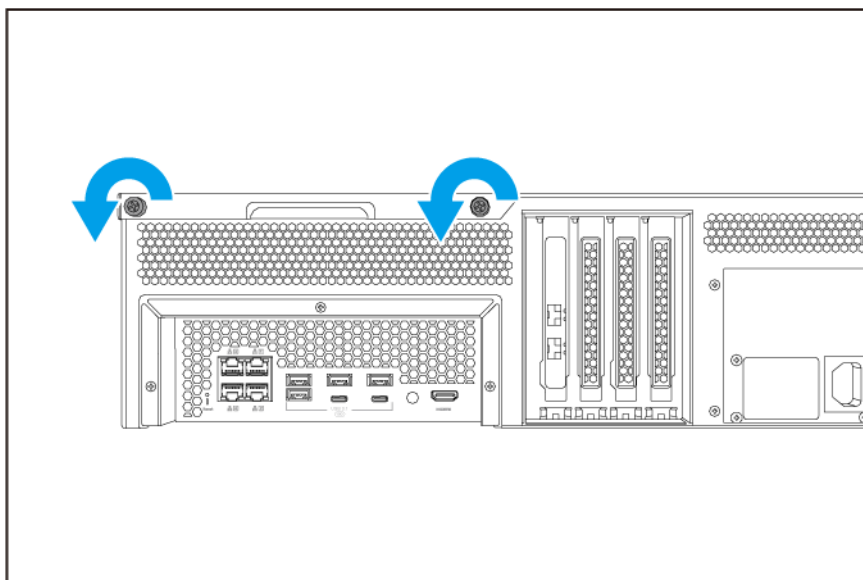
转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。



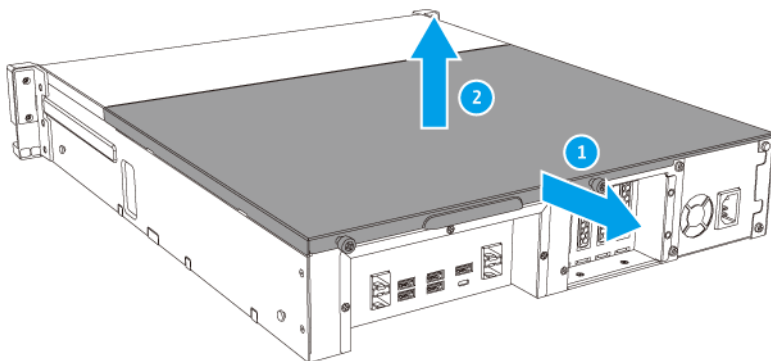
其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

1. 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。

- 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. 取下顶盖。
 - a. 松开顶盖后面的两个螺丝。

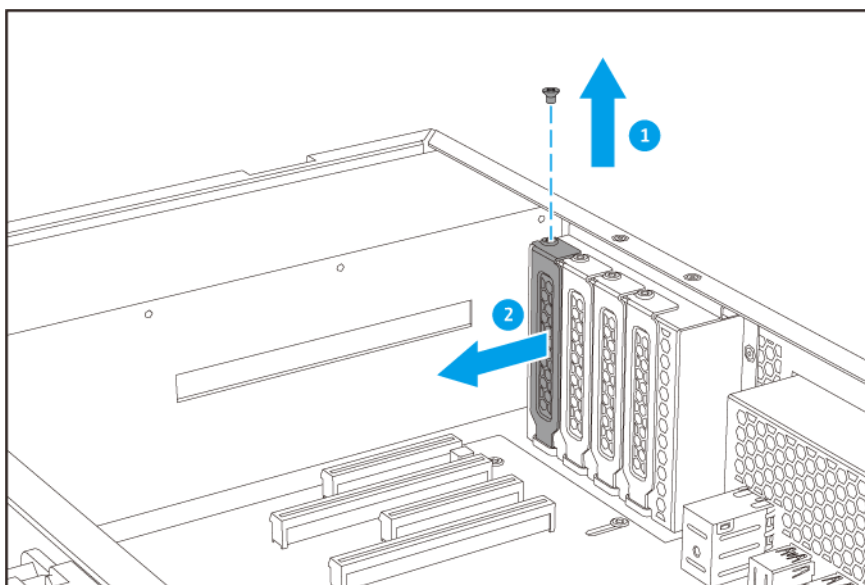


- b. 按住手柄将顶盖向后滑动。
- c. 将顶盖提起。



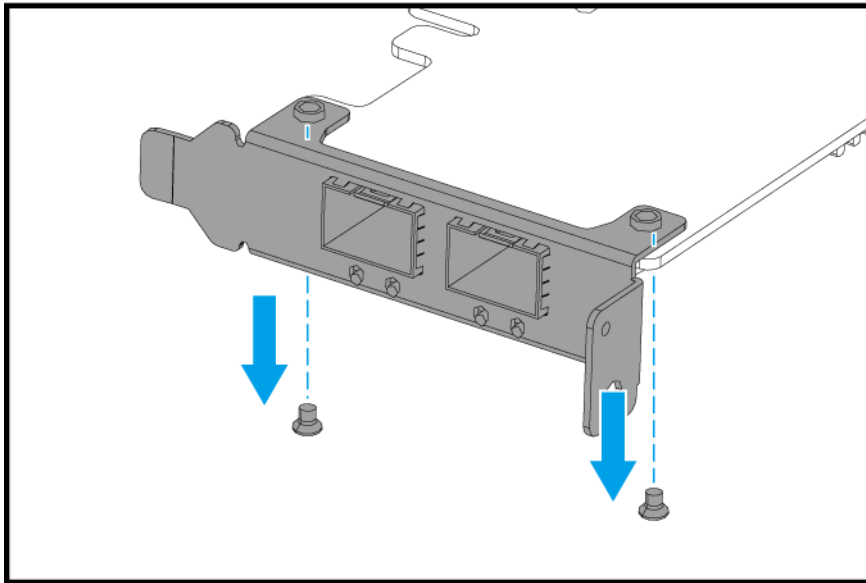
6. 取下 PCIe 盖板。

- a. 取下用于将盖板固定到支架的螺丝。
- b. 将盖板从插槽中拉出。

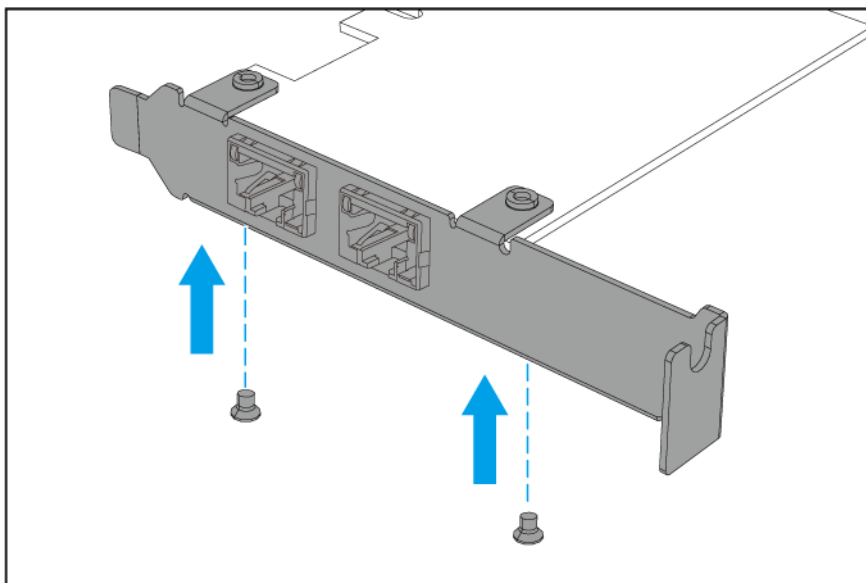


7. 可选: 将 QNAP 支架安装到扩展卡上。

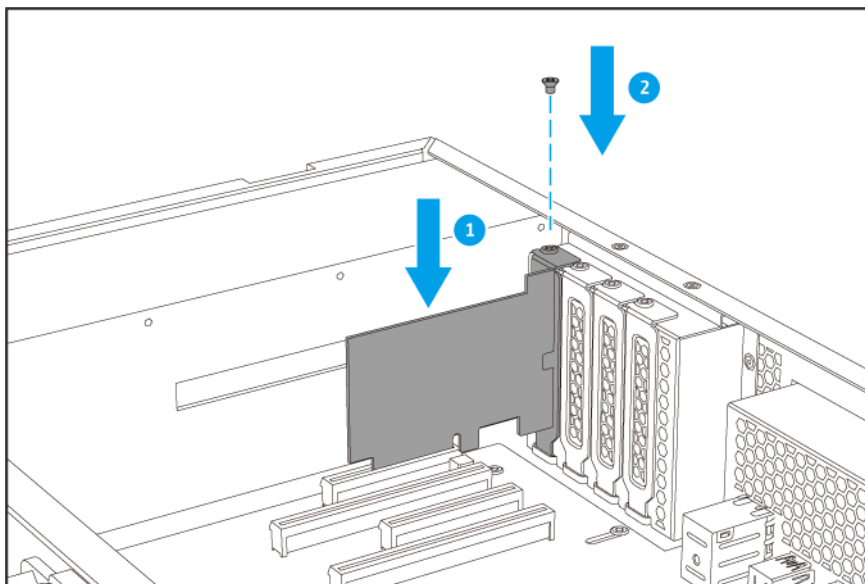
- a. 卸下现有支架的所有螺丝。



- 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。

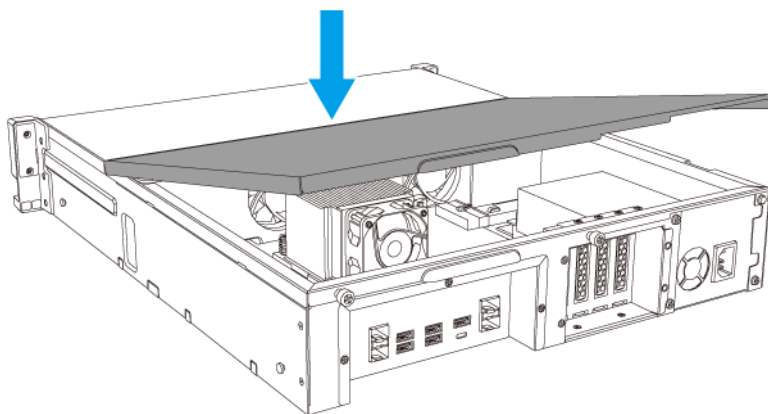


- d. 确认支架不会移动。
8. 安装扩展卡。
- a. 握住卡片边缘。
 - b. 将其插入插槽中。
 - c. 安装螺丝。

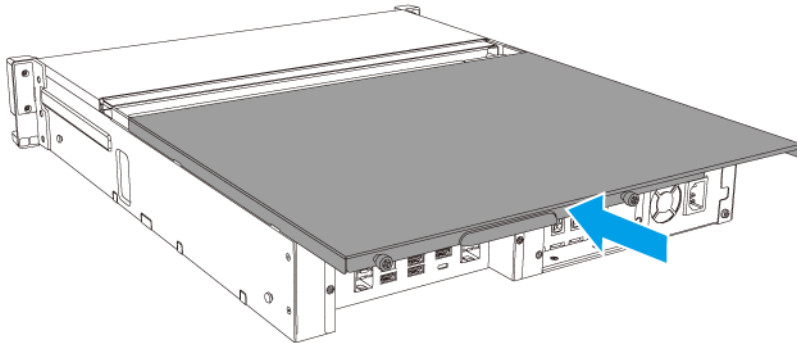


9. 安装顶盖。

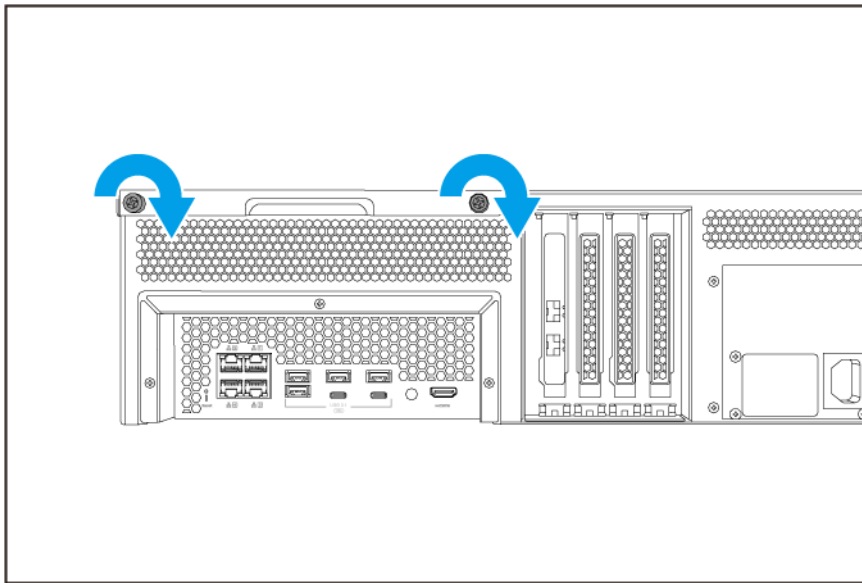
- a. 将顶盖放在 NAS 上。**



- b. 将顶盖向前滑动。**



c. 拧紧螺丝。



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。

导轨套件

导轨套件未随 NAS 提供，必须单独购买。有关详细信息，请联系授权经销商或转到 <http://shop.qnap.com>。

TVS-x72XU 兼容以下导轨型号：

型号	兼容的导轨套件
TVS-1672XU-RP	RAIL-A03-57
TVS-2472XU-RP	RAIL-A02-90

安装信息位于导轨套件包中。

更换内存模块

NAS 有四个内存插槽。您可以通过升级内存模块来增加 NAS 的内存容量。

只能使用类型和容量均相同的 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。



重要

更换内存模块时，请务必遵守以下规则：

- 只安装一个模块时，使用插槽 1。
- 安装两个模块时，使用插槽 1 和 3。确保两个模块完全相同。
- 安装四个模块时，前两个使用插槽 1 和 3，后两个使用插槽 2 和 4。确保每对模块都完全相同。

有关插槽编号的详细信息，请参见[系统主板](#)。



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。

•



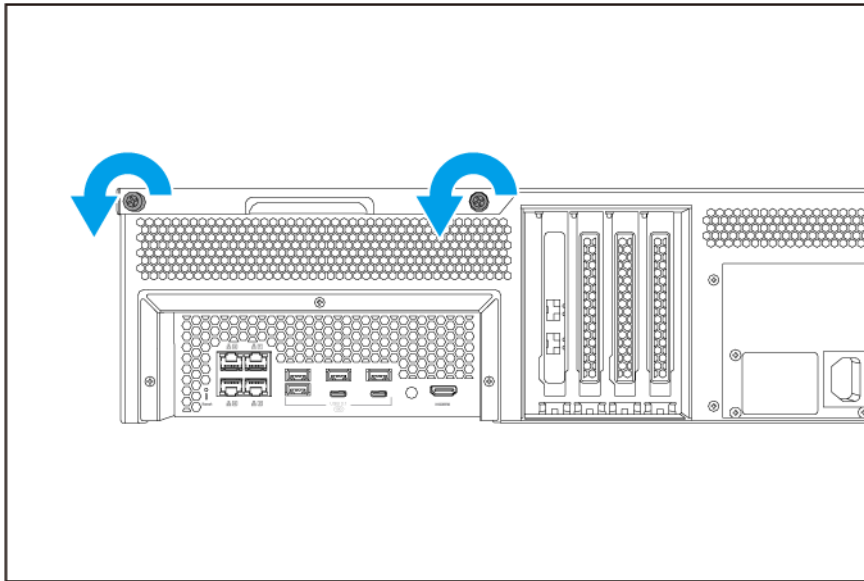
转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。

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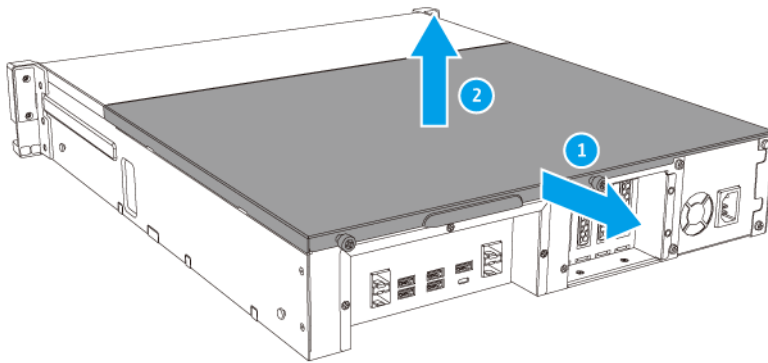


其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

1. 关闭 NAS 电源。
2. 从插座上拔下电源线。
3. 拔掉所有线缆和外接部件。
4. 取下顶盖。
 - a. 松开顶盖后面的两个螺丝。



- b. 按住手柄将顶盖向后滑动。
- c. 将顶盖提起。



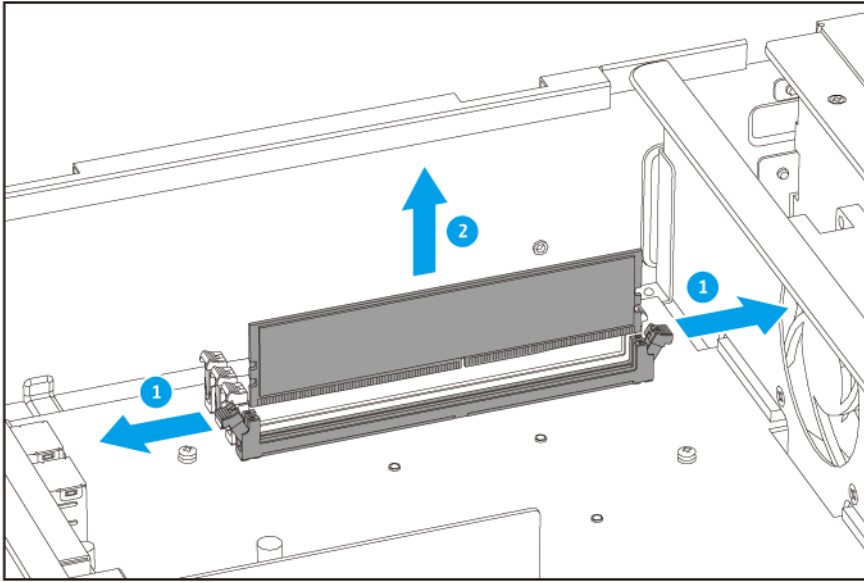
5. 取下现有模块。
 - a. 同时向外推动固定夹以释放模块。



警告

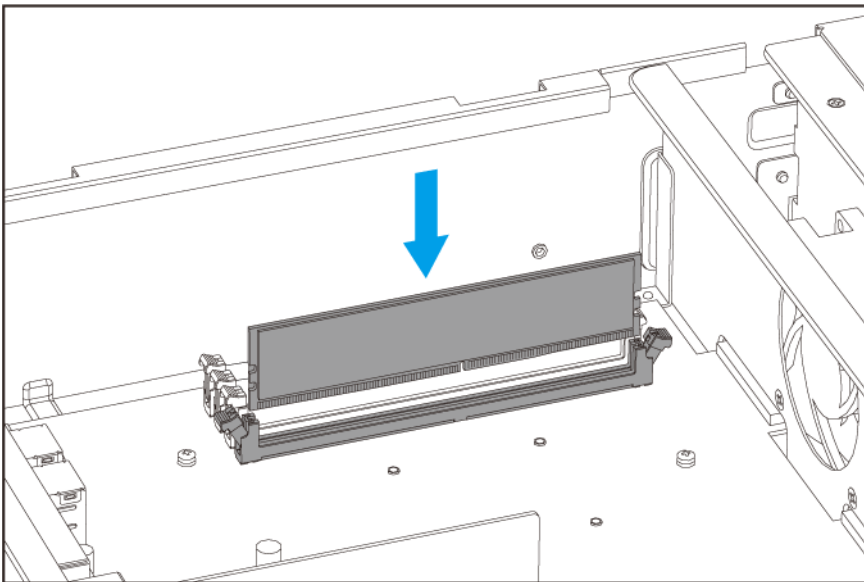
如果尝试在模块尚未完全脱离时将其取出，可能会损坏模块和主板。

- b. 握住模块边缘，然后小心地将其从插槽中滑出。



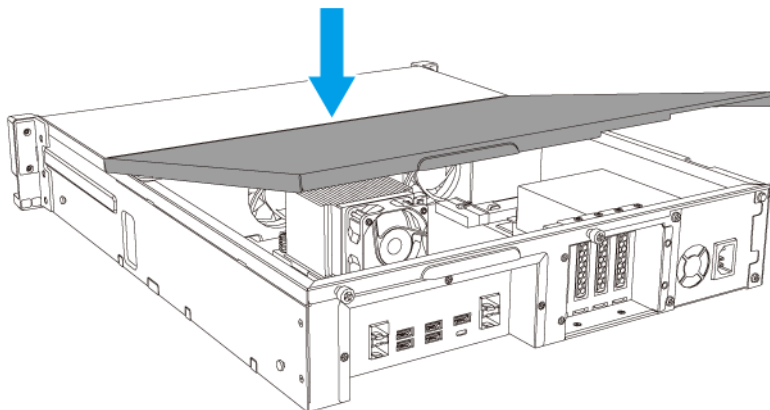
6. 安装新模块。

- 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。
- d. 小心地向下按压模块，直到固定夹将模块锁定到位。

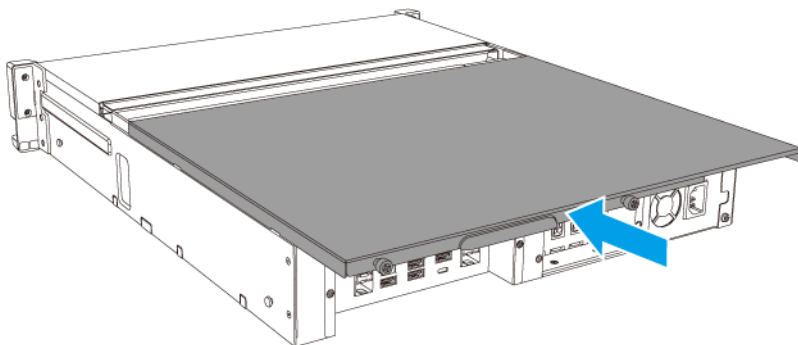


7. 安装顶盖。

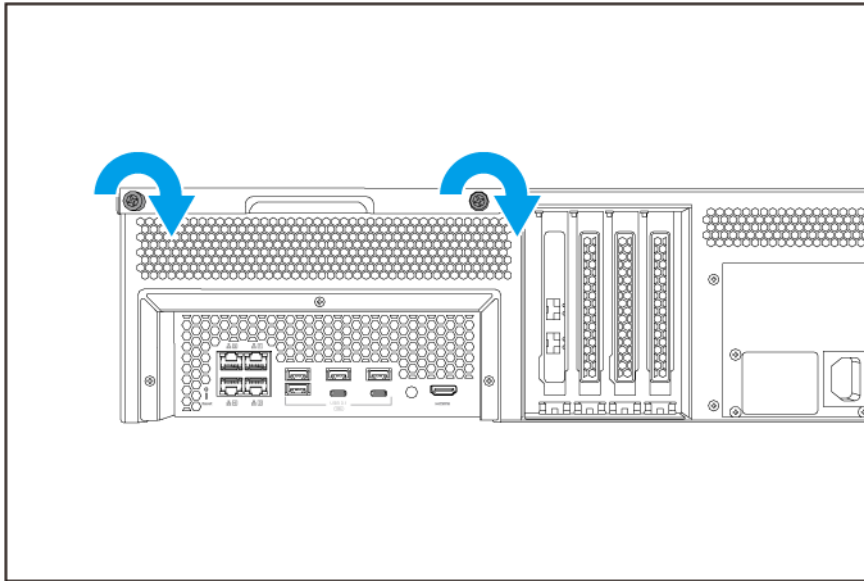
- a. 将顶盖放在 NAS 上。



b. 将顶盖向前滑动。



c. 拧紧螺丝。



8. 连接所有线缆和外接部件。
9. 启动 NAS 电源。
10. 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

TVS-x72XU 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

方法	描述	要求
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。
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. 选择稍后配置磁盘。



注

有关配置磁盘的详细信息，请参见《QTS 用户指南》的“存储空间总管”一节。

15. 单击下一步。

16. 选择否。



注

- 启用多媒体功能后，可以在“存储空间总管”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。

17. 单击下一步。

18. 检查设置。

19. 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。

20. 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。

- 为 NAS 指定 myQNAPcloud 设备名称。



注

myQNAPcloud 设备名称用于远程访问 NAS。

- 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**。

- 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。

- 选择**稍后配置磁盘**。



注

有关配置磁盘的详细信息，请参见《QTS 用户指南》的“存储空间总管”一节。

- 单击下一步。

- 选择否。



注

- 启用多媒体功能后，可以在“存储空间总管”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。

21. 单击下一步。
22. 检查设置。
23. 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。


24. 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。	<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。

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（读/写）数据时出错。 • 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）。 • 硬件自检发生错误。
	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 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	正在访问驱动器，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
扩展  注 扩展单元 LED 不适用于有 9 个硬盘架的型号。	橙色	<ul style="list-style-type: none"> 检测到 SAS JBOD 扩展单元。 检测到 REXP 扩展单元。
	熄灭	未检测到 JBOD 扩展单元。

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。

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

7. 聲明

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D33B77
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CE 声明



此 QNAP NAS 符合 CE 合规性类别 A 标准。

FCC 声明

FCC A 类声明



经测试，本设备符合 FCC 规则第 15 部分的限制标准。其运行需满足下面两个条件：

1. 本设备不会产生有害干扰。
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

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重要

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GNU Public License

Version 3, 29 June 2007

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2. Source Code.

The “source code” for a work means the preferred form of the work for making modifications to it.

“Object code” means any non-source form of a work.

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The “System Libraries” of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A

“Major Component”, in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The “Corresponding Source” for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work’s System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

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7. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

- a. Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.
- b. Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.
- c. Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.
- d. Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

- e. Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

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