



QNAP

QGD-3014-16PT

用户指南

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1. 前言





关于本指南

本指南提供有关设备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 设备的基本信息。

关于 QGD-3014-16PT

QGD-3014-16PT 是一款 QNAP 智能边缘网络交换机，专用于监控应用程序。该交换机内置了存储功能，可放置四个 3.5 英寸 SATA 硬盘，并采用软件定义的网络 (SDN) 来支持包括 NAS、NVR、路由器、监控和虚拟机在内的多个 SMB 应用。QGD-3014-16PT 采用 16 端口 30 瓦特千兆位以太网供电 (PoE) 和两个 2.5GbE 主机管理端口，以实现快速数据传输。交换机的双 CPU 设计为 VM 和 QTS 应用程序提供了第 2 层管理功能。

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 产品保修服务条款](#)。







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>。

订购部件号	CPU	内存	电源
QGD-3014-16PT-8G	Intel Celeron® J4125	8 GB	单个

组件	QGD-3014-16PT-8G
处理器	
CPU	Intel Celeron® J4125
频率	4 核/4 线程 2.0 GHz 基本/2.7 GHz 脉冲
架构	x86 64 位
加密引擎	AES-NI
显卡	Intel® HD Graphics 600
内存	
预安装内存	8 GB RAM: 2 x 4 GB DDR4 SODIMM
内存插槽	2 x DDR4 SODIMM
	 注 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 个 4 GB
闪存	4 GB (双重引导操作系统保护)
存储	

组件	QGD-3014-16PT-8G
硬盘架	4 个 3.5 英寸 SATA 6 Gbps  注 3.5 英寸 SATA 6 Gbps 硬盘架向后兼容 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 • 3.5 英寸 SATA 固态硬盘 • 2.5 英寸 SATA 机械硬盘 • 2.5 英寸 SATA 固态硬盘
M.2 SSD 插槽	2 个 M.2 SATA
M.2 SSD 外形规格	2230
SSD 缓存加速支持	3.5 英寸硬盘架：1-4
热插拔	支持
网络	
2.5 Gb 以太网端口	2 x 2.5 GbE RJ45
千兆位以太网端口	<ul style="list-style-type: none"> • 2 个 1 GbE RJ45/SFP combo 端口 • 14 x 1 GbE RJ45
PoE 支架	
802.3at (PoE+)	端口 1 至 16  注 端口支持 IEEE 802.3at-2009 PoE 标准，并提供最高 30W 的直流电源。
PoE 最大电源端口	30W
总 PoE 功耗预算	140W
总功耗	250W
外部 I/O 端口和扩展插槽	
USB 端口	正面： 1 个 USB 3.0 A 型  注 此 USB 端口支持一键复制。 背面： 2 个 USB 3.0 A 型
HDMI 端口	2 x HDMI 2.0 (30 Hz HDR 时分辨率最高 3840 x 2160)
音频端口	<ul style="list-style-type: none"> • 1 个 3.5 mm 动圈式麦克风插孔 • 1 个 3.5 mm 线路输出插孔  注 扬声器和线路输出插孔不能同时使用。
界面	

组件	QGD-3014-16PT-8G
显示面板	单色背光 LCD 显示屏
按钮	<ul style="list-style-type: none"> • Enter (确认) • Select (选择) • 电源 • 交换机重置按钮 • 主机重置按钮 • USB 一键复制
尺寸	
外形规格	立式
尺寸 (高 x 宽 x 深)	130 x 295 x 224.8 mm (5.12 x 11.61 x 8.85 英寸)
净重	4.08 kg (8.99 磅)
系统电池	CR2032 锂电池 (3V, 225 mAh)
风扇	1 个 120 mm, 12V DC 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

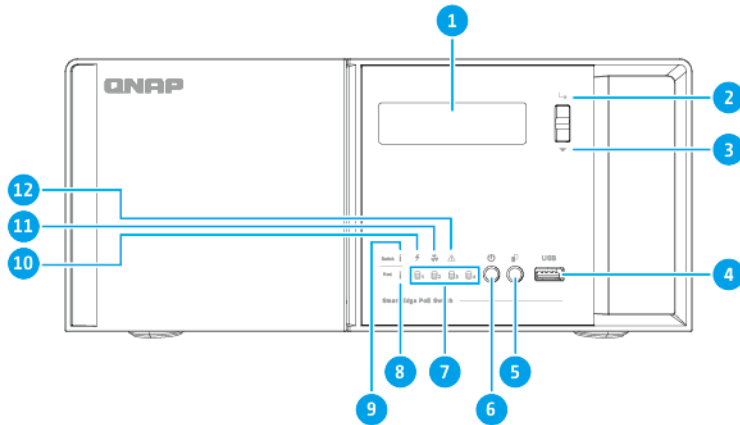
有关兼容的硬盘型号和扩展卡的列表，请转到 <https://www.qnap.com/compatibility>。

包装内容

项目	数量
QGD-3014-16PT	1
交流电源适配器	1
电源线	1
以太网线	1 x 1GbE (RJ45)
硬盘托盘钥匙	1
适用于 3.5 英寸硬盘的螺丝	16
适用于 2.5 英寸硬盘的螺丝	12
快速安装指南 (QIG)	1

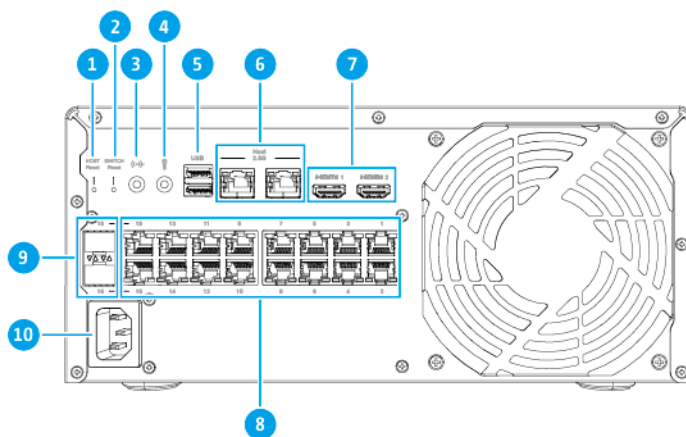
组件

前面板



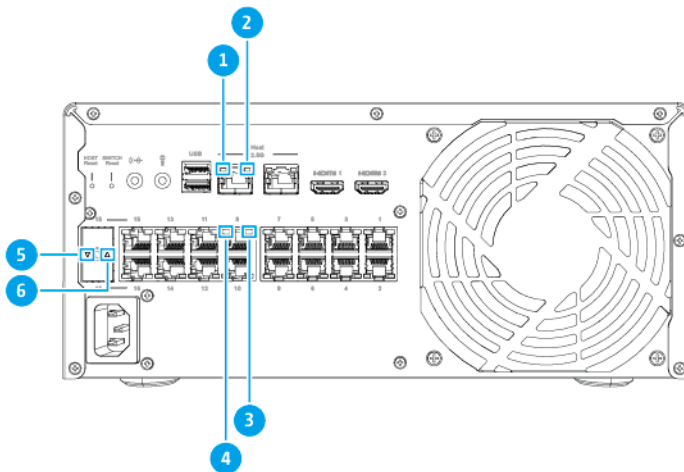
编号	组件	编号	组件
1	LCD 面板	7	硬盘 LED
2	Enter 按钮	8	状态 LED
3	Select 按钮	9	交换机状态 LED
4	USB 3.2 Gen 1 一键复制 A 型端口	10	PoE LED
5	USB 一键复制按钮	11	风扇 LED
6	电源按钮	12	警告 LED

后面板



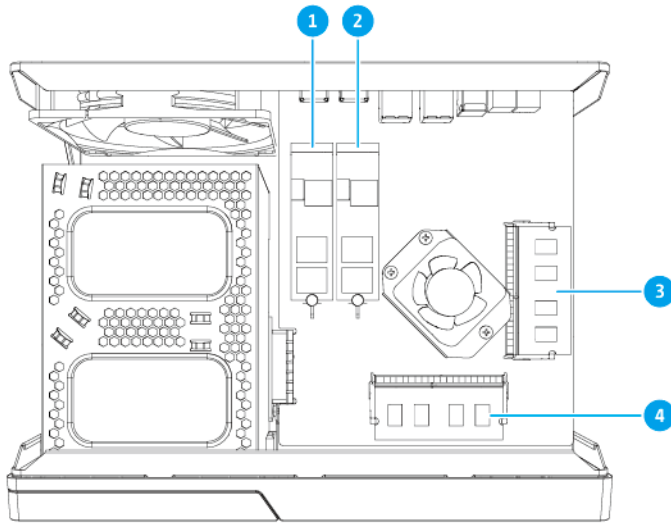
编号	组件	编号	组件
1	主机重置按钮	6	2.5 Gb 以太网端口 (RJ45)
2	交换机重置按钮	7	HDMI 2.0 端口
3	3.5 mm 线路输出插孔	8	千兆位 802.3at PoE+ RJ45 端口
4	3.5 mm 动圈式麦克风插孔	9	千兆位 RJ45/SFP combo 端口
5	USB 3.0 A 型端口	10	电源输入

后面板 LED



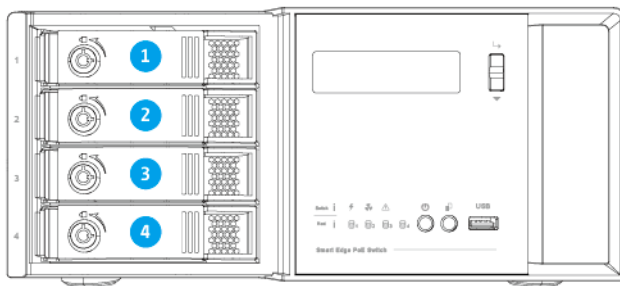
编号	组件	编号	组件
1	2.5 Gb 以太网活动 LED	4	千兆位 802.3at PoE+ 端口活动 LED
2	2.5 Gb 以太网速度 LED	5	Combo 端口活动 LED
3	千兆位 802.3at PoE+ 端口速度 LED	6	Combo 端口速度 LED

系统主板



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

硬盘编号



注
此图显示取下了前面板的交换机。

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，经培训的维修技师必须先从设备拔下所有 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 • 无可能阻塞交换机通风或者压住交换机或电源线的物品。
硬件和外围设备	<ul style="list-style-type: none"> • 计算机或 NAS • 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

设置交换机

1. 将交换机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 英寸硬盘或固态硬盘](#)
 - [在 3.5 英寸托盘上安装 2.5 英寸硬盘或固态硬盘](#)
 - [安装 M.2 固态硬盘](#)
 有关兼容硬盘的列表，请转到 <http://www.qnap.com/compatibility>
3. 可选: 更换内存模块。
有关详细信息，请参见[更换内存模块](#)。
4. 启动交换机。
有关详细信息，请参见[前面板](#)。
5. 将交换机连接到计算机或网络。
有关详细信息，请参见[将交换机连接到计算机或网络](#)。
6. 安装 QTS。
有关详细信息，请参见 [QTS 安装](#)。
7. 登录 QTS。
8. 在交换机上管理设备。
有关详细信息，请参见[交换机管理应用程序访问](#)。

3. 安装和配置

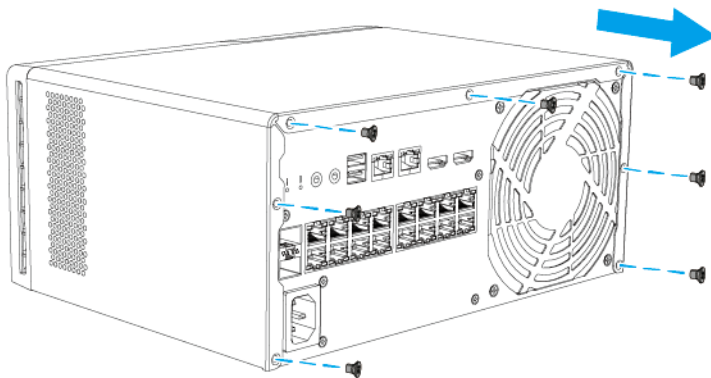
本章提供了具体的硬件和固件安装与配置步骤。

硬件安装

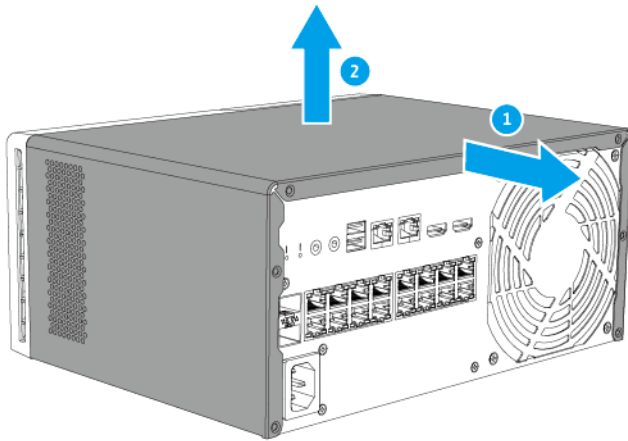
本节提供有关安装硬盘、内存模块和扩展卡的信息。

取下外壳盖

1. 关闭设备。
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. 松开螺丝。

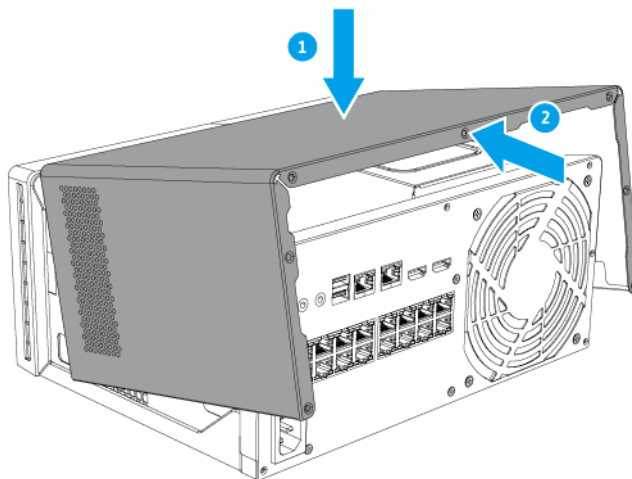


- b. 将盖板向后滑动。
- c. 从设备上提起盖板。

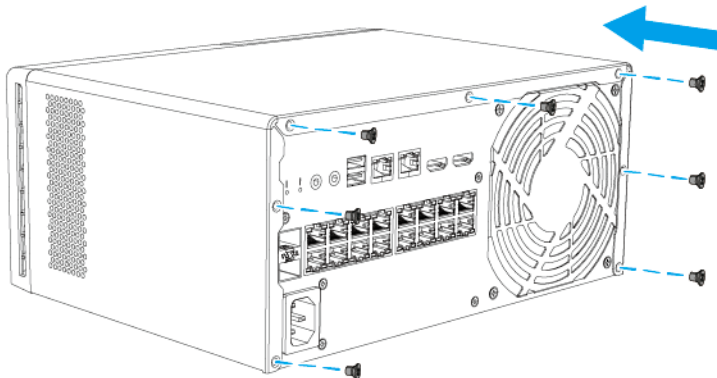


安装外壳盖

1. 将盖板放在设备上。
2. 将盖板向前滑动。



3. 安装螺丝。



4. 连接所有线缆和外接部件。
5. 将电源线连接到插座。
6. 启动设备。

硬盘安装

QGD-3014-16PT 兼容 3.5 英寸硬盘、3.5 英寸固态硬盘、2.5 英寸固态硬盘和 2.5 英寸硬盘。

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。



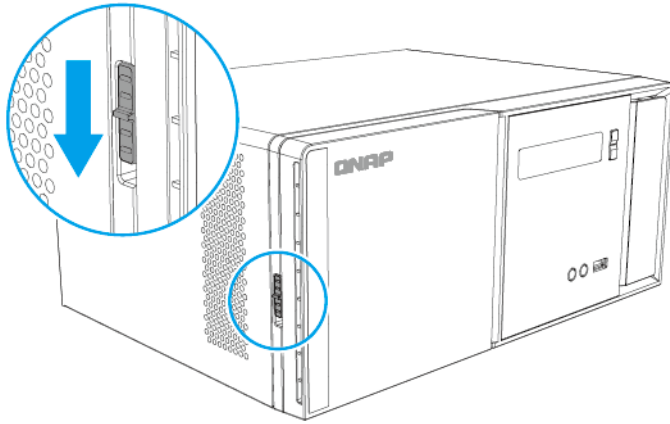
转动的风扇叶片：使您的双手和身体其他部位远离正在转动的风扇叶片。



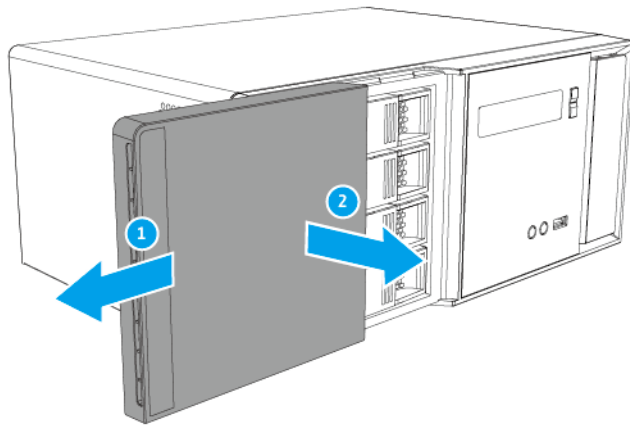
其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

1. 关闭交换机。
2. 取下前盖。
 - a. 找到交换机左侧的锁紧机构。

- b. 向下滑动锁扣以释放前盖。

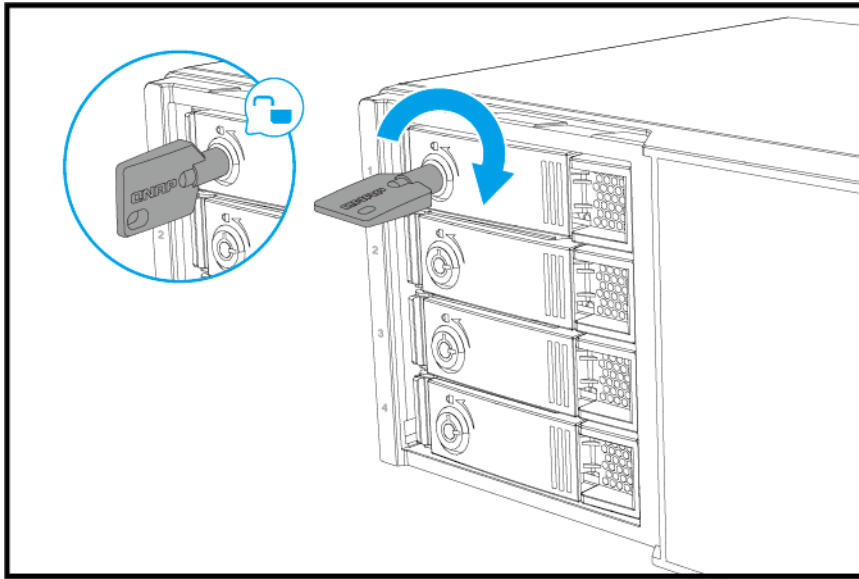


- c. 将前盖向左滑动，然后拉出。



3. 取下硬盘托盘。

- a. 可选: 解除对托盘的锁定。

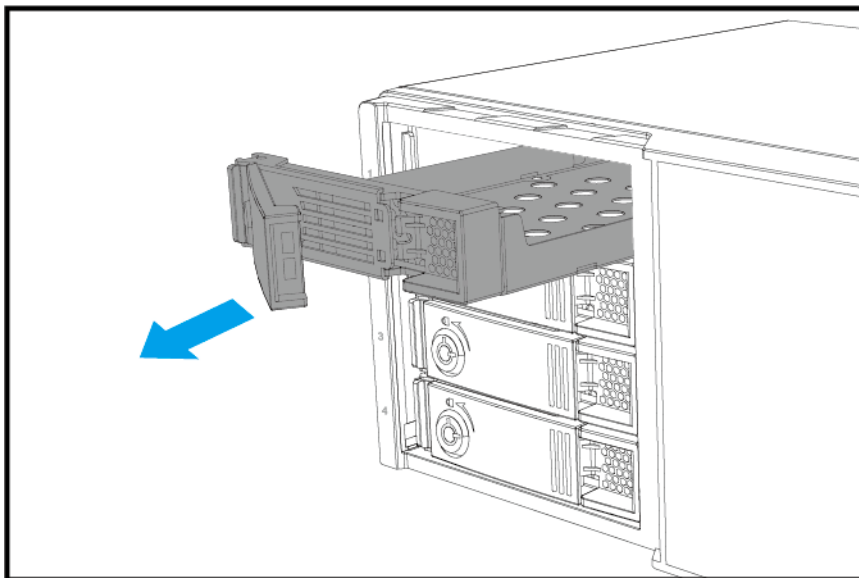


注
预装硬盘托盘未锁定。

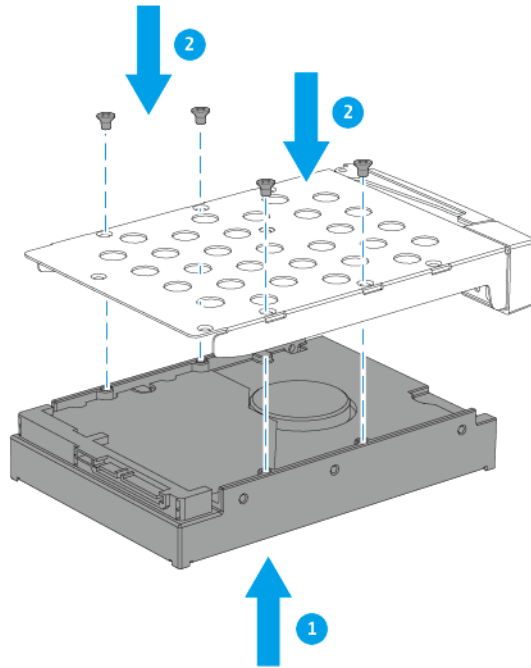


重要
请确保将硬盘托盘钥匙存放在安全的地方。

- b. 拉动手柄以松开托盘。
- c. 拉出托盘。

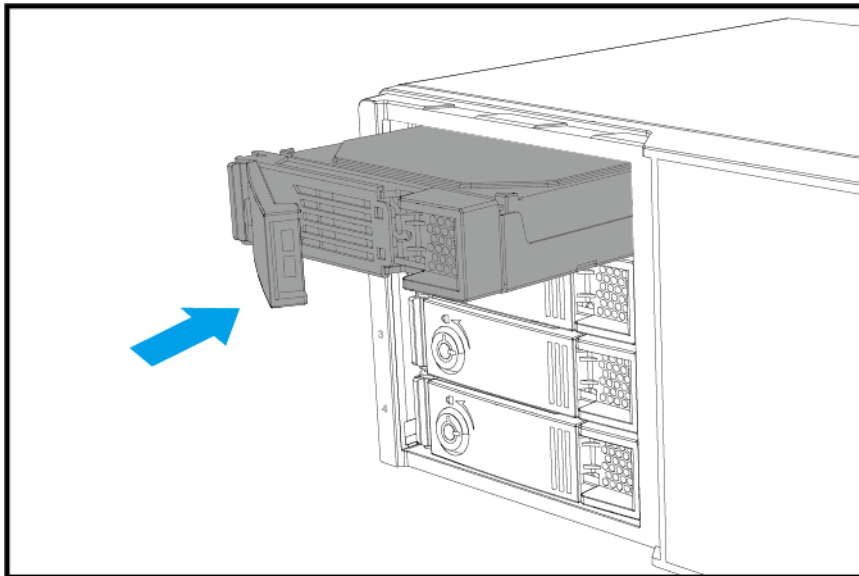


4. 将硬盘安装到托盘上。
 - a. 将硬盘放在托盘上，使硬盘两侧的孔与托盘两侧的孔对齐。
 - b. 可选: 装上螺丝，进一步固定硬盘。

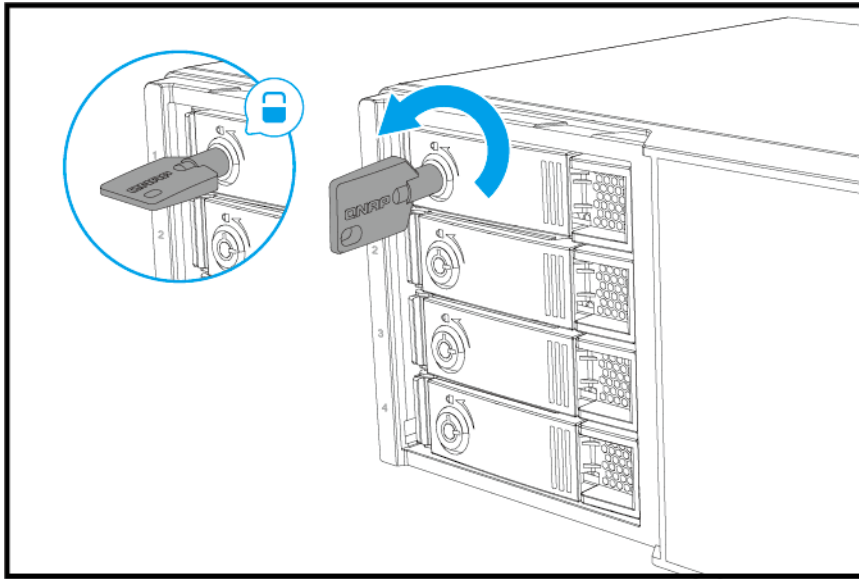


5. 将托盘装入硬盘架。

- a. 将托盘插入硬盘架。
- b. 推动手柄。

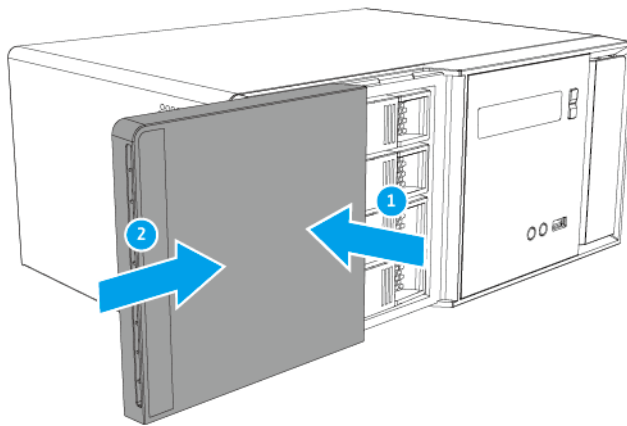


- c. 锁住托盘。

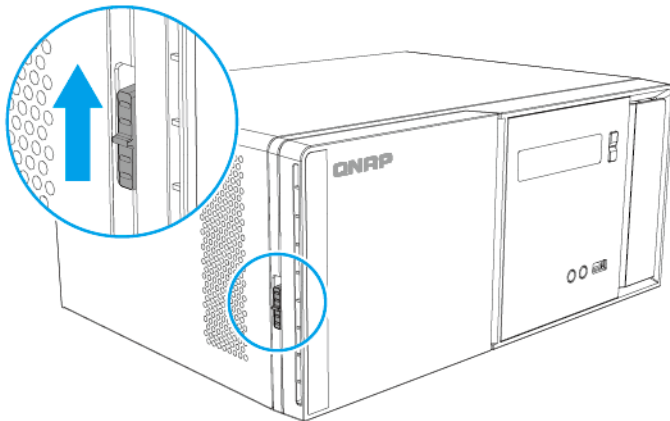


6. 安装前盖。

- 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. 启动交换机。

在 3.5 英寸托盘上安装 2.5 英寸硬盘和固态硬盘



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。

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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。

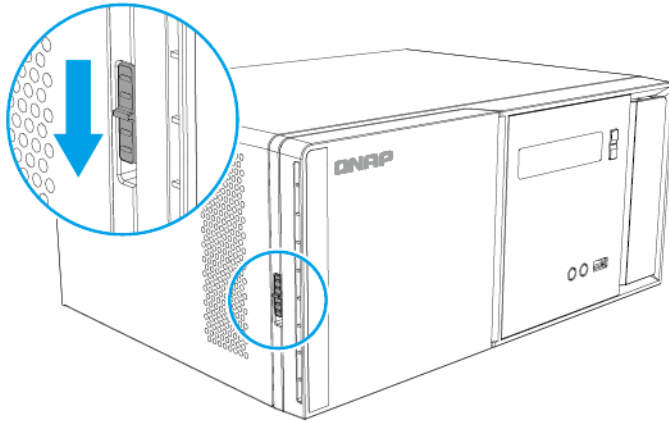
•



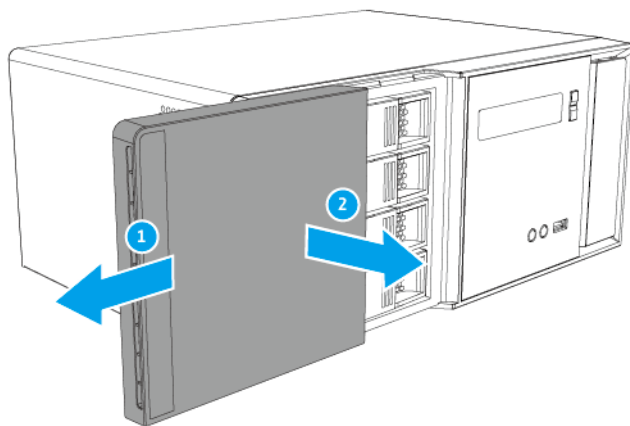
其他运动的组件：使您的双手和身体其他部位远离正在运动的其他组件。

1. 关闭交换机。
2. 取下前盖。
 - a. 找到交换机左侧的锁紧机构。

- b. 向下滑动锁扣以释放前盖。

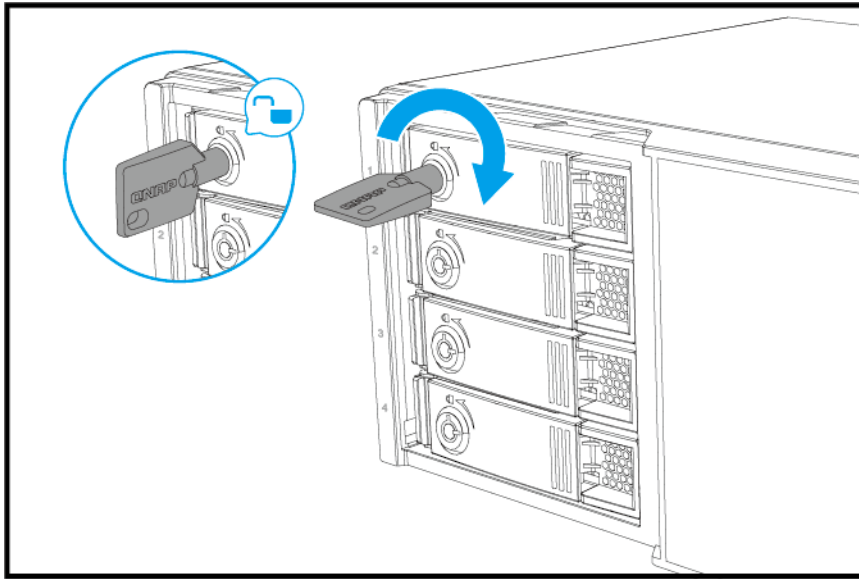


- c. 将前盖向左滑动，然后拉出。



3. 取下硬盘托盘。

- a. 可选: 解除对托盘的锁定。

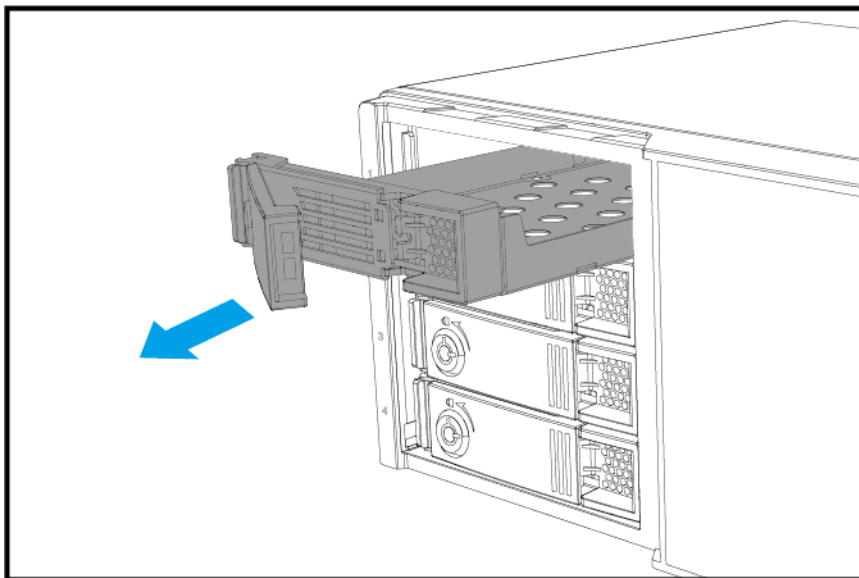


注
预装硬盘托盘未锁定。

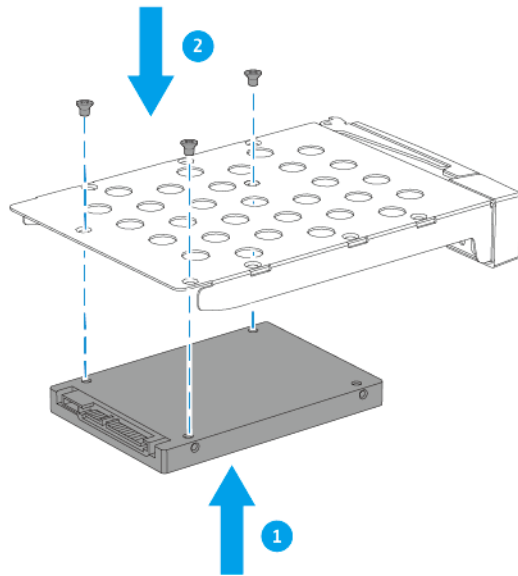


重要
请确保将硬盘托盘钥匙存放在安全的地方。

- b. 拉动手柄以松开托盘。
- c. 拉出托盘。

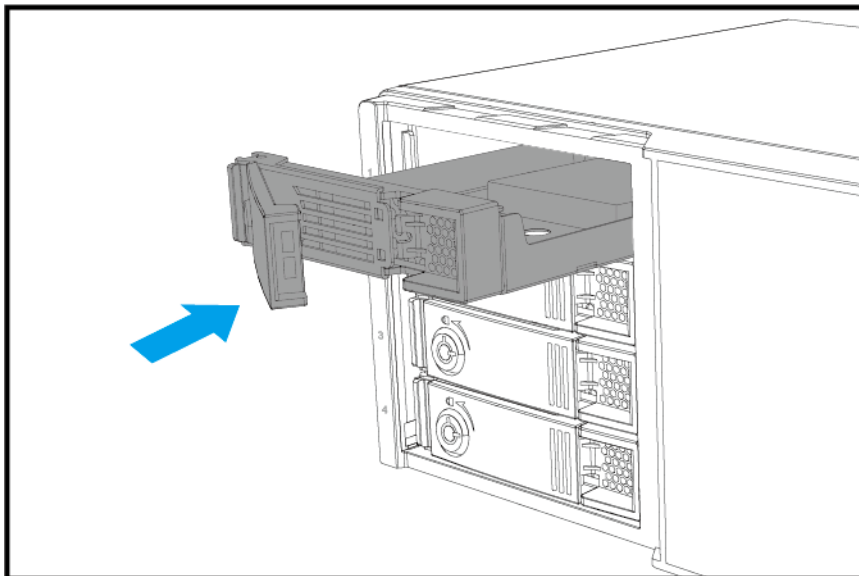


4. 将硬盘安装到托盘上。
 - a. 将硬盘放在托盘上，使硬盘底部的孔与托盘底部的孔对齐。
 - b. 安装螺丝。

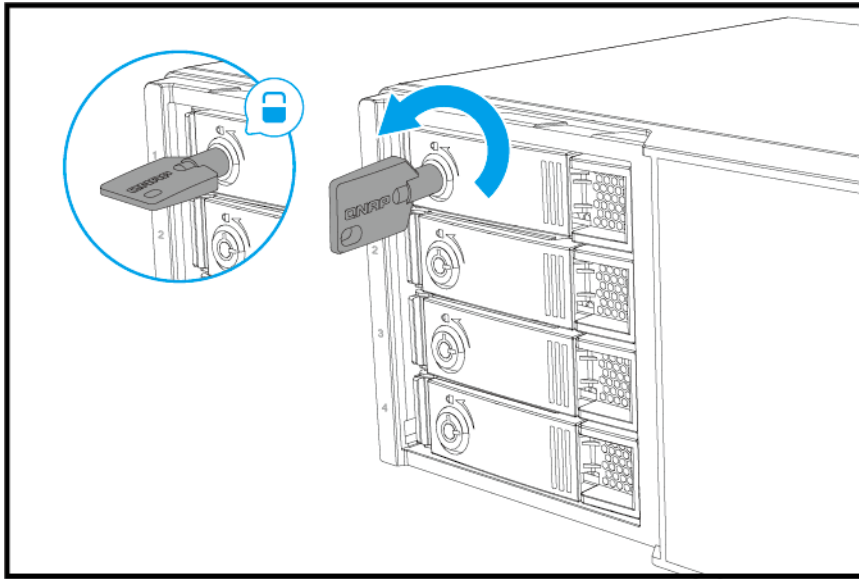


5. 将托盘装入硬盘架。

- a. 将托盘插入硬盘架。
- b. 推动手柄。

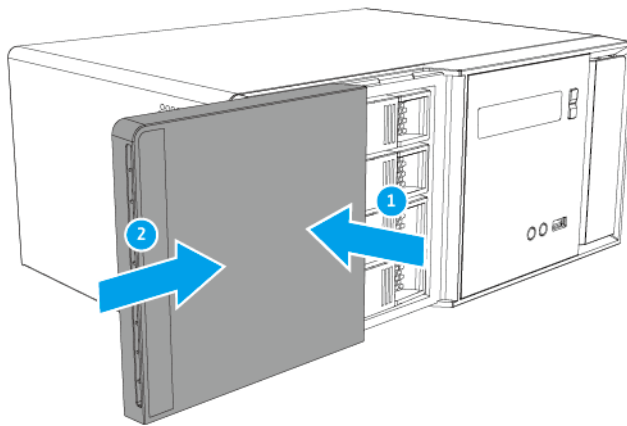


- c. 锁住托盘。

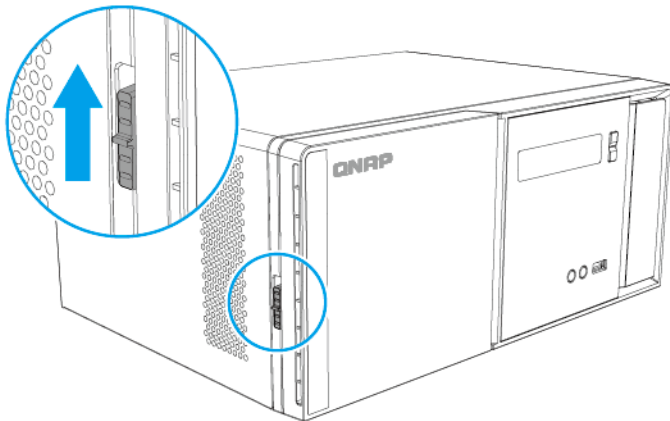


6. 安装前盖。

- 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. 启动交换机。

安装 M.2 固态硬盘

设备的系统主板上有两个 M.2 SSD 插槽。

有关详细信息，请参见[系统主板](#)。

有关兼容的 M.2 SSD 的列表，请转到 <http://www.qnap.com/compatibility>。



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。



注

- 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。

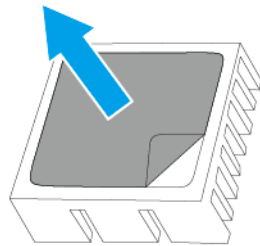
1. 关闭设备。

2. 取下外壳盖。
有关详细信息，请参见[取下外壳盖](#)。
3. 在 M.2 SSD 上安装散热片。
 - a. 在 M.2 SSD 上找到控制器。

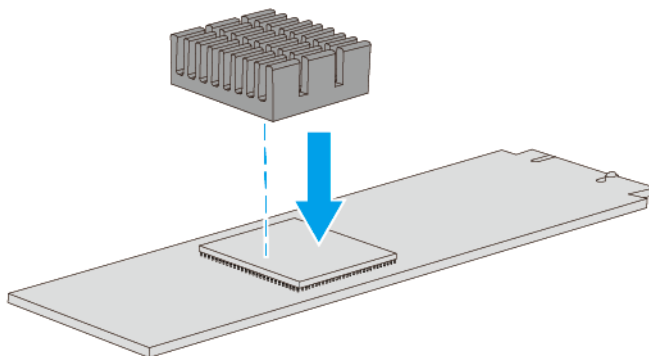


注
控制器位置因 M.2 SSD 的型号和制造商而异。
有关详细信息，请参阅文档或联系制造商。

- b. 取下散热片的保护膜。

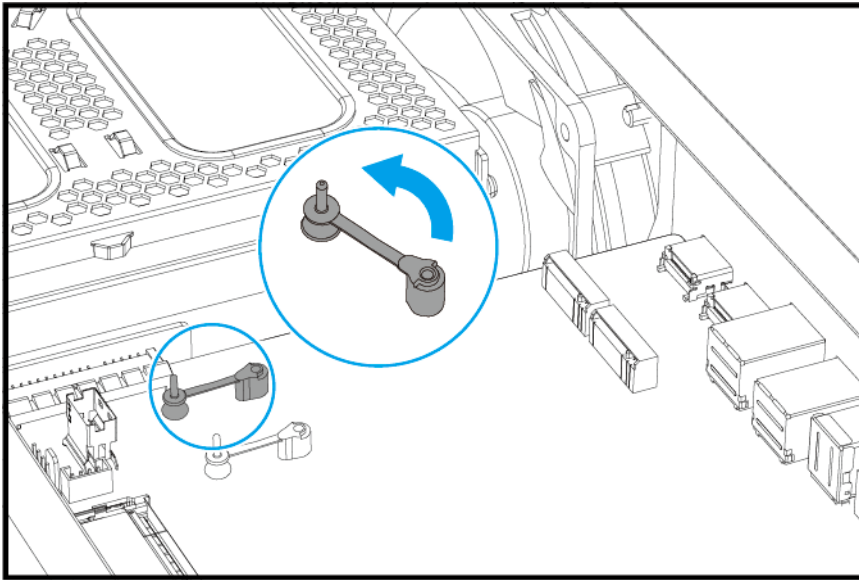


- c. 将散热片安装到控制器上。



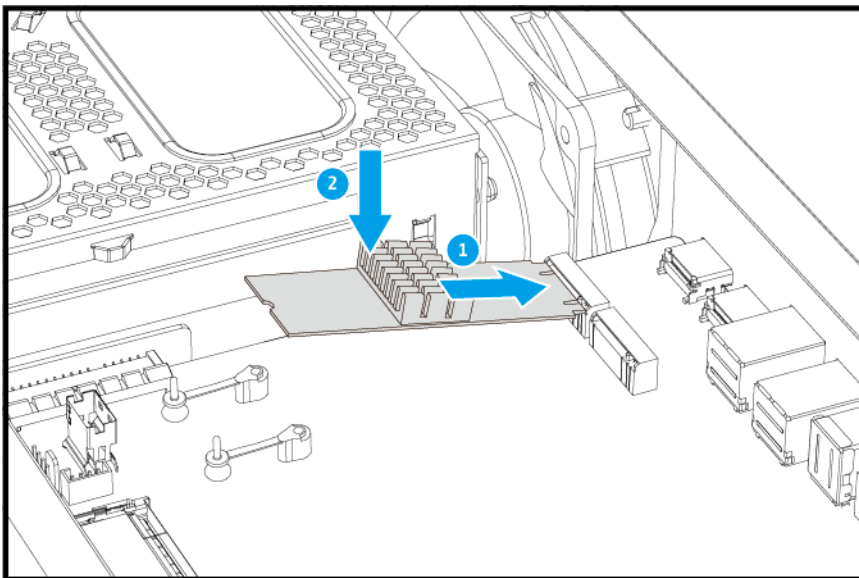
4. 安装 M.2 SSD。

a. 拉开固定扣。

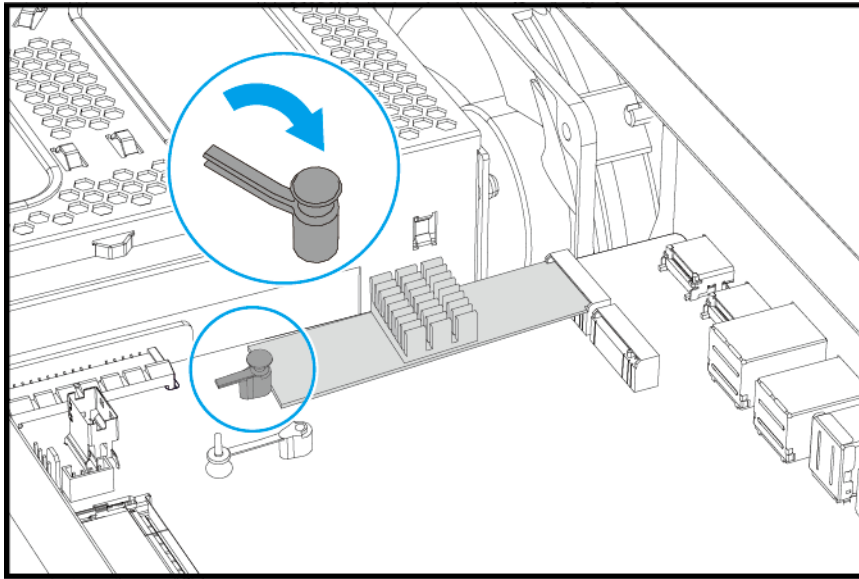


b. 将 M.2 SSD 插入插槽中。

c. 向下推入 M.2 SSD。



d. 插入固定扣，固定硬盘。



5. 安装外壳盖。
有关详细信息，请参见[安装外壳盖](#)。
6. 启动设备。

更换内存模块

QGD-3014-16PT 有两个内存插槽。您可以通过升级内存模块来增加交换机的内存容量。

请仅使用 QNAP 内存模块，以保证系统性能和稳定性。可以从授权经销商处购买 QNAP 内存模块。

有关插槽编号的详细信息，请参见[系统主板](#)。



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。

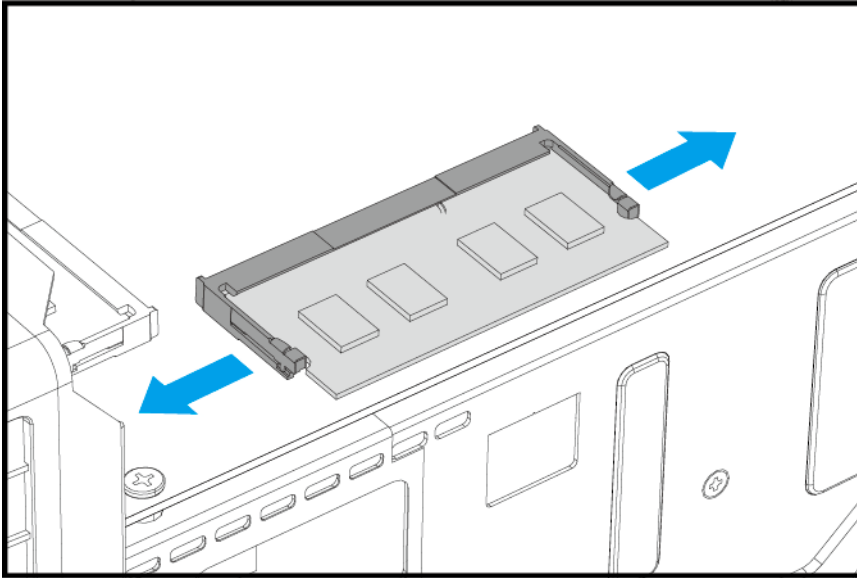
•



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. 关闭设备。
2. 取下外壳盖。
有关详细信息，请参见[取下外壳盖](#)。
3. 取下现有模块。

- a. 同时向外推动固定夹以释放模块。

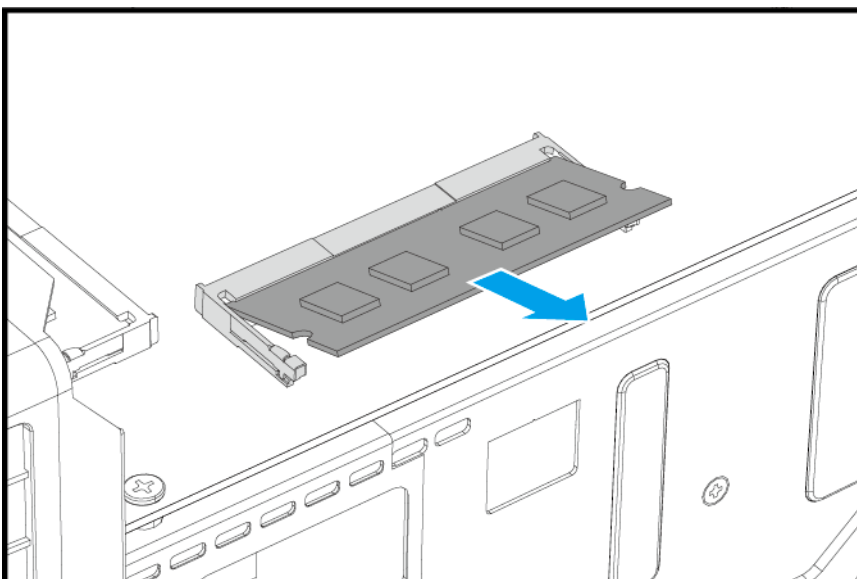
**警告**

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. 确认模块向上倾斜并已完全脱离插槽。
- c. 握住模块边缘。
- d. 小心将模块滑出插槽。

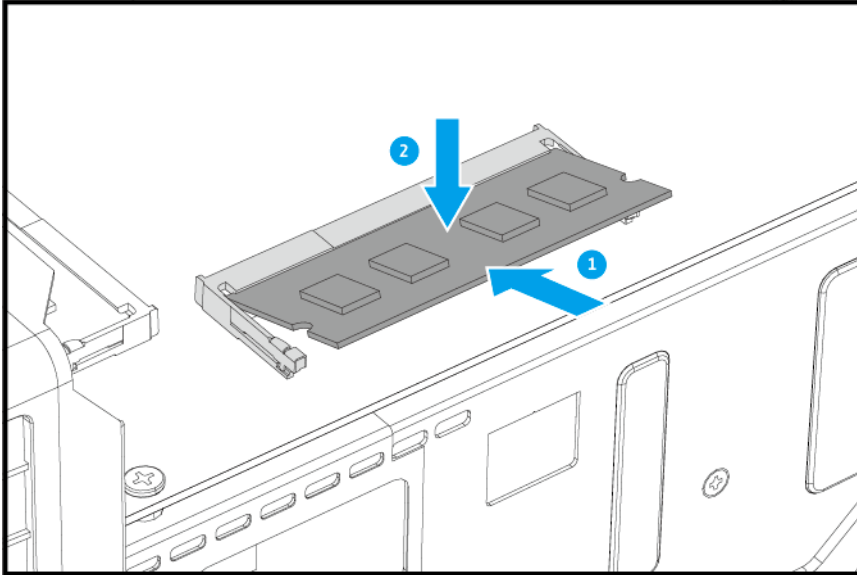
**警告**

- 请勿触摸内部组件，特别是金属接头。
- 不要折弯模块。



4. 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。



5. 安装外壳盖。



注
有关详细信息，请参见[安装外壳盖](#)。

6. 启动设备。

7. 确认设备能够识别该模块。

- 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。

将交换机连接到计算机或网络

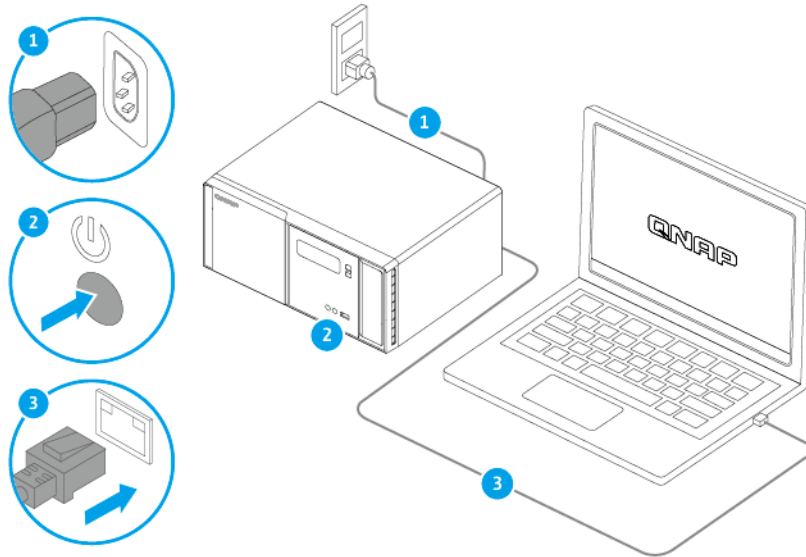
QGD-3014-16PT 可以连接到计算机或局域网。有关详细信息，请参见以下主题：

- [将交换机连接到计算机](#)
- [将交换机连接到网络](#)

将交换机连接到计算机

将 QGD-3014-16PT 连接到 QNAP NAS 可以扩展存储容量，还可通过连接到交换机 PoE 端口的以太网线将数据备份到另一 NAS。但是，必须将 QGD-3014-16PT 连接到计算机才能配置交换机设置。

1. 启动交换机。
2. 将交换机连接到计算机。
 - a. 将以太网线连接到交换机上的 PoE 端口。
 - b. 将以太网线连接到计算机上的千兆位以太网端口。



3. 确认计算机能够识别该交换机。
 - a. 在主机计算机上打开 Qfinder Pro。



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

- b. 在列表上找到所需交换机。

将交换机连接到网络

QGD-3014-16PT 可以通过主机端口或 PoE 端口连接到局域网。

1. 启动交换机。
2. 通过以下端口类型之一将交换机连接到局域网：

类型	方法
主机端口	选择从 LCD 面板上的适配器 1 获得的交换机 IP 地址。
PoE 端口	选择从 LCD 面板上的适配器 2 或适配器 3 获得的交换机 IP 地址。

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 Qfinder Pro 搜索栏中输入 IP 地址。

5. 在列表中找到交换机，然后双击名称或 IP 地址。
此时会出现 QTS 登录屏幕。
6. 输入 QTS 登录信息。
7. 单击登录。

连接 USB 扩展单元

该设备支持 USB 扩展单元。有关详细信息，请参见下表。

您可以从 QNAP 或授权经销商处购买存储扩展配件。

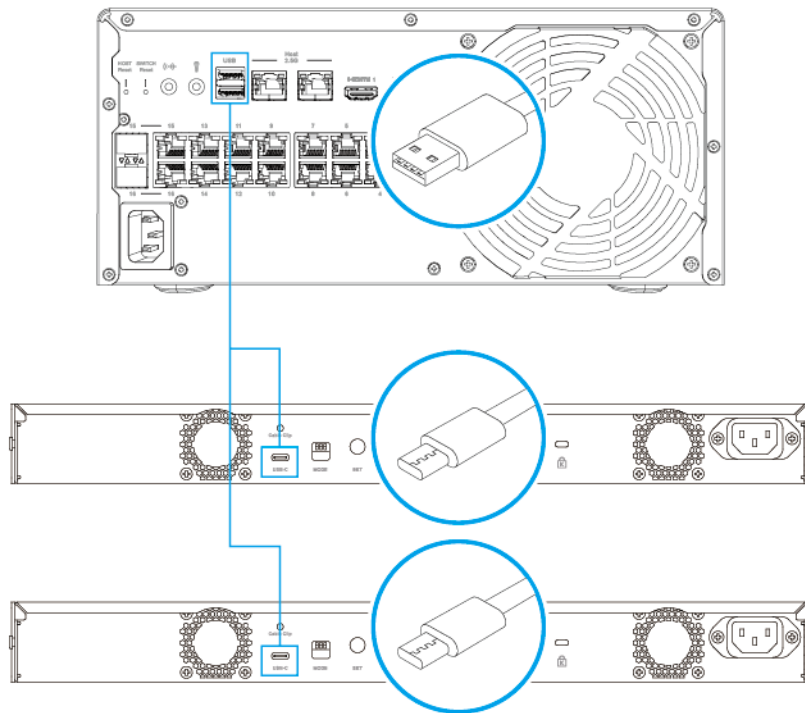
有关详细信息，请转到 <https://shop.qnap.com/>。

有关兼容扩展单元的列表和最大可应用扩展单元数，请转到 <http://www.qnap.com/go/compatibility-expansion>。

扩展单元型号	描述	所需配件
TR-002	• 使用 USB 3.2 Gen 2 C 型接口	USB 3.2 Gen 2 A 型至 C 型线缆
TR-004	• 支持 SATA 硬盘	
TR-004U	• 使用 USB 3.2 Gen 1 C 型接口 • 支持 SATA 硬盘	• USB 3.2 Gen 1 A 型至 C 型线缆 • RAIL-B02
TL-D800C	• 使用 USB 3.2 Gen 2 C 型接口 • 支持 SATA 硬盘	USB 3.2 Gen 2 A 型至 C 型线缆
TL-R1200C-RP	• 使用 USB 3.2 Gen 2 C 型接口 • 支持 SATA 硬盘	• USB 3.2 Gen 2 A 型至 C 型线缆 • RAIL-B02

要将设备连接到 USB 扩展单元，需要 USB A 型至 USB C 型线缆或 USB C 型至 USB C 型线缆。

1. 将扩展单元连接到交换机。
 - a. 将 USB 线缆连接到扩展单元上的 USB C 型端口。
 - b. 将 USB 线缆连接到交换机上的 USB 3.2 Gen 1 A 型端口。



2. 为扩展单元接通电源。
3. 确认交换机能够识别扩展单元。
 - a. 以管理员身份登录 QTS。
 - b. 转到**主菜单 > 存储与快照总管 > 总览 > 系统**。
 - c. 确认扩展单元已列出。

QTS 安装

方法	描述	要求
Qfinder Pro 安装 (推荐)	<p>如果交换机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 定位交换机。 • 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>如果交换机已连接到 Internet，可以执行以下操作：</p> <ul style="list-style-type: none"> • 扫描交换机上的二维码。 • 指定 Cloud Key。 • 登录您的 myQNAPcloud 帐户。 • 使用 myQNAPcloud Link 远程访问交换机。 • 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 • myQNAPcloud 帐户 • Cloud Key

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. 启动交换机。
2. 将交换机连接到您的局域网中。



提示

可以通过主机端口或任何 PoE 端口连接到局域网。

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. 在列表中找到交换机，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，以确保交换机遵循协调世界时 (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. 选择将用于访问交换机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. 启动交换机。
2. 将交换机连接到 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/>。
 - 使用移动设备扫描交换机上的二维码。

网页中会列出本地网络上所有尚未初始化的 QNAP 设备。

4. 从列表中找到您的交换机，然后单击**初始化**。

**注**

如果未列出您的交换机，请按网页上的说明指定交换机上的 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. 为交换机指定 myQNAPcloud 设备名称。

**注**

- myQNAPcloud 设备名称用于远程访问交换机。
- 因安全原因，在您的交换机上初始化 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。

7. 单击**下一步**。
智能安装指南将在默认 Web 浏览器中打开。
8. 单击**启动智能安装指南**。

9. 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。

10. 单击下一步。

11. 指定时区、日期和时间。



提示

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

12. 单击下一步。

13. 选择自动获取 IP 地址(DHCP)。

14. 单击下一步。

15. 选择将用于访问交换机上共享文件夹的设备类型。

16. 单击下一步。

17. 检查设置。

18. 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。

19. 单击确认。

QTS 即安装完毕。

交换机管理应用程序访问

可以使用以下应用程序管理 QGD-3014-16PT 交换机：

应用程序	描述
QuNetSwitch	QTS 的交换机管理应用程序。QuNetSwitch 预装在 QTS 中。
QSS	QNAP 交换机的交换机管理系统。QSS 预装在交换机上。

有关如何访问这些应用程序的详细信息，请参见以下主题：

- [使用 Qfinder Pro 访问 QSS](#)
- [在 QTS 中访问 QuNetSwitch](#)

使用 Qfinder Pro 访问 QSS



注

必须先创建一个默认系统卷，然后才能使用 QuNetSwitch。

1. 启动设备。
2. 将设备连接到您的局域网中。

有关详细信息，请参见[将交换机连接到网络](#)。

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. 输入交换机 IP 地址。
交换机 IP 地址将显示为 %yourNAS name%- switch。

5. 在列表中找到交换机，然后双击名称或 IP 地址。
此时会出现 QSS 登录屏幕。

6. 登录 QSS。
QSS 默认登录详细信息如下：

- 用户名: admin
- 密码: admin

此时会出现**欢迎**窗口。

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. 继续管理交换机。



注

有关交换机管理的详细信息，请参见《QuNetSwitch 用户指南》。

在 QTS 中访问 QuNetSwitch



注

必须先创建一个默认系统卷，然后才能使用 QuNetSwitch。
有关更多详细信息，请参见《QTS 用户指南》。

1. 启动设备。
2. 登录 QTS。



注

有关详细信息，请参见[将交换机连接到网络](#)。

3. 转到**主菜单** > **QuNetSwitch**。
4. 继续管理交换机。



注


有关交换机管理的详细信息，请参见《QuNetSwitch 用户指南》。

4. 基本操作

本章介绍交换机的基本操作。

按钮


电源按钮

操作	用户操作	结果
启动电源	按下此按钮一次。	交换机电源开启并登录 QTS。
关闭电源	按住此按钮 1.5 秒钟。	交换机电源关闭并从 QTS 注销。
强制关机	按住此按钮 5 秒钟。	交换机关闭。  重要 仅当交换机无响应时才能使用此方法。

交换机重置按钮

操作	用户操作	结果
重置	按住此按钮 3 秒钟。	交换机即会重置并恢复所有默认设置。

QTS 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 QTS 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：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 QTS 设置。  提示 要在高级系统重置后检索旧数据，请在交换机上重新创建先前的文件夹结构。

LCD 面板

通过 LCD 面板，可以执行以下操作：

- 重新启动和关闭设备
- 配置或更改 LCD 面板密码
- 查看和配置网络设置
- 查看系统、物理磁盘和卷的相关信息

查看 TCP/IP 设置

您可以查看设备上的每个网络适配器的以下设置：

- IP 地址
 - 子网掩码
 - 默认网关
 - 主 DNS
 - 辅助 DNS
1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
 2. 按住“**Enter**”（确认）两秒钟。
面板会显示 Main Menu 1.TCP/IP（主菜单 1. TCP/IP）。
 3. 按住“**Enter**”（确认）。
面板会显示第一个网络适配器的 IP 地址。
 4. 按住“**Select**”（选择）以查看下一个 TCP/IP 屏幕。
根据需要重复执行此步骤。

配置 TCP/IP 设置

您可以为交换机上的每个网络适配器配置以下设置：

- IP 地址
 - 子网掩码
 - 默认网关
 - 主 DNS
 - 辅助 DNS
1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
 2. 按住“**Enter**”（确认）两秒钟。
面板会显示 Main Menu 1.TCP/IP（主菜单 1. TCP/IP）。
 3. 按住“**Enter**”（确认）。

面板会显示第一个网络适配器的 IP 地址。

4. 反复按“**Select**”（选择），直到面板显示“Enter Network Settings”（输入网络设置）。
5. 按住“**Enter**”（确认）。
面板会显示可配置的网络设置。
6. 按“**Select**”（选择）和“**Enter**”（确认）以配置设置。

按钮	用途
Enter （确认）	<ul style="list-style-type: none"> • 显示配置屏幕。 • 移动到配置屏幕中的下一个项目。
Select （选择）	<ul style="list-style-type: none"> • 移动到菜单中的下一个项目。 • 修改配置屏幕上的值。

根据需要重复执行此步骤。

查看硬盘信息

LCD 面板可以显示交换机中安装的每个硬盘的温度和容量。

1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
2. 按住“**Enter**”（确认）两秒钟。
面板会显示“Main Menu 1.TCP/IP”（主菜单 1.TCP/IP）。
3. 反复按“**Enter**”（确认），直到面板显示“Main Menu 2.Physical disk”（主菜单 2.物理磁盘）。
4. 按住“**Enter**”（确认）。
面板会显示硬盘架 1 中安装的硬盘的温度和容量。
5. 按住“**Select**”（选择）。
根据需要重复执行此步骤。
面板会显示下一个硬盘的温度和容量。

查看系统信息

LCD 面板可显示 CPU 温度、系统温度和系统风扇转速。

1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
2. 按住“**Enter**”（确认）两秒钟。
面板会显示“Main Menu 1.TCP/IP”（主菜单 1.TCP/IP）。
3. 反复按“**Enter**”（确认），直到面板显示“Main Menu 4.System”（主菜单 4.系统）。
4. 按住“**Enter**”（确认）。
面板会显示 CPU 和系统温度。
5. 按住“**Select**”（选择）。
面板会显示系统风扇转速。

关闭交换机电源

1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
2. 按住“**Enter**”（确认）两秒钟。
面板会显示 Main Menu 1.TCP/IP（主菜单 1. TCP/IP）。
3. 反复按“**Enter**”（确认），直到面板显示“Main Menu 5.Shut down”（主菜单 5. 关闭）。
4. 按住“**Enter**”（确认）。
交换机关机。

重新启动交换机

1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
2. 按住“**Enter**”（确认）两秒钟。
面板会显示 Main Menu 1.TCP/IP（主菜单 1. TCP/IP）。
3. 反复按“**Enter**”（确认），直到面板显示“Main Menu 6.Reboot”（主菜单 6. 重启）。
4. 按住“**Enter**”（确认）。
交换机即会重新启动。

更改 LCD 密码

为 LCD 面板指定密码可以防止未经授权的访问。

1. 按“**Enter**”（确认）或“**Select**”（选择）。
面板会显示交换机名称和 QTS 版本。
2. 按住“**Enter**”（确认）两秒钟。
面板会显示“Main Menu 1.TCP/IP”（主菜单 1. TCP/IP）。
3. 反复按“**Enter**”（确认），直到面板显示“Main Menu 7.Password”（主菜单 7. 密码）。
4. 按住“**Enter**”（确认）。
此时会显示“Change Password”（更改密码）屏幕。
5. 按住“**Enter**”（确认）选择“**Yes**”（是）。
此时会显示“New Password”（新密码）屏幕。
6. 按“**Select**”（选择）和“**Enter**”（确认）指定新密码。
 - 指定密码。
 - 长度：1-8 个字符
 - 有效字符：0-9
 - 要删除密码，请将密码字段留空。

按钮	用途
Enter （确认）	移动到“New Password”（新密码）屏幕中的下一个项目。

按钮	用途
Select (选择)	更改“New Password” (新密码) 和“Verify Password” (验证密码) 屏幕中的数字。

7. 按 **Enter** 键。
交换机会保存密码。

LCD 错误消息

系统消息	描述
Sys.Fan Failed (系统风扇故障)	系统风扇有故障。
Sys.Overheat (系统过热)	系统温度过高。
HDD Overheat (硬盘过热)	硬盘温度过高。
CPU Overheat (CPU 过热)	CPU 温度过高。
Network Lost (网络丢失)	LAN 1 和 LAN 2 在故障转移或负载平衡模式下断开连接。
LAN [number] Lost (LAN [编号] 丢失)	LAN [编号] 已断开连接。
HDD Failure (硬盘故障)	硬盘出现故障。
Vol [number] Full (卷 [编号] 已满)	卷已满。
HDD Ejected (硬盘弹出)	硬盘已弹出。
Vol [number] Degraded (卷 [编号] 已降级)	卷 [编号] 处于降级模式。
Vol [number] Unmounted (卷 [编号] 已卸载)	卷 [编号] 已卸载。
Vol [number] Inactive (卷 [编号] 非活动)	卷 [编号] 处于非活动状态。

LED

开启设备电源后，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设备已连接到网络或主机的情况。

有关 LED 位置的详细信息，请参见[组件](#)。

LED	状态	描述
主机状态	绿色	主机系统准备就绪。
	闪烁绿色，间隔 1.0 秒	主机系统正在启动。
	红色	主机系统发生致命错误。
	熄灭	主机系统已关机。
交换机状态	绿色	交换机准备就绪。
	闪烁绿色，间隔 1.0 秒	交换机正在启动。
	红色	交换机系统发生致命错误。
	熄灭	交换机系统已关机。
PoE	绿色	PoE 状态正常。
	红色	发生 PoE 致命错误。
风扇	绿色	风扇状态正常。
	红色	风扇发生致命错误。

LED	状态	描述
PoE 端口速度	闪烁绿色，间隔 1.0 秒	链路以 1 Gbps 的速度运行。
	闪烁琥珀色，间隔 1.0 秒	链路以 10/100 Mbps 的速度运行。
	熄灭	未检测到链路。
PoE 端口活动/链路	绿色	交换机已连接至电源设备。
	琥珀色	电源设备发生错误。
	熄灭	未检测到电源设备。
Combo 端口速度	闪烁绿色，间隔 1.0 秒	链路以 1 Gbps 的速度运行。
	闪烁琥珀色，间隔 1.0 秒	链路以 10/100 Mbps 的速度运行。
	熄灭	未检测到链路。
Combo 端口活动/链路	闪烁琥珀色，间隔 1.0 秒	正在传输数据。

警告音

时长	频率	描述
短提示音 (0.5 秒)	1	<ul style="list-style-type: none"> • 交换机正在启动。 • 按下重置按钮 3 秒钟后，交换机将重置配置。 • 按下重置按钮 10 秒钟后，交换机将重置配置并重新启动。 • 操作系统已更新。 • 交换机正在启动 USB 一键复制。
	2	USB 设备已移除 (USB 一键复制按钮)。
	3	无法检测到已安装的磁盘。
长提示音 (1.5 秒)	3 (每 5 分钟)	<ul style="list-style-type: none"> • 电源发生错误。 • 系统风扇故障。 • 风扇模块已移除。 • 无法将交换机数据复制到连接到前 USB 端口的外部存储设备。
	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。 • 正在移除 USB 设备 (USB 一键复制按钮)。 • 发生卷状态错误。 • 插入或抽出硬盘。
	1	<ul style="list-style-type: none"> • 交换机已通过强制关闭关机 (硬件关闭)。 • 交换机已成功开机并准备就绪。
长提示音 (5 秒)	1	QTS 正在重新启动。

5. 故障排除

本章介绍基本故障排除信息。

热插拔故障硬盘

RAID 类型	磁盘数量	情形
RAID 1	2	一个成员硬盘有故障
RAID 5	≥ 3	一个成员硬盘有故障
RAID 6	≥ 4	一个或两个成员硬盘有故障
RAID 10	≥ 4 (必须为偶数)	处于两个不同对中的一个或两个成员硬盘有故障。
RAID 50	≥ 6	每个子组的一个磁盘有故障。
RAID 60	≥ 8	每个子组的两个磁盘有故障。

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. 从设备中取下故障硬盘。
6. 等待 20 秒或设备发出两声提示音。
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。
此时交换机会发出两声提示音。
10. 转到**主菜单 > 存储与快照总管 > 存储**。
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

交换机支持独有的 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。用户可以从降级模式恢复非活动 RAID 1、RAID 5、RAID 6、RAID 10、RAID 50 或 RAID 60 卷。

磁盘卷	RAID 恢复支持	磁盘数量	被移除硬盘的最大数量
单盘	否	1	不适用
JBOD	是	≥ 2	不适用
RAID 0	是	≥ 2	不适用
RAID 1	是	2	1
RAID 5	是	≥ 3	1
RAID 6	是	≥ 4	2
RAID 10	否	≥ 4 (必须为偶数)	处于两个不同对中的一个或两个成员硬盘有故障。

磁盘卷	RAID 恢复支持	磁盘数量	被移除硬盘的最大数量
RAID 50	是	≥ 6	每个子组的一个磁盘有故障。
RAID 60	是	≥ 8	每个子组的两个磁盘有故障。

强制 Qfinder Pro 和 myQNAPcloud 定位交换机

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

1. 关闭交换机。
2. 取下所有硬盘。
3. 启动交换机。
4. 使用 Qfinder Pro 定位交换机。
5. 重新插入硬盘。
6. 继续安装 QTS。

支持和其他资源

QNAP 提供了以下资源：

资源	URL
文档	https://download.qnap.com
兼容性列表	https://www.qnap.com/compatibility/
NAS 迁移兼容性	https://www.qnap.com/en/nas-migration
扩展单元兼容性	http://www.qnap.com/go/compatibility-expansion
服务门户	https://service.qnap.com
产品支持状态	https://www.qnap.com/product/eol.php
下载	https://download.qnap.com
社区论坛	https://forum.qnap.com
QNAP 配件商店	https://shop.qnap.com/

6. 术语表

myQNAPcloud

提供各种远程访问服务，如 DDNS 和 myQNAPcloud Link

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

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

QSS

QNAP 交换机管理应用程序

QTS

QNAP NAS 操作系统

QuNetSwitch

在 QTS 操作系统上运行的 QNAP 交换机管理应用程序

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