



QNAP

QSW-M5216-1T

用户指南

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1. 前言





关于本指南

本指南提供有关 QNAP QSW-M5216-1T 网络交换机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支持信息的说明。

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 QSW-M5216-1T

QSW-M5216-1T 是一款第 2 层 Web 托管交换机，具有 16 个 25 GbE SFP28 端口和 1 个 10GBASE-T 端口，用于实现高速数据传输。紧凑型外形规格支持简单分支部署，并允许您使用 QNAP 交换机系统 (QSS) 管理交换机操作。

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	电源
QSW-M5216-1T	Marvell ® ARMADA ® 88F6821	单一

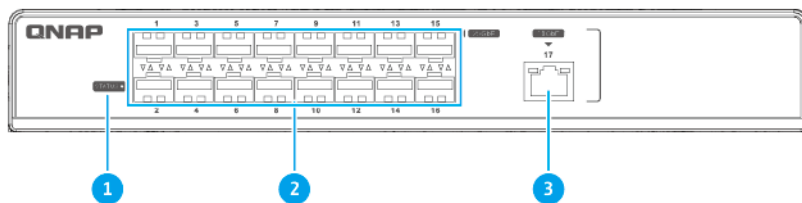
组件	QSW-M5216-1T
处理器	
CPU	Marvell ® ARMADA ® 88F6821
频率	双核 2.0 GHz
架构	ARM 32 位
网络	
25 Gb 网络接口	16 x 25 GbE SFP28
10 Gb 网络接口	1 x 10GbE RJ45
界面	
按钮	交换机重置按钮
尺寸	
外形规格	紧凑
尺寸 (高 x 宽 x 深)	43.5 x 285 x 237.7 mm (1.70 x 11.22 x 9.35 英寸)
净重	2.15 kg (4.73 磅)
工作温度	0°C 至 40°C (32 至 104°F)
相对湿度	<ul style="list-style-type: none"> 无冷凝相对湿度：5% 至 95% 湿球温度：27°C (80.6°F)

包装内容

项目	数量
QSW-M5216-1T	1
电源线	1
支架螺丝	6
支架	2
橡胶垫脚	4
快速安装指南 (QIG)	1

组件

前面板



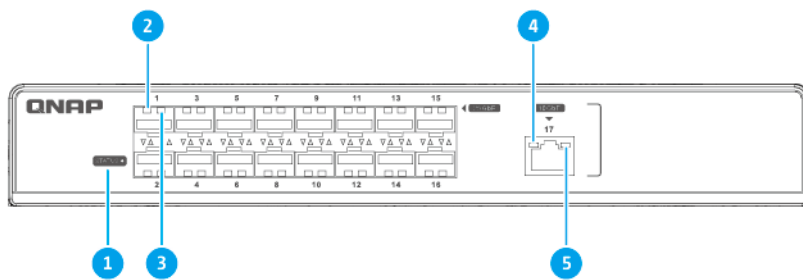
编号	组件	编号	组件
1	交换机状态 LED	3	10GBASE-T 端口 (RJ45)
2	25 Gb SFP28 端口	-	-

后面板



编号	组件	编号	组件
1	电源输入	4	重置按钮
2	管理端口	5	Kensington 安全锁孔
3	控制台端口	-	-

前面板 LED



编号	组件	编号	组件
1	交换机状态 LED	4	10GBASE-T 链路 (左) LED
2	25 Gb SFP28 链路 (左) LED	5	10GBASE-T 链路 (右) LED

编号	组件	编号	组件
3	25 Gb SFP28 链路 (右) LED	-	-

3. 安装和访问

本章提供特定硬件安装和交换机访问步骤。

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 • 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. 将交换机安装在机架上。
安装信息位于导轨套件包中。
3. 启动交换机。
有关详细信息，请参见[后面板](#)。
4. 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](#)。
5. 登录 QSS。

将交换机连接到计算机或网络

QSW-M5216-1T 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：

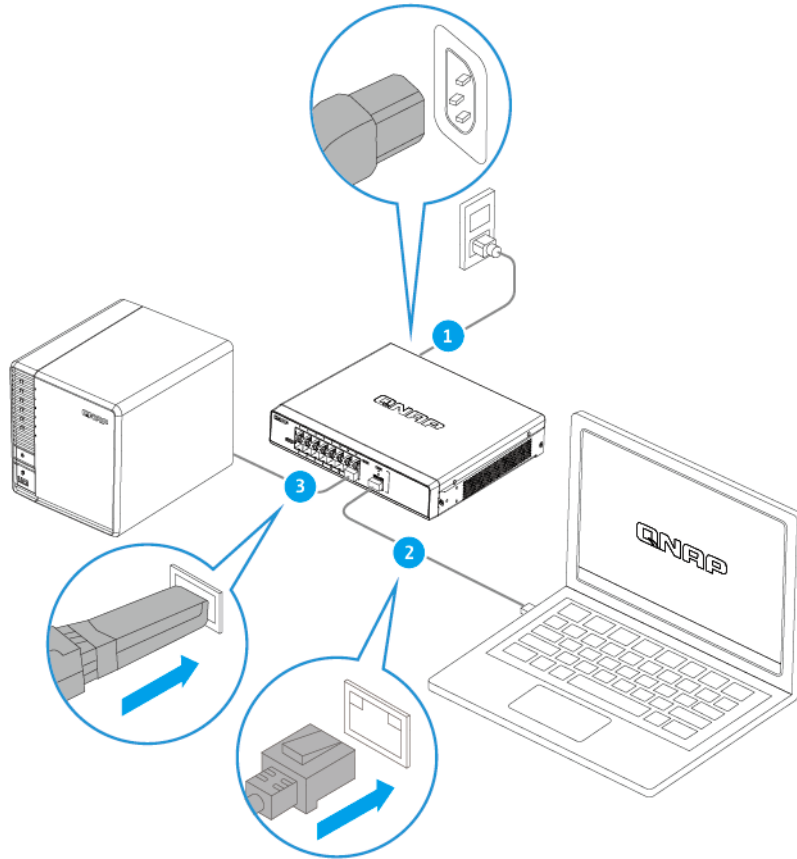
- [将交换机连接到计算机](#)
- [将交换机连接到网络](#)

将交换机连接到计算机

将交换机连接到 QNAP NAS 可以扩展存储容量，还可通过连接到 PoE 或主机端口的网线将数据备份到另一 NAS。但是，必须将交换机连接到计算机才能配置设置。

1. 启动交换机。

2. 将交换机连接到计算机。
 - a. 将网线连接到交换机上的主机端口。
 - b. 将网线连接到计算机上的千兆位网络端口。



3. 确认计算机可识别交换机。
 - 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

可以通过主机端口或任何 PoE 端口将交换机连接到局域网。

1. 启动交换机。
2. 通过主机端口将交换机连接到局域网。
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。
此时会出现 QSS 登录屏幕。
5. 输入 QSS 登录信息。
6. 单击登录。

交换机访问

方式	描述	要求
Web 浏览器	<p>如果您掌握以下信息，便可使用同一网络上的任意计算机访问交换机：</p> <ul style="list-style-type: none"> • 交换机名称（例如：http://example123/）或 IP 地址 • 有效用户帐户的登录凭据 <p>有关详细信息，请参见使用浏览器访问交换机</p>	<ul style="list-style-type: none"> • 连接到交换机所在网络的计算机 • Web 浏览器
Qfinder Pro	<p>Qfinder Pro 是一个桌面实用工具，可用于在特定网络上查找并访问 QNAP 设备。此实用工具支持 Windows、macOS、Linux 和 Chrome 操作系统。</p> <p>有关详细信息，请参见使用 Qfinder Pro 访问交换机。</p>	<ul style="list-style-type: none"> • 连接到交换机所在网络的计算机 • Web 浏览器 • Qfinder Pro

使用浏览器访问交换机



如果您知道交换机的 IP 地址和有效用户帐户的登录凭据，便可以使用网络上的任何计算机访问此交换机。QNAP 交换机默认支持 DHCP 客户端配置以进行 IP 分配。连接到网络时，交换机将自动从 DHCP 服务器获取 IP 地址。



注

- 如果不知道交换机的 IP 地址，可以使用 Qfinder Pro 查找该交换机。
- 如果交换机未连接到 DHCP 支持的网络，您可以将计算机的 IP 地址更改为 169.254.100.102 以访问交换机 Web 接口。
- 交换机的默认 IP 地址为 169.254.100.101。

1. 请确认您的计算机与交换机位于同一网络中。
2. 在计算机上打开 Web 浏览器。
3. 在地址栏中键入交换机的 IP 地址。
此时会出现 QSS 登录页面。
4. 指定默认用户名和密码。

默认用户名	默认密码
admin	<p>交换机映像的 MAC 地址会省略所有标点并大写所有字母。</p> <p> 提示 例如，如果 MAC 地址为 00:0a:0b:0c:00:01，则默认密码将为 000A0B0C0001。 您可以使用 Qfinder Pro 找到 MAC 地址。设备上的贴纸也印有带“MAC”字样的 MAC 地址。</p> <p> 注 首次登录后，系统将提示您更改密码。 出于安全原因，QNAP 强烈建议首次登录后更改密码。</p>

5. 单击登录。

此时会出现 QSS 桌面。



重要

设置交换机之后，请确保将计算机的 IP 地址更改为原始配置。

使用 Qfinder Pro 访问交换机


1. 在已连接到交换机所在网络的计算机上安装 Qfinder Pro。



提示

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

2. 打开 Qfinder Pro。
Qfinder Pro 会自动搜索网络上的所有 QNAP 设备。
3. 在列表中找到交换机，然后双击名称或 IP 地址。
QSS 登录屏幕将在默认 Web 浏览器中打开。
4. 指定默认用户名和密码。

默认用户名	默认密码
admin	<p>交换机映像的 MAC 地址会省略所有标点并大写所有字母。</p> <p> 提示 例如，如果 MAC 地址为 00:0a:0b:0c:00:01，则默认密码将为 000A0B0C0001。 您可以使用 Qfinder Pro 找到 MAC 地址。设备上的贴纸也印有带“MAC”字样的 MAC 地址。</p>

5. 单击登录。

此时会出现 QSS 桌面。

4. 基本操作

本章介绍交换机的基本操作。


LED

开启交换机电源后，LED 指示灯会指示系统状态和相关信息。以下 LED 信息仅适用于交换机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](#)。

LED	状态	描述
系统状态	绿色	设备已就绪。
	闪烁绿色	<ul style="list-style-type: none"> 设备正在初始化。 固件正在更新。 <div style="border-left: 1px solid black; padding-left: 10px; margin-top: 10px;"> <p>注 更新固件时，请勿拔下电源线或 USB 缆线，也不要强行退出应用程序。</p> </div> <ul style="list-style-type: none"> 设备正在重置。
	红色	设备发生致命错误。
	熄灭	设备已关机。
25 Gb SFP28 链路（左）	绿色	链路以 25 Gbps 的速度运行。
	闪烁绿色	正在传输数据。
	熄灭	没有网络连接。
25 Gb SFP28 链路（右）	橙色	链路以 10 或 1 Gbps 的速度运行。
	闪烁橙色	正在传输数据。
	熄灭	没有网络连接。
10GBASE-T RJ45 链路（左）	绿色	链路以 10 Gbps 的速度运行。
	闪烁绿色	正在传输数据。
	熄灭	没有网络连接。
10GBASE-T RJ45 链路（右）	橙色	链路以 5 Gbps、2.5 Gbps、1Gbps 或 100 Mbps 的速度运行。
	闪烁橙色	正在传输数据。
	熄灭	没有网络连接。

重置按钮

操作	用户操作	结果
基本系统重置	按住此按钮 5 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：默认密码为第一个 MAC 地址（去掉特殊字符），以大写字母表示。例如，如果第一个 MAC 地址为 00-08-9B-F6-15-75，则管理员密码为 00089BF61575。 <p> 注 您可以使用 Qfinder Pro 找到第一个 MAC 地址，此地址也可能粘贴在设备的标签上，列示为 MAC1。</p> <ul style="list-style-type: none"> admin 帐户将自动启用
高级系统重置	按住此按钮 10 秒钟。	恢复默认出厂设置。

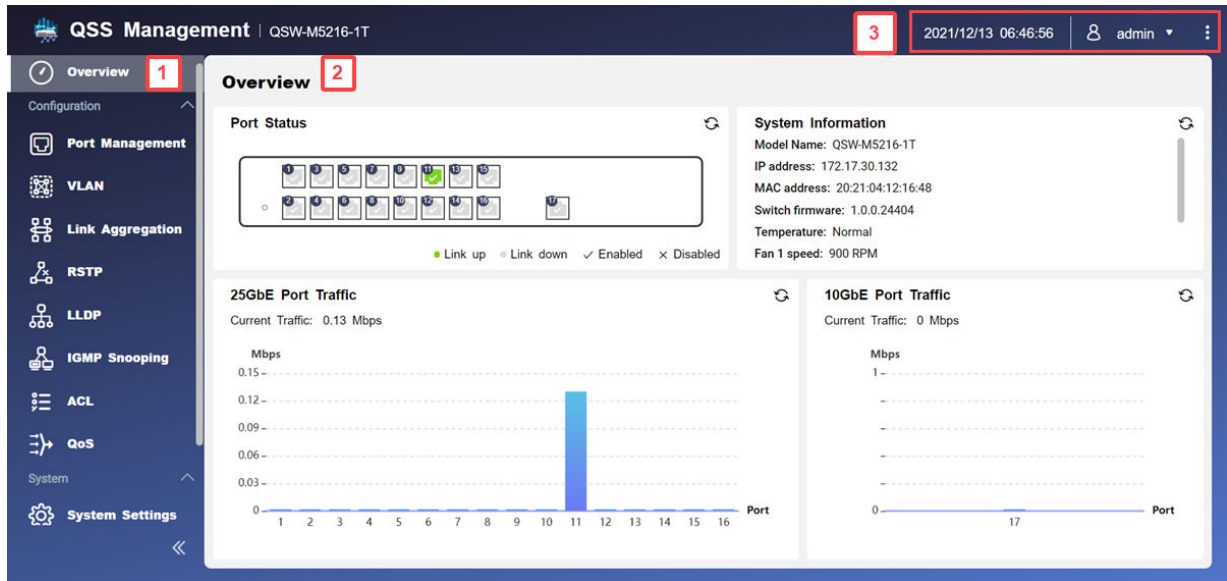
5. QSS




关于 QSS

QSS 是一款适用于托管 QNAP 交换机设备的集中管理工具。

用户界面的各个部分

QSS 用户界面包括三个主要区域。



标签	区域	描述
1	菜单	菜单有两个部分：配置和系统 单击  或  可展开或折叠菜单。
2	主面板	主面板显示选定的屏幕。
3	工具栏	工具栏显示以下信息： <ul style="list-style-type: none"> 在系统设置 > 时间中配置的日期和时间。 [用户名]：单击以访问注销按钮。 ：单击此项可查看以下信息： <ul style="list-style-type: none"> 重新启动交换机：重新启动交换机 语言：打开支持的语言列表，可用于更改操作系统的语言 关于：显示以下信息： <ul style="list-style-type: none"> 硬件型号 版本号

开始使用

1. 以管理员身份登录交换机。
默认管理员帐户为 `admin`。
有关详细信息，请参见[交换机访问](#)。
2. 配置系统设置。
有关详细信息，请参见[系统设置](#)。
3. 配置端口设置和其他网络设置。
有关详细信息，请参见[网络管理](#)。

6. 网络管理

本节介绍如何使用 QSS 网络设置来配置交换机。交换机的基本网络配置包括通过服务质量 (QoS) 和访问控制列表 (ACL) 进行的端口管理、VLAN 配置、各类协议的配置，以及流量管理。


仪表板

仪表板在 QSS 的配置部分打开。单击仪表板中的下拉菜单，可查看端口状态、VLAN 状态、链路聚合状态以及所有端口的端口流量。

您还可以删除用户配置的网络设置和监控交换机的网络设置。

配置端口设置

1. 登录 QSS。
2. 转到配置 > 端口管理。
3. 转到端口配置。
4. 指定一个端口。
5. 配置设置。

设置	描述
状态	控制端口的操作状态
速度	指定端口的最大运行速度。
流量控制	控制端口的流量控制状态
	 重要 当端口速度设置为 HDX 时，不支持流量控制。

6. 单击保存。

QSS 随即保存设置。

添加 VLAN

虚拟 LAN (VLAN) 将多个网络设备组合在一起并限制广播域。VLAN 的各成员之间彼此隔离，网络流量仅在组成员之间发送。

为每个 VLAN 均分配一个特定的 VLAN 识别码。此 **VLAN** 屏幕显示有关现有 VLAN 的信息，同时还可以通过此屏幕访问 VLAN 配置选项。


1. 登录 QSS。
2. 转到配置 > VLAN。
3. 单击添加。
此时会打开添加 VLAN 窗口。
4. 指定 VLAN ID。
5. 选择要包括在 VLAN 中的端口。
仅已标记的端口可以属于多个 VLAN。
6. 单击保存。



QSS 随即添加 VLAN。

配置链路聚合组

使用链路聚合控制协议 (LACP)，可以将多个网络适配器合并到一个逻辑网络接口中。这可以确保提高吞吐量，并实现冗余。如果某个端口发生故障，流量还会在其余端口继续。

链路聚合 页面显示有关现有链路聚合组的信息，同时还可以通过此页面访问配置选项。

1. 登录 QSS。
2. 转到 **配置 > 链路聚合**。
3. 指定组。
4. 单击 。
此时会打开 **编辑组** 窗口。
5. 配置组设置。

设置	描述
模式	控制组的链路聚合模式  重要 在将电缆连接到交换机之前，请先启用“链路聚合”以免产生数据循环。
端口配置	指定组中要包含哪些端口  注 您可以在一个组中添加最多 4 个端口。

6. 单击 **保存**。

QSS 随即更新组设置。

管理快速生成树协议 (RSTP) 设置

RSTP 提供了生成树的快速收敛，并为交换机网络构建了无环路拓扑。RSTP 支持在活动链路发生故障时启用备份链路。





注

- RSTP 默认处于禁用状态。
- 交换机的默认网桥优先级为 32768。

配置 RSTP 状态

1. 登录 QSS。
2. 转到 **配置 > RSTP**。
3. 更改 RSTP 控制状态。

切换设置	描述
	启用 RSTP 功能
	禁用 RSTP 功能

4. 单击保存。

QSS 随即保存设置。

设置网桥优先级

您可以在 RSTP 配置字段中配置交换机的 RSTP 网桥优先级。

1. 登录 QSS。
2. 转到配置 > RSTP > RSTP 配置。
3. 启用 RSTP。



注
有关详细信息，请参见[配置 RSTP 状态](#)。

4. 从下拉列表中选择 RSTP 网桥优先级。



注
默认优先级为 32768，对于根网桥优先级，建议将网桥优先级设置为 0。

5. 单击保存。



QSS 随即更新 RSTP 网桥优先级。

配置 LLDP 状态

链路层发现协议 (LLDP) 使用定期广播在网络上播发设备信息并发现邻近设备。此协议在运行时建立分布式数据库并从网络链路连接的邻近端口收集信息。

LLDP 页面显示有关检测到的设备的信息，同时可在此页面启用和禁用 LLDP。

1. 登录 QSS。
2. 转到配置 > LLDP。
3. 更改 LLDP 控制状态。

切换设置	描述
	启用 LLDP 功能
	禁用 LLDP 功能

4. 单击保存。

QSS 随即保存设置。

添加静态 MAC 地址

MAC 地址表跟踪 MAC 地址并通过特定端口转发相关的单播流量。

1. 登录 QSS。
2. 转到配置 > LLDP > MAC 地址表。
3. 指定 MAC 表的老化时间。



注
您可以配置条目在 MAC 表中保留的时间。


4. 单击**添加**。
此时会打开**添加静态 MAC 地址**窗口。
5. 配置 MAC 地址设置。
 - a. 指定 VLAN ID。
 - b. 指定 MAC 地址。
 - c. 至少选择一个端口。
6. 单击**保存**。
添加静态 MAC 地址窗口随即关闭。

QSS 随即添加 MAC 地址。

配置 IGMP 侦听

Internet 组管理协议 (IGMP) 管理 IP 多播组的成员关系。IP 主机和相邻的多播路由器使用 IGMP 来建立多播组成员关系。

IGMP 侦听页面显示有关检测到的 IGMP 组的信息，同时还可以通过此页面访问 IGMP 侦听配置选项。

1. 登录 QSS。
2. 转到配置 > **IGMP 侦听**。
3. 单击 。
QSS 随即启用 IGMP 侦听。
4. 配置 IGMP 设置。

设置	描述
多播泛洪阻止	阻止来自未知源的多播泛洪
路由器端口	指定要用作 VLAN 的路由器端口的端口 接收到 IGMP 数据包后，QSS 会通过选定的路由器端口转发流量。
快速离开	指定支持 IGMP v2 快速离开功能的端口。 接收到 IGMP 离开消息后，QSS 会停止向选定的快速离开端口转发多播流量。

5. 单击**保存**。

QSS 随即保存 IGMP 设置。

管理访问控制列表 (ACL) 条目

通过访问控制列表，可以使用受控规则集处理交换机内的网络流量。每个 ACL 规则专用于一组用户创建的条件，数据包必须满足这些条件才能匹配规则。在数据包没有可匹配的 ACL 规则的情况下，交换机将应用默认规则。否则，交换机会将数据包与规则进行匹配，并允许或拒绝该数据包。

您可以使用 ACL 控制主机对网络不同部分的访问，或在交换机级别下控制流量转发或阻止。

添加基于 IP 地址的 ACL 规则

1. 登录 QSS。
2. 转到配置 > ACL > 按 IP 地址。
3. 单击添加。
此时会打开添加 ACL - IP 地址窗口。
4. 配置 ACL 设置。

设置	用户操作
ACL 编号	请指定介于 1 到 255 之间的数字
来源	
IP 地址	指定源 IP 地址
子网掩码	指定源子网掩码
目标	
IP 地址	指定目标 IP 地址
子网掩码	指定目标子网掩码
端口	选择全部以选择所有端口，也可以单击端口复选框，在特定端口上配置基于 IP 地址的 ACL 规则。
权限	选择以下选项之一： <ul style="list-style-type: none"> • 允许 • 拒绝

5. 单击保存。

QSS 随即添加基于 IP 地址的 ACL 规则。

添加基于 MAC 地址的 ACL 规则

1. 登录 QSS。
2. 转到配置 > ACL > 按 MAC 地址。
3. 单击添加。
此时会打开添加 ACL - MAC 地址窗口。
4. 配置 ACL 设置。

设置	用户操作
ACL 编号	请指定介于 1 到 255 之间的数字
来源	

设置	用户操作
MAC 地址	指定源 MAC 地址
目标	
MAC 地址	指定目标 MAC 地址
端口	选择 全部 以选择所有端口，也可以单击端口复选框，在特定端口上配置基于 IP 地址的 ACL 规则。
权限	选择以下选项之一： <ul style="list-style-type: none"> • 允许 • 拒绝

5. 单击保存。

QSS 随即添加基于 MAC 地址的 ACL 规则。

配置 QoS 设置

服务质量(QoS)通过对不同的网络设备和数据包进行分类和优先级排序来改善网络流量的形成。

1. 登录 QSS。
2. 转到配置 > QoS。
3. 选择 QoS 模式。

模式	描述
基于端口	对每个端口的流量进行优先级排序
基于 VLAN	对每个 VLAN 的流量进行优先级排序

4. 配置优先级。




注
数字越大，优先级越高。

5. 单击保存。

QSS 随即更新 QoS 设置。

配置 QoS 的 CoS 优先级

CoS（服务等级）是以太网帧标头中的一个 3 位字段。CoS 值根据 CoS 值 (0-7) 决定流量转发到哪个队列。


1. 登录 QSS。
2. 转到配置 > QoS。
3. 指定一个端口。
4. 在 CoS 检测下单击 。
QSS 随即在端口上启用 CoS 检测。
5. 单击编辑 CoS 检测。
6. 为 CoS 值分配一个 1 到 8 之间的优先级值。

7. 单击**保存**。
QSS 更新 CoS 值的优先队列。
8. 单击**保存**。

QSS 随即更新 QoS 信息。

配置 QoS 的 DSCP 优先级

DSCP（差分服务代码点位）是数据包 IP 标头中的一个对数据包进行分类的 6 位字段。DSCP 值根据分配给 DSCP 值 (0-63) 的优先级决定数据包转发到哪个队列。

1. 登录 QSS。
2. 转到**配置 > QoS**。
3. 指定一个端口。
4. 在 DSCP 检测下单击 。
QSS 随即在端口上启用 DSCP 检测。
5. 单击**编辑 DSCP 检测**。
6. 为 DSCP 值分配一个 1 到 8 之间的优先级值。
7. 单击**保存**。
QSS 随即更新 DSCP 值的优先队列。
8. 单击**保存**。

QSS 随即更新 QoS 信息。


删除网络设置

1. 登录 QSS。
2. 转到**配置**。
3. 选择网络设置。



注

删除网络设置仅适用于 ACL 规则、链路聚合组、静态 MAC 地址和 VLAN。

4. 单击 。
此时会出现确认消息。
5. 单击**删除**。



QSS 随即删除网络设置。

监控网络设置

您可以在**配置**部分监控以下网络设置。这些设置可用于监控和诊断交换机操作。

1. 登录 QSS。
2. 转到**配置**。

3. 选择网络设置。

设置	描述
IGMP 侦听统计信息	转到 IGMP 侦听 > IGMP 侦听统计信息 。 显示有关已检测到的 IGMP 组的统计信息。
LLDP 远程设备	转到 LLDP > LLDP 远程设备 。 显示支持 LLDP 的端口的信息，包括系统功能和远程管理 IP 地址。 可能的系统功能包括： <ul style="list-style-type: none"> • 桥接器 • DOCSIS 线缆设备 • 中继器 • 保留 • 路由器 • 仅工作站 • 电话 • WLAN 接入点 • 其他
端口状态	转到 端口管理 > 端口状态 ，查看以下端口状态信息： <ul style="list-style-type: none"> • 端口号 • 端口链路状态 • 端口状态 • 端口速度 • 流量控制
端口统计信息	<p>a. 转到端口管理 > 端口统计信息，查看网络端口的统计信息。</p> <p>b.  单击 ，将查看选项更改为列表视图。</p>



7. 系统管理

可在**系统**部分访问设备配置选项。

系统设置

系统设置菜单包含交换机的系统信息、IP 信息、密码设置、安全连接设置以及时间设置等系统配置选项。


更改交换机字名称

1. 登录 QSS。
2. 转到**系统 > 系统设置 > 系统信息**。
3. 单击 。
4. 指定设备名称：
要求：
 - 长度：1-14 个字符
 - 有效字符：A-Z、a-z、0-9
 - 有效特殊字符：连字符 (-)
5. 单击  确认设备名称。

QSS 随即更新交换机名称。

配置交换机 IP 信息

1. 登录 QSS。
2. 转到**系统 > 系统设置 > IP**。
3. 选择网络配置设置。

设置	描述
自动获取 IP 与 DNS	如果网络支持 DHCP，则适配器会自动获取 IP 地址和网络设置。
手动设置 IP 与 DNS	手动分配静态 IP 地址。您必须指定以下信息： <ul style="list-style-type: none"> • 固定 IP 地址 • 子网掩码 • 默认网关 <div style="display: flex; align-items: center;">  <div style="border-left: 1px solid black; padding-left: 5px;"> <p>注 交换机的默认网关 IP 地址是可选的。</p> </div> </div>

4. 单击**保存**。
此时会出现确认消息。
5. 单击**是**。

QSS 随即更新 IP 信息。



注
使用 Qfinder Pro 查找交换机并登录到 QSS。

更新交换机密码

1. 登录 QSS。
2. 转到 **系统 > 系统设置 > 密码**。
3. 指定一个新密码。



提示
单击 可显示密码。

设置	用户操作
当前密码	指定设备的当前密码
新密码	指定包含 8 至 20 个 ASCII 字符的密码
确认新密码	重新输入新密码

4. 单击 **保存**。

QSS 随即从交换机界面中将您注销。您可以使用新密码访问交换机。

配置时间设置



注
必须正确配置系统时间以避免下列问题。

- 使用 Web 浏览器连接到设备或保存文件时，显示的操作时间不正确。
- 事件日志未反映事件发生的确切时间。
- 计划性任务在错误的时间运行。

1. 登录 QSS。
2. 转到 **系统 > 系统设置 > 时间**。
3. 指定时区。
4. 指定时间配置。

设置	描述
手动配置	指定日期和时间。
与 Internet 时间服务器同步	确保设备连接到 Internet，然后指定以下信息： 服务器： 网络时间协议 (NTP) 服务器的名称 示例：time.nist.gov、time.windows.com

5. 单击 **保存**。

QSS 随即更新时间设置。

备份系统设置

1. 登录 QSS。
2. 转到系统 > 系统设置 > 备份和恢复。
3. 单击备份。

设备会将系统设置导出为 BIN 文件，并将该文件下载至计算机。

恢复系统设置



警告

如果选定的备份文件包含设备上已存在的用户或用户组信息，系统将覆盖现有信息。


1. 登录 QSS。
2. 转到系统 > 系统设置 > 备份和恢复。
此时会打开文件资源管理器窗口。
3. 单击浏览。
4. 选择包含设备系统设置的有效 BIN 文件。
5. 单击恢复。

QSS 恢复交换机设置。

重置交换机密码

1. 登录 QSS。
2. 转到系统 > 系统设置 > 备份和恢复。
3. 转到系统 > 系统设置 > 备份和恢复。
4. 单击密码重置。

QSS 随即重置交换机密码。

默认用户名	默认密码
admin	<p>交换机映像的 MAC 地址会省略所有标点并大写所有字母。</p> <p> 提示 例如，如果 MAC 地址为 00:0a:0b:0c:00:01，则默认密码将为 000A0B0C0001。 您可以使用 Qfinder Pro 找到 MAC 地址。设备上的贴纸也印有带“MAC”字样的 MAC 地址。</p>

将交换机重置为出厂设置

重置交换机会删除设备上存储的数据，并将交换机恢复到默认的出厂设置。




提示

还可以按住实体重置按钮 10 秒，将交换机重置为出厂默认设置。

1. 登录 QSS。
2. 转到**系统 > 系统设置 > 备份和恢复**。
3. 单击**恢复出厂设置**。
此时会出现确认消息。
4. 单击**是**。

QSS 随即将交换机重置为出厂默认设置。

默认用户名	默认密码
admin	<p>交换机映像的 MAC 地址会省略所有标点并大写所有字母。</p> <p> 提示 例如，如果 MAC 地址为 00:0a:0b:0c:00:01，则默认密码将为 000A0B0C0001。 您可以使用 Qfinder Pro 找到 MAC 地址。设备上的贴纸也印有带“MAC”字样的 MAC 地址。</p>

启用安全连接 (HTTPS)

1. 登录 QSS。
2. 转到**系统 > 系统设置 > HTTPS**。
3. 选择**启用安全连接**。
4. 选择 TLS 版本。



注

选择 TLS 最新版本以最大程度地提高系统安全性。确保系统满足 TLS 要求以避免兼容性问题。

5. 可选: 选择**强制仅使用安全连接**。




注

启用此设置后，仅可通过 HTTPS 访问 Web 管理页面。

6. 单击**保存**。

QSS 随即保存安全连接设置。

重新启动交换机

1. 登录 QSS。
2. 单击位于页面右上角的 。
3. 单击**重新启动交换机**。
此时会出现确认消息。
4. 单击**是**。

QSS 随即重新启动交换机。

查看交换机信息

要查看交换机的硬件和系统信息，可以转到**系统 > 系统信息**。

该屏幕提供以下信息。

信息	描述
交换机名称	显示设备的默认名称或修改后的名称
型号名称	显示交换机的型号名称
MAC 地址	显示交换机映像的 MAC 地址
IP 地址	显示交换机的 DHCP 或静态 IP 地址
系统运行时间	显示系统的运行时间
当前固件版本	显示交换机的固件映像版本

固件更新



QNAP 建议设备固件始终保持最新版本。这可确保您的设备可以从新 QSS 软件功能、安全更新、增强功能和错误修复中获益。

可以使用以下方法之一更新 NAS 固件：

更新方法	描述
使用 实时更新	QSS 会自动检测固件更新并将其安装到您的设备上。 有关详细信息，请参见 检查实时更新 。
使用 固件更新	您可以在 QNAP 网站 上检查最新的设备固件更新，将固件更新下载到计算机并将固件更新手动安装到您的设备。 有关详细信息，请参见 手动更新固件 。

固件要求

设备必须符合以下要求才能执行固件更新：

设置	要求
硬件设置	<ul style="list-style-type: none"> 一台计算机 <p> 注 需要一台计算机才能手动或通过 Qfinder Pro 更新固件。</p> <p>以太网线</p> <p> 注 QNAP 建议使用有线以太网连接更新固件，以确保在固件更新过程中网络连接稳定可靠。</p>
备份系统设置	QNAP 建议在更新固件前将系统设置备份到计算机。 有关详细信息，请参见 备份系统设置 。
管理员权限	您必须是交换机管理员或具有管理权限才能更新固件。
停止交换机操作	QNAP 建议在固件更新前停止所有其他交换机操作。要使固件更新生效，必须重新启动交换机，并且可能会中断正在进行的交换机服务或操作。

设置	要求
设备型号名称	<p>确保您具有正确的交换机型号名称。您可以使用以下方法找到交换机型号名称：</p> <ul style="list-style-type: none"> • 在设备底部或后面的贴纸上找到设备型号名称。 • 登录设备找到型号名称。
固件版本	<p>如果正在使用固件更新或 Qfinder Pro 更新固件，请确保所选固件版本适用于您的设备型号。</p>

检查实时更新



警告

- 为防止数据丢失，QNAP 建议您在更新固件前备份设备上的所有数据。有关数据备份的详细信息，请参见[备份系统设置](#)。
- 在固件更新过程中不要关闭设备。



重要

- 在更新固件前，确保您已查看[固件要求](#)的全部内容。
- 更新可能需要花费数分钟或更长时间，具体取决于硬件配置和网络连接。

1. 登录 QSS。
2. 转到**系统 > 固件更新 > 实时更新**。
3. 单击**刷新检查**。
QSS 将检查是否有固件更新可用。如果有可用更新，您可以选择更新 QSS。
4. 单击**更新系统**。
此时会出现确认消息。
5. 单击**更新**。

QSS 随即更新固件。

手动更新固件



警告

- 为防止数据丢失，QNAP 建议您在更新固件前备份设备上的所有数据。有关数据备份的详细信息，请参见[备份系统设置](#)。
- 在固件更新过程中不要关闭设备。



重要

- 在更新固件前，确保您已查看[固件要求](#)的全部内容。
- 更新可能需要花费数分钟或更长时间，具体取决于硬件配置和网络连接。

1. 下载设备固件。
 - a. 转到 <http://www.qnap.com/download>。

- b. 选择产品类型。
- c. 选择您的设备型号。
- d. 阅读发行说明并确认以下信息：
 - 设备型号与固件版本匹配。
 - 需要更新固件。
 - 检查是否有其他固件更新设置说明。

2. 确保产品型号与固件正确。
3. 根据您的位置选择下载服务器。
4. 下载固件包。
5. 单击**浏览**。
6. 选择一个文件夹。
7. 保存下载的固件包。
8. 解压缩固件映像文件。
9. 登录 QSS。
10. 转到**系统 > 固件更新 > 固件更新**。
11. 单击**浏览**，然后选择解压缩后的固件映像文件。
12. 单击**更新系统**。
此时会出现确认消息窗口。
13. 单击**更新**。

设备会立即重新启动。

8. 支持和其他资源

QNAP 提供了以下资源：

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

9. 术语表

myQNAPcloud

提供各种远程访问服务，如 DDNS 和 myQNAPcloud Link

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

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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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 A 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，以防止在商业环境中运行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，如果不按说明手册安装和使用，可能会对无线电通信产生有害干扰。在住宅区运行本设备可能会造成有害干扰，用户需自付费用消除干扰。



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。

欧盟指令 2002/96/EC 废弃电子电气设备 (WEEE)



根据 WEEE 法规的要求，向所有受 WEEE 指令约束的 QNAP 品牌电子产品提供以下用户信息。

产品或其包装上的此标志表示该产品不得与其他生活垃圾一起处理。相反，您有责任将废弃设备移交给指定的回收废弃电气和电子设备的回收点，来处置废弃设备。在处置时对废弃设备进行单独收集和回收，将有助于保护自然资源，并确保以保护人类健康和环境的方式进行回收。有关废弃设备回收点位置的更多信息，请联系您当地的市政府、生活垃圾处理服务或购买产品的商店。

EU RoHS 声明

本设备符合关于限制在电子电器设备中使用某些有害成分的欧盟 RoHS 指令 2011/65/EU。该指令适用于在电子电器设备中使用铅、汞、镉、六价铬、多溴联苯 (PBB) 和多溴联苯醚 (PBDE)。

UKCA 声明



此设备符合在英国销售产品的 UKCA 要求。