



**QNAP**

# TS-x28A

TS-128A

TS-228A

用户指南

# 内容

<b>1. 前言</b>	
关于本指南.....	2
受众.....	2
文档约定.....	2
<b>2. 产品概述</b>	
关于 TS-x28A.....	3
硬件规格.....	3
包装内容.....	4
组件.....	4
前面板.....	4
后面板.....	5
正面硬盘编号.....	5
安装要求.....	6
设置 NAS.....	6
<b>3. 安装和配置</b>	
硬盘安装.....	7
安装 3.5 英寸硬盘.....	7
QTS 安装.....	10
使用 Qfinder Pro 安装 QTS.....	10
使用 Cloud Key 安装 QTS.....	12
<b>4. 基本操作</b>	
电源按钮.....	15
重置按钮.....	15
USB 一键复制按钮.....	15
LED.....	16
提示音警报.....	17
<b>5. 故障排除</b>	
强制 Qfinder Pro 或 myQNAPcloud 定位 NAS.....	18
支持和其他资源.....	18
<b>6. 术语表</b>	
CloudKey.....	19
CloudLink.....	19
myQNAPcloud.....	19
myQNAPcloud ID.....	19
Qfinder Pro.....	19
QTS.....	19
<b>7. 声明</b>	
有限保修.....	20
免责声明.....	20
GNU Public License.....	20
FCC 声明.....	28
CE 声明.....	28
SJ/T 11364-2006.....	28

# 1. 前言





## 关于本指南

本指南提供有关 QNAPTS-x28A 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，提供有关执行某项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-x28A NAS 的基本信息。

### 关于 TS-x28A

TS-x28A 是一款简单易用的轻量型 NAS，专为备份、同步、远程访问和家庭娱乐而设计。TS-x28A 可以为多位用户提供平稳、无缝的数据传输。此机型由 Realtek RTD 1295 四核 ARM Cortex A53 处理器提供支持，采用 1 GB DDR4 内存。此型 NAS 采用免工具立式设计，是家庭和小型公司的理想之选。

### 硬件规格



#### 重要

修改 QNAP 产品的硬件或软件会使保修失效。对于因未经授权进行的修改和安装不受支持的第三方应用程序而造成的任何损坏或数据丢失，QNAP 概不负责。

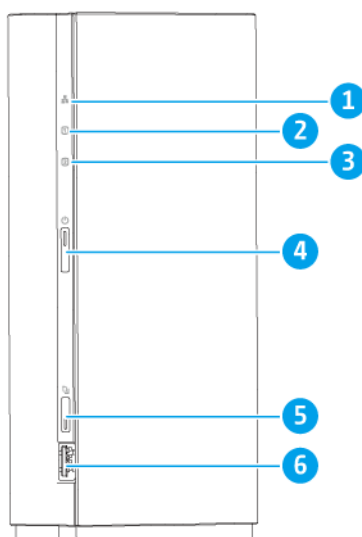
组件	TS-128A	TS-228A
处理器		
CPU	Realtek RTD 1295 四核 ARM Cortex A53 1.4 GHz 处理器	
架构	64 位	
内存		
最大内存	系统：1 GB DDR4 闪存：4 GB eMMC	
存储		
支持的 HDD	1 x 3.5 英寸 SATA 6 Gbps	2 x 3.5 英寸 SATA 6 Gbps
硬盘兼容性	3.5 英寸 SATA 机械硬盘	
网络		
千兆位以太网端口	1 x RJ45	
外部 I/O 端口和扩展插槽		
USB 端口	<ul style="list-style-type: none"> <li>正面：1 x USB 3.0 A 型</li> </ul> <div style="display: flex; align-items: center; margin: 5px 0;"> <div> <p><b>注</b></p> <p>您可以将一键复制按钮与此端口搭配使用。</p> </div> </div> <ul style="list-style-type: none"> <li>背面：2 x USB 2.0 A 型</li> </ul>	
尺寸		
外形规格	立式	
尺寸（高 x 宽 x 深）	187.7 x 60 x 125 mm 7.36 x 2.36 x 4.92 英寸	187.7 x 90 x 125 mm 7.36 x 3.54 x 4.92 英寸
净重	0.56 kg（1.23 磅）	0.7 kg（1.54 磅）
其他		
电源单元	36W, 100-240V AC, 50/60Hz	60W, 100-240V AC, 50/60Hz
系统风扇	40 x 40 mm	
工作温度	0 至 40°C（32 至 104°F）	
相对湿度	<ul style="list-style-type: none"> <li>无冷凝相对湿度：5 至 95%</li> <li>湿球温度：27°C（80.6°F）</li> </ul>	

**重要**

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>。

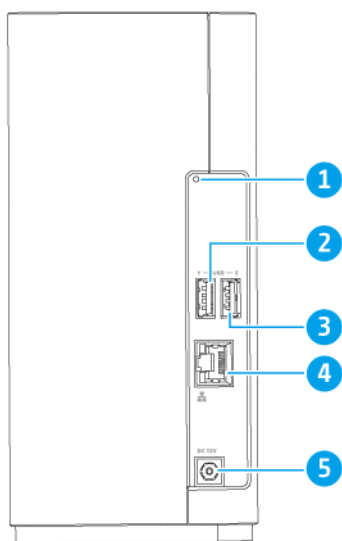
**包装内容**

项目	数量
TS-x28A	1
HDD 固定面板	TS-128A: 1 对 TS-228A: 2 对
交流电源适配器	1
电源线	1
以太网线	1
《快速安装指南 (QIG)》	1

**组件****前面板****TS-228A**

编号	组件	编号	组件
1	LAN LED	4	电源按钮
2	硬盘 1 LED	5	USB 一键复制按钮
3	硬盘 2 LED	6	USB 3.0 一键复制端口

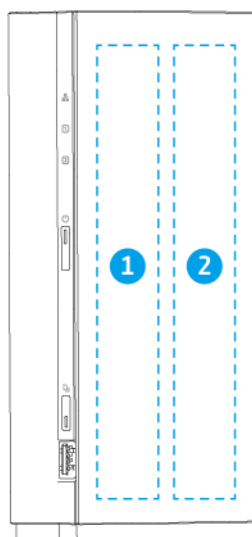
## 后面板



## TS-228A

编号	组件	编号	组件
1	重置按钮	4	千兆位 RJ45 以太网端口
2	USB 2.0 端口 1	5	电源输入
3	USB 2.0 端口 2	-	-

## 正面硬盘编号



## 安装要求

类别	项目
环境	<ul style="list-style-type: none"> <li>• 室温：0 至 40°C（32 至 104°F）</li> <li>• 无冷凝相对湿度：5 至 95%</li> <li>• 湿球温度：27°C (80.6°F)</li> <li>• 平坦的防静电表面，无直射阳光、液体和化学药剂</li> </ul>
硬件和外围设备	<ul style="list-style-type: none"> <li>• 存储硬盘</li> <li>• 网线</li> </ul>
工具	防静电腕带

## 设置 NAS

1. 将 NAS 设备置于符合要求的环境中。
2. 安装硬盘。  
有关详细信息，请参见[安装 3.5 英寸硬盘](#)。
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。

#### 硬盘安装

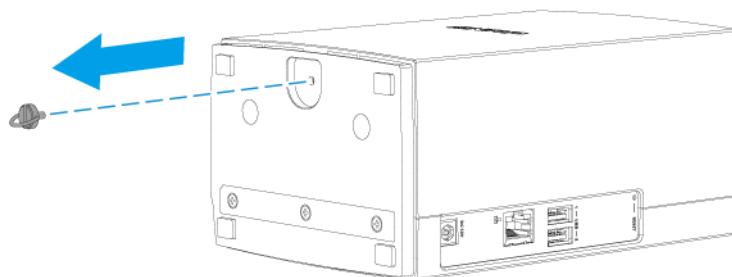
##### 安装 3.5 英寸硬盘



#### 警告

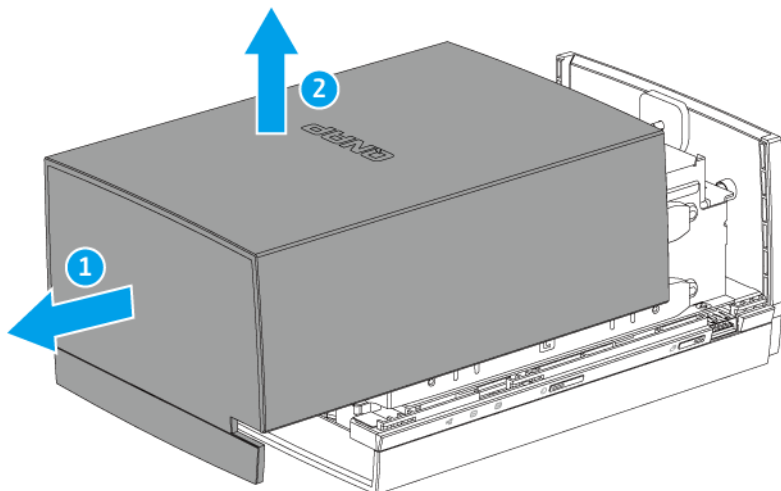
安装硬盘将删除硬盘上的所有数据。  
请执行静电放电 (ESD) 规程，以避免组件损坏。

1. 关闭 NAS 电源。
2. 从插座上拔下电源线。
3. 拔掉所有线缆和外接部件。
4. 取下外壳盖。
  - a. 将 NAS 左侧朝下放置。
  - b. 取下 NAS 底部的免工具螺丝。



- c. 滑动盖板，使其离开底座，解除锁定。
- d. 向上拉起盖板，使其完全脱离机箱。

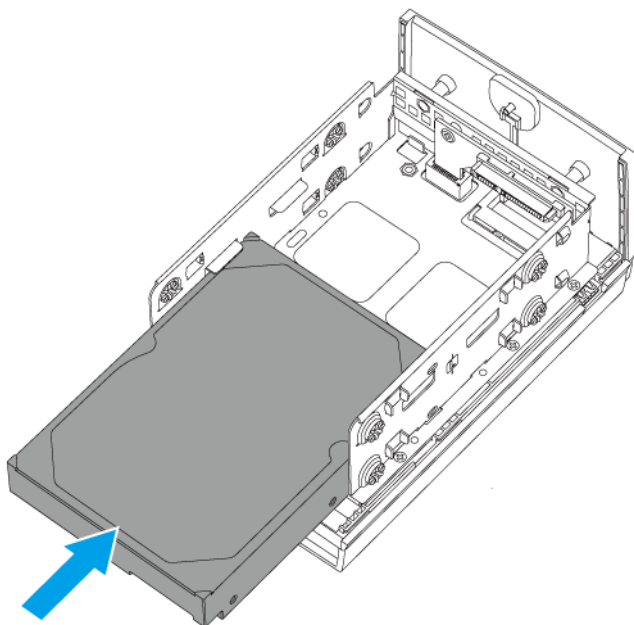




5. 将硬盘滑入托盘，直至与 SATA 连接器完全连接。

**重要**

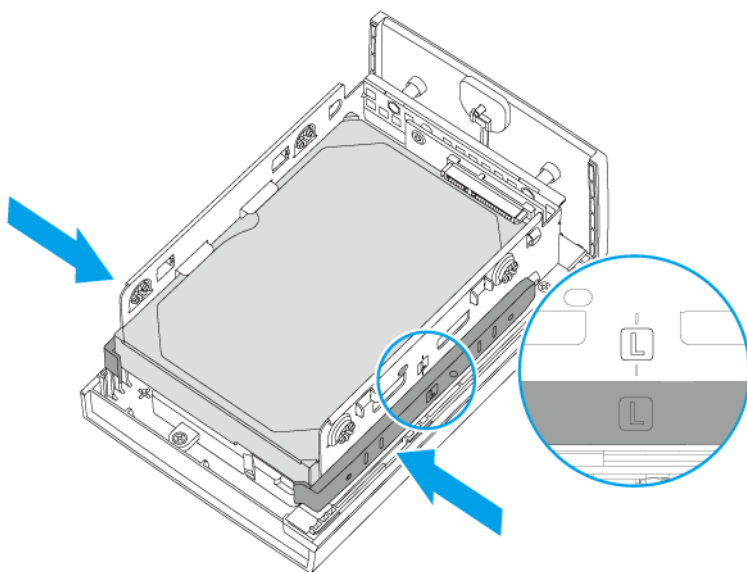
在 TS-228A 上安装硬盘时，务必从插槽 1 开始安装。  
有关详细信息，请参见[正面硬盘编号](#)。



6. 装上固定面板。

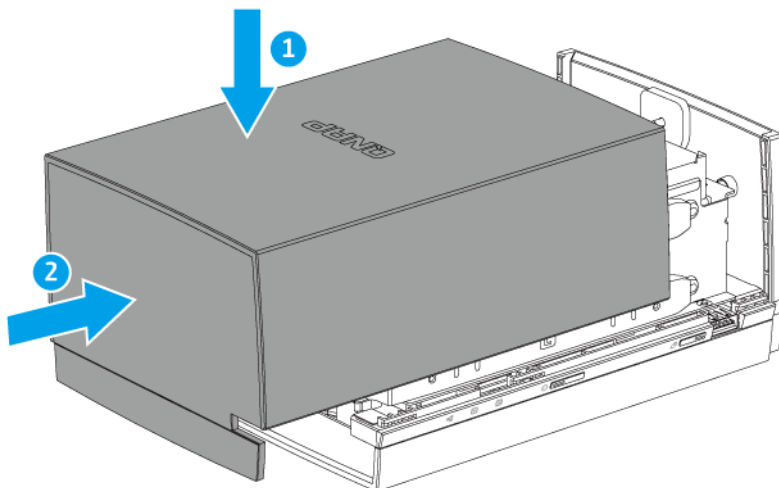
**提示**

固定面板不能互换。请检查面板上的标识，将其安装到正确的一侧。

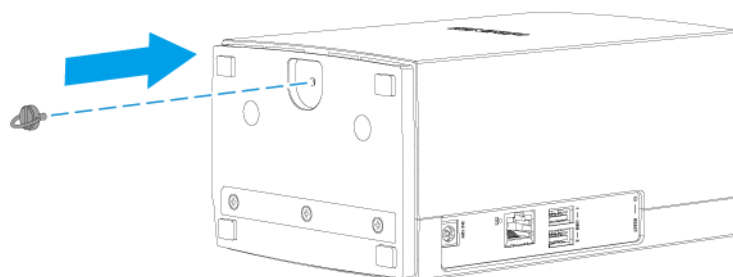


## 7. 安装外壳盖。

- a. 将盖板与外壳上的凹槽对齐。
- b. 将盖板滑向底座，将其锁定到位。



- c. 将免工具螺丝安装到 NAS 底部。



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。

## QTS 安装

### 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. 执行以下任一操作。
  - 要检查是否有可供使用的最新版本，单击**开始**。  
向导会下载可供使用的最新版本，下载完成后，NAS 会重新启动。如果没有更新的版本，向导会自动显示**智能安装指南**。
  - 要安装立即可用的版本，单击**跳过**。
6. 单击**启动智能安装指南**。
7. 指定以下信息。

- **NAS 名称:** 指定 1 至 14 个字符的名称。名称支持字母（A 到 Z、a 到 z）、数字（0 到 9）和连字符 (-)，但不能以连字符结尾。
- **密码:** 指定 1 至 64 个字符的管理员密码。密码支持所有 ASCII 字符。

8. 单击下一步。
9. 指定时区、日期和时间。

**提示**

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

10. 单击下一步。
11. 选择**自动获取 IP 地址(DHCP)**。
12. 单击下一步。
13. 选择将用于访问 NAS 上共享文件夹的设备类型。
14. 单击下一步。
15. 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。

16. 配置磁盘设置。
  - a. 选择卷类型。
  - b. 选择要用于创建 RAID 组的磁盘。
  - c. 可选: 选择 RAID 类型。

**注**

**智能安装指南**会根据所选磁盘的数量自动选择最佳的 RAID 类型。

- d. 可选: 选择**加密磁盘卷和坏块扫描**。
17. 单击下一步。
  18. 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。

19. 单击下一步。
20. 检查设置。
21. 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。

22. 单击**确认**。  
QTS 即安装完毕。

## 使用 Cloud Key 安装 QTS

**警告**

安装 QTS 将删除硬盘上的所有数据。请先备份您的数据，然后再继续。

1. 启动 NAS 电源。
2. 将 NAS 连接到 Internet。
3. 使用以下方法之一转到“QNAP 云端安装程序”页面：
  - 在您的计算机上，转到 <http://install.qnap.com/>。
  - 使用移动设备扫描 NAS 上的二维码。

网页中会列出本地网络上所有尚未初始化的 QNAP NAS 设备。

4. 从列表中找到您的 NAS，然后单击**初始化**。

**注**

如果未列出您的 NAS，请按网页上的说明指定 NAS 上的 Cloud Key。

安装向导将在默认 Web 浏览器中打开。

5. 创建帐户或登录 myQNAPcloud。

**注**

创建帐户后，您必须返回此页面才能完成安装。

6. 为 NAS 指定 myQNAPcloud 设备名称。

**注**

myQNAPcloud 设备名称用于远程访问 NAS。

7. 可选: 选择 **CloudLink**。

**注**

- 使用 CloudLink，可以远程访问 NAS，而无需在路由器上配置端口转发。您可以通过登录 QTS 或使用移动应用来远程访问 NAS。
- 还可以通过在 NAS 上安装 CloudLink 应用来启用 CloudLink。

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

9. 执行以下任一操作。

- 要检查是否有可供使用的最新版本，单击**开始**。  
向导会下载可供使用的最新版本，下载完成后，NAS 会重新启动。如果没有更新的版本，向导会自动显示**智能安装指南**。

- 要安装立即可用的版本，单击**跳过**。

10. 单击**启动智能安装指南**。

11. 指定以下信息。

- **NAS 名称**：指定 1 至 14 个字符的名称。名称支持字母（A 到 Z、a 到 z）、数字（0 到 9）和连字符 (-)，但不能以连字符结尾。
- **密码**：指定 1 至 64 个字符的管理员密码。密码支持所有 ASCII 字符。

12. 单击**下一步**。

13. 指定时区、日期和时间。

**提示**

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

14. 单击**下一步**。

15. 选择**自动获取 IP 地址(DHCP)**。

16. 单击**下一步**。

17. 选择将用于访问 NAS 上共享文件夹的设备类型。

18. 单击**下一步**。

19. 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。

20. 配置磁盘设置。

- a. 选择卷类型。
- b. 选择要用于创建 RAID 组的磁盘。
- c. 可选：选择 RAID 类型。

**注**

智能安装指南会根据所选磁盘的数量自动选择最佳的 RAID 类型。

- d. 可选：选择**加密磁盘卷**和**坏块扫描**。

21. 单击**下一步**。

22. 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。

23. 单击**下一步**。

24. 检查设置。

25. 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。

26. 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。
		 <b>重要</b> 仅当 NAS 无响应时才能使用此方法。

### 重置按钮

操作	用户操作	结果
基本系统重置	按住此按钮 3 秒钟。	以下设置将重置为默认值： <ul style="list-style-type: none"> <li>• 系统管理员密码：admin</li> <li>• TCP/IP 配置：               <ul style="list-style-type: none"> <li>• 通过 DHCP 自动获取 IP 地址设置</li> <li>• 禁用巨型帧</li> <li>• 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)”。</li> </ul> </li> <li>• 系统端口：8080（系统服务端口）</li> <li>• 安全等级：低（允许所有连接）</li> <li>• LCD 面板密码：（空白）</li> <li>• VLAN：禁用</li> </ul>
高级系统重置	按住此按钮 15 秒钟。	恢复默认出厂设置。 <ul style="list-style-type: none"> <li>• 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。</li> </ul>

### USB 一键复制按钮

使用 USB 一键复制按钮，可以将数据备份从外部 USB 设备复制到 NAS，或将数据备份从 NAS 复制到外部 USB 设备。

此功能支持增量备份。NAS 只会复制在上次备份后修改或添加的文件。

有关配置 USB 一键复制的详细信息，请参见《QTS 用户指南》。



## LED

开启 NAS 电源后，LED 指示灯会指示系统状态和相关信息。以下 LED 信息仅适用于硬盘已正确安装并且 NAS 已连接到网络的情况。

有关 LED 位置的详细信息，请参见[组件](#)。

LED	状态	描述
系统状态	红绿交替闪烁，间隔 0.5 秒	<ul style="list-style-type: none"> <li>• 硬盘正在格式化。</li> <li>• NAS 正在初始化。</li> <li>• 操作系统正在更新。</li> <li>• RAID 正在重建。</li> <li>• 正在进行在线 RAID 容量扩展。</li> <li>• 正在进行在线 RAID 级别迁移。</li> </ul>
	红色	<ul style="list-style-type: none"> <li>• 硬盘无效。</li> <li>• 磁盘卷的容量已满。</li> <li>• 磁盘卷的容量即将被占满。</li> <li>• 系统风扇故障。</li> <li>• 访问（读/写）数据时出错。</li> <li>• 在硬盘上检测到坏扇区。</li> <li>• 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）。</li> <li>• 硬件自检错误</li> </ul>
	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"> <li>• NAS 正在启动。</li> <li>• NAS 未配置。</li> <li>• 硬盘未格式化。</li> </ul>
	闪烁绿色，间隔 2 秒	NAS 处于 S3 睡眠模式。
	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"> <li>检测到 USB 设备（已连接到前 USB 端口）。</li> <li>正在从 NAS 移除 USB 设备（已连接到前 USB 端口）。</li> <li>正在访问 USB 设备（已连接到 NAS 的前 USB 端口）。</li> <li>正在与 USB 或 eSATA 设备间复制数据。</li> </ul>
	蓝色	在前 USB 端口中检测到 USB 设备。
	熄灭	<ul style="list-style-type: none"> <li>未检测到 USB 设备。</li> <li>NAS 已经完成与连接到前 USB 端口的 USB 设备间的数据复制。</li> </ul>

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

## 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。

### 支持和其他资源

QNAP 提供了以下资源：

资源	URL
文档	<a href="http://docs.qnap.com">http://docs.qnap.com</a>
技术支持	<a href="http://helpdesk.qnap.com">http://helpdesk.qnap.com</a>
下载	<a href="http://download.qnap.com">http://download.qnap.com</a>
社区论坛	<a href="http://forum.qnap.com">http://forum.qnap.com</a>

## 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. 声明

本章提供有关保修、免责声明、许可和联邦法规的信息。

### 有限保修

QNAP 为本公司产品提供有限保修服务。自发票注明日期起一 (1) 年或更长期限内，QNAP 品牌的硬件产品享受材料和工艺缺陷的保修服务。("保修期")。请访问 [www.qnap.com/warranty](http://www.qnap.com/warranty) 查看您的法定权利 (QNAP 可不时自行修改这些权利)。

### 免责声明

本档中提供的信息与 QNAP Systems, Inc. (即 "QNAP") 的产品有关。本档未通过禁止反言或其他方式授予对任何知识产权的明示或暗示许可。除非在 QNAP 针对此类产品的销售条款和条件中明确注明，QNAP 不承担任何责任，并且 QNAP 不提供任何与 QNAP 产品的销售和/或使用有关的明示或暗示的担保，包括与特定用途的适用性、适销性或者侵犯任何专利、版权或其他知识产权有关的责任或担保。

QNAP 产品不适用于医疗、救生、生命维持、关键控制、安全系统或核设施应用。

在任何情况下，对于因使用本产品、其随附软件或文档而导致的直接、间接、特殊、偶发或继发损失，QNAP 的赔偿责任均不超出产品售价。QNAP 对其产品或本文档的内容或使用以及所有随附软件，不做任何明示、暗示或法定的保证或表述，并特别声明，不保证其质量、性能、适销性或适用于任何特定用途。QNAP 保留修改或更新其产品、软件或文档的权利，无需通知任何个人或实体。

建议定期备份系统，以避免任何潜在的数据丢失。QNAP 对所有类型的数据丢失或恢复不承担任何责任。

如果退回 QNAP 产品 (例如 NAS, 网络连接存储) 包装中的任何组件进行退款或维修，请务必妥善包装以便运输。对于因包装不当而造成的任何形式的损坏，QNAP 将不予赔偿。

所有特性、功能和其他产品规格如有更改，恕不另行通知，亦不承担任何责任。本文所包含的信息如有更改，恕不另行通知。

此外，文中未使用 ® 或 ™ 符号。

### GNU Public License

Version 3, 29 June 2007

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### Preamble

The GNU General Public License is a free, copy left license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

## Terms and Conditions

### 1. Definitions.

“This License” refers to version 3 of the GNU General Public License.

“Copyright” also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

“The Program” refers to any copyrightable work licensed under this License. Each licensee is addressed as “you”. “Licensees” and “recipients” may be individuals or organizations.

To “modify” a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a “modified version” of the earlier work or a work “based on” the earlier work.

A “covered work” means either the unmodified Program or a work based on the Program.

To “propagate” a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To “convey” a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays “Appropriate Legal Notices” to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

### 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.

A “Standard Interface” means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

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.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

### 3. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below.

Sublicensing is not allowed; section 10 makes it unnecessary.

### 4. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work’s users, your or third parties’ legal rights to forbid circumvention of technological measures.

### 5. Conveying Verbatim Copies.

You may convey verbatim copies of the Program’s source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

#### 6. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a. The work must carry prominent notices stating that you modified it, and giving a relevant date.
- b. The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to “keep intact all notices” .
- c. You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.
- d. If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.  
A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an “aggregate” if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

#### 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.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A “User Product” is either (1) a “consumer product”, which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, “normally used” refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

“Installation Information” for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

## 8. Additional Terms.

“Additional permissions” are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a. Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or
- b. Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or
- c. Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

- d. Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e. Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f. Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors. All other non-permissive additional terms are considered “further restrictions” within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying. If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms. Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

## 9. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

## 10. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

## 11. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An “entity transaction” is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party’s predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in

a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

## 12. Patents.

A “contributor” is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's “contributor version” .

A contributor's “essential patent claims” are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, “control” includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a “patent license” is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To “grant” such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. “Knowingly relying” means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is “discriminatory” if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

## 13. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

## 14. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

**15. Revised Versions of this License.**

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License “or any later version” applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

**16. Disclaimer of Warranty.**

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

**17. Limitation of Liability.**

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

**18. Interpretation of Sections 16 and 17.**

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

## FCC 声明

### FCC B 类声明



本设备符合 FCC 规则第 15 部分的规定。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

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。

## CE 声明



本 QNAP NAS 符合 CE 合规性 B 类标准。

## 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。						