



QNAP Turbo NAS

硬件使用手册

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感谢您购买威联通产品。此使用手册提供 Turbo NAS 的硬件说明及相关功能介绍，请仔细阅读并依照本手册使用产品功能。

本使用手册适用于下列 Turbo NAS 型号：HS-210、HS-251、HS-251+、TS-112P、TS-131、TS-212P、TS-231、TS-231+、TS-251、TS-251+、TS-251C、TS-251A、TS-253 Pro、TS-431、TS-431+、TS-431U、TS-451、TS-451+、TS-451S、TS-451U、TS-451A、TS-453 Pro、TS-453S Pro（前身为 SS-453 Pro）、TS-453U、TS-453U-RP、TS-463U、TS-463U-RP、TVS-463、TS-470U-SP/RP、TS-563、TVS-473、TS-531P、TS-651、TS-653 Pro、TVS-663、TS-531X、TVS-673、TS-831X、TS-851、TS-853 Pro、TS-853S Pro（前身为 SS-853 Pro）、TS-853U、TS-853U-RP、TS-863U、TS-863U-RP、TVS-863、TVS-863+、TVS-882ST、TS-870U-RP、TVS-873、TS-879 Pro、TS-879U-RP、TS-EC879U-RP、TS-1079 Pro、TS-1253U、TS-1253U-RP、TS-1263U、TS-1263U-RP、TS-1270U-RP、TS-1279U-RP、TS-EC1279U-RP、TS-1635、TS-1679U-RP、TS-EC1679U-RP、IS-453S、TS-453Bmini、TS-453mini、TAS-168、TAS-268、TS-253A、TS-453A、TS-653A、TS-853A、TS-128、TS-228、TBS-453A

注意：

- 本手册中 Turbo vNAS 及 Turbo NAS 皆简称为 NAS。
- 本手册包含威联通 Turbo NAS 系列网络储存服务器的使用说明，部份功能仅适用于特定型号，您所购买的型号可能不支持这些功能。
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- 请务必定期备份硬盘中的数据，以避免任何意外、人为操作疏失或硬盘故障所造成的数据毁损。威联通不负任何资料遗失或复原。
- 如要把 NAS 或任何包装内零件退回或维修，请确定货品妥善包装以确保运送无误。若货品运送期间因不妥善包装造成任何损坏，威联通一概不予负责。

## 规范声明



### FCC 声明

QNAP NAS 符合不同的 FCC 规范等级。详细信息，请参考附录。一旦确定本产品的等级，请参考以下对应的声明。

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### FCC A 级声明

本产品符合 FCC 规则第 15 部份。产品操作受以下两条件限制：

1. 本产品不得造成有害干扰。
2. 本产品必须接受任何接受到的干扰，包含可能造成意外操作的干扰。

注意：本产品已通过测试并符合 FCC 规则第 15 部分 A 级数位装置之限制。此等限制旨在此装置于商业环境中操作时，提供免于有害干扰之合理保护所设计。本产品产生、使用、并可能放射调频能量，若未依据指示安装及使用，可能对无线电通讯造成有害干扰。在住宅区操作本产品可能会造成有害干扰。在这种情况下，使用者必须自行解决干扰现象。

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### A 급기기

(업무용정보통신기기)

이기는업무용으로전자파적합등록을한기기이오니,  
판매자또는사용자는이점을주위하시기바라며,  
만약잘못판매또는구입하였을때에는가정용으로교환하시기바랍니다.

## FCC B 级声明

本产品符合 FCC 规则第 15 部份。产品操作受以下两条件限制：

1. 本产品不得造成有害干扰。
2. 本产品必须接受任何接受到的干扰，包含可能造成意外操作的干扰。

注意：本产品已通过测试并符合 FCC 规则第 15 部分 B 级数位装置之限制。此等限制旨在为家用装置提供免于有害干扰之合理保护所设计。本产品产生、使用、并可能放射调频能量，若未依据指示安装及使用，可能对无线电通讯造成有害干扰。但特定之安装并不保证免于发生干扰。若本产品对收音机、电视之收讯造成有害干扰(可开关设备之电源确认)，建议使用者以下列一种或多种方式改善干扰状况：

- 重新调整或放置接收天线。
- 增加本产品与接收器之间的距离。
- 将本产品连接到与接收器不同的电源插座上。
- 如需协助，请洽询经销商或专业的收音机或电视技术人员。

修改：任何未经过威联通科技股份有限公司同意，对此产品之修改，可能会让 FCC 规范授予此用户操作本装置的权力变为无效。



QNAP NAS 符合不同的 CE 规范等级。详细信息，请参考附录。



SJ/T 11364-2006

QNAP Turbo NAS 符合 SJ/T 11364-2006 (电子信息产品污染控制标识要求) 执行标准。

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<br>(Pb) | 汞<br>(Hg) | 镉<br>(Cd) | 六价铬<br>(CR(VI)) | 多溴联苯<br>(PBB) | 多溴二苯醚<br>(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               |

0: 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。

- (1) 本产品最高适用的环境温度: 40°C
- (2) 主板中有可更换纽扣电池, 用错误型号电池更换会有爆炸的危险, 务必按照说明处置用完的电池。

## 本文使用的符号说明

|   |  |
|---|--|
| <br>警告 | 此符号表示使用者必须严格依照说明操作，否则将会导致身体伤害甚至死亡。                 |
| <br>注意 | 此符号表示该行为可能会引致硬盘数据被清除，或不依照说明操作之情况下，可能会导致数据、硬盘或产品损毁。 |

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## 安全须知

1. 本产品的使用环境温度范围应介于 0° C - 40° C (或根据具体产品规格最高为 35° C), 相对湿度为 0% - 95%。请确保其放置场所通风良好。
2. 与本产品连接的线路和装置必须能提供本产品正常的电量(100W, 90 - 264V), 以确保其运作正常。
3. 切勿将本产品放置于直接受阳光曝晒或靠近化学药剂的场所。请确保其所在环境维持稳定的温度与湿度。
4. 清洁时本产品, 先将电源插头及所有线路拔下, 再以干布擦拭即可。切勿使用任何化学药剂或喷雾式清洁剂清洁本产品。
5. 为确保机器正常运作, 以及避免机器过热, 切勿将任何物品或重物放置于本产品上。
6. 安装硬盘时, 请务必使用平头螺丝将硬盘固定在硬盘抽取盒上, 以确保其运作正常。
7. 切勿使本产品靠近水源。
8. 切勿将本产品放置在不平稳的桌子或台面上, 以避免因本产品滑落而损坏。
9. 使用本产品时, 请留意当地的电压指示。若无法确定, 请洽询经销商或当地电力公司。
10. 切勿放置任何物品于本产品的电源在线。
11. 切勿自行维修本产品。不当的拆装, 可能导致触电或其它不良后果。若有任何维修问题, 请洽询当地经销商。
12. 机架式系统只适用于机房, 并应由授权之系统管理员管理及维护。机房必须上锁, 并只允许授权人员进入。



### 警告:

- 如错误更换电池, 可能会有导致爆炸的危险。更换电池时, 请务必更换同类型之电池, 或更换制造商建议的类型。请依照当地废弃物管理办法规定, 处理使用过之电池组。
- 切勿触摸系统内之风扇, 以避免严重性伤害。



## 第1章 CPU 处理器及内存规格



**注意：**变更威联通产品的硬件、软件或固件，将导致产品保固完全失效。威联通不负任何因改机导致的任何形式的产品毁损或数据流失。使用者需自行负责因变更 Turbo NAS 硬件、更改系统固件或安装未授权的第三者应用程序而导致任何可能的数据损失或系统不稳定等问题。

| 系统型号       | TS-112P        | TS-212P        |
|------------|----------------|----------------|
| CPU 处理器    | Marvell 1.6GHz | Marvell 1.6GHz |
| 内存         | 512MB DDR2     | 512MB DDR2     |
| Flash 快闪记忆 | 16MB           | 16MB           |
| 可否更换内存     | -              | -              |
| RAM 插槽数目   | -              | -              |
| 硬盘插槽数目     | 1              | 2              |

| 系统型号       | TS-128                     | TS-228                     |
|------------|----------------------------|----------------------------|
| CPU 处理器    | Dual-core ARM®v7<br>1.1GHz | Dual-core ARM®v7<br>1.1GHz |
| 内存         | 1GB DDR3                   | 1GB DDR3                   |
| Flash 快闪记忆 | 4GB                        | 4GB                        |
| 可否更换内存     | -                          | -                          |
| RAM 插槽数目   | -                          | -                          |
| 硬盘插槽数目     | 1（仅限 3.5”）                 | 2（仅限 3.5”）                 |

| 系统型号       | TAS-168                     | TAS-268                     |
|------------|-----------------------------|-----------------------------|
| CPU 处理器    | Dual-core Realtek<br>1.1GHz | Dual-core Realtek<br>1.1GHz |
| 内存         | 2GB DDR3                    | 2GB DDR3                    |
| Flash 快闪记忆 | 4GB                         | 4GB                         |
| 可否更换内存     | -                           | -                           |
| RAM 插槽数目   | -                           | -                           |
| 硬盘插槽数目     | 1 (仅限 3.5")                 | 2 (仅限 3.5")                 |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR003)   | ✓ (QNAP 遥控器:<br>RM-IR003)   |

| 系统型号       | TS-131                         | TS-231                         |
|------------|--------------------------------|--------------------------------|
| CPU 处理器    | Dual-core<br>Freescale™ 1.2GHz | Dual-core<br>Freescale™ 1.2GHz |
| 内存         | 512MB DDR3                     | 512MB DDR3                     |
| Flash 快闪记忆 | 512MB                          | 512MB                          |
| 可否更换内存     | -                              | -                              |
| RAM 插槽数目   | -                              | -                              |
| 硬盘插槽数目     | 1                              | 2                              |

| 系统型号       | TS-431                         | TS-431U                        |
|------------|--------------------------------|--------------------------------|
| CPU 处理器    | Dual-core<br>Freescale™ 1.2GHz | Dual-core<br>Freescale™ 1.2GHz |
| 内存         | 512MB DDR3                     | 1GB DDR3                       |
| Flash 快闪记忆 | 512MB                          | 512MB                          |
| 可否更换内存     | -                              | -                              |
| RAM 插槽数目   | -                              | -                              |
| 硬盘插槽数目     | 4                              | 4                              |

|                 |  |  |
|-----------------|--|--|
| 系统型号            | TS-231+  | TS-431+  |
| CPU 处理器         | Annapurna Labs Alpine AL-212 Dual-core 1.4GHz Cortex-A15 | Annapurna Labs Alpine AL-212 Dual-core 1.4GHz Cortex-A15 |
| 内存              | 1GB DDR3   | 1GB DDR3   |
| Flash 快闪记忆      | 512MB  | 512MB  |
| 可否更换内存          | -  | -  |
| RAM 插槽数目        | -  | -  |
| 硬盘插槽数目          | 2  | 4  |
| PCI-E 扩充插槽      | -  | -  |
| 内置 10GbE LAN 端口 | -  | -  |

|                 |   |   |   |
|-----------------|---|---|---|
| 系统型号            | TS-531P   | TS-531X   | TS-831X   |
| CPU 处理器         | Quad-core Annapurna Labs Alpine AL-314 1.4 GHz Cortex-A15 | <b>Quad-core Annapurna Labs Alpine AL-314 1.4GHz Cortex-A15</b> | Annapurna Labs Alpine AL-314 Quad-core 1.4 GHz Cortex-A15 |
| 内存              | 2GB/8GB DDR3 (可扩充至 16GB)                                  | <b>2GB/8GB DDR3 (可扩充至 16GB)</b>                                 | 8GB/16GB DDR3 (可扩充至 16GB)                                 |
| Flash 快闪记忆      | 512MB   | <b>512MB</b>  | 512MB   |
| 可否更换内存          | ✓ (与 DDR3 RAM 兼容之内存)                                      | <b>✓ (与 DDR3 RAM 兼容之内存)</b>                                     | ✓ (与 DDR3L RAM 兼容之内存)                                     |
| RAM 插槽数目        | 2 (SODIMM)  | <b>2 (SODIMM)</b>   | 2 (SODIMM)  |
| 硬盘插槽数目          | 5   | <b>5</b>  | 8   |
| PCI-E 扩充插槽      | 1   | <b>1</b>  | 1   |
| 内置 10GbE LAN 端口 | -   | <b>2 x SFP+</b>   | 2 x SFP+  |

|                 |   |                |
|-----------------|---|----------------|
| 系统型号            | TS-1635   | HS-210         |
| CPU 处理器         | Quad-core Annapurna Labs Alpine AL-514<br>1.7GHz Cortex-A15 | Marvell 1.6GHz |
| 内存              | 8GB/16GB DDR3<br>(可扩充至 16GB)                                | 512MB DDR3     |
| Flash 快闪记忆      | 512MB   | 16MB           |
| 可否更换内存          | ✓ (与 DDR3 RAM 兼容之内存)  | -              |
| RAM 插槽数目        | 2 (SODIMM)  | -              |
| 硬盘插槽数目          | 16  | 2              |
| PCI-E 扩充插槽      | 1   |                |
| 内置 10GbE LAN 端口 | 2 x SFP+  |                |

| 系统型号       | TS-451U   | TS-453U  | TS-453U-RP   |
|------------|---|--|--|
| CPU 处理器    | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) |
| 内存         | 1GB DDR3L (可扩充至<br>8GB)                                   | 4GB/8GB DDR3L (可扩<br>充至 8GB)                             | 4GB/8GB DDR3L (可扩<br>充至 8GB)                             |
| Flash 快闪记忆 | 512MB (USB DOM)   | 512MB (USB DOM)  | 512MB (USB DOM)  |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容<br>之内存)                                 | ✓ (兼容 DDR3L RAM)   | ✓ (与 DDR3L RAM 兼容<br>之内存)                                |
| RAM 插槽数目   | 2 (SODIMM)  | 2 (SODIMM)   | 2 (SODIMM)   |
| 硬盘插槽数目     | 4   | 4  | 4  |
| 电源供应器      | 250W  | 250W   | 2 x 250W   |

| 系统型号    | TS-853U  | TS-853U-RP   |
|---------|--|--|
| CPU 处理器 | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) |
| 内存      | 4GB/8GB DDR3L (可扩<br>充至 8GB)                             | 4GB/8GB DDR3L (可扩<br>充至 8GB)                             |

|            |                       |                       |
|------------|-----------------------|-----------------------|
| Flash 快闪记忆 | 512MB (USB DOM)       | 512MB (USB DOM)       |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容之内存) | ✓ (与 DDR3L RAM 兼容之内存) |
| RAM 插槽数目   | 2 (SODIMM)            | 2 (SODIMM)            |
| 硬盘插槽数目     | 8                     | 8                     |
| 电源供应器      | 250W                  | 2 x 250W              |

|            |  |  |
|------------|--|--|
| 系统型号       | TS-1253U   | TS-1253U-RP  |
| CPU 处理器    | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) |
| 内存         | 4GB/8GB DDR3L (可扩<br>充至 8GB)                             | 4GB/8GB DDR3L (可扩<br>充至 8GB)                             |
| Flash 快闪记忆 | 512MB (USB DOM)  | 512MB (USB DOM)  |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容<br>之内存)                                | ✓ (与 DDR3L RAM 兼容<br>之内存)                                |
| RAM 插槽数目   | 2 (SODIMM)   | 2 (SODIMM)   |
| 硬盘插槽数目     | 12   | 12   |
| 电源供应器      | 250W   | 2 x 250W   |

|              |  |
|--------------|--|
| 系统型号         | IS-453S  |
| CPU 处理器      | Quad-core<br>Intel® Atom™ 1.91GHz                    |
| 内存           | IS-453S-2G: 2GB<br>DDR3L<br>IS-453S-8G: 8GB<br>DDR3L |
| Flash 快闪记忆   | 512MB (USB DOM)                                      |
| 可否更换 CPU 处理器 | -  |
| 可否更换内存       | ✓ (与<br>DDR3L-1333/1600SODI<br>MM RAM 兼容之内存)         |
| RAM 插槽数目     | 2 (SODIMM)   |
| 硬盘插槽数目       | 4 (仅限 2.5")  |





|            |   |   |  |
|------------|---|---|--|
| 系统型号       | TS-251C   | TS-251/TS-251-4G  | TS-251A-2G /<br>TS-251A-4G                             |
| CPU 处理器    | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) | Dual-core Intel®<br>Celeron™ 1.6GHz (可<br>扩充至 2.48GHz) |
| 内存         | 1GB DDR3L   | 1GB / 4GB DDR3L (可<br>扩充至 8GB)                            | 2GB / 4GB DDR3L (可<br>扩充至 8GB)                         |
| Flash 快闪记忆 | 512MB   | 512MB   | 512MB  |
| 可否更换内存     | -   | ✓ (与 DDR3L RAM 兼容<br>之内存)                                 | ✓ (与 DDR3L-1600 RAM<br>兼容之内存)                          |
| RAM 插槽数目   | -   | 2 (SODIMM)  | 2 (SODIMM)   |
| 硬盘插槽数目     | 2 (仅限 3.5")   | 2   | 2  |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)                                 | ✓ (QNAP 遥控器:<br>RM-IR002)                                 | ✓ (QNAP 遥控器:<br>RM-IR002)                              |

|            |   |   |   |
|------------|---|---|---|
| 系统型号       | TS-451 / TS-451-4G  | TS-451A-2G /<br>TS-451A-4G                                    | TS-451S   |
| CPU 处理器    | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) | <b>Dual-core Intel®</b><br>Celeron™ 1.6GHz (可<br>扩充至 2.48GHz) | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) |
| 内存         | 1GB / 4GB DDR3L (可<br>扩充至 8GB)                            | 2GB / 4GB DDR3L (可<br>扩充至 8GB)                                | 1GB DDR3L (可扩充至<br>8GB)                                   |
| Flash 快闪记忆 | 512MB   | 512MB   | 512MB   |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容<br>之内存)                                 | ✓ (与 DDR3L-1600 RAM<br>兼容之内存)                                 | ✓ (与 DDR3L RAM 兼容<br>之内存)                                 |
| RAM 插槽数目   | 2 (SODIMM)  | <b>2 (SODIMM)</b>   | 2 (SODIMM)  |
| 硬盘插槽数目     | 4   | 2   | 4 (仅限 2.5")   |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)                                 | ✓ (QNAP 遥控器:<br>RM-IR002)                                     | ✓ (QNAP 遥控器:<br>RM-IR002)                                 |

|            |   |   |
|------------|---|---|
| 系统型号       | TS-651 / TS-651-4G  | TS-851 / TS-851-4G  |
| CPU 处理器    | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) |
| 内存         | 1GB / 4GB DDR3L (可<br>扩充至 8GB)                            | 1GB / 4GB DDR3L (可<br>扩充至 8GB)                            |
| Flash 快闪记忆 | 512MB   | 512MB   |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容<br>之内存)                                 | ✓ (与 DDR3L RAM 兼容<br>之内存)                                 |
| RAM 插槽数目   | 2 (SODIMM)  | 2 (SODIMM)  |
| 硬盘插槽数目     | 6   | 8   |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)                                 | ✓ (QNAP 遥控器:<br>RM-IR002)                                 |

|              |  |   |
|--------------|--|---|
| 系统型号         | HS-251+  | HS-251 / HS-251-2G  |
| CPU 处理器      | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Dual-core<br>Intel® Celeron™<br>2.41GHz (可扩充至<br>2.58GHz) |
| 内存           | 2GB DDR3L  | 1GB / 2GB DDR3L   |
| Flash 快闪记忆   | 512MB  | 512MB   |
| 可否更换 CPU 处理器 | -  | -   |
| 可否更换内存       | -  | -   |
| RAM 插槽数目     | -  | -   |
| 硬盘插槽数目       | 2  | 2   |
| IR 传感器       | ✓ (QNAP 遥控器:<br>RM-IR002)                                | ✓ (QNAP 遥控器:<br>RM-IR002)                                 |

|            |  |  |
|------------|--|--|
| 系统型号       | TBS-453A-4G/<br>TBS-453A-4G-1TB/TBS<br>-453A-4G-512GB          | TBS-453A-8G/<br>TBS-453A-8G-1TB/TBS<br>-453A-8G-512GB          |
| CPU 处理器    | Quad-core<br>Intel® Celeron™<br>N31501.6GHz (可扩充<br>至 2.08GHz) | Quad-core<br>Intel® Celeron™<br>N31501.6GHz (可扩充<br>至 2.08GHz) |
| 内存         | 4GB DDR3L  | 8GB DDR3L  |
| Flash 快闪记忆 | 4GB  | 4GB  |
| 可否更换 CPU   | -  | -  |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容<br>之内存)                                      | ✓ (与 DDR3L RAM 兼容<br>之内存)                                      |
| RAM 插槽数目   | 2 (SODIMM)   | 2 (SODIMM)   |
| 硬盘插槽数目     | 4  | 4  |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002 和<br>RM-IR003)                        | ✓ (QNAP 遥控器:<br>RM-IR002 和<br>RM-IR003)                        |

|            |  |  |
|------------|--|--|
| 系统型号       | TS-251+-2G /<br>TS-251+-8G                               | TS-253 Pro /<br>TS-253 Pro-8G                            |
| CPU 处理器    | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) |
| 内存         | 2GB / 8GB DDR3L (可<br>扩充至 8GB)                           | 2GB / 8GB DDR3L (可<br>扩充至 8GB)                           |
| Flash 快闪记忆 | 512MB  | 512MB  |
| 可否更换内存     | ✓ (与<br>DDR3L-1333/1600 RAM<br>兼容之内存)                    | ✓ (与<br>DDR3L-1333/1600 RAM<br>兼容之内存)                    |
| RAM 插槽数目   | 2 (SODIMM)   | 2 (SODIMM)   |
| 硬盘插槽数目     | 2  | 2  |
| LCD 面板     | -  | -  |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)                                | ✓ (QNAP 遥控器:<br>RM-IR002)                                |



|                   |  |   |
|-------------------|--|---|
| <b>系统型号</b>       | <b>TS-453Bmini-4G / TS-453Bmini-8G</b>                 | <b>TS-453mini-2G / TS-453mini-8G</b>                  |
| <b>CPU 处理器</b>    | Quad-core Intel® Celeron™ J3455 1.5 GHz (可扩充至 2.3 GHz) | Quad-core Intel® Celeron™ J1900 2.0GHz (可扩充至 2.42GHz) |
| <b>内存</b>         | 4GB / 8GB DDR3L (可扩充至 8GB)                             | 2GB / 8GB DDR3L (可扩充至 8GB)                            |
| <b>Flash 快闪记忆</b> | 512MB  | 512MB   |
| <b>可否更换内存</b>     | ✓ (与 DDR3L RAM 兼容之内存)                                  | ✓ (与 DDR3L-1333/1600 RAM 兼容之内存)                       |
| <b>RAM 插槽数目</b>   | 2 (SODIMM)   | 2 (SODIMM)  |
| <b>硬盘插槽数目</b>     | 4  | 4   |
| <b>IR 传感器</b>     | ✓ (QNAP 遥控器: RM-IR002)                                 | ✓ (QNAP 遥控器: RM-IR002)                                |

|                   |   |   |   |
|-------------------|---|---|---|
| <b>系统型号</b>       | <b>TS-451+-2G / TS-451+-8G</b>                  | <b>TS-453 Pro / TS-453 Pro-8G</b>               | <b>TS-653 Pro / TS-653 Pro-8G</b>               |
| <b>CPU 处理器</b>    | Quad-core Intel® Celeron™ 2.0GHz (可扩充至 2.42GHz) | Quad-core Intel® Celeron™ 2.0GHz (可扩充至 2.42GHz) | Quad-core Intel® Celeron™ 2.0GHz (可扩充至 2.42GHz) |
| <b>内存</b>         | 2GB / 8GB DDR3L (可扩充至 8GB)                      | 2GB / 8GB DDR3L (可扩充至 8GB)                      | 2GB / 8GB DDR3L (可扩充至 8GB)                      |
| <b>Flash 快闪记忆</b> | 512MB   | 512MB   | 512MB   |
| <b>可否更换内存</b>     | ✓ (与 DDR3L RAM 兼容之内存)                           | ✓ (与 DDR3L RAM 兼容之内存)                           | ✓ (与 DDR3L RAM 兼容之内存)                           |
| <b>RAM 插槽数目</b>   | 2 (SODIMM)                                      | 2 (SODIMM)                                      | 2 (SODIMM)                                      |
| <b>硬盘插槽数目</b>     | 4   | 4   | 6   |
| <b>LCD 面板</b>     | -   | ✓   | ✓   |
| <b>IR 传感器</b>     | ✓ (QNAP 遥控器: RM-IR002)                          | ✓ (QNAP 遥控器: RM-IR002)                          | ✓ (QNAP 遥控器: RM-IR002)                          |

|  |           |           |           |
|--|-----------|-----------|-----------|
|  | RM-IR002) | RM-IR002) | RM-IR002) |
|--|-----------|-----------|-----------|

|            |  |  |  |
|------------|--|--|--|
| 系统型号       | TS-853 Pro /<br>TS-853 Pro-8G                            | TS-453S Pro (前身为<br>SS-453 Pro)                          | TS-853S Pro(前身为<br>SS-853 Pro)                           |
| CPU 处理器    | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) | Quad-core<br>Intel® Celeron™<br>2.0GHz (可扩充至<br>2.42GHz) |
| 内存         | 2GB / 8GB DDR3L (可<br>扩充至 8GB)                           | 4GB DDR3L (可扩充至<br>8GB)                                  | 4GB DDR3L (可扩充至<br>8GB)                                  |
| Flash 快闪记忆 | 512MB  | 512MB  | 512MB  |
| 可否更换内存     | ✓ (与 DDR3L RAM 兼容<br>之内存)                                | ✓ (与 DDR3L RAM 兼容<br>之内存)                                | ✓ (与 DDR3L RAM 兼容<br>之内存)                                |
| RAM 插槽数目   | 2 (SODIMM)   | 2 (SODIMM)   | 2 (SODIMM)   |
| 硬盘插槽数目     | 8  | 4 (仅限 2.5")  | 8 (仅限 2.5")  |
| LCD 面板     | ✓  | -  | ✓  |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)                                | ✓ (QNAP 遥控器:<br>RM-IR002)                                | ✓ (QNAP 遥控器:<br>RM-IR002)                                |

|            |                               |                               |                               |
|------------|-------------------------------|-------------------------------|-------------------------------|
| 系统型号       | TS-563-4G /<br>TS-563-8G      | TVS-463-4G /<br>TVS-463-8G    | TVS-663-4G /<br>TVS-663-8G    |
| CPU 处理器    | Quad-core AMD<br>2.0GHz       | Quad-core AMD<br>2.4GHz       | Quad-core AMD<br>2.4GHz       |
| 内存         | 4/8 GB DDR3L (可扩充<br>至 16GB)  | 4/8 GB DDR3L (可扩充<br>至 16GB)  | 4/8 GB DDR3L (可扩充<br>至 16GB)  |
| Flash 快闪记忆 | 512MB                         | 512MB                         | 512MB                         |
| 可否更换内存     | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) |
| RAM 插槽数目   | 2 (SODIMM)                    | 2 (SODIMM)                    | 2 (SODIMM)                    |
| 硬盘插槽数目     | 5                             | 4                             | 6                             |
| PCI-E 扩充插槽 | 1                             | 1                             | 1                             |
| HDMI       | -                             | ✓                             | ✓                             |
| LCD 面板     | -                             | ✓                             | ✓                             |
| IR 传感器     | -                             | ✓ (QNAP 遥控器:<br>RM-IR002)     | ✓ (QNAP 遥控器:<br>RM-IR002)     |

|            |                               |                               |
|------------|-------------------------------|-------------------------------|
| 系统型号       | TVS-863-4G /<br>TVS-863-8G    | TVS-863+-8G /<br>TVS-863+-16G |
| CPU 处理器    | Quad-core AMD<br>2.4GHz       | Quad-core AMD<br>2.4GHz       |
| 内存         | 4/8 GB DDR3L (可扩充<br>至 16GB)  | 8/16 GB DDR3L (可扩<br>充至 16GB) |
| Flash 快闪记忆 | 512MB                         | 512MB                         |
| 可否更换内存     | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) |
| RAM 插槽数目   | 2 (SODIMM)                    | 2 (SODIMM)                    |
| 硬盘插槽数目     | 8                             | 8                             |
| PCI-E 扩充插槽 | 1                             | 1 (出货时包含 1 埠<br>10GbE 网卡)     |
| HDMI       | ✓                             | ✓                             |
| LCD 面板     | ✓                             | ✓                             |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)     | ✓ (QNAP 遥控器:<br>RM-IR002)     |

| 系统型号       | TS-253A-4G / TS-253A-8G                        | TS-453A -4G / TS-453A -8G                      | TS-653A -4G / TS-653A -8G                      |
|------------|--|--|--|
| CPU 处理器    | 四核 Intel® Celeron® N3150 1.6GHz (可扩充至 2.08GHz) | 四核 Intel® Celeron® N3150 1.6GHz (可扩充至 2.08GHz) | 四核 Intel® Celeron® N3150 1.6GHz (可扩充至 2.08GHz) |
| 内存         | 4/8 GB DDR3L (可扩充至 8GB)                        | 4/8 GB DDR3L (可扩充至 8GB)                        | 4/8 GB DDR3L (可扩充至 8GB)                        |
| Flash 快闪记忆 | 512MB  | 512MB  | 512MB  |
| 可否更换内存     | ✓ (与 DDR3L-1600 RAM 兼容之内存)                     | ✓ (与 DDR3L-1600 RAM 兼容之内存)                     | ✓ (与 DDR3L-1600 RAM 兼容之内存)                     |
| RAM 插槽数目   | 2 (SODIMM)                                     | 2 (SODIMM)                                     | 2 (SODIMM)                                     |
| 硬盘插槽数目     | 2  | 4  | 6  |
| PCI-E 扩展插槽 | -  | -  | -  |
| HDMI       | 2  | 2  | 2  |
| LCD 面板     | -  | ✓  | ✓  |
| IR 传感器     | ✓ (QNAP 遥控器: RM-IR002)                         | ✓ (QNAP 遥控器: RM-IR002)                         | ✓ (QNAP 遥控器: RM-IR002)                         |



|            |  |
|------------|--|
| 系统型号       | TS-853A -4G /<br>TS-853A -8G                                   |
| CPU 处理器    | Quad-core Intel®<br>Celeron® N3150<br>1.6GHz (可扩充至<br>2.08GHz) |
| 内存         | 4/8 GB DDR3L (可扩充<br>至 8GB)                                    |
| Flash 快闪记忆 | 512MB  |
| 可否更换内存     | ✓ (与 DDR3L-1600 RAM<br>兼容之内存)                                  |
| RAM 插槽数目   | 2 (SODIMM)   |
| 硬盘插槽数目     | 8  |
| PCI-E 扩展插槽 | -  |
| HDMI       | 2  |
| LCD 面板     | ✓  |
| IR 传感器     | ✓ (QNAP 遥控器:<br>RM-IR002)                                      |

| 系统型号       | TVS-882S-i5-8G                      | TVS-882S-i7-16G                     |
|------------|-------------------------------------|-------------------------------------|
| CPU 处理器    | Quad-core Intel® Core™ i5<br>1.9GHz | Quad-core Intel®<br>Core™ i7 2.6GHz |
| 内存         | 8GB DDR4 (可扩充至 32GB)                | 16GB DDR4 (可扩充至<br>32GB)            |
| Flash 快闪记忆 | 512MB                               |                                     |
| 可否更换内存     | ✓ (与 DDR4 RAM 兼容之内存)                |                                     |
| RAM 插槽数目   | 2(SODIMM)                           |                                     |

|            |   |
|------------|---|
| 硬盘插槽数目     | 8 x 2.5" SATA 6Gb/s                     |
| PCI-E 扩充插槽 | 1 x PCIe Gen3 (x8) + 1 x PCIe Gen3 (x4) |
| HDMI       | 1                                       |
| LCD 面板     | ✓                                       |
| IR 传感器     | ✓ (QNAP 遥控器: RM-IR002)                  |

| 系统型号       | TVS-882ST2-i5-8G   | TVS-882ST2-i7-16G                   |
|------------|--|-------------------------------------|
| CPU 处理器    | Quad-core Intel® Core™ i5<br>1.9GHz  | Quad-core Intel®<br>Core™ i7 2.6GHz |
| 内存         | 8GB DDR4 (可扩充至 32GB)   | 16GB DDR4 (可扩充至<br>32GB)            |
| Flash 快闪记忆 | 512MB  |                                     |
| 可否更换内存     | ✓ (与 DDR4 RAM 兼容之内存)   |                                     |
| RAM 插槽数目   | 2(SODIMM)  |                                     |
| 硬盘插槽数目     | 8 x 2.5" SATA 6Gb/s  |                                     |
| PCI-E 扩充插槽 | 1 x PCIe Gen3 (x8) + 1 x PCIe Gen3 (x4)<br>注意: 这两个扩展槽由 Thunderbolt™ 2 和 USB 3.1 扩展卡占用。 |                                     |

|                       |                        |
|-----------------------|------------------------|
| <b>HDMI</b>           | 1                      |
| <b>LCD 面板</b>         | ✓                      |
| <b>IR 传感器</b>         | ✓ (QNAP 遥控器: RM-IR002) |
| <b>Thunderbolt 接口</b> | 2 个 Thunderbolt™ 2 接口  |
| <b>10GbE LAN 端口</b>   | 2 个 10GbE SFP+ LAN 端口  |

| 系统型号              | TS-463U                       | TS-463U-RP                    | TS-863U                       |
|-------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>CPU 处理器</b>    | Quad-core AMD<br>2.0GHz       | Quad-core AMD<br>2.0GHz       | Quad-core AMD<br>2.0GHz       |
| <b>内存</b>         | 4 GB DDR3L (可扩充至<br>16GB)     | 4 GB DDR3L (可扩充至<br>16GB)     | 4 GB DDR3L (可扩充至<br>16GB)     |
| <b>Flash 快闪记忆</b> | 512MB                         | 512MB                         | 512MB                         |
| <b>可否更换内存</b>     | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) |
| <b>RAM 插槽数目</b>   | 2 (SODIMM)                    | 2 (SODIMM)                    | 2 (SODIMM)                    |
| <b>硬盘插槽数目</b>     | 4                             | 4                             | 8                             |
| <b>PCI-E 扩充插槽</b> | 1 (出货时包含<br>LAN-10G1SR-D 网卡)  | 1 (出货时包含<br>LAN-10G1SR-D 网卡)  | 1 (出货时包含<br>LAN-10G1SR-U 网卡)  |
| <b>HDMI</b>       | -                             | -                             | -                             |
| <b>LCD 面板</b>     | -                             | -                             | -                             |

| 系统型号       | TS-863U-RP                    | TS-1263U                      | TS-1263U-RP                   |
|------------|-------------------------------|-------------------------------|-------------------------------|
| CPU 处理器    | Quad-core AMD<br>2.0GHz       | Quad-core AMD<br>2.0GHz       | Quad-core AMD<br>2.0GHz       |
| 内存         | 4 GB DDR3L (可扩充至<br>16GB)     | 4 GB DDR3L (可扩充至<br>16GB)     | 4 GB DDR3L (可扩充至<br>16GB)     |
| Flash 快闪记忆 | 512MB                         | 512MB                         | 512MB                         |
| 可否更换内存     | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) | ✓ (与 DDR3L-1600<br>RAM 兼容之内存) |
| RAM 插槽数目   | 2 (SODIMM)                    | 2 (SODIMM)                    | 2 (SODIMM)                    |
| 硬盘插槽数目     | 8                             | 12                            | 12                            |
| PCI-E 扩充插槽 | 1 (出货时包含<br>LAN-10G1SR-U 网卡)  | 1 (出货时包含<br>LAN-10G1SR-U 网卡)  | 1 (出货时包含<br>LAN-10G1SR-U 网卡)  |
| HDMI       | -                             | -                             | -                             |
| LCD 面板     | -                             | -                             | -                             |

| 系统型号           | TVS-473  | TVS-673                     | TVS-873                        |
|----------------|--|-----------------------------|--------------------------------|
| CPU 处理器        | AMD R-Series RX-421BD 2.1 GHz APU, Turbo Core 可扩展至 3.4 GHz |                             |                                |
| 内存             | 8GB DDR4 (可扩展至<br>64GB)                                    | 16GB DDR4 (可扩展至<br>64GB)    | 64GB DDR4 (可扩展至<br>64GB)       |
| Flash 快闪<br>记忆 | 512MB  |                             |                                |
| 可否更换内<br>存     | ✓ (与 DDR4 RAM 兼容之内存)                                       |                             |                                |
| RAM 插槽数<br>目   | 4 (SODIMM)   |                             |                                |
| 硬盘插槽数<br>目     | 4 x 3.5"/2.5" SATA<br>6Gb/s                                | 6 x 3.5"/2.5" SATA<br>6Gb/s | 8 x 3.5"/2.5" SATA<br>6Gb/s /s |
| PCI-扩充插<br>槽   | 2 个 PCIe Gen3 (x4)<br>*1 个插槽已预装双端口 USB 3.1 PC 卡            |                             |                                |
| HDMI           | 2  |                             |                                |
| LCD 面板         | ✓  |                             |                                |
| IR 传感器         | ✓ (QNAP 遥控器: RM-IR004)                                     |                             |                                |

|                |                      |
|----------------|----------------------|
| <b>USB 3.1</b> | 2 x USB 3.1 Gen 2 端口 |
|----------------|----------------------|

## 第2章 电源按钮及系统重置按钮说明

- 电源按钮：按此按钮开启或关闭系统。

| 系统型号 | 开启系统 | 硬件关机    | 强制关机  |
|------|------|---------|-------|
| 所有型号 | 按一下  | 按 1.5 秒 | 按 5 秒 |

- 重置按钮：按此按钮重设系统至默认值。

| 系统型号 | 系统基本重设（哔一声） | 系统进阶重设（哔两声） |
|------|-------------|-------------|
| 所有型号 | 按 3 秒       | 按 10 秒      |

### 系统基本重设（按重设键 3 秒）

持续按系统重置按钮 3 秒，系统会哔一声。以下设定将回复至默认值：

- 系统管理员密码：admin
- TCP/IP 设定：使用动态 IP 地址
- TCP/IP 设定：关闭 Jumbo Frame
- TCP/IP 设定：若有启用 Port Trunking(适用于支持双 LAN 型号)，系统将回复设定为 Active Backup（网络容错）模式。
- 系统通讯端口：8080
- 安全等级：接受所有联机
- LCD 面板密码：空白\*
- VLAN 会被停用

\*此功能只适用于配有LCD面板的机种，详情请参考 <http://www.qnap.com>。

### 系统进阶重设（按重设键 10 秒）

按住复位按钮 10 秒钟。您会听到两次哔声：一次在第 3 秒，另一次在第 10 秒。NAS 将重新启动，并将系统设置恢复至默认值。用户、用户组、之前创建的网络共享文件夹等设置将被清除。默认的网络共享将予以恢复（不适用于 1 个托槽的 NAS 型号）。如要在高级系统复位后取回旧数据，只需在 NAS 上重新创建原来的网络共享文件夹，即可重新存取数据。

## 第3章 USB 单键备份

| 系统型号      | 按键秒数（按单键备份按钮复制数据） |
|-----------|-------------------|
| 所有 NAS 型号 | 0.5 秒             |

### 透过前方 USB 端口执行单键备份功能

NAS 支持通过前部的一键复制按钮将数据立即复制到 USB 设备或者反之。如要使用此功能，请执行下述步骤：

1. 确保 NAS 中至少安装和配置了一块硬盘驱动器。
2. 在 Backup Station/ Hybrid Backup Sync（备份站/混合备份同步）> External Backup（外部备份）> USB One Touch Copy（USB 一键复制）中配置一键复制按钮的工作方式。
3. 将 USB 存储设备连接到 NAS 的前部 USB 端口。
1. 4. 按一键复制按钮。USB LED 将闪亮。数据将进行备份。

#### 注意：

- 本功能采用增量备份，执行第一次完全备份后，系统会针对差异的档案进行备份。
- 本功能仅限特定 NAS 使用。详情请参考 [www.qnap.com](http://www.qnap.com)。



## 第4章 系统灯号及蜂鸣器说明

NAS 的 LED 灯号指示系统状态；当 NAS 开启时，可以检查以下项目确定系统运作正常。注意检视灯号状态前，必须在 NAS 上正确安装好硬盘、接上电源及连接至网络。

| LED                 | 颜色  | LED 状态               | 说明  |
|---------------------|-----|----------------------|---|
| 系统状态                | 红/绿 | 绿灯/红灯每 0.5 秒<br>交错闪烁 | <ol style="list-style-type: none"> <li>1. 硬盘格式化中。</li> <li>2. 系统初始化中。</li> <li>3. 韧体更新中。</li> <li>4. RAID 组态重建中。</li> <li>5. RAID 容量扩充 (Online RAID Capacity Expansion) 进行中。</li> <li>6. RAID 组态迁移 (Online RAID Level Migration) 进行中。</li> </ol>      |
|                     |     | 红灯常亮                 | <ol style="list-style-type: none"> <li>1. 硬盘异常。</li> <li>2. 硬盘群组容量已满。</li> <li>3. 硬盘群组容量将满。</li> <li>4. 系统风扇异常。</li> <li>5. 硬盘读写错误。</li> <li>6. 硬盘坏轨。</li> <li>7. RAID 降阶模式，即 RAID 5 或 RAID 6 组态有 2 颗硬盘损毁，系统数据仍能被读取。</li> <li>8. 硬件自我检查错误。</li> </ol> |
|                     |     | 红灯每 0.5 秒闪烁          | 降阶模式 (RAID 1、RAID 5、RAID 6 降阶模式)。   |
|                     |     | 绿灯每 0.5 秒闪烁          | <ol style="list-style-type: none"> <li>1. 系统开机中。</li> <li>2. 系统未设定。</li> <li>3. 硬盘未格式化。</li> </ol>  |
|                     |     | 绿灯每 2 秒闪烁            | 该NAS是在S3睡眠模式  |
|                     |     | 绿灯常亮                 | 系统可使用。  |
|                     |     | 关闭                   | 所有硬盘进入待命模式。   |
| LAN                 | 橙   | 常亮                   | 用户透过网络存取数据中并发生读写错误。   |
|                     |     | 闪烁                   | LAN 存取中。  |
| 10 GbE <sup>1</sup> | 绿   | 绿灯常亮                 | 10GbE 网络扩充卡已安装。   |
|                     |     | 关闭                   | 没有安装 10GbE 网络扩充卡。   |
| HDD (硬盘)            | 红/绿 | 红灯闪烁                 | 存取硬盘中，但发生读写错误。  |
|                     |     | 红灯常亮                 | 硬盘读写错误。   |

<sup>1</sup> 本功能仅限特定 NAS 使用。详情请参考 [www.qnap.com](http://www.qnap.com)。

| LED                | 颜色 | LED 状态    | 说明   |
|--------------------|----|-----------|--|
|                    |    | 绿灯闪烁      | 硬盘读取中。   |
|                    |    | 绿灯常亮      | 硬盘可被存取。  |
| USB                | 蓝  | 每 0.5 秒闪烁 | <ol style="list-style-type: none"> <li>1. 系统侦测到有 USB 装置连接至前方的 USB 埠。</li> <li>2. 连接至系统前方的 USB 装置正被移除。</li> <li>3. 连接至系统前方的 USB 装置正被存取中。</li> <li>4. 正在复制系统数据至外接 USB/eSATA 装置，或正由外接 USB/eSATA 装置复制数据至系统。</li> </ol> |
|                    |    | 常亮        | 系统侦测到前方 USB 端口有连接 USB 装置 (USB 装置已挂载至系统)。   |
|                    |    | 关闭        | <ol style="list-style-type: none"> <li>1. 系统没有侦测到任何的 USB 装置。</li> <li>2. 系统已完成复制数据至前方的 USB 装置，或已完成由前方 USB 装置复制数据至系统。</li> </ol>  |
| eSATA <sup>2</sup> | 橙  | 闪烁        | 资料存取中。   |
|                    |    | 关闭        | 系统没有侦测到任何 eSATA 装置。  |

<sup>2</sup> 10 GbE 网络扩充功能只适用于 TVS-463、TVS-663、TVS-863/863+、TS-879 Pro、TS-1079 Pro、TS-879U-RP、TS-1279U-RP、TS-EC879U-RP、TS-EC1279U-RP、TS-1679U-RP、TS-EC1679U-RP、TS-870U-RP、TS-1270U-RP。本功能仅限特定 NAS 使用。详情请参考 [www.qnap.com](http://www.qnap.com)。

## 警示蜂鸣器：适用于所有 NAS 型号

警示蜂鸣器可于 [系统工具] > [硬件设定] 页面关闭。

| 哔叫声                    | 次数         | 说明   |
|------------------------|------------|--|
| 短哔 (0.5 秒)             | 1          | 1. 系统开启中。<br>2. (透过软件) 关闭系统中。<br>3. 系统重设。<br>4. 韧体已更新。   |
| 短哔 (0.5 秒)             | 3          | 备份数据至外接硬盘时, 数据无法复制。                                      |
| 短哔 (0.5 秒), 长哔 (1.5 秒) | 3 (每 5 分钟) | 系统风扇异常。  |
| 长哔 (1.5 秒)             | 2          | 1. 硬盘群组容量快满。<br>2. 硬盘群组容量已满。<br>3. 硬盘降阶模式。<br>4. 硬盘开始重建。 |
|                        | 1          | 1. 硬件关闭系统。<br>2. 系统可使用。                                  |

## 第5章 升级 Turbo NAS 内存（安装 RAM 模块）



### 警告：

- 以下操作说明必须由授权及合格的技术人员进行。
- 请务必依照以下说明安装 RAM 模块至 NAS，否则将有可能导致身体伤害甚至死亡。
- 在您开始执行任何步骤之前，请务必关闭 NAS 电源，移除 NAS 的电源变压器、网络线及其他连接装置及连接线。
- 在安装内存模块前，请先戴上防静电的手腕带，并确保接地线接至地上。
- 当安装超过一个内存模块时，建议使用相同型号与规格的内存模块。

威联通通过经销商提供不同的 RAM 模块（选择性购买）以供用户更新 NAS 内存。如果使用非 QNAP RAM 模块，可能导致不稳定。要在 NAS 安装一个额外的内存模块以更新内存，请依循以下步骤：



请依照以下说明安装额外的内存模块替 NAS 升级内存。

### 5.1 TS-453Bmini、TS-453mini（4-bay 型号）

1. 使用一字起子松开 NAS 底部的内存插槽盖上的螺丝并移开内存插槽盖。



2. 如果内存插槽上已装有内存模块，请将内存模块两边之扣夹推开，此时内存会翘起，然后直接移除内存。



**注意：**请务必确认将内存模块安装在主要插槽（红色）中。否则，系统将会无法启动。支持的最大内存总和为 8GB。



3. 将欲装入之内存模块以约 45 度角的方式置放于插槽中。平均施力直到内存完全插入插槽中。



4. 关上 NAS 外盖然后锁上螺丝，最后将电源及网络线重新插回至 NAS 上。

## 5.2 TBS-453A

1. 请拆下 NAS 底部的橡胶垫脚并拧松四个手拧螺丝。然后，抬起上盖。



2. 要取出内存模块，请拉动每侧的固定夹，使模块向上倾斜，以便拆下。



**注意：请务必确保内存模块安装在主（红色）插槽。否则，系统将无法启动。支持的最大内存总和为 8GB。**



3. 以 45 度倾角（近似）使内存模块向插槽滑动，并向下按压内存模块，直至其卡入到位。确保内存模块正确安放，固定夹卡入到位。



4. 合上 NAS 盖，固定四个手拧螺丝，并重新安好橡胶垫脚。重新连接 NAS 的电源线和网线。

### 5.3 TS-451S、TS-531P、TS-531X、TS-651、TS-831X、TS-851、TS-x53/x53S Pro、TS-563、TVS-882S、TVS-882ST、TVS-x63, TS-x53A 系列 (2/4/6/8-bay 型号)

请依照以下说明安装额外的内存模块至 NAS 升级内存。

1. 移除 NAS 背面的三颗螺丝。



2. 小心地移除 NAS 的外壳。



3. 找到扩充内存插槽，并确认插槽没有安装任何内存。

**注意：对于 TS-x53/x53S Pro、TS-451S、TS-531P、TS-651、TS-851 和 TS-x53A 型号，请始终**

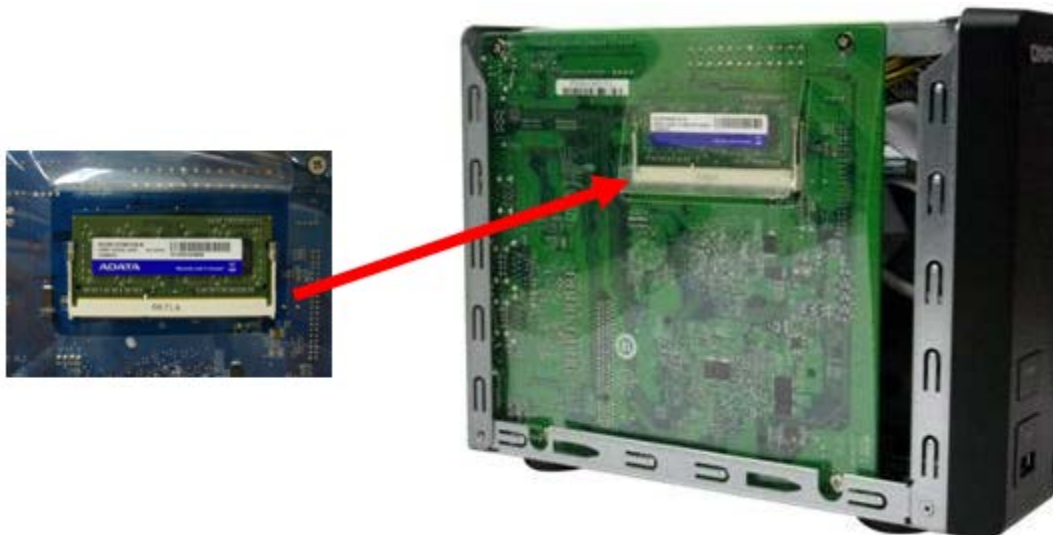
确保内存模块安装在主插槽（红色）。否则，系统将无法启动。支援的最大内存总和为 8GB。



4. 小心握住内存模块边缘，将模块金边上的接口与内存插槽的接口对齐。以大约 45 度角斜放内存，将内存推入插槽。



5. 平均施力压下内存模块，直至内存模块插入正确的位置。
6. 将模块向背板方向旋转直至扩充插槽两端的固定片吻合。



7. 将 NAS 外壳盖上并锁上螺丝，重新连接电源变压器、电源线及网络线等。
8. 要检查内存模块是否成功被 NAS 侦测，请开启 NAS 电源，然后以管理者账号登入网页管理接口。在 [系统状态] > [系统信息] 页面的 [硬件信息] 检视内存总容量。

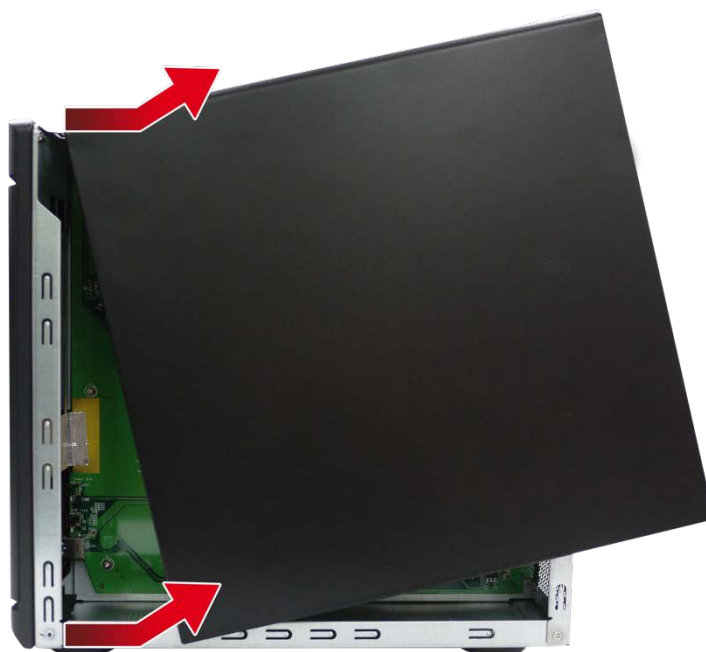


## 5.4 TS-1635

1. 拧松安装机箱盖的 NAS 背面上的螺丝。

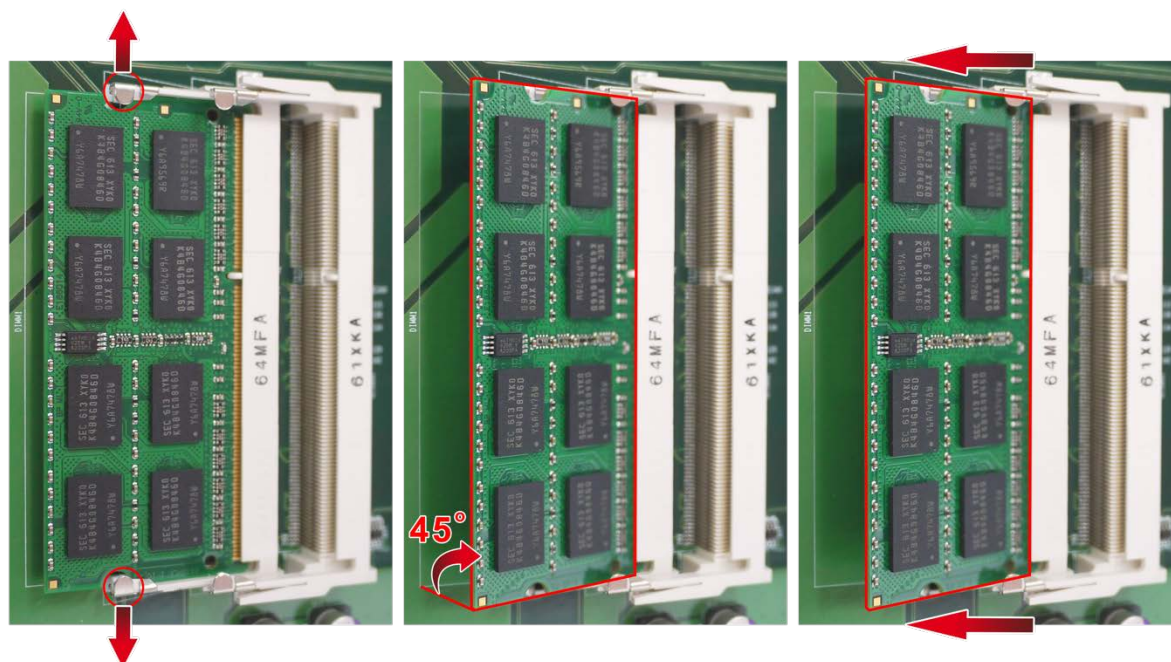


2. 将机箱盖从机箱上取下。



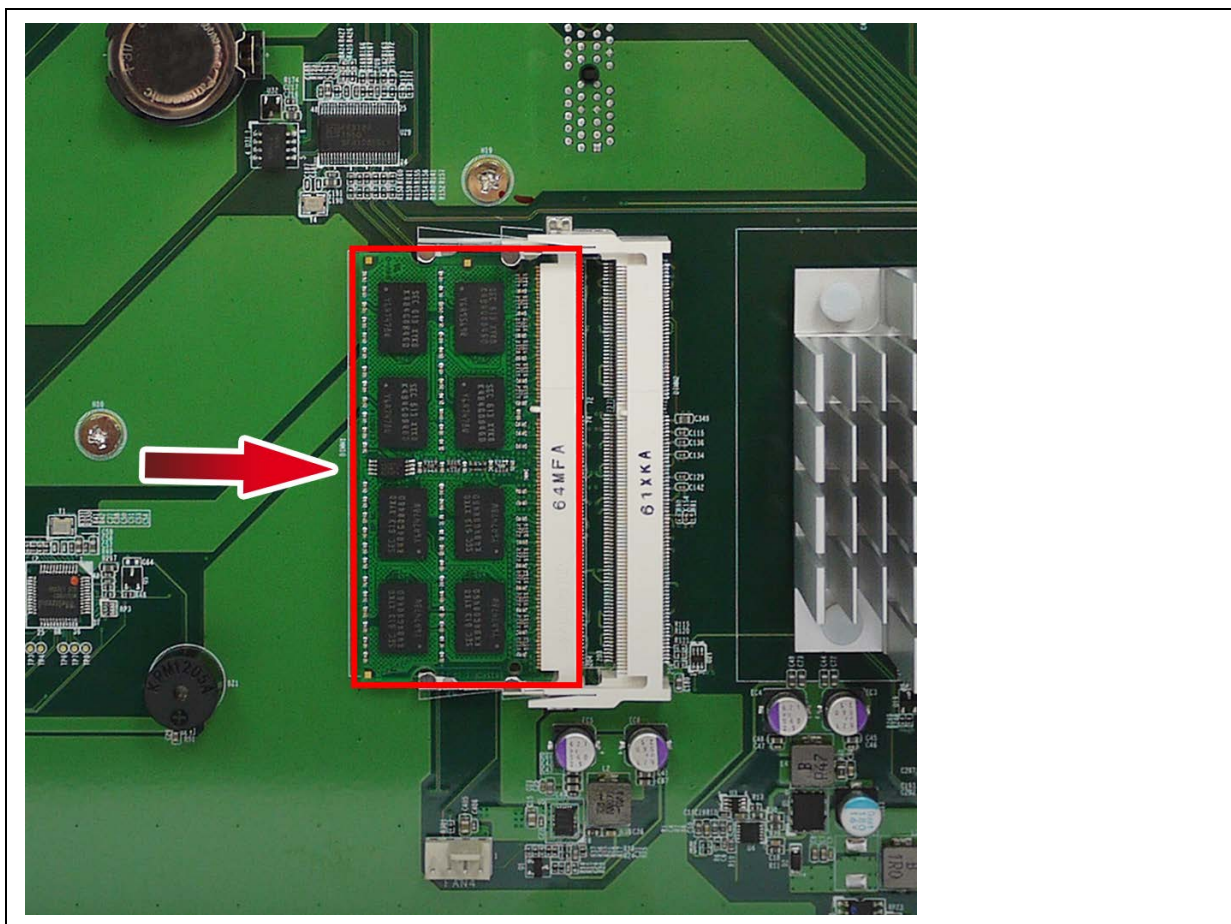
3. 要拆下安装的内存模块时，将两侧的固定夹轻轻向外拉开，将内存模块倾斜 45°，然后将

其拔出。



4. 抓紧内存模块边缘，将内存模块上的缺口对准内存卡座上的脊位，然后以 45°角将内存模块滑入插槽，确保将模块牢固插入卡座。

备注：必须将内存模块插入主插槽（图中红框所示），如果不插入主插槽，系统将无法启动。每个插槽最大支持容量为 8GB。



5. 将内存模块轻轻压向主板，直至固定夹锁紧内存模块。

6. 装回机箱盖，拧紧螺丝。将电源适配器和电线插入 NAS 上的 NSA 电源。

7. 如要检查内存模块是否正确安装并由操作系统识别，以管理员身份登陆 OTS。

- 对于 QTS 4.3.0 及以上版本，进入“控制面板”>“系统”>“系统状态”>“硬件信息”，查看全部内存。
- 对于 QTS 4.2.x 及以上版本，进入“控制面板”>“系统设置”>“系统状态”>“硬件信息”，查看全部内存。

#### 5.5 TVS-473、VS-673、TVS-873

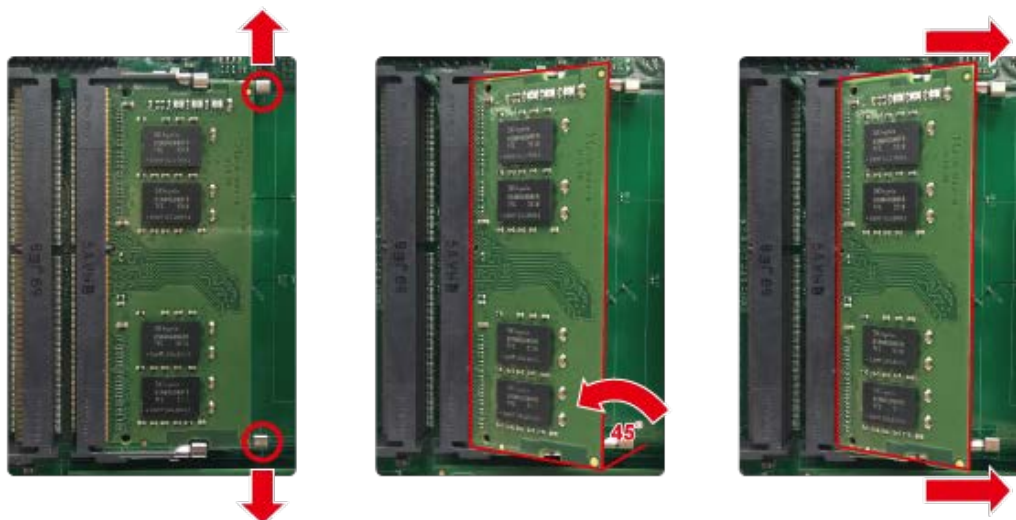
1. 拧松安装机箱盖的 NAS 背面上的螺丝。



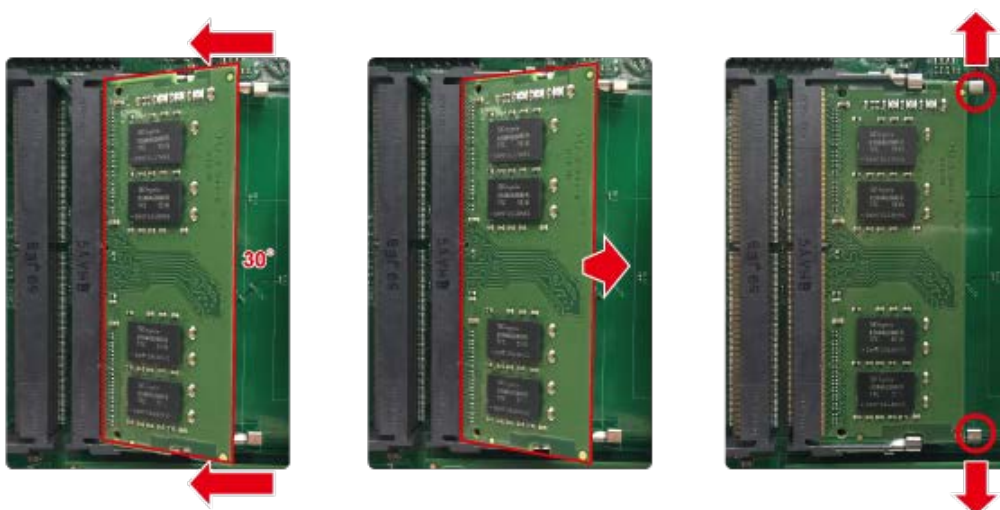
2. 将机箱盖从机箱上取下。



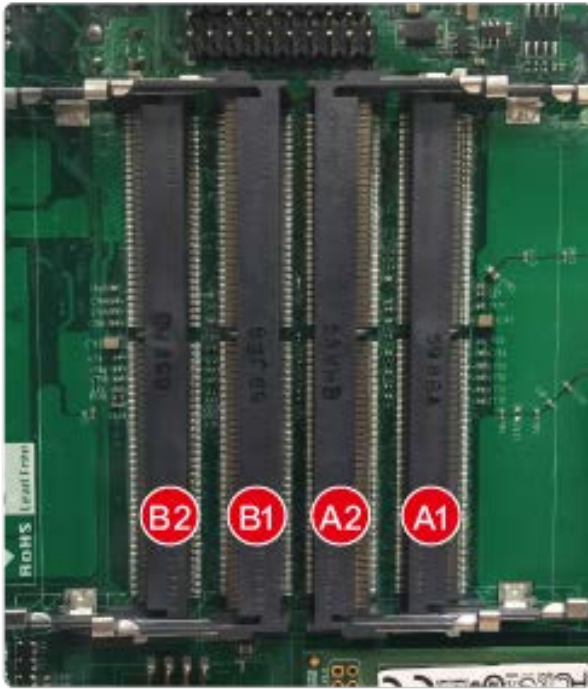
3. 要拆下安装的内存模块时，将两侧的固定夹轻轻向外拉开，将内存模块倾斜 30°，然后将其拔出。



4. 抓紧内存模块边缘，将内存模块上的缺口对准内存卡座上的脊位，然后以 30°角将内存模块滑入插槽，确保将模块牢固插入卡座和固定夹弹力足够。



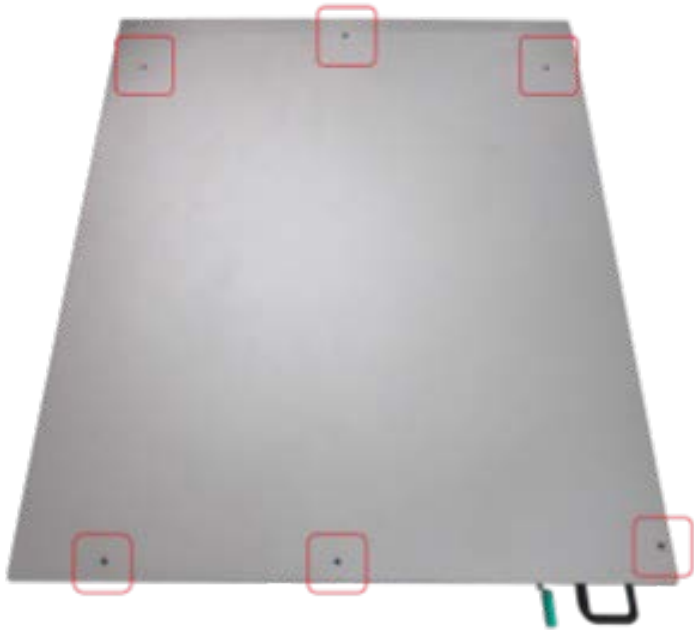
备注：最大支持容量为 64GB。  
如要插入 1 个 SODIMM 模块，可选择 A2 或 B2 插槽。  
如要插入 2 个 SODIMM 模块使用双通道，可选择 A1 和 A2、B1 和 B2 或 A2 和 B2。  
如要插入三个 SODIMM 模块，可选择 A1、A2 和 B2 或 B1、B2 和 A2。



5. 将内存模块轻轻压向主板，直至固定夹锁紧内存模块。
6. 装上机箱盖，拧紧螺丝。将电源适配器和电线插至 NAS 上的 NAS 电源。
7. 如要检查内存模块是否正确安装并由操作系统识别，以管理员身份登陆 OTS，进入“控制面板”>“系统”>“系统状态”>“硬件信息”，查看全部内存。

#### 5.6 TS-431U、TS-451U、TS-x53U 系列、TS-x63U 系列(4/8/12-bay 型号)

1. 开启 NAS 上盖。
  - a. TS-431U、TS-451U、TS-453U、TS-463U：删除 NAS 上方所有的螺丝。



b. TS-853U、TS-863U、TS-1253U、TS-1263U：移除 NAS 背面的两颗螺丝。



2. 开启上盖。拉动每侧的固定夹，使模块向上倾斜，以便拆下。拆下内存模块。



3. 以大约 45 度角斜放内存，将内存推入插槽。



4. 压下内存模块。确认模块正确安装并与扩充插槽两端的固定片吻合。





注意：针对 TS-x53U 及 TS-451U 机型，请务必确认将内存模块安装在主要插槽（红色）中。否则，系统将会无法启动。支持的最大内存总容量为 8GB。



5. 盖好 NAS 上盖并锁上螺丝，重新连接电源变压器、电源线及网络线等。

### 5.7 TS-251、TS-251+、TS-451、TS-451+、TS-251A、TS-451A

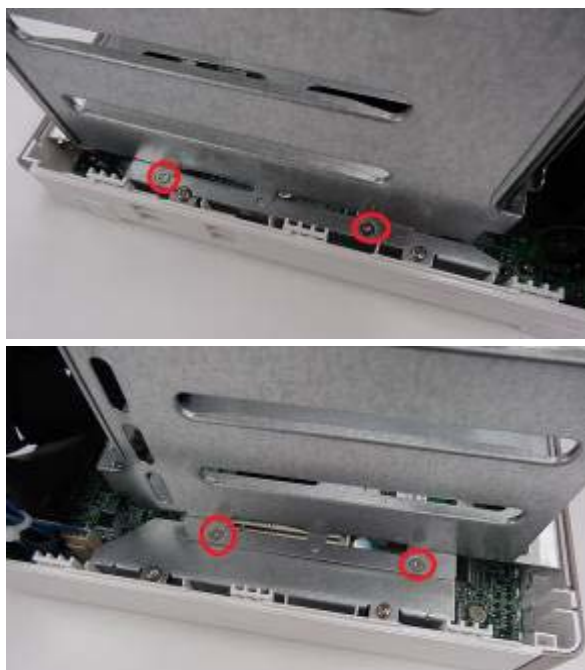
1. 移除 NAS 背面（顶部与底部）的螺钉。如果是一款 2-bay NAS，它将会有**两颗**螺钉。一个 4-bay NAS 将有**四颗**螺钉。



2. 轻轻地滑动以移除 NAS 的外壳（参阅 NAS 底面的 NAS 未开锁/已开锁图片指示）



3. 移除硬盘盒内部的四颗螺钉(每侧两颗)。



4. 如果是一个 4-bay NAS，您还需要移除硬盘盒顶部的两颗螺钉。



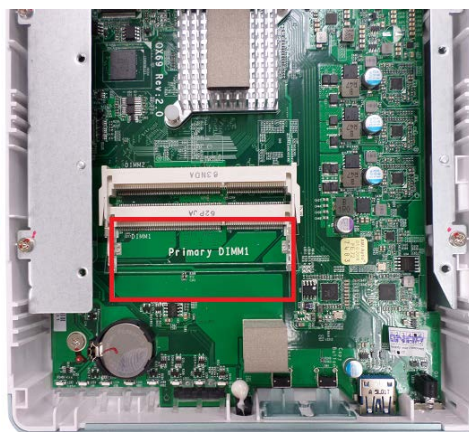
5. 轻轻地从插槽中抬起硬盘盒以将其从 NAS 移除。



6. 始终确保内存模块安装在主插槽（红色）。否则，系统将无法启动。当要安装两个内存模块时，请确保它们为同样大小，并且使用相同类型的 RAM 内存插槽。支援的最大内存总和为 8GB。



TS-251/TS-451



TS-251A/TS-451A

7. 重新安装硬盘盒至 NAS。请确保它正确地插入到插槽中。



8. 紧固四颗内部螺钉以固定硬盘盒（对于 4-bay NAS，还需拧紧另外的两颗顶部螺钉）。然后轻轻地滑动 NAS 盒盖以重新将其固定。
9. 将 2/4 颗螺钉拧紧在 NAS 的背板上。
10. 重新插入您的硬盘至 NAS。
11. 将电源适配器和电缆重新连接到 NAS。
12. 要检查内存模块是否被 NAS 识别，请启动 NAS 并以管理员身份登入至网页界面。至 [系统状态] > [系统信息]，在[硬件信息]中检查内存总容量。

## 5.8 IS-453S

1. 松开 NAS 底部四颗螺丝和后面板上的两颗螺丝，然后将 NAS 底板移除。



2. 拨开内存插槽两侧的固定片，并将原本的内存模块移除。



**注意：**若您仅需安装一条内存模块，请务必确认将该内存模块安装在主要插槽中（图中标示 DIMM1 处）。否则，系统将无法启动。支持的最大内存总和为 8GB。



3. 以大约 45 度角斜放内存模块，然后将内存模块推入插槽，下压直到固定。请确认内存模块已装妥，且两侧固定片已固定住内存模块。



4. 盖上 NAS 底盖，并将其用螺丝锁紧（螺丝位置请参考步骤 1）。重新连接电源变压器、电源线、及网络线等。

## 第6章 安装网络扩充卡



### 警告：

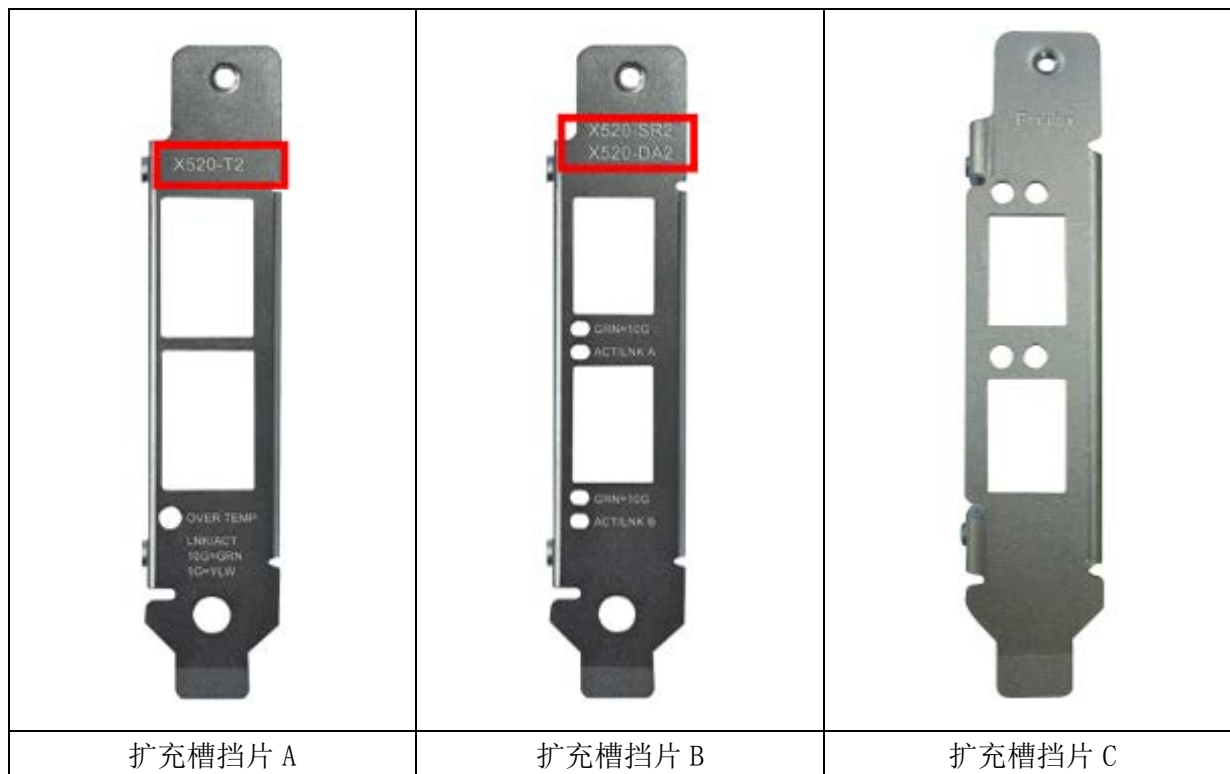
- 以下操作说明必须由授权及合格的技术人员进行。
- 请务必依照以下说明安装 RAM 模块至 NAS，否则将有可能导致身体伤害甚至死亡。

特定 NAS 会配备网络卡扩充插槽，用户可以安装额外的网络扩充卡（需另购）至 NAS 的主板以增加网络带宽。如需兼容性列表，请参考 <http://qnap.com/compatibility>。

**注意：** 网络扩展卡不支持Wake-on-LAN ( WoL , LAN唤醒 ) 。

### 6.1 TVS-463、TS-531P、TS-531X、TVS-663、TS-831X、TVS-863、TS-863+、TS-563、TS-879 Pro、TS-1079 Pro、TS-463U 及 TS-463U-RP

请参考以下内容，为网络扩充卡更换合适的扩充槽挡片。



|                                | 兼容网络扩充卡  |
|--------------------------------|--|
| 扩充槽挡片 A (X520-T2)              | Intel® Ethernet Server Adapter X520-T2 (E10G42B)   |
| 扩充槽挡片 B<br>(X520-SR2/X520-DA2) | Intel® Ethernet Server Adapter X520-SR2 (E10G42BFSR)<br>Intel® Ethernet Server Adapter X520-DA2 (E10G42BTDA)   |
| 扩充槽挡片 C (Emulex)               | <ol style="list-style-type: none"> <li>Emulex OneConnect 10GbE Network Adapters, SFP+ Direct attach copper (OCe11102-NX、OCe14102-NX)</li> <li>Emulex OneConnect 10GbE Network Adapters, Short reach optical (OCe11102-NM)</li> <li>Emulex OneConnect 10GbE Network Adapters, SFP+ Direct attach copper (OCe11102-IX)</li> <li>Emulex OneConnect 10GbE Network Adapters, Short reach optical (OCe11102-IM)</li> </ol> |

1. 关闭 NAS 电源，移除 NAS 的电源变压器、网络线及其它连接装置及连接线。
2. 安装网络扩充卡前，请先戴上防静电的手腕带，并确保接地线接至地上。
3. 移除 NAS 背面的螺丝。



4. 小心地移除 NAS 的外壳。



若为 TVS-463：取出外部螺丝然后移除电源供应器。



5. 移除螺丝及扩充插槽的面板。

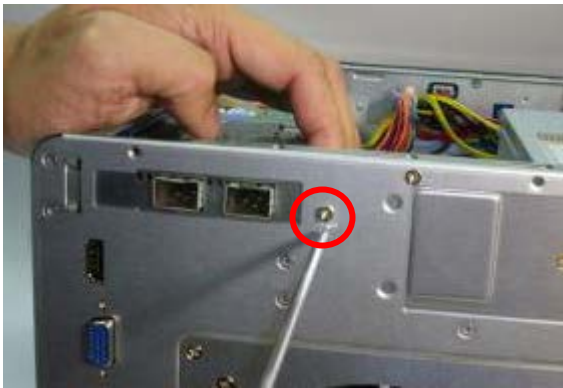


6. 小心握住网络扩充卡的边缘，将扩充卡金边上的接口与插槽的接口对齐。将网络扩充卡插入插槽直至完全紧合。





7. 锁上螺丝。



8. 将 NAS 外壳盖上并锁上螺丝，重新连接电源变压器、电源线及网络线等。

9. 要检查网络扩充卡是否成功被 NAS 侦测，请开启 NAS 电源，然后以管理者账号登入网页管理接口。在 [系统状态] > [网络] > [TCP/IP] 页面检查网络接口的数目。

## 6.2 TS-1635

TS-1635 提供 PCIe2.0x2 扩充插槽，使用户可以选择安装网络扩充卡，以增强网络性能。操作

步骤如下所示：

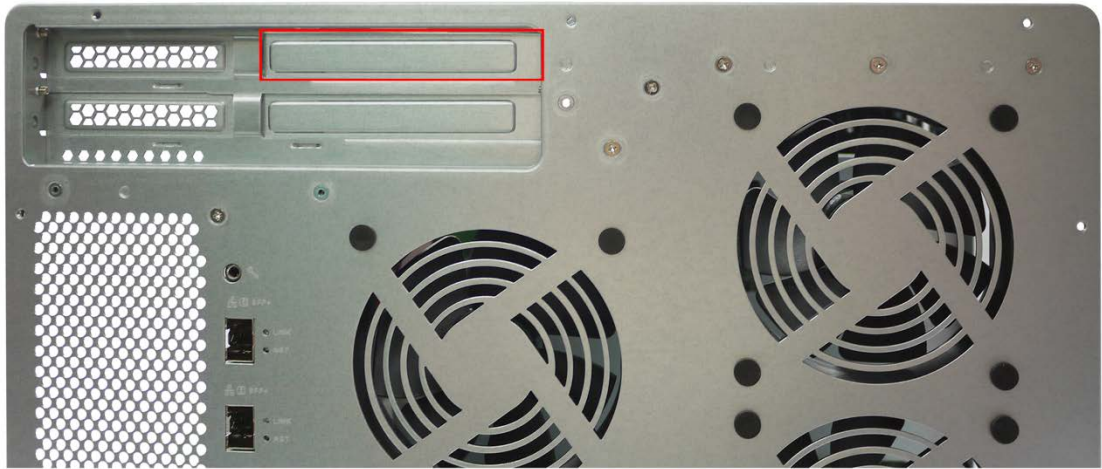
1. 关闭 NAS，切断电源线、网线和其它设备线缆。
2. 打开 NAS 前，请戴防静电手环，用鳄鱼夹接地，避免因释放静电而损坏设备。
3. 拧松安装机箱盖的 NAS 的背面上的螺丝。



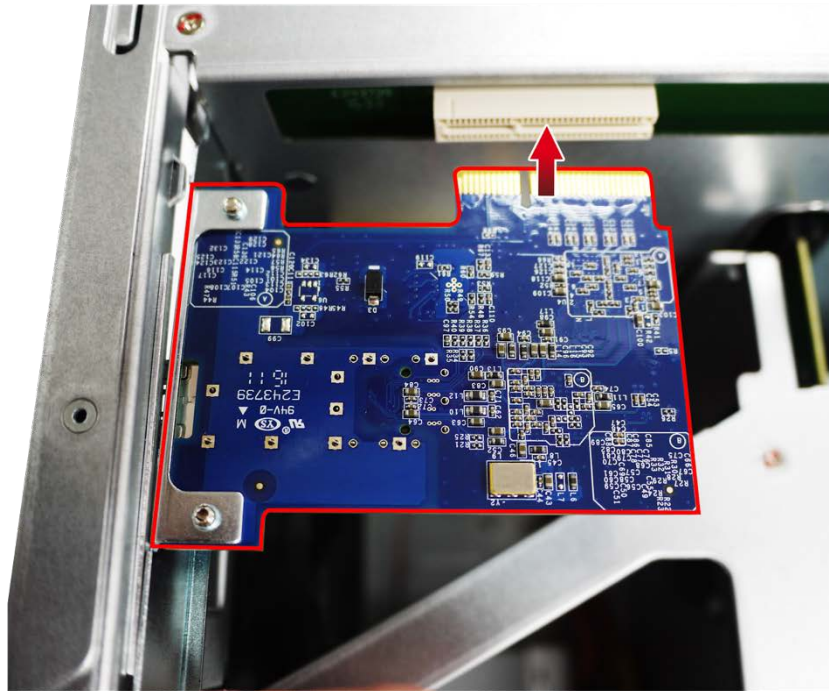
4. 将机箱盖从机箱上取下。



5. 拧下顶部全尺寸 PCIe 支架的螺丝，将支架拆下。



6. 抓紧网卡边缘 ,将网卡上的缺口对准 PCIe 上的脊位 ,然后将网络扩充卡充分插入扩充卡槽。



7. 拧紧螺丝，固定好网卡。



8. 装回机箱盖，拧紧螺丝。将电源适配器和电线插入 NAS 上的 NSA 电源。

9. 如要检查内存模块是否正确安装并由操作系统识别，以管理员身份登陆 OTS。进入“控制面板”>“系统设置”>“系统状态”>“网络状态信息”，查看全部网络端口。

### 6.3 TVS-473、TVS-673、TVS-873

备注：

1. TVS-473 使用小型 PCIe 支架。
2. TVS-673 和 TVS-873 使用全高度 PCIe 支架。

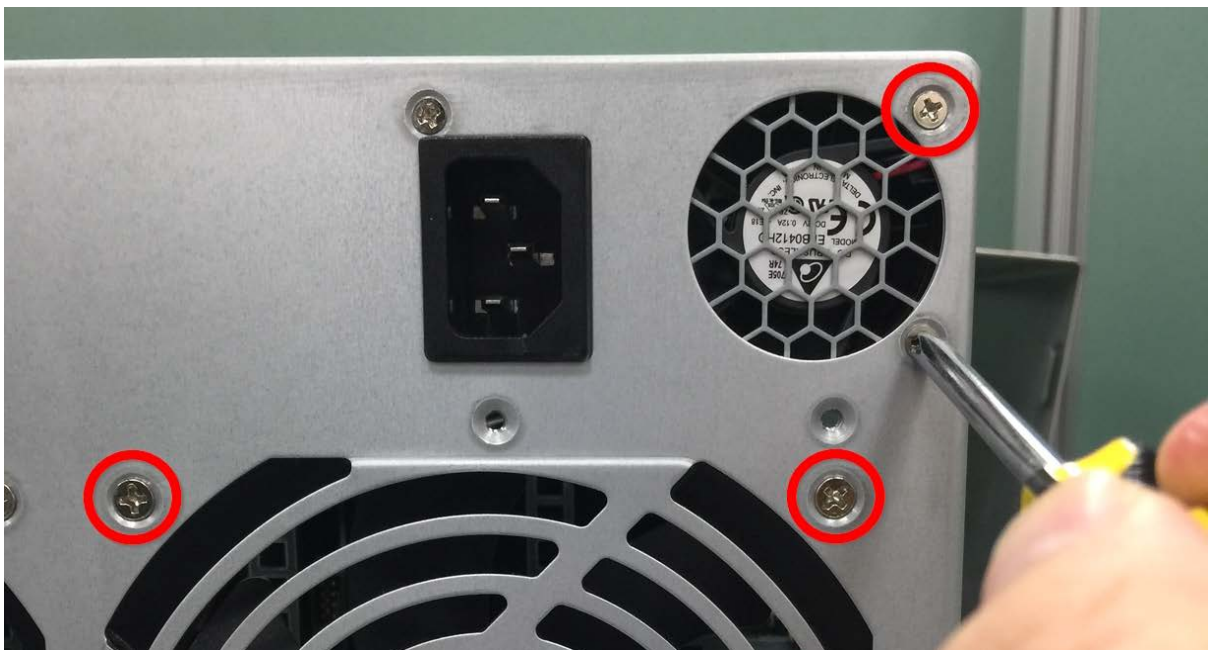
1. 关闭 NAS，断开设备的电源线、网线及其它连接线。
2. 打开 NAS 前，请先戴上防静电的手腕带，用鳄鱼夹接地，避免因释放静电而损坏设备。
3. 打开 NAS 前，请先戴上防静电的手腕带，用鳄鱼夹接地，避免因释放静电而损坏设备。
4. 拧松并拆下安装机箱盖的 NAS 的背面上的螺丝。



5. 轻轻取下机箱上的机箱盖。



6. 拧松并取下 PSU 背面上的 3 个螺丝。



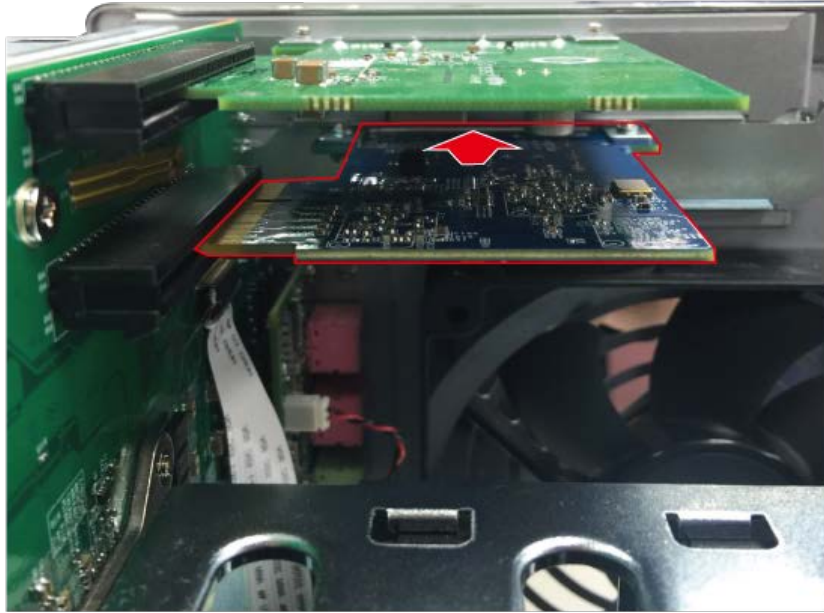
7. 拧松并拆下机箱上安装 PSU 的剩余 2 个螺丝。



8. 定位 PSU，使螺丝刀可以操作 PCIe 支架的螺丝。
9. 拧松并拆下 PCIe 支架的螺丝，然后拆下支架。



10. 抓紧网络扩充卡边缘，将网络扩充卡上的缺口对准 PCIe 插槽上的断位，然后将网络扩充卡充分插入扩充插槽。



11. 拧紧螺丝，固定好扩充卡。
12. 将 PSU 装回原位，拧紧步骤 6 和 7 中拧下的 5 个螺丝。
13. 装回机箱盖，拧紧螺丝。将电源适配器和电线插入 NAS。
14. 如要检查网络扩充卡是否正确安装并由操作系统识别，以管理员身份登陆 OTS，进入“控制面板”>“系统设置”>“系统状态”>“网络状态”，查看网络端口总数。

#### 6.4 TS-463U、TS-463U-RP 及 TVS-471U

关闭 NAS 电源，移除 NAS 的电源变压器、网络线及其它连接装置及连接线。

2. 安装网络扩充卡前，请先戴上防静电的手腕带，并确保接地线接至地上。
3. 删除 NAS 背面上所有螺丝。

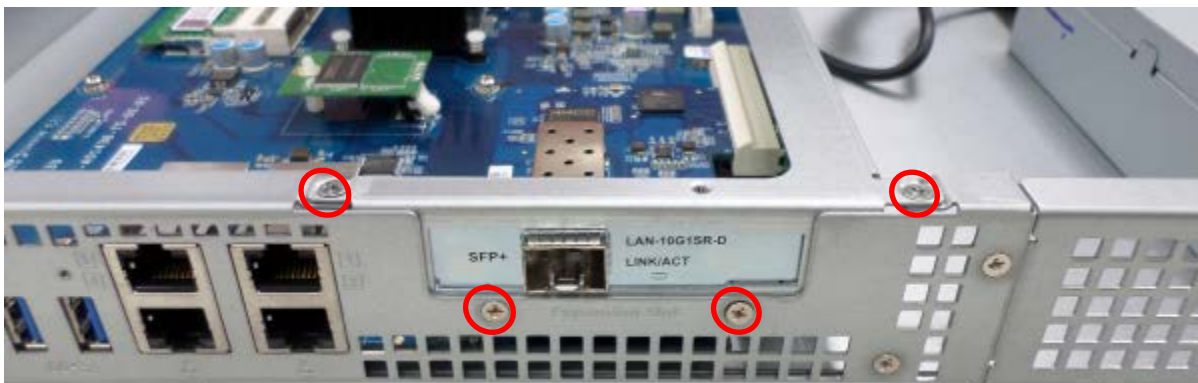




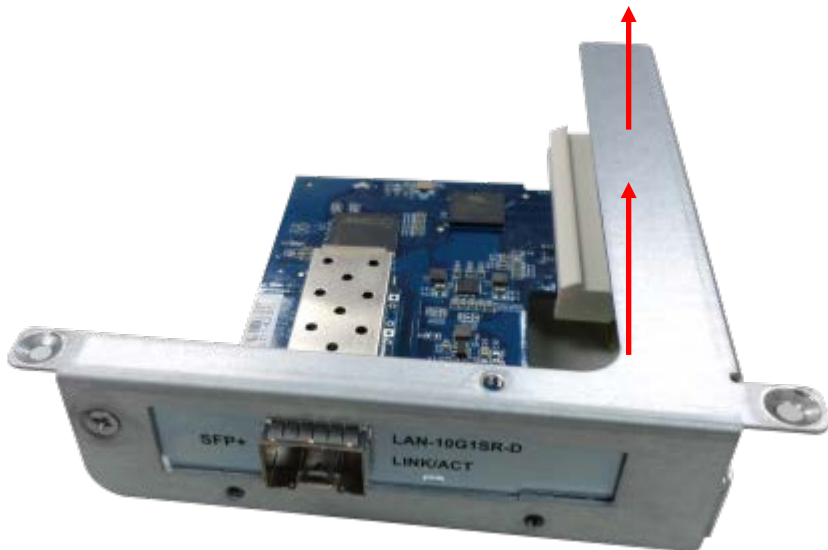
4. 用双手将上盖拉出卸下。



5. 如图标删除 Riser Card 模块螺丝。



6. 握住 Riser Card 模块的金属边缘，并小心地删除 Riser Card 模块。



7. 删除网络扩充卡 / 档片。

a. TS-463U 及 TS-463U-RP: 删除螺丝以及网络扩充卡。



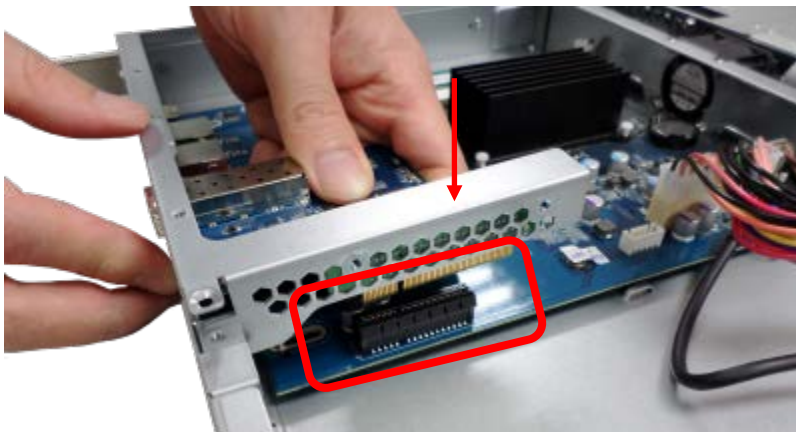
b. TVS-471U: 删除螺丝以及档片。



8. 将新的网络扩充卡插入 Riser Card 模块直至完全紧合，然后锁上螺丝。



9. 将 Riser Card 模块金边上的接口与 PCIe 插槽的接口对齐。将 Riser Card 模块插入 PCIe 插槽直至完全紧合。



10. 锁上螺丝。将 NAS 外壳盖上并锁上螺丝。



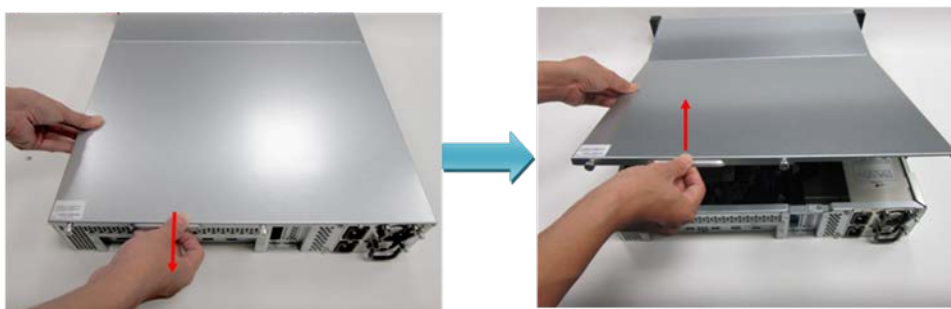
11. 重新连接电源变压器、电源线及网络线等。
12. 要检查网络扩充卡是否成功被 NAS 侦测，请开启 NAS 电源，然后以管理者账号登入网页管理接口。在 [系统状态] > [网络] > [TCP/IP] 页面检查网络接口的数目。

## 6.5 TS-863U、TS-863U-RP、TS-1263U 及 TS-1263U-RP

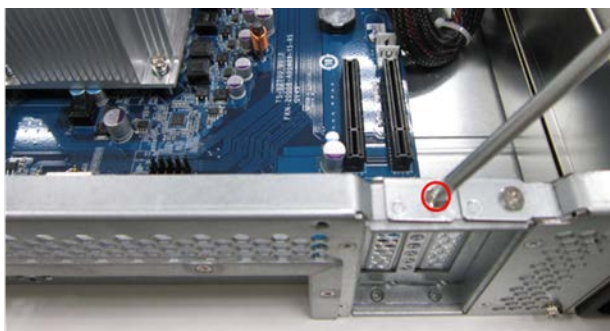
1. 关闭 NAS 电源，移除 NAS 的电源变压器、网络线及其它连接装置及连接线。
2. 安装内存模块前，请先戴上防静电的手腕带，并确保接地线接至地上。
3. 移除 NAS 背面的两颗螺丝。



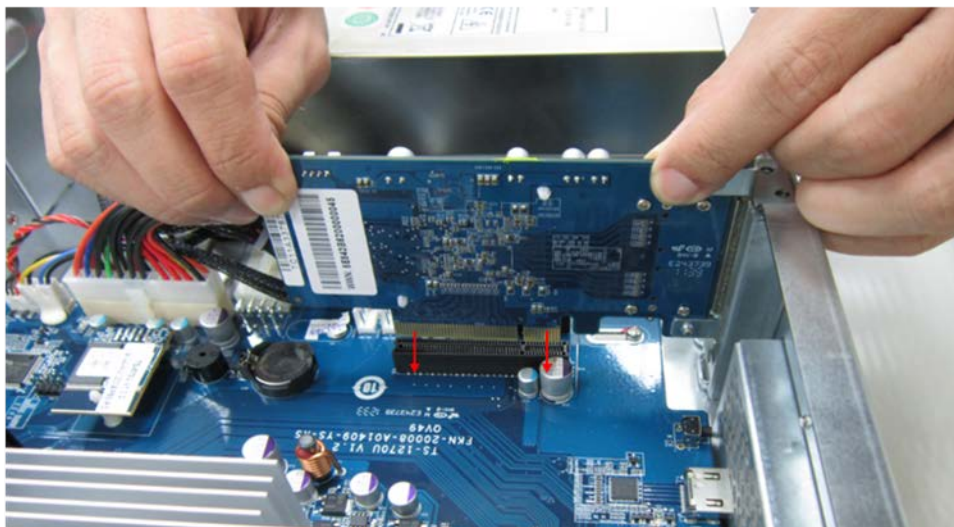
4. 握住上盖边缘沟槽拉出上盖，用双手将上盖卸下。



5. 移除螺丝及扩充插槽的面板。



6. 小心握住网络扩充卡的边缘，将扩充卡金边上的接口与插槽的接口对齐。将网络扩充卡插入插槽直至完全紧合。



7. 锁上螺丝。



8. 将 NAS 外壳盖上并锁上螺丝，重新连接电源变压器、电源线及网络线等。
9. 要检查网络扩充卡是否成功被 NAS 侦测，请开启 NAS 电源，然后以管理者账号登入网页管理接口。在 [系统状态] > [网络] > [TCP/IP] 页面检查网络接口的数目。

## 第7章 安装及热抽换硬盘



### 注意：

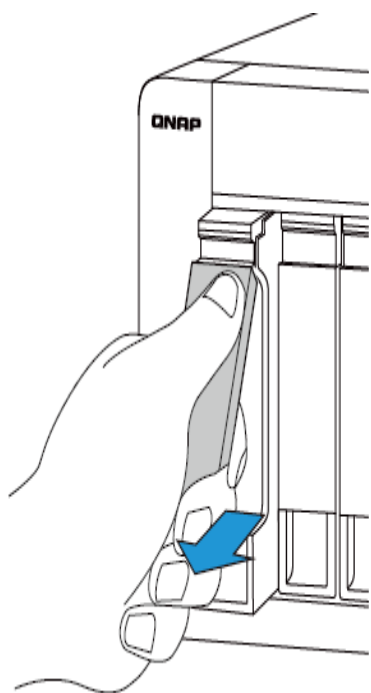
- 在您开始执行任何步骤之前，请务必关闭 NAS 电源，移除 NAS 的电源变压器、网络线及其他连接装置及连接线。
- 在安装内存模块前，请先戴上防静电的手腕带，并确保接地线接至地上。

### 7.1 安装硬盘

请参考以下步骤在 NAS 上安装硬盘。

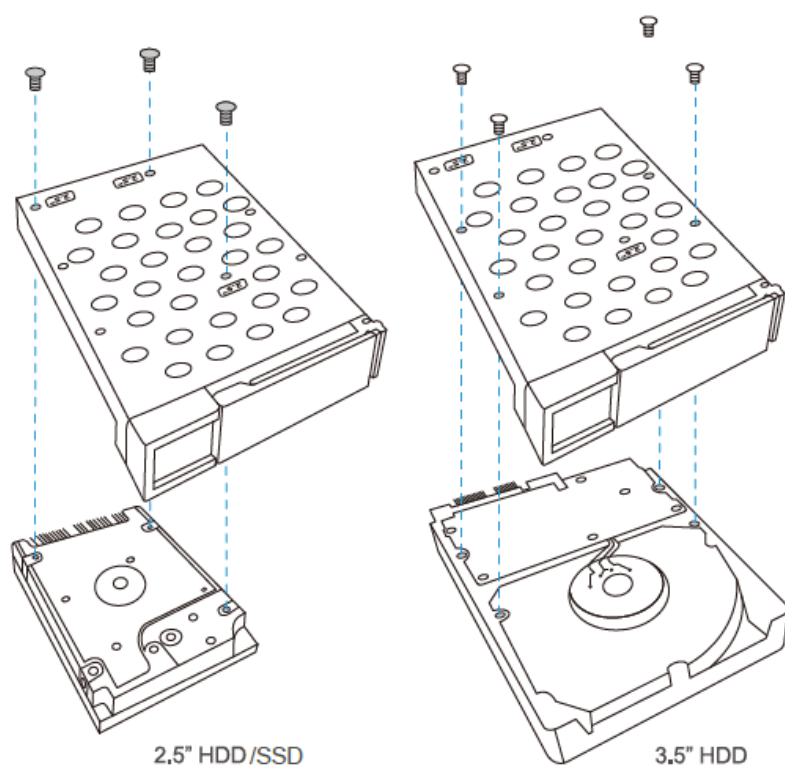
#### 7.1.1. TS-x51、TS-x51A、TVS-x63、TS-563、TS-x53 Pro、TS-651、TS-831X、TS-851、 TS-531X、TS-531P 及 TS-x53A

1. 打开并抽出硬盘托盘。

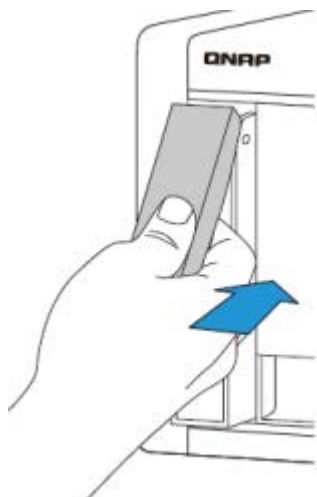


2. 安装硬盘：
  - a. 3.5" 硬盘：将硬盘由托盘底部用四颗螺丝锁住。

b. 2.5"硬盘：依照托盘底部标示用三颗螺丝锁住硬盘。



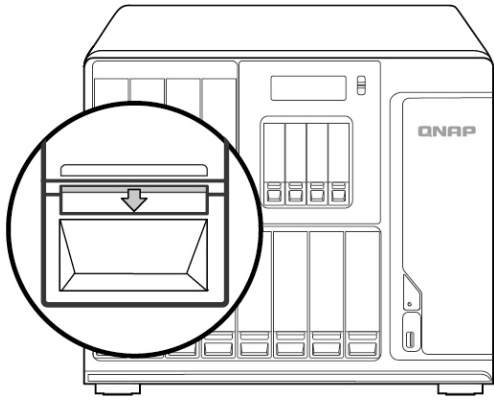
3. 将装有硬盘的硬盘托盘插入至 NAS 底部，直到听到咯一声。



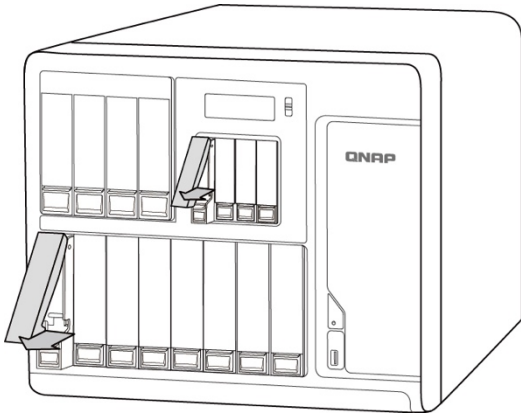
### 7.1.2. TS-1635

1. 拆下 NAS 上的硬盘架；

i. 将硬盘架上的蓝色锁开关推至解锁位置。



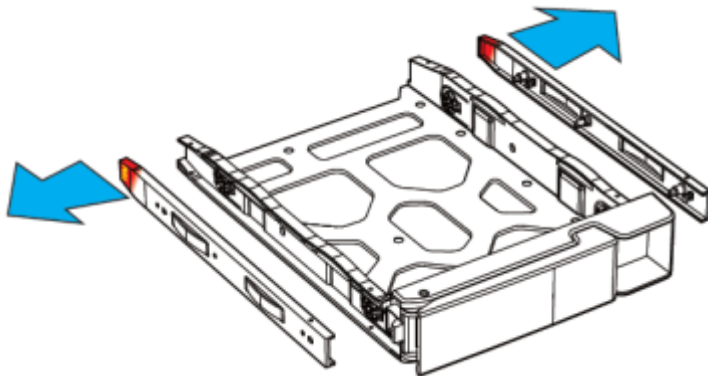
- ii. 推动蓝色开关下的按钮，释放控制杆。
- iii. 使用控制杆拔出硬盘架。



2. 将HDD/SDD 硬盘安装到硬盘架上。

a. 3.5" HDD :

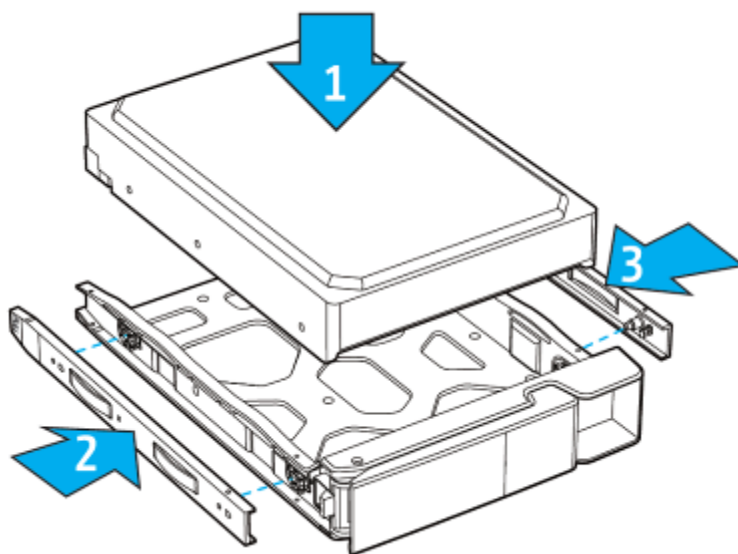
- i. 拆下硬盘架一侧的固定板。



- ii. 将硬盘装到硬盘架上，使硬盘架侧孔对准硬盘侧孔。

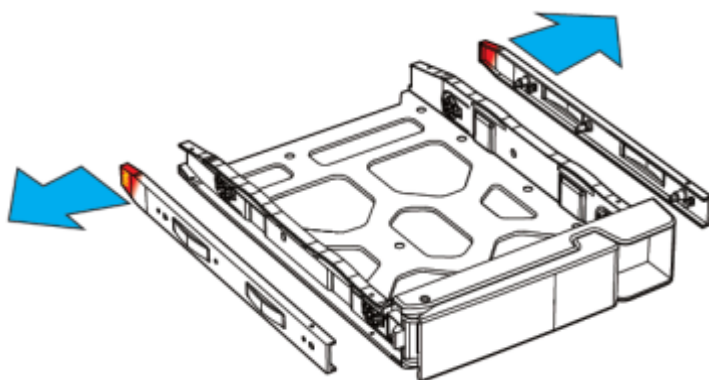


iii. 重新插入固定板，将硬盘固定到硬盘架上。



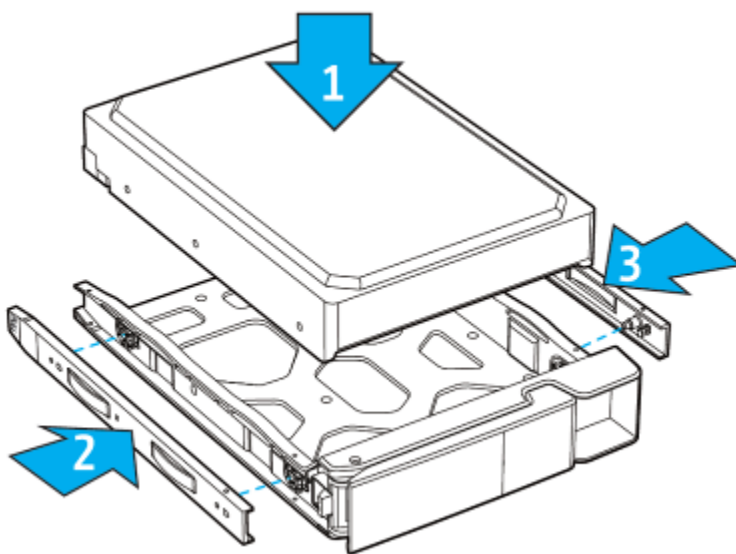
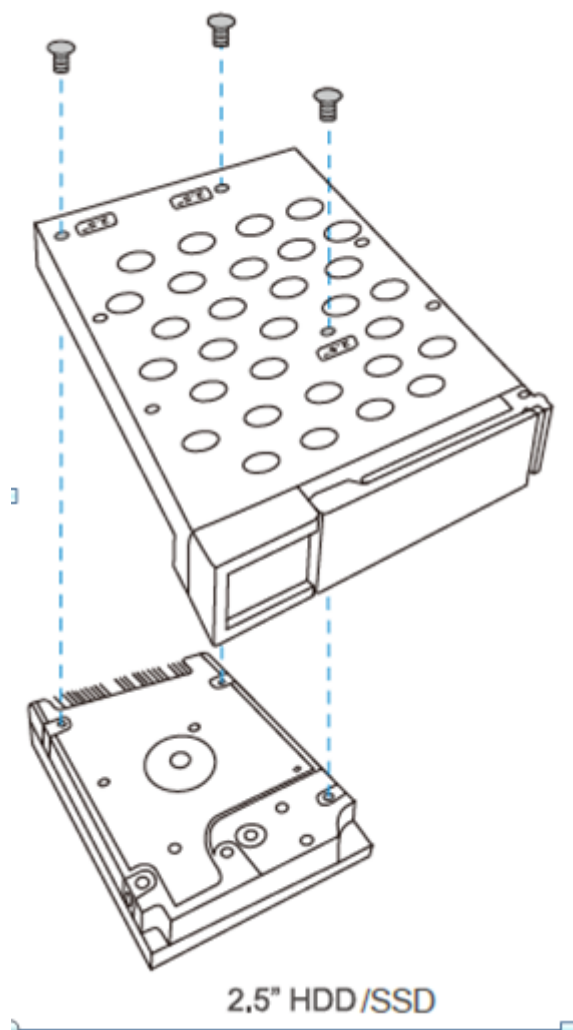
b. 2.5" HDD/SSD :

i. 拆下硬盘架一侧的固定板。



ii. 将硬盘放到硬盘架上，确保硬盘架底面孔对准硬盘底面孔。

iii. 重新插入固定板，将硬盘锁定到硬盘架上。

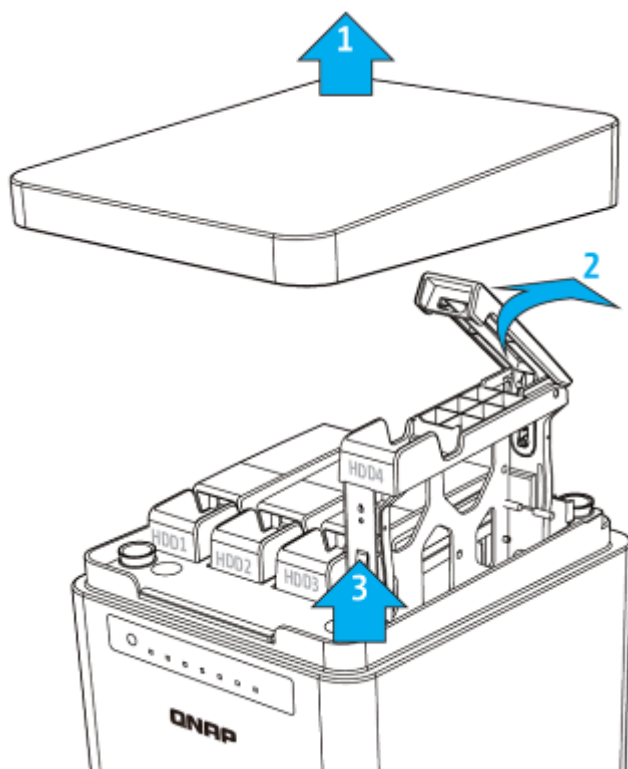


3. 将硬盘架装回硬盘槽。

- i. 将硬盘架插入 NAS 并检查硬盘架取向正确 ( HDD 顶部面向右 ) 和充分推入。
- ii. 关闭卡锁，锁紧开关。

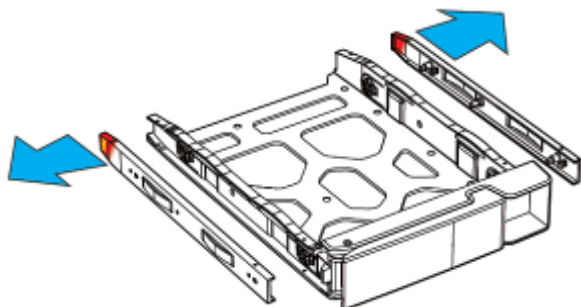
### 7.1.3. TS-453Bmini、TS-453Mini

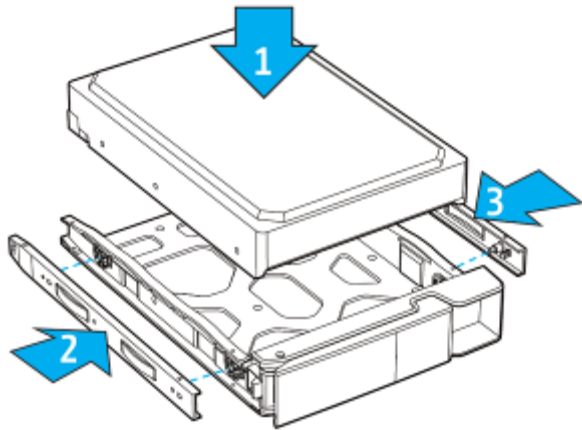
1. 移除上盖，打开然后抽出硬盘托盘。



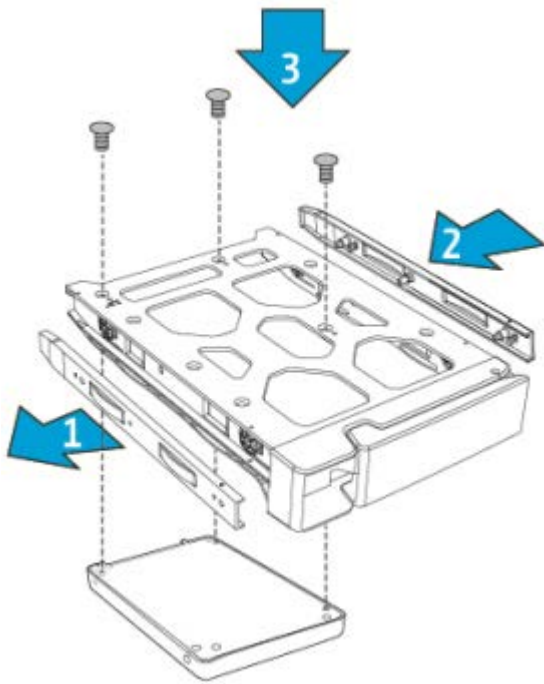
2. 安装硬盘：

- a. 如为 3.5” 硬盘，移除托盘两侧之固定片(在固定片上标有 Pull 处将固定片往外拨)。将硬盘放入托盘上并将两侧固定片装回托盘(请将固定片对准托盘孔洞后再行装上)。

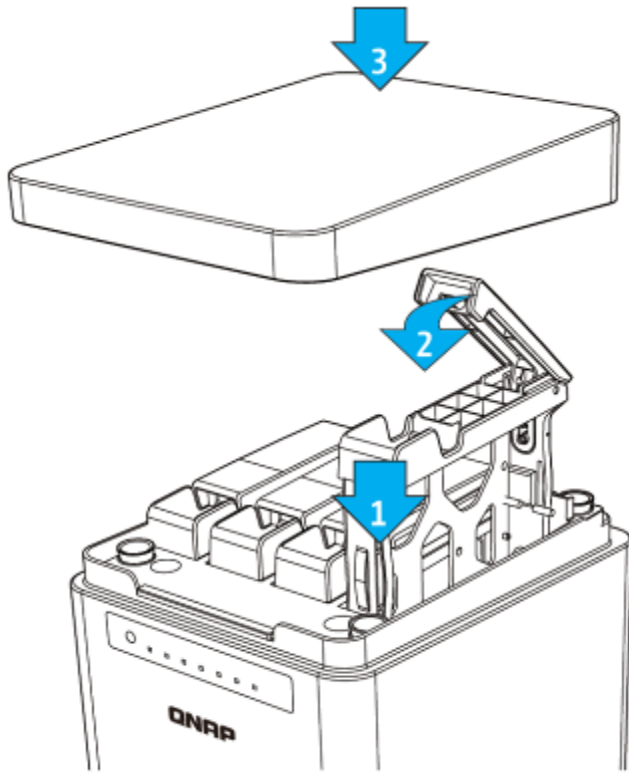




- b. 如为 2.5” 硬盘或固态硬盘，先将靠近 2.5” 托盘孔洞那边的固定片删除（您可在托盘底部看到 2.5” 托盘孔洞标示），然后将硬盘由托盘底部用三颗螺丝锁住。

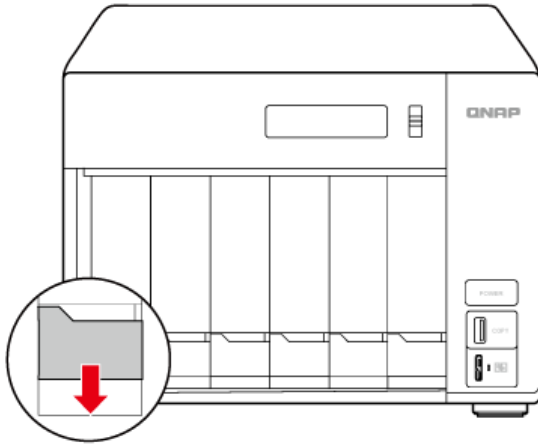


3. 将装有硬盘的硬盘托盘插入至 NAS 底部，然后关上上盖。

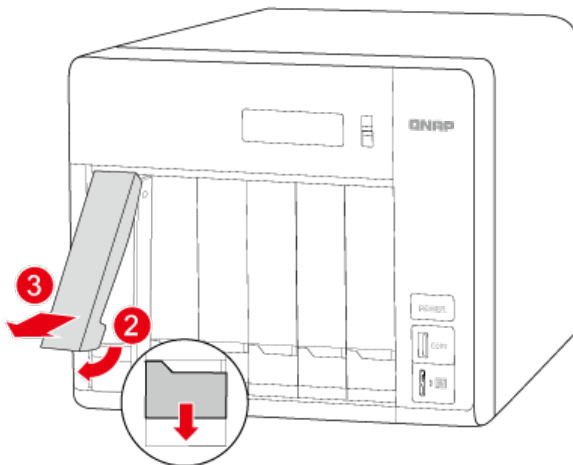


#### 7.1.4. TVS-473, TVS-673, TVS-873

1. 移除上盖，打开然后抽出硬盘托盘。
  - i. 将托架上的锁定开关向下推至解锁位置。

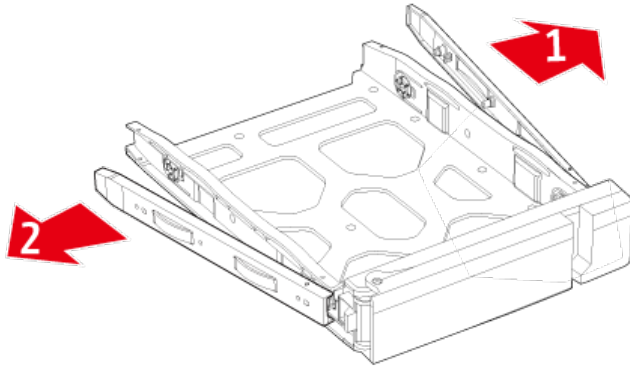


- ii. 推蓝色开关下面的按钮以释放拉杆

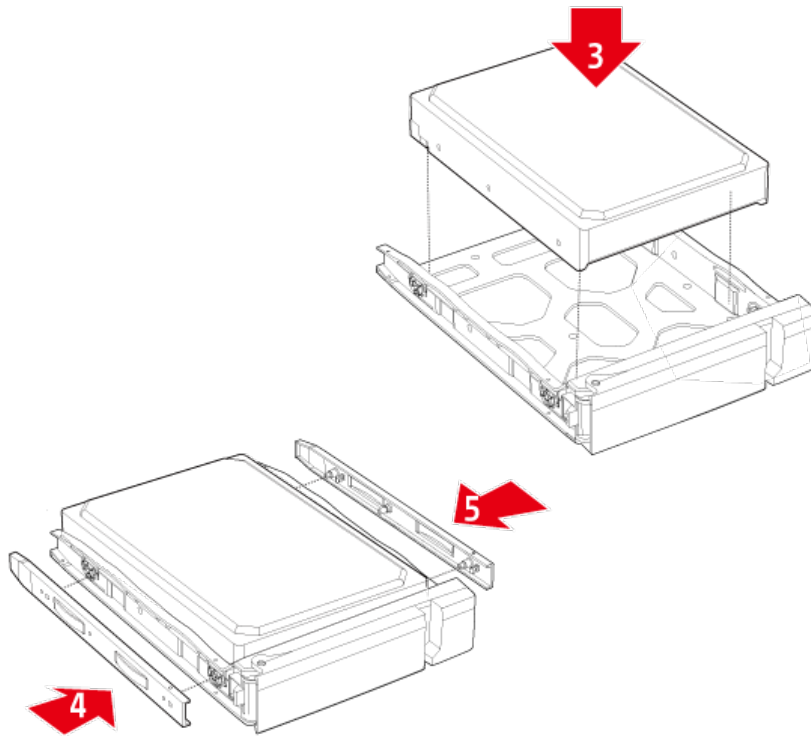


- iii. 使用拉杆拉出托架。

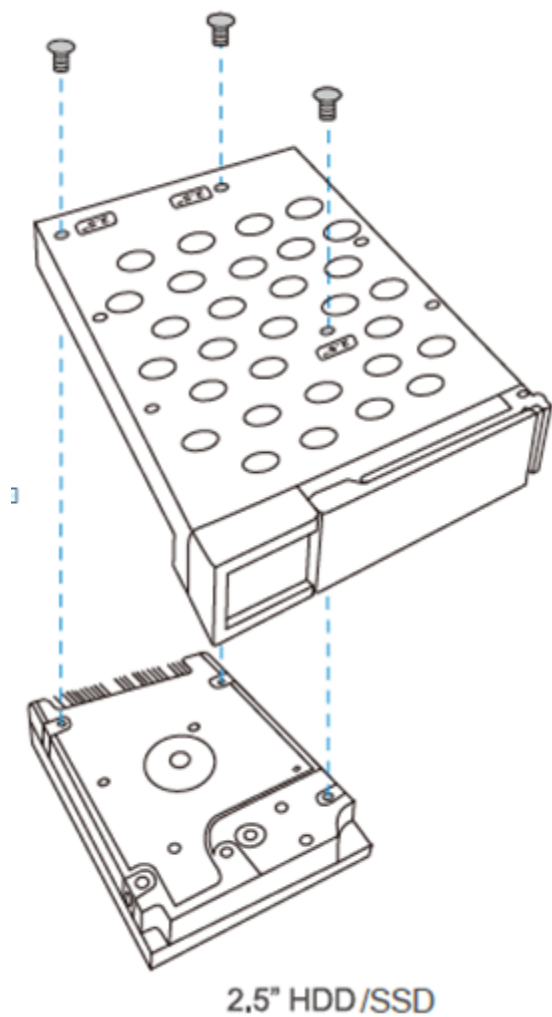
2. 安装硬盘：
  - a. 3.5” HDD:
    - i. 从硬盘托架侧面卸下紧固面板



- ii. 将硬盘放到托架，使托架底部的小孔对准硬盘的底部小孔。
- iii. 重新插入紧固面板以将硬盘锁到托架。



- b. 2.5" HDD/SSD:
  - i. 将 2.5" 驱动器插入托盘中，使 HDD/SSD 接口恰好对准托盘末端的开口。
  - ii. 拧紧硬盘驱动器托盘背面的 3 个螺丝。

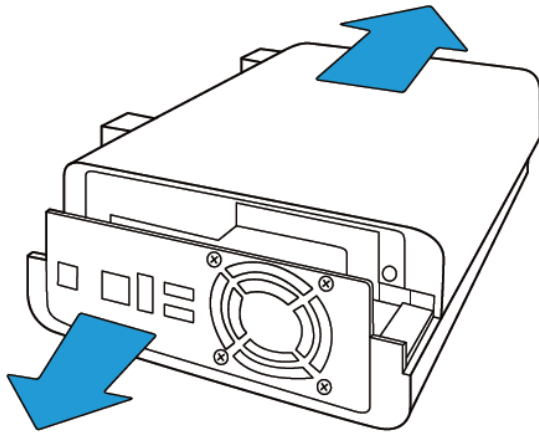


3. 将托架装回硬盘仓。
  - i. 将硬盘托架插入 NAS。验证托架安装方向正确（硬盘顶部向右）并已完全推入。
  - ii. 合上插门，将开关锁定。

#### 7.1.5. TS-112P、TS-212P 和 TS-251C

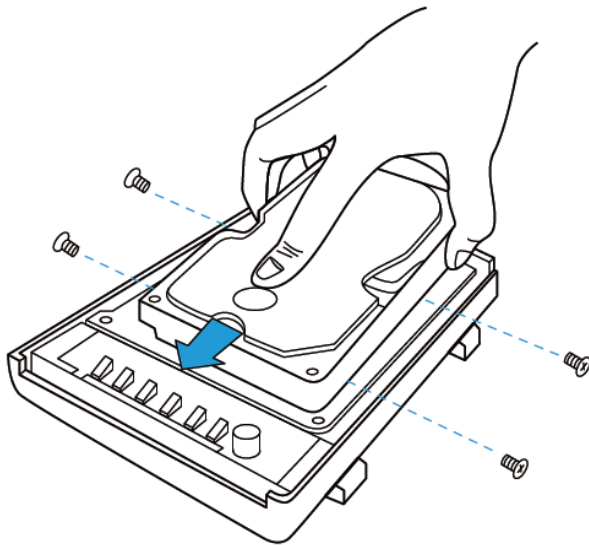
1. 拧松 NAS 后面（上部和下部）的螺丝。推开然后取下 NAS 外盖（参见 NAS 底面关于 NAS 机壳锁定/解锁的标记）。



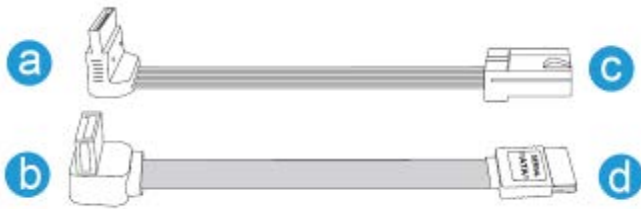
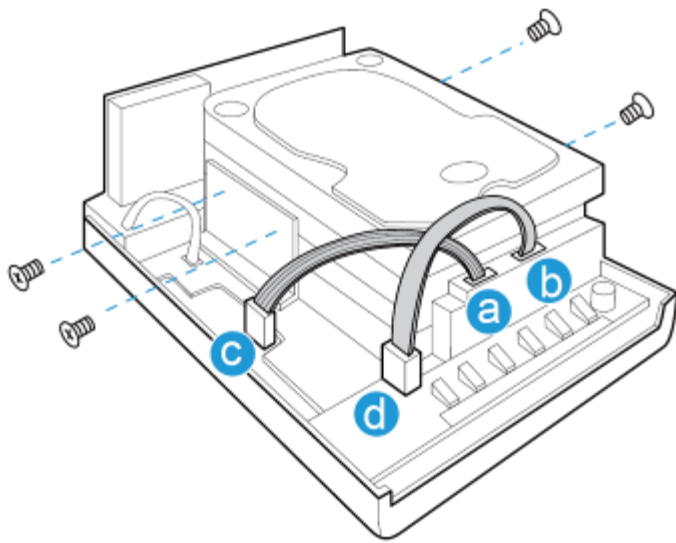


2. 安装硬盘驱动器：

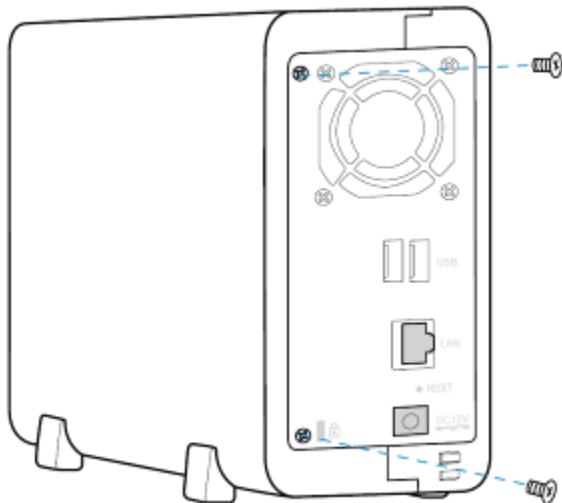
- a. TS-112P：将硬盘驱动器放入硬盘驱动器底座，然后向前推动使其牢固插入接口。拧紧硬盘驱动器侧面的螺丝。



- b. TS-212P 和 TS-251C：将第一块硬盘驱动器放入硬盘驱动器底座，然后向前推动使其牢固插入接口。将第二块硬盘驱动器放在第一块硬盘驱动器的上面，拧紧两块硬盘驱动器侧面的螺丝。将 SATA 线和电源线连接到相应的接口，如图所示。

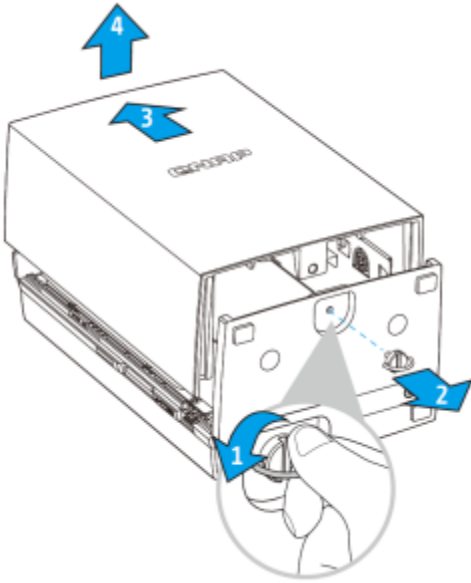


3. 安装完硬盘驱动器后，装上 NAS 外盖，拧紧圆头螺丝。然后，将 NAS 竖放在底座上。

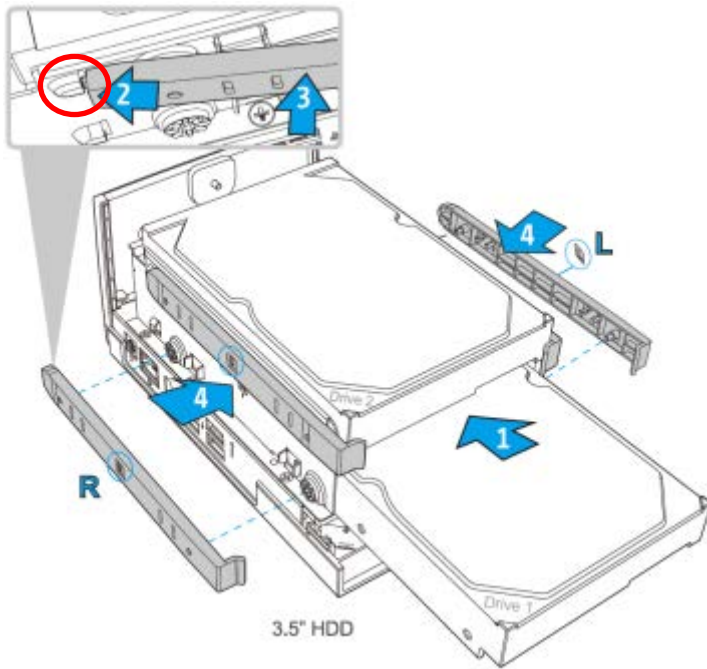


### 7.1.6. TAS-168、TAS-268、TS-128、TS-228

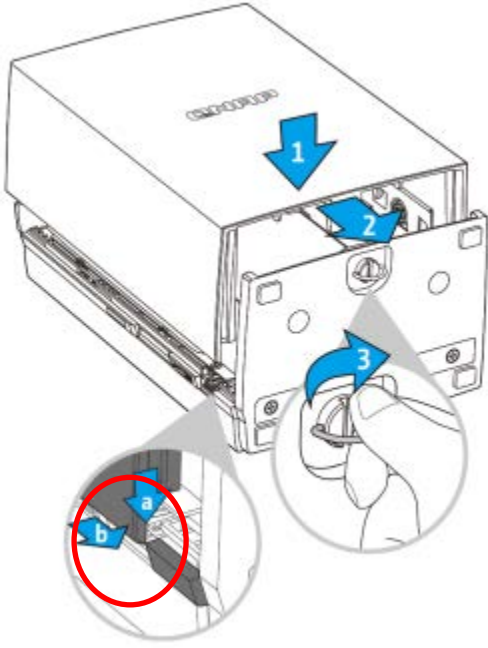
1. 拧下指旋螺丝，取下上盖。



2. 将硬盘驱动器放入硬盘驱动器底座，然后向前推动使其牢固插入 SATA 接口。装上两个支架，将支架滑入位置 2 的孔中，然后向着硬盘驱动器按压支架 (TAS-268 :对第二块驱动器重复此此步骤)。

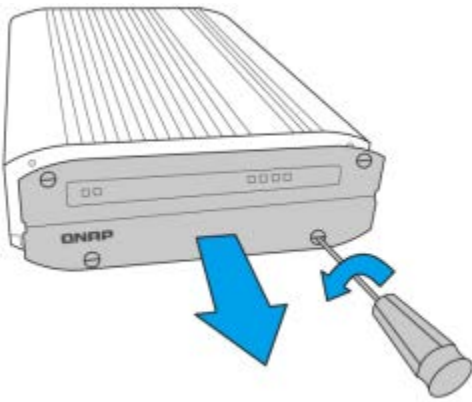


3. 将外盖上的点 a 对准 NAS 前部的点 b (参见下图)。向前推动外盖 (步骤 2)，然后拧紧免工具螺丝以固定外盖。

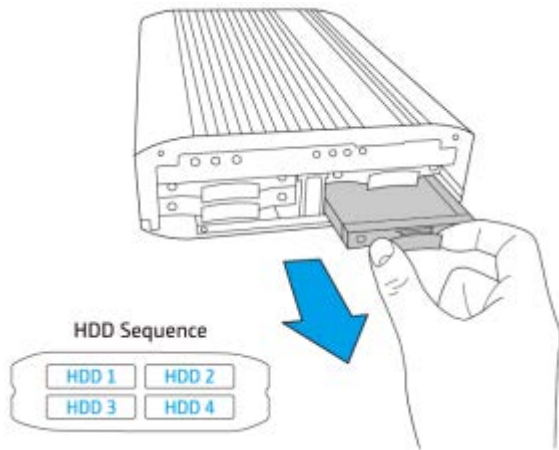


#### 7.1.7. IS-453S

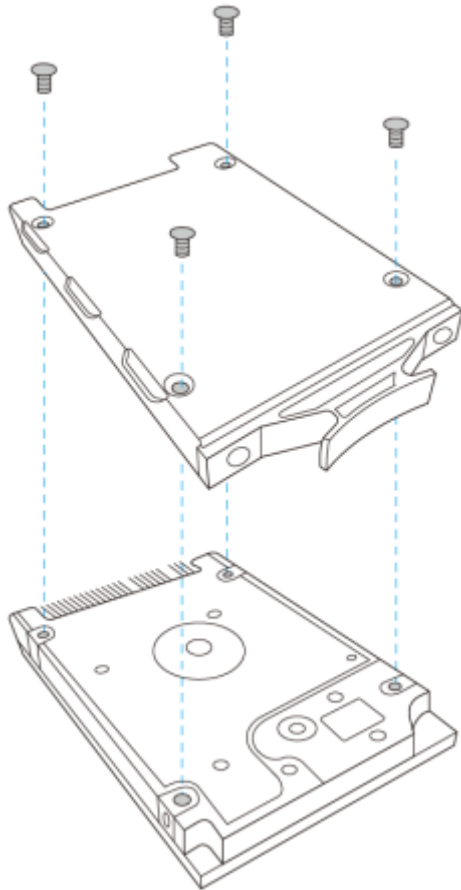
1. 拧下前面板上的所有四个螺丝。



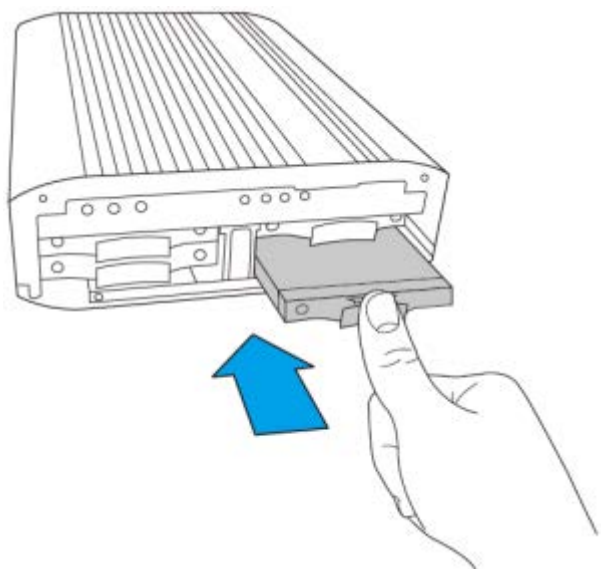
2. 取出驱动器托盘。



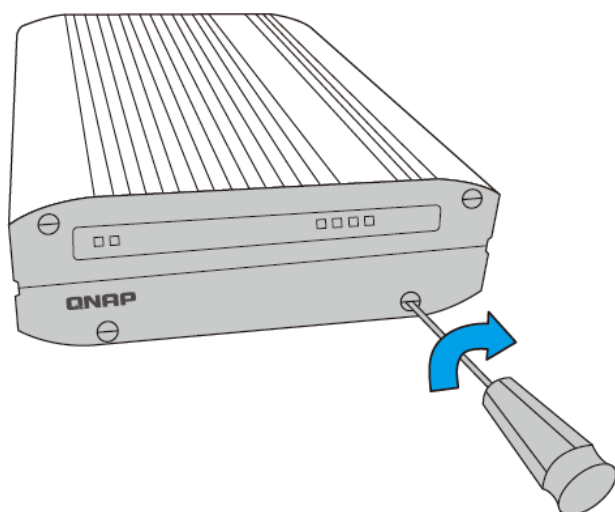
3. 将驱动器装入托盘，然后拧上驱动器托盘背面的四个螺丝。



4. 将驱动器托盘完全插入 NAS。



5. 重复步骤 2 到 4 以安装其他驱动器。请遵循步骤 2 中所示的硬盘驱动器顺序进行操作。
6. 装上前面板，拧紧螺丝。



## 7.2 热抽换硬盘

QNAP NAS支持各大硬盘品牌之 2.5 吋/3.5 吋 SATA硬盘，有关支持硬盘信息，请至威联通网站查询：<http://www.qnap.com>。



### 注意：

- 威联通不負責任何情况、原因下错误安装或使用硬盘所导致的产品损坏与不正常运作下的数据损失。
- 若要安装之硬盘从未被安装至 NAS，硬盘将会自动被格式化，硬盘上的数据会被清除。

| 系统型号  | 支持 3.5 吋<br>SATA 硬盘 | 支持 2.5 吋<br>SATA 硬盘 | 支持 2.5" SATA SSD | 支持 M.2<br>SATASSD  | 支持硬盘热抽换<br>(RAID 1 或以上<br>磁盘组态) |
|---|---------------------|---------------------|------------------|--------------------|---------------------------------|
| TS-112P、TS-212P、TS-251C   | ✓                   |                     |                  |                    |                                 |
| TAS-168、TAS-268、TS-128、<br>TS-228   | ✓                   |                     |                  |                    |                                 |
| TVS-473、TVS-673、<br>TVS-873   | ✓                   | ✓                   | ✓                | ✓ (2280<br>& 2260) | ✓                               |
| TS-131  | ✓                   | ✓                   | ✓                |                    |                                 |
| HS-210、HS-251、<br>HS-251+、TS-231、<br>TS-231+、TS-251、<br>TS-251+、TS-251A、<br>TS-431、TS-431+、<br>TS-431U、TS-451、<br>TS-451+、TS-451A、<br>TS-651、TS-851、TS-253<br>Pro、TS-453 Pro、TS-563、<br>TS-653 Pro、TS-853 Pro、<br>TS-879 Pro、TS-1079 Pro、<br>TS-879U-RP、<br>TS-1279U-RP、<br>TS-EC879U-RP、<br>TS-EC1279U-RP、<br>TS-1679U-RP、<br>TS-EC1679U-RP、 | ✓                   | ✓                   | ✓                |                    | ✓                               |

| 系统型号  | 支持 3.5 吋<br>SATA 硬盘 | 支持 2.5 吋<br>SATA 硬盘 | 支持 2.5" SATA SSD | 支持 M.2<br>SATASSD          | 支持硬盘热抽换<br>(RAID 1 或以上<br>磁盘组态) |
|---|---------------------|---------------------|------------------|----------------------------|---------------------------------|
| TS-451U、TS-453U、<br>TS-453U-RP、TS-531P、<br>TS-451、TS-853U、<br>TS-853U-RP、TS-1253U、<br>TS-1253U-RP、<br>TS-870U-RP、<br>TS-1270U-RP、TS-470/470<br>Pro、TS-670/670 Pro、<br>TS-870/870 Pro、<br>TVS-463、TVS-663、<br>TS-531X、TS-831X、<br>TVS-863、TVS-863+、<br>TS-453mini、<br>TS-453Bmini、TS-463U、<br>TS-463U-RP、TS-863U、<br>TS-863U-RP、TS-1263U、<br>TS-1263U-RP、TS-531P、<br>TS-253A、TS-453A、<br>TS-653A、TS-853A |                     |                     |                  |                            |                                 |
| TVS-473、TVS-673、<br>TVS-873   |                     | ✓                   | ✓                |                            | ✓                               |
| TBS-453A  |                     |                     |                  | ✓ (2280,<br>2260,<br>2242) |                                 |

NAS 支持热抽换 RAID 1 组态内一颗失效硬盘或 RAID 5/RAID 6 组态内一至两颗失效硬盘。请依照以下说明热抽换 RAID 磁盘组态中失效的硬盘：

1. 登入 NAS，于 [硬盘管理] 页面检查硬盘群组的状态。
2. 硬盘群组的状态应为 [降阶模式]。
3. 准备一颗新的硬盘，硬盘的容量应该与原来的硬盘容量相同或大于原来的硬盘。



4. 将 NAS 的失效硬盘拔出。等待 20 秒或直至 NAS 发出两次哔声。
5. 将失效硬盘从硬盘抽取盒上移除。
6. 安装新的硬盘至硬盘抽取盒，然后安装至 NAS。
7. 系统会发出两次哔声（每次约 1.5 秒）。
8. 在管理页面再次检查硬盘群组状态，状态应为 [重建中]。



**警告：** 为避免触电，强烈建议使用者在更换硬盘前，先关闭系统。

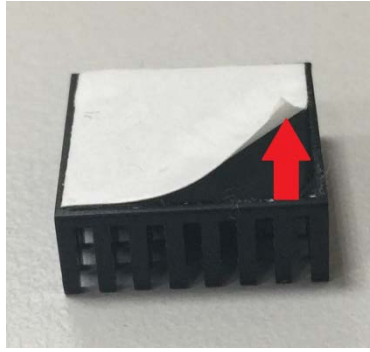
## 第8章            安装 M.2 SSD

### 8.1 M.2 SSD 散热器安装

支持 M.2 SSD 的 NAS 型号安装有 M.2 SSD 散热器。要取得可靠的操作，建议将散热器安装到 SSD 控制器。

安装散热器：

1. 在 M.2 SSD 上找出 SSD 控制器。SSD 控制器的位置根据型号而异。请向 SSD 制造商了解详情。
2. 揭下控制器上的任何现有贴签或标签。
3. 从散热器底部取下防粘衬里。



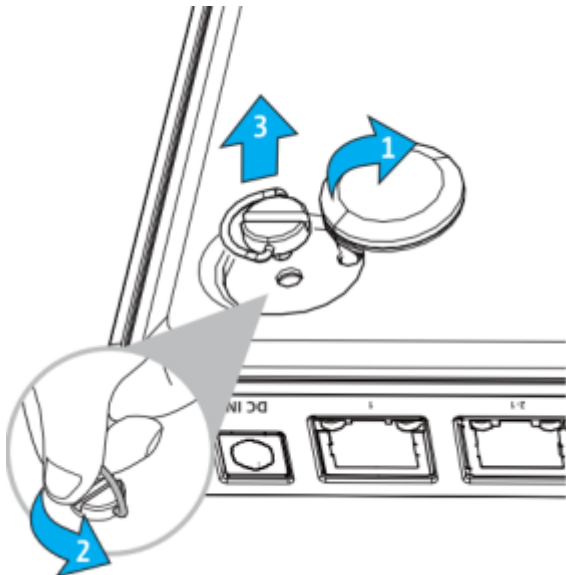
4. 将防粘衬里粘贴到控制器。不需要散热膏。

## 8.2 M.2 SSD 安装

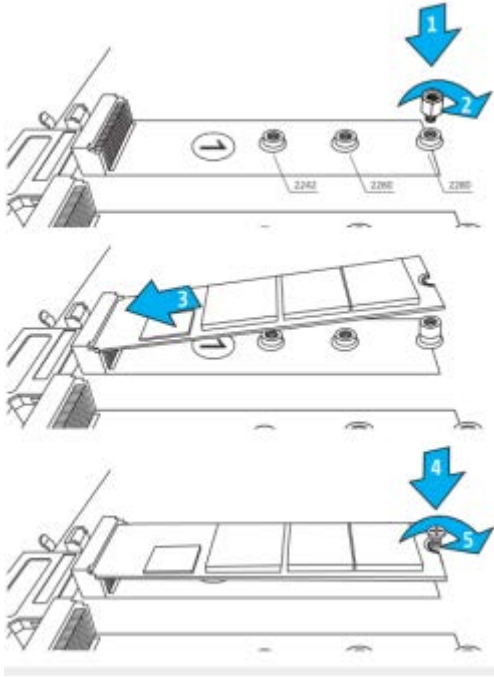
按照以下步骤将 M.2 SSD 安装到 NAS。

### 8.2.1 TBS-453A

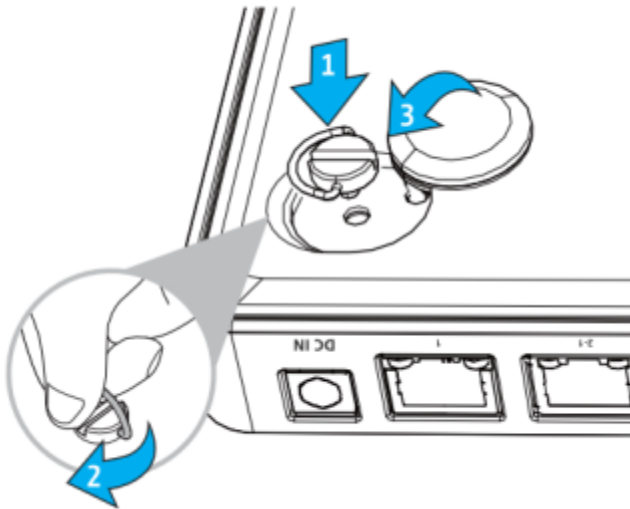
1. 此系统底部配有 4 个 M.2 SSD 插槽。系统存储容量有 2 种升级方式：在空闲的 M.2 SSD 插槽中添加 M.2 SSD 模块；升级现有 M.2 SSD 模块。以下步骤介绍如何添加/替换 M.2 SSD 模块。取下橡胶垫，卸下底盖。逆时针转动并取下底盖四角上的四个螺丝。



2. TBS-453A 支持 3 种不同尺寸的 M.2 SSD (2242、2260 和 2280)。根据 M.2 SSD 的尺寸，将立柱螺丝移至合适的位置并拧紧。然后，将 M.2 SSD 插入插槽，并使用随附的螺丝将其固定到位。



3. 将底盖重新装到系统上，拧紧四角的螺丝（顺时针）。然后，重新装好橡胶垫。



### 8.2.2 TVS-473, TVS-673, TVS-873

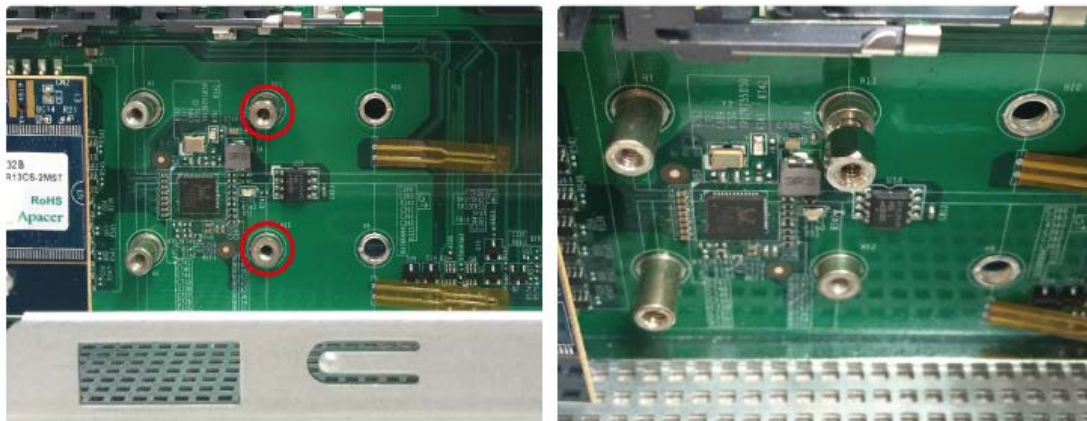
1. 关闭 NAS。断开设备上连接的电源线、网线和其它线缆。
2. 在打开 NAS 前，戴上防静电手腕，将鳄鱼夹接地以防止静电损害设备。
3. 松开 NAS 后面的螺丝（将机壳盖连接到机壳）。



4. 从机壳卸下机壳盖。



5. [可选：仅适用于 M.2 2260 SSD] 插入和拧紧旋起螺丝。



6. 抓住 M.2 SSD 模块的边缘。将模块上的槽口对准 M.2 插槽上的突起部分。以 15 度角将内存模块轻轻滑入插槽。确保模块已牢固插入槽中。请勿强行将 M.2 硬盘插入插槽中。



7. 朝主板方向轻轻按入内存模块，直至其置于旋起螺丝上。将 M.2 SSD 按入到位，将安装螺丝插入旋起螺丝，根据需要拧紧以将 M.2 SSD 拧紧到位。请勿过度拧紧螺丝。



8. 合上机壳盖并拧紧螺丝。将电源适配器和线缆连接到 NAS。打开 NAS 电源。
9. 要验证 M.2 SSD 安装正确并被操作系统识别，请以管理员身份登录 QTS。转到“Main Menu”（主菜单） > “Storage Manager”（存储管理器） > “Disks/VJBOD”（磁盘/VJBOD）。在“NAS Host”（NAS 主机）部分，检查 M.2 SSD 状态。

## 第9章 RAID 回复

QNAP NAS 支持在健康驱动器意外地从 RAID 或 JBOD 配置中移除时进行 RAID 恢复。若在尝试热交换故障驱动器时从降级的 RAID 1/5/6 配置中移除了健康驱动器，用户可以将驱动器重新插回原位，以恢复 RAID。健康驱动器意外地从 RAID 0/JBOD 配置中移除时，也可以执行 RAID 恢复。请注意：RAID 10 不支持此功能。

健康驱动器意外地从 RAID 组中移除时，RAID 的状态将变为“非活动”。从“非活动”状态进行恢复：

1. 将所有硬盘驱动器按照原来的顺序重新插入 NAS。这包括在恢复后需要更换的故障驱动器。
2. 以管理员身份登录 QTS，转到 Control Panel（控制面板） > Storage Manager（存储

管理器 ) > Storage Space ( 存储空间 )

3. 双击受影响的存储池，以打开 Storage Pool Management ( 存储池管理 ) 窗口。
4. 在 Storage Pool Management ( 存储池管理 ) 窗口中，单击 Manage ( 管理 ) 按钮，选择 Recover ( 恢复 )。

此过程大约需要 60 秒钟。 恢复完成后，RAID 组应恢复至其初始状态。

关于此过程中的 RAID 状态，请参见下图。

|                     | 初始状态 | 健康驱动器移除后的状态 | 驱动器重新插入并且存储池得以恢复后的状态 |
|---------------------|------|-------------|----------------------|
| <b>RAID 0/ JBOD</b> | 准备就绪 | 非活动         | 准备就绪                 |
| <b>RAID 1/5/6</b>   | 准备就绪 | 降级          | 重建                   |
| <b>RAID 1/5/6</b>   | 降级   | 非活动         | 降级                   |

下图介绍在使用 RAID 5 时的错误事件。

|                           | <b>RAID 5 ( 最少 3 个磁盘 )</b> |                   |
|---------------------------|----------------------------|-------------------|
|                           | <b>QTS</b>                 | <b>标准</b>         |
| <b>一个驱动器发生故障</b>          | 降级模式 ( 仍可读取和写入 )。          | 降级模式 ( 仍可读取和写入 )。 |
| <b>一个驱动器发生故障，并且在其他驱动器</b> | 只读保护模式( 立即备份数据并更换硬盘驱动器 )。  | RAID 崩溃。          |

|              |          |          |
|--------------|----------|----------|
| 器中发现坏扇区      |          |          |
| 2 个硬盘驱动器发生故障 | RAID 崩溃。 | RAID 崩溃。 |

下图介绍在使用 RAID 6 时的错误事件。

|                           | RAID 6 (最少 4 个磁盘)       |                 |
|---------------------------|-------------------------|-----------------|
|                           | QTS                     | 标准              |
| 一个或两个驱动器发生故障              | 降级模式。(仍可读取和写入)。         | 降级模式。(仍可读取和写入)。 |
| 两个驱动器发生故障, 并且在其他驱动器中发现坏扇区 | 只读保护模式(立即备份数据并更换硬盘驱动器)。 | RAID 崩溃。        |
| 3 个硬盘驱动器发生故障              | RAID 崩溃。                | RAID 崩溃。        |



## 第10章 使用液晶面板

此功能仅适用于有液晶面板的 NAS 型号。

### 液晶面板 – QTS 4.3.0 及以上

您可以使用液晶面板来配置系统设置和查看系统信息。面板旁边的“ENTER”和“SELECT”按钮用于在液晶菜单中进行导航。

NAS 启动后，面板上会显示其名称和固件版本。

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N | A | S | 5 | F | 4 | D | E | 3 |   |   |   |   |   |   |
| 4 | . | 3 | . | 0 | ( | 2 | 0 | 1 | 6 | 0 | 7 | 0 | 3 | ) |

几秒钟后，面板会自动关闭。之后，您可以开始配置设置或查看系统信息。

#### 查看系统IP地址

1. 按“ENTER”或“SELECT”开启面板。
2. 按“SELECT”浏览 NAS 型号名称和可用的 IP 地址（每个网络和 thunderbolt 接口）。

当 NAS 在您旁边时，此功能特别有用。

#### 查看和配置系统设置

当 NAS 的名称和固件版本出现在面板上时，按住“ENTER”两秒钟可以查看主菜单，如果在 10 秒钟内不执行进一步操作，它将自动消失。

主菜单中有 8 个选项：

1. TCP/IP

2. Physical disk ( 物理磁盘 )

3. Volume ( 卷 )

4. System ( 系统 )

5. Shut down ( 关机 )

6. Reboot ( 重新启动 )

7. Password ( 密码 )

8. Back ( 返回 )

按“SELECT”转到下一个选项，按“ENTER”选择选项。

## **TCP/IP**

在 TCP/IP 中，您会看到下述选项：

1. LAN IP Address ( LAN IP 地址 )

380

2. LAN Subnet Mask ( LAN 子网掩码 )

3. LAN Gateway ( LAN 网关 )

4. LAN PRI. DNS ( LAN 首选 DNS )

5. LAN SEC. DNS ( LAN 备用 DNS )

( 您可以为每个接口配置上述设置。 )

6. Enter Network Settings ( 输入网络设置 )

a. Network Settings ( 网络设置 ) – DHCP

i. 设置 LAN1 和 LAN2 的 DHCP

b. Network Settings ( 网络设置 ) – Static IP ( 静态 IP ) \*

- i. 按“SELECT”切换到下一个可用的选项。
- ii. 按“ENTER”配置所选的选项。 第一个数字开始闪烁。
- iii. 按“SELECT”增大所选的数字，按“ENTER”确认值，然后转到下一个数字，直至所有数字设置完毕。
- iv. 对于您要更改的每个设置，重复此过程。

c. Network Settings ( 网络设置 ) – BACK ( 返回 )

7. Back to Main Menu ( 返回主菜单 )

\* 在此部分中，您只能配置 IP 地址、子网掩码、网关、以及 LAN1 和 LAN2 的 DNS。

### Physical disk ( 物理磁盘 )

在 Physical disk ( 物理磁盘 ) 中，您会看到下述选项：

1. Disk Info ( 磁盘信息 )
2. Back to Main Menu ( 返回主菜单 )

Disk Info ( 磁盘信息 ) 显示硬盘驱动器的温度和容量。

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | i | s | k | : | 1 |   | T | e | m | p | : | 5 | 0 | ° | C |
| S | i | z | e | : | 2 | 3 | 2 |   | G | B |   |   |   |   |   |

### Volume ( 卷 )

此部分显示卷和 LUN 的容量。 您可以查看卷/LUN 的名称和容量。 若有多个卷/LUN，可以

按“Select”查看特定卷/LUN 的信息。。

|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|
| D | a | t | a | V | o | l | 1 |  |  |  |  |  |  |  |  |
| 7 | 5 | 0 |   | G | B |   |   |  |  |  |  |  |  |  |  |

|   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| L | U | N | _ | 0 |   |  |  |  |  |  |  |  |  |  |  |
| 1 | 0 | 0 |   | G | B |  |  |  |  |  |  |  |  |  |  |

### System ( 系统 )

此部分显示系统温度和系统风扇转速。

|   |   |   |  |   |   |   |   |   |  |   |   |   |   |  |  |
|---|---|---|--|---|---|---|---|---|--|---|---|---|---|--|--|
| C | P | U |  | T | e | m | p | : |  | 5 | 0 | ° | C |  |  |
| S | y | s |  | T | e | m | p | : |  | 5 | 5 | ° | C |  |  |

|   |   |   |   |   |  |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|--|
| F | a | n | 1 | : |  | 2 | 3 | 2 | 1 | R | P | M |  |  |  |
| F | a | n | 2 | : |  | 2 | 4 | 0 | 2 | R | P | M |  |  |  |

### Shut down ( 关机 )

您可以使用此选项来关闭 NAS。 按"SELECT"，选择 Yes ( 是 )，然后按"ENTER"进行确认。

### Reboot ( 重新启动 )

您可以使用此选项来重新启动 NAS。 按"SELECT"，选择 Yes ( 是 )，然后按"ENTER"进行确认。

### Password ( 密码 )

液晶面板的默认密码是空的。 如要更改密码，请选择 Yes ( 是 )，然后继续操作。

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| C | h | a | n | g | e |   | P | a | s | s | w | o | r | d |  |
|   |   |   |   |   | Y | e | s |   | → | N | o |   |   |   |  |

密码最多可输入 8 位。

按“SELECT”增大数字，然后按“ENTER”以添加新数字。

输入所需的密码后，按“ENTER”。

当光标移到 OK ( 确定 ) 旁边时，按“ENTER”确认密码。

|   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|
| N | e | w |  | P | a | s | s | w | o | r | d | : |   |   |   |
| 2 | 3 | 4 |  |   |   |   |   |   |   |   |   |   | → | O | K |

核验密码以确认所做的

更改。

|   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|
| V | e | r | i | f | y |  | P | a | s | s | w | o | r | d | : |
| 2 | 3 | 4 |   |   |   |  |   |   |   |   |   |   | → | O | K |

## Back ( 返回 )

选择此选项时返回主菜单。

## 系统消息

发生错误时，液晶面板上会显示相应的消息。按“ENTER”查看消息，再按一次“ENTER”转到

下一条消息。

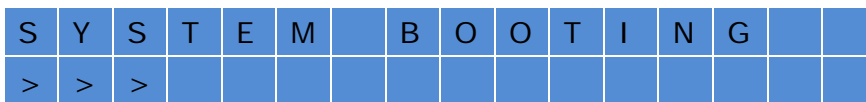
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| S | y | s | t | e | m |   | E | r | r | o | r | ! |   |   |  |
| P | l | s | . |   | C | h | e | c | k |   | L | o | g | s |  |

| 系统消息                        | 说明        |
|-----------------------------|-----------|
| !Sys. Fan Failed ( 系统风扇故障 ) | 系统风扇发生故障。 |

|                                   |  |
|-----------------------------------|--|
| Sys. Overheat( 系统过热 )             | 系统过热。                                    |
| HDD Overheat ( 硬盘驱动器过热 )          | 硬盘驱动器过热。                                 |
| CPU Overheat( CPU 过热 )            | CPU 过热。                                  |
| Network Lost ( 网络断开 )             | LAN 1 和 LAN 2 在故障转移或负载均衡模式下均已断开。         |
| LAN1 Lost ( LAN1 断开 )             | LAN 1 已断开。                               |
| LAN2 Lost ( LAN2 断开 )             | LAN 2 已断开。                               |
| HDD Failure ( 硬盘驱动器故障 )           | 硬盘驱动器发生故障。                               |
| Vol1 Full ( 卷 1 满 )               | 磁盘卷(1)满了。                                |
| NAS HDD Ejected ( NAS 硬盘驱动器弹出 )   | 一块硬盘驱动器已从 NAS 中弹出。                       |
| RX#3 HDD Ejected ( RX#3 硬盘驱动器弹出 ) | 一块硬盘驱动器已从扩展单元 3 中弹出。                     |
| M.2 SSD Ejected ( M.2 SSD 弹出 )    | 热插拔不支持 M.2 驱动器，一块 M.2 SSD 已弹出，并且可能存在缺陷。  |
| PCIe SSD Ejected ( PCIe SSD 弹出 )  | 热插拔不支持 PCIe 设备，一块 PCIe SSD 已弹出，并且可能存在缺陷。 |

|                             |                |
|-----------------------------|----------------|
| SSD 弹出 )                    | 在缺陷。           |
| Vol1 Degraded( 卷 1 降级 )     | 磁盘卷(1)处于降级模式。  |
| Vol1 Unmounted( 卷 1 卸载 )    | 磁盘卷(1)已卸载。     |
| Vol1 Nonactivate( 卷 1 非活动 ) | 磁盘卷(1)处于非活动状态。 |

## 系统启动



系统启动过程中有几个短语：

- System Booting ( 系统引导 )： BIOS和硬件初始化，系统正在引导过程中 ( 不需要执行任何操作 )
- Loading Driver ( 加载驱动程序 )： 正在加载OTS及其驱动程序 ( 不需要执行任何操作 )
- Mount Volume ( 装载卷 )： 准备卷 ( 不需要执行任何操作 )
- Starting Service ( 启动服务 )： 正在启动NAS系统服务 ( 不需要执行任何操作 )。 请

注意：应用程序只能在系统引导完毕后启动。

对于TVS-x82 系列，液晶面板在开启NAS电源后显示更多引导信息：

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | I | O | S |   | X | X | X | X | X | X |   |   |   |   |
| C | h | e | c | k | i | n | g |   | M | e | m | o | r | y |

- BIOS xxxxxx – xxxx 是 BIOS 版本，它有助于技术支持人员判断和解决问题。
- 启动短语：
  - o Checking Memory ( 检查内存 ) – 系统检查已安装的内存。
  - o Powering up all disks ( 所有磁盘加电 ) – 按顺序对所有磁盘加电。
  - o Hardware initialization ( 硬件初始化 ) – 初始化附加硬件组件，如 PCIe SSD、图形卡、Thunderbolt 适配器等。
  - o Booting ( 引导 ) - 从 DOM 引导。 如果启动在此步停止，则可能是 DOM 存在缺陷。请咨询技术支持人员。
  - o Starting System ( 启动系统 ) – 正在启动 QTS。 如果启动在此步停止，则可能是 QTS 安装遇到问题。 请咨询技术支持人员。
- 其余启动短语与其他 NAS 型号的启动短语相同

### 液晶面板 – QTS 4.2.x 及以下

有关详细信息，请参阅 QTS 4.2.x 用户手册。



## 第11章 安装电源供应器

**注意：**

- 以下说明只适用于机架式 NAS 型号。
- TS-879U-RP 及 TS-EC879U-RP 的电源供应器必须由授权及合格的技术人员进行。

### 11.1 1U Turbo NAS（配备热抽换 PSU）

**注意：** 以下操作说明必须由授权及合格的技术人员进行。

要安装额外的电源供应器至 1U Turbo NAS，请参考以下说明：

1. 关闭 NAS 电源。
2. 如图示移除螺丝及隔板。



3. 插入电源供应器并推至末端。



4. 锁紧螺丝。



5. 开启 NAS。

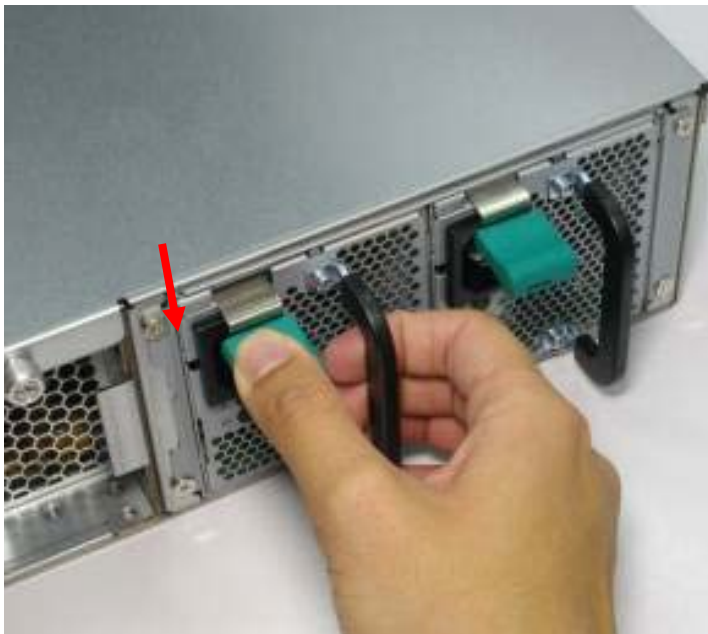
**注意：**要更换失效的电源供应器，请先关闭 NAS，然后拔出失效的电源供应器，再重复以上步骤 3-5 安装新的电源供应器。

## 11.2 2U/3U Turbo NAS（只适用于 TS-853U-RP 及 TS-1253U-RP）

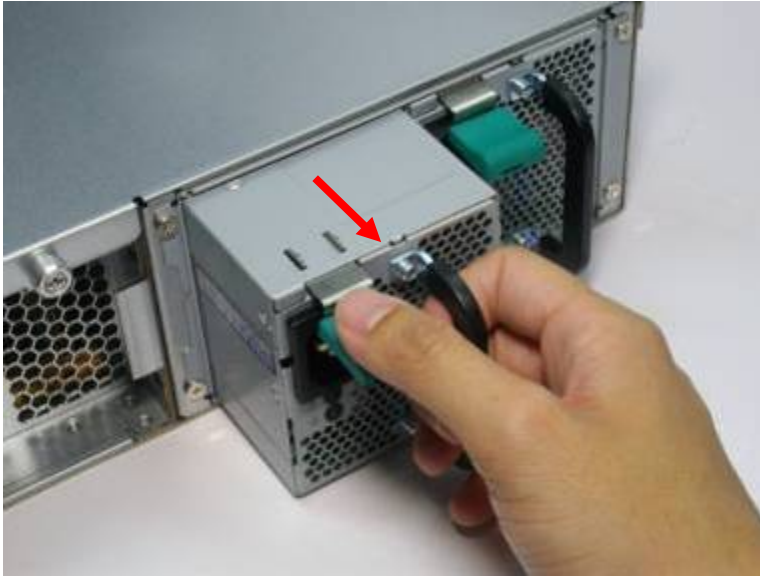
**注意：**以下操作说明必须由授权及合格的技术人员进行。

要更换 Turbo NAS 上的失效电源供应器，请参考以下说明：

1. 关闭 NAS 电源。
2. 握紧黑色手把并同时按下绿色杠杆。



3. 抽出失效的电源供应器。



4. 插入新的电源供应器至 NAS。



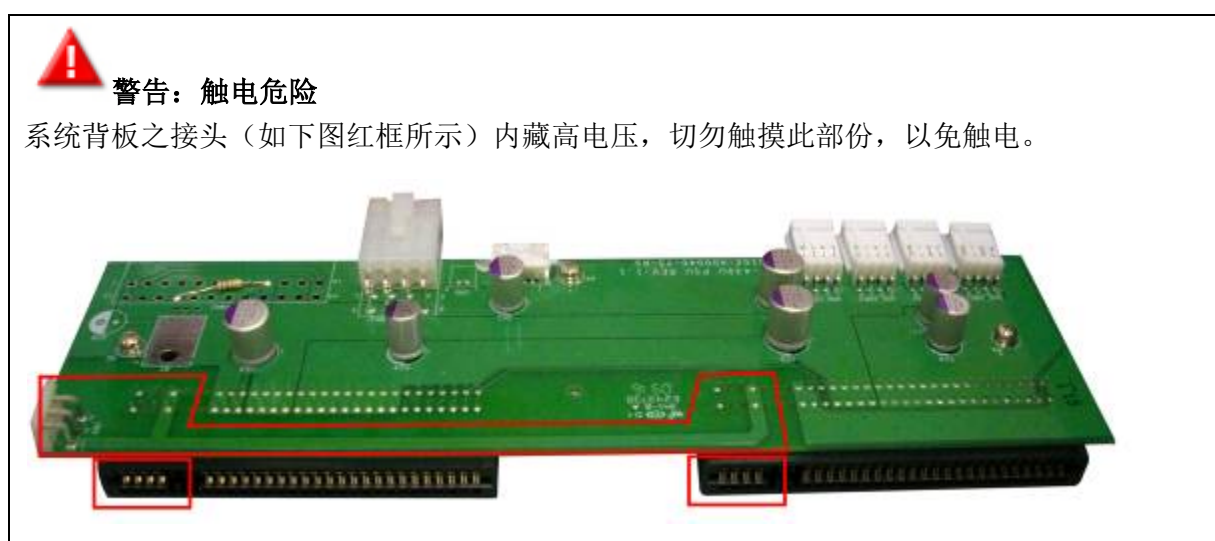
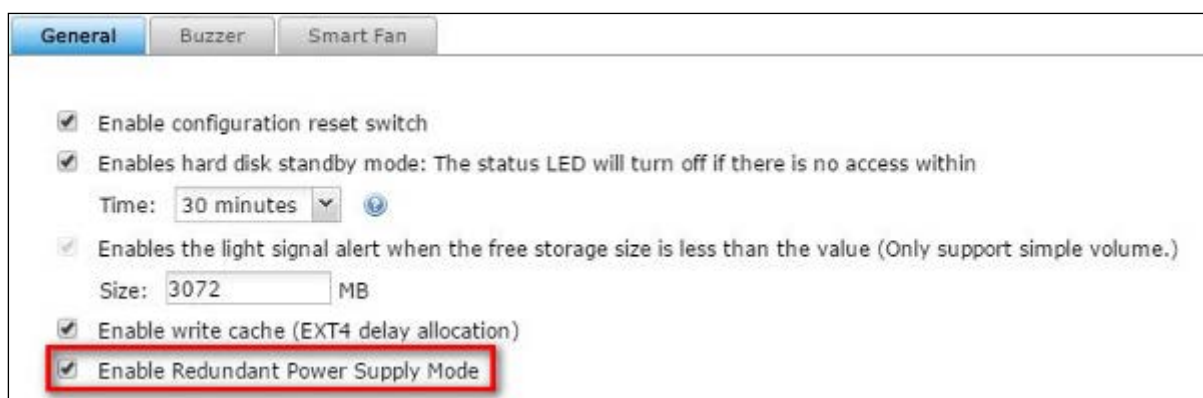
5. 开启 NAS。

**于管理页面启动备援电源警告：**

如 NAS 配备两组电源供应器，并已连接至电源插头，两颗电源供应器会同时供电（适用于 1U 及 2U 型号）。使用者可以登入 NAS 管理页面，进入 [系统管理] > [硬件设定] 启动 [备援电源供应模式]，当系统的电源供应器发生错误，如被拔除或失效，NAS 会发出声响，并在 [系统纪录] 页面记录错误讯息。

如 NAS 只安装一组电源供应器，建议不要启动此功能。

\*此功能预设关闭。



## 技术支持

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Email：<http://qnap.com/support>

电话：+1-909-595-2782 #3

地址：168 University Parkway, Pomona CA 91768

服务时间：06:00-18:00 (GMT- 08:00 Pacific Time, 星期一至星期五)

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#### 1. 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 “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



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|---------|---------|--|
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