

QNAP

# TS-431KX

10GbE SFP+ business solution

&

# TS-x31K series

... with a quad-core 1.7GHz processor ...



Quad-core



TS-431K



TS-231K



TS-131K



TS-431KX

# Sharing data and entertainment all from home

- New quad-core processor and gigabit network ports for multitasking
- Stream content without barriers, connect to data even when on the move
- Easily back up data and share it securely to avoid data loss and hackers
- Deploy 10GbE in offices quickly



# All models with a quad core 1.7GHz CPU



**TS-431KX-2G**

2 GB RAM (1 x 2 GB), expandable!  
1 x SODIMM DDR3L memory slot



**TS-431K**

1 GB RAM



**TS-231K**

1 GB RAM



**TS-131K**

1 GB RAM



Ordering information:

2GB: RAM-2GDR3T0-S0-1600  
4GB: RAM-4GDR3-S0-1600  
8GB: RAM-8GDR3-S0-1600



# Performance you can count on



powered by  
**annapurnalabs**  
an amazon company

**4-core 1.7GHz**

**Alpine AL-214 ARM v7 processor**

- **Native 4 x SATA 6 Gb/s ports** for the optimal throughput
- Built-in **AES 256-bit** encryption engine for security and performance
- ARM **NEON v2** floating point acceleration engine
- **2MB L2 cache**, twice more than the competition!



# TS-131K, TS-231K, TS-431K front view

LEDs:  
Status, LAN, USB

Drive LEDs:  
HDD 1, HDD 2,  
HDD 3, HDD 4

Power

Copy

USB 3.2 Gen 1 port



4x 3.5-  
inch/2.5-inch  
SATA 6Gb/s  
HDD bays



Lockable drive trays with 2  
keys provided



QNAP

# TS-131K, TS-231K, TS-431K rear views



**Smart fan**  
TS-431K: 1 x 120mm  
TS-231K: 1 x 70mm  
TS-131K: 1 x 50mm

**Kensington security slot**

**Reset**

**2 x GbE RJ45 LAN ports**  
(TS-131K: 1 x GbE RJ45 LAN port)

**2 x USB 3.2 Gen 1 (5Gbps)**

**DC 12V power input**





# TS-431KX front view

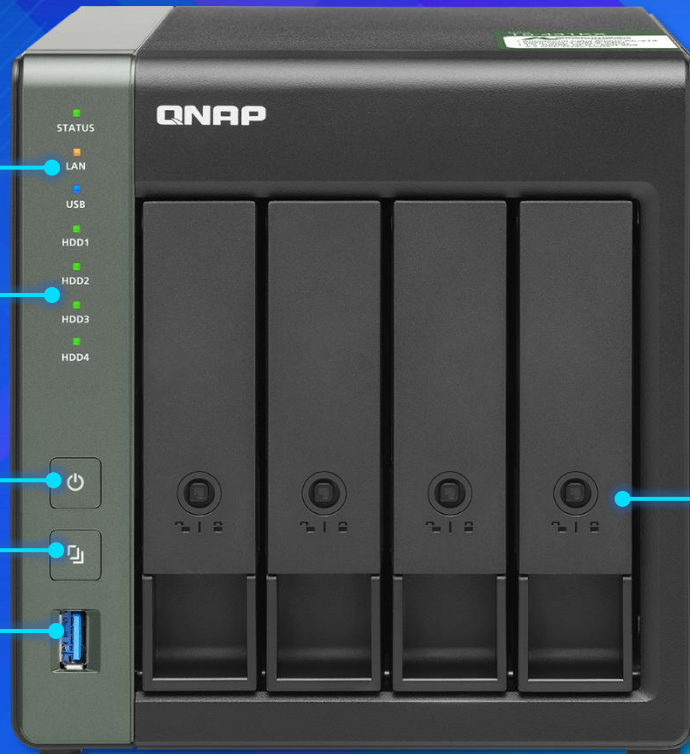
LEDs:  
Status, LAN, USB

Drive LEDs:  
HDD 1, HDD 2,  
HDD 3, HDD 4

Power

Copy

1 x USB 3.2 Gen 1  
port (5 Gbps)



4x 3.5-  
inch/2.5-inch  
SATA 6Gb/s  
HDD bays



Lockable drive trays  
with 2 keys provided



# TS-431KX rear view





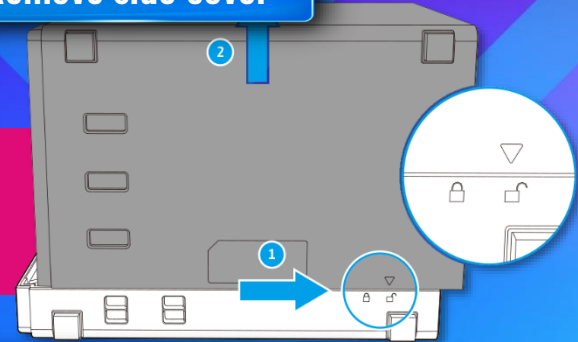
# Upgrade TS-431KX memory up to 8GB



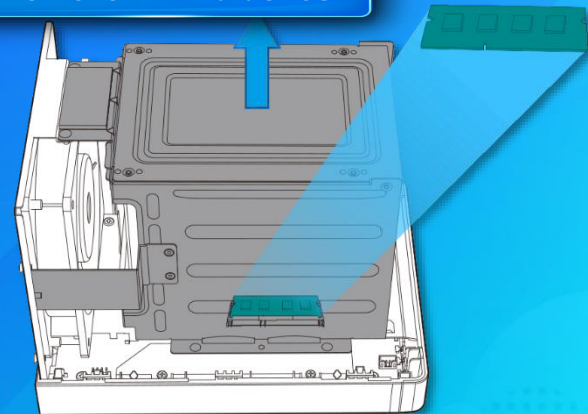
1 x DDR3L SO-DIMM RAM slot  
Up to 8 GB memory support



1. Remove side cover



2. Remove HDD bracket



Ordering information:

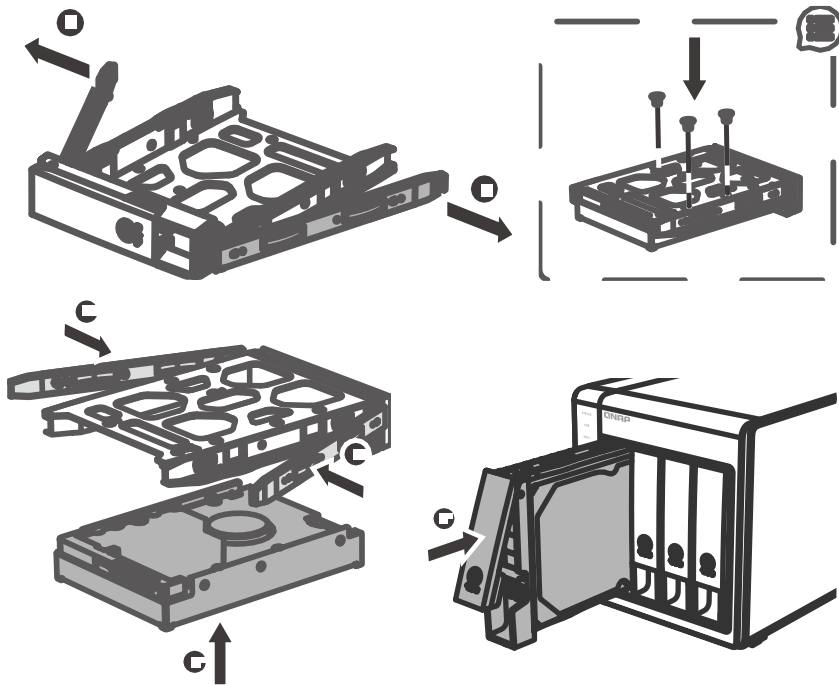
2GB: RAM-2GDR3T0-SO-1600

4GB: RAM-4GDR3-SO-1600

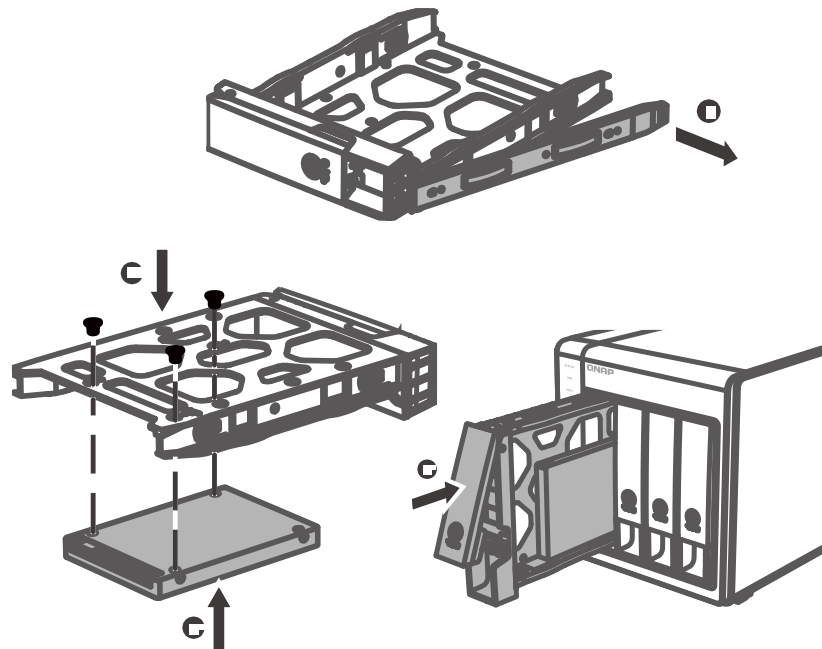
8GB: RAM-8GDR3-SO-1600

# Easy to install HDDs and SSDs

3.5-inch HDD : toolless



2.5-inch HDD/SSD: screws



**QNAP**

**Stream content without barriers, connect to data even when on the move**



TS-431K

TS-231K

TS-131K

TS-431KX





# How to manage tons of photos and videos at home?

Take pretty pictures~



Can I do it at home?



How to share content with family/friends without going out?



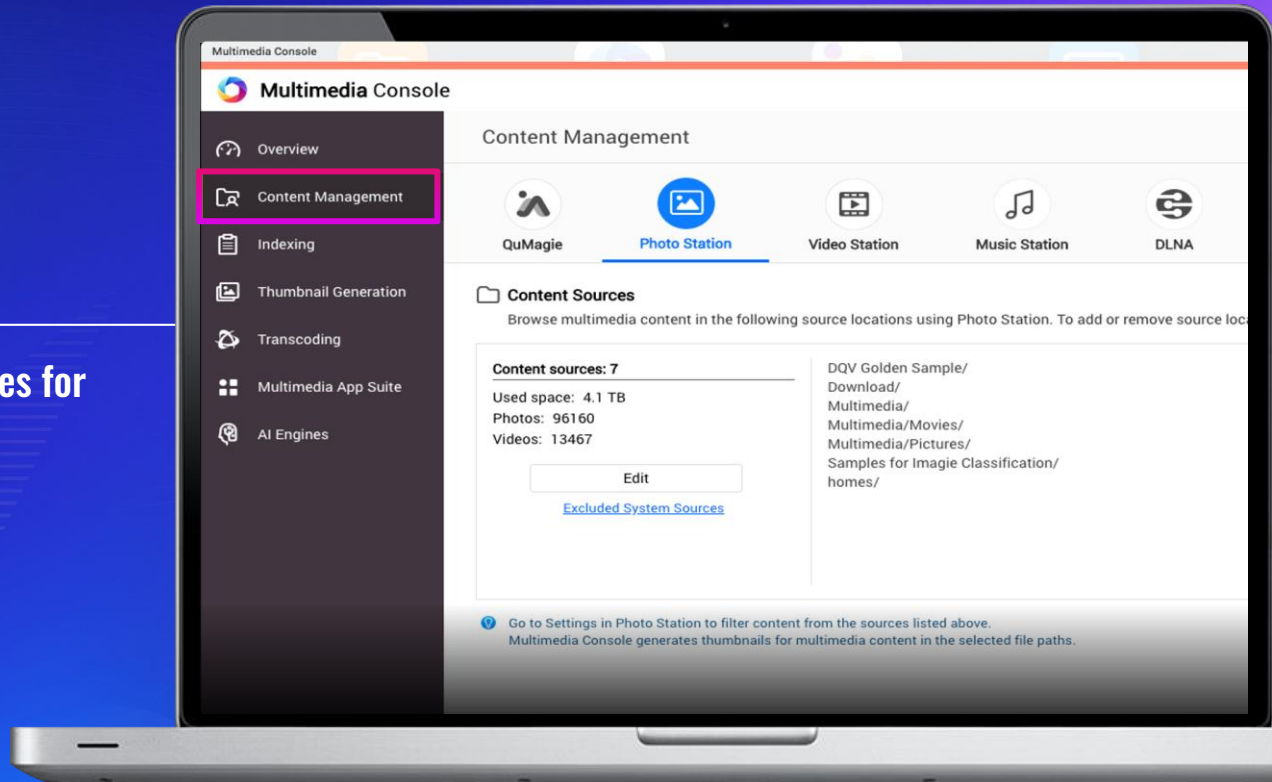
Any tool to efficiently manage them?



# Set content sources for all multimedia applications

Go to Content management in Multimedia Console

Assign folders as content sources for each application

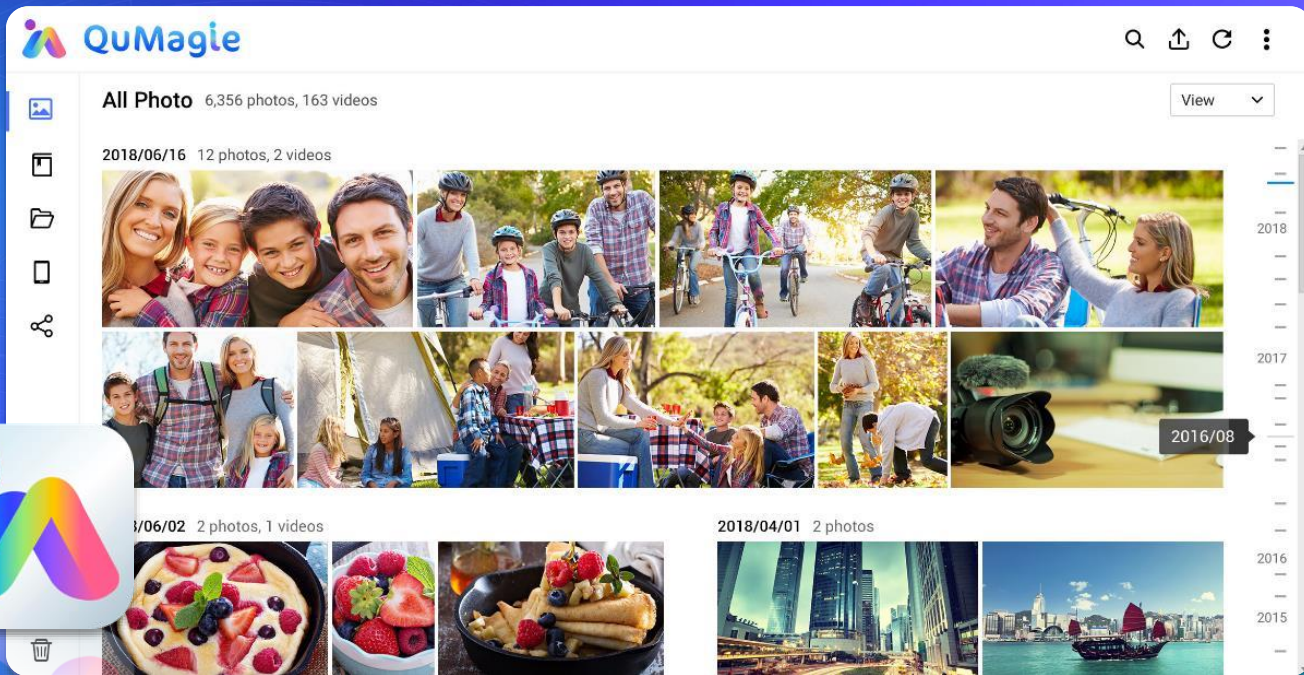


# QuMagie photo management

Album View

Albums and Smart Albums

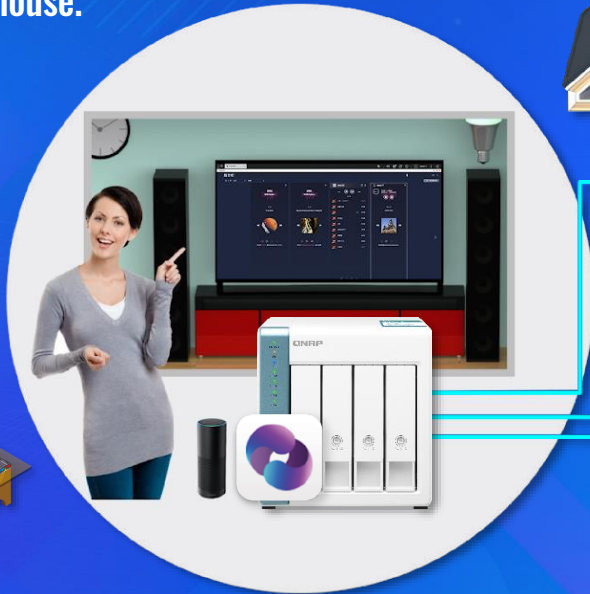
Folder View





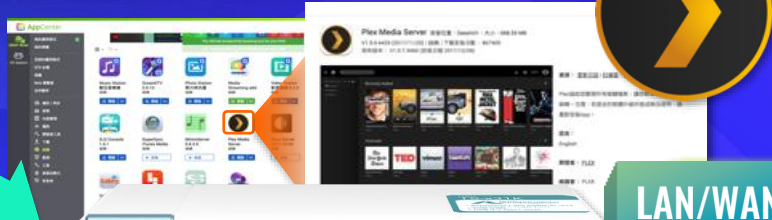
# Use Cinema28 for whole-home streaming

Integrate multiple streaming devices and streaming protocols into a single interface for centralized management, allowing users to easily stream digital multimedia files to audio/video devices in every corner of the house.



# PLEX Server for home media streaming

Internet



LAN/WAN streaming



Roku



Chromecast



amazon fireTV



Apple tv



Smart TV



Computer



Phone



Tablet

QNAP

# Don't get kidnapped by the so-called free hosting sites

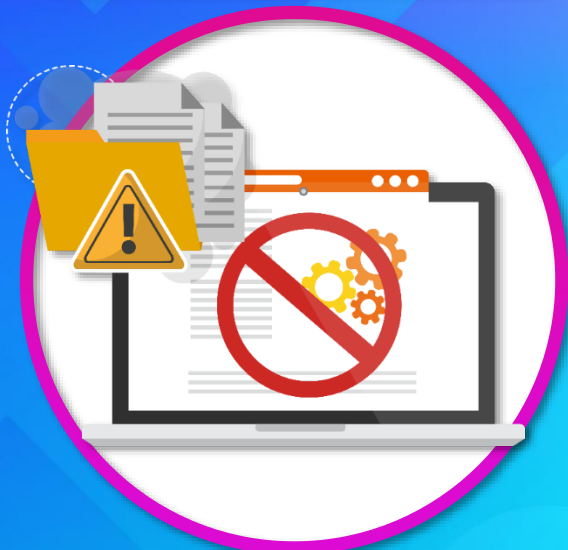
Ads everywhere, bad experience for visitors



Spend lots of time to locate media files



Closure of free sites and forgot to or difficult to back up the content





# Build your site with the free WordPress

1. Enable SQL server
2. Install phpMyAdmin and create a database
3. Install WordPress from NAS App Center

QNAP file management utilities  
Improve content publishing  
efficiency

Free personal domain for  
quickly enabling SSL  
certificates

From setup to backup, QNAP  
NAS has it all

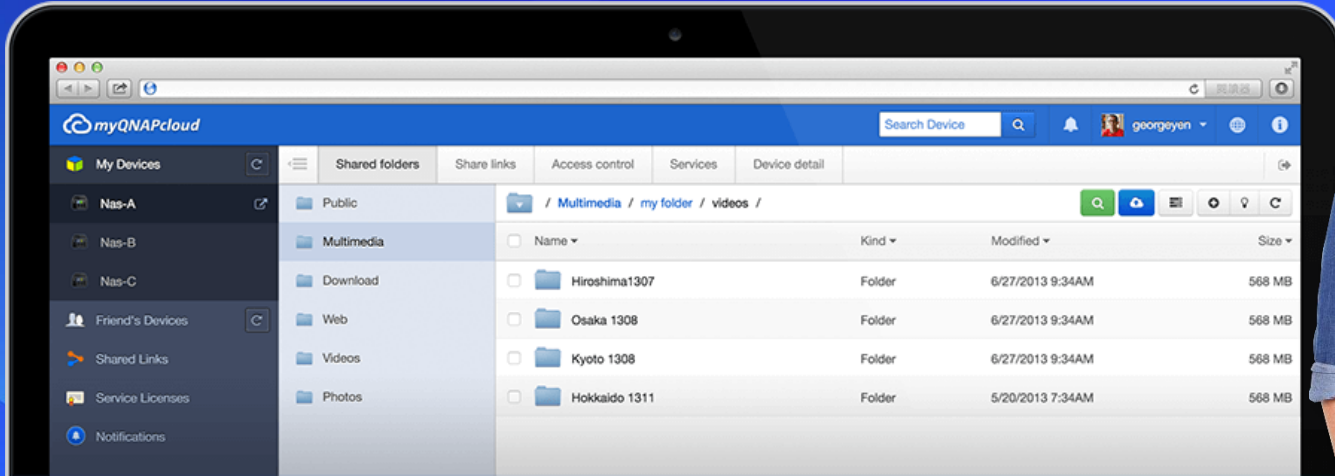
Host multiple websites on  
QNAP NAS with Virtual  
Hosting



# Connect to home NAS with myQNAPcloud and QNAP ID (QID)

Anytime / Anywhere

Register and login with Email or phone number



# QNAP QVPN and QBelt protocol for anywhere access



**Secure Encrypted Connection:**

**DTLS + SSL + AES-256 encryption**



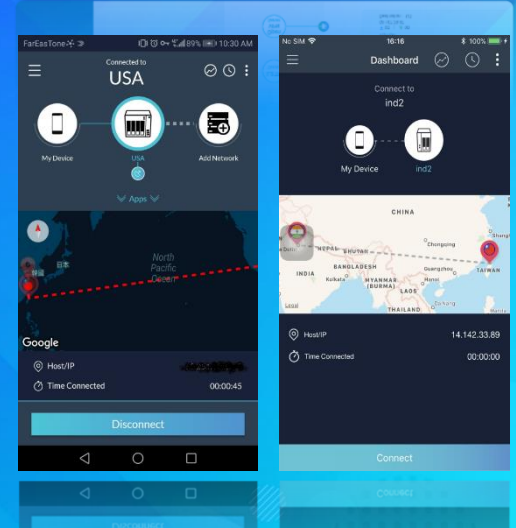
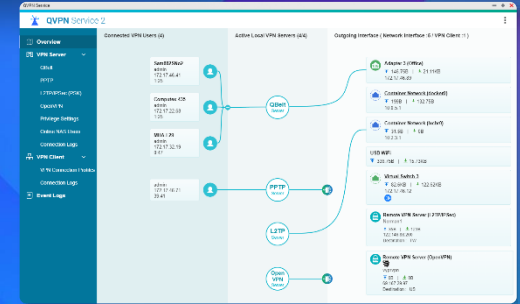
**New QBelt protocol:**

**Decreases the chance of being detected**



**Works on desktop and mobile devices**

**Windows, macOS, Android, iOS**





**QNAP**

**Easily back up data and  
share it securely to avoid  
data loss and hackers**



TS-431K

TS-231K

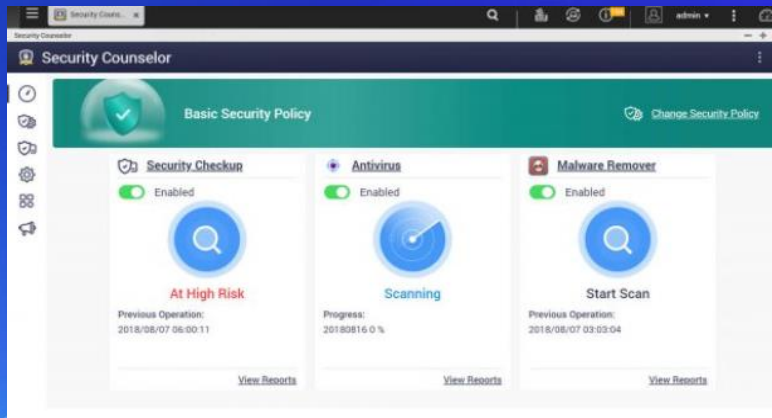
TS-131K

TS-431KX



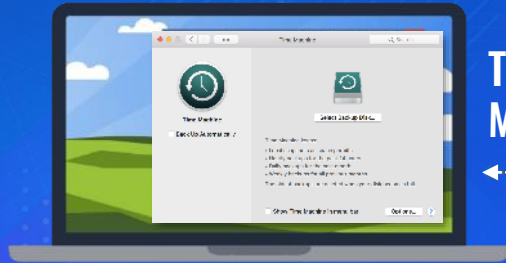
# Not just Antivirus, QTS Security Circle !

Beside installing Antivirus to protect the uploaded files, QTS NAS also needs a full circle of protection, such as OS integrity and safe NAS set-up.



# Fight against virus and ransomware

macOS



Time  
Machine



Windows



NetBak  
Replicator

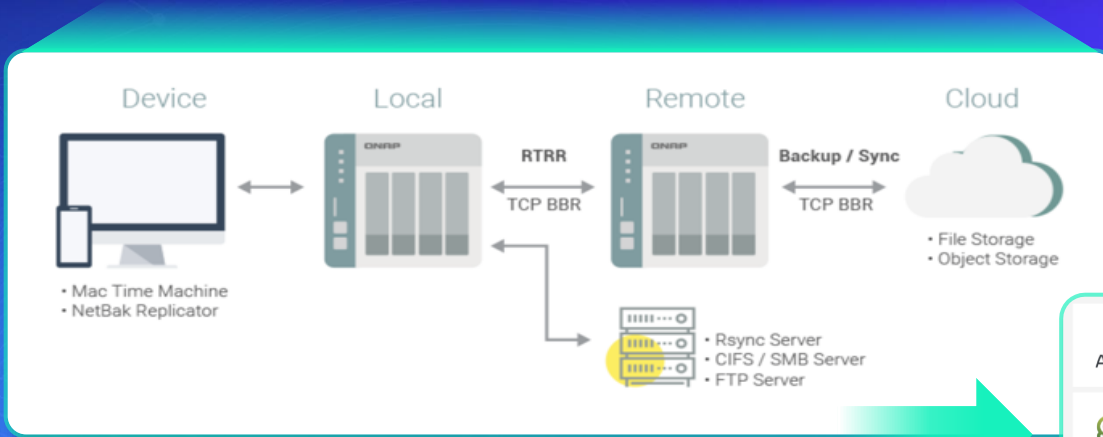


TS-431K

Real-time or  
scheduled data  
backup



# HBS 3 for backup and recovery



Use HBS 3 (Hybrid Backup Sync 3) to easily transfer your data to local, remote and cloud storage spaces as a comprehensive data storage and disaster recovery plan.

Alibaba Cloud	amazon drive	Amazon S3	BACKBLAZE	box
ShareFile	Dropbox	Google Cloud	Google Drive	HiDrive
HKT	HUAWEI	hubic	IBM Cloud	OneDrive for Business
Azure	OneDrive	openstack.	rackspace.	Yandex Disk
		wasabi		

# Free Mac Time Machine backup



Create the backup job:

1

Select Time Machine Backup as Source

2

Select TR-004 as Destination

3

Setup the backup schedule in HBS 3

# QNAP snapshot for file recovery

1. Fully supports all storage configurations at the storage pool level.
2. Easily take, manage and restore snapshots.
3. Using the mature Ext4 file system for "out of volume" snapshots

RAM Size	NAS Models	Maximum Total Snapshot Number	Maximum Snapshot Number per Volume/LUN
1GB	TS-131K, TS-231K, TS-431K	32	16
2GB	TS-431KX	64	32
4GB and more	TS-431KX	256	64

File level



Block level

A'

B'

C'

D'

E'

A

B

C

D

E

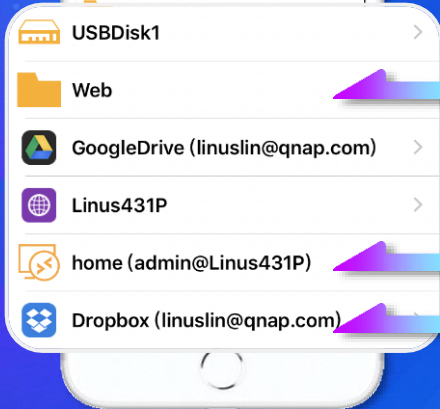
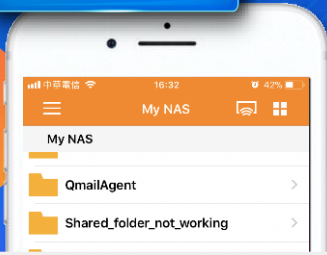




# Connect to Dropbox, One Drive, Google Drive and more

Qfile

Mobile



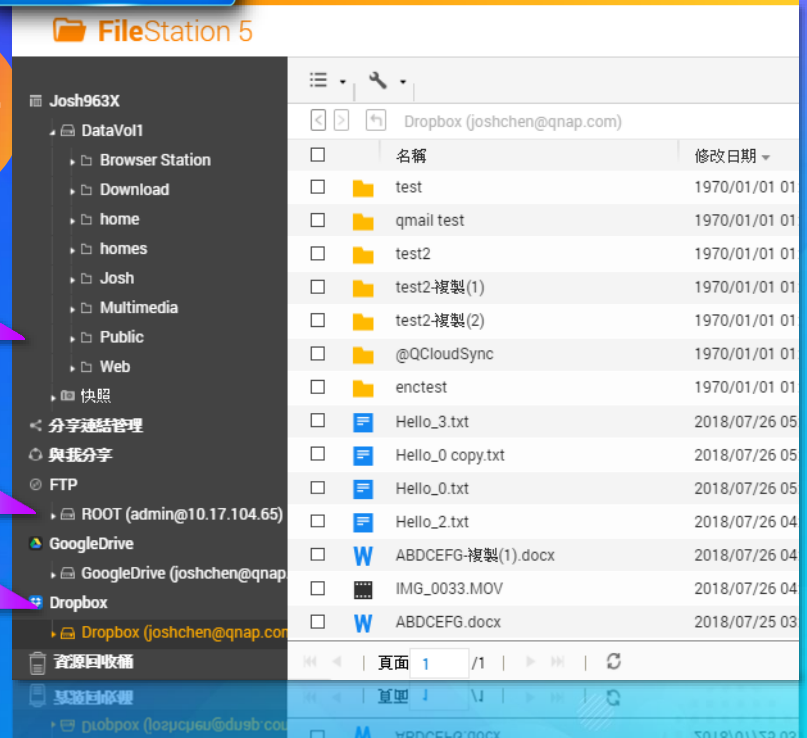
Local NAS

Remote NAS

Cloud Storage

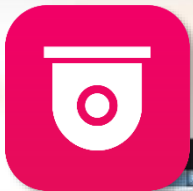
File Station

Computer



QNAP

# 24x7 surveillance for home care and anti-theft



## Surveillance Station 5.1



Vmobile



Recording Channels

TS-131K/231K/431K/431KX

Free: 2 Max: 16



# QNAP mobiles apps for data on the go

## File & System



Qfile  
File management



Qsync  
File backup



Qmanager  
NAS management

## Multimedia



Qphoto  
Photo library



QuMagie  
Photo library



Qvideo  
Video library



Qmusic  
Music library



DJ2 Client  
Live streaming



Photo Tagger  
Classification tool



Qget (Android only)  
Download management

## Productivity



QmailClient  
E-mail backup



Qcontactz  
Contacts backup



Qnotes3  
Notes taker



Vmobile  
Mobile surveillance



# QNAP TR USB RAID & TL USB JBOD support 2 modes on NAS

- NAS supports maximum two QNAP TR-002/TR-004 RAID enclosures or one TL-D800C USB JBOD enclosure ([Compatibility list](#)).
- Internal mode with storage pool support or external mode with cross-platform compatibility with Windows/Mac computers.

## Mode 1: Expanding the NAS with new volume



## Mode 2: Work as backup destination for snapshot replica



**QNAP**

# Deploy 10GbE in offices quickly

Taking ages to transfer many work  
files if using just 1GbE LAN.



TS-431K

TS-231K

TS-131K

TS-431KX



# TS-431KX integrates 10GbE SFP+ port



High-speed throughput for large data backup and recovery, multi-user environment, or containerized applications.



QSW-308S





# Affordable QNAP unmanaged 10GbE switches

## QSW-308-1C



### Ports:

- 10GbE SFP+/ RJ-45 Combo \* 1
- 10GbE SFP+ \* 2
- 1GbE RJ45 \* 8

## QSW-308S



### Ports:

- 10GbE SFP+ \* 3
- 1GbE RJ45 \* 8

## QSW-1208-8C



### Ports:

- 10GbE SFP+/ RJ-45 Combo \* 8
- 10GbE SFP+ \* 4

## QSW-804-4C



### Ports:

- 10GbE SFP+/ RJ-45 Combo \* 4
- 10GbE SFP+ \* 4

# Short distance SFP+ DAC cables

**1.5M SFP+ 10GbE  
DAC cable**



**Part number:  
CAB-DAC15M-SFPP-DEC02**

**3.0M SFP+ 10GbE  
DAC cable**



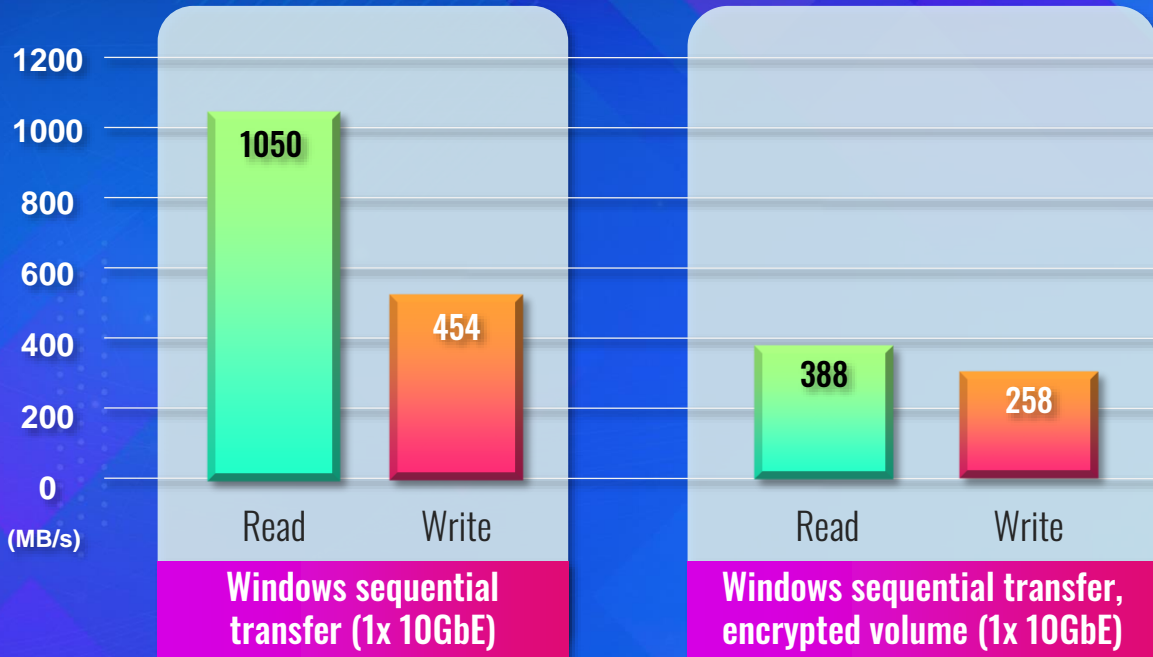
**Part number:  
CAB-DAC30M-SFPP-DEC02**

**5.0M SFP+ 10GbE  
DAC cable**



**Part number:  
CAB-DAC50M-SFPP-DEC02**

# TS-431KX 10GbE performance



Tested in QNAP Labs. Figures may vary by environment.

Test environment

NAS: TS-431KX

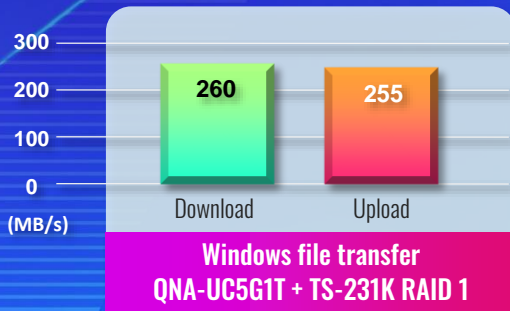
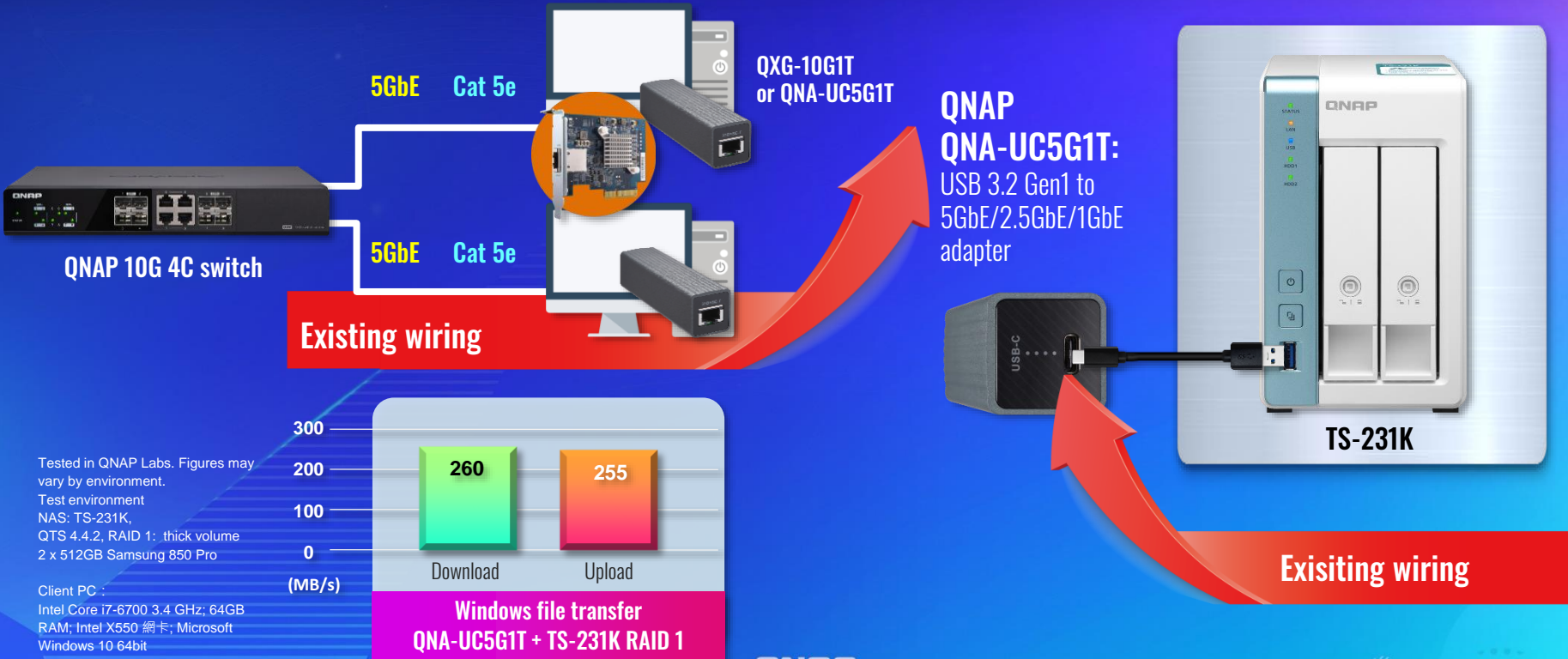
OS: QTS 4.4.2

Volume : RAID 5; 4 x Samsung 850 Pro 512GB SSD

Client PC :

Intel Core i7-6700 3.4 GHz; 64GB RAM; LAN-10G2SF-MLX; Microsoft Windows 10 64bit

# Use USB to 5GbE/2.5GbE to enhance the performance of PC/NAS





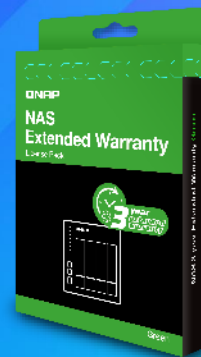


# All the goodies for homes and offices



NAS model	TS-431KX	TS-431K/231K/131K	Other vendor DS420j
Processor	Quad-core 1.7 GHz	Quad-core 1.7 GHz	Quad-core 1.4 GHz
Memory	2GB, max 8GB ( 1 x SODIMM DDR3L RAM slot )	1GB, not upgradeable	1GB, not upgradeable
10GbE LAN	1 x 10GbE SFP+	---	---
GbE LAN	2	2 (TS-131K: 1)	1
Performance (MB/s)	1,050 / 454	221 / 195	112 / 112
USB 3.0 / 2.0	3 / 0	3 / 0	2 / 0
Hot-swap HDD	Yes	Yes	---

2 years of standard warranty  
with optional 3-year extended  
warranty for a total of 5 years.



Ordering information  
**EXTW-GREEN-3Y**

QNAP

# TS-431KX & TS-x31K series for Home and Offices

Quad-core



TS-431K



TS-231K



TS-131K



TS-431KX



Copyright© 2020 QNAP Systems, Inc. All rights reserved. QNAP® and other names of QNAP Products are proprietary marks or registered trademarks of QNAP Systems, Inc. Other products and company names mentioned herein are trademarks of their respective holders.