

QNAP

TS-832PX / TS-932PX

Dual 10GbE SFP+/2.5GbE ports, dedicated
SSD bays or PCIe expansion for SMB



TS-832PX



TS-932PX

Quad-core 10GbE TS-832PX & TS-932PX with new 2.5GbE ports



- More devices in the office and more data storage and higher speed requirement for agility.
- Both TS-832PX & TS-932PX come with dual 10GbE SFP+ and dual 2.5GbE RJ45 ports
- Value-added software applications for efficient file sharing, backup, containerized apps, and hybrid cloud

More connected devices in the SOHO & SMB environments

Deploying 2.5GbE+ for an efficient work environment

- Faster network speed requirements
- Larger file sizes of audio / video
- Higher Internet speed from ISP



Slower office computers can also affect work efficiency

- In 2018 ~2019 motherboard vendors launched 10GbE & 5GbE Multi-Gig products (2.5GbE-compatible). In 2020 these vendors have launched more affordable 2.5GbE products.
- More and more laptops and desktops provides high-speed Thunderbolt 3 or 2.5GbE-compatible ports.



Gigabyte Z490 AORUS MASTER



Thunderbolt 3 and/or 10GbE/5GbE/2.5GbE Multi-Gig laptop or desktop

Save money with existing wiring infrastructure by 2.5GbE

QNAP 10GbE switches supporting 2.5GbE



QSW-M408-4C (Managed)

4 x 10G/5G/2.5G
RJ45 Multi-Gig



QSW-M408-2C (Managed)

2 x 10G/5G/2.5G
RJ45 Multi-Gig



QSW-1208-8C

8 x 10G/5G/2.5G
RJ45 Multi-Gig



QSW-308-1C

1 x 10G/5G/2.5G
RJ45 Multi-Gig



	CAT 5e	CAT 6	CAT 6A
100M	✓	✓	✓
1G	✓	✓	✓
2.5G	✓	✓	✓
5G	✓	✓	✓
10G	X	✓ (55m)	✓

Cost-effective QNAP QSW-1105-5T 5-port 2.5GbE switch

- Spend less than the cost of a 10GbE switch and get the upcoming QNAP 5-port 2.5GbE switch QSW-1105-5T, achieving a balance between cost and speed.
- Leveraging current cabling infrastructure with CAT5e without re-wiring.

Affordable CAT5e cables
are everywhere



2.5GbE solution

More expensive 10GbE RJ45 or
SFP+ cables and transceivers



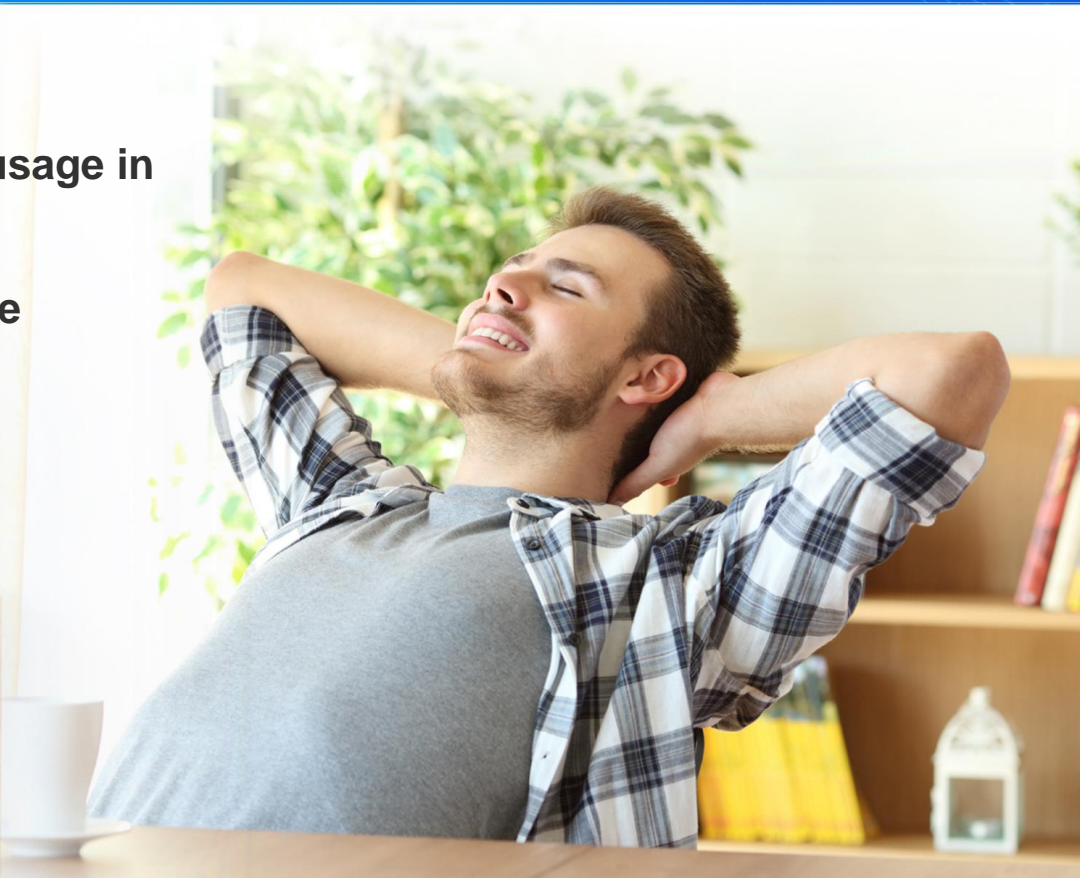
10GbE solution

Fanless and unmanaged 2.5GbE switch with metal housing

- Zero noise with the fanless design
- Solid metal housing for long-term usage in various environments
- No learning curve, just plug and use
- Network loop detection warning

**Available
in 2020 Q3!**

QSW-1105-5T



Storage devices also need 2.5GbE to catch up the speed

Integrated I/O

Annapurna Labs SoC integrates 10GbE, SATA 6Gbps, PCIe lanes in a small 27 x 27 mm BGA form

AArch64 arch.

ARM Cortex-A57 Quad-core 1.7GHz AL-324 CPU with 64-bit instructions for high performance and energy saving

10GbE & 2.5GbE

2 x 10GbE SFP+ and 2 x 2.5GbE RJ45 with enhanced floating-point operations and 31 64-bit registers for reduced redundant data access

Cryptography

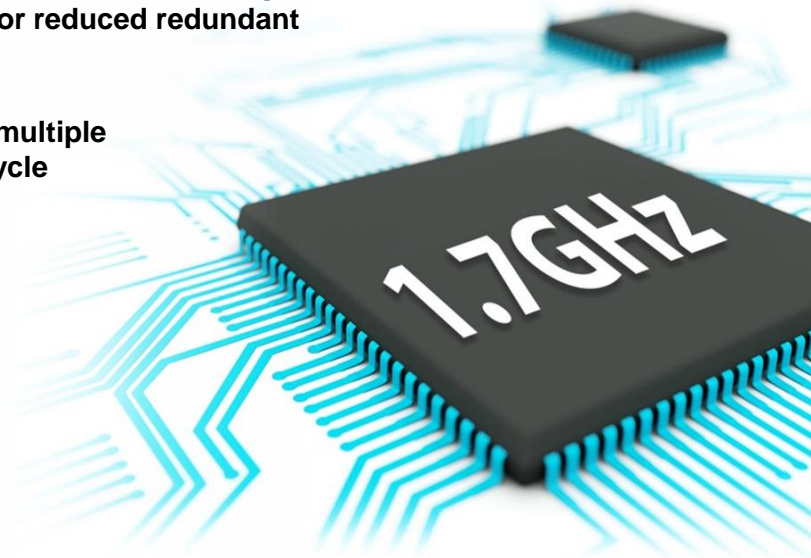
Operates with 128-bit SIMD registers for multiple encryption/decryption instructions per cycle



TS-832PX



TS-932PX

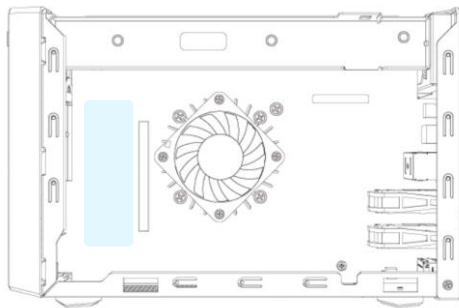
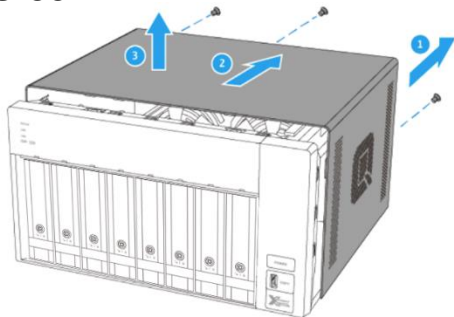


Upgrade up to 16GB DDR4 memory

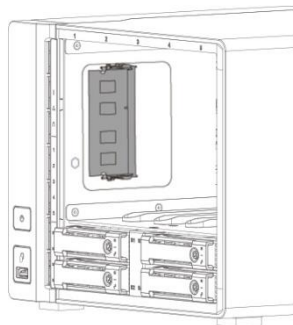
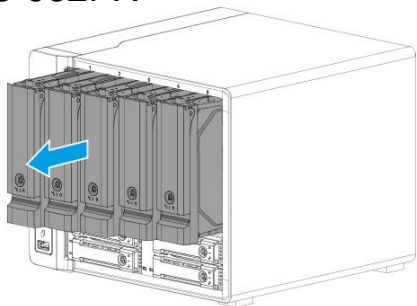
1 x DDR4 SO-DIMM slot

Memory up to **16GB**

TS-832PX



TS-932PX



QNAP
Accessories

4GB, 8GB,
16GB RAM



TS-832PX-4G: 1 x 4GB DDR4 SODIMM
TS-932PX-4G: 1 x 4GB DDR4 SODIMM

TS-832PX & TS-932PX front views

8 x 3.5-inch/2.5-inch SATA 6Gb/s drive bays

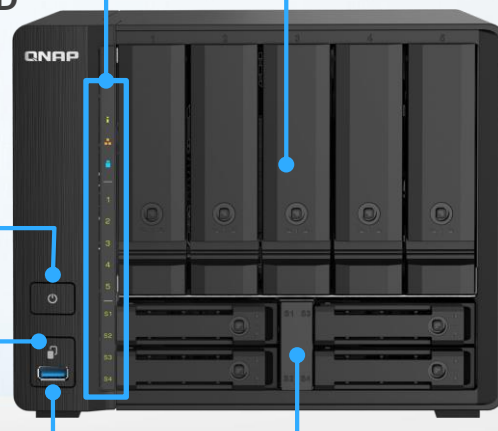
Indicators:
Status, LAN,
USB



HDD1~8
status

5 x 3.5-inch/2.5-inch SATA 6Gb/s drive bays

Indicators:
Status, LAN, USB,
HDD/SSD



Power
button

USB copy
button

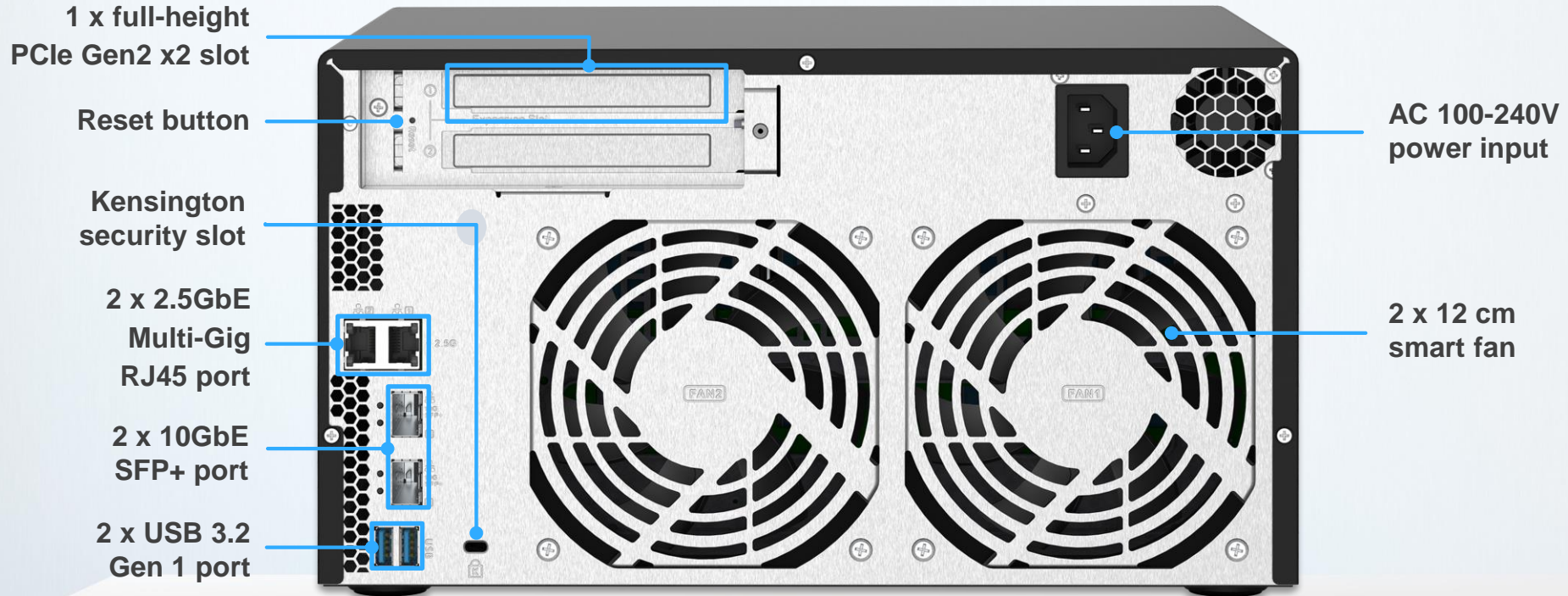
USB 3.2
Gen 1 port

4 x 2.5-inch SATA 6Gb/s SSD
bays (for HDD + SSD hybrid setup)

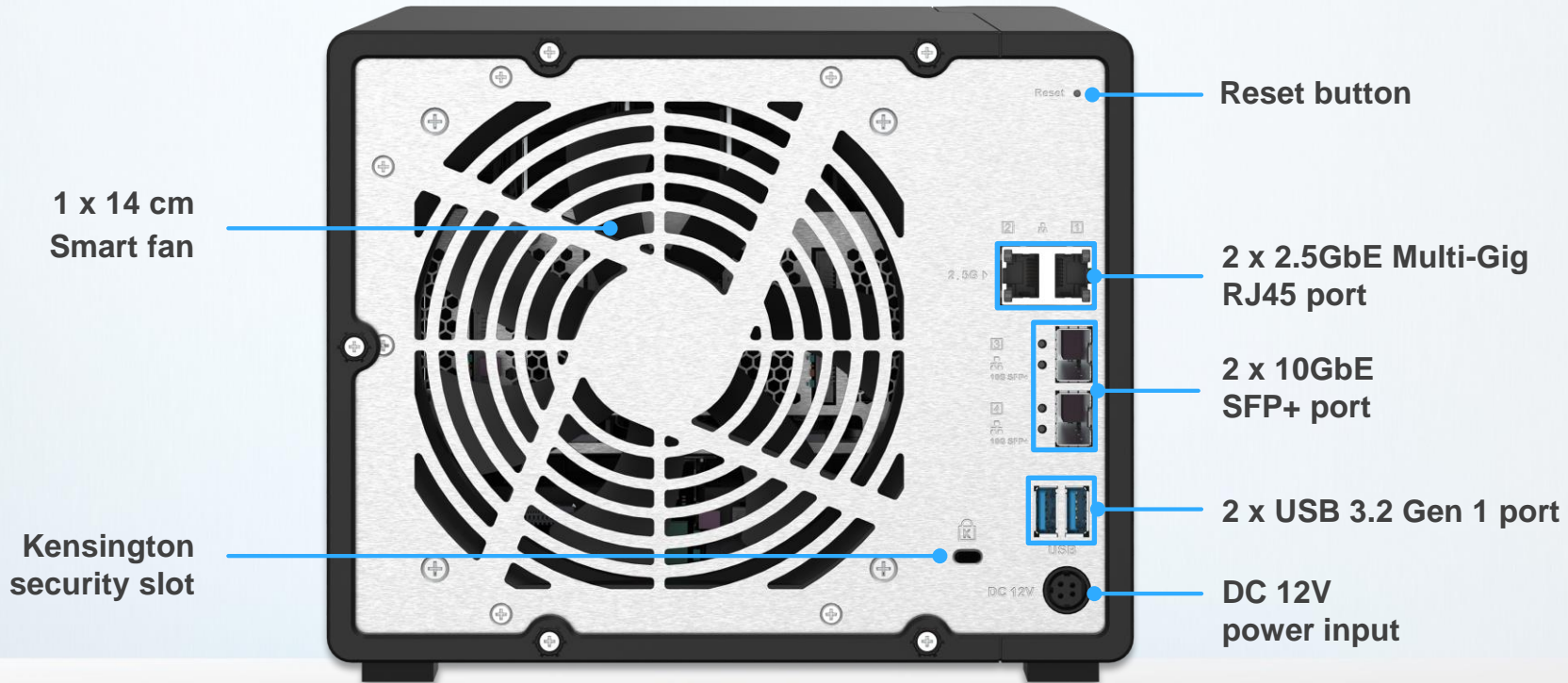


Lockable drive trays with
2 keys included

8-bay TS-832PX rear view

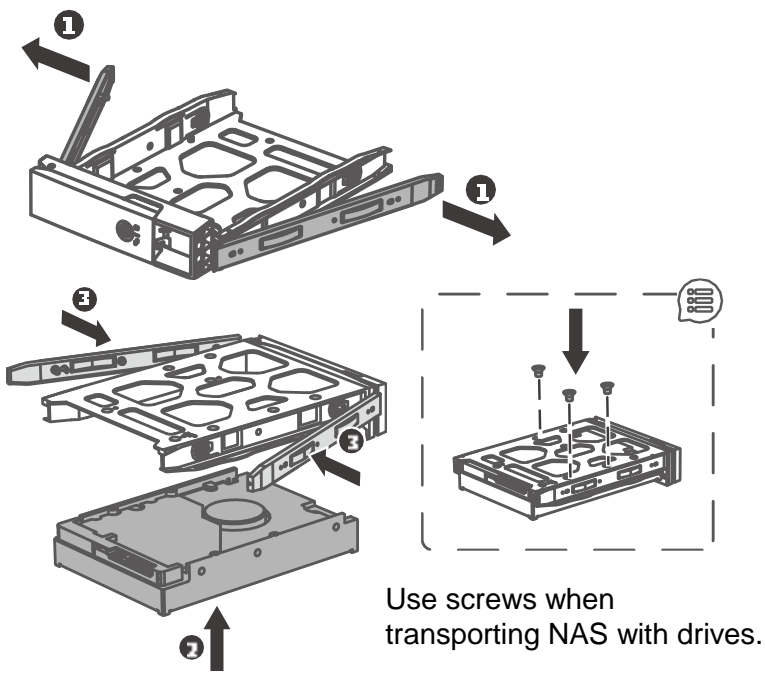


9-bay TS-932PX rear view

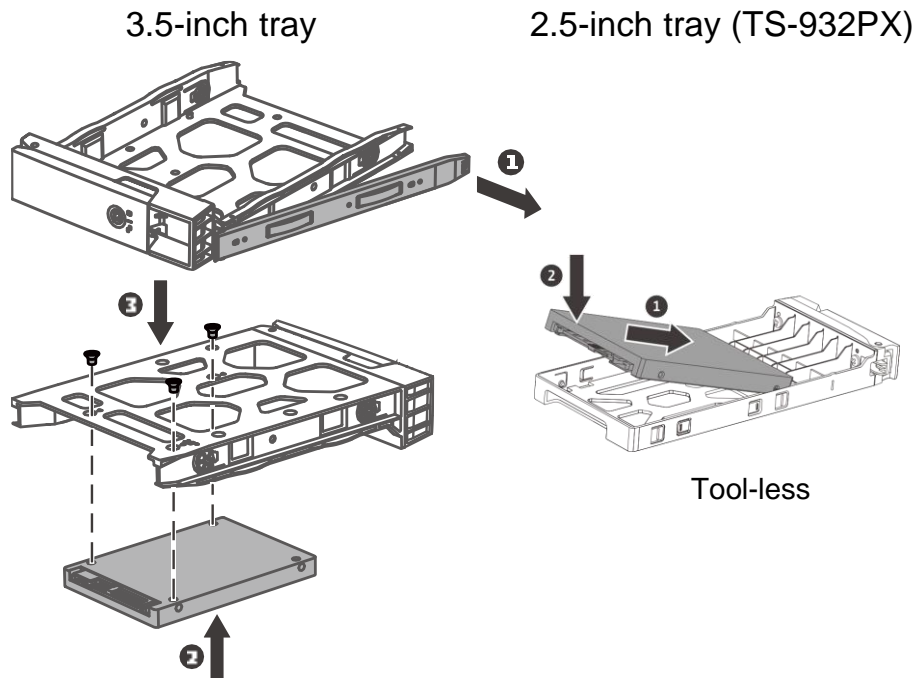


Easy-to-install HDDs and SSDs

3.5-inch HDD: tool-less



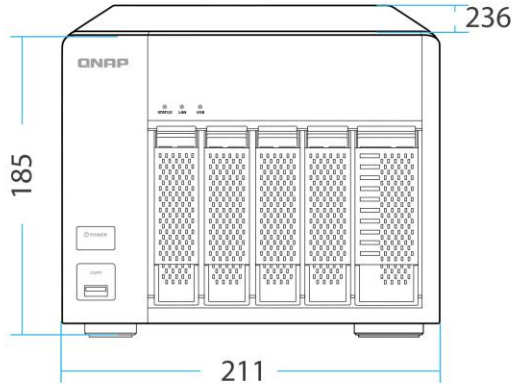
2.5-inch HDD / SSD



TS-932PX is as small as a 5-bay but with 9-bay capacity

5 Bay

185 x 211 x 236



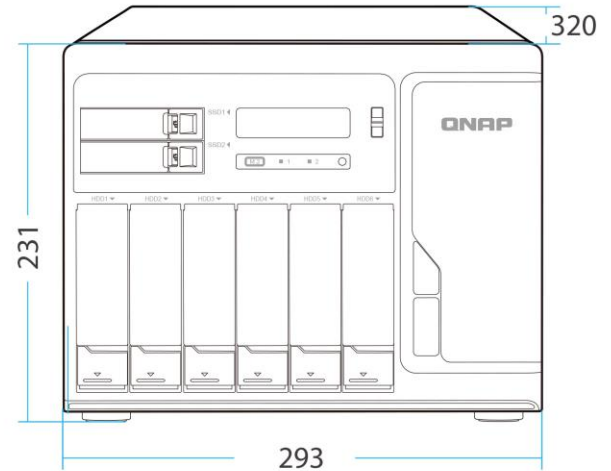
9-bay

182 x 217 x 236



8-bay

231.9 x 293 x 320



Speed

How to bring out
2.5GbE & 10GbE
performance



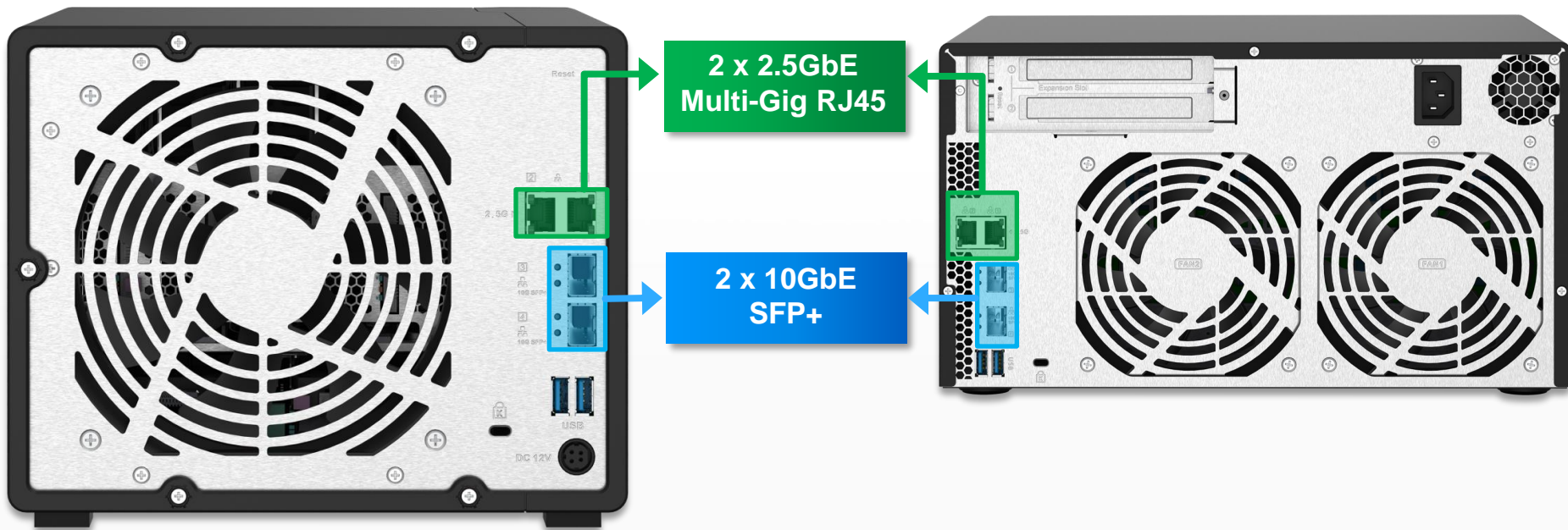
TS-832PX



TS-932PX

Both with dual 10GbE SFP+ & 2.5GbE ports

2 x 10GbE SFP+ & 2 x 2.5GbE Multi-Gig RJ45 ports delivering a major speed increase for fast backup & restoration, large-data applications, and container application tasks.



The best way to utilize high-performance SSDs



**5 x 3.5-inch HDDs
(high capacity)**

Performance

**All in one for SMB
2 x SSD for caching, RAID1**

Boost performance of accessing small files

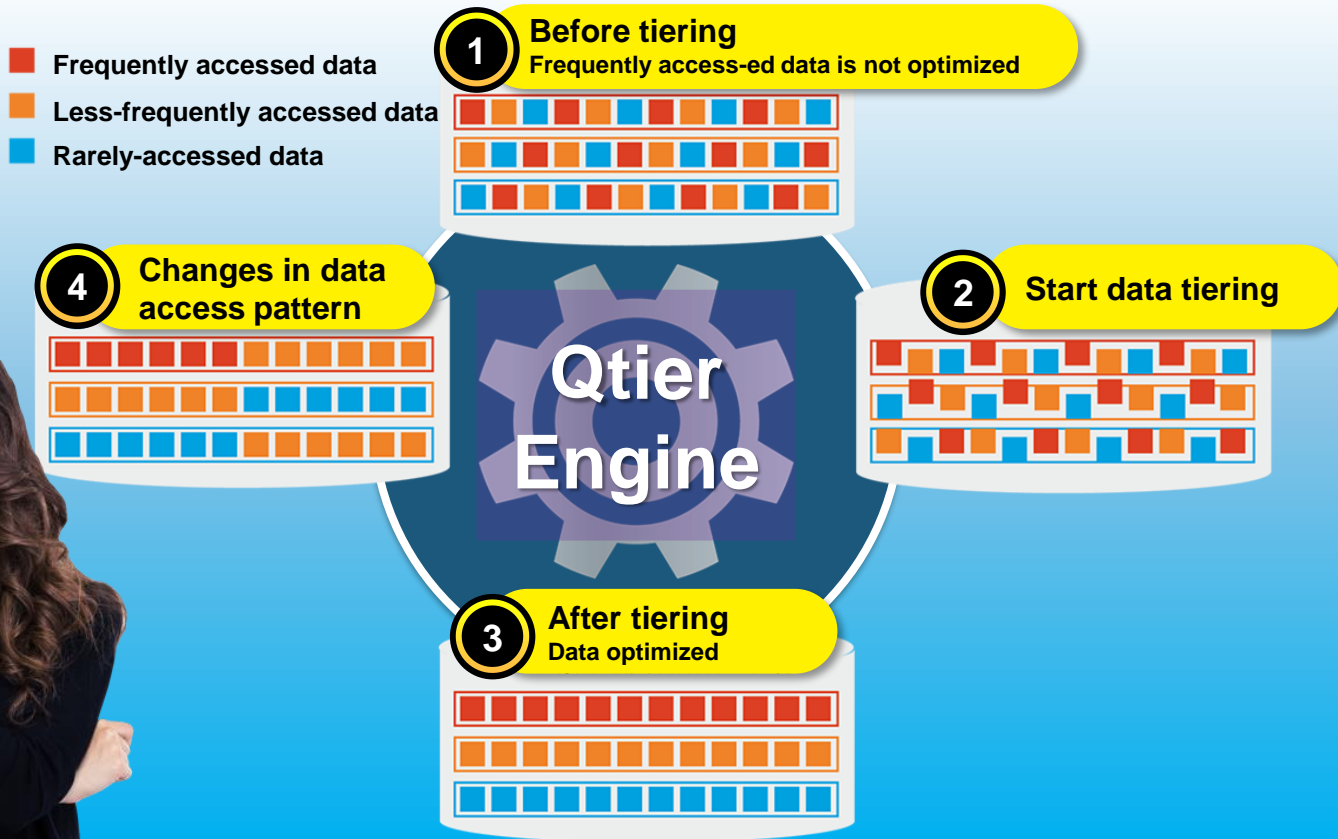
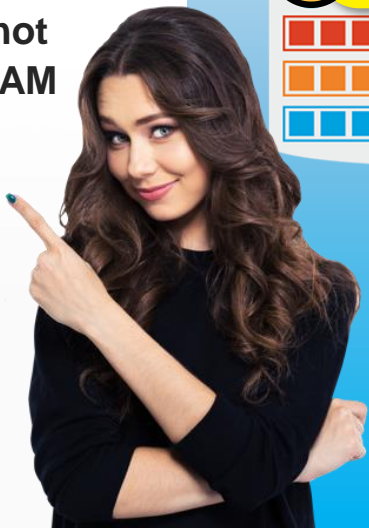
Performance and capacity

**High capacity file & media server
4 x SSDs for Qtier, RAID 5**

Boost overall performance

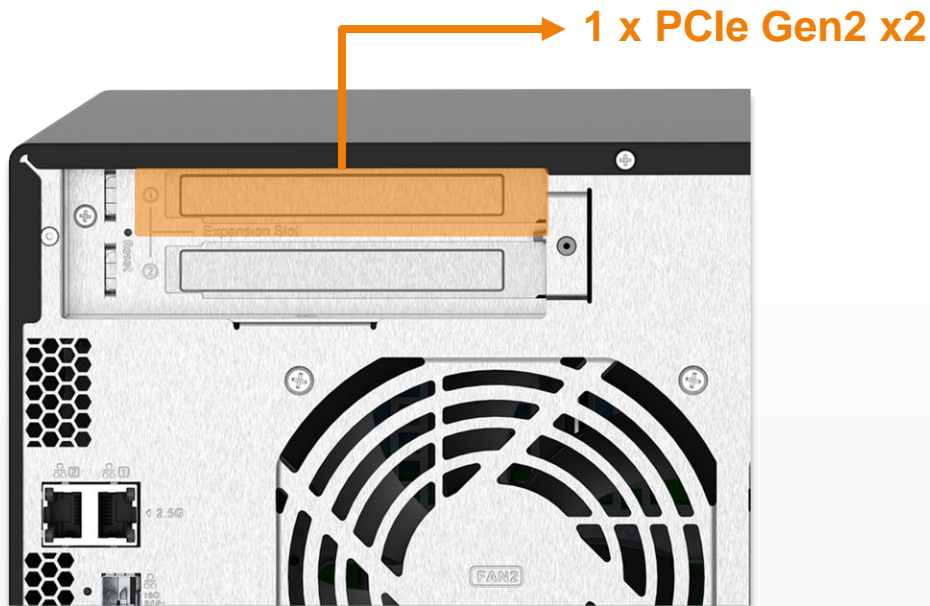
Qtier auto-tiering for speed and capacity

- Automatically moves data between different tiers
- SSD cache capacity is not limited by RAM size



TS-832PX with a PCIe slot for flexible network deployment

TS-832PX provides a full-height
PCIe Gen2 expansion slot



QXG-5G1T-111C
1 x 5G/2.5G/1G/100M port

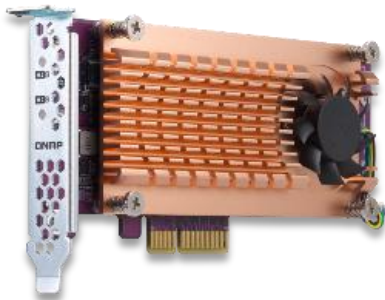


QXG-10G1T
1 x 10G/5G/2.5G/1G/100M port



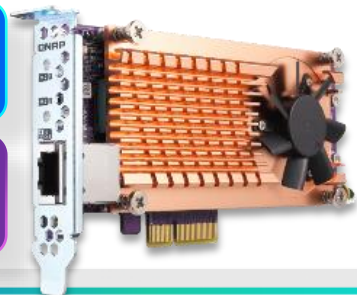
QWA-AC2600
Wi-Fi 5 2.4GHz/5GHz AP

TS-832X with a QM2 PCIe adapter to add M.2 SSDs for SSD cache



QM2-2S-220A
2 x M.2 SATA 6Gb/s ports

QM2-2P-244A
2 x M.2 NVMe PCIe Gen2 ports



QM2-2S-10G1TA
2 x M.2 SATA 6Gb/s ports
1 x 10G/5G/2.5G/1G ports

QM2-2P10G1TA
2 x M.2 NVMe PCIe Gen2 ports
1 x 10G/5G/2.5G/1G ports



Storage & Snapshots

Storage & Snapshots

- Overview
- Storage
- Snapshot
- Storage
 - Disks/VJBOD
 - Storage/Snapshot
 - Cache Acceleration
- External Storage
- Snapshot Backup
- Snapshot Replica
- Snapshot Vault
- iSCSI
 - iSCSI Storage
 - Remote Disk
 - LUN Backup

Cache Acceleration

Cache Acceleration

Usage

Allocated: 0% Free: 100%

Service: Enabled
Capacity: 108.64 GB
Cache Type: Read-Write
Cache RAID: RAID 1
Read Hit Rate: 0%
Write Hit Rate: 97%
Cache Flushing: --
Status: Ready

Hit Rate History

Name/Alias	Capacity	Status
Data/Vol1	245.44 GB	<input checked="" type="checkbox"/> Ready
Data/Vol2	688.37 GB	<input checked="" type="checkbox"/> Ready
Data/Vol3	688.37 GB	<input checked="" type="checkbox"/> Ready
Data/Vol4	693.84 GB	<input checked="" type="checkbox"/> Ready
Data/Vol5	688.37 GB	<input checked="" type="checkbox"/> Ready
Data/Vol6	325.27 GB	<input checked="" type="checkbox"/> Ready

Optimize performance and capacity with Qtier



8 x 3.5-inch HDDs for
high-capacity storage



Install a QM2 adapter with dual M.2
SATA or NVMe SSDs and setup Qtier

**Benefited from 8 x 14TB HDD + 2 x 1TB M.2 SSD
capacity and performance boost!**

Upgrade to Qtier anytime when performance is needed



Scenario

When the HDD-based storage pool cannot provide enough performance...

Step

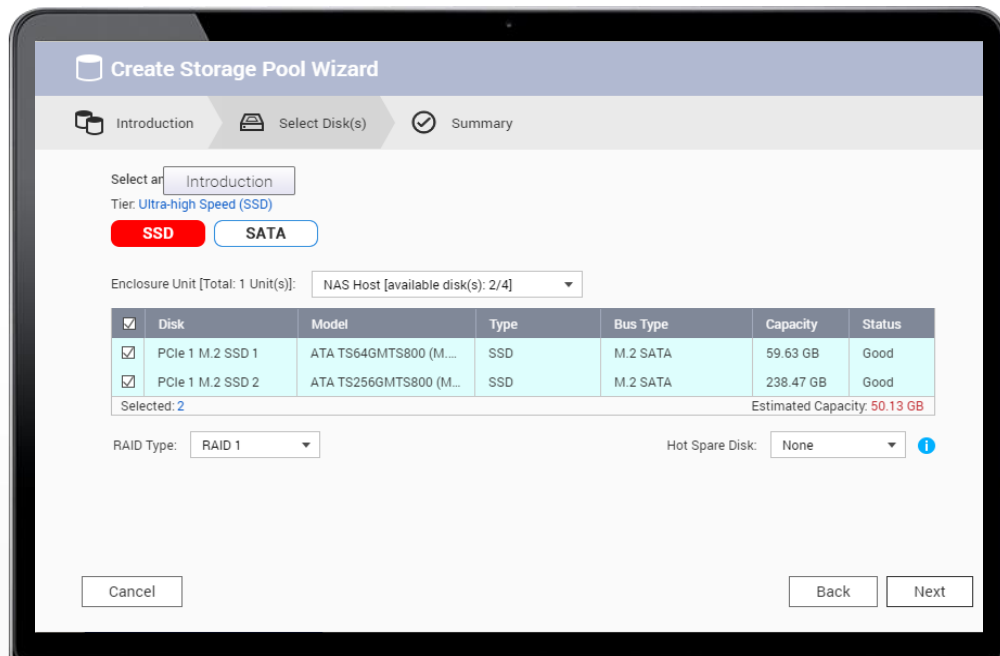
1

Install a QM2 adapter and M.2 SSD

Step

2

Select SSDs and upgrade to Qtier pool



Short-distance 10GbE SFP+ DAC cable for direct connection without a transceiver

**1.5M SFP+ 10GbE
direct attached copper
(DAC) cable**

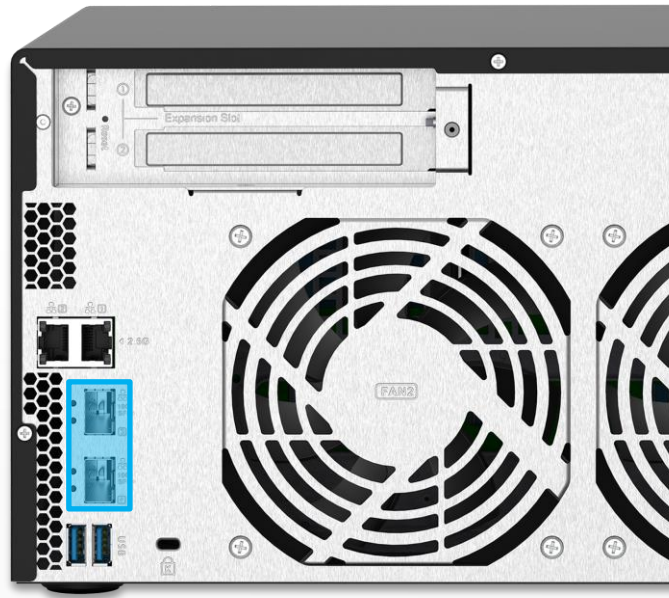


Part number:
CAB-DAC15M-SFPP-DEC02

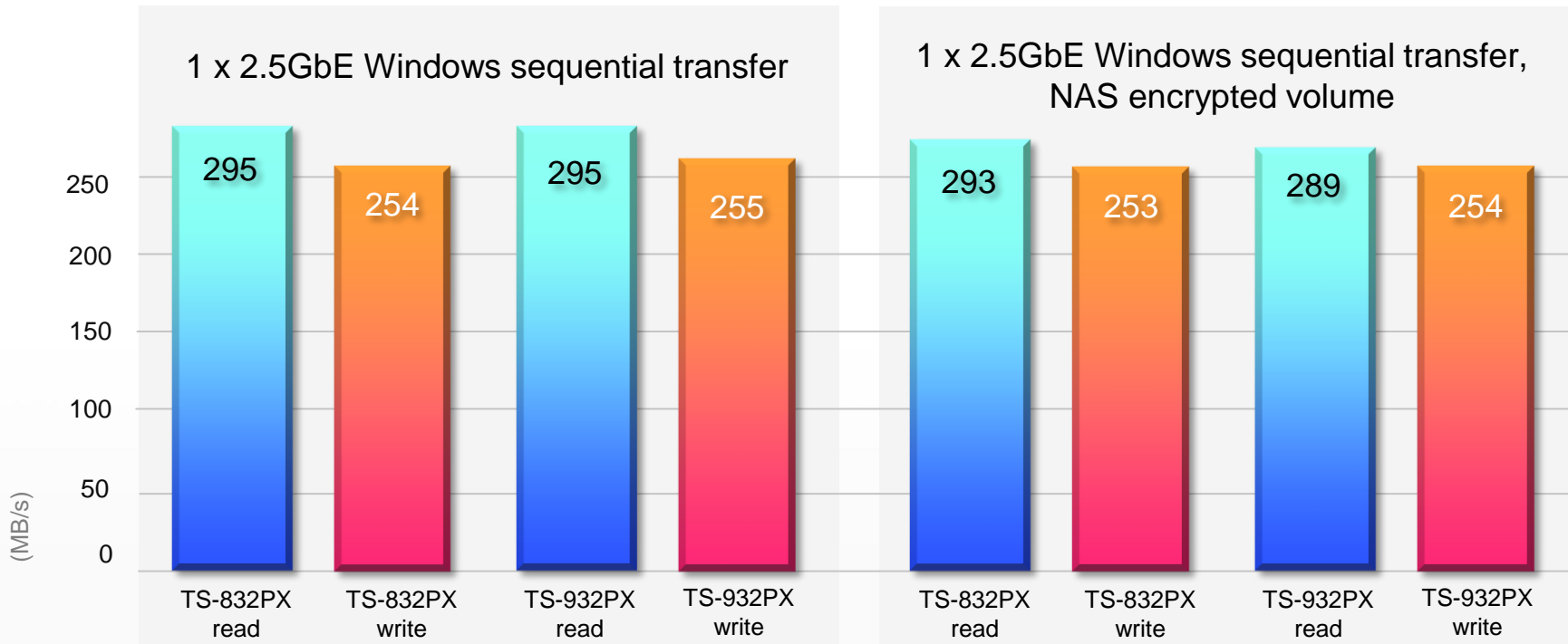
**3.0M SFP+ 10GbE
direct attached copper (DAC)
cable**



Part number:
CAB-DAC30M-SFPP-DEC02



2.5GbE provides much faster speed over 1GbE

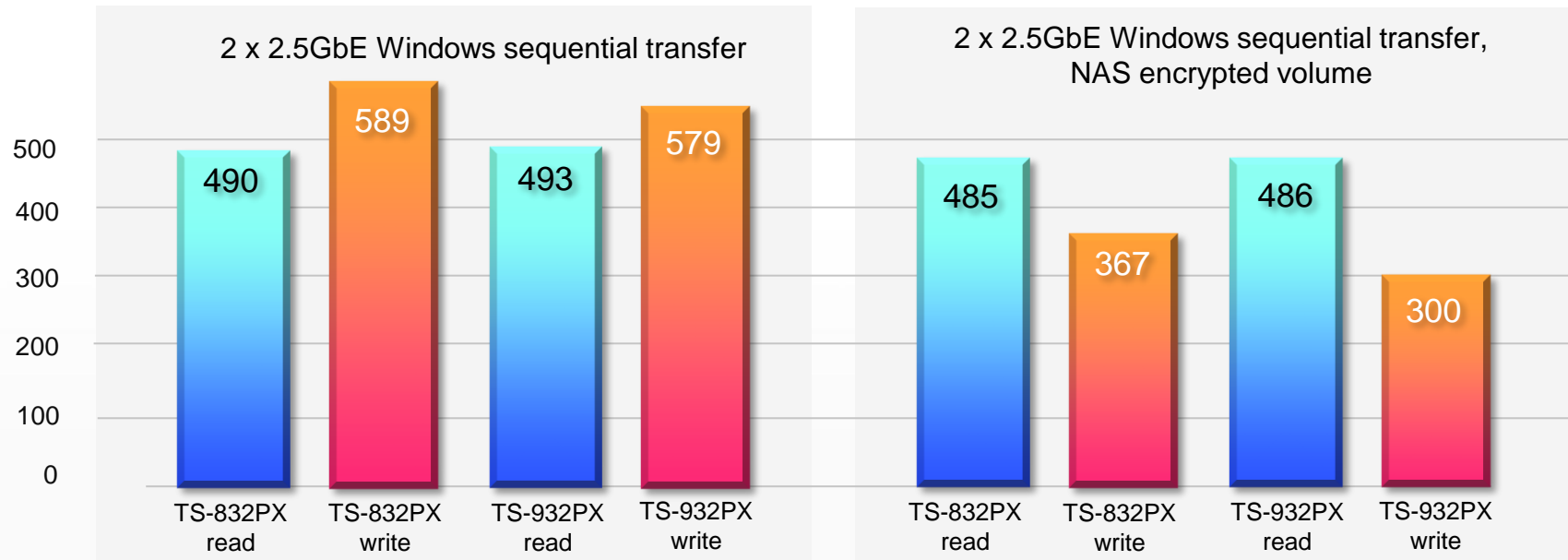


Test environment:
NAS | TS-832PX & TS-932PX, QTS 4.4.2, 8 or 9 x Samsung 850 Pro 512GB, RAID 5, thick volume
Client PC | Windows 10 Pro, Intel Core i7-6700 3.4 GHz, 32GB RAM
IOmeter | RAM*4, 30-sec ramp up time, 3-min seq. run time, 2 workers, 64-outstanding, 1MB, SMB transfer

Tested in QNAP Labs. Figures may vary by environment.

2 x 2.5GbE ports for the multi-user/device environment for the future business growth

In addition to Jumbo Frame support, port trunking / link aggregation provides enhanced performance.

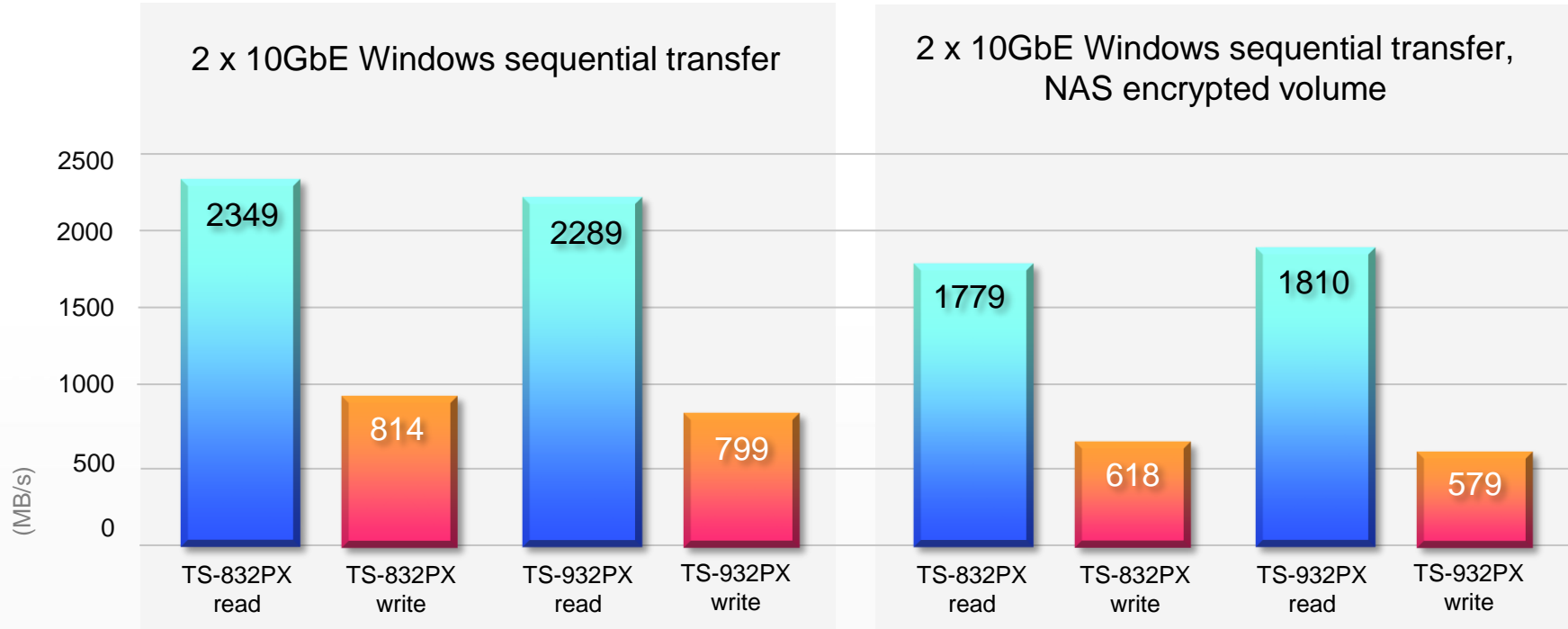


Test environment:

NAS | TS-832PX & TS-932PX, QTS 4.4.2, 8 or 9 x Samsung 850 Pro 512GB, RAID 5, thick volume
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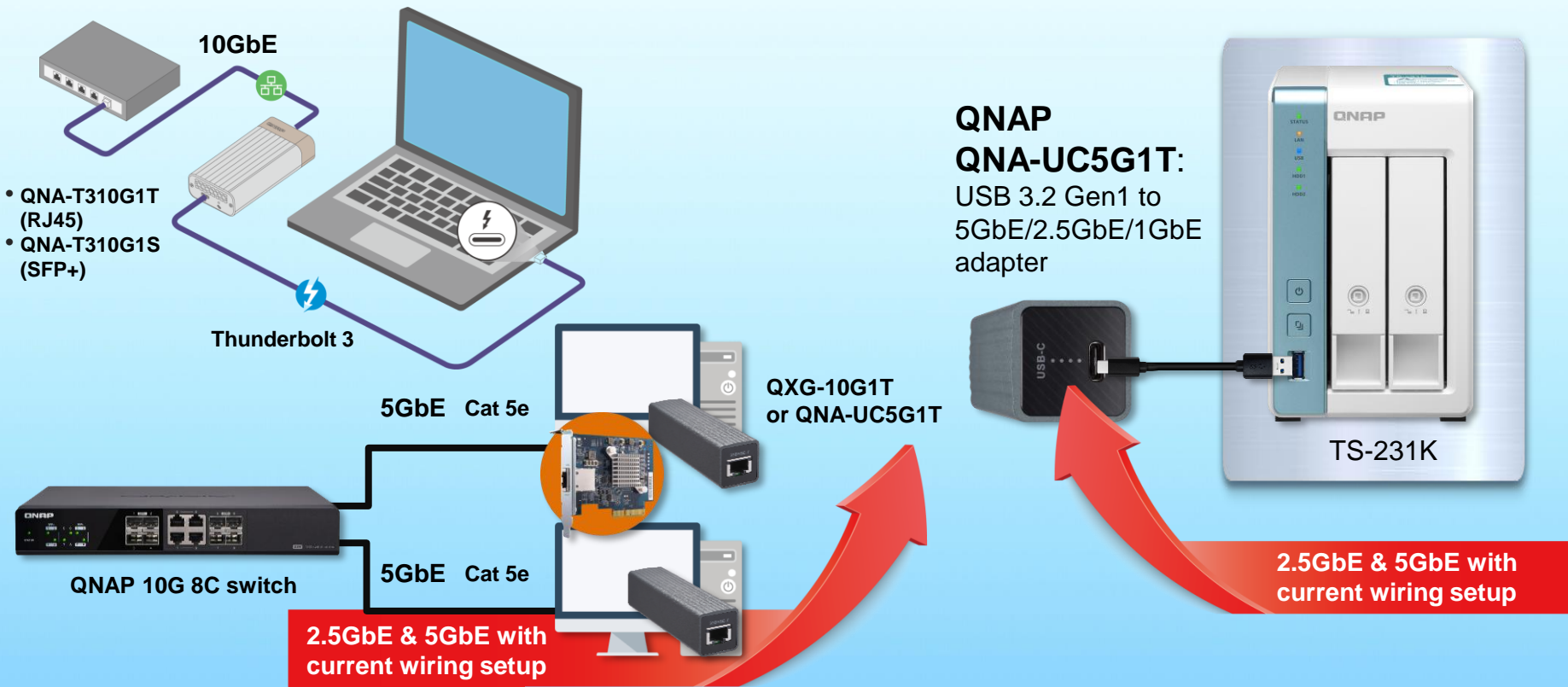
Achieve the best performance with the integrated 2 x 10GbE SFP+



Test environment:
NAS | TS-832PX & TS-932PX, QTS 4.4.2, 8 or 9 x Samsung 850 Pro 512GB, RAID 5, thick volume
Client PC | Windows 10 Pro, Intel Core i7-6700 3.4 GHz, 32GB RAM
IOmeter | RAM*4, 30-sec ramp up time, 3-min seq. run time, 2 workers, 64-outstanding, 1MB, SMB transfer

Tested in QNAP Labs. Figures may vary by environment.

NAS/PC/Mac can also use Thunderbolt 3, USB or PCIe accessories to achieve 10GbE/5GbE/2.5GbE speed



Demo

1. Memory upgrade
2. 2.5GbE & 10GbE performance test



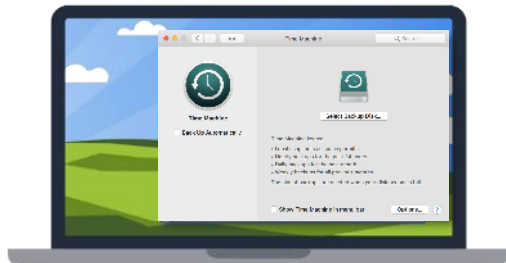
TS-832PX



TS-932PX

Backup the data from your computers

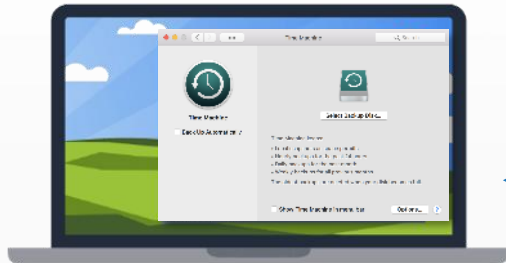
macOS



Time
Machine



Windows



NetBak
Replicator

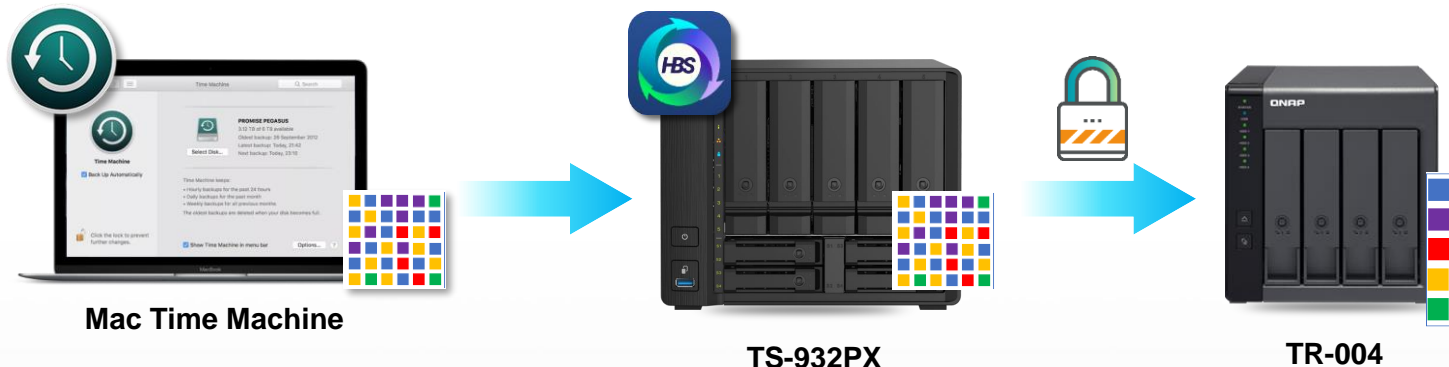


TS-932PX

Scheduled or instant
backup to counter
against viruses and
ransomware

Additional backup of Time Machine data

Copy Time Machine Backup file to NAS via HBS 3, and then synchronize the data from NAS to an external device or the cloud, eg. TR-004 USB RAID DAS or TL-D800C USB JBOD DAS.



Create the backup job:

1

Select Time Machine Backup as source

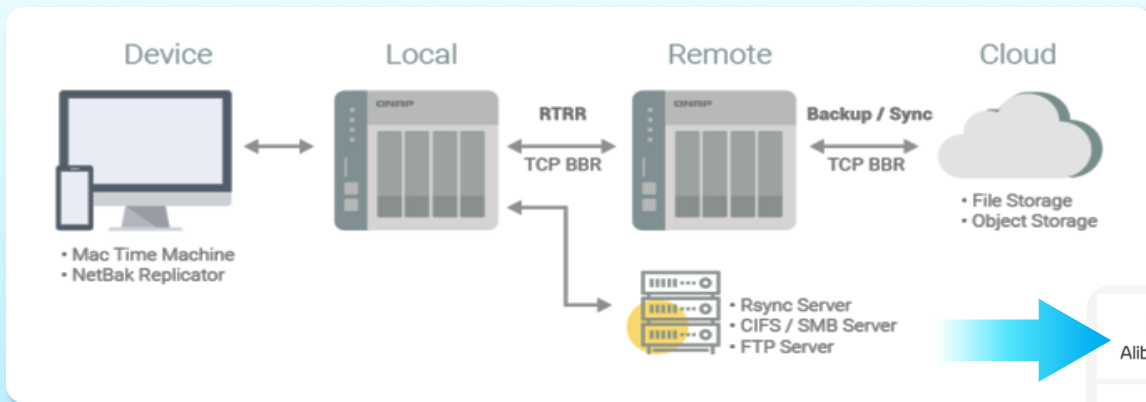
2

Select TR-004 as destination

3

Setup scheduled backup of NAS Time Machine data

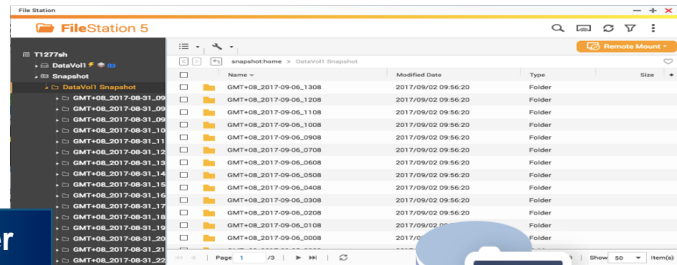
HBS 3 for data backup and recovery



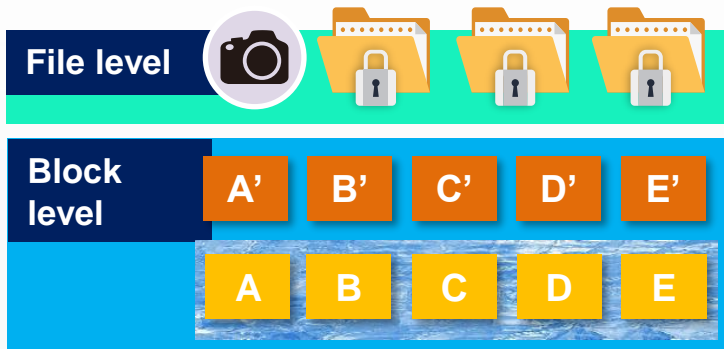
Use HBS 3 (Hybrid Backup Sync 3) to easily transfer your data to local, remote and cloud storage spaces as a comprehensive data storage and disaster recovery plan.

QNAP snapshot for file recovery, up to 256 versions

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	Maximum total snapshot numbers per NAS	Maximum snapshot number per volume/LUN
4GB and above	256	64



Qsirch 4.0 makes it easy to search for files



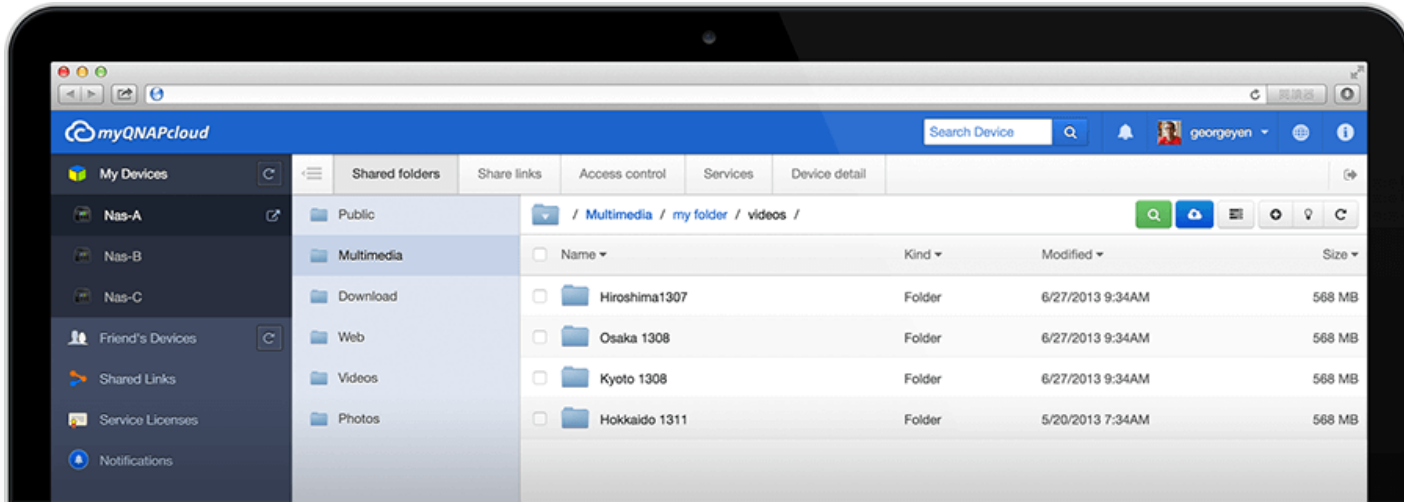
- Search within NAS and on the Internet
- Large file preview pane
- Advanced search for complex keyword search
- 35+ powerful filter conditions
- Easy steps from previewing to sharing



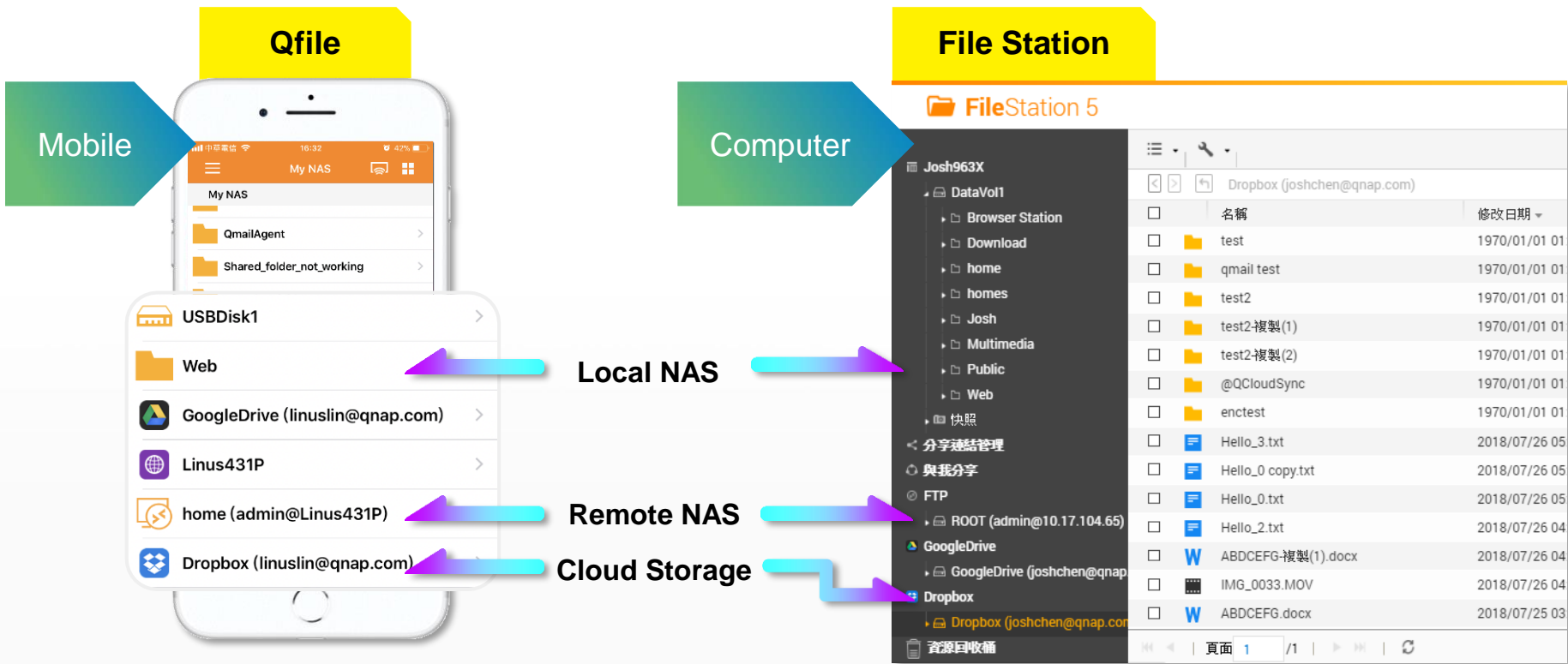
Connect to home or office NAS with myQNAPcloud and QNAP ID (QID)

Anytime / Anywhere

Register and login with
Email or phone number



Connect to Dropbox, One Drive, Google Drive and more



QNAP QVPN and QBelt protocol for anywhere access



Secure Encrypted Connection:

DTLS + SSL +
AES-256 encryption



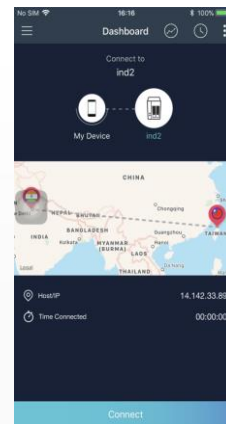
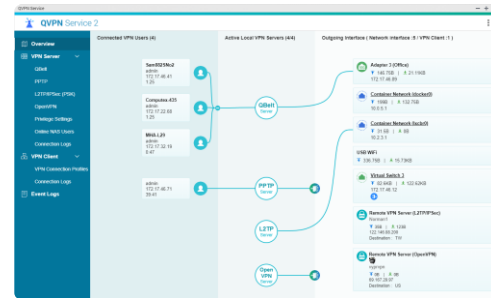
New QBelt protocol:

Decreases the chance
of being detected



**Works on desktop
and mobile devices:**

Windows, macOS,
Android, iOS

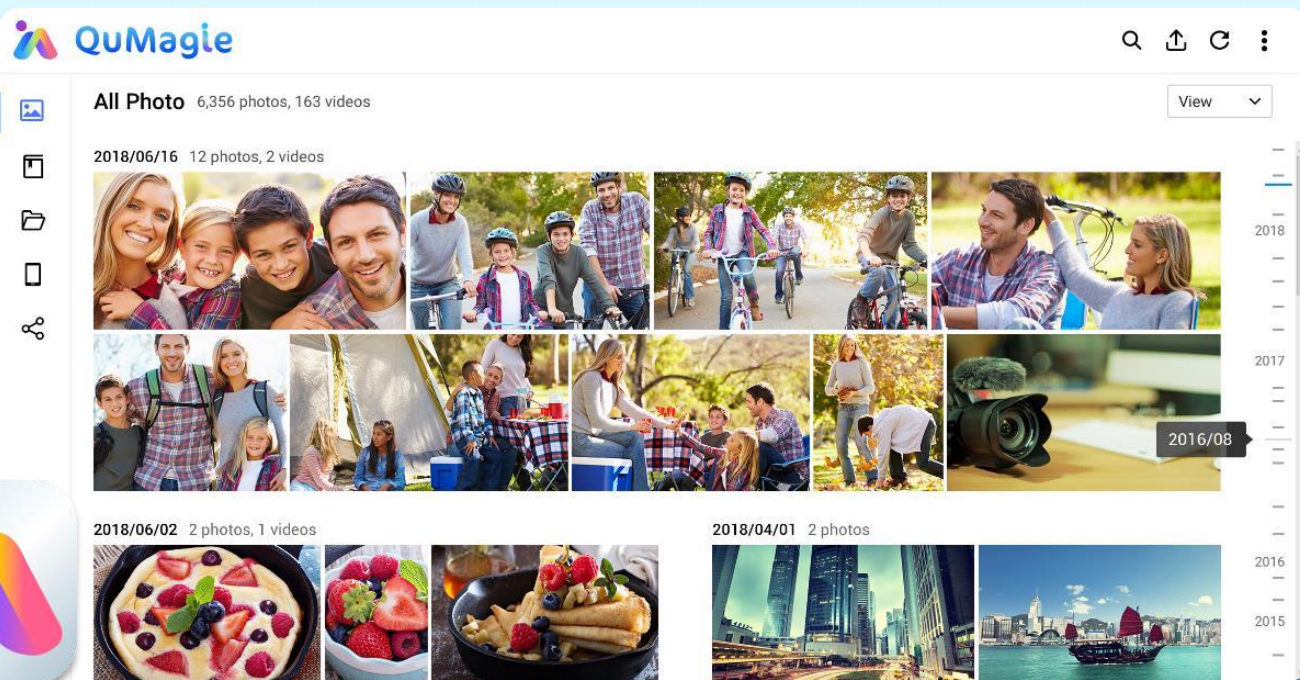


QuMagie photo management with object and face auto-classification

Album view

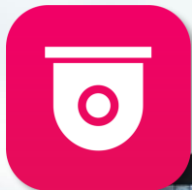
Folder view

Albums and Smart Albums



The screenshot displays the QuMagie photo management interface. At the top left is the QuMagie logo, and at the top right are search, share, refresh, and menu icons. Below the header, the main section is titled "All Photo" with a sub-header "6,356 photos, 163 videos" and a "View" dropdown menu. The interface shows a grid of photos organized by date. The first major section is for "2018/06/16" with "12 photos, 2 videos", featuring a collage of family photos including a group portrait and people riding bicycles. The second section is for "2018/06/02" with "2 photos, 1 videos", showing images of pancakes topped with fruit. The third section is for "2018/04/01" with "2 photos", showing a city skyline and a traditional Chinese boat. A vertical timeline on the right side of the interface shows years from 2015 to 2018, with a tooltip for "2016/08" appearing over a camera lens image. A large, colorful QuMagie logo is overlaid in the bottom-left corner of the screenshot.

Surveillance Station 24x7 with IP cameras



Surveillance Station 5.1



Vmobile



Recording channels

Free: **2**

Max: **25**



TS-832PX

Quad-core 1.7GHz w/ max 16GB RAM, best for Container Station to show your creativity

AI, IoT, Commonly-used Container Recommendation

- One-click installation wizard helps you quickly setup
- Supports Docker Compose YAML format to create applications

Easily import/export containers


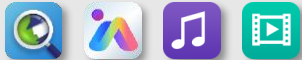
- Imports images or containers from PC or NAS
- Exports images or containers to NAS as backup

The screenshot displays the ContainerStation web interface. On the left is a dark blue sidebar with navigation icons and labels: 管理 (Management), 總覽 (Overview), 建立 (Create), 匯入 (Import), 匯出 (Export), 記錄 (Logs), 屬性 (Properties), 資源 (Resources), 映像檔 (Images), 儲存空間 (Storage), and 容器 (Containers). The main content area shows a container named '123_wordpress_1' in a 'DOCKER' environment. It is currently '運行中' (Running). The interface includes fields for '網址' (URL: http://172.17.28.127:10084/), '映像檔' (Image: wordpress:latest), 'ID' (ec4f0f1f7a66), '進入點' (Endpoint: docker-entrypoint.sh), 'CPU' (0%), and 'RAM' (0%). A '主控台' (Terminal) section at the bottom shows a log of HTTP GET requests to the container's IP address.

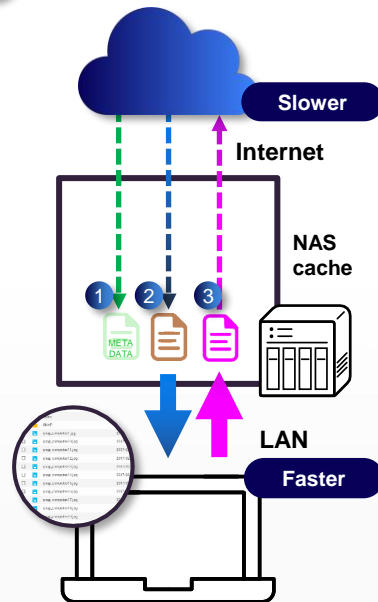
Built-in Docker Hub Marketplace
Easily downloadable tools



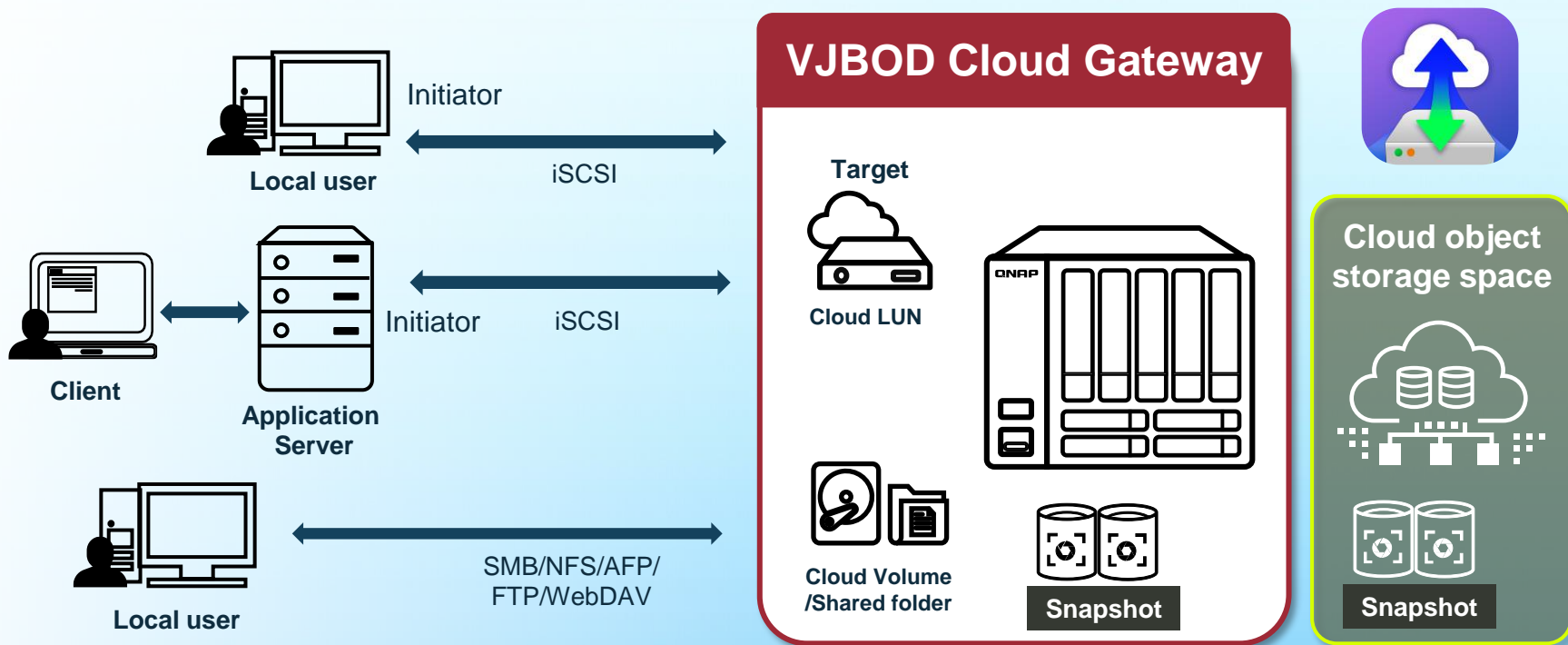
HybridMount provides two modes for file-based cloud storage gateway

	File Station Mount	File Cloud Gateway 
Setup Method	Mount cloud drives	Select "File Cloud Gateway" mode and create a dedicated cache space
Connections	No limit	2 free and perpetual connections. Purchase license for more connections
Access Performance	Depends on network speed	High performance thanks to caching
Access in File Station	Supported	Supported
Access through SMB / NFS / AFP	Not supported	Supported
Sync with the cloud	Sync only when browsing	Sync constantly for quick access
Integration with QTS Apps	Not supported	Supported 

- Online collaboration
- File data analysis

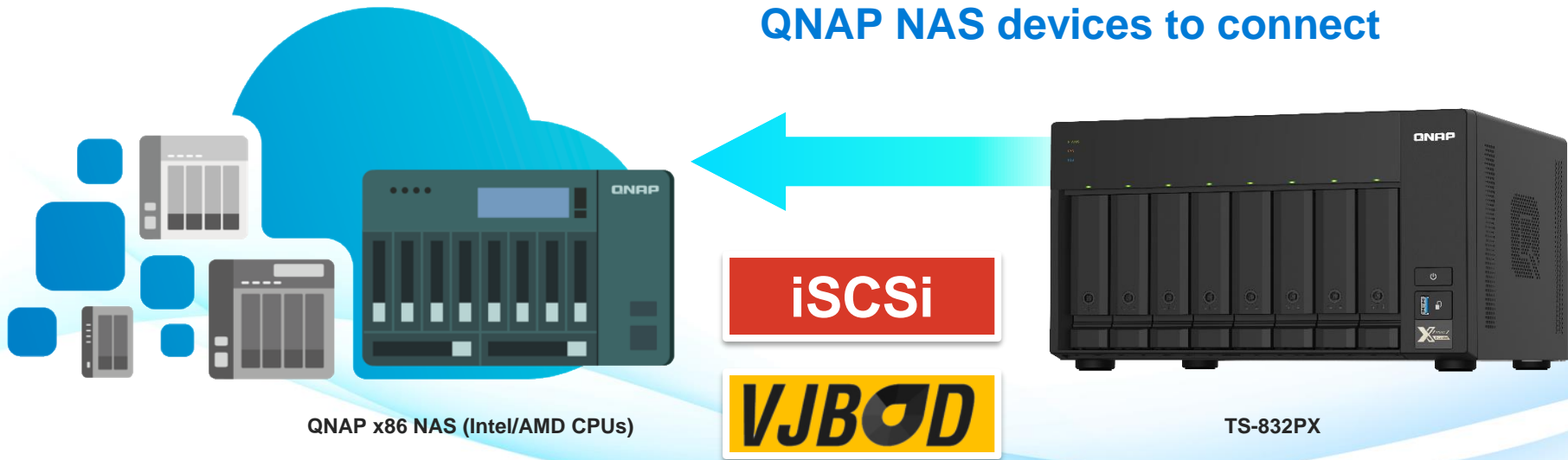


Business-class LUN backup: VJBOD Cloud block-based gateway



Use network-based VJBOD to expand other NAS capacity

Setup free space for multiple
QNAP NAS devices to connect



Economical and flexible QNAP expansion enclosures for multi-platform usage

QNAP TR RAID & TL JBOD have many advantages

Bigger capacity

- 2, 4, 8, 16-bay choices
- NAS can support up to two units

Faster speed

- Popular USB 3.2 Gen 1 5Gb/s, USB 3.2 Gen 2 10Gb/s and PCIe with multi-channel SATA up to 64Gb/s*

Better compatibility: for NAS or PC/server

- Expand NAS or server storage capacity or data migration between different hosts
- QNAP External RAID Manager and JBOD Manager for monitoring the JBOD status

USB interface



TR-002

TR-004

TL-D800C

PCIe interface with SFF-8088 multi-channel SATA



TL-D400S

TL-D800S

TL-D1600S

*TS-832PX be installed with a USB 3.2 Gen 2 PCIe adapter to support USB 3.2 Gen 2 10Gbps

TS-932PX does not have a PCIe slot. Therefore it does not support TL-D400S, TL-D800S, TL-D1600S JBOD, which requires a QXP SATA PCIe adapter.

QNAP TR & TL enclosures support 2 usages on NAS

- TS-832PX and TS-932PX supports up to two QNAP TR or TL enclosures.
- Internal mode with storage pool support or external mode with cross-platform compatibility with Windows/Mac computers.

Usage 1: Expanding the NAS with a new volume



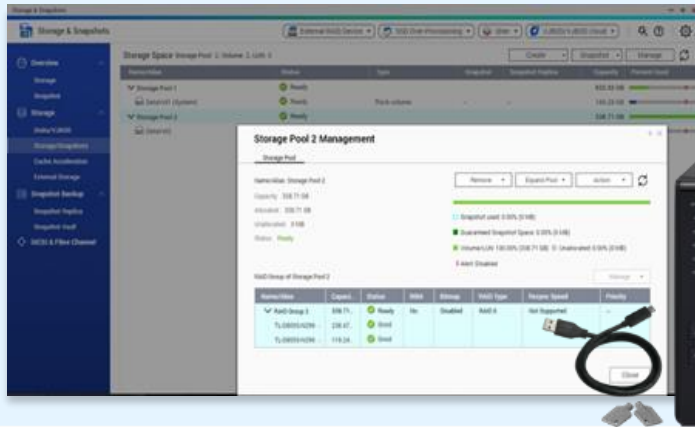
Usage 2: Work as a backup destination for snapshot replica



One enclosure for two different uses: internal expansion or external disk mode

RAID & Storage Pool

All disks of TR & TL expansion units would be identified by Storage & Snapshot manager, then configure as a RAID of storage pool.



External Disk Mode

The storage is individual for each disk, it will show 8 independent external disks with TL JBOD or as a single disk with IR RAID unit. This mode is also for cross-platform compatibility among various O.S.



- TL & TR units cannot be configured as a RAID group with those internal disks from NAS.
- TR units can only support RAID 0/1/5/10 and JBOD modes.

3-year extended warranty option

Provide up to 5 years of warranty coverage



Part number:
EXTW-YELLOW-3Y



Standard warranty

- **2-year** standard warranty service that comes in effect at the time of purchase.
- **Free** repair and part replacement for products under normal use during warranty period. (Spare parts and consumables are excluded)



Extended warranty

- Extending your warranty with this paid service, available **within 90 days** of the initial unit purchase.
- Offers identical service to standard warranty.

TS-832PX / TS-932PX

Less to spend. Lots to like.

2.5GbE, 10GbE SFP+, 4-core 1.7GHz, PCIe expansion or dedicated SSD bays



TS-832PX



TS-932PX