

QNAP



4 / 8 / 12-bay Rackmount NAS Series

TS-X53DU

l a u n c h e d

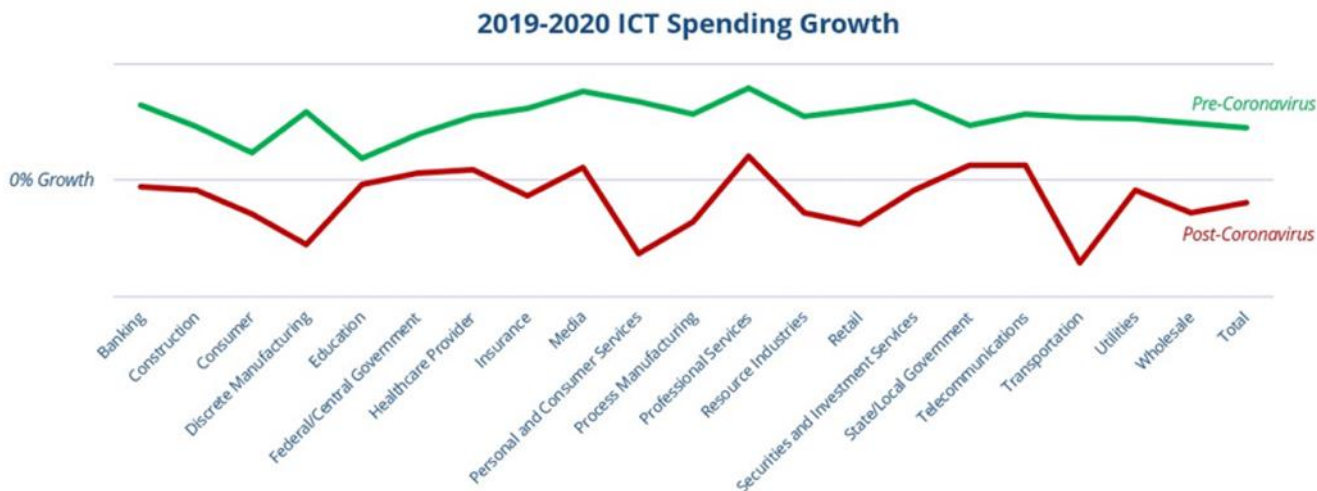


The Intel® J4125 2.0GHz quad-core 2.5GbE NAS with PCIe for M.2 SSD caching & network cards



How businesses can make the most effective IT investments in 2020 during and after the COVID-19 crisis?

- “Worldwide IT spending is now expected to decline **2.7%** in constant currency terms this year as COVID-19 impacts the global economy and forces many organizations around the world to respond with contingency planning and spending cuts in the short term.” - IDC
- “**hospitality** and **tourism-heavy industries** like **transportation** and **personal and consumer services** are expected to be the most negatively impacted markets with IT spending expected to decline by **5% or more.**” - IDC



Source: IDC , April 2020



Source: <https://www.idc.com/getdoc.jsp?containerId=prUS46228020>

Wi-Fi 6 enhances wireless network speed and density

AP

Ruckus
R750



Aruba
550



Extreme Networks
AP305C



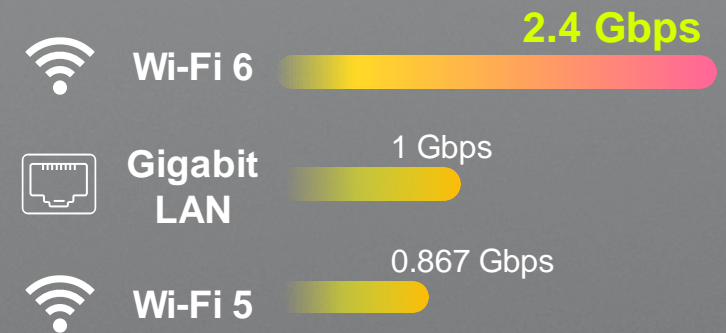
Computers

PCIe & CNVi NICs



Mobile

iPad Pro, iPhone 11, Galaxy S20 series



With the same LAN cable, 2.5GbE switch for multi-device environment

Coming
2020 Q3!



QSW-1105-5T (Unmanaged)
5 x 2.5G
RJ45 Multi-Gig

Fanless & metal housing

Use the existing wiring
infrastructure to support
2.5GbE

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



QSW-1208-8C (Unmanaged)
8 x 10G/5G/2.5G
RJ45 Multi-Gig



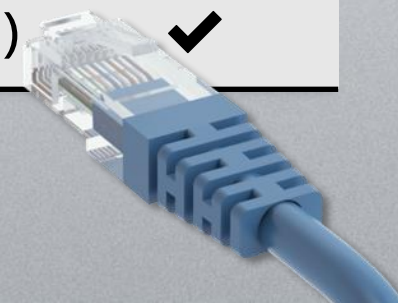
QSW-308-1C (Unmanaged)
1 x 10G/5G/2.5G
RJ45 Multi-Gig



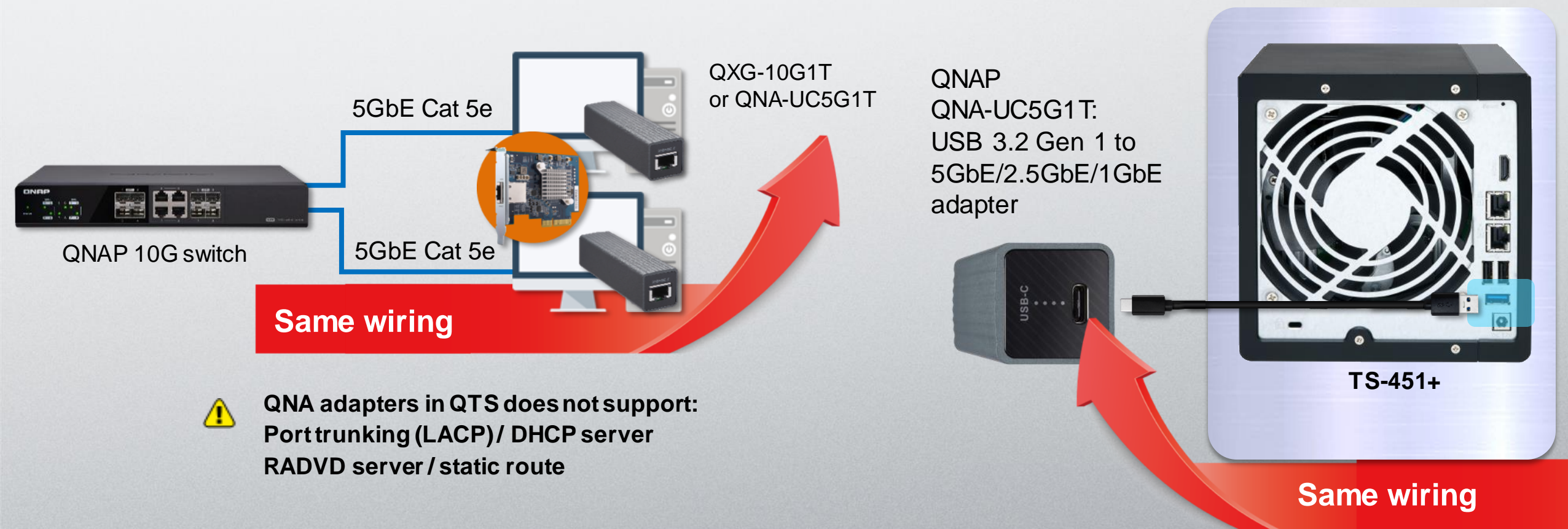
QSW-M408-4C (Managed)
4 x 10G/5G/2.5G
RJ45 Multi-Gig



QSW-M408-2C (Managed)
2 x 10G/5G/2.5G
RJ45 Multi-Gig



QNAP 10GbE/5GbE accessories for PC / Server / NAS to get 10GbE/5GbE/2.5GbE via PCIe or USB



Invest higher speed now and save later! Dual 2.5GbE TS-x53DU

NAS for large file transfer and intensive access

No more bandwidth restriction by 1GbE interface on NAS! No more DIY to install the 2.5GbE driver to your NAS from other vendors!! TS-x53DU NAS is equipped with with 2 independent 2.5GbE NICs for faster and smoother multi-device networking experience. The available PCIe expansion slot is ready for the future business growth.

Lower NAS CPU utilization

Better TCP & UDP for more users

2.5GbE

2.5GbE

Save space in your server or laptop with the large capacity NAS for more data and applications.



iSCSI 2.5GbE connection



TS-1253DU-RP



4 / 8 / 12-bay Rackmount NAS Series

TS-X53DU



Hardware overview

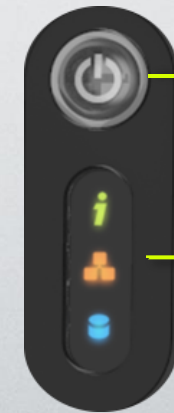


TS-x53DU front views

TS-1253DU-RP



4/8/12 x SATA 6Gb/s 3.5-inch/2.5-inch HDD/SSD



Power
button

LED indicators:
Status, HDD 1~4/8/12,
LAN, expansion device

TS-853DU-RP



TS-453DU-RP / TS-453DU

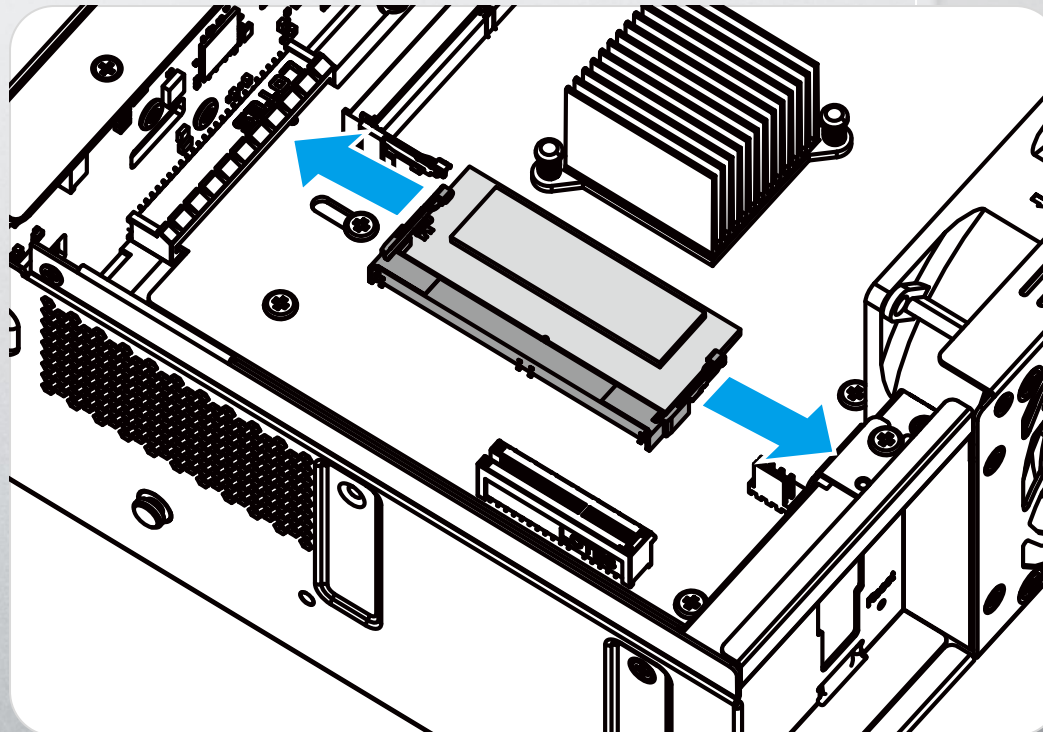


Upgradeable to 8GB memory for multi-tasking and multi-client access



Dual channel

- 2 x DDR4 2400 MHz SO-DIMM slots for max **8 GB** (2 x 4 GB)
- Optional 4GB RAM module (P/N: **RAM-4GDR4K0-SO-2666**) for 4GB models to become 8GB for higher performance in multi-client and multi-app environment



NAS Models

TS-453DU-4G

4 GB RAM (1 x 4 GB)

TS-453DU-RP-4G

4 GB RAM (1 x 4 GB)

TS-853DU-RP-4G

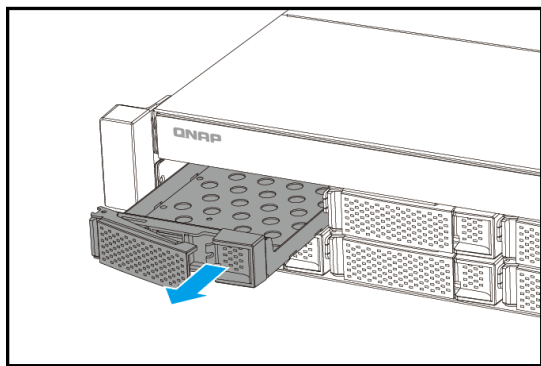
4 GB RAM (1 x 4 GB)

TS-1253DU-RP-4G

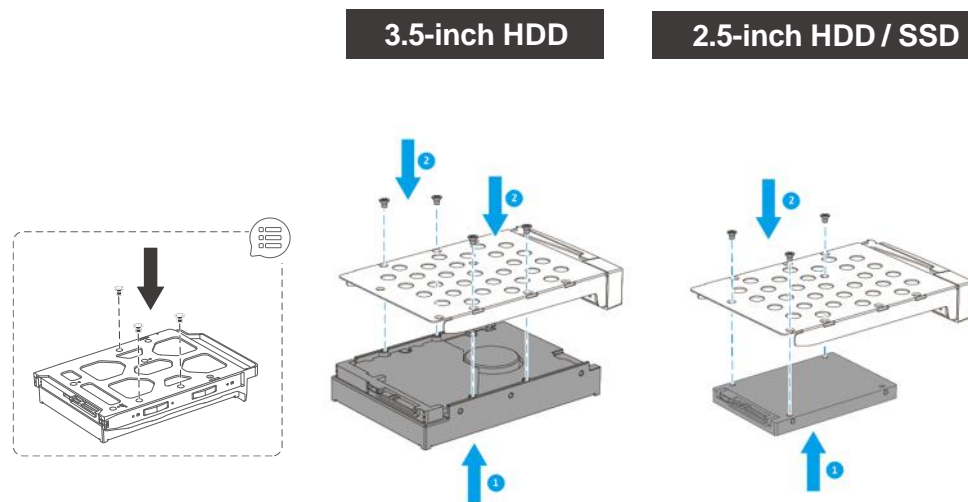
4 GB RAM (1 x 4 GB)

Easy to install HDDs and SSDs in few steps

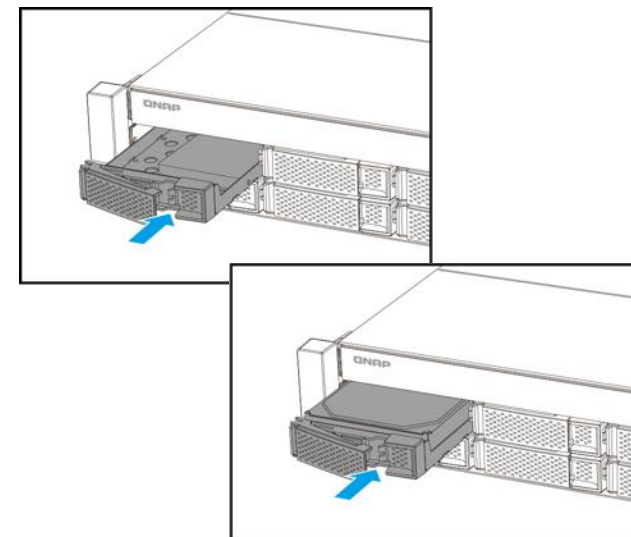
STEP | 01



STEP | 02



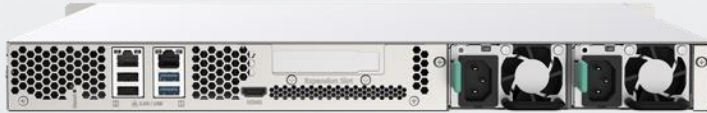
STEP | 03



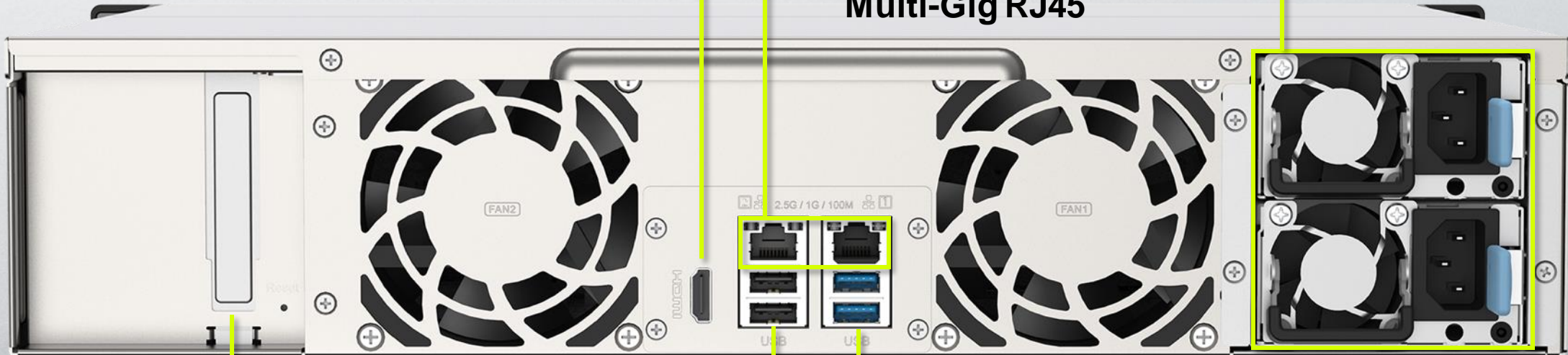
TS-x53DU rear views



TS-453DU



TS-453DU-RP



PCIe 2.0 x2 slot

2 x USB 2.0

2 x USB 3.2 Gen 1

HDMI v1.4b 4K 30Hz

2 x 2.5G/1G/100M/10M
Multi-Gig RJ45

AC 100-240V power input
TS-453DU-RP, TS-853DU-RP, TS-
1253DU-RP have redundant PSUs

TS-853DU-RP & 1253DU-RP

Energy-efficient Intel 4-core J4125 2.0GHz saves bills while empowering your business operations



Low-power 10W TDP
Quad-core J4125

2.0 GHz base

2.7 GHz burst

Integrated Intel UHD Graphics 600

250 MHz base

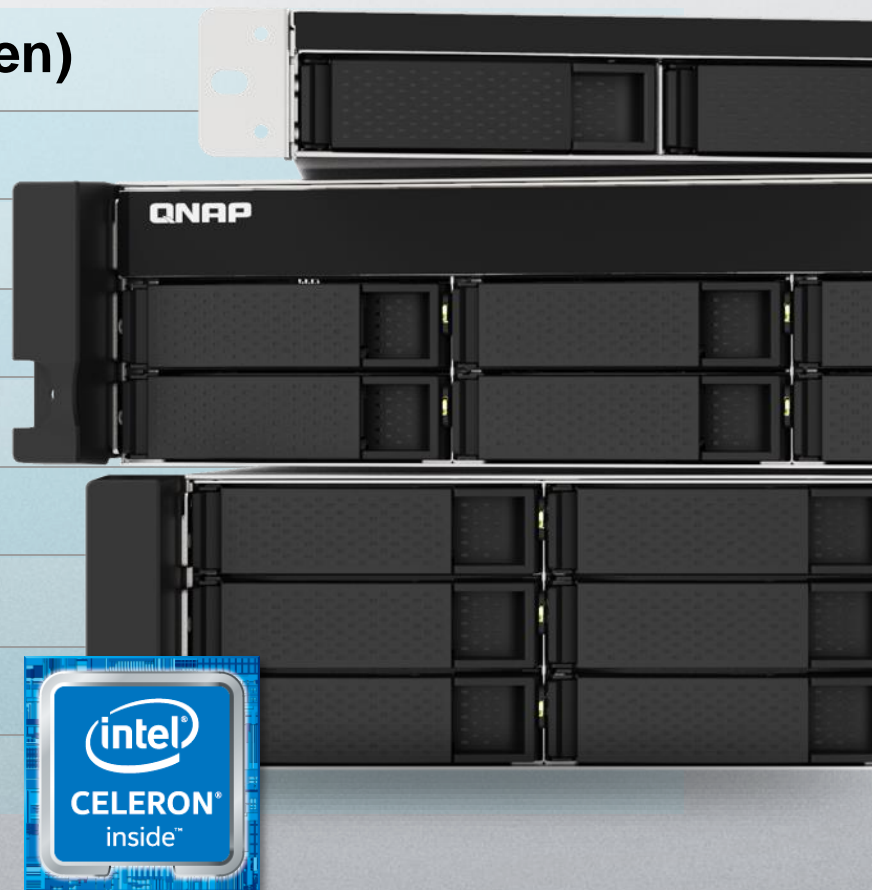
750 MHz burst



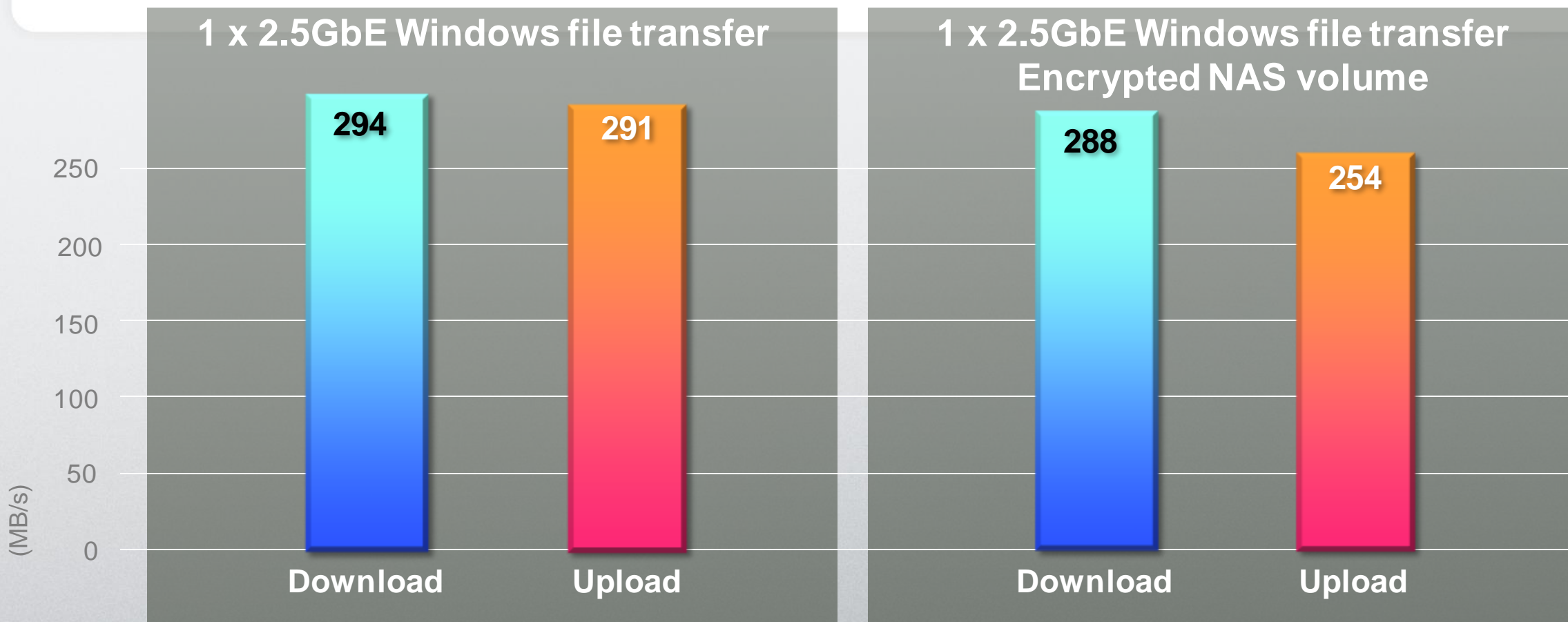
TS-1253DU-RP

Performance upgrade you can count on

CPU model	J4125	J3455 (Previous gen)
Launch date	Q4'19	Q3'16
Cores	4	4
Threads	4	4
Base freq.	2.0 GHz	1.5 GHz
Burst freq.	2.7 GHz	2.3 GHz
Cache	4 MB	2 MB
Memory	DDR4 (2400 MHz)	DDR3L (1866 MHz)
Graphics	Intel UHD Graphics 600	Intel HD Graphics 500



2.5GbE accelerates large file transfer than 1GbE, especially suitable for a single client environment



Tested in QNAP Labs. Figures may vary by environment.

Test environment:

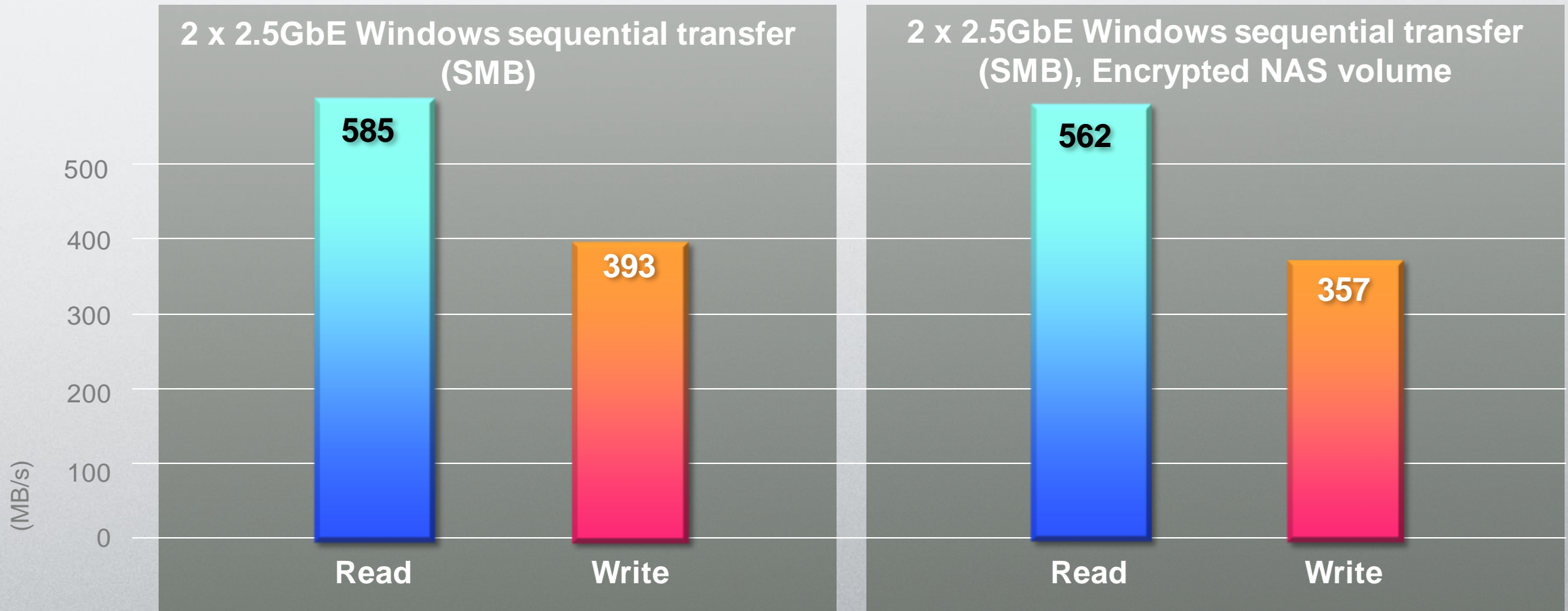
NAS | TS-1253DU-RP-4G, QTS 4.4.2, 12 x Samsung 850 Pro 512GB, RAID 5, thick volume

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

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

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

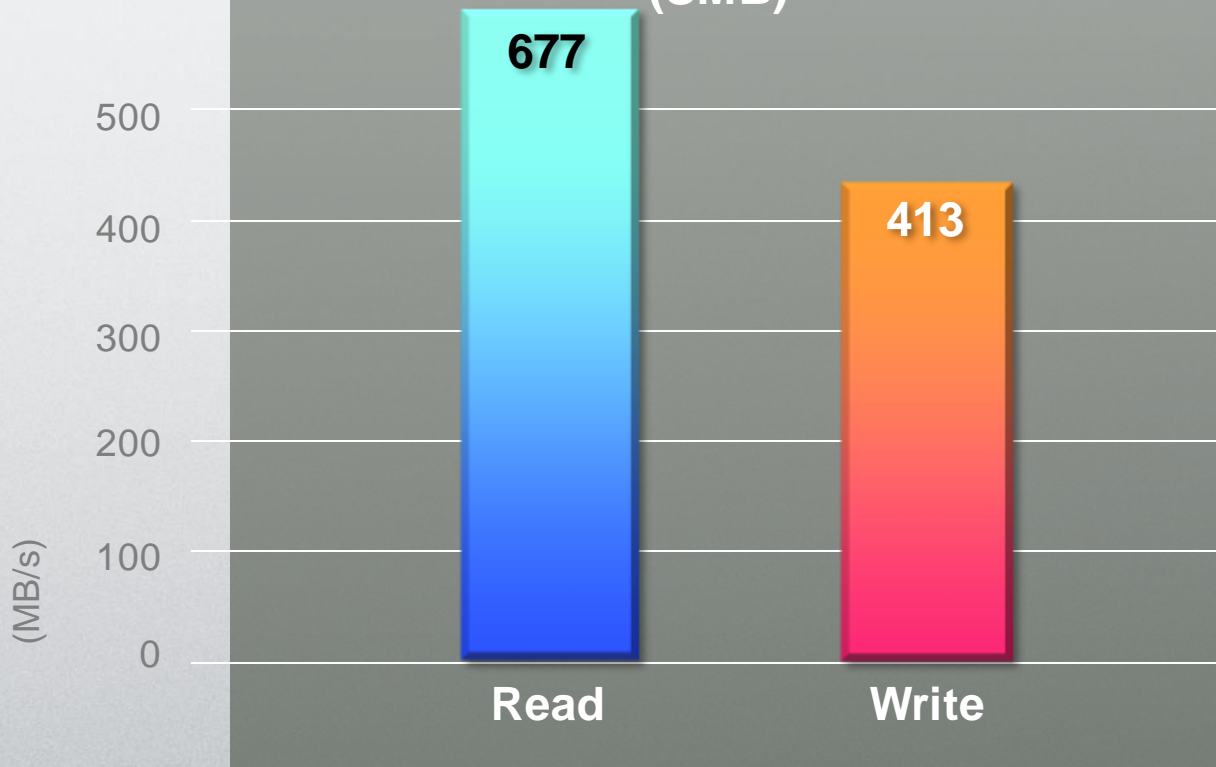


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Tested in QNAP Labs. Figures may vary by environment.

PCIe 2.0 slot for various 5GbE & 10GbE PCIe NICs to accommodate different environment

1 x 10GbE Windows sequential transfer (SMB)



QXG-5G1T-111C

1 x 5G/2.5G/1G/100M RJ45



QXG-5G2T-111C

2 x 5G/2.5G/1G/100M RJ45



QXG-5G4T-111C

4 x 5G/2.5G/1G/100M RJ45



QXG-10G1T

1 x 10G/5G/2.5G/1G/100M RJ45



QXG-10G2T-107

2 x 10G/5G/2.5G/1G/100M RJ45

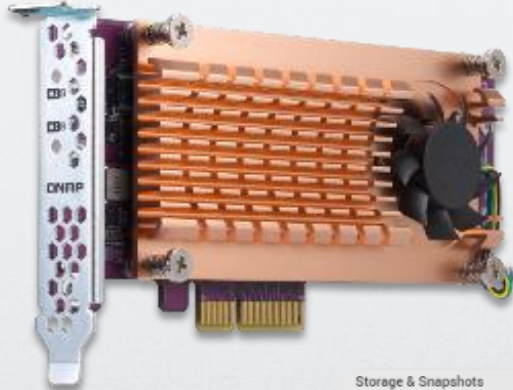


QXG-10G2SF-CX4

2 x 10G SFP+

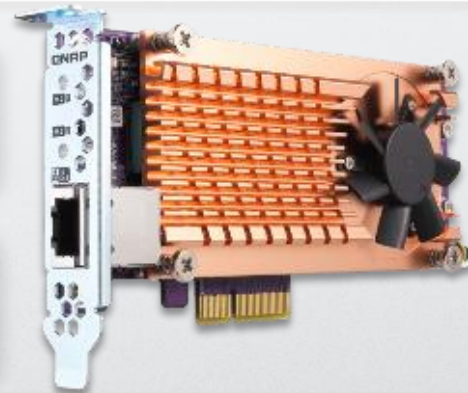


Add two M.2 SSDs with a QM2 PCIe adapter and use SSD cache to enhance IOPS and performance of processing small files



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

QM2-2P-244A
2 x M.2 NVMe PCIe 2.0



QM2-2S-10G1TA
2 x M.2 SATA 6Gb/s
1 x 10G/5G/2.5G/1G RJ45

QM2-2P10G1TA
2 x M.2 NVMe PCIe 2.0
1 x 10G/5G/2.5G/1G RJ45

Storage & Snapshots

Storage & Snapshots

Cache Acceleration

ON

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

0% 25% 50% 75% 100%

10 (mins) 9 8 7 6 5 4 3 2 1 0

Write Read

Name/Alias	Capacity	Status
DataVol1	245.44 GB	Ready
DataVol2	688.37 GB	Ready
DataVol3	688.37 GB	Ready
DataVol4	693.84 GB	Ready
DataVol5	688.37 GB	Ready
DataVol6	325.27 GB	Ready

Various accessories to mount the NAS, protect against SSD failure, or increase the NAS storage capacity

RAIL-B02

*Optional rail-kit that is compliant
with ANSI/EIA-RS-310-D.*



QDA-A2AR

*2 x 2.5-inch SATA 6Gb/s to 1 x 3.5-inch
SATA 6Gb/s hardware RAID 0/1 adapter*



TR & TL expansion enclosures

Flexibly use USB or multi-channel SATA to expand NAS storage space



TR-004U



TL-R1200C-RP

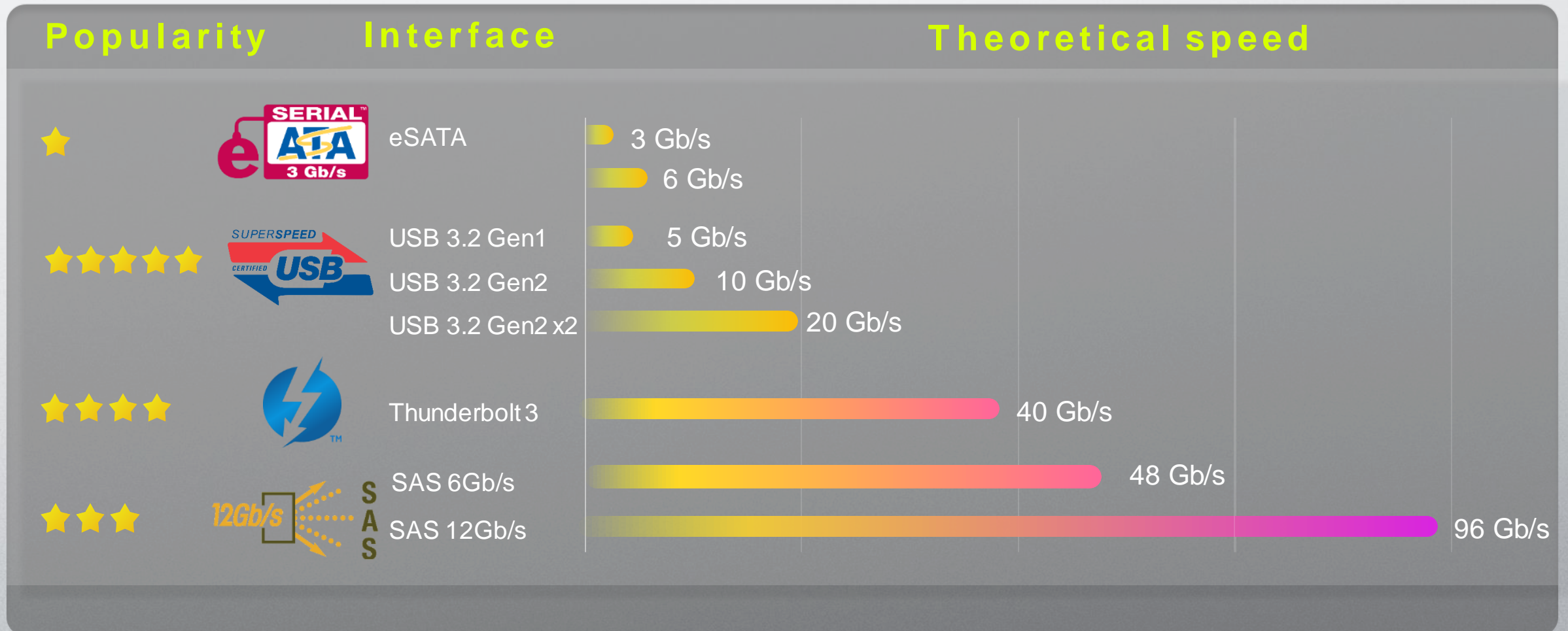


TL-R400S



TL-R1200S-RP

Follow the trend and choose a newer technology over the old eSATA



Economical and flexible QNAP expansion enclosures for multi-platform usage

QNAP TR RAID and TL JBOD enclosures have many advantages compared to the eSATA JBOD enclosures in the market for NAS capacity expansion.

- **Bigger capacity**
 - 4 & 12-bay choices
 - NAS can support up to two expansion enclosures
- **Higher speed**
 - USB 3.2 Gen 1 5Gb/s, USB 3.2 Gen 2 10Gb/s or up to 64Gb/s with multiple miniSAS SFF-8088 6Gb/s cables
- **Better compatibility: NAS or Windows/Ubuntu server applications**
 - 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-004U

TL-R1200C-RP

SFF-8088 multi-ch SATA interface



TL-R400S

TL-R1200S-RP

*TS-x53DU can be installed with an USB 3.2 Gen 2 PCIe expansion adapter for dual USB 3.2 Gen 2 10Gbps ports.
TS-x53DU's PCIe slot is PCIe 2.0 x2 = 8Gbps bandwidth

QNAP TR & TL enclosures support 2 modes on NAS

- TS-x53DU 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.

Mode 1: Expanding the NAS with a new volume



12-bay TL-R1200S-RP
12-bay TL-R1200C-RP
4-bay TL-R400S
4-bay TR-004U



TS-453DU



Mode 2: Work as a backup destination for snapshot replica



12-bay TL-R1200S-RP
12-bay TL-R1200C-RP
4-bay TL-R400S
4-bay TR-004U



4 / 8 / 12-bay Rackmount NAS Series

TS-X53DU



**Live
Demo**

QNAP

4 / 8 / 12-bay Rackmount NAS Series

TS-X53DU



Lowering TCO:
backup, sharing,
VM hosting and
more free features
in a single NAS.

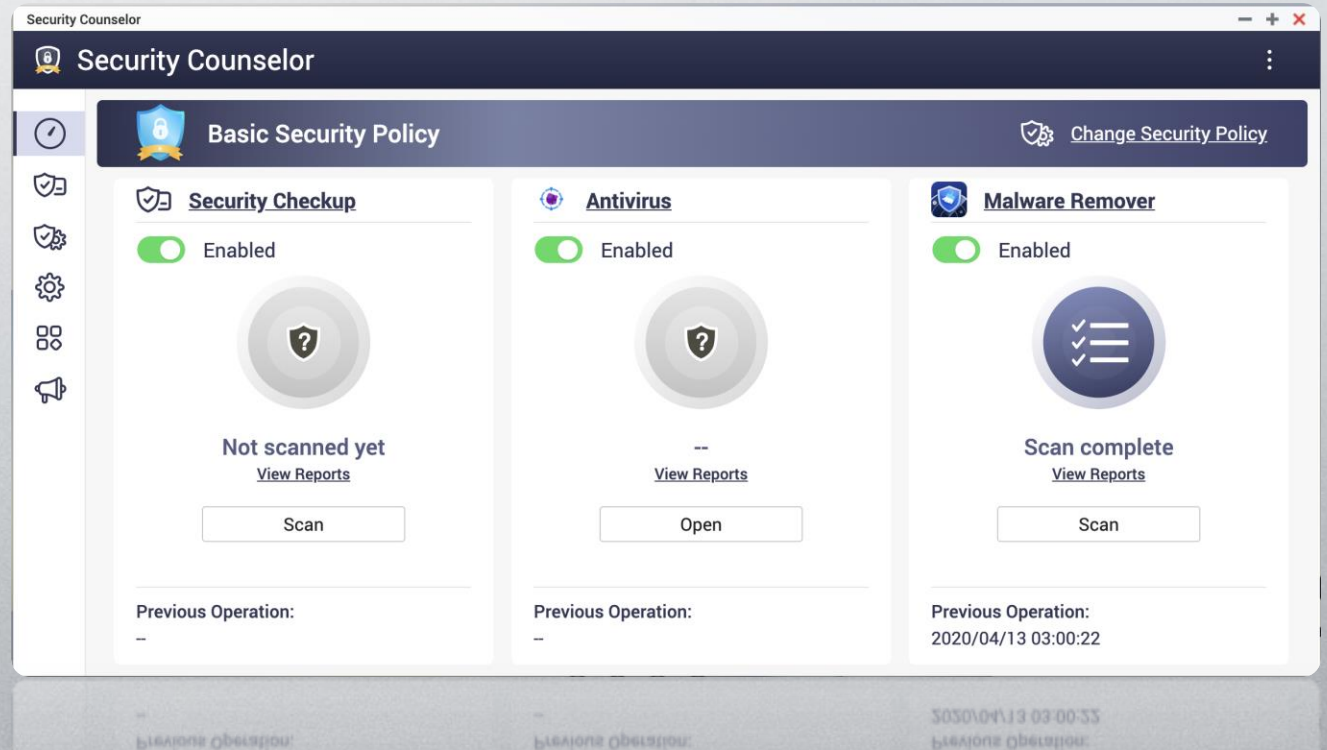


QNAP

QTS security circle with anti-virus and malware protection to guard business digital assets



NAS is the central place for storing files from various sources, which may carry viruses, or malwares. Regular use of Antivirus app scans and cleans up the infected files, so that the virus would not infect other connected computers or servers.

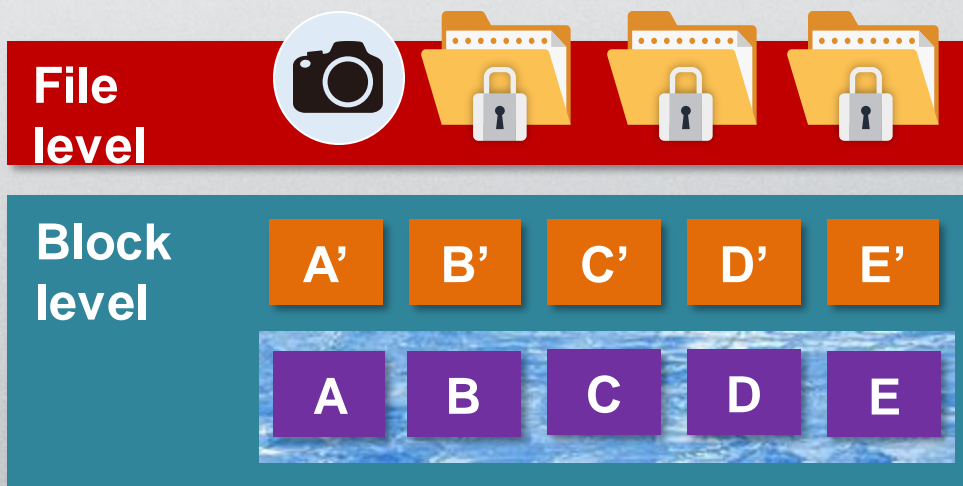


QNAP snapshot features for file recovery, keeping business in good hands

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 Number	Maximum Snapshot Number per Volume/LUN
4GB and more	1024	256

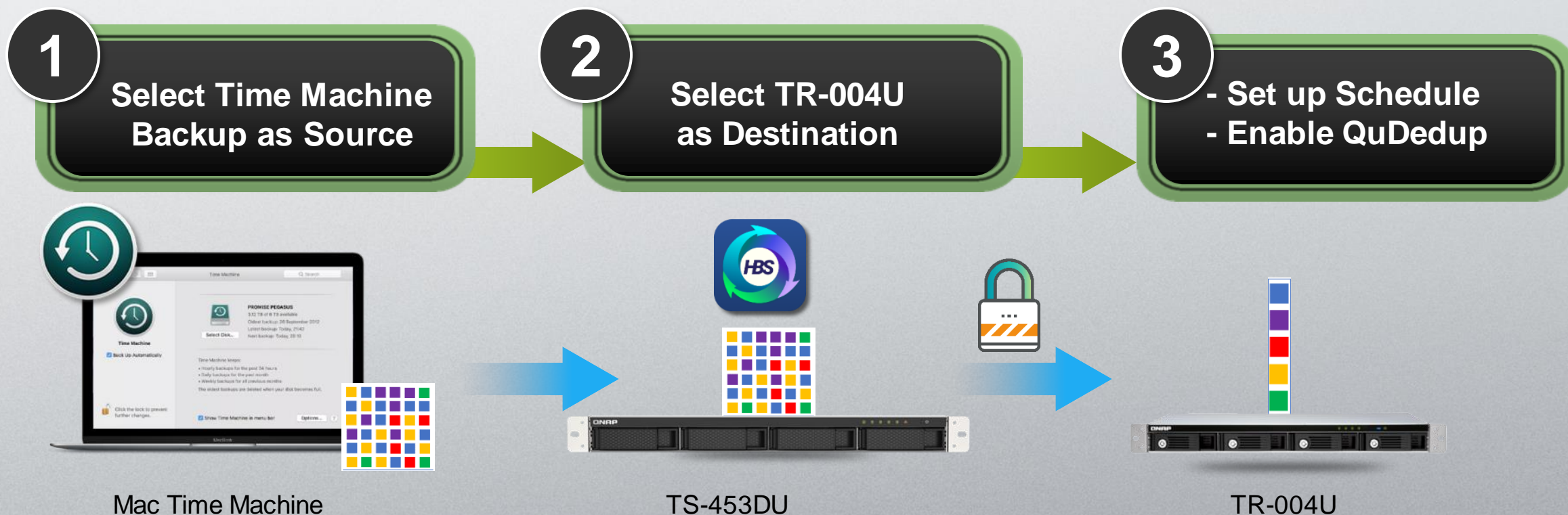
- Ransomware cannot overwrite snapshots which are stored out of volume.



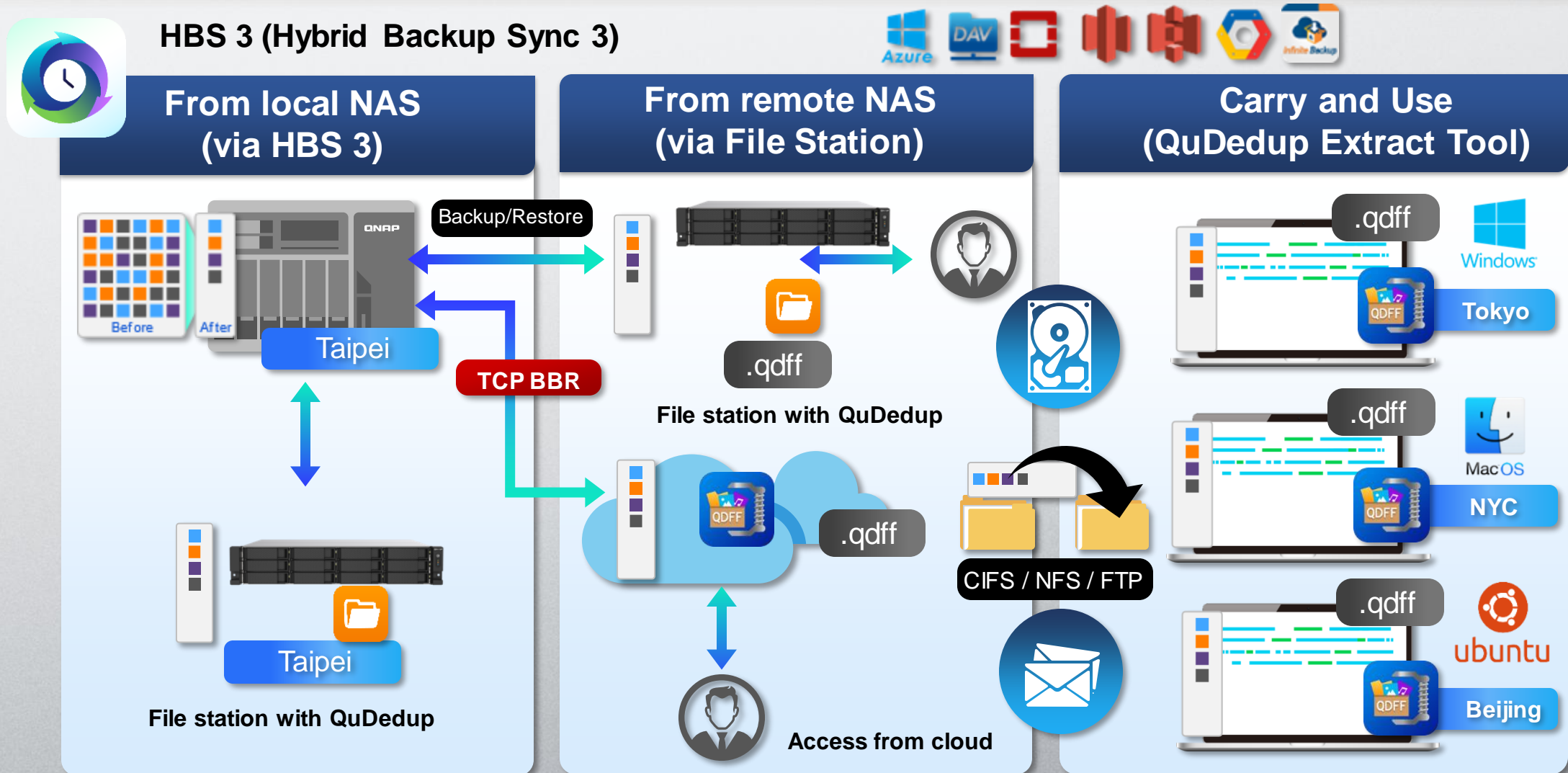
Free macOS Time Machine backup supporting multiple user. Save extra business expenses.

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-004U USB RAID DAS

Create the backup job:



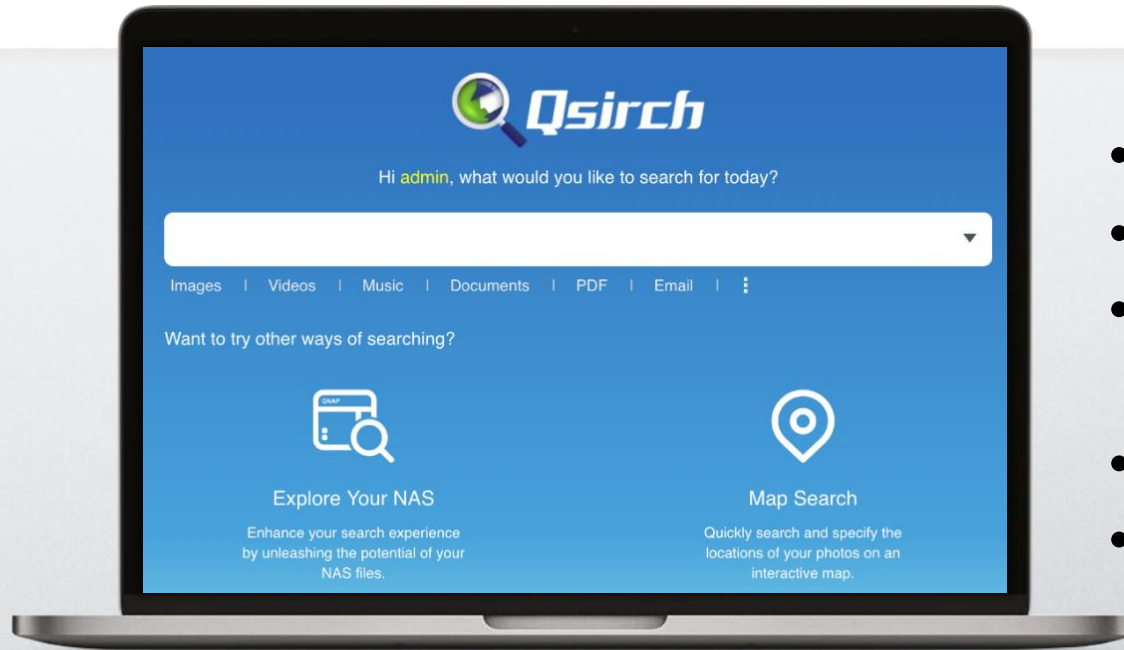
Backup data with deduplication for quick disaster recovery. TS-x53DU is your private cloud!



Hyper Data Protector NAS app with high-speed 2.5GbE to actively backup virtual machines for free



Qsirch makes it easy to search for files in various ways



- 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



Enhance efficiency with online collaboration

Note taking

Josh's notes > Default Section
QTS 4.4.1

Backup Data Can Be Restored in Different Places and Taken Anywhere

The diagram illustrates three methods for restoring backup data:

- Restore via HBS:** Shows a laptop in Taipei connected to a server via TCP BBR.
- Access from remote:** Shows a laptop in Taipei connected to a remote NAS via .qdf files, with access from cloud storage.
- Carry and use:** Shows a laptop in Taipei connected to a server via TCP BBR, with access from remote NAS and cloud storage.

Locations shown: Taipei, Tokyo, New York, Beijing.

Image editing

Notes Station 3

Backup Data Can Be Restored in Different Places and Taken Anywhere

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Locations shown: Taipei, Tokyo, New York, Beijing.

QubeDUP Extract Tool



Link



Image



Table



Rotate/
Flip



Pixelation



Cut



Chrome
extension



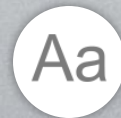
File



YouTube



Check list



Text



Shapes



Brush

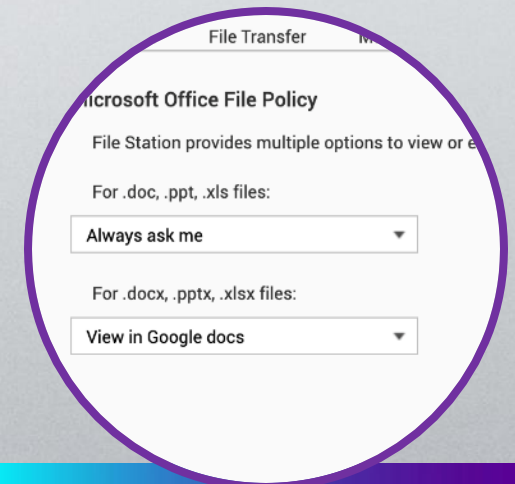


Mobile
Apps

Make NAS your team workspace central and easily collaborate with File Station



	Edit with Office Online	View in Google Docs	Open with Chrome Extension
Requirement	CloudLink needs to be enabled	CloudLink needs to be enabled	Use Chrome with extension "Office Editing for Docs, Sheets & Slides" to open
Supported formats	.docx, .pptx, .xlsx	.doc, .ppt, .xls .docx, .pptx, .xlsx	.doc, .ppt, .xls .docx, .pptx, .xlsx
Capabilities	<ul style="list-style-type: none">File collaborationAuto save to NAS in real time	<ul style="list-style-type: none">Document previewConvert to Google docs for editing & saving in your Google Drive	<ul style="list-style-type: none">Document previewConvert to Google docs for editing & saving in your Google Drive



In File Station, go to Settings > Documents to set the default file opening policy

QuMagie smart photo albums and AI classification for different subjects

Classify photos into 400 different themes using Subject Detection : People, tags, dates, events, etc.



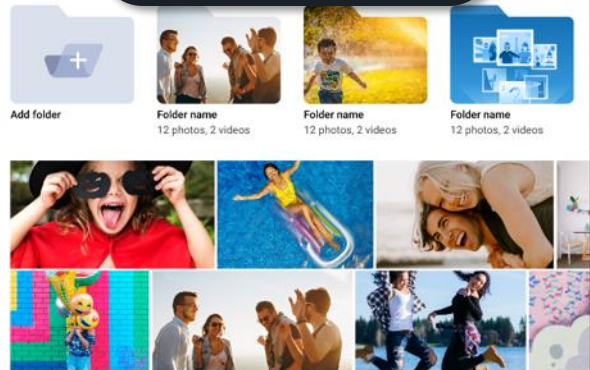
- Organize photos with similar faces using facial recognition.
- Helps company to quickly locate and share objects or projects.

Album view

Albums



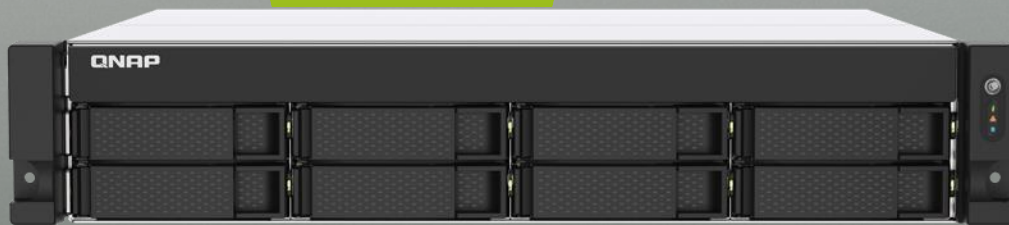
Folder view



TS-1253DU-RP

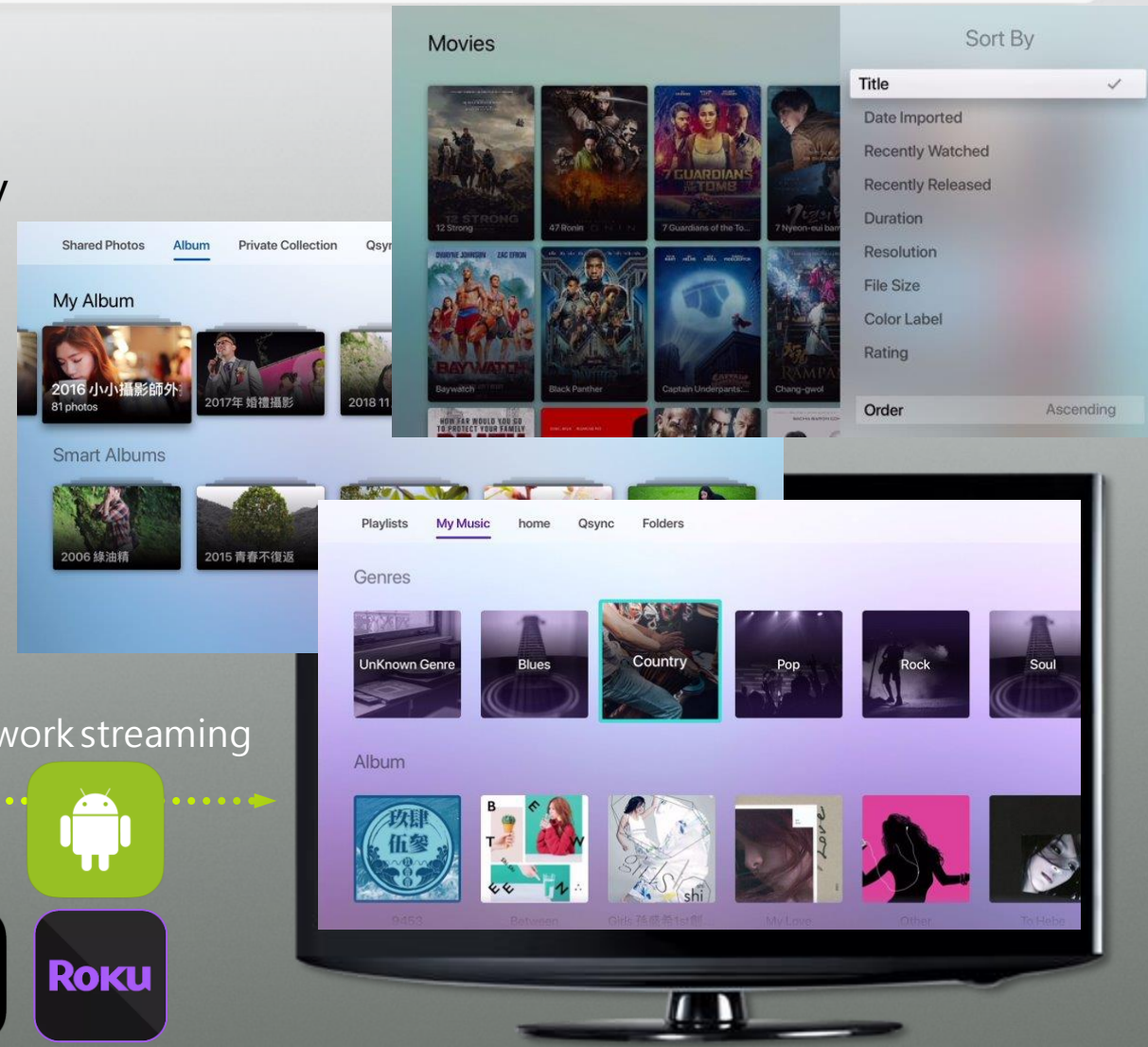
Stream to Smart TV, Apple TV, Chromecast, Fire TV & Roku

- Use the remote control of your media player to navigate
- Categorization and multiple sorting methods to enjoy your media content
- Filters and keyword searches to locate a file quickly



TS-853DU-RP

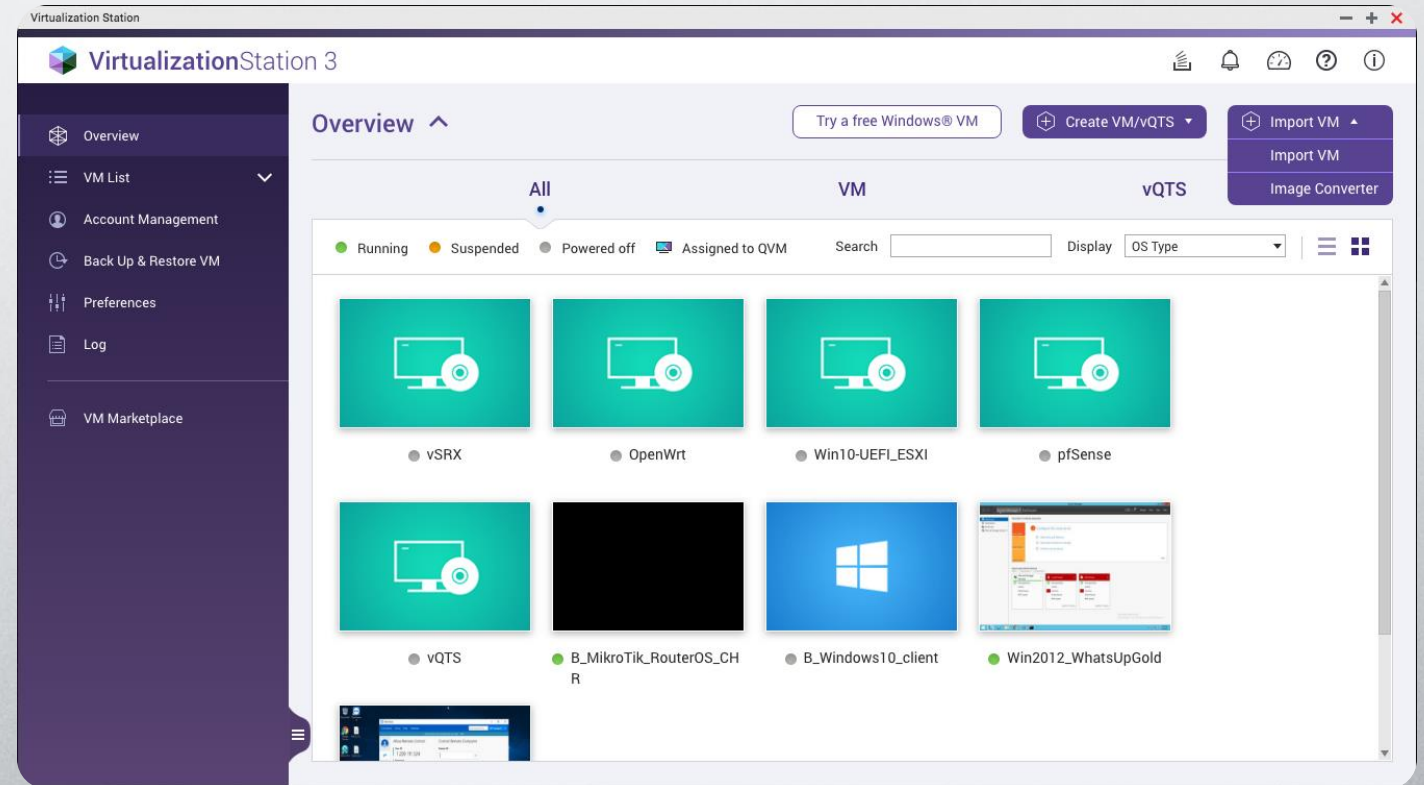
DLNA & network streaming



Use Virtualization Station to run light-weight guest OS and save from buying another small server

With Virtualization Station, you can create multiple virtual machines to run various operating systems such as Windows, Linux, UNIX and Android on a QNAP NAS.

- Operate VM via **remote desktop** or **HDMI output** with a USB keyboard and a mouse
- VM Import/Export
- VM backup and snapshot
- Virtual switch: support multiple network modes
- Support USB device connection



Go beyond your creativity with Container Station for a x86 Quad-core NAS with up to 8GB RAM

AI, IoT, Commonly-used Container Recommendation

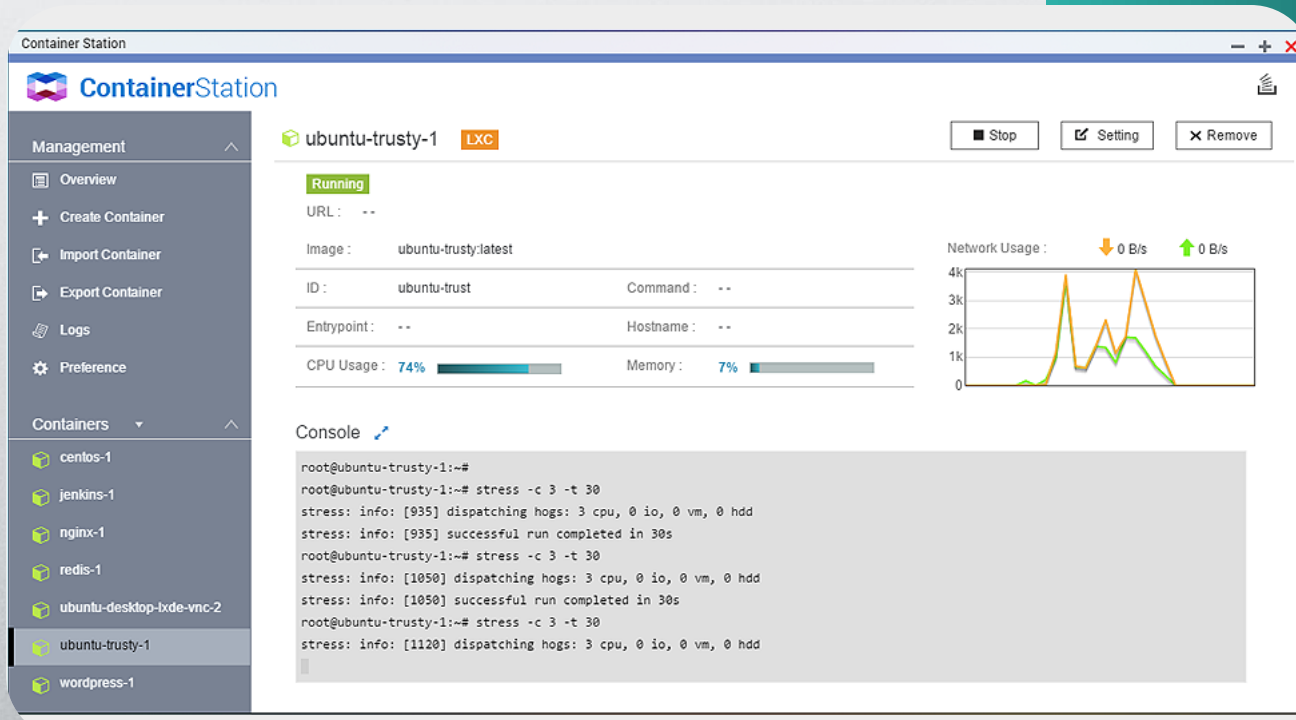
- One-click installation wizard helps you quickly setup
- Supports Docker Compose YAML format to create applications

Easily import/export containers






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

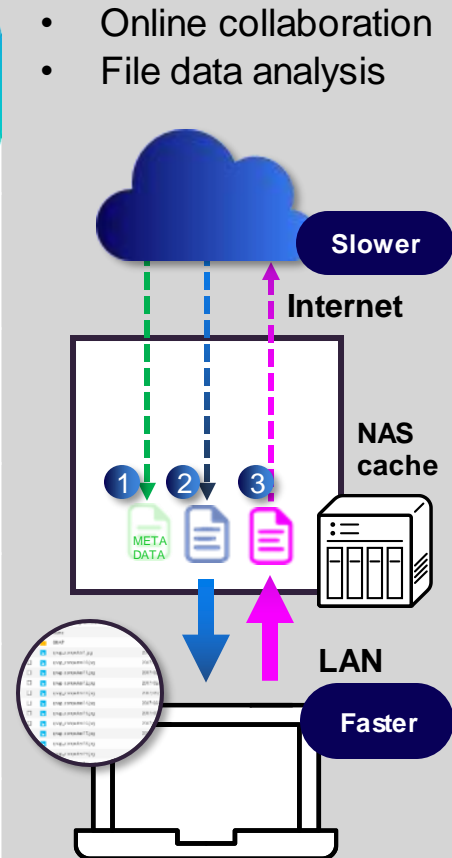
Built-in Docker Hub Marketplace

- Easily downloadable tools

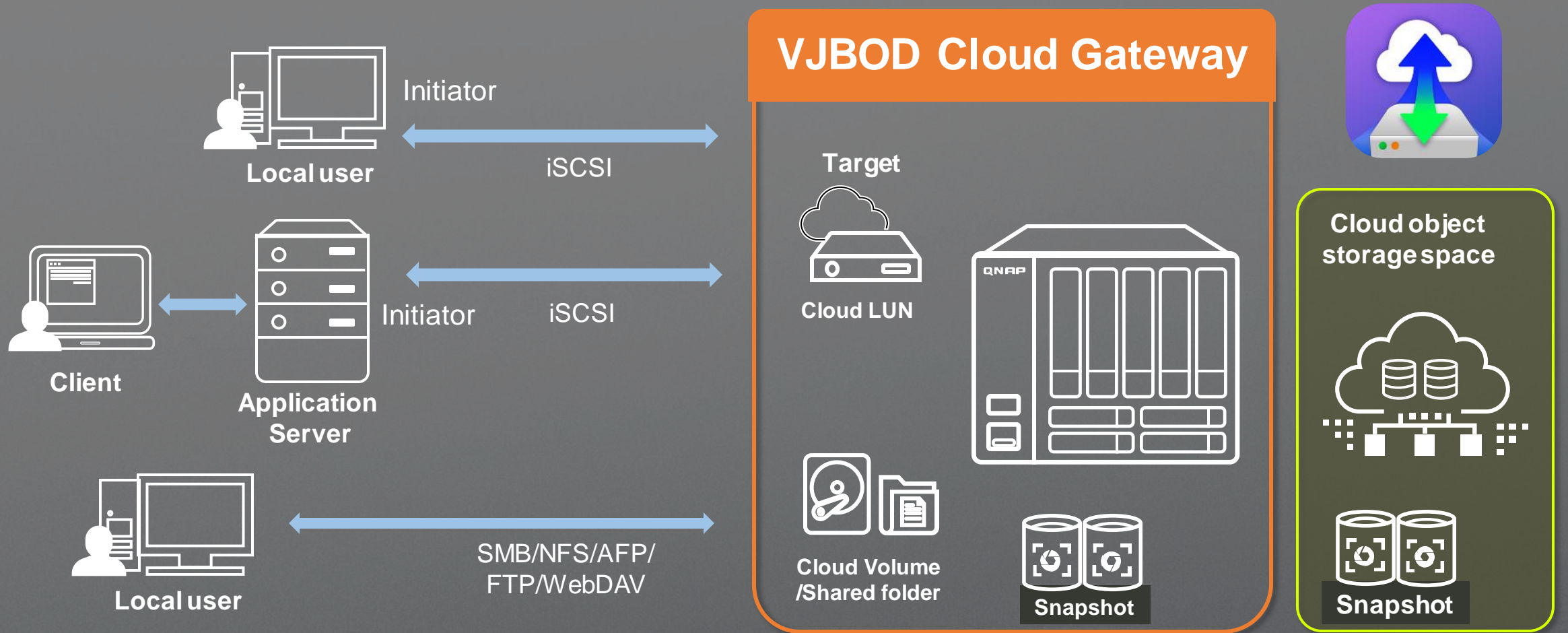


HybridMount provides two modes for file-based cloud storage gateway

	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    



Enterprise LUN backup: VJBOD Cloud block-based gateway



Use Virtual JBOD to expand NAS capacity via 2.5GbE iSCSI protocol

Max. 8 VJBOD connections

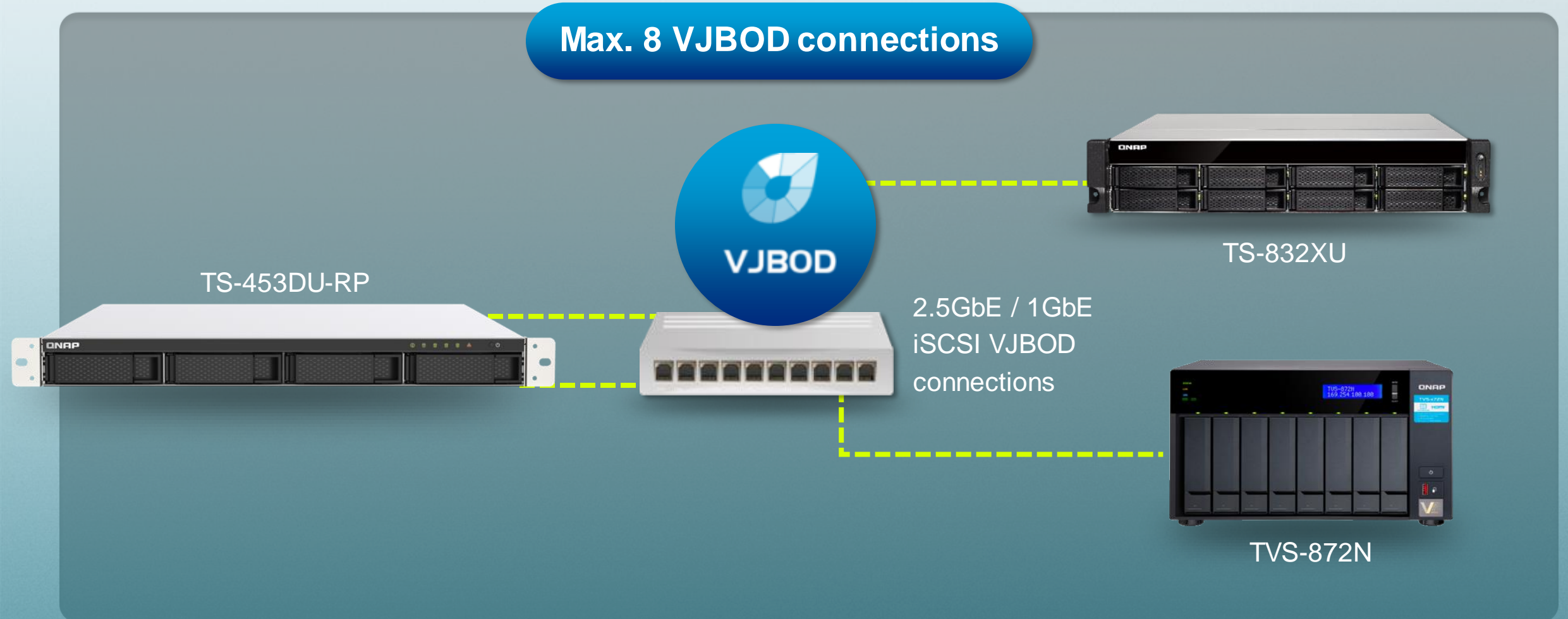
TS-453DU-RP



TS-832XU

2.5GbE / 1GbE
iSCSI VJBOD
connections

TVS-872N



Protect your business with 24 x 7 intelligent surveillance solution and centralized management system



QVR Pro

5,000+ compatible IP cameras

8 free camera channels

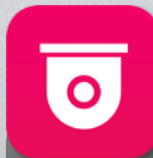
Expandable channels via licenses

TS-1253DU-RP: max. 48 ch. recommended

TS-853DU-RP : max. 36 ch. recommended

TS-453DU-RP & TS-453DU: max. 24 ch. recommended

QUSBCam2 for webcam recording



Surveillance Station

2 free channels and can be upgraded to max 40 via licenses



QVR Pro Client



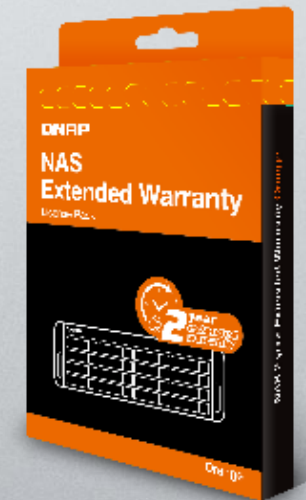
Monitor feeds with iOS & Android mobile devices

NAS HDMI output with USB mouse / keyboard control

2.5GbE and processor upgrades for the business multi-user onsite and work-from-home environments

NAS models	NEW ARRIVAL	QNAP TS-x53DU	QNAP TS-x53BU
Ordering SKUs		TS-1253DU-RP-4G TS-853DU-RP-4G TS-453DU-RP-4G, TS-453DU-4G	TS-1253BU-RP-4G, TS-1253BU-4G TS-853BU-RP-4G, TS-853BU-4G TS-453BU-RP-4G, TS-453BU-4G
Processor		Intel x86 Celeron J4125 quad-core 2.0 GHz , burst up to 2.7 GHz	Intel x86 Celeron J3455 quad-core 1.5 GHz, burst up to 2.3 GHz
Memory		2 x DDR4-2400 SODIMM slots for up to 8GB (2 x 4GB)	2 x DDR3L-1866 SODIMM slots for up to 8GB (2 x 4GB)
LAN		2 x 2.5GbE	2 x 1GbE
HDMI output		4K HDMI v1.4b 30Hz	
Graphics unit		Intel UHD Graphics 600	Intel HD Graphics 500
PCIe slot		1 x PCIe 2.0 x2	
USB 3.2 Gen1 port		2	4
USB 2.0 port		2	0

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