



A NAS guide for Final Cut Pro users:

Enhance your video editing with Thunderbolt 3 and 10GbE connectivity



Live Broadcast Date:
APR 24, 2018

Live Broadcast Date:
6 p.m. (UTC+8)

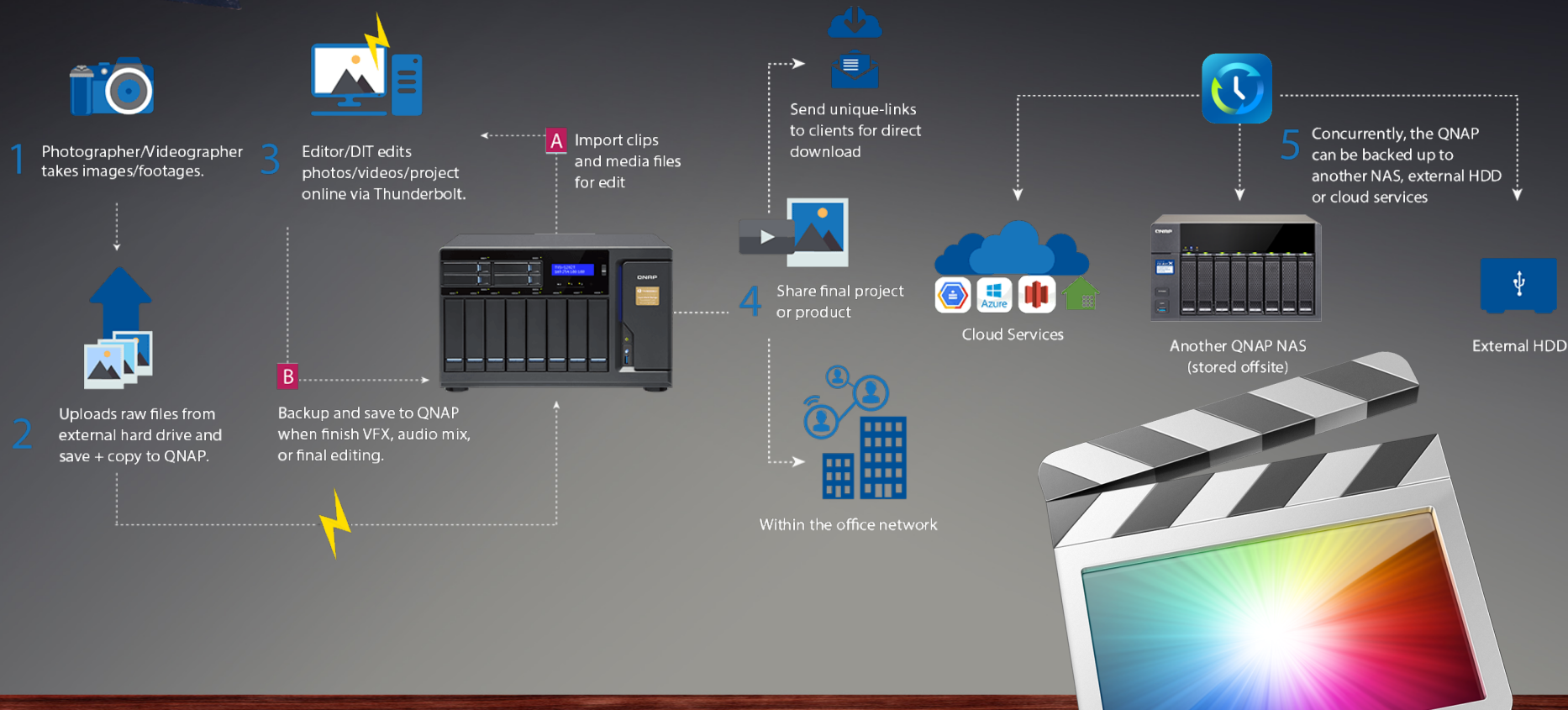




An In-depth Analysis of QNAP Thunderbolt3 / 10GbE NAS the Best Solution for Final Cut Pro X Video Editing



The post-production workflow of Final Cut Pro + QNAP NAS



QNAP

The best combination for video editing



QNAP 10G/Thunderbolt NAS



Final Cut Pro X



Required storage in video editing flow



4K~8K material (CFast/SSD)



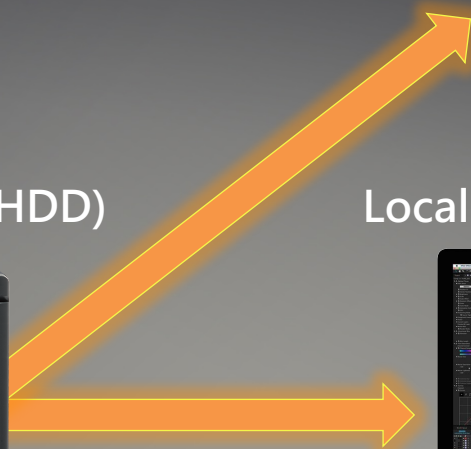
Archive (BluRay)



Shared storage: NAS(SSD/HDD)



Local Storage of desktop (NVMe)



Storage Solution Comparison



	Mac Local Storage	External / DAS	SAN	NAS	
Storage capacity	small	medium	large	large	
Protection	N/A	Limited	Supported	Supported	
File Sharing	N/A	N/A	Limited	Supported	
Remote Replication	N/A	N/A	limited model	Supported (another NAS or Cloud)	
Access speed	Fastest (NVMe)	Fast	Fast	Fast (Thunderbolt / 10G / 40G)	
FCPX Library	Supported	Supported	Limited	Supported (NFS/SMB3)	

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QNAP NAS is the best storage with FCPX



The interface that is available with all Mac:

10~20G Thunderbolt network, Plug & Play



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Thunderbolt port: convenient and fast

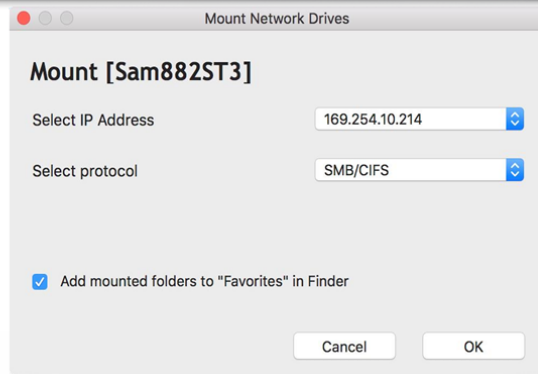


For Mac users, it's easy and efficient!

Plug & Play

Qfinder Pro auto scan

Mount and adjust
parameters



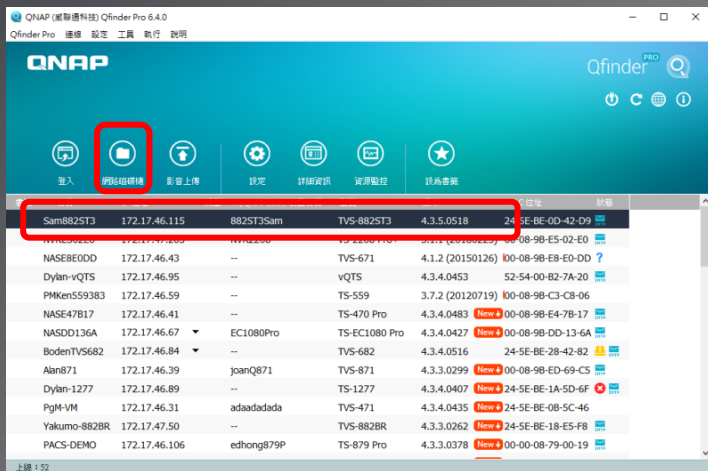
Auto detect/shared folder mount tool makes it easier



Download Qfinder Pro utility

Search your NAS:

- (1) Click on the list to open the web interface for system configuration.
- (2) Easily mount shared folders



Final Cut Pro X starts to support users to directly create libraries in shared folders on a NAS.

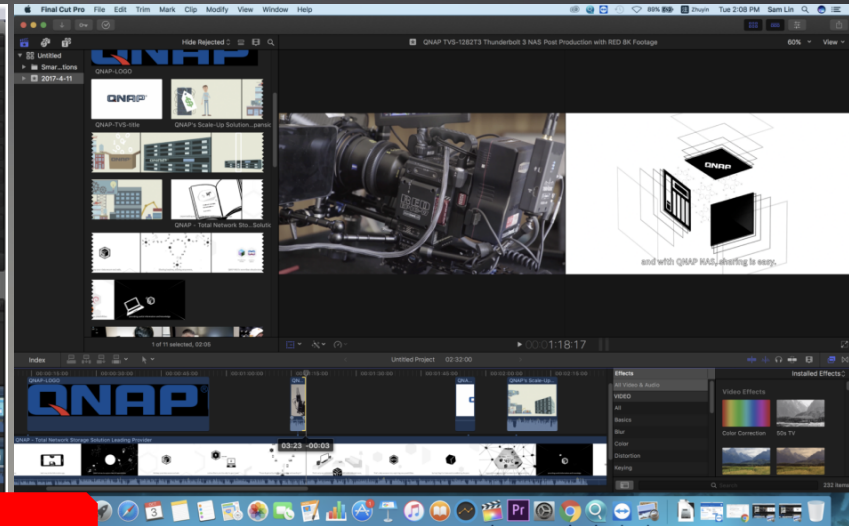
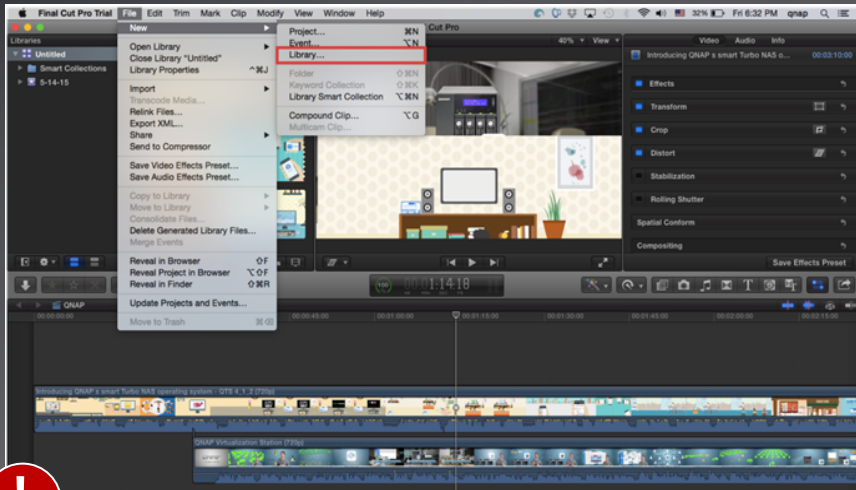
- (1) FCPX 10.3 or newer
- (2) Mount with SMB 3 protocol



QNAP NAS supports FCPX Library



- Create FCPX Library on shared storage directly.
- Store material files from your Mac to the NAS.



Attention: must mount as NFS or SMB 3 protocol.

Amazing performance: Thunderbolt 3



Mac : high speed transmission

Environment:

- Client: MacBook Pro
- Connection: Thunderbolt 3
- NAS: TVS-1282T3 (i5)

Equivalent to built-in 10~20Gb high performance NIC!

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2018 iMac Pro built-in 10Gb NIC

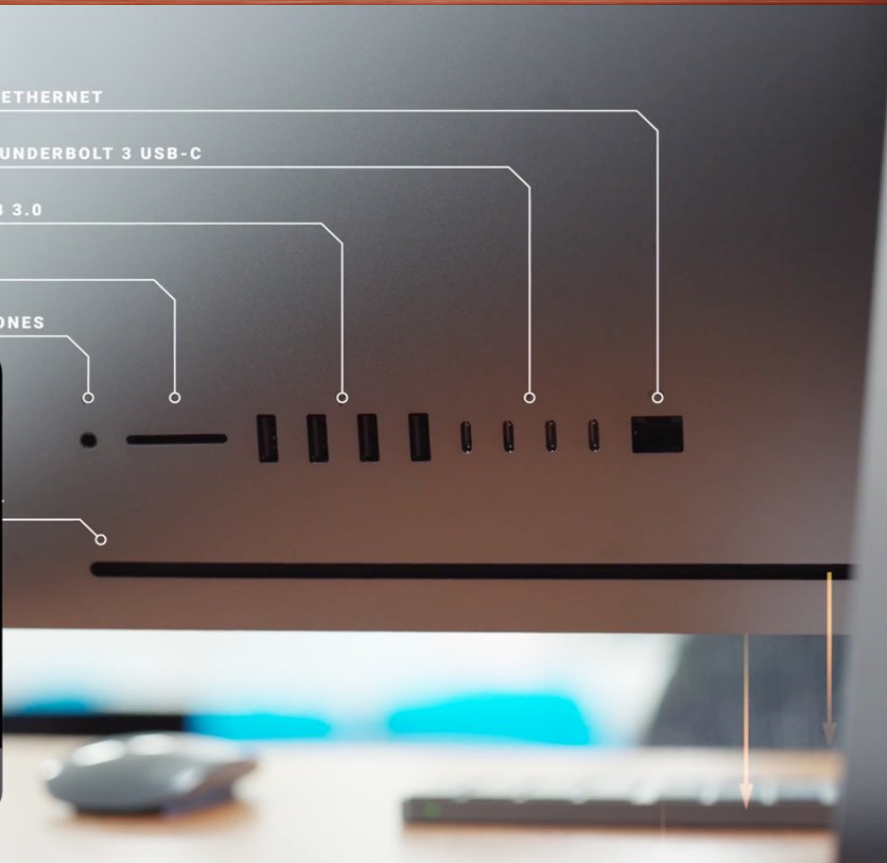
10 GIGABIT ETHERNET

4X // THUNDERBOLT 3 USB-C

4X // USB 3.0

SD CARD

HEADPHONES



QNAP

Get full 10G performance with QNAP 10Gb switch



Mac : 10Gb performance

With QNAP 10Gb switch,
multiple editors can have
high speed access to NAS
at the same time.



10G high speed transmission



How to store FCPX libraries on your NAS





The image illustrates a QNAP storage solution in a professional environment. On the left, a laptop displays the QNAP Cylindr web interface, showing a table of files and folders. In the center, a desktop monitor displays a video editing software interface, likely Final Cut Pro, showing a motorcycle scene. On the right, a QNAP TS-453A NAS unit is shown. The background is a blurred office scene with people working, and a network diagram is overlaid on the left side.



QNAP

QNAP recommended – Professional Tower model



TVS-882ST3

2x Thunderbolt 3 + 2x 10GbE



Compact, suitable to carry out

TVS-1282T3

4x Thunderbolt 3 + 2x 10GbE



The best companion of studio

QNAP

QNAP recommended – Rackmount model



TVS-1582TU

4x Thunderbolt 3 + 2x 10GbE

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Construct the High Speed Editing Environment



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Why you need the higher bandwidth?



ALEXA SXT

The best just got better

Surprise new ALEXA from ARRI

lackmagicdesign

4K
Cinematic Resolution



lackmagic Production Camera 4K



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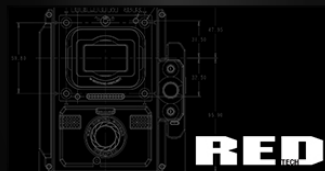
WEAPON 8K S35

"I see richer, cleaner, smoother blacks, deep rich colors and low noise at higher ISOs. This is my camera of choice and there is nothing else like it."

– Mark Toia, Director and Cinematographer



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Higher quality means larger file sizes



Format	bit rate	Size
HD 1080P (ProRes 422)	220 Mb/s	90GB/hr
4K (ProRes 422)	880 Mb/s	400GB/hr
BlackMagic 4K	1.4 Gb/s	630GB/hr
Canon 4K	2.3 Gb/s	1TB/hr
Phantom Flex 4K	2.3 Gb/s	1TB/hr
Red 6K	2.4 Gb/s	1.1TB/hr
ARRI Alexa 6K	6.6 Gb/s	3TB/hr

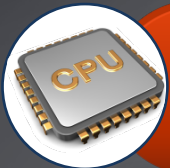
High speed transmission needs more external help



SSD ?
HDD?



Your SSD fast enough?



CPU ?
Cable?



Is your high speed connection fully utilized?



RAID
configuration?



Is your storage pool flexible and secure enough to ingest massive data?

Storage configurations can greatly affect efficiency

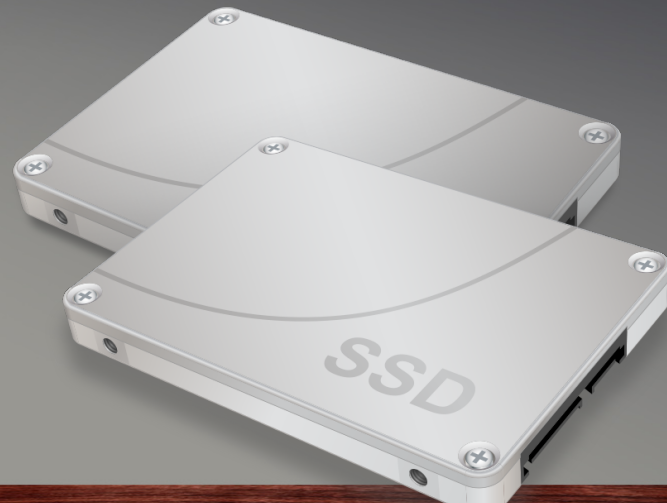


Disk speed (Unit speed)

- MLC/SLC SSD (highest performance but expensive) => **500~600 MB/s**
- Enterprise HDD => **250MB/s**
- New NAS HDD (like IronWolf.....etc) => **220MB/s**
- TLC SSD (popular and commonly) => **500MB/s?** => **Sustained is 120MB/s when cache full**
- Regular HDD => **150MB/s**

RAID configuration

- RAID 0 (fastest but without data protection)
- RAID 10
- RAID 5
- RAID 6
- RAID 50 or 60



Qtier 2.0 - make the read/write faster



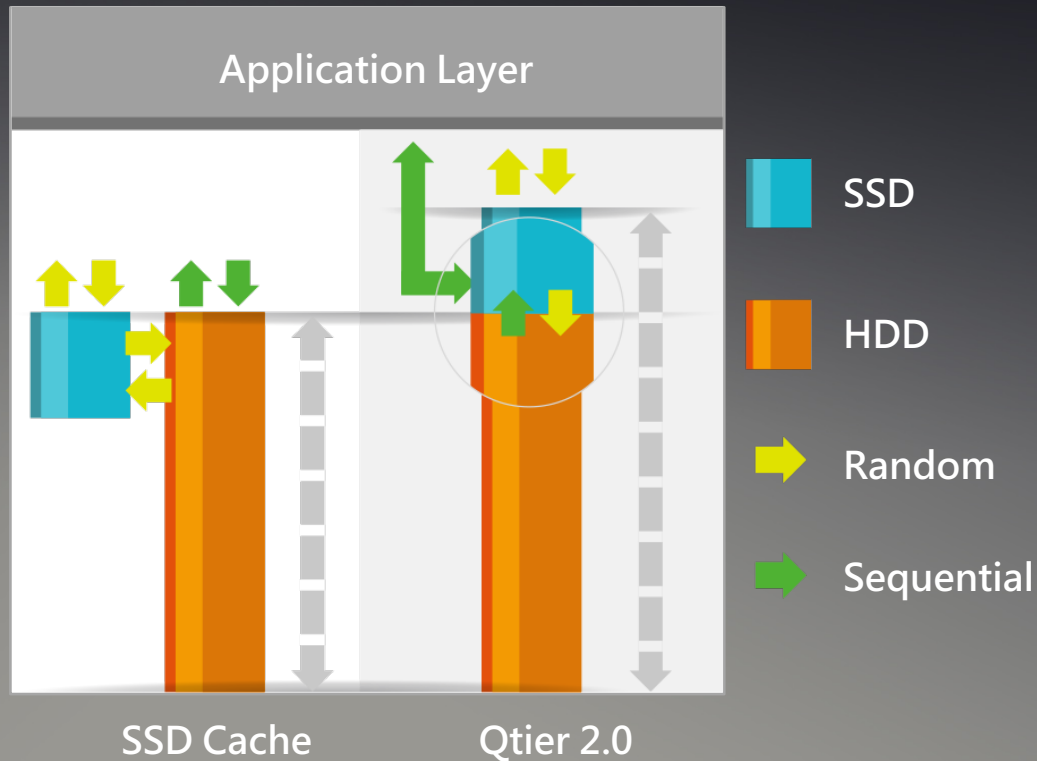
SSD Cache

- Cannot be used to store data
- Fixed bypass options
 - > For short term performance boost

Qtier 2.0

- The SSD tier can keep data
- **IO Aware** and **Tiering On Demand**
 - > For both short and long term performance improvements

Video Editing recommended

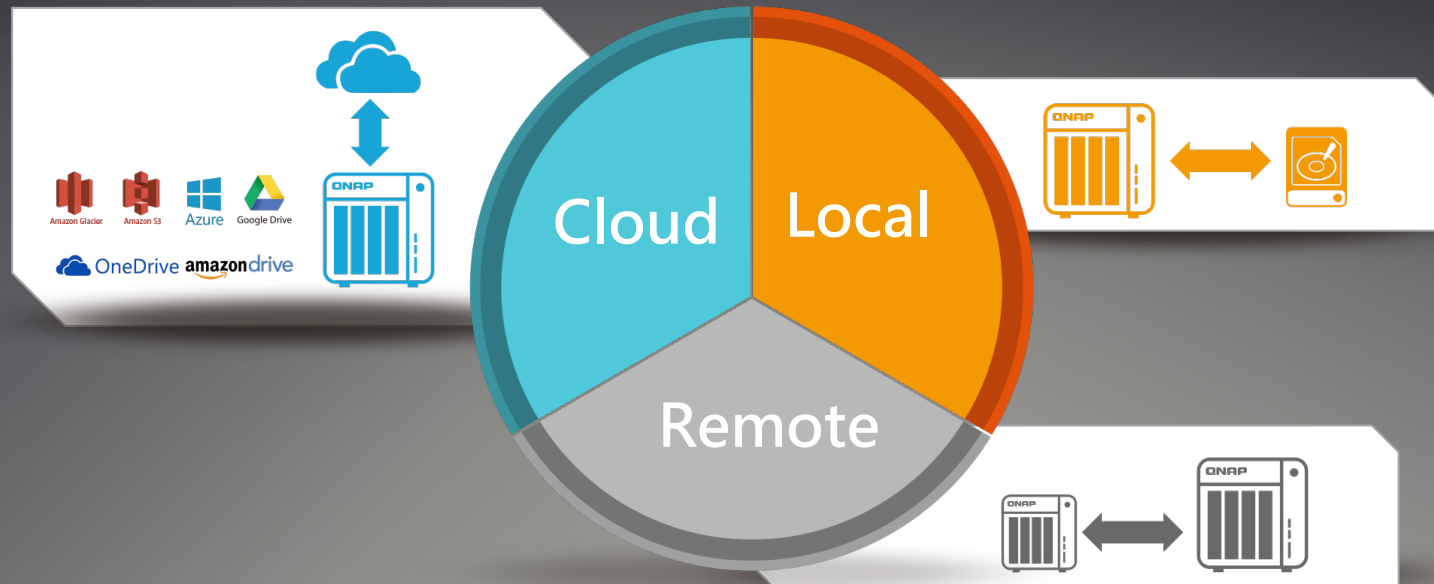


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Multi-layer protection secures your digital assets



Hybrid Backup Sync

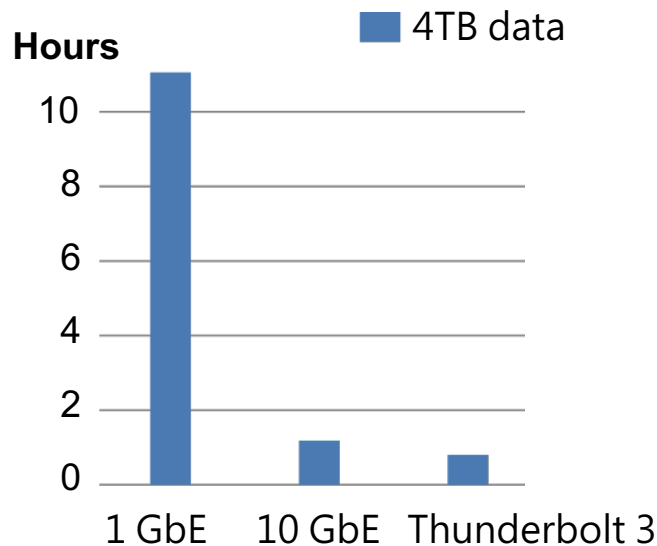
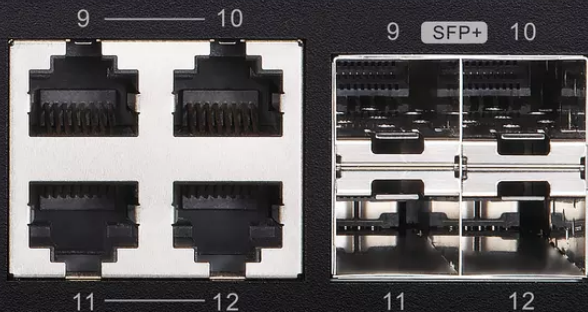


Strengthen work efficiency because time is money



- When you need to process 4TB Raw Data, it takes 11 hours via 1GbE.
- Use 10GbE / Thunderbolt for the same data, only 1 hour is needed.
- When most QNAP products are ready for 10GbE networks in 2018, is your infrastructure ready for it?

QSW-1208-8C



Summary



"We have been able to condense a rather eclectic collection of different hard drives and storage systems into one single unit. This makes data-wrangling a whole lot easier."

- Nick Rains

Since adopting the TVS-1282T3, Nick Rains has reported over 50% increases in his productivity and work efficiency. This is in no doubt due to being able to deliver 4K video to Final Cut Pro in real time combined with being able to consolidate his storage library to one device.

QNAP



QNAP NAS

the Best Solution for Video Editing



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