



Data Storage, Security & Performance



QSAN XCubeNAS Series

Breaking Through the I/O bottleneck with
Thunderbolt™ 3 Connectivity



The Next Generation Thunderbolt™ 3 Solution to QSAN XCubeNAS

QSAN is proud to be providing the latest Thunderbolt™ 3 adapter card (XN-TB302) as an option for our XCubeNAS series NAS. You can create lightning throughput and reliable connectivity between QSAN NAS storage systems and a work station, MacBook or iMac directly with the QSAN Thunderbolt™ 3 solution.

In addition to the lightning throughput, the Thunderbolt™ 3 ports can directly be attached to the QSAN XCubeNAS series NAS products for expanding client's data storage capacity or hook up as an external device for fast data backup to the QSAN NAS. Thunderbolt™ 3 is not only a reliable data transmission tunnel but also provides more than a 100% increase in bandwidth than the 2nd generation.

Theoretically the Thunderbolt™ 3 solution is up to eight times faster than USB 3.0. So a QSAN NAS with a Thunderbolt™ 3 adapter is an ideal solution for throughput demanding applications such as video editing and production, music production, digital photography editing, high speed external device data backup to NAS...etc.

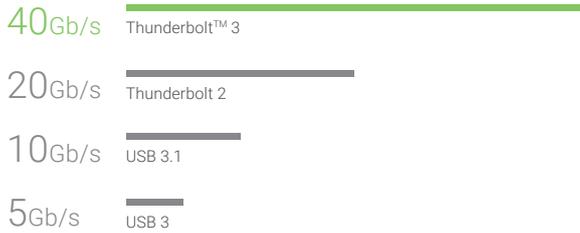


Thunderbolt™ 3

XCubeNAS Thunderbolt™ 3 Applications



High-Performance : Breaking The I/O Throughput

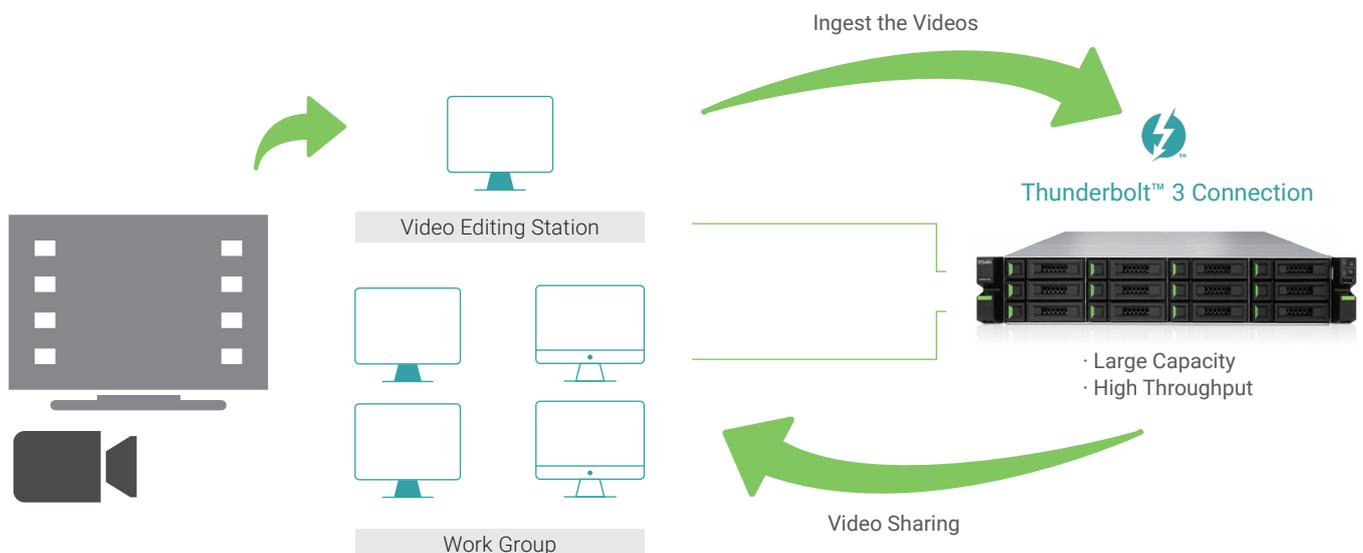


With next generation Thunderbolt™ 3 technology, you can connect a Thunderbolt™ 3 device to an XCubeNAS directly with a 40Gb/s data transmission rate. XCubeNAS with Thunderbolt™ 3 is capable of transferring high resolution video smoothly and handling relative workloads with ease. Copy a 4.7GB DVD video will on average take under a minute.

Type	CD 700MB	DVD 4.7GB	Blue-ray 25GB
Thunderbolt™ 3 (40Gb/s)	0.14	0.95	5
Thunderbolt 2 (20Gb/s)	0.28	1.88	10
Thunderbolt (10Gb/s)	0.56	3.76	20
USB 3.1 (10 Gb/s)	0.56	3.76	20
USB 3.0 (5 Gb/s)	1.12	7.52	40
FireWire 800 (800Mb/s)	7	47	250
USB 2.0 (480Mb/s)	11.66	78.33	416.66

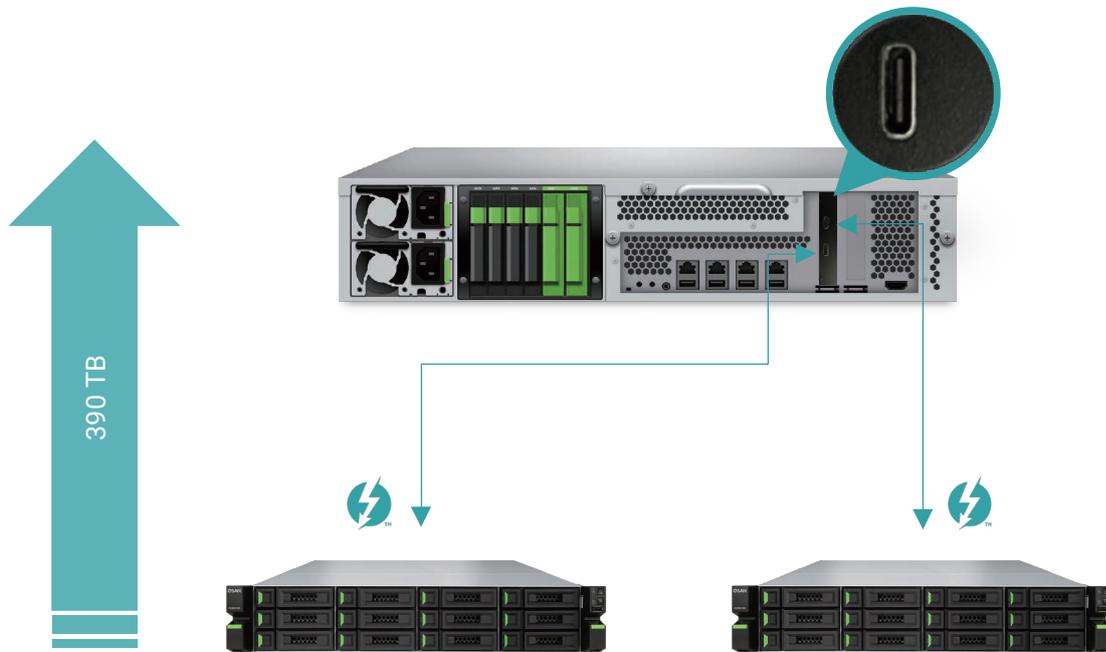
High-Efficient : 4K Video Editing

The XCubeNAS fulfils storage and video editing needs with high-speed Thunderbolt™ 3. Digital videos can be quickly stored and edited on the XCubeNAS via a stable transmission tunnel without dropping a single frame. So you can are able to achieve blazingly fast transfer speeds to your workstation at up to 40 Gb/s speed with a single cable connection. That's more than enough bandwidth to handle the highest resolution video formats including Ultra HD and 4K, or even the highly demanding stereoscopic 3D files.



High Capacity : Scale-Up Solution

The XCubeNAS provides a massive scale-up capability by connecting other XCubeNAS with the thunderbolt technology. It can support up to whopping 54 disk drives or up to 390 TB of raw storage space by using 10TB HDD drives.



Maximum Raw Storage Capacity

NAS Models	Enclosure Front Factor	Max. No. of Expansion Units	Max. No. of Hard Drives	Max. Raw Capacity	
				LFF 8TB SFF 2TB(SATA) SFF 1TB(PCIe)	LFF 10TB SFF 2TB(SATA) SFF 1TB(PCIe)
XN8012R XN7012R XN5012R	Rackmount 2U12 (LFF 12 + SFF 6)	2	18+18*2=54	318 TB	390 TB
XN8008R XN7008R XN5008R	Rackmount 2U8 (LFF 8 + SFF 6)	2	14+14*2=42	222 TB	270 TB
XN 7008T XN 5008T	Tower 8+1 bay (LFF 8 + SFF 1)	2	9+9*2=27	198 TB	246 TB
XN7006T XN5006T	Tower 6+1 bay (LFF 6 + SFF 1)	2	7+7*2=21	150 TB	186 TB
XN7004R XN5004R	Rackmount 1U4 (LFF 4 + SFF 2)	2	6+6*2=18	108 TB	132 TB
XN 7004T XN 5004T	Tower 4+1 bay (LFF 4 + SFF 1)	2	5+5*2=15	102 TB	126 TB

Highly Expandability : Enlarge Your MAC's Capacity

With storage in modern computers at a premium, running out of storage seems like an every day issue. With the XCubeNAS when you are out of storage space, simply connect it to your MAC via the Thunderbolt port. It will then provide extra space in a secure and high performance environment. Moreover, Choosing stable Thunderbolt interface to share your MAC's data to another workstation by separating the XCubeNAS from your MAC and attach to the workstation. Using the Thunderbolt connectivity also allows flexibility. To share work between desktops, simply disconnect the cable from your machine, and attach it to another.



Thunderbolt™ 3 Adapter Card Specification



Hardware Specification

Thunderbolt™ 3 Adapter

Bandwidth

- 40Gb/s

Interface

- PCI Express 3.0

Port

- Dual Ports

Size (L*W)

- 1040*688 mm

PD Controller

Brand

- Texas Instruments

Model

- TPS65983

Connector

Certification

- Intel approval:
UT121113-116B2-7H

Module

- Type-C

Compatibility

USB

- Type-C, 3.1, 3.0, 2.0

Power Delivery

Internal

- 15W: 5V / 3A

External

- 36W: 12V / 3A

Equipment Specifications

Temperature

- Operating: 0°C to 65°C
(32°F to 149°F)
- Junction: 110°C (230°F)

Agency Approvals - EMC (Class B)

US

- FCC Part 15 Class B

Europe

- EN55032
- EN55024
- EN61000-3-2
- EN61000-3-3
- CE EMC DIRECTIVE 2014/30/EU

Asia

- RCM: C-Tick
- KCC: Class B
- AS/NZS CISPR22:2009+A1:2010
- BSMI CNS 13438
- VCCI: Class B
V-3:2015.04+V-4:2012.04

Host System Supported

XCubeNAS Series

Rackmount

- XN8008R / XN8012R
- XN7004R / XN7008R / XN7012R
- XN5004R / XN5008R / XN5012R

Tower

- XN8004T / XN8006T / XN8008T
- XN7004T / XN7006T / XN7008T
- XN5004T / XN5006T / XN5008T

XCubeNAS Software

System

OS

- QSM 3.0

Utility

- XFinder

File System

- ZFS

Support Protocol

- AFP
- NFS
- CIFS
- FTP
- SFTP
- WebDAV

Thunderbolt™ 3 Applications

Media Manage

- Media backup
- 4K-2K video editing

Direct Attach Storage

- File sharing
- Data backup
- External device backup

Expansion

- NAS capacity expansion

Order and Support

Information

Order Number

- XN-TB302

Support

- Tel: +886-2-77202118
- Mail: support@qsan.com
- Skype: qsan.support

Thunderbolt™ NAS

Thunderbolt™ Solution Ready

Intel® Core™ i5 2.7GHz Quad-Core Processor
RAM: 8GB DDR4 SO-DIMM (Max 32GB)

TN8000T Series



TN8004T



TN8008T

XCubeNAS + Thunderbolt™ 3 Adapter Card (XN-TB302)

Enterprise

Intel® Xeon® E3 3.3GHz Quad-Core Processor
RAM: 8GB DDR4 U-DIMM ECC (Max 64GB)

XN8000R Series



XN8008R



XN8012R

Intel® Core™ i5 2.7GHz Quad-Core Processor
RAM: 8GB DDR4 SO-DIMM (Max 32GB)

XN8000T Series



XN8004T



XN8006T



XN8008T

Thunderbolt™ NAS

SMB High End

Intel® Core™ i3 3.9GHz Dual-Core Processor
Rackmount RAM: 8GB DDR4 U-DIMM (Max 64GB)
Tower RAM: 8GB DDR4 SO-DIMM (Max 32GB)

XN7000R Series



XN7004R



XN7008R



XN7012R

XN7000T Series



XN7004T



XN7006T



XN7008T

SMB Middle

Intel® Celeron® 2.9GHz Dual-Core Processor
Rackmount RAM: 8GB DDR4 U-DIMM n/ECC (Max 64GB)
Tower RAM: 8GB DDR4 SO-DIMM (Max 32GB)

XN5000R Series



XN5004R



XN5008R



XN5012R

XN5000T Series



XN5004T



XN5006T



XN5008T



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