

# XCubeNAS

## XN8012S

QSAN



## Ultra-high Performance and Virtualization Ready

The Industry' 2U hybrid NAS with Intel®Xeon® 64-bit Quad-Core processor provides native auto-tiering storage capability to fulfill the maximum performance and high-capacity demand for enterprises. With up to 64GB memory capacity, It is a perfect solution to the applications of surveillance, backup and for disaster recovery in SMB which can reduce capital expenditure and achieve maximum efficiency at the same time.

## Product Features

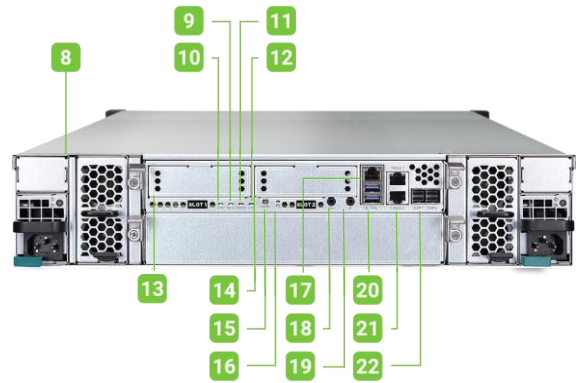
- With High performance and expansion by using 12Gb/s technology, maximum space up to 3.3PB.
- Unified Storage - Integrated storage system supports block and file storage simultaneously and following protocols, iSCSI, CIFS, NFS, FTP, and AFP.
- Universal and Efficient Data Backup - XMirror supports permission backup , disaster recovery and flexible protection between multiple NAS devices.
- KVM Built-in Hypervisor Manager : enabling user to create and manage virtual machines that run directly on the XCubeNAS and host multiple virtualized environments without the additional hardware investment.
- Comprehensive Data Security - Pool Military level encryption with AES-256, Write Once Read Many (WORM) , Self-Encrypting Drive (SED).
- Thin Provision - Precision Restore and dynamically Space.
- Advanced Enterprise Storage Technology - Auto-Tiering, Inline Compression, Deduplication and Thin Provision.

## Application areas

- IT Industry : File storage services, cloud storage services, near-line backup systems, secondary backup storage devices, disaster recovery solutions, virtualize host and storage devices.
- Government : Diskless workstation system, urban security monitoring system, agenda recording and playback system, digital file storage (digital collection), remote data backup center, cloud storage service, virtualized storage device.
- Education : Administrative system storage device, host and storage device virtualization, network storage service, security monitoring system, digital teaching system, library management system, computer classroom diskless workstation.
- Media Industry : Non-linear editing system, audio-visual editing system, online editing storage system, media database storage management, video on-demand system, content on-demand delivery system, wedding studio photo/video storage system.
- Finance & Insurance : Telemarketing recording system, policy image storage device, data storage system , Near-Line backup system, host virtualization application, development system storage device.
- Telecommunications industry : Online music play system, security monitoring system, customer service recording system, network storage service, Near-Line backup system, virtualization of host and storage devices.

# Product Spec of XN8012S

## Appearance



1. Enclosure Power Button / LED	7. Disk Drive Status LED	13. Host Card Slot 1 (host card is an optional part)	19. Service Port
2. UID (Unique Identifier) Button / LED	8. Power Supply Unit – PSU Indicator and Beep Off Button	14. Host Card Slot 2 (host card is an optional part)	20. USB Port
3. Enclosure Access LED	9. Controller Status LED	15. Buzzer Mute Button	21. 10GbE iSCSI Port
4. Enclosure Status LED	10. Master / Slave LED (only for dual controllers)	16. Reset to Factory Default Button	22. 12Gb/s SAS Wide Port
5. USB Port	11. Dirty Cache LED	17. Management Port	
6. Disk Drive Power LED	12. UID (Unique Identifier) LED	18. Console Port	

## Hardware Specifications

Architecture	All-in-one
<b>CPU</b>	
Processor	Intel®Xeon® 64-bit Quad-Core (8-core processor models are also available)
<b>Memory</b>	
System Flash	8GB SATA DOM
Memory Module Pre-installed	8GB DDR4 U-DIMM
Total Memory Slots	4
Memory Expandable up to	64 GB
<b>Storage</b>	
Drive Bays	3.5" Slot x 12
Maximum Drive Bays with Expansion Unit	420
Compatible Drive Type	3.5" SAS HDD / SAS SED HDD, 3.5" NL-SAS HDD / NL-SAS SED HDD, 2.5" SAS SSD / SAS SED SSD, 2.5" SATA SSD / SATA SED SSD (*), 2.5" SAS HDD / SAS SED HDD, 2.5" NL-SAS HDD / NL-SAS SED HDD (*) 6Gb MUX board needed for 2.5" SATA drives in dual controller system
Drive Interface	SAS 12Gb/s
Maximum Internal Raw Capacity	216TB
Maximum Raw Capacity with Expansion Units	7,560TB
Hot Swappable Drive	Yes
<b>External Port</b>	
USB 2.0 Port	1 (Front)
USB 3.0 Port	-
Others	UPS Port x 1, Console Port x 1
<b>Connectivity Port</b>	
1GbE RJ45 LAN Port	1 (Onboard Management Port)
10GbE RJ45 LAN Port	2 (Onboard) / 2 iSCSI (Option: HQ-10G2T)
10GbE SFP+ LAN Port	4 iSCSI (Option: HQ-10G4S2)
16Gb SFP+ Fibre Channel	4 (Option: HQ-16F4S2) / 2 (Option: HQ-16F2S2)

Appearance	
Dimension (H x W x D) (mm)	88.5 x 438 x 510
Chassis Form Factor	19" Rackmount 2U 12 Bay
Net Weight (kg)	13.5
Gross Weight (kg)	14.9
Others	
System Fan	60mm x 60mm x 3 pcs
Replaceable System Fan	yes
Power Recovery	yes
Scheduled Power On/Off	yes
Wake on LAN/WAN	yes
Power Supply Unit / Adapter	250W x2
Redundant Power Supply	Yes
AC Input Power Voltage	100V-240V
Power Frequency	50-60 Hz, Single Phase
Power Consumption	332 W (Access), 179 W (HDD Hibernation)
British Thermal Unit	1132 BTU/hr (Access), 611 BTU/hr (HDD Hibernation)
LCM Support	yes
Environment Temperature	
Operating Temperature	0 to 40°C
Storage Temperature	-10°C to 50°C
Operating Relative Humidity	20% to 80% non-condensing
Non-operating Relative Humidity	10% to 90%
Certification	
認證標章	CE
Warranty	
Standard Warranty	3 years

## QSM Specifications

Operating System	64bit embedded Linux
Unified Storage Server	NAS application server / iSCSI storage / Fibre Channel storage / Thunderbolt™ 3
File Server	File sharing across Windows/Mac/Linux/UNIX and centralized management
FTP Server	Supports data access from remote location via FTP / Bandwidth Control / Connection control / FTP with SSL/ TLS (explicit) mode / FXP supported / Passive FTP port range control
Backup Server	Snapshot and Replication Block-Level Snapshot and Replication / Schedule Snapshot / Snapshot retention policy / Xmirror / Time machine Public Cloud backup: Alibaba Cloud OSS, HiCloud S3, Amazon S3 and S3 compatible Public Cloud synchronization: Google Drive, Microsoft OneDrive, Dropbox
Web Server	Built-in phpMyAdmin
SQL Server	MariaDB database server
VPN Server	Supports OpenVPN, PPTP and IPsec+L2TP
Virtualization Server{0}	Virtual machine import/export / backup / Snapshot / User-based permissions settings / Support virtual switch / Supports access from Browser / Windows, Linux, UNIX and Android
Connection	IPv4, IPv6 and DDNS domain name registration (QSAN Cloud) / UPNP / Auto port forwarding
Networking	VLAN / Link aggregation (support 11 bonding modes) / Multi-IP settings / Gigabit Jumbo Frame
File System	ZFS file system / EXT2 / EXT3 / EXT4 / FAT / NTFS / HFS
Supported Operating Systems	Windows / Mac OS X / Linux (2.6 or later) and UNIX
Storage Management	RAID 0, 1, 5, 6, Z3, 10, 50, 60 and JBOD Global and Dedicated spare disk Disk management / Disk S.M.A.R.T check / Instant RAID / RAID Fast Rebuild Pool application mode: General, Media Streaming, and Database Multi-pool and volume management / Storage capacity management / Pool and Volume thread hole notification Online Pool expansion and migration / Online volume expansion / Build in iSCSI initiator and Target / External storage device management Virtual Volume / Auto-Tiering Pool Encryption / Support Disk cache / Data Scrubbing / Data Scrubbing / Virtual Volume / SSD Read and Write cache / Deduplication (volume and LUN) / Snapshot (folder and LUN) / Compression (volume and LUN) / Thin Provision for LUN / Self-encryption Drive (SED)

User Management	Local / domain user and group management / Local / domain application privilege / User quota for local and domain user Home folder / Windows AD and LDAP support Trust domain and support up to 200,000 domain user
Folder Management	Advanced ACL / Windows ACL / Hide shared folder on Windows network / WORM (Write Once Read Many protection) / Unicode support / Folder usage threshold notification / Folder quota
System Tool	SNMP / Antivirus / IP access control Real-time Resource (CPU, Memory, Storage, Pool, Process)/ HardwaService/ Network resource monitor
Power Management	HDD Hibernation / Power schedule / Wake on LAN / UPS settings / Recover from power outage
System Optimization Settings	Service binding / User application mode / SSD Trim
Log	System log / System connection and data transfer log
File Manager	File Manager (Web UI)
Service	Data service: CIFS, AFP, NFS, FTP, WebDAV, Bonjour
User Management	Local / domain user and group management / Local / domain application privilege / User quota for local and domain user
Virtualization	Windows: Hyper-V, storage space, VMware: VMware 6.7 ready, VAAI, SRM, Citrix: Citrix 7.0 ready
Multi-Browser Support	Internet Explorer / Safari / Firefox / Google Chrome
Utility	XFinder, XInsight
Mobile App	XAccess (iOS, Android)
Notes	Fibre Channel storage is only applicable to: XN7016R, XN7024R, XN8016R, XN8024R Thunderbolt™ 3 solution is only applicable to: XN5004R, XN5008R, XN5008RE, XN5012R, XN5012RE, XN7004R, XN7008R, XN7008RE, XN7012R, XN7012RE, XN8008R, XN8008RE, XN8012R, XN8012S, XN5004T, XN5008T, XN7004T, XN7008T, XN8004T, XN8008T JBod for XN5000R/RE, 7000R/RE, 8000R/RE series Virtualization Server is only applicable to: XN5000/7000/8000 series. Deduplication is only applicable to: XN5000/7000/8000 series.