FlashStation FS6400



Brand: Synology

Product Code: FS6400

Availability: 10 **Weight:** 17.26kg

Dimensions: 88.00mm x 482.00mm x

724.00mm

Call for Price:

Short Description

Synology 24 Bay NAS FlashStation FS6400 (Diskless)

Description

Uncompromising performance

Synology FlashStation FS6400 is a 2U rackmount server designed for I/O-intensive and latency-sensitive tasks, ideal for multimedia post-production, virtual machines, online transaction processing, or database applications.



CPU

Dual Intel[®] Xeon[®] Silver 8-core with NUMA



Memory

DDR4 ECC RDIMM, up to 512GB



High Performance

Over 240,000 iSCSI 4K random write IOPS



Scalability

Up to 72 drives with FX2421

Fast and reliable networking

With multi-LAN design, FS6400 is capable of performing Link Aggregation and failover. For environments requiring a higher speed, two optional Ethernet add-in cards can be installed on PCIe 3.0 slots to provide fast data transmission.

Complete iSCSI and virtualization solutions

Synology iSCSI storage supports most virtualization solutions such as VMware vSphere, Microsoft Hyper-V, Citrix Xen Server, and OpenStack Cinder to enhance work efficiency. You can run and manage multiple virtual machines on Windows, Linux, or DSM using Virtual Machine Manager.









Next-generation file system for better data protection

The Btrfs file system introduces advanced storage technologies and optimized snapshots to prevent data corruption and reduce maintenance overheads. It offers flexible, efficient data protection and recovery tools while ensuring high-level data integrity.

Flexible Shared Folder/User Quota System provides comprehensive quota control on all

user accounts and shared folders

Snapshot Replication provides schedulable and storage capacity-saving data protection with 1,024 shared folder backups and 65,000 system-wide snapshots

File- or folder-level data restoration accelerates data recovery and provides more flexibility for businesses

Automatic file self-healing detects and recovers corrupted files without user intervention

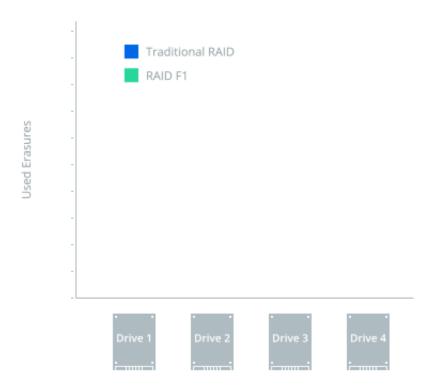


RAID F1

Due to the peculiarities of SSD and RAID technology, a common challenge lies in how to prevent all of the drives from failing at the same time because of the evenly distributed workload. RAID F1 alleviates this problem with a specially designed algorithm to

unevenly distribute workload to drives, enhancing the resilience of the storage pool and ensuring your data remains safe.

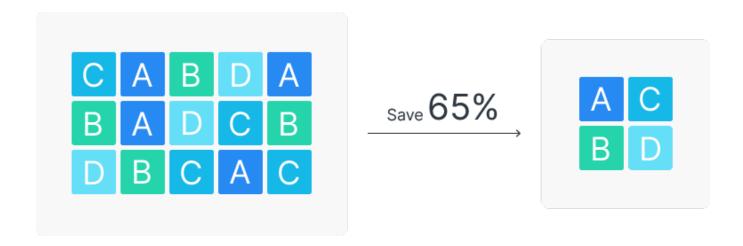
See the white paper for more technical details regarding RAID F1



Compared with traditional RAID, RAID F1 distributes uneven workload to SSDs to prevent all drives from wearing out simultaneously.

Flash volume deduplication

Remove duplicate data on all-flash arrays with volume-wide deduplication to greatly increase storage efficiency. Eliminate redundant data to save up to 65% in storage space use in applications like virtual desktop infrastructure, and virtual machine.



Powered by Synology DiskStation Manager (DSM), Synology NAS offers advanced security measures to protect against sudden data loss and potential security holes.

Security Advisor

Analyze system settings, password strength and network preferences, and remove any possible malware.

AppArmor

A kernel-level enhancement that blocks malicious programs from accessing unauthorized system resources.

AES 256-bit encryption

Encrypt shared folders and network data transmission to avoid unauthorized data access.

2-step verification

Prevent others from logging in to your DSM by generating a six-digit one-time password (OTP) on your mobile device.



5-year warranty

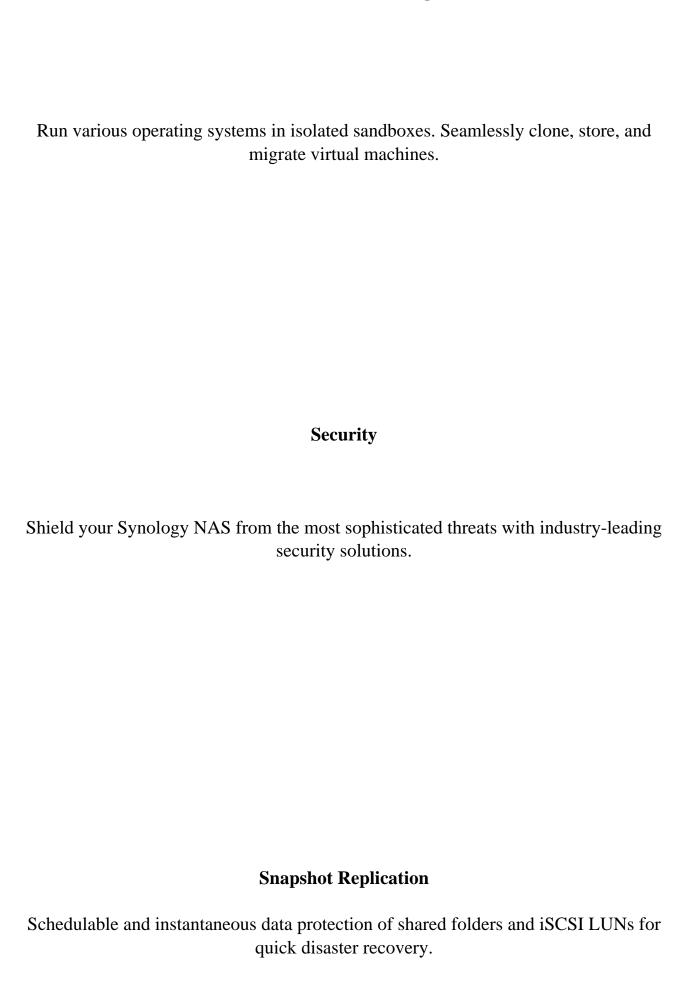
At Synology, we are committed to product innovation and quality. Synology guarantees a robust and reliable data management experience with a 5-year limited warranty, providing responsive technical support and hardware replacement services to maximize your return on investment.

Powered by Synology DiskStation Manager

Synology High Availability
Seamless transition between clustered servers in the event of a server failure to minimize the impact on applications.
Synology Office
Collaborate on documents, spreadsheets, and slides in real time to boost team productivity.
Synology MailPlus

Secure, reliable, and private mail server solution with an intuitive and modern mail client.

Virtual Machine Manager



Software

DSM Specifications

Storage Management

Maximum Single Volume

Size

• 1 PB (64 GB memory required, for RAID 6 groups only)

• 200 TB

• 108 TB

256

Maximum Internal Volume

Number

SSD Read/Write

Cache (Determining cache

size)

SSD TRIM

RAID Group

Supported RAID Type

• RAID F1

• Basic

• JBOD

• RAID 0

• RAID 1

• RAID 5

• RAID 6

• RAID 10

RAID Migration

• Basic to RAID 1

• Basic to RAID 5

• RAID 1 to RAID 5

• RAID 5 to RAID 6

• RAID F1

• RAID 1

• RAID 5

• RAID 6

• RAID 10

• RAID F1

• JBOD

• RAID 5

Volume Expansion with

Larger HDDs

Volume Expansion by Adding a HDD

Global Hot Spare Supported **RAID** Type

Notes

- RAID 6
- RAID F1
- RAID 1
- RAID 5
- RAID 6
- RAID 10
- Usable capacity for each volume will be lower than the maximum volume size and is dependent on the filesystem and the amount of system metadata stored.
- When Peta Volume is enabled, validated services and packages are required. Please refer to this article for more information on limitations.
- Actual maximum storage pool and volume sizes depend on drive sizes used. the number of drive bays available, and the RAID configuration.
- Btrfs
- ext4
- Btrfs
- ext4
- ext3
- FAT
- NTFS
- HFS+
- exFAT

exFAT Access can be installed for free from Package Center in DSM 7.0. In DSM 6.2 or earlier

Internal Drives

External Drives

Notes

File System

versions, exFAT Access needs to be purchased in Package Center.

File Protocol

- SMB
- AFP
- NFS
- FTP
- WebDAV
- Rsync

Maximum Concurrent

8,000

SMB/AFP/FTP Connections

Maximum Concurrent

10,000

SMB/AFP/FTP Connections

(with RAM expansion)

Windows Access Control

List (ACL) Integration

NFS Kerberos Authentication

Notes

- Regarding data concerning tests with RAM expansion, all memory slots are installed with the maximum capacity of supported RAM.
- During testing, the maximum number of SSDs supported by this model is installed in a RAID 5 configuration.
- The testing standard was based on the maximum number of concurrent connections supported by this model. During the testing, 25% of the connections were used to transfer files concurrently. The transfer process guaranteed that the

File Services

connections were not interrupted; the minimum transfer speed was not guaranteed.

Account & Shared Folder	Maximum Local User	16.000
Account & Shared Political	Maximum Local Osei	10,000

Accounts

Maximum Local Groups 512 Maximum Shared Folder 512 Maximum Shared Folder 32

Sync Tasks

<u>Hybrid Share</u> Maximum Hybrid Share

Folders

Hyper Backup Folder and Package Backup

Entire System Backup

Notes Full-system backup requires

30

DSM 7.2 or later.

<u>High Availability</u> Synology High Availability

<u>Log Center</u> Syslog Events per Second 3,000

Virtualization VMware ESXi 6.5 and VAAI

Windows Server 2016 Windows Server 2019 Windows Server 2022

Citrix Ready OpenStack

General Specifications Supported Protocols SMB1 (CIFS), SMB2,

SMB3, NFSv3, NFSv4, NFSv4.1, NFS Kerberized sessions, iSCSI, Fibre Channel, HTTP, HTTPs, FTP, SNMP, LDAP,

CalDAV

Supported Browsers • Chrome

• Firefox

• Edge

Safari

Supported Language English, Deutsch, Français,

Italiano, Español, Dansk, Norsk, Svenska, Nederlands, ??????, Polski, Magyar, Português do Brasil,

Português Europeu, Türkçe,

?eský, ??????, ???, ???,

????, ????

Notes For an updated list of

supported browser versions, check the <u>DSM Technical</u>

Specifications.

Add-on Packages view the complete package list

Central Management System

Synology Chat Suggested Users 1,500

Notes Models with expandable

memory are tested with their

maximum supported

memory.

SAN Manager Maximum iSCSI Target 256

Number

Maximum LUN 512

LUN Clone/Snapshot,

Windows ODX

Notes iSCSI Manager has been

renamed to SAN Manager in

DSM 7.0.

Synology MailPlus /

MailPlus Server

Free Email Accounts

5 (Additional accounts

require purchase of licenses)

Suggested Users 17,500

Notes

,500

- Suggested users is derived from testing in an environment with 20% heavy users (each with 20,000 prepopulated emails and receiving 240 emails per day) and 80% light users (each receiving an average of 20 emails per day). Learn more
- The performance of the mail system will slightly decrease in high-availability mode due to data synchronization

between the two servers.

- Functions that were enabled in all of the tests above: antispam, anti-virus, DNSBL, greylist, content scan, full-text search (English only).
- Models with expandable memory are tested with their maximum supported memory. To estimate the RAM requirement for your NAS, please <u>read this article</u>

Sna	pshot	Ren	licat	tion
DIIG	DDIIOt	TTO D.	HUU	

Maximum Snapshots per

Shared Folder

Maximum of System

Snapshots

Surveillance Station

Default Licenses

Suggested Maximum IP Cameras and Total FPS (H.264)

Suggested Maximum IP Cameras and Total FPS (H.265) 1,024

65,536

2 (Additional cameras require purchase of licenses)

- 1080p: 485 channels, 4850 FPS
- 3M: 450 channels, 4500 FPS
- 5M: 300 channels, 3000 FPS
- 4K: 220 channels, 2200 FPS
- 1080p: 520 channels, 15600 FPS
- 3M: 485 channels, 4850 FPS
- 5M: 450 channels, 4500 FPS
- 4K: 300 channels, 3000 FPS

• Surveillance Station 9.1.3 or above is

Notes

- required to support the maximum IP cameras and FPS figures listed.
- Performance figures are obtained from testing conducted with the device fully populated with drives, with their default memory configuration, and under a continuous recording setup. Actual system capabilities may vary based on configuration, drive performance, enabled features, and the presence of additional workloads.
- Use <u>NVR Selector</u> to quickly find a suitable model based on your requirements.
- The number of streams that can be viewed simultaneously is **twice** the suggested maximum number of cameras. For example, if the suggested maximum number of cameras for a model is 10 under H.264, 1080p, the model can support up to 20 streams of the same specification at the same time.

Synology Drive

Recommended Number of Concurrent Sync Clients

Recommended Number of Hosted Files

2,000 (the number of connections that can be maintained when the recommended number of hosted files was reached) 100,000,000 (applies to files indexed or hosted by Synology Drive. For file access through other standard protocols, refer to the File Services section above)

Notes

- Exceeding the recommended numbers above will not block application operations, but may result in longer response time.
- Utilizing SSD cache can significantly improve performance.
- Models with expandable memory are tested with their maximum supported memory.
- Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.

Synology Office

Suggested Users Notes 16,250

• Suggested users is derived from testing in an environment with 60% idle users (each logging in and viewing documents) and 40% active users (each executing random actions at

intervals of 20 to 40 seconds) operating within documents, each document having 30 users. Learn more

- Models with expandable memory are tested with their maximum supported memory.
- Client performance may affect maximum simultaneous editing users. Client PCs used for testing: Intel Core i3-3220 / 8GB RAM

<u>Virtual Machine Manager</u> Recommended Virtual 32 (<u>Learn more</u>)

Machine Instances

Recommended Virtual DSM 32 (including 1 Free License)

Number (Licenses required)

Notes The specifications vary

depending on system

configuration and memory

size.

<u>VPN Server</u> Maximum Connections 60

Specification

pecification	
NAS	
CPU Model	Intel Xeon Silver 4110
CPU Quantity	2
CPU Core	8
CPU Architecture	64-bit
CPU Frequency	2.1 (base) / 3.0 (turbo) GHz
Hardware Encryption	Yes
Engine	
Memory	32 GB DDR4 ECC RDIMM
Drive Bays	24
Hot Swappable Drive	Yes
RJ-45 1GbE LAN Port	2
USB 3.2 Gen 1 Port	2
System Fan	80 mm x 80 mm x 4 pcs
Power Supply Unit /	800 watts

Adapter	
Total Memory Slots	16
Maximum Memory	512 GB (32 GB x 16)
Capacity	
Expansion Port	1
PCIe Expansion	2 x Gen3 x8 slots (x8 link)
Form Factor (RU)	2U
Redundant Power Supply	Yes
RJ-45 10GbE LAN Port	2

Product Gallery