FlashStation
FS6400

Blazingly-Fast All-Flash Server Aiming for I/O-Intensive Applications

FlashStation FS6400 is a highly reliable and ultra-high performance all-flash server for I/O-intensive and latency-sensitive applications, such as multimedia post-production, virtual machines, online transaction processing, or databases. FS6400 is backed by Synology's 5-year limited warranty.

Highlights

- Synology all-flash server targeted at I/O-intensive and latency-sensitive applications
- Over 240,000 iSCSI 4K Random Write IOPS, ultra-high performance with low latency[1]
- Dual Intel® Xeon® Silver 8-core processors and 32GB DDR4 ECC RDIMM, expandable up to 512GB
- Onboard 10GBASE-T ports, capable of installing optional 10GbE/25GbE/40GbE NICs
- Complete virtualization solution for VMware® vSphere, Windows Server® Hyper-V™, Citrix® XenServer, and OpenStack® Cinder
- Advanced Btrfs file system offering 65,000 system-wide snapshots and 1,024 snapshots per shared folder
- Scale up to 72 drives with 2 x Synology expansion unit RX2417sas[2]

Uncompromising Performance

Synology FlashStation FS6400 is a 2U rackmount server designed for I/O-intensive and latency-sensitve tasks. Featuring two **Intel® Xeon® Silver** processors with **Non-Uniform Memory Access (NUMA)** I/O optimization, **24** drive bays supporting 2.5" **SAS/SATA SSD**, and **32GB DDR4 ECC RDIMM**, FS6400 provides over **240,000 iSCSI 4K random write IOPS** and is ideal for multimedia post-production, virtual machines, online transaction processing, or database applications.

FS6400 comes with **two 10GBASE-T ports** and supports optional network interface cards for high-speed data transmission. Storage capacity can be further scaled up with Synology expansion unit **RX1217sas/RX2417sas**, providing up to **72 storage drives** with elastic expandability. **5-year product warranty** guarantees hardware replacement and technical support services, maximizing your return on investment (ROI).

Next-Generation File System

A modern file system designed to address obstacles often encountered in enterprise storage systems, safeguarding data integrity through metadata mirroring, self-healing and snapshot replication.

Btrfs: Next Generation Storage Efficiency

FS6400 introduces the **Btrfs file system**, bringing the most advanced storage technologies to meet the management needs of modern businesses:

- **Advanced snapshot technology** provides schedulable, near-instantaneous data protection of shared folders and iSCSI LUNs.
- **File and folder level data restoration** brings huge conveniences and saves time for users who wish to restore only a specific file or folder.
- **Flexible shared folder and user quota system** provide comprehensive quota control on all user accounts and shared folders.
- **File self-healing**: Btrfs file system is able to auto-detect corrupted files with mirrored metadata and recover broken data using the supported RAID volumes, which include RAID1, 5, 6, 10, and Synology RAID F1.

Enterprise-Grade Applications

Powered by the innovative Synology DiskStation Manager (DSM), FS6400 comes fully-equipped with applications and features designed specifically for large-scale businesses:

- **Windows® AD** and **LDAP** support allows easy integration with existing business directory services.
- **Windows ACL** support provides fine-grained access control and efficient privilege settings, allowing FS6400 to fit seamlessly into existing infrastructure.
- Internet file access is simplified by the encrypted FTP server and the web-based file explorer **Synology File Station**. **HTTPS**, **firewall**, and **IP auto-block** support ensures file sharing over the Internet is protected with a high level of security.
- **Application privileges** control access to applications and packages based on each individual account, user group, or IP address.

Virtual Machine Manager

Virtual Machine Manager implements various virtualization solutions, allowing you to manage multiple virtual machines on your FS6400, including Windows, Linux, and Virtual DSM.

Effortless Virtualization Deployment

Synology iSCSI storage fully supports most virtualization solutions to enhance work efficiency with a simple management interface. **VMware® vSphere 6.5** and **VAAI** integration helps offload storage operations and optimizes computation efficiency. **Windows Offloaded Data Transfer (ODX)** speeds up data transfer and migration rates, while **OpenStack® Cinder** support turns your Synology NAS into a block-based storage component.

Synology **Virtual Machine Manager** adds boundless capabilities to your NAS. Set up and run various virtual machines, including **Windows**, **Linux**, and **Virtual DSM**, so that you can test new software versions in a sandbox environment, isolate your customers' machines, and increase the flexibility of your FS6400 with reduced hardware deployment and maintenance costs.

Reliability, Availability & Disaster Recovery

System reliability is critical for businesses everywhere. FS6400 responds to these concerns with wide-ranging availability and redundancy features:
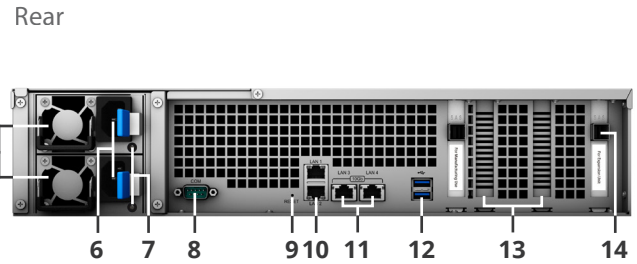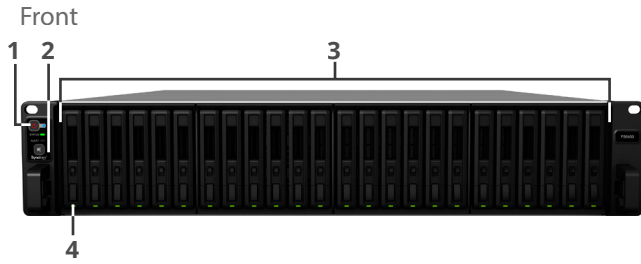
- **Synology High Availability** ensures seamless transitioning between clustered servers in the event of unexpected disasters and ensures that your services remain online.
- **Snapshot Replication** provides schedulable, near-instantaneous data protection, ensuring business documents in shared folders, virtual machines in iSCSI LUNs, or dockerized application data remain safe and available in the event of a disaster.
- **Redundant power supplies**, **system fans** and **network ports** with failover support ensure continual service uptime.
- High reliability system design, including **fan-less CPU heat-sink** and **passive cooling technology**, prevents single points of failure.
- **DDR4 ECC RDIMM** reduces power consumption and has error detection and correction capabilities during data transmission.

A Powerful Collaboration Solution

Use the collaboration suites on your Synology NAS to build a private cloud to enhance team cooperation and boost productivity.

- **Synology Drive** allows you to access the data and files on Synology NAS through a unified portal and enable data synchronization across platforms. You can also install the online editor **Synology Office** and collaborate with others on **Documents**, **Spreadsheets**, and **Slides**.
- **Synology MailPlus** allows your business to set up a private and reliable mail server with the support of high-availability design and gives your employees an intuitive web-based client to manage emails and boost productivity.
- **Synology Calendar** enables you to manage team schedules and organize daily tasks effortlessly. Event information can also be synced to your CalDAV clients, allowing you to check schedules anywhere and anytime.
- **Synology Chat** is a web-based application that allows you to start conversations instantly and safely and optimizes companies' internal communications with its powerful information management and interaction features.

Hardware Overview

Front

Rear

1	Power button and indicator	2	Beep off button	3	Drive tray	4	Drive status indicator
5	PSU fan	6	Power port	7	PSU indicator	8	Console port
9	Reset button	10	1GbE RJ-45 port	11	10GbE RJ-45 (10GBASE-T) port	12	USB 3.0 port
13	PCIe expansion slot	14	Expansion port				

Technical Specifications

Hardware

CPU	2 x Intel® Xeon® Silver 4110 8-core 2.1GHz, Turbo Boost up to 3.0GHz
Hardware encryption engine	Yes (AES-NI)
Memory	• 32 GB DDR4 ECC RDIMM (16 GB x 2) • Expandable up to 512 GB (32 GB x 16)
Compatible drive type	24 x 2.5" SAS SSD/HDD or SATA SSD (drives not included)
Hot swappable drive	Yes
External port	• 2 x USB 3.0 port • 1 x Expansion port
Size (HxWxD)	• 88 x 430.5 x 692 mm • 88 x 482 x 724 mm (with server ears)
Weight	17.26 kg
LAN	• 2 x 10GbE RJ-45 (10GBASE-T) • 2 x 1GbE RJ-45
Wake on LAN/WAN	Yes
PCIe 3.0 slot	• 2 x 8-lane x8 slot • High-performance network interface card support
Scheduled power on/off	Yes
System fan	4 (80 x 80 x 32 mm)
AC input power voltage	100V to 240V AC
Power frequency	47 to 63Hz, single phase
Operating temperature	0°C to 35°C (32°F to 95°F)
Storage temperature	-20°C to 60°C (-5°F to 140°F)
Relative humidity	5% to 95% RH
Maximum operating altitude	5,000 m (16,400 ft)

General DSM specification

Networking protocol	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN ™ , L2TP)
File system	• Internal: Btrfs, ext4 • External: Btrfs, ext4, ext3, FAT, NTFS, HFS+, exFAT[3]
Supported RAID type	Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10, Synology RAID F1
Storage management	• Maximum single volume size: 200TB (for RAID 5 or RAID 6 groups only) • Maximum system snapshots: 65,536[4] • Maximum internal volume: 256
SSD cache	Read/write cache support
File sharing capability	• Maximum local user account: 16,000 • Maximum local group: 512 • Maximum shared folder: 512 • Maximum concurrent SMB/NFS/AFP/FTP connection: 8,000
Privilege	Windows Access Control List (ACL), application privilege
Directory service	Windows® AD integration: Domain users login via SMB/NFS/AFP/FTP/File Station, LDAP integration
Virtualization	VMware vSphere® 6.5, Microsoft Hyper-V® , Citrix®, OpenStack®
Security	Firewall, encryption shared folder, SMB encryption, FTP over SSL/TLS, SFTP, rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)
Supported client	Windows 7 onwards, Mac OS X® 10.11 onwards
Supported browser	Chrome®, Firefox®, Edge®, Internet Explorer® 10 onwards, Safari® 10 onwards; Safari (iOS 10 onwards), Chrome (Android™ 6.0 onwards) on tablets
Interface Language	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svensk, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文

Packages and Applications

File Server & Synchronization

Synology Drive	Provide a universal portal to synchronize your files across various platforms, including Windows, macOS, Linux, Android and iOS. The built-in universal portal allows you to access data anytime and anywhere. • Maximum number of hosted files: 5,000,000 • Maximum number of concurrent connections for PC clients: 2,000
File Station	Virtual drives, remote folders, Windows ACL editor, compressing/extracting archived files, bandwidth control for specific users/groups, creating sharing links, transfer logs
FTP Server	Bandwidth control for TCP connections, custom FTP passive port range, anonymous FTP, FTP SSL/TLS and SFTP protocol, boot over the network with TFTP and PXE support, transfer logs
Presto File Server[5]	High-speed data transfer over WAN with exclusive SITA technology between Synology NAS and desktop
Cloud Sync	One or two-way synchronization with public cloud storage providers including Alibaba Cloud OSS, Amazon Drive, Amazon S3-compatible storage, Backblaze B2, Baidu Cloud, Box, Dropbox, Google Cloud Storage, Google Drive, hubiC, MegaDisk, Microsoft OneDrive, OpenStack Swift-compatible storage, Tencent COS, WebDAV servers, Yandex Disk
Universal Search	Offer global search for applications and files

iSCSI Storage & Virtualization

iSCSI Manager	• Maximum iSCSI target: 256 • Maximum iSCSI LUN: 512 • iSCSI LUN clone/snapshot support
Virtual Machine Manager	Deploy and run various virtual machines on Synology NAS, including Windows, Linux, or Virtual DSM

Data Protection & Backup Solution

Hyper Backup	Support local backup, network backup, and backup data to public clouds
Backup tools	DSM configuration backup, macOS Time Machine support, Synology Drive Client desktop application Shared folder sync - maximum task number: 32
Snapshot Replication	• Maximum of shared folder snapshots: 1,024 • Maximum of Replication: 64
Synology High Availability	Reduce service downtime by setting up two identical NAS into one high-availability cluster
Active Backup for G Suite	Support G Suite, My Drive and Team Drive backup and restoration
Active Backup for Office 365	Support Office 365 OneDrive for Business, mail, contacts, and calendar backup and restoration

Active Backup for Business	All-in-one backup solution designed for heterogeneous business IT environment, enabling IT admins to remotely manage and monitor protection over PC, servers and VM on one centralized console

Productivity & Collaboration

Collaboration tools	Collaborate with instant message service Synology Chat, online editor Synology Office, and scheduling assistant Synology Calendar • Chat maximum user: 6,000 • Office maximum user: 3,400 • Calendar: support CalDAV and access via mobile devices
Note Station	Rich-text note organization and versioning, encryption, sharing, media embedding and attachments
Synology MailPlus Server	Secure, reliable, and private mail solution with high-availability, load balancing, security and filtering design (includes 5 free email account licenses; additional accounts require the purchasing of additional licenses)
Synology MailPlus	Intuitive webmail interface for Synology MailPlus Server, customizable mail labels, filters, and user interface

Surveillance

Surveillance Station	Maximum IP camera: 128 (total of 3,840 FPS at 720p, H.264) (Including two free camera licenses; additional cameras require the purchasing of additional licenses)

All-in-One Server

Synology Directory Server	Provide a flexible and cost-effective domain controller solution
Central Management System	Provide a single interface to manage and monitor multiple Synology NAS
VPN Server	Maximum connection: 40, supported VPN protocol: PPTP, OpenVPN™, L2TP/IPSec
Mail Server	Supported Mail Server Protocols: POP3, SMTP, IMAP, Support LDAP/AD account
Mail Station	Webmail interface for Mail Server to receive emails from multiple POP3 mailboxes, customizable SMTP server
Web Station	Virtual host (up to 30 websites), PHP/MariaDB®, third-party applications support
Other packages	DNS Server, RADIUS Server, Log Center

Others

Storage Analyzer	Volume and quota usage, total size of files, volume usage and trends based on past usage, size of shared folders, large files, most recently modified files, least recently accessed files
Antivirus Essential	Full system scan, scheduled scan, white list customization, virus definition auto update
Security Advisor	Malware detection/removal, user account/password, network, system-related security scan
Other packages	Additional 3rd-party packages available on Package Center

Environment and Packaging

Environment safety	RoHS compliant
Package content	• FS6400 main unit x 1 • Quick Installation Guide x 1 • Accessory pack x 1 • AC power cord x 2
Optional accessories	• 16GB/32GB DDR4-2666 ECC RDIMM (D4RD-2666-16G/D4RD-2666-32G) • Synology E10G17-F2/E10G18-T1/E10G18-T2 10Gbps Ethernet adapters • Synology expansion unit RX1217sas/RX2417sas • Synology VisualStation VS360HD/VS960HD • Synology MailPlus License Pack • Surveillance Device License Pack • Virtual DSM License Pack
Warranty	5 years[6]

*Model specifications are subject to change without notice. Please refer to www.synology.com for the latest information.

1. Performance figures may vary depending on environment, usage, and configuration.
2. FS6400 can scale up to 48 drives with 2 x RX1217sas, or 72 drives with 2 x RX2417sas, sold separately.
3. exFAT Access can be purchased separately in Package Center.
4. System snapshot includes snapshots taken by iSCSI Manager, Snapshot Replication, and Virtual Machine Manager. Availability of these packages varies by model.
5. Presto File Server License can be purchased separately in Package Center.
6. The warranty period starts from the purchase date as stated on your purchase receipt. Visit https://www.synology.com/company/legal/warranty for more information.

Synology®

SYNOLOGY INC.

Synology creates network-attached storage, IP surveillance solutions, and network equipment that transform the way users manage data, conduct surveillance, and manage networks in the cloud era. By taking full advantage of the latest technologies, Synology aims to help users centralize data storage and backup, share files on-the-go, implement professional surveillance solutions, and manage networks in reliable and affordable ways. Synology is committed to delivering products with forward-thinking features and the best in class customer services.

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