

TerraMaster F6-425 Pro

6+3 Bay Hybrid Network Storage

Datasheet



The F6-425 Pro is a high-performance NAS designed for content creators, small-scale post-production studios, independent filmmakers, MCN video teams, and audiovisual enthusiasts. It features an Intel Core i3-1315U 6-core/8-thread processor with 8GB DDR5 memory, dual 10GbE ports, and dual Thunderbolt 4 interfaces for ultra-fast data transfer. With Hyper Cache acceleration, disk array efficiency is significantly improved. Powered by the TOS 7 AI-native NAS system, smarter AI management streamlines operations. Enterprise-grade backup and multi-layered security protect against ransomware, while team collaboration, cross-platform file services, Docker, and virtualization deployment are fully supported. The F6-425 Pro is an all-in-one solution for high-performance backup, secure storage, and efficient office workflows, while also delivering exceptional 4K entertainment.

Powerful Performance Meets High-Speed Storage

The F6-425 Pro is powered by an Intel® Core™ i3-1315U processor with 6 cores and 8 threads, featuring integrated Intel® UHD Graphics for 13th Gen Intel® Processors with a maximum dynamic frequency of 1.25 GHz. Paired with 8 GB DDR5 memory, it delivers responsive performance and smooth multitasking. Equipped with dual 10 GbE ports and three M.2 NVMe slots, and supporting Hyper Cache acceleration, the F6-425 Pro significantly improves disk array performance and data access efficiency. It is an ideal solution for small-to-medium businesses seeking high-performance backup and high-speed storage.

Dual Thunderbolt™ 4 Ports with Thunderbolt Bridge – Exceptional Transfer Speeds

The F6-425 Pro features dual Thunderbolt™ 4 ports with up to 40 Gbps of bandwidth, delivering real-world read speeds of up to 3,853 MB/s and write speeds of up to 3,707 MB/s. A 3 GB file can be transferred in approximately one second, minimizing wait times for large video files, project assets, and media backups.

With support for Thunderbolt Bridge technology, the F6-425 Pro can establish a high-speed point-to-point connection between a PC and the NAS, delivering throughput of approximately 10 – 20 Gbps. This enables smooth editing and handling of 4K and 8K video footage without relying on a traditional network infrastructure. Users can edit and color-grade media stored on the NAS directly, improving collaboration efficiency while maintaining centralized data management and high-performance access.

20 Gbps High-Speed Throughput for Smooth Media and Enterprise Workflows

Equipped with dual 10 GbE ports, the F6-425 Pro delivers up to 20 Gbps of aggregate bandwidth for high-speed, reliable data transfer. Combined with SMB Multichannel technology, linear write speeds reach 2,090 MB/s, with 4K random read/write up to 450 MB/s. It handles demanding workloads—such as video editing, post-production,

virtualization, and database operations—smoothly and without interruption.

TOS 7: the World's First AI-Native NAS Operating System— Redefining Intelligent Storage

As the world's first NAS operating system deeply optimized for AI-driven workloads, TOS 7 has undergone a comprehensive, system-level upgrade for AI applications rather than merely adding intelligent features. We have restructured and deeply optimized the underlying system architecture to build a technical foundation better suited for AI agent operation, standardizing and enhancing interfaces across the entire system while providing dedicated toolkits and scheduling capabilities so AI can interact with all system functions efficiently. The system natively integrates core agent components and enables natural language-driven interaction across scenarios, simplifying NAS operations. In addition, we have officially launched a brand-new developer platform, building a complete development support system and ecosystem service capability and incorporating a broad range of self-developed AI modules. This fully empowers developer ecosystem development, truly realizes a comprehensive AI transformation of the NAS operating system, and redefines the intelligent storage experience.

TOS 7 Is More Than Beautiful

TOS 7 once again raises the standard for usability and visual design. More than 100 engineers spent over 300 days building the all-new TOS 7 system. Compared with the previous generation, 90% of the icons have been redesigned, over 50 new features have been added, and more than 1,000 details have been optimized. Refreshed colors and a new visual language deliver a more intuitive experience while supporting a broader range of application needs.

Docker Containers and Virtualization for Maximum Flexibility

Efficient containerization: TOS natively supports Docker Compose and Portainer, enabling rapid deployment of a wide range of containerized applications to flexibly meet individual requirements. With the VMs platform and its intuitive centralized management interface, users can quickly create virtual machines, efficiently allocate computing resources, and manage multiple VMs, with enterprise-grade data protection ensuring reliable business continuity. Powered by VirtualBox, multiple virtual machines can run simultaneously, covering use cases such as development, debugging, office productivity, and environment testing, enabling a single device to support work, study, and entertainment simultaneously.

Fast and Stable Remote Access

Even when your data is stored remotely, it remains instantly accessible, allowing you to access your files anytime, anywhere.

Backed by a globally distributed multi-node network architecture, it ensures stable and reliable data transmission. Even under complex network conditions, users can securely access their NAS quickly and effortlessly without complicated configuration.

Seamless Integration with Cloud Drives

With TerraMaster CloudSync, users can seamlessly connect cloud drives to the NAS and perform automatic one-way or two-way backups between cloud drives and NAS data.

CloudSync combines synchronization functions for multiple mainstream cloud drives within a single application, including Google Drive, OneDrive, Amazon S3, Dropbox, Baidu Netdisk, and Alibaba Cloud. When syncing with cloud drives, CloudSync supports multiple sync strategies, data encryption, scheduled tasks, idle-time synchronization, speed and bandwidth limits, and a complete synchronization history.

Video Surveillance Management

TerraMaster's self-developed Surveillance Manager allows users to connect multiple IP cameras to TNAS and build a complete video surveillance system. Using the ONVIF protocol, users can manage cameras, view live footage, review recorded videos, and save recordings

directly to designated storage locations on TNAS.

Flexible Storage Configuration

In addition to supporting multiple RAID modes, including Single Disk, RAID 0/1/5/6/10, the F6-425 Pro also features TerraMaster's proprietary TRAIID and TRAIID+ flexible array technologies, supporting online capacity expansion, online RAID migration, and redundant drive protection. Users can create multiple storage pools and freely choose between the ext4 and Btrfs file systems based on their business needs. When paired with TerraMaster USB DAS disk arrays, storage capacity can be easily expanded.

All-in-One Entertainment Hub for Home and Personal Use

AI Smart Albums: Automatically organize photos with AI-powered classification and timeline browsing for centralized family photo management.

TNAS Mobile: One-tap backup of mobile photos, remote management, and secure sharing.

4K Hardware Decoding: Supports Plex, Emby, and Jellyfin to build a home theater.

Professional Download Tools: High-speed downloads for movies and media, delivering immersive high-definition entertainment for the whole family.

Unified Family Photo Management

Centrally store and manage all family photos, cherishing precious family moments together.

Powered by AI, the system intelligently organizes millions of photos into individual albums for each family member.

With the timeline view, users can quickly locate daily photos and videos of the child, reliving every precious moment of growth with the family.

TNAS Mobile — Full Control of Your NAS

The redesigned TNAS Mobile delivers a more intuitive and streamlined user experience.

TNAS Mobile can seamlessly back up photos and videos from mobile devices while

AI-powered photo organization intelligently categorizes and manages large photo libraries

with ease.

Users can complete TNAS initial setup and management directly through TNAS Mobile. TNAS Mobile integrates user management, storage management, personal folders, team shared folders, and secure vault features, making remote access, mobile productivity, and NAS management more convenient than ever.

Share the Moments That Matter

Precious memories are meant to be shared with family and friends. TNAS Mobile gives you granular control over how you share — you can set expiration times, access limits, validity periods, password protection, and download permissions for each link. Multiple security settings ensure that sharing your photos is as worry-free as it is effortless.

Create Your Home Multimedia Center

The F6-425 Pro features powerful 4K video hardware decoding capabilities. Paired with popular media server platforms, including Plex, Emby, and Jellyfin, which are used by millions worldwide, it can stream content to a wide range of devices, including smartphones, tablets, Roku, Apple TV, Google Chromecast, Amazon Fire TV, and smart TVs. This enables seamless organization and streaming of your media library across multiple devices.

Professional Media Download Tools

Professional video download tools such as Aria2, qBittorrent, Transmission, and Xunlei are provided to help users obtain abundant video resources quickly and conveniently.

Enterprise Collaboration Solution

Designed for small and medium-sized businesses, this enterprise-grade private cloud solution supports local data storage while ensuring data privacy and security. Built on a local network environment, it delivers high-speed access and stable file transfers without the limitations of external network bandwidth.

Seamless PC Storage Expansion

By seamlessly mapping TNAS storage to a local drive, users can easily expand PC storage

capacity while enjoying a native local disk experience.

Flexible Access Permission Allocation

Administrators can assign customized read and write permissions to different folders according to user roles and specific requirements, ensuring both data security and convenient management.

Team Shared Folders

Shared Team Folders enable fast file sharing and transfer among team members, improving collaboration efficiency and streamlining workflows.

Recycle Bin Permission Control

Files deleted by standard users are automatically moved to the recycle bin, but those users do not have permission to access or manage it. Only administrators have full recycle bin management privileges, including file restoration and permanent deletion.

Guest Access Mode

Visitors can access authorized shared content without entering an account or password, simplifying the access process while maintaining data security and improving temporary collaboration efficiency.

Familiar Windows-Like Interface

Designed with a familiar Windows-style file management experience, the system allows users to get started quickly without adapting to a new workflow, reducing training costs for businesses.

Remote Access

Access company files remotely anytime through the internet, ensuring important business documents are always available wherever you are.

Enterprise Backup Solution

BBS (Business Backup Suite) is TerraMaster's comprehensive enterprise backup solution designed for a wide range of data protection scenarios. Its core components include TerraSync (TS), Centralized Backup (CB), Duple Backup (DB), CloudSync, and Snapshot. TS is used for data synchronization among multiple backup servers and between backup servers and computers. CB centrally backs up data from employee computers, file servers, virtual machines, and other sources to a local TerraMaster backup server. DB enables off-site disaster recovery between TerraMaster backup servers. CloudSync is used for cloud disaster recovery. Snapshot and file

system snapshot features support snapshot creation and restoration for file systems and folders, providing effective protection against ransomware attacks. View BBS Solutions.

Cross-Platform File Services with Broad Device Compatibility

Supports mainstream protocols including SMB, NFS, SFTP/FTP, AFP, iSCSI, and WebDAV. It also provides flexible permission management for users, user groups, and directories. Windows, Mac, Linux, smartphones, and tablets can all access files seamlessly, ensuring reliable access across diverse network environments.

Multiple Business Applications to Meet Diverse Enterprise Needs

With TNAS, users can easily build file servers, mail servers, web servers, FTP servers, MySQL databases, CRM systems, Node.js services, Java virtual machines, and more to meet the business needs of small and medium-sized enterprises in industries such as education, consulting, finance, scientific research, and legal services.

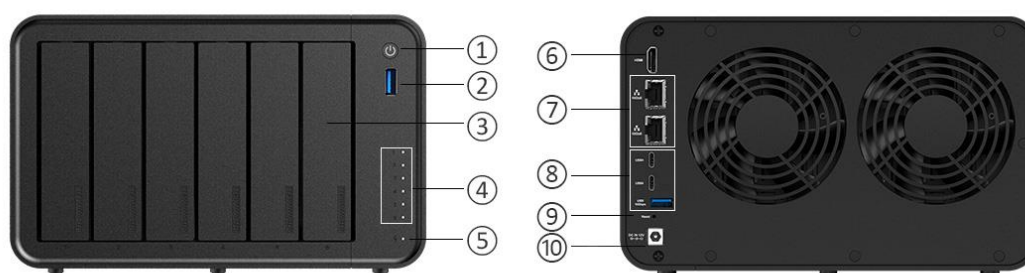
Multiple Security Protection Mechanisms for Worry-Free File Security

With cyberattacks on the rise, network device security faces unprecedented challenges. TOS offers multiple layers of protection to safeguard your data and minimize the risk of unauthorized access and ransomware attacks.

1. System-level PAM authentication enables flexible and configurable security policy management.
2. Firewall and whitelist rule restrictions support fine-grained controls down to IP addresses, subnet addresses, and port ranges.
3. End-to-end encrypted data transmission with 256-bit encryption and TLS support provides stronger security.

4. OTP two-factor authentication requires secondary mobile verification when logging in to the TOS system.
5. IP blocking automatically locks the IP address of a login source if failed login attempts reach the configured threshold within a specified time.
6. DoS protection keeps NAS operating stably even under DoS attacks, effectively protecting TNAS against malicious attacks from the internet.
7. Certificate services provide device authentication, encrypted communication, and access control.
8. After Security and Privacy Control (SPC) protection is enabled, unauthorized applications and executables cannot access network resources or storage space, preventing unauthorized programs from compromising user data security.
9. When Security Isolation Mode is enabled, TNAS disconnects from the internet to block external threats, prevent unauthorized software installation, and create a more secure operating environment.
10. TRAIID flexible arrays allow flexible storage configuration, online migration, expansion, and redundancy, improving disk space utilization.
11. TFSS file system snapshots support one-click global snapshots of storage space and one-click restoration, effectively helping prevent ransomware attacks.
12. TFM Backup supports mirror backup and differential backup for local and remote folders, improving storage utilization.
13. HyperLock-WORM prevents tampering, with a protection period of up to 70 years.
14. Snapshot supports snapshots and restoration for files and iSCSI LUNs, and also supports remote replication.

Panel Illustration:



SN	Item	Description
①	Power button	Used to turn the device on/off
②	USB host	Use to connect USB storage device or USB wireless adaptor
③	Hard drive tray	Used for installing and securing hard drives
④	Hard drive indicator	Green: Normal operation status Green (flickering): Reading/writing data Off: No hard drive detected
⑤	Power indicator	Steady on: Power on Off: Power off

Rear Cover Illustration:

SN	Item	Description
⑥	HDMI interface	For displaying the software codes or commands, not for video playing.
⑦	Network interface	10000M/5000M/2500M/1000M/100M bps network interface
⑧	USB4 USB host	Use to connect USB storage device or USB wireless adaptor
⑨	Reset Button	When the device is powered off, use a pin to continuously press and hold the RESET button on the back of the product. While keeping the RESET button pressed, briefly press the power button to start the device. Wait for approximately 30 seconds until you hear three consecutive "beep beep beep" sounds, then release the pin. Next, use the TNAS PC client software to perform a new search for the TNAS device and follow the client's instructions to restart the TOS system initialization process.
⑩	Power interface	DC 12V power input NOTE: Do not use a third-party power adaptor.

Specifications:

Processor	
Processor Model	intel® Core™ i3-1315U
Processor Architecture	X.86 64-bit
Processor Frequency	Max burst up to 4.5 GHz
CPU Single-Core Score	/
Hardware Encryption Engine	√
Hardware Transcoding Engine	H.264, H.265, MPEG-4, VC-1; maximum resolution: 4K (4096 x 2160); maximum frame rate per second (FPS): 60
Memory	
System Memory	8 GB DDR5 non-ECC SODIMM
Pre-installed Memory module	8 GB DDR5 non-ECC SODIMM (1x 8GB)
Total Memory Slot Number	2 (DDR5 SODIMM)
Maximum Supported Memory	64 GB DDE5 non-ECC SODIMM
Note	TerraMaster reserves the right to replace memory modules with the same or higher frequency based on supplier's product life cycle status. Rest assured that the compatibility and stability have been strictly verified with the same benchmark to ensure identical performance.
Storage	
Disk Slot Number	6
Compatible Drive types	3.5" SATA HDD
	2.5" SATA HDD
	2.5" SATA SSD
Maximum Internal Raw Storage Capacity	180 TB (30TB x6) (Capacity may vary by RAID types)
M.2 2280 NVMe Slot	1(PCIe 3.0 x4); 2(PCIe 4.0 x4)
Drive Hot Swap	√
Note	. Hard drive vendors will release their latest models of hard drives, and Maximum internal raw storage capacity may be adjusted accordingly. . The maximum single volume size is not directly related to the maximum raw capacity.
File System	
Internal Drive	Btrfs, EXT4
External Drive	EXT3, EXT4, NTFS, FAT32, HFS+, BTRFS
External Ports	
RJ-45 10GbE Network Jack	2
USB4.0 Host Port Type C	2
USB3.2 Host Port Type A	2(10Gbps)
HDMI	1
Appearance	
Size (H*W*D)	222 x 240 x 154 mm

Packaging Size (H*W*D)	342 x 281 x 188 mm
Weight	Net Weight: 2.7 Kg, Gross Weight: 4.2 Kg
Others	
System Fan	92 x 92 x 25mm 2PCS
Fan Mode	Smart, High speed, Middle speed, Low speed
Noise Level	22.0 dB(A) (Using M.2 SSDs in standby mode; Test environment noise: 17.3dB(A); Test distance: 1m)
Power Supply	150 W
Redundancy Power Supply	/
AC Input Voltage	100V - 240V AC
Current Frequency	50/60 Hz, Single frequency
Power Consumption	56.0 W (Fully loaded Seagate 4TB ST4000VN008 hard drive(s) in read/write state)
	19.5 W (Fully loaded Seagate 4TB ST4000VN008 hard drive(s) in hibernation)
Limited warranty	2 years
Certificate	FCC, CE, CCC, KC
Environment	RoHS, WEEE
Temperature	
Working Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 60°C (-5°F ~ 140°F)
Relative Humidity	5% ~ 95% RH
Package Contents	
	Host unit (x1)
	Power cord (x1)
	Power Adapter(x1)
	RJ-45 network cable (x1)
	Quick Installation Guide (x1)
	Limited Warranty Note(x1)
	Screws(a few)

TOS Features	
OS Supported	
Supported Client OS	Windows OS, Mac OS, Linux OS
Supported Web Browsers	Google Chrome 97.0.xxxx, Mozilla Firefox 9.3, Apple Safari 12.1; Microsoft Edge 99.0.xx or later version.
Supported mobile OS	iOS14.0, Android 10.0 or later version
Storage Management	
Supported RAID Types	TRAIAD, TRAIAD+, Single, JBOD, RAID 0, RAID 1, RAID5, RAID 6, RAID 10
Maximum Internal Volume Number	256
Maximum iSCSI Target	128
Maximum iSCSI LUN	256
Volume Expansion with Larger HDDs	TRIAD, TRAIAD+, RAID 1, RAID5, RAID 6, RAID10
Volume Expansion by Adding a HDD	TRIAD, TRAIAD+, RAID5, RAID6
RAID Migration	√
SSD Cache	√
Hot Spare	√
SSD TRIM	√
Hard Drive S.M.A.R.T.	√
Seagate IHM	√
NVRAM write cache (BBU-protected)	/
Shared Folder Snapshot	√
LUN Snapshot	/
File Services	
File Protocol	SMB/AFP/NFS/FTP/SFTP/WebDAV
Maximum Concurrent SMB/AFP/FTP/SFTP Connections	512
Windows Access Control List (ACL) Integration	√
NFS Kerberos Authentication	√
Account & Shared Folder	
Maximum local user's account number	2048
Maximum local group number	512
Maximum shared folders number	512
Maximum shared folders syncing tasks	8
Backup	

Rsync Backup	√
Duple Backup	√
Centralized Backup	√
Snapshot	√
USB Backup	√
Cloud Sync	√
Time Machine Backup	√
File System Snapshot	√
TFM Backup	√
Networking	
TCP/IP	IPv4/IPv6
Protocols	CIFS/SMB, NFS, FTP, SFTP, HTTPS, SSH, iSCSI, SNMP
Link Aggregation	√
DLNA Compliance	√
VPN Client	√
VPN Server	√
Proxy Client	√
Proxy Server	/
UPnP/Bonjour Discovery	√
TNAS.online Remote Access	√
DDNS	√
Access Right Management	
Batch users creation	/
Import/Export users	√
User Quota Management	√
Local user access control for CIFS/SAMBA and FTP	√
Domain Authentication	
AD Domain	√
LDAP Client	√
LDAP Server	/
Security	
Firewall Protection	√
Account Auto-block Protection	√
AES Volume and Shared Folder Encryption	√
Importable SSL certificate	√
Instant Alert via email, Desktop Notification, Beep	√
RSA 2048 Encryption (TOS 7)	√
PAM (Pluggable Authentication Modules)	√
OTP Authentication (TOS 7)	√
HyperLock File System (TOS 7)	√

Power Management	
Power Resume	√
Scheduled Power On/Off	√
Wake up On LAN (WOL)	√
UPS Supported	√
Administration	
Multi-window, Multi-task System Management	√
Custom Desktop	√
Control Panel	√
Resource Monitor	√
Syslog	√
OS UI Language	English, German, French, Spanish, Italian, Magyar, Chinese, Japanese, Korean, Turkish, Portuguese, Russian
Applications	
Application Center	√
iSCSI Target	√
Terra Photos	√
TerraSync	√
Duple Backup	√
CloudSync	√
Centralized Backup	√
USB Backup	√
VPN Server	√
Transmission	√
qBittorrent	√
Aria 2	√
Terra Search	√
Surveillance Manager	√
Web Server	√
Clam Antivirus	√
EMBY	√
Multi Media Server	√
Plex Media Server	√
Docker Manager	√
Snapshot	√

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