

TerraMaster F2-423

2-Bay High Performance NAS

Datasheet



The 2-Bay F2-423 is suitable for SMB users who need high-performance storage solutions. High performance means that users can easily handle high-load assignments, while multiple business-level backup solutions guarantee user' data safety and prevent the potential risk of data loss.

Excellent Performance

This is a high-performance storage solution for iSCSI virtual storage and database service for SMB users. It uses an Intel Celeron N5105/5095 quad-core processor with 2.0 GHz and maximum turbo to 2.9 GHz. It is integrated with a GPU graphics card, AES NI hardware encryption, and equipped with two 2.5 GbE interfaces and 4 GB DDR4 dual-channel memory (expandable up to 32 GB).

The Ideal Choice for SMB' Data Management

The F2-423 can deal with high-load workflow and a high level of concurrent user access. Rapid document storage and management are facilitated by high-speed document retrieval, efficient transmission performance, and rich TerraMaster disaster backup and recovery solutions.

Higher Transmission Speed

The F2-423 is configured with two 2.5 GbE interfaces, supporting 2.5 GbE high-speed network bandwidth. The transmission speed can reach 283 MB/s (Seagate IronWolf 18TB x 4, RAID 0) . Link Aggregation provides a network bandwidth up to 5 Gb, thus providing a cost-effective solution for multi-user and high-concurrent file access.

High Speed Network and Flexible Extension

The F2-423 is configured with two 2.5 GbE interfaces. Link Aggregation provides a network bandwidth up to 5 Gb. The built-in M.2 NVMe slot realizes SSD cache acceleration and significantly increases the storage efficiency of the disk array. To meet performance enhancement expansion requirements, the memory can be extended to as large as 32 GB.

Small-sized Compact Design

Structural optimization has remarkably reduced the space occupied by the F2-423, thus realizing product miniaturization. By adopting both vertical and horizontal designs, the F2-423 better satisfies the usage requirements of small-sized business users with limited space.

Very Quiet

It is essential that a desktop NAS is very quiet. The F2-423 has a high-quality silent fan and optimized internal structure, which increases the equipment's internal wind pressure and

reduces the working temperature of the hard disk. This remarkably reduces resonance between the equipment components and the hard disk, so even in a full-load working environment, the F2-423 maintains a low-noise performance.

Flexible Configuration and Management of Disk Arrays

The F2-423 supports rich RAID types, which can be selected based on your data access and data protection level requirements. Hot Spare can be configured for the disk array and any of the following array types can be chosen according to the number of hard disks: Single, RAID 0, 1, 5, 6, 10. To reduce the risk of material loss and ensure important materials are kept, the F2-423 supports online capacity expansion and online migration of RAID array.

Across-Platform File Management and Sharing

Supporting most of file services (SMB, AFP, SFTP/FTP, iSCSI, NFS, and WebDAV), the F2-423 can fully satisfy file management requirements in different network environments.

TerraMaster's web file management tool, File Manager, is easily operated with visualized interfaces, while its classification and search functions can make it simple to organize and share data.

Enhance the Safety of your Data with a Superior File System

Superior storage technology and optimized snapshot technology are the cornerstones of the Btrfs file system, which is what TerraMaster's F2-423 relies on for advanced data protection, the prevention of data corruption, and minimal maintenance expenses. This file system promotes high data integrity while promoting flexibility and efficiency in the areas of data protection and recovery. The Btrfs file system features data recovery capabilities at the file or folder level for faster data recovery and greater flexibility for businesses.

Virtualization Storage Solutions

TerraMaster iSCSI supports VMware vSphere and Windows Hyper-V virtualization storage solutions. The simple management interface enhances working efficiency and optimizes calculation efficiency, as well as facilitating the shunt of storage operations.

Multiple Backup Solutions

Integrated with multiple backup applications, the F2-423 uses visual user interfaces and reliable storage technologies to protect your precious data.

Centralized Backup: Backups for virtual machines, employees' PCs, and file servers are managed centrally, facilitating the rapid restoration of data after an incident.

Duple Backup: To provide several offsite backup versions, Duple Backup offers advanced data protection by backing up files to another remote TNAS, file server, or cloud drive.

Snapshot: Take continuous snapshots of your folders or iSCSI LUNs by enabling snapshot schedule. When a disaster occurs, it can roll back to points-in-time and restore to the last backup, ensuring your data is well protected.

CloudSync: Back up your data to a mainstream cloud drive to provide remote backup versions, making your data more secure.

Striving to Satisfy Small and Medium-sized Businesses

Business users can easily build file storage servers, mail servers, web servers, FTP servers, MySQL databases, CRM systems, Node.js, and Java virtual machines, as well as a host of other commercial applications.

Panel Illustration:



| SN | Item | Item |
|----|------------------------------|--|
| ① | Hard drive tray | 3.5" SATA HDD; 2.5" SATA HDD; 2.5" SATA SSD |
| ② | Hard drive indicator | Red: Hard drive failure Green: Normal operation status Green (flickering): Reading/writing data Off: No hard drive detected |
| ③ | Network indicator | Green: Network connection is normal Off: Network disconnected |
| ④ | Power switch/Power indicator | On: Power on Off: Power off |

Rear Cover Illustration:

| SN | Item | Description |
|----|-------------------|---|
| ④ | Power interface | DC 12V input |
| ⑥ | Network interface | 2.5G/1000M/100M bps network interface |
| ⑦ | USB 3.1 host (x2) | Use to connect USB storage device or USB wireless adaptor |
| ⑧ | HDMI interface | For displaying the software codes or commands, not for video playing. |

Specifications:

| Hardware | |
|---------------------------------------|--|
| Processor | |
| Processor Model | Intel® Celeron® N5105/N5095 |
| Processor Architecture | X.86 64-bit |
| Processor Frequency | Quad Core 2.0 GHz (Max burst up to 2.9 GHz) |
| Hardware Encryption Engine | √ |
| Hardware Transcoding Engine | H.265 (HEVC), MPEG-4 Part 2, MPEG-2, VC-1; maximum resolution: 4K (4096 x 2160); maximum frame rate per second (FPS): 60 |
| Memory | |
| System Memory | 4GB |
| Pre-installed Memory module | 1 |
| Total Memory Slot Number | 2 |
| Maximum Supported Memory | 32 GB (16 GB + 16 GB) |
| 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 | 2 |
| Compatible Drive types | 3.5" SATA HDD |
| | 2.5" SATA HDD |
| | 2.5" SATA SSD |
| Maximum Internal Raw Storage Capacity | 40TB (20TB x 2) (Capacity may vary by RAID types) |
| Max Single Volume | 108TB |
| 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 | EXT4,BTRFS |
| External Drive | EXT3, EXT4, NTFS, FAT32, HFS+ |
| External Ports | |
| RJ-45 2.5GbE Network Jack | 2 |

| | |
|-------------------------|---|
| USB 3.1 Port | 2 (Type-A USB 3.1 Gen2) |
| HDMI | 1 |
| M.2 NVMe Slot | 2 (PCIe3.0 x1) |
| Appearance | |
| Size | 227 x 119 x 133 mm |
| Packaging Size | 258 x 220 x 170 mm |
| Weight | Net Weight: 1.5 Kg Gross Weight: 2.4 Kg |
| Others | |
| System Fan | 80 mm x 80 mm x25mm 1 PCS |
| Fan Mode | Smart, High speed, Middle speed, Low speed |
| Noise Level | 26.4 dB(A) (Fully loaded Seagate 4TB ST4000VN008 hard drive(s) in idle state) |
| Power Supply | 40 W |
| AC Input Voltage | 100V - 240V AC |
| Current Frequency | 50/60 Hz, single frequency |
| Power Consumption | 22.1 W (Fully loaded Seagate 4TB ST4000VN008 hard drive(s) in read/write state) |
| | 11.4 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 | 5°C ~ 40°C (40°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 | iOS 12.0, Android 8.0 or later version |
| Storage Management | |
| Supported RAID Types | Single, JBOD, RAID 0, RAID 1, RAID5, RAID 6, RAID10 |
| Maximum Internal Volume Number | 256 |
| Maximum iSCSI Target | 128 |
| Maximum iSCSI LUN | 128 |
| Volume Expansion with Larger HDDs | RAID 1, RAID5, RAID 6, RAID10 |
| Volume Expansion by Adding a HDD | / |
| RAID Migration | √ |
| SSD Cache | √ |
| Hot Spare | √ |
| SSD TRIM | √ |
| Hard Drive S.M.A.R.T. | √ |
| Seagate IHM | √ |
| NVRAM write cache(BBU-protected) | / |
| WORM(Write Once Read Many) | / |
| Shared Folder Snapshot | √ |
| LUN Snapshot | / |
| Storage QoS For Shared Folder | / |
| File Services | |
| File Protocol | SAMBA/AFP/NFS/FTP/WebDAV |
| Maximum Concurrent SAMBA/AFP/FTP Connections | 500 |
| 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 Server | √ |

| | |
|--|---|
| Rsync Backup | √ |
| Schedule Backup | √ |
| USB Device Backup | √ |
| Cloud Sync | √ |
| Time Machine Server | √ |
| File System Gluster | / |
| Networking | |
| TCP/IP | IPv4/6 |
| Protocols | CIFS/SAMBA, NFS, FTP, TFTP, HTTPS, SSH, iSCSI, SNMP, SMTP |
| Link Aggregation | √ |
| DLNA Compliance | √ |
| VPN Client | √ |
| VPN Server | √ |
| Proxy lien | √ |
| 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 | |
| Microsoft Active Directory | √ |
| LDAP Client | √ |
| LDAP Server | √ |
| SSO | √ |
| Security | |
| Firewall Protection | √ |
| Account Auto-block Protection | √ |
| AES Volume and Shared Folder Encryption | √ |
| Importable SSL certificate | √ |
| Instant Alert via email, SMS, Beep | √ |
| Power Management | |

| | |
|--|--|
| Automatic Power On After Power Recovery | √ |
| Scheduled Power On/Off | √ |
| Wakeup On LAN | √ |
| UPS Supported | √ |
| Administration | |
| Multi-window, Multi-task System Management | √ |
| Custom Desktop | √ |
| Control Panel | √ |
| Resource Monitor | √ |
| Sys log | √ |
| OS UI Language | English, German, French, Spanish, Italian, Magyar, Chinese, Japanese, Korean, Turkish, Portuguese, Russian |
| Applications | |
| Application Center | √ |
| Mail Server | √ |
| Web Server | √ |
| Clam Antivirus | √ |
| Download | √ |
| Multi Media Server | √ |
| Docker | √ |
| Plex Media Server | √ |
| Snapshot | √ |

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