Synology DiskStation DS411+

High-Performance & Easy to Manage 4-bay All-in-1 NAS Server for SMB Users

Synology® DiskStation DS411+ is specifically designed for small and medium-sized businesses who need a high-performance, easy to manage, and full-featured network attached storage solution to centralize data backups, protect critical assets and share files across different platforms. Synology protects your investment in the DS411+ with a 2-year limited warranty.

Highlights

- 112.99 MB/sec Reading 106.91 MB/sec Writing[1]
- Power-saving with only 60W in Operation
- Wake on LAN/WAN
- Scheduled Power On/Off
- Hard Drive Hibernation
- Includes Feature-Rich Synology DiskStation Manager 2.3 (DSM 2.3)

High Performance

The Synology DS411+ is designed for business users who require a reliable storage solution and demand high-performance for file sharing. The Synology DS411+ delivers an average 112.99 MB/sec reading and 106.91 MB/sec writing speeds under RAID 5 configuration in a Windows® environment.

Easy Setup and Management

For users who are limited on time or may not be familiar with configuring complicated routers, the Synology EZ-Internet Wizard simplifies the process of allowing access to the Synology DS411+ from the Internet. The EZ-Internet Wizard walks the user through all of the settings required including firewall settings, port-forwarding, PPPoE setup and DDNS registration for a hassle-free solution to remote access.

Running on AJAX technology, DiskStation Manager's UI is intuitive and easy-to-use. To save time and minimize redundancy, common tasks are automated, such as creating private shared folders for a large number of users with the User Home feature. Sub-folder privilege settings further extend the flexibility to allocate permissions to different workgroups.

Synology DiskStation Manager now also offers the ability to customize the management UI for end-users or specific projects.

Flexible RAID Management

The Synology Hybrid RAID (SHR) automatically builds an optimal RAID volume with data protection based on the hard drives installed, eliminating the need to have hard drives of identical size, while still offering a manual setup option for advanced users.

Complete Backup Solutions

The Synology DS411+ offers a centralized backup target to consolidate fragmented and unstructured data across the network. Integrating easily into a current network structure and compatible with Windows®, Mac®, and Linux systems, the DS411+ provides the entire office data redundancy and protection. PC Users can back up their data to the Synology DS411+ using the free Synology Data Replicator software, while Mac OS X users enjoy native Apple® Time Machine® integration. A backup wizard is also provided for backing up data in the DS411+ to another Synology DiskStation or any rsync server via an encrypted transmission, or to an external hard drive via USB or eSATA connection. Furthering options, the wizard also makes it easy to backup to the cloud via Amazon® S3.

Full-featured Business Applications

The Synology DS411+ runs on the renowned system firmware, Synology DSM 2.3, offering applications and features designed specifically for SMBs. Comprehensive network protocol support assures seamless file sharing across Windows®, Mac®, and Linux® platforms. Windows® ADS integration allows the Synology DS411+ to quickly and easily fit in an existing business network environment with no need to recreate user accounts.

Internet file access is simplified with the included encrypted FTP server and the web-based file explorer, Synology File Station 3. HTTPS, the built-in firewall, and IP auto-block support ensure file sharing over the Internet is protected at a high security level.

A wealth of additional features allows the Synology DS411+ to replace several pieces of network hardware. Synology Web Station with support for PHP/MySQL content allows for the hosting of up to 30 websites on a single Synology DS411+. Synology Surveillance Station offers a centralized interface to safeguard the office environments by deploying IP cameras throughout the network. The Mail Station add-on turns a Synology DS411+ into a mail server with only few steps of installation and the USB printer sharing capability minimizes businesses' printing cost by sharing printing resources throughout the office.

Using the NFS protocol or iSCSI target support within DiskStation Manager 2.3, the Synology DS411+ provides seamless serving with Windows, Linux, or Virtual Machine Servers.
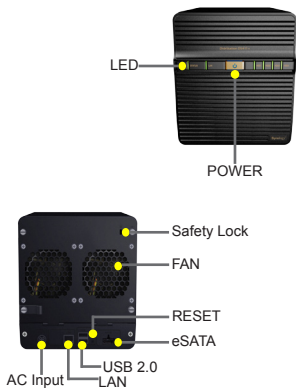
DSM 2.3 users are encouraged to develop and install third-party applications on the Synology DS411+. Meanwhile, a list of third-party applications that were tested by Synology is available for users to install on the Synology DS411+.

Energy Efficient Design

Synology DiskStations are designed and developed with energy efficiency in mind. Compared with the average PC counterparts, the Synology DS411+ consume relatively low amount of power at 60 watts only in operation. The support of Wake on LAN/WAN, scheduled power off and hard drive hibernation can further reduce power consumption and operation cost.

All Synology products are produced with RoHS compliant parts and packed with recyclable packing materials. Synology acknowledges the responsibility as a global citizen to continually work to reduce the environmental impact of every product produced.

CONNECTIONS & BUTTONS

LED

POWER

Safety Lock

FAN

RESET

eSATA

USB 2.0

AC Input

LAN

Technical Specifications

Hardware

- CPU: Intel® Atom™ D510, Dual Core 1.67 GHz
- RAM Size: DDR2 1 GB (64bit@DDR800)
- Internal HDD[2] : 4X 3.5" SATA(II) or 4X 2.5" SATA/SSD
- External HDD Interface: 2X USB ports, 1X eSATA port
- Size: 168mm X 184mm X 230mm
- Weight: 2.23kg
- LAN: 1X Gigabit

- Wireless Support[3]
- Fan: 2X (80mm X 80mm)
- Noise Level[4] : 22.5dB(A)
- Power Recovery
- AC Input Power Voltage: 100V to 240V
- Power Frequency: 50Hz to 60Hz, Single Phase
- Max Internal Capacity: 12TB (4X 3TB hard drives)[5]

- Operating Temperature: 5°C to 35°C (40°F to 95°F)
- Storage Temperature: -10°C to 70°C (15°F to 155°F)
- Relative Humidity: 5% to 95% RH
- Max Operating Altitude: 10,000 feet
- Power Consumption[6]: 60W (Access); 19.8W (HDD Hibernation)
- Certification: FCC Class, CE Class B, BSMI Class B

Applications

File Station 3

FTP Server
- Bandwidth Control
- Custom FTP Passive Port Range
- Anonymous FTP
- Transfer Log

Web Station
- Virtual Host (up to 30 websites)
- PHP/MySQL
- Alternative HTTP Error Page
- 3rd-Party Applications Support

Surveillance Station 4
- Default IP cam #: 1
- MAX IP cam # (licenses required): 20[7]

Photo Station 4
- Supported Image Format: BMP, JPG (jpe, jpeg), GIF, RAW (arw, srf, sr2, dcr, k25, kdc, cr2, crw, nef, mrw, ptx, pef, raf, 3fr, erf, mef, mos, orf, rw2, dng, x3f)
- Supported Video Format[8]: 3G2, 3GP, ASF, AVI, DAT, DivX, FLV, M4V, MOV, MP4, MPEG, MPG, QT, WMV, XviD, RM, RMVB, VOB, RV30, RV40, AC3, AMR, WMA3

Download Station 2
- Supported Download Protocols: BT/HTTP/FTP/NZB/eMule
- Custom BitTorrent Port Range
- BitTorrent / eMule Bandwidth Control

Audio Station 2
- Supported Audio Format: (USB Mode) AAC, FLAC, M4A, MP3, Ogg Vorbis, WMA, WMA VBR; (Streaming Mode) MP3, M4A, M4B
- Supported Playlist Format: M3U, WPL
- Internet Radio: SHOUTcast, Radioio

DLNA/UPnP Media Server Support
- PS3/Xbox 360 Support
- Supported Audio Format: AAC, FLAC, M4A, MP3, Ogg Vorbis, PCM, WAV, WMA, WMA VBR, WMA PRO, WMA Lossless
- Supported Video Format: 3GP, 3G2, ASF, AVI, DAT, DivX, DVR-MS, ISO, M2T, M2TS, M4V, MKV, MP4, MPEG1, MPEG2, MPEG4, MTS, MOV, QT, SWF, TP, TRP, TS, VOB, WMV, XviD, RV30, RV40, AC3, AMR, WMA3
- Supported Image Format: BMP, JPG (jpe, jpeg), GIF, ICO, PNG, PSD, TIF (tiff), UFO, RAW (arw, srf, sr2, dcr, k25, kdc,

cr2, crw, nef, mrw, ptx, pef, raf, 3fr, erf, mef, mos, orf, rw2, dng, x3f)
- Supported Subtitles Format: srt, psb, smi, ass, ssa, sub, idx, ifo

iTunes Server
- Supported Audio Format[9]: MP3, M4A, M4P, WAV, AIF
- Supported Video Format: M4V, MOV, MP4
- Supported Playlist Format: M3U, WPL

Printer Support[10]
- Max Printer #: 2
- Supported Protocols: LPR, CIFS, AppleTalk

Synology Packages
- Mail Station
- SqueezeCenter
- Weblizer
- phpMyAdmin

iPhone Applications
- DS photo
- DS audio
- DS cam

General Specifications

Networking Protocols
- CIFS, AFP, FTP, iSCSI, Telnet, SSH, NFS, SNMP

File System
- EXT3
- FAT32 (External Disk Only)[11]
- NTFS (External Disk Read Only)[12]

Volume Management
- Synology Hybrid RAID
- iSCSI Target (Max size: 24TB):32
- Volume Type: Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 5+Spare, RAID 6, RAID 10
- RAID Migration: from Basic to RAID 1, Basic to RAID 5, Basic to RAID 5+Spare, RAID 1 to RAID 5, RAID 1 to RAID 5+Spare, RAID 5 to RAID 5+Spare, RAID 5 to RAID 6
- Expand RAID 1, RAID 5, RAID 5+Spare or RAID 6 with Larger Hard Drives
- Expand RAID 5, RAID 5+Spare or RAID 6 by adding a Hard Drive On The Fly

File Sharing Capability
- Max User Account: 2048
- Max Group: 256
- Max Shared Folder: 256
- Max Concurrent Connections (SAMBA, FTP, AFP): 512

Windows ADS Domain Integration
- Domain Users login via Samba/AFP/FTP/File Station

Backup Solutions
- Network Backup
- Local Backup
- Desktop Backup (using Synology Data Replicator 3 or Apple Time Machine backup application)
- 3rd-Party Backup Support

Security
- FTP over SSL/TLS
- IP Auto-Block
- Firewall
- Encrypted Network Backup over rsync
- HTTPS Connection

Management
- Firmware
- Email Notification
- SMS Notification
- Customized User Quota
- DDNS Support
- PPPoE
- Resource Monitor
- UPS Management
- Scheduled Power On/Off
- Custom Management UI HTTP/HTTPS Ports

HDD Management
- HDD Hibernation
- S.M.A.R.T.
- Dynamic Bad Sector Mapping

Utilities
- Synology Assistant
- Synology Download Redirector
- Synology Data Replicator 3

Supported Browsers
- Internet Explorer 7
- Internet Explorer 8
- Firefox 3
- Firefox 3.5
- Safari 3 (Mac)
- Safari 4 (Mac)

Supported Clients
- Windows 2000 onward
- Mac OS X 10.3 onward
- Linux

Supported Mobile Devices (Photo Station, File Station)
- iPhone OS 2.2.1 onward
- Windows Mobile (IE Mobile or Opera 9.0 onward)
- Symbian OS 9.1, S60 3rd Edition onward

Language
- Czech, Danish, Dutch, English, French, German, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese Brazil, Portuguese European, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, Turkish

Environment and Packaging

Environment
- RoHS Compliant

Package Content
- DS411+ Main Unit

- Installation CD
- Welcome Note
- Assembling Kit
- AC Power Adaptor
- AC Power Cord

- 2M RJ-45 LAN Cable

Optional Accessories
- Remote
- Camera License Pack

1. The performance figures are achieved in Synology lab by using very powerful client computers with extremely optimized network settings, and could vary on different environments. A regular desktop/notebook may not be able to achieve these high performance figures.
2. Hard drive not included.
3. Wireless dongles not included. Please check http://www.synology.com/ for supported wireless dongles
4. Fully loaded with Seagate 1TB ST31000520AS hard drive(s)

in operation; Two G.R.A.S. Type 40AE microphones, each set up at 1 meter away from the DiskStation front and rear; Background noise: 17.2 dB(A); Temperature: 23.6°C; Humidity: 58.2%; More details about dB(A) value, check: http://www.quietnoise.com/facts.htm
5. The actual capacity will differ according to volume types.
6. Measured with 4 Seagate 750GB ST3750640NS hard drive. The figures could vary on different environments.
7. 1 free license to install 1 IP camera. Additional licenses can be

purchased to expand the license quota.
8. User can click and download the following video formats: RM, RMVB, VOB, RV30, RV40, AC3, AMR, WMA3, but not able to play it in Photo Station as compressed Flash video.
9. The music in WAV and AIF format can be streamed, but the metadata (ex: title, album) may not be indexed on the iTunes.
10. For Mac users, DS411+ supports PostScript USB printers only.
11. Primary partition only.
12. Primary partition only.

Networking

External Disk

DS411+

USB Printer

DS411+

Wireless Router

Windows ADS Server

PC / Mac / Linux

PC / Mac / Linux

IP Camera

http://www.synology.com