

Product

**RS822+**



## Hardware Specs

CPU	
CPU Model	AMD Ryzen V1500B
CPU Quantity	1
CPU Core	4
CPU Architecture	64-bit
CPU Frequency	2.2 GHz
Hardware Encryption Engine	v
Memory	
System Memory	2 GB DDR4 ECC SODIMM
Memory Module Pre-installed	2 GB (2 GB x 1)
Total Memory Slots	2
Maximum Memory Capacity	32 GB (16 GB x 2)
Notes	<ul style="list-style-type: none"><li>• Synology 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.</li><li>• Please select Synology memory modules for optimum compatibility and reliability. Synology will not provide complete product warranty or technical support if non-Synology memory modules are used for memory expansion.</li><li>• For more information about the recommended memory configurations, please check the <a href="#">Hardware Installation Guide</a> of your Synology product.</li></ul>
Storage	
Drive Bays	4

Maximum Drive Bays with Expansion Unit	8 (RX418 x 1)
Compatible Drive Type* ( <a href="#">See all supported drives</a> )	<ul style="list-style-type: none"> <li>• 3.5" SATA HDD</li> <li>• 2.5" SATA SSD</li> </ul>
Hot Swappable Drive*	v
Notes	<ul style="list-style-type: none"> <li>• "Compatible drive type" indicates drives that have been tested to be compatible with Synology products. This term does not indicate the maximum connection speed of each drive bay.</li> <li>• The maximum raw capacity is not limited by the maximum single volume size. Synology NAS models may utilize capacities over the maximum single volume size as long as each volume created is below the limit. (<a href="#">Learn more</a>)</li> </ul>

## External Ports

RJ-45 1GbE LAN Port	4
USB 3.2 Gen 1 Port*	2
Expansion Port	1
Expansion Port Type	eSATA
Notes	<ul style="list-style-type: none"> <li>• This device's 1GbE LAN ports have a maximum transmission unit (MTU) size of 1,500 bytes.</li> <li>• The USB 3.0 standard was renamed to USB 3.2 Gen 1 by the USB Implementers Forum (USB-IF) in 2019.</li> </ul>

## PCIe

PCIe Expansion	1 x Gen3 x8 slot (x4 link)
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## Appearance

Form Factor (RU)	1U
Size (Height x Width x Depth)	44 mm x 480 mm x 492.6 mm
Weight	6.4 kg

Rack Installation Support*	4-post 19" rack (Synology Rail Kit - <a href="#">RKM114/RKS-02</a> )
Notes	The rail kit is sold separately
Others	
System Fan	40 mm x 40 mm x 3 pcs
Fan Speed Mode	<ul style="list-style-type: none"> <li>• Full-Speed Mode</li> <li>• Cool Mode</li> <li>• Quiet Mode</li> </ul>
Power Recovery	v
Noise Level*	27.4 dB(A)
Scheduled Power On / Off	v
Wake on LAN / WAN	v
Power Supply Unit / Adapter	150 watts
AC Input Power Voltage	100 V to 240 V AC
Power Frequency	50/60 Hz, Single Phase
Power Consumption	47.69 watts (Access) 16.7 watts (HDD Hibernation)
British Thermal Unit	162.83 BTU/hr (Access) 57.02 BTU/hr (HDD Hibernation)
Notes	<ul style="list-style-type: none"> <li>• For more information on how power consumption is measured, refer to <a href="#">this article</a>.</li> <li>• Noise testing was conducted with the Synology system fully installed with Synology SATA HDDs and in an idle state. Two G.R.A.S. Type 40AE microphones are placed at a 1 m distance from the front and rear of the device. Background noise: 16.49-17.51 dB(A); Temperature: 24.25-25.75°C; Humidity: 58.2-61.8%</li> </ul>
Temperature	
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

## Certification

- FCC
- CE
- BSMI
- VCCI
- RCM
- UKCA
- EAC
- CCC
- KC
- UL

## Warranty

3-year hardware warranty, extendable to 5 years with [EW202](#) or [Extended Warranty Plus](#)

### Notes

- The warranty period starts from the purchase date as stated on your purchase receipt. ([Learn more](#))
- [Extended Warranty Plus](#) is only available in Europe and North America. [EW201/EW202](#) is only available in Asia, Africa, and Oceania. For exact availability information please visit their respective websites.

## Environment

RoHS Compliant

## Packaging Content

- Main Unit X 1
- Accessory Pack X 1
- AC Power Cord X 1
- Quick Installation Guide X 1

## Optional Accessories

- DDR4 ECC SODIMM: [D4ES02-4G/D4ES02-8G/D4ES01-16G](#)
- Expansion Units: [RX418](#)
- Enterprise Series 3.5" SATA HDD: [HAT5300 Series](#)
- Plus Series 3.5" SATA HDD: [HAT3300 Series](#)
- Enterprise Series 2.5" SATA SSD: [SAT5200 Series](#)
- M.2 SSD & 10GbE Combo Adapter Card: [E10M20-T1](#)
- M.2 SSD Adapter Card: [M2D20/M2D18](#)
- 25GbE Network Interface Card: [E25G30-F2](#)
- 10GbE Network Interface Card: [E10G21-F2/E10G30-T2/E10G18-T1](#)
- Rail Kit Sliding: [RKS-02](#)
- Rail Kit Mounted: [RKM114\\*](#)

Notes	<ul style="list-style-type: none"> <li>• Certain items may not be available in your location. Please contact your local distributors for more information.</li> <li>• Upgrade to DSM 7.2-64551 or later before installing the M2D18.</li> <li>• All memory modules will operate at the maximum frequency specified by the CPU manufacturer.</li> </ul>
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## Software Specs

### DSM Specifications

Storage Management	
Maximum Single Volume Size	108 TB
Maximum Internal Volume Number	64
SSD Read/Write Cache ( <a href="#">Determining cache size</a> )	v
SSD TRIM	v

Supported RAID Type	<ul style="list-style-type: none"> <li>• Synology Hybrid RAID</li> <li>• Basic</li> <li>• JBOD</li> <li>• RAID 0</li> <li>• RAID 1</li> <li>• RAID 5</li> <li>• RAID 6</li> <li>• RAID 10</li> </ul>
RAID Migration	<ul style="list-style-type: none"> <li>• Basic to RAID 1</li> <li>• Basic to RAID 5</li> <li>• RAID 1 to RAID 5</li> <li>• RAID 5 to RAID 6</li> </ul>
Volume Expansion with Larger HDDs	<ul style="list-style-type: none"> <li>• Synology Hybrid RAID</li> <li>• RAID 1</li> <li>• RAID 5</li> <li>• RAID 6</li> <li>• RAID 10</li> </ul>
Volume Expansion by Adding a HDD	<ul style="list-style-type: none"> <li>• Synology Hybrid RAID</li> <li>• JBOD</li> <li>• RAID 5</li> <li>• RAID 6 (with Expansion Unit)</li> </ul>
Global Hot Spare Supported RAID Type	<ul style="list-style-type: none"> <li>• Synology Hybrid RAID</li> <li>• RAID 1</li> <li>• RAID 5</li> <li>• RAID 6 (with Expansion Unit)</li> <li>• RAID 10 (with Expansion Unit)</li> </ul>
Notes	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Each internal volume (may consist of multiple drives) is expandable up to 108TB.</li> </ul>
File System	
Internal Drives	<ul style="list-style-type: none"> <li>• Btrfs</li> <li>• ext4</li> </ul>

External Drives	<ul style="list-style-type: none"> <li>• Btrfs</li> <li>• ext4</li> <li>• ext3</li> <li>• FAT</li> <li>• NTFS</li> <li>• HFS+</li> <li>• exFAT</li> </ul>
<b>File Services</b>	
File Protocol	<ul style="list-style-type: none"> <li>• SMB</li> <li>• AFP</li> <li>• NFS</li> <li>• FTP</li> <li>• WebDAV</li> <li>• Rsync</li> </ul>
Maximum Concurrent SMB/AFP/FTP Connections	500
Maximum Concurrent SMB/AFP/FTP Connections (with RAM expansion)	2,000
Windows Access Control List (ACL) Integration	v
NFS Kerberos Authentication	v
Notes	<ul style="list-style-type: none"> <li>• Regarding data concerning tests with RAM expansion, all memory slots are installed with the maximum capacity of supported RAM.</li> <li>• 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 connections were not interrupted; the minimum transfer speed was not guaranteed.</li> </ul>
<b>Account &amp; Shared Folder</b>	
Maximum Local User Accounts	2,048
Maximum Local Groups	256



Maximum Shared Folder	512
Maximum Shared Folder Sync Tasks	16
<b>Hybrid Share</b>	
Maximum Hybrid Share Folders	10
<b>Hyper Backup</b>	
Folder and Package Backup	v
Entire System Backup	v
Notes	Full-system backup requires DSM 7.2 or later.
<b>High Availability</b>	
Synology High Availability	v
<b>Log Center</b>	
Syslog Events per Second	800
<b>Virtualization</b>	
VMware ESXi 6.5 and VAAI	v
Windows Server 2016	v
Windows Server 2022	v
Citrix Ready	v
OpenStack	v
<b>General Specifications</b>	
Supported Protocols	SMB1 (CIFS), SMB2, SMB3, NFSv3, NFSv4, NFSv4.1, NFS Kerberized sessions, iSCSI, HTTP, HTTPs, FTP, SNMP, LDAP, CalDAV

Supported Browsers	<ul style="list-style-type: none"> <li>• Chrome</li> <li>• Firefox</li> <li>• Edge</li> <li>• Safari</li> </ul>
Supported Language	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svenska, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文
Notes	For an updated list of supported browser versions, check the <a href="#">DSM Technical Specifications</a> .

## Add-on Packages [view the complete package list](#)

### Antivirus by McAfee (Trial)

v

### Central Management System

v

### Synology Chat

Suggested Concurrent Users	150
Notes	<ul style="list-style-type: none"> <li>• Measured with simulated users, each with an average record of 20,000 messages, emojis, or stickers. The required server response time is below ten seconds.</li> <li>• For tested models with expandable memory, the maximum amount of RAM was installed.</li> </ul>

### Download Station

Maximum Concurrent Download Tasks	80
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### SAN Manager

Maximum iSCSI Target Number	128
Maximum LUN	256

LUN Clone/Snapshot, Windows ODX	v
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## Synology MailPlus / MailPlus Server

Free Email Accounts	5 (Additional accounts require purchase of licenses)
Suggested Maximum Users	750
Suggested Concurrent Users	150
Maximum Server Performance	1,484,000 emails per day, approx. 45GB
Notes	<ul style="list-style-type: none"> <li>Models with more than 4 bays were installed with two SSDs for SSD cache.</li> <li>For tested models with expandable memory, the maximum amount of RAM was installed.</li> <li>The performance of the mail system will slightly decrease in high-availability mode due to data synchronization between the two servers.</li> <li>Functions that were enabled in all of the tests above: anti-spam, anti-virus, DNSBL, greylist, content scan, full-text search (English only).</li> </ul>

## Media Server

DLNA Compliance	v
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## Synology Photos

Facial Recognition	v
Object Recognition	v
Notes	Object recognition requires an upgrade of memory capacity to a minimum of 4 GB.

## Snapshot Replication

Maximum Snapshots per Shared Folder	1,024
Maximum of System Snapshots	65,536

## Surveillance Station

Default Licenses	2 ( <a href="#">Additional cameras require purchase of licenses</a> )
Suggested Maximum IP Cameras and Total FPS (H.264)	<ul style="list-style-type: none"><li>• 720p: 40 channels, 1200 FPS</li><li>• 1080p: 40 channels, 800 FPS</li><li>• 3M: 35 channels, 350 FPS</li><li>• 5M: 28 channels, 280 FPS</li><li>• 4K: 17 channels, 170 FPS</li></ul>
Suggested Maximum IP Cameras and Total FPS (H.265)	<ul style="list-style-type: none"><li>• 720p: 40 channels, 1200 FPS</li><li>• 1080p: 40 channels, 1200 FPS</li><li>• 3M: 40 channels, 600 FPS</li><li>• 5M: 40 channels, 480 FPS</li><li>• 4K: 20 channels, 200 FPS</li></ul>
Notes	<ul style="list-style-type: none"><li>• 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.</li><li>• Use <a href="#">NVR Selector</a> to quickly find a suitable model based on your requirements.</li><li>• The maximum number of camera stream outputs is 2 times the suggested maximum number of IP cameras.</li></ul>

## Synology Drive

Recommended Number of Concurrent Sync Clients	550 (the number of connections that can be maintained when the recommended number of hosted files was reached)
Recommended Number of Hosted Files	50,000,000 (applies to files indexed or hosted by <a href="#">Synology Drive</a> . For file access through other standard protocols, refer to the File Services section above)
Notes	<ul style="list-style-type: none"><li>• Exceeding the recommended numbers above will not block application operations, but may result in longer response time.</li><li>• Utilizing SSD cache can significantly improve performance.</li><li>• For tested models with expandable memory, the maximum amount of RAM was installed.</li><li>• Btrfs file system and non-encrypted shared folders were used during the aforementioned testing.</li></ul>

## Synology Office

Suggested Maximum Users	4,500
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Suggested Concurrent Users	1,800
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### Notes

- Multiple files were opened for testing and each file was edited by 30 users simultaneously.
- For tested models with expandable memory, the maximum amount of RAM was installed.
- Client performance may affect maximum simultaneous editing users. Client PCs used for testing: Intel Core i3-3220 / 8GB RAM

## Video Station

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## Virtual Machine Manager

Recommended Virtual Machine Instances	8 ( <a href="#">Learn more</a> )
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Recommended Virtual DSM Number ( <a href="#">Licenses required</a> )	8 (including 1 Free License)
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Notes	The specifications vary depending on system configuration and memory size.
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## VPN Server

Maximum Connections	40
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