



Synology Hardware Portfolio

Q3 2023

Table of contents

Our website www.synology.com features a comprehensive knowledge base and all the latest information related to Synology and its products, including more details about system requirements and feature limitations.

Company profile

Storage systems

Rackmount servers	05
Tower servers	15

Surveillance

IP cameras	23
Storage systems	24

Networking

Synology routers	25
------------------	----

Storage & add-ons

Enterprise Series SSD	27
Enterprise Series HDD	31
Plus Series HDD	34
Add-in cards	37

Managing and protecting the world's data

Data is at the heart of every industry's transformation, and this is where Synology has a profoundly important role to play. Our goal is simple. To accommodate the exponential growth of data by transforming the way our customers store and manage data assets.

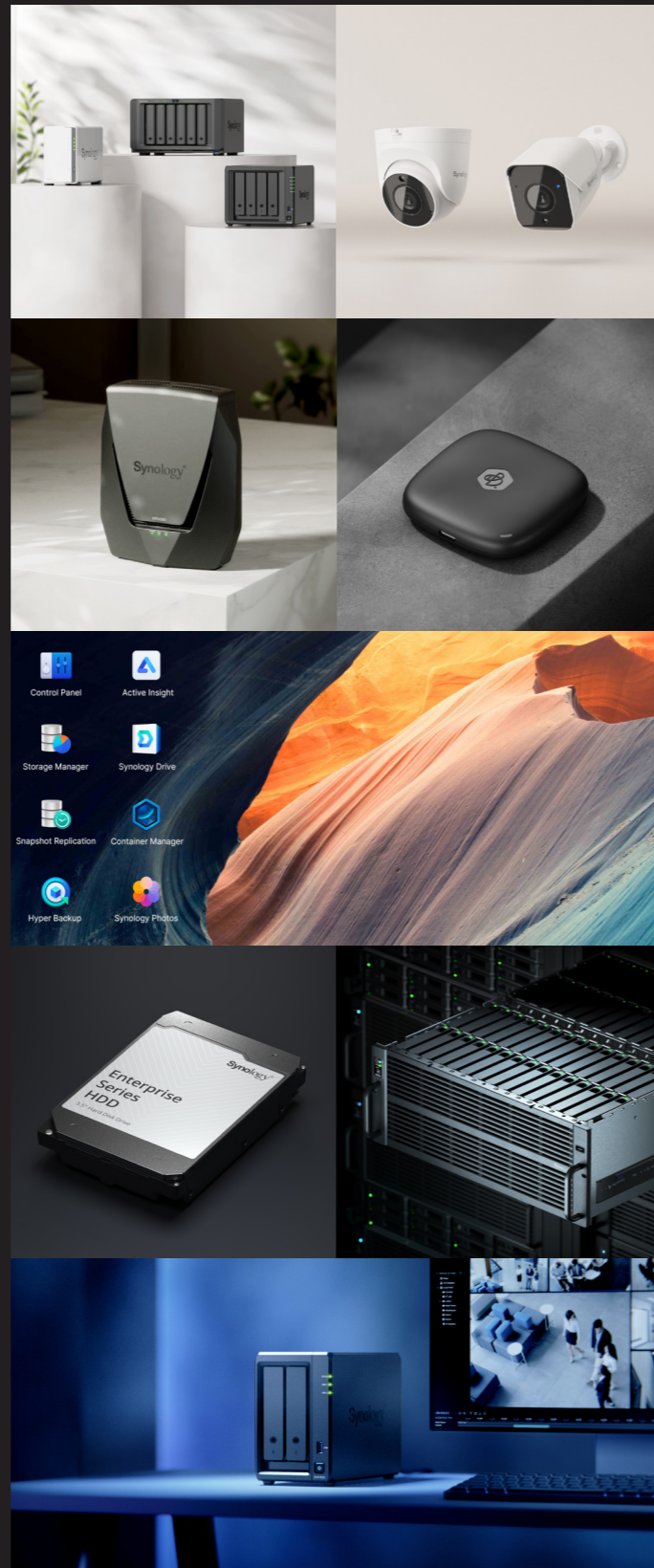
Our core philosophy is to enable anyone to organize, share, and protect their data as they see fit, regardless of scale, infrastructure, or expertise. We're committed to providing simple, secure, and reliable solutions that enable our customers to focus on what matters.

Internally developed hardware and software

To deliver unique and class-leading solutions, both hardware and software are developed in-house. Synology's storage solutions are powered by our DiskStation Manager (DSM) operating system and additional software solutions developed to complement our ecosystem.

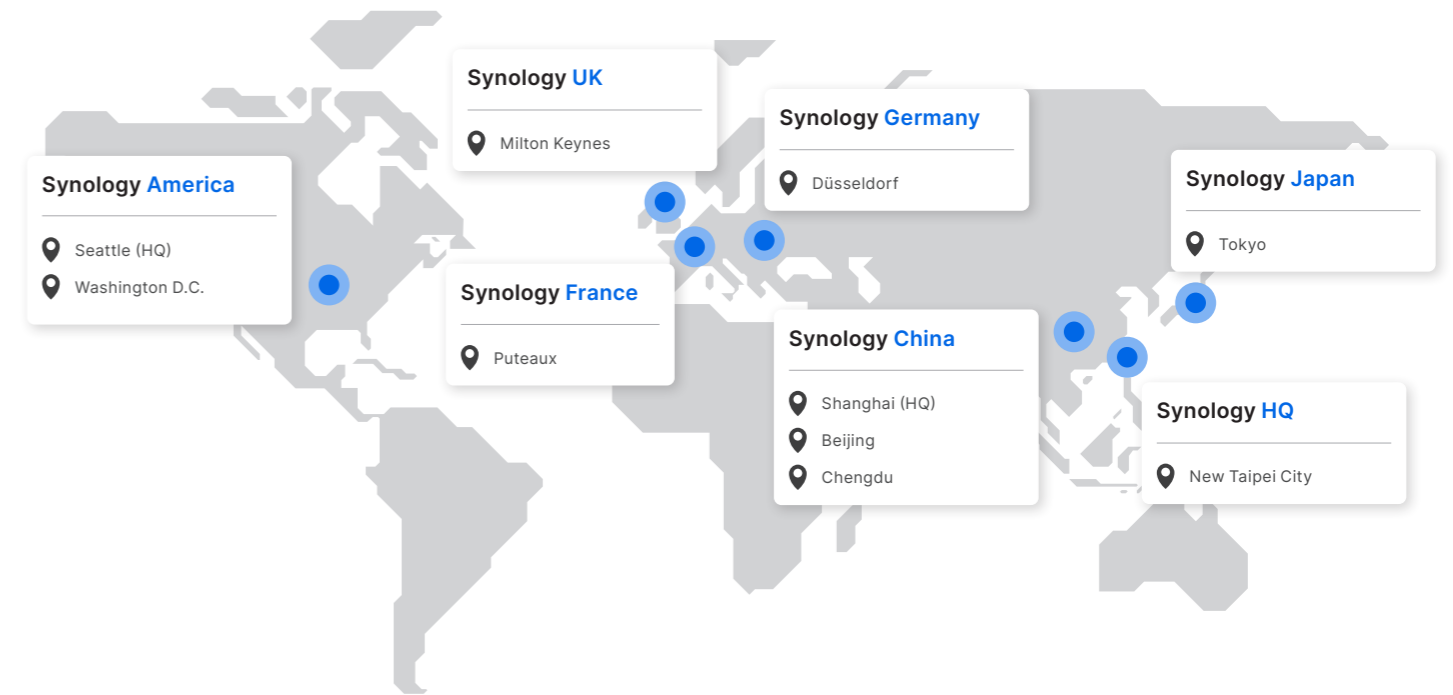
From datacenters to homes

Our products reach a wide range of customers. Synology's solutions range from SaaS cloud solutions and entry-level servers designed to organize and manage multimedia libraries, to multi-system clusters that enable businesses to centrally manage tens of thousands of devices and petabytes of data.



Servicing 100+ markets worldwide

Together with 50,000+ partners



Industry-leading solutions

Consistently the top choice for SMBs/SMEs¹

11M+

Total systems shipped to date

1M+

Systems shipped in 2022

87EB+

Data actively stored and protected

470K+

Businesses using Active Backup

13M+

SaaS² user accounts protected by Synology

480K+


Businesses using Surveillance Station

1. #1 in PCMag Reader's Choice (2012-2021), #2 in IT market share study conducted by IT Markt (2019), 4.6/5 customer reviews on Gartner Peer Insights platform (2022)

2. Microsoft 365 (Business) and Google Workspace accounts backed up via Active Backup for Microsoft 365/Google Workspace







Storage systems

Rackmount servers

		FS Series		FS Series		UC Series	
		FS6400	FS3600	FS3410	FS2500	UC3400 (2 Controllers)	UC3200 (2 Controllers)
							
Performance⁽¹⁾		iSCSI 10GbE - Random IOPS Read: 666,419 IOPS Write: 215,353 IOPS	iSCSI 10GbE - Random IOPS Read: 577,400 IOPS Write: 173,356 IOPS	iSCSI 10GbE - Random IOPS Read: 394,930 IOPS Write: 129,101 IOPS	iSCSI 10GbE - Random IOPS Read: 228,544 IOPS Write: 83,201 IOPS	iSCSI 10GbE - Random IOPS with SSD Read: 699,668 IOPS Write: 189,350 IOPS	iSCSI 10GbE - Random IOPS with SSD Read: 444,490 IOPS Write: 154,174 IOPS
Processor		Intel® Xeon® Silver 4110	Intel® Xeon® D-1567	Intel® Xeon® D-1541	AMD Ryzen™ V1780B	Intel® Xeon® D-1541 (per controller)	Intel® Xeon® D-1521 (per controller)
Memory/Max. Memory		32 GB DDR4 ECC, up to 512 GB	16 GB DDR4 ECC, up to 128 GB	16 GB DDR4 ECC, up to 128 GB	8 GB DDR4 ECC, up to 32 GB	8 GB DDR4 ECC, up to 64 GB (per controller)	
Drive Bays⁽³⁾	SAS/SATA LFF/SFF ⁽²⁾	24/72 ⁽⁷⁾ SATA/SAS SFF		24 SATA SFF	12 SATA SFF	12/36 ⁽⁸⁾ SAS LFF/SFF	
	NVMe	-		-	-	-	
External Ports		2 × USB 3.2 Gen 1 1 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	2 × USB 3.2 Gen 1		1 × Expansion port (per controller)	
PCIe Slots⁽⁴⁾		2 × PCIe Gen 3 ×8	1 × PCIe Gen 3 ×8	2 × PCIe Gen 3 ×8	1 × PCIe Gen 3 ×4	1 × PCIe Gen 3 ×8 (per controller)	
Network Ports		2 × 10GbE, 2 × 1GbE	2 × 10GbE, 4 × 1GbE	2 × 10GbE, 5 × 1GbE (1 for OOB management)	2 × 1GbE, 2 × 10GbE	1 × 10GbE, 2 × 1GbE (per controller)	
Supported File Systems (Internal Drives)		Btrfs, ext4	Btrfs, ext4	Btrfs, ext4		Btrfs	
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel	SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel	SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel		iSCSI, Fibre Channel	
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1	
File Sharing	Max. Number of User Accounts	16,000		16,000		65	
	Max. Concurrent Connections (SMB, FTP, AFP)	8,000	4,000	4,000	2,000	-	
Synology Surveillance Station	Max. IP Cameras ⁽⁵⁾	150	128	100		-	
	Total Frames Per Second (H.264)	4,500 FPS at 720p	3,840 FPS at 720p	3,000 FPS at 720p		-	
Synology Productivity Suite	Max. Concurrent MailPlus Users	2,200	1,600	1,100	300	-	
	Max. Synology Office Users	3,400		3,400	2,900	-	
Power Consumption⁽⁶⁾	Access	288.49 W	258.23 W	113.84 W	74.83 W	239.25 W	417.48 W
	HDD Hibernation	145.80 W	127.99 W	-		-	
Appearance	Dimensions (H × W × D)	88 × 482 × 724 mm		88 × 482 × 724 mm	44 × 481.9 × 555.9 mm	88 × 482 × 724 mm	
	Weight	17.26 kg	14.90 kg	15.00 kg	8.30 kg	19.70 kg	
Warranty		5 years		5 years		5 years	

Storage systems

Rackmount servers

		SA Series				HD Series	
		SA6400	SA3610	SA3410	SA3400D (2 Controllers)	SA3200D (2 Controllers)	HD6500
							
Performance⁽¹⁾		Read: 6,259.12 MB/s Write: 4,032.83 MB/s	Read: 6,197.03 MB/s Write: 3,054.16 MB/s	Read: 6,283.92 MB/s Write: 3,020.29 MB/s	Read: 3,540.47 MB/s Write: 2,941.47 MB/s	Read: 3,540.72 MB/s Write: 2,183.12 MB/s	Read: 6,474.51 MB/s Write: 6,678.65 MB/s
Processor		AMD EPYC™ 7272	Intel® Xeon® D-1567	Intel® Xeon® D-1541	Intel® Xeon® D-1541 (per controller)	Intel® Xeon® D-1521 (per controller)	Intel® Xeon® Silver 4210R
Memory/Max. Memory		32 GB DDR4 ECC, up to 1,024 GB	16 GB DDR4 ECC, up to 128 GB	16 GB DDR4 ECC, up to 128 GB	8 GB DDR4 ECC, up to 64 GB (per controller)	8 GB DDR4 ECC, up to 64 GB (per controller)	64 GB DDR4 ECC, up to 512 GB
Drive Bays⁽³⁾	SAS/SATA LFF/SFF⁽²⁾	12/108 ⁽¹⁰⁾ SATA LFF/SFF	12/96 ⁽⁹⁾ SATA/SAS LFF/SFF	12/96 ⁽⁹⁾ SATA/SAS LFF/SFF	12/36 ⁽⁸⁾ SAS LFF/SFF		60/300 ⁽¹¹⁾ SAS LFF / SATA SFF
	NVMe	-		-		-	-
External Ports		2 × USB 3.2 Gen 1 8 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	1 × Expansion port (per controller)		2 × USB 3.2 Gen 1 2 × Expansion port
PCIe Slots⁽⁴⁾		2 × PCIe Gen 3 ×8		2 × PCIe Gen 3 ×8	1 × PCIe Gen 3 ×8 (per controller)		2 × PCIe Gen 3 ×16, 2 × PCIe Gen 3 ×8
Network Ports		2 × 10GbE, 5 × 1GbE (1 for OOB management)		2 × 10GbE, 5 × 1GbE (1 for OOB management)	1 × 10GbE, 2 × 1GbE (per controller)		2 × 10GbE, 3 × 1GbE (1 for OOB management)
Supported File Systems (Internal Drives)		Btrfs, ext4		Btrfs, ext4		Btrfs	
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel	
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		Basic, JBOD, RAID 0/1/5/6/10	
File Sharing	Max. Number of User Accounts	16,000		16,000			
	Max. Concurrent Connections (SMB, FTP, AFP)	8,000	4,000	4,000	1,200		10,000
Synology Surveillance Station	Max. IP Cameras⁽⁵⁾	128		128	100		150
	Total Frames Per Second (H.264)	3,840 FPS at 720p		3,840 FPS at 720p	3,000 FPS at 720p		4,500 FPS at 720p
Synology Productivity Suite	Max. Concurrent MailPlus Users	2,200	1,600	1,100		500	800
	Max. Synology Office Users	3,400		3,400		2,800	3,400
Power Consumption⁽⁶⁾	Access	180.50 W	137.54 W	136.15 W	257.78 W	417.48 W	1,025.20 W
	HDD Hibernation	88.56 W	58.23 W	58.48 W	-		418.00 W
Appearance	Dimensions (H × W × D)	88 × 482 × 724 mm		88 × 482 × 724 mm		176 × 482 × 1020 mm	
	Weight	16.50 kg	14.50 kg	14.50 kg	19.70 kg		37.90 kg
Warranty		5 years		5 years			






Storage systems

Rackmount servers

		XS(+) Series					
		RS4021xs+	RS3621xs+	RS3621RPxs	RS3618xs	RS1619xs+	
							
Performance⁽¹⁾		Read: 6,259.05 MB/s Write: 3,039.22 MB/s	Read: 5,723.82 MB/s Write: 2,889.97 MB/s	Read: 4,666.09 MB/s Write: 2,787.46 MB/s	Read: 4,715.83 MB/s Write: 2,301.96 MB/s	Read: 1,577.39 MB/s Write: 969.71 MB/s	
Processor		Intel® Xeon® D-1541			Intel® Xeon® D-1531	Intel® Xeon® D-1521	Intel® Xeon® D-1527
Memory/Max. Memory		16 GB DDR4 ECC, up to 64 GB	8 GB DDR4 ECC, up to 64 GB	8 GB DDR4 ECC, up to 64 GB			
Drive Bays⁽³⁾	SAS/SATA LFF/SFF⁽²⁾	16/40 ⁽¹²⁾ SATA LFF/SFF	12/36 ⁽¹²⁾ SATA LFF/SFF	12/36 ⁽¹²⁾ SATA LFF/SFF		4/16 ⁽¹³⁾ SATA LFF/SFF	
	NVMe	-		-		2 × M.2 2280 NVMe	
External Ports		2 × USB 3.2 Gen 1 2 × Expansion port		2 × USB 3.2 Gen 1 2 × Expansion port		2 × USB 3.2 Gen 1 1 × Expansion port	
PCIe Slots⁽⁴⁾		2 × PCIe Gen 3 ×8		2 × PCIe Gen 3 ×8		1 × PCIe Gen 3 ×8	
Network Ports		2 × 10GbE, 4 × 1GbE			4 × 1GbE		
Supported File Systems (Internal Drives)		Btrfs, ext4			Btrfs, ext4		
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel			SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel		
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1			Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		
File Sharing	Max. Number of User Accounts	16,000			16,000		
	Max. Concurrent Connections (SMB, FTP, AFP)	4,000	2,000	2,000			
Synology Surveillance Station	Max. IP Cameras⁽⁵⁾	90			75		
	Total Frames Per Second (H.264)	2,700 FPS at 720p			2,250 FPS at 720p		
Synology Productivity Suite	Max. Concurrent MailPlus Users	1,100	800	800	500	450	
	Max. Synology Office Users	3,000			3,000	2,900	
Power Consumption⁽⁶⁾	Access	145.79 W	142.50 W	140.01 W	142.76 W	68.68 W	
	HDD Hibernation	62.68 W	72.76 W	65.94 W	55.05 W	34.78 W	
Appearance	Dimensions (H × W × D)	132.3 × 482 × 656.5 mm	88 × 482 × 724 mm	88 × 482 × 724 mm		44 × 480 × 518.6 mm	
	Weight	17.40 kg	14.50 kg	14.50 kg		8.16 kg	
Warranty		5 years			5 years		






Storage systems

Rackmount servers

		Plus Series				
		RS2821RP+	RS2423+/RS2423RP+	RS1221+/RS1221RP+	RS822+/RS822RP+	RS422+
						
Performance⁽¹⁾		Read: 2,220.06 MB/s Write: 1,457.34 MB/s	Read: 3,540.01 MB/s Write: 1,661.68 MB/s	Read: 2,321.45 MB/s Write: 1,475.50 MB/s	Read: 2,103.28 MB/s Write: 1,078.33 MB/s	Read: 574.25 MB/s ⁽¹⁶⁾ Write: 532.48 MB/s ⁽¹⁶⁾
Processor		AMD Ryzen™ V1500B	AMD Ryzen™ V1780B	AMD Ryzen™ V1500B		AMD Ryzen™ R1600
Memory/Max. Memory		4 GB DDR4 ECC, up to 32 GB	8 GB DDR4 ECC, up to 32 GB	4 GB DDR4 ECC, up to 32 GB	2 GB DDR4 ECC, up to 32 GB	2 GB DDR4 ECC
Drive Bays⁽³⁾	SAS/SATA LFF/SFF⁽²⁾	16/28 ⁽¹³⁾ SATA LFF/SFF	12/24 ⁽¹⁴⁾ SATA LFF/SFF	8/12 ⁽¹⁵⁾ SATA LFF/SFF	4/8 ⁽¹⁵⁾ SATA LFF/SFF	4 SATA LFF/SFF
	NVMe	-		-		
External Ports		2 × USB 3.2 Gen 1 1 × Expansion port		2 × USB 3.2 Gen 1 1 × Expansion port		1 × USB 3.2 Gen 1
PCIe Slots⁽⁴⁾		1 × PCIe Gen 3 ×4		1 × PCIe Gen 3 ×4		1 × Network upgrade slot
Network Ports		4 × 1GbE	1 × 10GbE, 2 × 1GbE	4 × 1GbE		2 × 1GbE
Supported File Systems (Internal Drives)		Btrfs, ext4			Btrfs, ext4	
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI			SMB, AFP, NFS, WebDAV, FTP, iSCSI	
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, SHR			Basic, JBOD, RAID 0/1/5/6/10, SHR	
File Sharing	Max. Number of User Accounts	2,048			2,048	
	Max. Concurrent Connections (SMB, FTP, AFP)	1,000	2,000	1,000	500	
Synology Surveillance Station	Max. IP Cameras⁽⁵⁾	40	50	40		
	Total Frames Per Second (H.264)	1,200 FPS at 720p	1,500 FPS at 720p	1,200 FPS at 720p		
Synology Productivity Suite	Max. Concurrent MailPlus Users	150			150	-
	Max. Synology Office Users	1,800			1,800	200
Power Consumption⁽⁶⁾	Access	97.54 W	RS2423+: 119.95 W RS2423RP+: 114.86 W	RS1221+: 61.94 W RS1221RP+: 61.94 W	RS822+: 47.69 W RS822RP+: 47.69 W	37.93 W
	HDD Hibernation	49.57 W	RS2423+: 46.21 W RS2423RP+: 42.33 W	RS1221+: 29.98 W RS1221RP+: 29.98 W	RS822+: 16.70 W RS822RP+: 16.70 W	13.43 W
Appearance	Dimensions (H × W × D)	132.3 × 482 × 656.5 mm	RS2423+: 88 × 482 × 552 mm RS2423RP+: 88 × 482 × 578 mm	RS1221+: 88 × 482 × 306.6 mm RS1221RP+: 88 × 482 × 407.5 mm	RS822+: 44 × 480 × 492.6 mm RS822RP+: 44 × 480 × 518.6 mm	44 × 478 × 327.5 mm
	Weight	17.10 kg	RS2423+: 11.50 kg RS2423RP+: 11.90 kg	RS1221+: 6.90 kg RS1221RP+: 8.40 kg	RS822+: 6.40 kg RS822RP+: 8.00 kg	4.38 kg
Warranty		3 years ⁽¹⁷⁾			3 years ⁽¹⁷⁾	

Storage systems

Rackmount servers





		Rackmount Expansion Units							
		FX2421	RXD1219sas	RX6022sas	RX1222sas	RX1217sas	RX1223RP	RX1217/RX1217RP	RX418
									
Compatible Drive Types		SATA/SAS SFF	SAS LFF/SFF	SAS LFF	SAS/SATA LFF/SFF			SATA LFF/SFF	
Bays		24	12	60	12			4	
Power Consumption⁽⁶⁾	Access	190.99 W	299.79 W	811.80 W	194.40 W	132.70 W	93.59 W	RX1217: 68.60 W RX1217RP: 71.32 W	23.26 W
	HDD Hibernation	80.97 W	-	231.00 W	82.56 W	89.30 W	30.73 W	RX1217: 27.45 W RX1217RP: 31.20 W	6.39 W
Volume Type		Host-dependent			Host-dependent				
Appearance	Dimensions (H x W x D)	88 x 482 x 724 mm		176 x 482 x 1020 mm	88 x 482 x 724 mm			RX1217: 88 x 482 x 696 mm RX1217RP: 88 x 482 x 724 mm	44 x 480 x 325 mm
	Weight	14.50 kg	18.20 kg	33.90 kg	13.50 kg	18.00 kg	13.90 kg	RX1217: 12.70 kg RX1217RP: 13.40 kg	4.28 kg
Warranty		5 years			5 years			3 years ⁽¹⁷⁾	

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

- 64 KB block size for SMB sequential throughput values, and 4 KB block size for iSCSI random IOPS values. Systems with 12 bays or above were tested using RAID 6. Actual performance may vary depending on workload, test equipment, and configuration. Please visit www.synology.com/products/performance for more information.
- Compatible drive types refer to supported bus interfaces. See each model's [compatibility list](#) for supported drives.
- Drives not included. Check our [compatibility list](#) for supported drives.
- Please visit www.synology.com for the most up-to-date information on lane count, slot width, and supported add-in cards.
- Device licenses govern the amount of cameras that can be used. Each Synology NAS comes with 2 free device licenses, with additional licenses available for purchase. The DVA3221 and DVA1622 come standard with 8 free licenses.
- Power consumption will vary according to drive models installed and any additional add-in-cards or upgrades. The provided values are for reference only.
- Compatible with up to 2 x RX1217sas or 2 x FX2421.
- Compatible with up to 2 x RXD1219sas.
- Compatible with up to 7 x RX1222sas.
- Compatible with up to 8 x RX1223RP.
- Compatible with up to 4 x RX6022sas. Only support SAS LFF HDDs and SATA SFF SSDs. To install 2.5" SATA SSDs, optional 2.5" drive trays (R5) must be purchased separately. Check our [compatibility list](#) for supported drives.
- Compatible with up to 2 x RX1217/RX1217RP.
- Compatible with up to 1 x RX1217/RX1217RP.
- Compatible with up to 1 x RX1223RP.
- Compatible with up to 1 x RX418.
- Tested using [E10G22-T1-Mini](#).
- See [Extended Warranty](#) or [Extended Warranty Plus](#) for more information and eligibility.







Storage systems

Tower servers

		XS(+) Series		Plus Series		
		DS3622xs+	DS1823xs+	DS2422+	DS1821+	DS1621+
						
Performance⁽¹⁾		Read: 4,705.06 MB/s Write: 2,467.33 MB/s	Read: 3,199.39 MB/s Write: 2,621.73 MB/s	Read: 2,201.20 MB/s Write: 1,398.17 MB/s	Read: 2,321.89 MB/s Write: 1,467.93 MB/s	Read: 2,323.50 MB/s Write: 1,437.60 MB/s
Processor		Intel® Xeon® D-1531	AMD Ryzen™ V1780B	AMD Ryzen™ V1500B	AMD Ryzen™ V1500B	AMD Ryzen™ V1500B
Memory/Max. Memory		16 GB DDR4 ECC, up to 48 GB	8 GB DDR4 ECC, up to 32 GB	4 GB DDR4 ECC, up to 32 GB		
Drive Bays⁽³⁾	SAS/SATA LFF/SFF⁽²⁾	12/36 ⁽⁷⁾ SATA LFF/SFF	8/18 ⁽⁸⁾ SATA LFF/SFF	12/24 ⁽⁹⁾ SATA LFF/SFF	8/18 ⁽⁸⁾ SATA LFF/SFF	6/16 ⁽⁸⁾ SATA LFF/SFF
	NVMe	-	2 × M.2 2280 NVMe	-	2 × M.2 2280 NVMe	
External Ports		2 × USB 3.2 Gen 1 2 × Expansion port	3 × USB 3.2 Gen 1 2 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	4 × USB 3.2 Gen 1 2 × Expansion port	3 × USB 3.2 Gen 1 2 × Expansion port
PCIe Slots⁽⁴⁾		1 × PCIe Gen 3 ×8	1 × PCIe Gen 3 ×4	1 × PCIe Gen 3 ×4		
Network Ports		2 × 10GbE, 3 × 1GbE (1 for OOB management)	1 × 10GbE, 3 × 1GbE (1 for OOB management)	4 × 1GbE		
Supported File Systems (Internal Drives)		Btrfs, ext4		Btrfs, ext4		
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI, Fibre Channel		SMB, AFP, NFS, WebDAV, FTP, iSCSI		
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, Synology RAID F1		Basic, JBOD, RAID 0/1/5/6/10, SHR		
File Sharing	Max. Number of User Accounts	16,000		2,048		
	Max. Concurrent Connections (SMB, FTP, AFP)	4,000	2,000	1,000		
Synology Surveillance Station	Max. IP Cameras⁽⁵⁾	90	75	40		
	Total Frames Per Second (H.264)	2,700 FPS at 720p	2,250 FPS at 720p	1,200 FPS at 720p		
Synology Productivity Suite	Max. Concurrent MailPlus Users	800	450	150		
	Max. Synology Office Users	2,900		1,800		
Power Consumption⁽⁶⁾	Access	94.42 W	87.93 W	73.11 W	59.80 W	51.22 W
	HDD Hibernation	54.33 W	28.37 W	32.12 W	26.18 W	25.27 W
Appearance	Dimensions (H × W × D)	270 × 300 × 340 mm	166 × 343 × 243 mm	270 × 300 × 340 mm	166 × 343 × 243 mm	166 × 282 × 243 mm
	Weight	9.80 kg	6.20 kg	9.50 kg	6.00 kg	5.10 kg
Warranty		5 years		3 years ⁽¹¹⁾		






Storage systems

Tower servers

		Plus Series					
		DS1522+	DS923+	DS723+	DS423+	DS224+	DS620slim
							
Performance⁽¹⁾		Read: 744.44 MB/s Write: 789.17 MB/s	Read: 598.51 MB/s Write: 560.33 MB/s	Read: 449.82 MB/s Write: 224.28 MB/s	Read: 225.97 MB/s Write: 225.82 MB/s	Read: 226.02 MB/s Write: 225.18 MB/s	Read: 225.98 MB/s Write: 225.41 MB/s
Processor		AMD Ryzen™ R1600		AMD Ryzen™ R1600	Intel® Celeron® J4125	Intel® Celeron® J4125	Intel® Celeron® J3355
Memory/Max. Memory		8 GB DDR4 ECC, up to 32 GB	4 GB DDR4 ECC, up to 32 GB	2 GB DDR4 ECC, up to 32 GB	2 GB DDR4, up to 6 GB		2 GB DDR3, up to 6 GB
Drive Bays⁽³⁾	SAS/SATA LFF/SFF⁽²⁾	5/15 ⁽⁸⁾ SATA LFF/SFF	4/9 ⁽¹⁰⁾ SATA LFF/SFF	2/7 ⁽¹⁰⁾ SATA LFF/SFF	4 SATA LFF/SFF	2 SATA LFF/SFF	6 SATA SFF
	NVMe	2 × M.2 2280 NVMe		2 × M.2 2280 NVMe		-	-
External Ports		2 × USB 3.2 Gen 1 2 × Expansion port	2 × USB 3.2 Gen 1 1 × Expansion port	1 × USB 3.2 Gen 1 1 × Expansion port	2 × USB 3.2 Gen 1		
PCIe Slots⁽⁴⁾		1 × Network upgrade slot		1 × Network upgrade slot	-		
Network Ports		4 × 1GbE	2 × 1GbE	2 × 1GbE			
Supported File Systems (Internal Drives)		Btrfs, ext4			Btrfs, ext4		
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI			SMB, AFP, NFS, WebDAV, FTP, iSCSI		
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, SHR		Basic, JBOD, RAID 0/1, SHR	Basic, JBOD, RAID 0/1/5/6/10, SHR	Basic, JBOD, RAID 0/1, SHR	Basic, JBOD, RAID 0/1/5/6/10, SHR
File Sharing	Max. Number of User Accounts	2,048		2,048			
	Max. Concurrent Connections (SMB, FTP, AFP)	2,000	1,000	500			
Synology Surveillance Station	Max. IP Cameras⁽⁵⁾	40		40	25		
	Total Frames Per Second (H.264)	1,200 FPS at 720p		1,200 FPS at 720p		750 FPS at 720p	
Synology Productivity Suite	Max. Concurrent MailPlus Users	100		100		50	
	Max. Synology Office Users	1,200		1200		400	
Power Consumption⁽⁶⁾	Access	52.06 W	35.51 W	21.07 W	28.30 W	14.69 W	34.88 W
	HDD Hibernation	16.71 W	11.52 W	8.62 W	8.45 W	4.41 W	7.59 W
Appearance	Dimensions (H × W × D)	166 × 230 × 223 mm	166 × 199 × 223 mm	166 × 106 × 223 mm	166 × 199 × 223 mm	165 × 108 × 232.2 mm	121 × 151 × 175 mm
	Weight	2.70 kg	2.24 kg	1.51 kg	2.18 kg	1.30 kg	1.40 kg
Warranty		3 years ⁽¹¹⁾		3 years ⁽¹¹⁾		2 years ⁽¹¹⁾	



Storage systems

Tower servers

		Value Series			J Series	
		DS423	DS223	DS124	DS223j	DS120j
						
Performance⁽¹⁾		Read: 224.76 MB/s Write: 213.03 MB/s	Read: 112.52 MB/s Write: 112.46 MB/s	Read: 112.53 MB/s Write: 112.58 MB/s	Read: 112.42 MB/s Write: 112.52 MB/s	Read: 113.41 MB/s Write: 102.90 MB/s
Processor		Realtek® RTD1619B			Realtek® RTD1619B	Marvell® A3720
Memory/Max. Memory		2 GB DDR4			1 GB DDR4	512 MB DDR3
Drive Bays⁽³⁾	SAS/SATA LFF/SFF⁽²⁾	4 SATA LFF/SFF	2 SATA LFF/SFF	1 SATA LFF/SFF	2 SATA LFF/SFF	1 SATA LFF/SFF
	NVMe	-			-	-
External Ports		2 × USB 3.2 Gen 1	3 × USB 3.2 Gen 1	2 × USB 3.2 Gen 1	2 × USB 3.2 Gen 1	2 × USB 2.0
PCIe Slots⁽⁴⁾		-			-	-
Network Ports		2 × 1GbE	1 × 1GbE	1 × 1GbE	1 × 1GbE	
Supported File Systems (Internal Drives)		Btrfs, ext4			Btrfs, ext4	
File/Network Protocols		SMB, AFP, NFS, WebDAV, FTP, iSCSI		SMB, AFP, NFS, WebDAV, FTP, iSCSI	SMB, AFP, NFS, WebDAV, FTP, iSCSI	
Supported RAID Types		Basic, JBOD, RAID 0/1/5/6/10, SHR	Basic, JBOD, RAID 0/1, SHR	Basic	Basic, JBOD, RAID 0/1, SHR	Basic
File Sharing	Max. Number of User Accounts	1,024			1,024	512
	Max. Concurrent Connections (SMB, FTP, AFP)	200			200	50
Synology Surveillance Station	Max. IP Cameras⁽⁵⁾	30	20	12	12	5
	Total Frames Per Second (H.264)	900 FPS at 720p	600 FPS at 720p	360 FPS at 720p	360 FPS at 720p	150 FPS at 720p
Synology Productivity Suite	Max. Concurrent MailPlus Users	-			-	-
	Max. Synology Office Users	200			200	100
Power Consumption⁽⁶⁾	Access	32.41 W	17.34 W	10.69 W	16.31 W	9.81 W
	HDD Hibernation	4.97 W	4.08 W	3.44 W	4.00 W	4.68 W
Appearance	Dimensions (H × W × D)	184 × 168 × 230 mm	165 × 108 × 232.7 mm	166 × 71 × 224 mm	165 × 100 × 225.5 mm	166 × 71 × 224 mm
	Weight	2.21 kg	1.28 kg	0.70 kg	0.88 kg	0.70 kg
Warranty		2 years ⁽¹¹⁾			2 years ⁽¹¹⁾	2 years ⁽¹¹⁾

Storage systems

Tower servers

		Desktop Expansion Units	
		DX1222	DX517
			
Compatible Drive Types⁽²⁾		SATA LFF/SFF	
Bays		12	5
Power Consumption⁽⁶⁾	Access	57.71 W	29.90 W
	HDD Hibernation	16.25 W	2.40 W
Volume Type		Host-dependent	
Video	Dimensions (H × W × D)	270 × 300 × 340 mm	157 × 248 × 233 mm
	Weight	9.02 kg	3.91 kg
Warranty		5 years	3 years ⁽¹¹⁾

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

- 64 KB block size for SMB sequential throughput values, and 4 KB block size for iSCSI random IOPS values. Systems with 12 bays or above were tested using RAID 6. DS Plus systems with 6 to 8 bays were tested with SSDs in a RAID 5 configuration. Please visit www.synology.com/products/performance for more information.
- Compatible drive types refer to supported bus interfaces. See each model's [compatibility list](#) for supported drives.
- Drives not included. Check our [compatibility list](#) for supported drives.
- Please visit www.synology.com for the most up-to-date information on lane count, slot width, and supported add-in cards.
- Device licenses govern the amount of cameras that can be used. Each Synology NAS comes with 2 free device licenses, with additional licenses available for purchase. The DVA3221 and DVA1622 come standard with 8 free licenses.
- Power consumption will vary according to drive models installed and any additional add-in-cards or upgrades. The provided values are for reference only.
- Compatible with up to 2 × DX1222.
- Compatible with up to 2 × DX517.
- Compatible with up to 1 × DX1222.
- Compatible with up to 1 × DX517.
- See [Extended Warranty](#) or [Extended Warranty Plus](#) for more information and eligibility.

Surveillance

IP cameras

Bullet and Turret IP Cameras

TC500

BC500



Optical	Lens	2.8 mm (110° H, 56° V, 132° D LDC ON)	
	Aperture	F1.8	
	Night Vision	30 meters	
	Shutter Speed	1/16,000 s to 1/30 s	
	DORI	D: 60 m, O: 24 m, R: 12 m, I: 6 m	
Video	Max. Streaming Resolution	5 MP (2880×1620) @ 30 FPS	
	Sub Streaming Capability	1920×1080 @ 15 FPS or 1280×720 @ 30 FPS	
	Video Compression	H.264, H.265	
	Video Orientation	Rotation (0°, 90°, 180°, 270°), Flip, Mirror	
Audio	Microphone	Yes	
	Audio Compression	G.711	
General Specifications	Dimensions	Ø97 × 88 mm (Ø3.82 × 3.46")	Ø110 × 161 mm (Ø4.33 × 6.34")
	Weight	387 g (0.85 lbs)	353 g (0.78 lbs)
	Weather Resistance	IP67	
	Impact Resistance	IK10	-
	Power Source	PoE (802.3af) or 12V DC	
	Power Consumption	4.8 W	
	Ethernet	1 × RJ-45 10/100 Mbps Ethernet port	
	Edge Storage	MicroSD (up to 128 GB)	
Operating environment	Temperature (IR off)	-30°C to 50°C (-22°F to 122°F)	
	Temperature (IR on)	-30°C to 40°C (-22°F to 104°F)	
	Relative Humidity	5% to 95% RH (non-condensing)	
Storage environment	Temperature	-40°C to 60°C (-40°F to 140°F)	
	Relative Humidity	5% to 95% RH (non-condensing)	
Certification	IP67, IK10, FCC, IC, CE, BSMI, VCCI, RCM, UKCA, KC, JATE	IP67, FCC, IC, CE, BSMI, VCCI, RCM, UKCA, KC, JATE	
NDA Compliance	Yes		
TAA Compliance	Yes		
Environmental Safety	RoHS compliant, WEEE, REACH		
Warranty	3 years		

Surveillance

Storage systems

Network Video Recorders

DVA3221

DVA1622







Processor	Intel® Atom® C3538	Intel® Celeron® J4125	
Memory/Max. Memory	8 GB DDR4, up to 32 GB	6 GB DDR4	
Compatible Drive Type ⁽¹⁾	SATA LFF/SFF	SATA LFF	
Internal Bays/Max. Bays ⁽²⁾	4/14 ⁽³⁾	2	
External Ports	3 × USB 3.2 Gen 1 2 × Expansion port	2 × USB 3.2 Gen 1 1 × HDMI	
Network Ports	4 × 1GbE	1 × 1GbE	
Supported File Systems (Internal Drives)	Btrfs, ext4		
File/Network Protocols	SMB, AFP, NFS, WebDAV, FTP, iSCSI		
Supported RAID Types	Basic, JBOD, RAID 0/1/5/6/10, SHR	Basic, JBOD, RAID 0/1, SHR	
File Sharing	Max. Number of User Accounts	2,048	
	Max. Concurrent Connections (SMB, FTP, AFP)	2,000	100
Synology Surveillance Station	Max. IP Cameras ⁽⁴⁾	32	16
	Total Frames Per Second (H.264)	960 FPS at 720p	480 FPS at 720p
Power Consumption ⁽⁵⁾	Access	43.92 W	19.93 W
	HDD Hibernation	28.43 W	4.02 W
Appearance	Dimensions (H x W x D)	166 × 250 × 237 mm	166 × 106 × 223 mm
	Weight	4.92 kg	1.51 kg
Warranty	3 years ⁽⁶⁾		

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

- Compatible drive types refer to supported bus interfaces. See each model's [compatibility list](#) for supported drives.
- Drives not included. Check our [compatibility list](#) for supported drives.
- Compatible with up to 2 × DX517.
- Device licenses govern the amount of cameras that can be used. Each Synology NAS comes with 2 free device licenses, with additional licenses available for purchase. The DVA3221 and DVA1622 come standard with 8 free licenses.
- Power consumption will vary according to drive models installed and any additional add-in-cards or upgrades. The provided values are for reference only.
- See [Extended Warranty](#) or [Extended Warranty Plus](#) for more information and eligibility.

Synology routers

Wi-Fi routers

		Wi-Fi Routers			
		WRX560	RT6600ax	RT2600ac	MR2200ac
					
CPU Frequency		4-core 1.4 GHz	4-core 1.8 GHz	2-core 1.7 GHz	4-core 717 MHz
RAM		512 MB DDR4	1 GB DDR3L	512 MB DDR3L	256 MB DDR3L
Layer 4 & 7 Traffic Control Hardware Acceleration		Yes	Yes		-
Wi-Fi Connectivity	Wi-Fi Generation	Wi-Fi 6	Wi-Fi 6	Wi-Fi 5	
	Wireless Standards	IEEE 802.11a/b/g/n/ac/ax, simultaneous dual-band Wi-Fi		IEEE 802.11a/b/g/n/ac, simultaneous dual-band Wi-Fi	IEEE 802.11a/b/g/n/ac, simultaneous tri-band Wi-Fi
	5 GHz - 1	2,400 Mbps	4,800 Mbps	1,733 Mbps	867 Mbps
	5 GHz - 2	-	1,200 Mbps	-	867 Mbps
	2.4 GHz	600 Mbps	600 Mbps	800 Mbps	400 Mbps
Wi-Fi Security		WPA/WPA2-Personal, WPA/WPA2-Enterprise, WPA2/WPA3-Personal, WPA3-Personal/Enterprise, OWE		WPA/WPA2-Personal, WPA/WPA2-Enterprise, WPA2/WPA3-Personal, WPA3-Personal/Enterprise, OWE	
Roaming		802.11k/v/r support		802.11k/v/r support	
Max. Connected Devices ⁽¹⁾		150	200	100	90
Recommended Max. Number of Wi-Fi Points		1 Primary + 6 Wi-Fi points ⁽²⁾ 1 Primary + 12 Wi-Fi points ⁽³⁾		1 Primary + 6 Wi-Fi points ⁽²⁾ 1 Primary + 12 Wi-Fi points ⁽³⁾	
Networking	LAN	3 × 1GbE 1 × 2.5GbE	3 × 1GbE 1 × 2.5GbE	4 × 1GbE 3 × 1GbE (Dual WAN)	1 × 1GbE
	WAN	1 × 1GbE 1 × 2.5GbE (Dual WAN)	1 × 1GbE 1 × 2.5GbE (Dual WAN)	1 × 1GbE 2 × 1GbE (Dual WAN)	1 × 1GbE
External Ports		1 × USB 3.2 Gen 1	1 × USB 3.2 Gen 1	1 × USB 3.2 Gen 1 1 × USB 2.0 1 × SD Card	1 × USB 3.2 Gen 1
Power Consumption	Access	10.80 W	11.11 W	10.80 W	12.95 W
	Idle	7.94 W	6.77 W	7.94 W	5.21 W
Appearance	Dimensions (H × W × D)	233 × 194 × 66 mm	175 × 320 × 200 mm (antennas in upright position)	77 × 280 × 169 mm (without antennas)	154 × 199 × 65 mm
	Weight	1.35 kg	1.60 kg	0.695 kg	0.45 kg
Warranty		2 years		2 years	

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

1. Based on Synology internal testing. While more clients are supported, the performance of connected devices will vary depending on the network environment, client bandwidth demands, and settings.
2. In an all-wireless uplink connection environment.
3. In an all-wired uplink connection environment.





Storage & add-ons

Enterprise Series SSD

		Enterprise Series M.2 NVMe SSD			
		SNV3410-400G	SNV3510-400G	SNV3410-800G	SNV3510-800G
					
Capacity		400 GB	400 GB	800 GB	
Form Factor		M.2 2280	M.2 22110	M.2 2280	M.2 22110
Interface		NVMe PCIe 3.0 ×4		NVMe PCIe 3.0 ×4	
Performance	Sequential Read (128 KB, QD32) ⁽¹⁾	3,000 MB/s	3,000 MB/s	3,100 MB/s	
	Sequential Write (128 KB, QD32) ⁽¹⁾	750 MB/s	750 MB/s	1,000 MB/s	
	Random Read (4 KB, QD256) ⁽¹⁾	225,000 IOPS	225,000 IOPS	400,000 IOPS	
	Random Write (4 KB, QD256) ⁽¹⁾	45,000 IOPS	45,000 IOPS	70,000 IOPS	
Endurance and Reliability	Terabytes Written (TBW) ⁽²⁾	491 TB	491 TB	1,022 TB	
	Mean Time Between Failures (MTBF)	1.8 million hours		1.8 million hours	
	Uncorrectable Bit Error Rates (UBER)	< 1 sector per 10 ¹⁷ bits read		< 1 sector per 10 ¹⁷ bits read	
	Power Loss Protection	-	Yes ⁽⁴⁾	-	Yes ⁽⁴⁾
	Warranty	5 years ⁽³⁾		5 years ⁽³⁾	
Power Consumption	Supply Voltage	3.3 V (± 5%)		3.3 V (± 5%)	
	Active Read (Typ.)	3.50 W	4.00 W	5.50 W	6.20 W
	Active Write (Typ.)	3.30 W	3.60 W	4.60 W	5.10 W
	Idle	1.60 W	1.60 W		1.70 W
Temperature	Operating Temperature	0°C to 70°C (32°F to 158°F)		0°C to 70°C (32°F to 158°F)	
	Storage Temperature	-40°C to 85°C (-40°F to 185°F)		-40°C to 85°C (-40°F to 185°F)	
Others	Dimensions (H × W × D)	3.5 × 22 × 80 mm	4.5 × 22 × 110 mm	3.5 × 22 × 80 mm	4.5 × 22 × 110 mm
	Certifications	FCC, CE, EAC, BSMI, VCCI, RCM, KC, RoHS, UKCA		FCC, CE, EAC, BSMI, VCCI, RCM, KC, RoHS, UKCA	

Storage & add-ons

Enterprise Series SSD

		Enterprise Series SATA HDD				
		SAT5210-480G	SAT5210-960G	SAT5210-1920G	SAT5210-3840G	SAT5210-7000G
						
Capacity		480 GB	960 GB	1.92 TB	3.84 TB	7 TB
Form Factor		2.5" 7 mm			2.5" 7 mm	
Interface		SATA 6 Gb/s			SATA 6 Gb/s	
Performance	Sequential Read (128 KB, QD32) ⁽¹⁾	530 MB/s			530 MB/s	
	Sequential Write (128 KB, QD32) ⁽¹⁾	500 MB/s			500 MB/s	
	Random Read (4 KB, QD256) ⁽¹⁾	96,000 IOPS	98,000 IOPS	98,000 IOPS		97,000 IOPS
	Random Write (4 KB, QD256) ⁽¹⁾	55,000 IOPS	67,000 IOPS	60,000 IOPS		50,000 IOPS
Endurance and Reliability	Terabytes Written (TBW) ⁽²⁾	1,097 TB	2,194 TB	4,800 TB	8,533 TB	11,460 TB
	Mean Time Between Failures (MTBF)	1.5 million hours			1.5 million hours	
	Uncorrectable Bit Error Rates (UBER)	< 1 sector per 10 ¹⁷ bits read			< 1 sector per 10 ¹⁷ bits read	
	Power Loss Protection	Yes ⁽⁴⁾			Yes ⁽⁴⁾	
	Warranty	5 years ⁽³⁾			5 years ⁽³⁾	
Power Consumption	Supply Voltage	5 V (± 5%)			5 V (± 5%)	
	Active Read (Typ.)	2.40 W	2.70 W	2.80 W		3.30 W
	Active Write (Typ.)	2.80 W			3.10 W	3.30 W
	Idle	1.30 W	1.40 W	1.40 W		1.80 W
Temperature	Operating Temperature	0°C to 70°C (32°F to 158°F)			0°C to 70°C (32°F to 158°F)	
	Storage Temperature	-40°C to 85°C (-40°F to 185°F)			-40°C to 85°C (-40°F to 185°F)	
Others	Dimensions (H × W × D)	7 × 69.85 × 100 mm			7 × 69.85 × 100 mm	
	Certifications	FCC, CE, EAC, BSMI, VCCI, KC, RoHS, UKCA			FCC, CE, EAC, BSMI, VCCI, KC, RoHS, UKCA	

Note: Model specifications are subject to change without advance notice. Please refer to www.synology.com for the latest information. Check our [compatibility list](#) for supported devices.

1. Performance measured using FIO on Linux with Queue Depth 32/256 (128 KB = 131,072 bytes; 4 KB = 4,096 bytes).
2. The endurance rating is calculated based on a JESD219A enterprise workload.
3. The 5-year limited warranty provides coverage until the end of the warranty period or until the endurance usage of the drive is reached, whichever comes first.
4. Power loss protection circuit design is available on SNV3510 Series and SAT5210 Series to further prevent data corruption in case of power failure.








Storage & add-ons

Enterprise Series HDD

		Enterprise Series SATA HDD					
		HAT5300-4T	HAT5310-8T	HAT5300-12T	HAT5300-16T	HAT5310-18T	
							
Capacity ⁽¹⁾		4 TB	8 TB	12 TB	16 TB	18 TB	
Form Factor ⁽²⁾		3.5"			3.5"		
Interface		SATA 6 Gb/s			SATA 6 Gb/s		
Sector Size		512e			512e		
Performance	Rotational Speed	7,200 rpm			7,200 rpm		
	Interface Speed	6.0 Gb/s, 3.0 Gb/s, 1.5 Gb/s			6.0 Gb/s, 3.0 Gb/s, 1.5 Gb/s		
	Buffer Size ⁽³⁾	256 MiB			512 MiB		
	Maximum Sustained Data Transfer Speed (Typ.)	243 MiB/s	248 MiB/s	242 MiB/s	262 MiB/s	268 MiB/s	
Endurance and Reliability	Mean Time to Failure (MTTF) ⁽⁴⁾ / Mean Time Between Failures (MTBF) ⁽⁵⁾	MTTF: 2 million hours			MTTF: 2.5 million hours		
	Workload Rating ⁽⁶⁾	550 TB Transferred per Year			550 TB Transferred per Year		
	Warranty	5 years ⁽⁷⁾			5 years ⁽⁷⁾		
Power Consumption	Supply Voltage ⁽⁸⁾	12 V (± 10%) / 5 V (+10/-7%)			12 V (± 10%) / 5 V (+10/-7%)		
	Active Idle (Typ.) ⁽⁹⁾	4.07 W	5.61 W	4.25 W	4.00 W	4.16 W	
	Operating (Typ.)	7.76 W	9.29 W	7.83 W	7.63 W	8.35 W	
Environmental Conditions	Temperature	Operating	5°C to 60°C (41°F to 140°F)			5°C to 60°C (41°F to 140°F)	
		Non-Operating	-40°C to 70°C (-40°F to 158°F)			-40°C to 70°C (-40°F to 158°F)	
	Shock	Operating	686 m/s ² {70 G} (2 ms duration)			686 m/s ² {70 G} (2 ms duration)	
		Non-Operating	2,940 m/s ² {300 G} (2 ms duration)	2,450 m/s ² {250 G} (2 ms duration)	2,450 m/s ² {250 G} (2 ms duration)		
	Vibration	Operating	7.35 m/s ² {0.75 G} (5 to 300 Hz), 2.45 m/s ² {0.25 G} (300 to 500 Hz)			7.35 m/s ² {0.75 G} (5 to 300 Hz), 2.45 m/s ² {0.25 G} (300 to 500 Hz)	
		Non-Operating	29.4 m/s ² {3.0 G} (5 to 500 Hz)			29.4 m/s ² {3.0 G} (5 to 500 Hz)	
	Altitude	Operating	-305 m to 3,048 m			-305 m to 3,048 m	
		Non-Operating	-305 m to 12,192 m			-305 m to 12,192 m	
	Relative Humidity	Operating	5% to 90% R.H. (No condensation)			5% to 90% R.H. (No condensation)	
		Non-Operating	5% to 95% R.H. (No condensation)			5% to 95% R.H. (No condensation)	
Others	Dimensions (H × W × D)	26.1 × 101.85 × 147 mm			26.1 × 101.85 × 147 mm		
	Weight	693 g	720 g	720 g			
	Certifications	CE, EAC, BSMI, RCM, KC, ICES, UKCA, TUV, UL, RoHS			CE, EAC, BSMI, RCM, KC, ICES, UKCA, TUV, UL, RoHS		

Storage & add-ons

Enterprise Series HDD

		Enterprise Series SAS HDD			Plus Series SATA HDD				
		HAS5300-8T	HAS5300-12T	HAS5300-16T	HAT3300-4T	HAT3300-6T	HAT3300-8T	HAT3300-12T	
									
Capacity ⁽¹⁾		8 TB	12 TB	16 TB	4 TB	6 TB	8 TB	12 TB	
Form factor		3.5"			3.5"				
Interface		SAS 12 Gb/s			SATA 6 Gb/s				
Sector Size		512e			512e				
Performance	Rotational Speed	7,200 rpm			5,400 rpm			7,200 rpm	
	Interface Speed	12.0 Gb/s, 6.0 Gb/s, 3.0 Gb/s, 1.5 Gb/s			-				
	Buffer Size ⁽³⁾	256 MiB		512 MiB	256 MB				
	Maximum Sustained Data Transfer Speed (Typ.)	230 MiB/s	242 MiB/s	262 MiB/s	202 MB/s			240 MB/s	
Reliability	Mean Time to Failure (MTTF) ⁽⁴⁾ / Mean Time Between Failures (MTBF) ⁽⁵⁾	MTTF: 2.5 million hours			MTBF: 1 million hours				
	Workload Rating ⁽⁶⁾	550 TB Transferred per Year			180 TB Transferred per Year				
	Warranty	5 years ⁽⁷⁾			3 years ⁽⁷⁾				
Power Consumption	Supply Voltage ⁽⁸⁾	12 V (± 10%) / 5 V (+10/-7%)			12 V (± 10%) / 5 V (± 5%)				
	Active Idle (Typ.) ⁽⁹⁾	6.62 W	4.36 W	4.46 W	3.96 W	3.40 W		5.07 W	
	Operating (Typ.)	9.87 W	7.80 W	8.12 W	4.85 W	5.30 W		8.33 W	
Environmental Conditions	Temperature	Operating	5°C to 60°C (41°F to 140°F)			0°C to 65°C (32°F to 149°F)			5°C to 65°C (41°F to 149°F)
		Non-Operating	-40°C to 70°C (-40°F to 158°F)			-40°C to 70°C (-40°F to 158°F)			
	Shock	Operating	686 m/s ² {70 G} (2 ms duration)		80 Gs (2 ms duration)	70 Gs (2 ms duration)		50 Gs (2 ms duration)	
		Non-Operating	2,450 m/s ² {250 G} (2 ms duration)		300 Gs (2 ms duration)			200 Gs (2 ms duration)	
	Vibration	Operating	7.35 m/s ² {0.75 G} (5 to 300 Hz) 2.45 m/s ² {0.25 G} (300 to 500 Hz)		10 Hz to 22 Hz: 0.25 Gs, Limited displacement 22 Hz to 350 Hz: 0.50 Gs 350 Hz to 500 Hz: 0.25 Gs			Linear Random: 5-500 Hz: 0.70 Grms Random Rotary: 20-1500 Hz: 12.5 rads/s ²	
		Non-Operating	29.4 m/s ² {3.0 G} (5 to 500 Hz)		5 Hz to 22 Hz: 3.0 Gs, 22 Hz to 350 Hz: 3.0 Gs, 350 Hz to 500 Hz: 3.0 Gs			Linear Random: 2-500 Hz: 2.27 Grms	
	Altitude	Operating	-305 m to 3,048 m			-304 m to 3,048 m		-304.8 m to 3,048 m	
		Non-Operating	-305 m to 12,192 m			-304 m to 12,192 m			-304.8 m to 12,192 m
	Relative Humidity	Operating	5% to 90% R.H. (No condensation)			5% to 90% R.H. (No condensation)			5% to 95% R.H. (No condensation)
		Non-Operating	5% to 95% R.H. (No condensation)			5% to 95% R.H. (No condensation)			
Others	Dimensions (H × W × D)	26.1 × 101.85 × 147 mm			20.20 × 101.85 × 147 mm	26.11 × 101.85 × 146.99 mm			
	Weight	770 g	720 g		490 g	610 g	630 g	690 g	
	Certifications	CE, EAC, BSMI, RCM, KC, ICES, UKCA, TUV, UL, RoHS			CE, EAC, BSMI, RCM, KC, ICES, UKCA, TUV, UL, RoHS				

Note: Model specifications are subject to change without advance notice. Please refer to www.synology.com for the latest information. Check our [compatibility list](#) for supported devices.

1. Definition of capacity: In the context of hard drives, a terabyte (TB) is defined as 1,000,000,000,000 bytes. However, computer operating systems report storage capacity using powers of 2, leading to a definition of 1 GB = 2^{30} = 1,073,741,824 bytes. Operating systems will therefore report less storage capacity. Available storage capacity will vary based on file size, formatting, settings, software, and operating system. Actual formatted capacity may vary.
2. 3.5" refers to the HDD form factor. It does not describe a drive's physical size.
3. A mebibyte (MiB) means 2^{20} bytes, or 1,048,576 bytes. MB/s means 10^6 bytes.
4. Mean Time to Failure (MTTF) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTTF.
5. Mean Time Between Failure (MTBF) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTBF.
6. Workload is defined as the amount of data written, read, or verified by commands from host system.
7. The warranty period starts from the purchase date as stated on your receipt of purchase. Visit www.synology.com/company/legal/warranty for more information.
8. Input voltages are specified at the HDD connector side, during HDD ready state. Make sure the value is no less than -0.3 V DC (less than -0.6 V, 0.1 ms) when turning the power on or off.
9. Idle specification is based on the use of Idle-A.

Storage & add-ons

Add-in cards

		Add-in Cards							
		M2D18	M2D20	E10M20-T1	E25G21-F2	E10G21-F2	E10G18-T2	E10G18-T1	E10G22-T1-Mini
General	Type	M.2 SSD Adapter Card		M.2 SSD & 10GbE Combo Adapter Card	Network Interface Card			Network Upgrade Module	
	Host Bus Interface	PCIe 2.0 x8	PCIe 3.0 x8		PCIe 3.0 x8			PCIe 3.0 x4	PCIe 3.0 x2
	Dimensions (H x W x D)	70 x 180 x 18 mm	71.75 x 181.9 x 15.8 mm	71.75 x 200.55 x 17.70 mm	69 x 168 x 17.3 mm		68.9 x 170.6 x 13.6 mm	68.1 x 86.0 x 13.6 mm	26.37 x 45.38 x 75.7 mm
	Operating Temperature	0°C to 40°C (32°F to 104°F)			0°C to 40°C (32°F to 104°F)				
	Storage Temperature	-20°C to 60°C (-5°F to 140°F)			-20°C to 60°C (-5°F to 140°F)				
	Relative Humidity	5% to 95% RH			5% to 95% RH				
	Warranty	3 years ⁽¹⁾	5 years ⁽¹⁾		5 years ⁽¹⁾			3 years ⁽¹⁾	
Storage	Storage Interface	NVMe/SATA		PCIe NVMe		-			
	Supported Form Factor	2280 / 2260 / 2242		22110 / 2280		-			
	Connector	Type	M-key			-			
		Quantity	2 slots			-			
Network	Data Transfer Rates	-		10/5/2.5 Gbps	25/10 Gbps	10 Gbps		10/5/2.5/1 Gbps / 100 Mbps	
	Connector	-		RJ-45	SFP28	SFP+	RJ-45		
	IEEE Specification Compliance	-		IEEE 802.3x Flow Control IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3bz 2.5/5 Gbps Ethernet IEEE 802.3an 10 Gbps Ethernet	IEEE 802.3ad Link Aggregation IEEE 802.3ae 10 Gbps Ethernet IEEE 802.3by 25 Gbps Ethernet	IEEE 802.3ad Link Aggregation IEEE 802.3ae 10 Gbps Ethernet	IEEE 802.3x Flow Control IEEE 802.3ad Link Aggregation IEEE 802.3ab Gigabit Ethernet IEEE 802.3an 10 Gbps Ethernet	IEEE 802.3x Flow Control IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3bz 2.5/5 Gbps Ethernet IEEE 802.3an 10 Gbps Ethernet	

Note: Model specifications are subject to change without advance notice. Please refer to www.synology.com for the latest information. Check our [compatibility list](#) for supported devices.

1. The warranty period starts from the purchase date as stated on your purchase receipt. Learn more at www.synology.com/company/legal/warranty.

Do you want to know more?

Our website www.synology.com features a comprehensive knowledge base and all the latest information related to Synology and its products, including more details about system requirements and feature limitations.



Knowledge Center

kb.synology.com



Downloads

synology.com/support/download



NAS Selector

synology.com/support/nas_selector



NVR Selector

synology.com/support/nvr_selector



RAID Calculator

synology.com/support/RAID_calculator



Community

community.synology.com



Where to Buy

synology.com/wheretobuy/locate_synology_partner

The customer is responsible for ensuring compliance with legal requirements. It is the customer's sole responsibility to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer's business and any actions the customer may need to take to comply with such laws. Synology does not provide legal advice or represent or warrant that its services and products will ensure that the customer is in compliance with any law or regulation.

Synology® and other Synology marks, logos and any other product or service name or slogan contained in this document are trademarks of Synology and its suppliers or licensors, and may not be copied, imitated or used, in whole or in part, without the prior written permission of Synology or the applicable trademark holder. All other trademarks, registered trademarks, product names and company names or logos mentioned in the document are the property of their respective owners.

No part of this document may be reproduced or transmitted in any form without written permission from Synology Inc.

Product data has been reviewed for accuracy as of the date of initial publication. Data and product information are subject to change without notice. Any statements regarding Synology's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.



SYNOLOGY INC.

9F., No.1, Yuandong Rd., Banqiao Dist.,
New Taipei City 220632
Taiwan

Synology America Corp.

3535 Factoria Blvd SE, Suite #200,
Bellevue, WA 98006,
USA

Synology France SARL

102 Terrasse Boieldieu (TOUR W)
92800 Puteaux,
France

Synology GmbH

Grafenberger Allee 295
40237 Düsseldorf
Deutschland

Synology Shanghai

200070, Floor 22, Shanghai Ji Dian Building,
No.600, Hengfeng Road,
Jing'an District, Shanghai,
China

Synology UK Ltd

Unit 5 Danbury Court, Linford Wood,
Milton Keynes, Bucks, MK14 6PL
United Kingdom

Synology Japan

JAPAN CO., LTD.
4F, No. 3-1-2, Higashikanda,
Chiyoda-ku, Tokyo, 101-0031

Synology may make changes to specifications and product descriptions at any time, without notice. Copyright © 2023 Synology Inc. All rights reserved. Synology® and other names of Synology Products are proprietary marks or registered trademarks of Synology Inc. Other products and company names mentioned herein are trademarks of their respective holders.