

Synology NAS recommendations

8 bay NAS

NAS/Server

Synology 8 Bay NAS Diskstation (Diskless) (DS1819+)

<https://www.synology.com/en-us/products/DS1819+>

<https://amzn.to/37mIDVG>

\$940

Memory upgrade

Micron - DDR4 - 16 GB - SO-DIMM 260-pin - unbuffered

Mfg.Part: MTA18ASF2G72HZ-2G6E1 | CDW Part: 5989124 | UNSPSC: 32101602

<https://www.cdw.com/product/micron-16gb-ddr4-ecc-sodimm-2666mhz/5989124>

2 x \$92

or

Kingston Server Premier - DDR4 - 16 GB - SO-DIMM 260-pin - unbuffered

Mfg.Part: KSM26SED8/16HD | CDW Part: 6200211 | UNSPSC: 32101602

<https://www.cdw.com/product/Kingston-Server-Premier-DDR4-16-GB-SO-DIMM-260-pin-unbuffered/6200211>

2 x \$78

Hard drives

2 x Western Digital 6TB Ultrastar DC HC310: <https://amzn.to/31njzZG>

Internal redundant data drives

2 x \$157 = \$315

Western Digital 8TB Ultrastar DC HC320: <https://amzn.to/34d2hjW>

Internal backup drive

1 x \$172

SSD for virtual machines

Samsung 860 EVO SSD: <https://amzn.to/34dSkM9>

Internal SSD for VM's

\$115

Battery backup UPS

APC UPS, 1500VA UPS Battery Backup & Surge Protector: <https://amzn.to/34cRhCT>

Battery backup for server

\$165

6 bay NAS

NAS/Server

Synology 6 Bay NAS DiskStation DS1621+ (Diskless)

<https://www.synology.com/en-us/products/DS1621+>

<https://amzn.to/391kbZw>

\$870

Memory upgrade

Micron - DDR4 - 16 GB - SO-DIMM 260-pin - unbuffered

Mfg.Part: MTA18ASF2G72HZ-2G6E1 | CDW Part: 5989124 | UNSPSC: 32101602

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Hard drives

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Battery backup UPS

APC UPS, 1500VA UPS Battery Backup & Surge Protector

<https://amzn.to/34cRhCT>

Battery backup for server

\$165

Estimated Total (NOT including tax): \$800

2 bay NAS

NAS/Server

Synology 2 Bay NAS DiskStation DS220+ (Diskless)

<https://www.synology.com/en-us/products/DS220+>

<https://amzn.to/3lZ9dXR>

\$300

Memory upgrade

Crucial 4GB Single DDR4 2666 MT/s (PC4-21300) CL19 x8 SODIMM 260-Pin Memory - CT4G4SFS8266, 4GB Single Rank

<https://amzn.to/34ddS2o>

\$17

Hard drives

Western Digital 6TB Ultrastar DC HC310

<https://amzn.to/31njzZG>

Internal redundant data drives

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Battery backup UPS

APC UPS, 1500VA UPS Battery Backup & Surge Protector

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Battery backup for server

\$165

Estimated Total (NOT including tax): \$800

Other hardware options:

RAM:

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\$78

16GB D4ECSO-2666-16G 260-Pin DDR4-2666 PC4-21300 ECC Sodimm RAM | Memory for Synology

Specs:16GB 260-Pin DDR4-2666 PC4-21300 ECC Sodimm 1.2v Dual Rank (2Rx8)

<https://archmemory.com/16gb-d4ecso-2666-16g-260-pin-ddr4-2666-pc4-21300-ecc-sodimm-ram-memory-for-synology/?fbclid=IwAR2eUTHwClwpgfKFq7MGfzqHonaQxgaeOpJF9d4eTvkiBiDe5i04uDkineI>

\$126

Crucial 4GB Single DDR4 2666 MT/s (PC4-21300) CL19 x8 SODIMM 260-Pin Memory - CT4G4SFS8266, 4GB Single Rank

<https://amzn.to/34ddS2o>

\$17

Hard drives:

512e vs 4kn

CMR (conventional magnetic recording) vs SMR

Spreadsheet:

<https://docs.google.com/spreadsheets/d/1QqWuj6HTs1Vt3zpBLgdv0RCVszaQ-ReCC9opIlggh8/edit#gid=0>

WD Red Plus

- 6 TB \$ <https://amzn.to/39lj9aX>

- 8 TB \$205 <https://amzn.to/37nJ13f>
- 10 TB \$280
- 12 TB \$305
- 14 TB \$418

Western Digital Ultrastar DC

- 6 TB \$160 <https://amzn.to/3l6XhIS>
- 8 TB \$165 <https://amzn.to/3nYEoDz>
- 10 TB \$275 <https://amzn.to/33iSFDe>
- 12 TB \$295 <https://amzn.to/37bdFNq>
- 14 TB \$310 <https://amzn.to/37bdFNq>

HGST

- 6 TB \$
- 8 TB \$
- 10 TB \$
- 12 TB \$273 <https://amzn.to/2V13XHN>
- 14 TB \$

Seagate Ironwolf (<https://www.seagate.com/internal-hard-drives/hdd/ironwolf/#specs>)

3 year warranty

- 6 TB \$
- 8 TB \$198 <https://amzn.to/2HCfPga>
- 10 TB \$269 <https://amzn.to/2V1dhLx>
- 12 TB \$290 <https://amzn.to/2V2Wvf5>
- 14 TB \$448 <https://amzn.to/2HBWwDG>

Seagate IronWolf Pro (<https://www.seagate.com/internal-hard-drives/hdd/ironwolf/#pro-specs>)

5 year warranty

- 6 TB \$
- 8 TB \$255 <https://amzn.to/39uBanq>
- 10 TB \$330 <https://amzn.to/3lmDVcM>
- 12 TB \$
- 14 TB \$

Seagate EXOS X Series (<https://www.seagate.com/products/enterprise-drives/exos-x/>)

5 year warranty

- 6 TB \$180 <https://amzn.to/2Jzu4CX>
- 8 TB \$190 <https://amzn.to/2Jzu4CX>
- 10 TB \$250 <https://amzn.to/2JvGaNG>
- 12 TB \$354 <https://amzn.to/33ssaer>
- 14 TB \$285 <https://amzn.to/2JqwWm7>
- 16 TB \$339 <https://amzn.to/33vCTEW>

Seagate Exos E Series (<https://www.seagate.com/products/enterprise-drives/exos-e/>)
https://www.seagate.com/files/www-content/datasheets/pdfs/exos-7-e8-msft-data-sheetDS1957-5M-2005US-en_US.pdf

5 year warranty

- 6 TB \$ Model: ST6000NM002A
- 8 TB \$189 <https://amzn.to/2Jsl6GK>
- 10 TB \$
- 12 TB \$
- 14 TB \$

Toshiba MG Series Enterprise

(https://www.toshiba-storage.com/wp-content/uploads/2018/04/DS_MG_Series.pdf)

5 year warranty

MTTF: 2 500 000 h

- 6 TB \$184
- 8 TB \$250
- 10 TB \$
- 12 TB \$275 Model: MG07ACA12TE
- 14 TB \$304 <https://amzn.to/378SBHk> Model: MG07ACA14TE