

You should choose a SSD based on its intended role.

Organization

SSDs tend to get faster from left to right on this guide. Drives on the right are perfectly capable of filling roles to the left but will be sup-optimal in performance profile, cost, or both.

Hardware

Most popular drives are listed as well as their related hardware configurations. Refer to my list or spreadsheet for further delineation.

### Selecting a SSD

SATA (2.5" or M.2)

NVMe (PCIe M.2)

Budget & Performance SATA SSDs usually have DRAM. DRAM improves performance and endurance and is optimal for mixed workloads, such as OS usage.

SATA SSDs use the SATA interface (physical or logical) and outdated AHCI protocol.

NVMe SSDs use the PCIe interface and the newer NVMe protocol.

DRAM is not as dire a requirement for NVMe drives due to the improved protocol. Some drives can use system memory (HMB) as well.

Storage SATA SSDs are suitable for general data storage or games. Generally larger in capacity and not the primary drive.

Light SATA SSDs are suitable for OS usage in machines with light usage, such as old or secondary PCs. Generally smaller in capacity and therefore TLC-based.

Budget SATA SSDs are suitable for varied use including OS. Cheaper alternative.

Moderate SATA SSDs are superior to Budget in some way while being more affordable than Performance.

Performance SATA SSDs are the best SATA drives on the market, suitable for anything.

Budget NVMe SSDs are entry-level, SATA replacement, or mobile/HTPC-oriented. Usually four-channel controllers with QLC or TLC and limited or no DRAM.

Moderate NVMe SSDs are in-between Budget and Consumer with elements of both. Capable of any usage. Cheaper alternative.

Consumer NVMe SSDs are high-performance desktop choices for the very best everyday experience.

Prosumer NVMe SSDs are specialized drives useful for content creation or workstation-type tasks. They often have a cost premium especially for Gen4.

Storage SATA

Light SATA

Budget SATA

Moderate SATA

Performance SATA

Budget NVMe

Moderate NVMe

Consumer NVMe

Prosumer NVMe

- ADATA SU630/SU635
- ADATA SU650/SU655
- ADATA SU720/SU740
- ADATA SU750/SU760
- Crucial BX500
- Inland SATA
- Kingston A400/Q500
- Mushkin Raw
- Mushkin Source
- Patriot Burst
- Patriot P200
- PNY CS900
- PNY CS2311
- Samsung 860/870 QVO
- SanDisk SSD Plus
- SP A55/S55
- Team AX1/AX2
- Team CX1/CX2
- Team EX2
- Team GX1/GX2
- Team Vulcan G

(Storage/Light) Controllers: Marvell 88NV1120, Maxio MAS0902A, Phison S11/T, Phison S13/T, Realtek RTS5733, SMI SM2258XT, SMI SM2259XT

- ADATA SU650/SU655
- ADATA SU750/SU760
- Crucial BX500
- HP S700
- HP M700 (MLC)
- Hyundai Sapphire
- Inland SATA
- Kingston A400/Q500
- Lexar NS100
- Mushkin Reactor (MLC)
- PNY CS1311
- Seagate BarraCuda
- Team Delta RGB
- Team L5 Lite 3D

- ADATA SU800/SX850
- ADATA SX950U
- Addlink S20
- Gigabyte UD Pro
- HP M700 (MLC)
- HP S700 Pro
- Kingston UV500
- Mushkin Reactor (MLC)
- PNY CS1311
- Seagate BarraCuda
- Team Delta RGB
- Team L5 Lite 3D

Controllers: Marvell 88SS1074, Phison S10, SMI SM2258

- Hynix S31
- Team Vulcan

- Crucial MX500
- Intel 545s
- Kingston KC600
- Lexar NS200
- PNY CS2311
- Samsung 860/870 EVO
- SanDisk Ultra 3D
- Seagate BarraCuda 120
- WD Blue 3D

Controllers: Marvell 88SS1074, Phison S12, SMI SM2258, SMI SM2259

- ADATA SX6000 Lite/Pro
- ADATA Falcon
- ADATA Swordfish
- ADATA S20G
- Crucial MP400
- Crucial P1/P2
- Gigabyte NVMe
- HP EX900
- Inland Professional
- Intel 660p/665p
- Kingston A1000
- MDSSD SBX/SBXe
- Mushkin Helix-L
- Patriot Scorch
- Plextor P300
- SP P32A80
- SP P34A60
- Team MP32/MP33/Z330
- WD SN500/SN550

Controllers: Realtek RTS5762DL, Realtek RTS5763DL, SMI SM2263/XT, Phison E8/E8T, Phison E13T

- ADATA S40G
- ADATA SX8100/S7
- ADATA SX8800
- Kingston A2000
- Intel 670p
- Sabrent Rocket Q

Controllers: Phison E12, Realtek RTS5762, SMI SM2263

Controllers: Marvell 88SS1092, Phison E12/E12S, SMI SM2262/EN, SMI SM2267

- ADATA SX8200/S11
- ADATA SX8200/S11 Pro
- ADATA S50 Lite (Gen4)
- Addlink S70
- Corsair MP510
- Crucial P5
- HP EX920
- HP EX950
- Hynix P31
- Inland Premium/Platinum
- Intel 760p
- Kingston KC2000/KC2500
- Lexar NM700
- MDSSD BPX Pro
- Mushkin Pilot
- Mushkin Pilot-E
- Patriot VPN/VPR100
- Plextor M9P+
- PNY CS3030
- Sabrent Rocket
- Seagate Barra/Fire 510
- SK hynix P31
- SP P34A80
- Team Cardea II/Liquid
- Team MP34/Z340

- ADATA S50 (Gen4)
- Corsair MP600 (Gen4)
- Gigabyte Aorus (Gen4)
- Inland Performance (Gen4)
- Patriot VP4100 (Gen4)
- PNY CS4040 (Gen4)
- Sabrent Rocket 4.0 (Gen4)
- Sabrent Rocket 4.0 Plus (Gen4)
- 970 EVO (Obsolete)
- 970 EVO Plus
- Samsung 970 Pro (MLC)
- Samsung 980 Pro
- Seagate FireCuda 520 (Gen4)
- SP US70 (Gen4)
- Team Cardea Zero/Z440 (Gen4)
- WD SN750
- WD SN850 (Gen4)

Controllers: Phison E16, Phison E18, SMI SM2264