

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SATA SSDs use the SATA interface (physical or logical) and outdated AHCI protocol.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

ADATA SU650/SU655
ADATA SU750/SU760
Crucial BX500
HP S700
HP M700 (MLC)
Hyundai Sapphire
Inland SATA
Kingston A400/Q500
Lexar NS100
Mushkin Raw
Mushkin Source
Patriot Burst
Patriot P200
SanDisk SSD Plus
SP A55/S55
Team AX1
Team CX1/CX2
Team GX1/GX2

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

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