

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SATA SSDs use the SATA interface (physical or logical) and outdated AHCI protocol.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

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 generally have some unique features or design.

Prosumer & Consumer NVMe SSDs are flexible, all-around performers capable of any task. Generally the very best drives.

**Storage SATA**

**Light SATA**

**Budget SATA**

**Performance SATA**

**Budget NVMe**

**Moderate NVMe**

**Consumer NVMe**

**Prosumer NVMe**

**P & C NVMe**

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

ADATA SU630/SU635  
ADATA SU650/SU655  
ADATA SU750/SU760  
Crucial BX500  
Inland SATA  
Kingston A400/Q500  
Mushkin Raw  
Mushkin Source  
Patriot Burst  
Patriot P200  
PNY CS900  
PNY CS2311  
Samsung 860 QVO  
SanDisk SSD Plus  
SP A55/S55  
Team GX1/GX2

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  
PNY CS2311  
SanDisk SSD Plus  
SP A55/S55  
Team GX1/GX2

ADATA SU800/SX850  
ADATA SX950U  
Addlink S20  
Gigabyte UD Pro  
HP M700 (MLC)  
HP S700 Pro  
Hynix Gold S31  
Kingston UV500  
Mushkin Reactor (MLC)  
PNY CS1311  
Seagate BarraCuda  
Team Delta RGB  
Team L5 Lite 3D

Controllers:  
Marvell 88SS1074  
Phison S10/S12  
SMI SM2258

Crucial MX500  
Intel 545s  
Kingston KC600  
Lexar NS200  
Samsung 860 EVO  
SanDisk Ultra 3D  
Team Vulcan  
WD Blue 3D

Controllers:  
Marvell 88SS1074  
SMI SM2258  
SMI SM2259

ADATA SX6000 Lite/Pro  
Crucial P1  
HP EX900  
Inland Professional  
Intel 660p/665p  
Kingston A1000  
MDSSD SBX/SBXe  
Mushkin Helix-L  
Patriot Scorch  
SP P32A80  
SP P34A60  
Team MP32  
WD SN500/SN550

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

ADATA S40G  
ADATA SX8100  
ADATA SX8800  
Kingston A2000  
Sabrent Rocket Q

Controllers:  
Phison E12S  
Realtek RTS5762  
SMI SM2263

ADATA SX8200/S11  
ADATA SX8200/S11 Pro  
Addlink S70  
Corsair MP510  
HP EX920  
HP EX950  
Inland Premium  
Intel 760p  
Kingston KC2000  
MDSSD BPX Pro  
Mushkin Pilot  
Mushkin Pilot-E  
Patriot VPN/VPR100  
PNY CS3030  
Sabrent Rocket  
Seagate Barra/Fire 510  
SP P34A80  
Team Cardea II/Liquid  
Team MP34

Controllers:  
Phison E12/E12S  
SMI SM2262/EN

ADATA S50  
Corsair MP600  
Gigabyte Gen4 Aorus  
Inland Performance  
Patriot VP4100  
PNY CS4040  
Sabrent Rocket 4.0  
Samsung 970 Pro (MLC)  
Seagate FireCuda 520  
Team Cardea Zero  
WD SN750

Controllers:  
Phison E16

Samsung 970 EVO  
Samsung 970 EVO Plus