

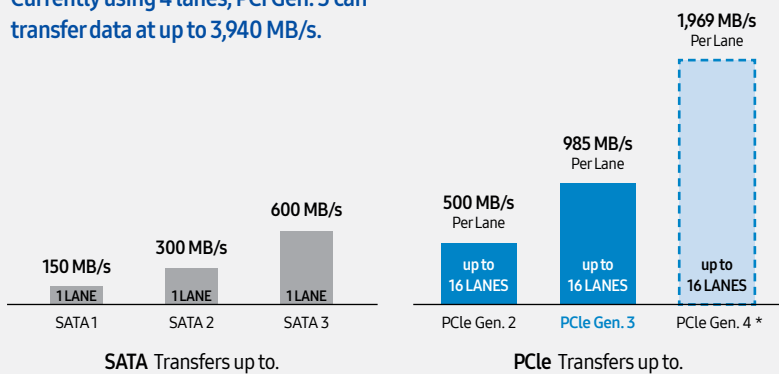
Introduction to Samsung NVMe SSDs

The solution to storage protocol and Interface bottleneck

When it comes to a PC's system "responsiveness", storage is one of the most crucial hardware components. The faster the drive, the faster the system boots, the faster apps launch, and the faster files save. The introduction of SSDs a number of years ago was a major step forward from traditional spinning HDDs, but SSDs recently hit a performance wall in the existing SATA 3 protocol, and they simply cannot run any faster.



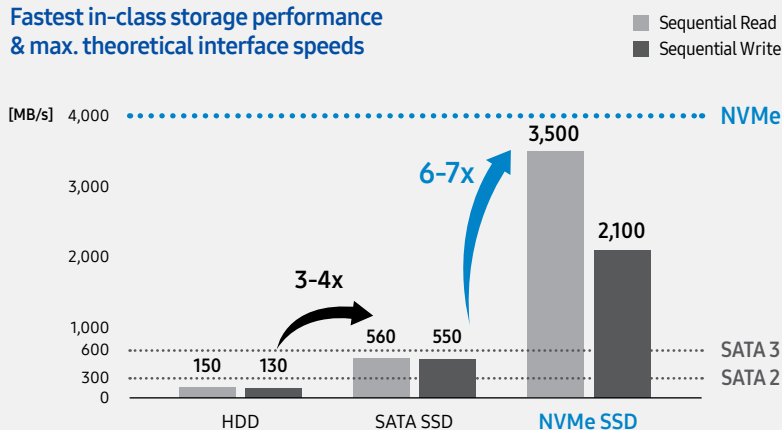
Currently using 4 lanes, PCI Gen. 3 can transfer data at up to 3,940 MB/s.



NVMe is built for SSDs

SSD technology grew enormously alongside advances in CPU and GPU. With a significant boost in storage capacity and performance, NAND Flash - the technology behind Solid State Drives - possesses the capability to do far more. The Non-Volatile Memory Express (NVMe) protocol was specially created for NAND Flash storage solutions to accelerate transfer speeds by overcoming legacy constraints in existing storage interfaces and protocols. SATA was optimized for mechanical Hard Disk Drive Storage, but even with revisions over time, the current SATA 3 interface bandwidth does not accommodate the full potential of NAND Flash based SSDs.

Fastest in-class storage performance & max. theoretical interface speeds



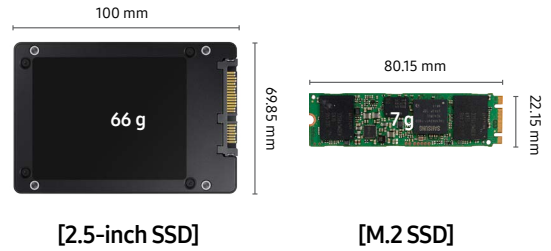
Transfer faster with NVMe SSDs

Non-Volatile Memory Express (NVMe) protocol was especially designed for NAND Flash storage solutions to unleash a new dimension of data transfer speed. It allows SSDs to achieve peak performance, 6-7 times the sequential read/write speeds of SATA.

* In the future, using PCIe 4.0 can be scaled to 16 lanes for a theoretical max. of 32 GB/s.

More gains from NVMe SSDs

Besides providing a leap in performance, NVMe SSDs are smaller, lighter, more efficient, and easier to install (no cables). The M.2 form-factor reduces the overall size of internal storage devices. Standard M.2 cards are just 22 mm wide, allowing dramatically expanded capacity without messy cables, power wires, or bulky disk housing.



The next generation of storage

With the faster data transfer speeds of the PCIe interface and the NVMe protocol, the SSD of the future is scalable with a theoretical transfer speed of up to 31,504 MB/s (using PCIe 4.0). NVMe SSDs unlock a new level in speed, capacity, and form.

Samsung NVMe SSD Lineup

Samsung accelerated the NVMe era in 2015 with the launch of the 950 PRO and continues to accelerate the innovation to address the evolving PC environment across laptops and desktops. These hardware options have fully matured for NVMe adoption with chipset, operating system, as well as motherboard support for PCI Express (PCIe) Gen. 3 x 4 lanes in an M.2 slot. Samsung is expanding the NVMe SSD market with the development of the 4th-generation V-NAND and two tier lineup.



960 PRO

Designed for tech enthusiasts and professionals seeking unprecedented workstation and PC performance for CAD engineering or data simulations.



960 EVO

The smart choice for entry-level NVMe SSD users who want to discover next-generation PC performance for gaming and graphics.

For more information

For more information about the Samsung NVMe SSD, visit www.samsungssd.com.

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