Samsung SZ1735a Z-SSD

The Fastest Flash Ever Made

Product Brief

Unlock your Data Center's potential.

The optimal configuration for systems in the data center is constantly evolving. IT and data center managers are tasked with finding high performing and extremely dependable memory solutions while maximizing ROI. Recent advances in flash technology have produced more economical, lower endurance SSDs. While fit for mass storage, they alone cannot fulfill the stringent requirements imposed on the enterprise data center. A buffer is needed, something which can withstand intensive write operations without introducing a performance bottleneck.

That's where the SZ1735a Z-SSD comes to the rescue. A specialized SSD designed with the modern data center in mind. By providing the highest throughput and endurance along with the lowest possible latency, the SZ1735a allows IT managers to fully realize the economics of the latest innovations without sacrificing system performance or reliability.

Unlock your Data Center with the Z-SSD. From Samsung - the most trusted name in flash.
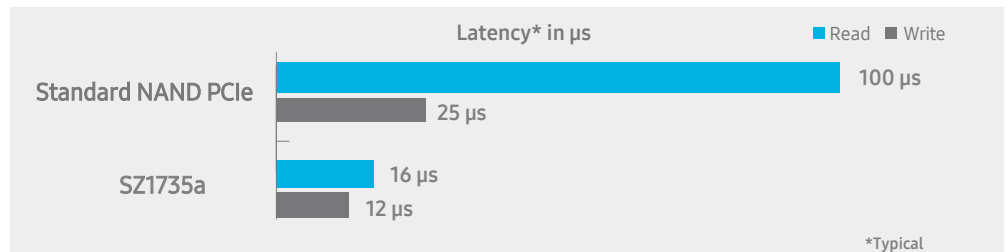
Highlights

Samsung SZ1735a delivers:

- **Extreme performance**
  Through PCIe Gen 4, the SZ1735a delivers over 7GB/s Sequential and 1.8M IOPS Random Read speeds, making it the highest performing SSD ever.

- **Unmatched Endurance**
  Offering up to 30 times the endurance of mainstream SSDs, the SZ1735a can withstand even the most write-heavy workloads.

- **Use Case Optimized**
  The Samsung SZ1735a Z-SSD is optimized to excel in write-intensive workloads as a high endurance, low latency buffer. This ultra-high performance SSD is particularly suitable for write buffering, read-caching, logging, metadata, and similar use cases.

Dual-Port Functionality

SZ1735a supports dual-port functionality, enabling high-availability via two access paths to the storage array controller. This delivers the reliability, availability and serviceability (RAS) that is required for enterprise storage.

Samsung SZ1735a Performance: Latency vs Standard NVMe SSD

Latency* in µs — Read / Write

Standard NAND PCIe	100 µs (Read), 25 µs (Write)
SZ1735a	16 µs (Read), 12 µs (Write)

*Typical

Samsung SZ1735a specifications

Form factor	U.2 / 2.5"
Capacity	800GB, 1.6 TB, 3.2TB
Host interface	PCIe Gen 4 x4
Spec Compliance	NVMe spec rev. 1.3 PCI Express base specification rev. 4.0
NAND flash memory	Samsung V-NAND®
Power consumption (Active/Idle)	19W/7.5W
Uncorrectable Bit Error Rate (UBER)	1 sector per 10^17 bits read
Mean Time Between Failure (MTBF)	2,000,000 hours
Endurance	Up to 30 DWPD for 5 years
Sequential read	7.2 GB/s
Sequential write	4.1 GB/s
Random read	1,800K IOPS
Random write	Up to 330K IOPS
Latency	<20 µs Read, <15 µs Write
Physical Dimensions	69 x 100 x 15 mm
Encryption Supported	SED
Bytes per sector	512, 520, 4096, 4104, 4160 Bytes
Operating Temperature	0 - 70° C

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Enterprise-grade power loss protection

The Samsung SZ1735a SSD has been designed to prevent data loss resulting from unexpected power shutdowns with its power-loss protection architecture. Upon detection of a failure, the SSD immediately uses the stored energy from tantalum capacitors to provide enough time to transfer the cached data in DRAM to the flash memory, ensuring no loss of data.

Optimized for the most demanding use cases

In the age of All-Flash arrays, not all flash is created equal. While this affords IT managers the advantages of flexibility in design and budget, it also requires ensuring the right flash is being used in the right places.

The Samsung SZ1735a Z-SSD is purpose-built to excel in the most intensive data center use cases. Operations such as write buffering and heavy-duty logging will wear down a mainstream SSD in no time, resulting in costly replacements and reduced ROI. The SZ1735a provides the endurance required to fulfill these critical functions reliably, so your mainstream storage can do what it's designed for, and you can get the most out of your investment.

Critical workloads deserve proven technology.

When it comes to reliability, scalability, and ease of use, NAND technology is simply unmatched. A proven solution with decades of development and the strength of industry behind it, why would you design your most critical functions around anything else?

Avoid unnecessary complications. Trust your most sensitive workloads to Samsung - the most trusted name in flash.

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