

Improve your data center fast. Really fast.

Advanced SSD designed for high-performance servers that require enhanced data reliability.

Get blazing-fast speed and performance while safeguarding critical data. Samsung 983 DCT SSD features an enhanced Phoenix controller and NVMe technology for significantly faster read/write speeds. Available in both U.2 and M.2 form factors and capacities of 960 GB and 1.9 TB, Samsung 983 DCT SSD is a simple way to transform your business, while also realizing high quality of service (QoS), power loss protection and end-to-end data protection.

Key Features

SAMSUNG V-NAND Data Center SSDs, Advanced V-NAND

Keep your business running 24/7. Attain high performance, value and reliability with advanced Samsung V-NAND technology SSDs. They're produced in-house to stringent standards and are designed to achieve high responsiveness in data centers requiring accelerated performance.

Seamless, High-Powered Performance

NVMe can quickly make a difference in your business. Combined with a Phoenix controller, the 983 DCT delivers stunning sequential read/write speeds of up to 3,000/1,900 MB/s¹ (U.2 1.9 TB). Samsung 983 DCT SSD is an ideal solution for servers that require blazing-fast speeds and high QoS.

End-to-End Data Protection

End-to-end data protection ensures consistency over the entire data transfer path, greater reliability and peace of mind.

Protection from Power Loss

In the event of power failure, Samsung SSD includes power loss protection to prevent data corruption.

Enhanced Operations Efficiency

Accomplish far more with less. Achieve higher efficiency and performance compared to legacy storage systems, with fewer servers, reduced power and cooling, and lower TCO. Maintenance is more efficient, too, with the provided Samsung SSD Toolkit software.

Samsung Quality and Reliability

Keep going with less downtime. In-house production utilizing our own Samsung-built components allows us greater quality control and manufacturing efficiencies, to produce SSDs of superior quality and reliability. Empower your business to run faster, more efficiently, and with the reduced costs that come from world-class dependability.



Samsung 983 DCT U.2 and M.2 Solid State Drives



		MZ-QLB960NE	MZ-QLB1T9NE	MZ-1LB960NE	MZ-1LB1T9NE
Usage Application		Data Center	Data Center	Data Center	Data Center
Capacity ²		960 GB	1920 GB (1.9 TB)	960 GB	1920 GB (1.9 TB)
Dimensions (WxHxD)		3.94" x 2.75" x 0.27"	3.94" x 2.75" x 0.27"	4.33" x 0.87" x 0.15"	4.33" x 0.87" x 0.15"
Interface		PCIe Gen 3.0 x4, NVMe 1.2b	PCIe Gen 3.0 x4, NVMe 1.2b	PCIe Gen 3.0 x4, NVMe 1.2b	PCIe Gen 3.0 x4, NVMe 1.2b
Form Factor		U.2	U.2	M.2	M.2
Controller		Phoenix	Phoenix	Phoenix	Phoenix
NAND Flash Memory		Samsung V-NAND 3-bit MLC	Samsung V-NAND 3-bit MLC	Samsung V-NAND 3-bit MLC	Samsung V-NAND 3-bit MLC
DRAM Cache Memory		Samsung 1.5 GB LPDDR4	Samsung 3 GB LPDDR4	Samsung 1.5 GB LPDDR4	Samsung 3 GB LPDDR4
Performance ¹	128KB Sequential Read (Max.)	3,300 MB/s	3,400 MB/s	3,000 MB/s	3,000 MB/s
	128KB Sequential Write (Max.)	1,300 MB/s	2,200 MB/s	1,200 MB/s	1,430 MB/s
	4KB Random Read (QD32) (Max.)	440,000 IOPS	580,000 IOPS	400,000 IOPS	480,000 IOPS
	4KB Random Write (QD32) (Max.)	46,000 IOPS	52,000 IOPS	38,000 IOPS	42,000 IOPS
Weight (Max.)		70 g.	70 g.	20 g.	20 g.
Reliability (MTBF)		2 Million Hours	2 Million Hours	2 Million Hours	2 Million Hours
TBW ⁵		Up to 1,366 TBW	Up to 2,733 TBW	Up to 1,366 TBW	Up to 2,733 TBW
Power Loss Protection		Provided	Provided	Provided	Provided
Power Consumption ⁴	Active Write (Max. RMS)	10.6 W	10.6 W	8.0 W	8.0 W
	Idle (Max.)	4.0 W	4.0 W	2.6 W	2.6 W
Supporting Features		TRIM Support, Garbage Collection, S.M.A.R.T., AES 256-bit Encryption (Class 0), WWN Support	TRIM Support, Garbage Collection, S.M.A.R.T., AES 256-bit Encryption (Class 0), WWN Support	TRIM Support, Garbage Collection, S.M.A.R.T., AES 256-bit Encryption (Class 0), WWN Support	TRIM Support, Garbage Collection, S.M.A.R.T., AES 256-bit Encryption (Class 0), WWN Support
Temperature ³	Operating	32° ~ 158° F (0° C ~ 70° C)	32° ~ 158° F (0° C ~ 70° C)	32° ~ 158° F (0° C ~ 70° C)	32° ~ 158° F (0° C ~ 70° C)
	Non-Operating	-49° ~ 185° F (-40° C to 85° C)	-49° ~ 185° F (-40° C to 85° C)	-49° ~ 185° F (-40° C to 85° C)	-49° ~ 185° F (-40° C to 85° C)
Humidity		5% to 95%, Non-Condensing	5% to 95%, Non-Condensing	5% to 95%, Non-Condensing	5% to 95%, Non-Condensing
Vibration (Non-Operating)		20-2000Hz, 20G	20-2000Hz, 20G	20-2000Hz, 20G	20-2000Hz, 20G
Shock (Non-Operating) ⁶		1500G, Duration 0.5 m/sec, Half-Sine Wave	1500G, Duration 0.5 m/sec, Half-Sine Wave	1500G, Duration 0.5 m/sec, Half-Sine Wave	1500G, Duration 0.5 m/sec, Half-Sine Wave
Limited Warranty ⁷		3 Years or 1,366 TBW	3 Years or 2,733 TBW	3 Years or 1,366 TBW	3 Years or 2,733 TBW



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Product Support

1-866-SAM4BIZ

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¹Based on PCI Express Gen3 x4. Random performance measured using FIO 2.7 in CentOS 6.6 (kernel 3.14.29) with 4KB (4,096 bytes) of data transfer size in queue depth 32 by 4 workers, and sequential performance with 128KB (131,072 bytes) of data transfer size in queue depth 32 by 1 worker. Actual performance varies depending on use conditions and environment. 1 MB/sec = 1,000,000 bytes/sec was used in sequential performance measurement. ²1 GB=1,000,000,000 bytes, unformatted capacity. User accessible capacity may vary depending on operating environment and formatting. ³All documented endurance test results are obtained in compliance with JEDEC standards. Please visit jedec.org for detailed information on JEDEC standards. ⁴Active power is measured using IOMeter2006 on Windows Server 2012. ⁵Tc is measured at the hottest point on the case. Sufficient airflow is recommended to be operated properly on heavier workloads within device operating temperature. ⁶Internal free fall shock test conducted under controlled conditions. ⁷Warranty 3 years or TBW, whichever comes first. For more information on the warranty, please find the warranty statement enclosed in the package.