DC4800/E | PCIe NVMe | OCP Cloud Spec 1.0

Next-Generation Data Center SSDs for Hyper-converged, Hyperscaler, and Cloud Service providers

SMART's DC4800 PCIe Gen4 NVMe SSDs are designed to meet the increasing demands placed on storage systems in Hyperscaler, Hyper converged, and Cloud Service Provider data centers.

SMART's DC4800 SSDs deliver industry leading KIOPs/Watt performance with superior Quality of Service (QoS) across mixed application workloads. At the heart of the DC4800 SSDs is an innovative controller and firmware architecture that delivers ultra-low and consistent I/O latency with power consumption levels that virtually eliminate thermal throttling.

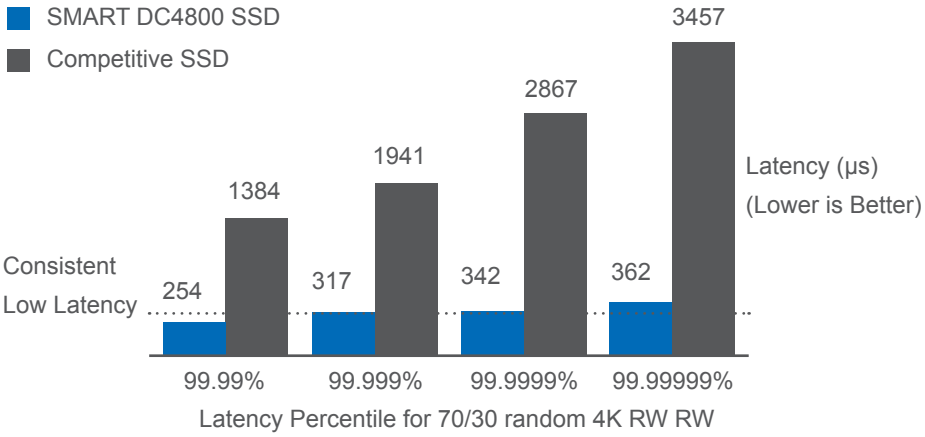
U.2

E1.S

GEN4
SSD STORAGE

Hyperscaler, Hyper Converged, Enterprise, and Edge Data Centers

Superior Latency QoS <370µs at 99.99999%



Benefits of SMART Gen4 SSDs

- 7.0GB/s seq read, 4.3GB/s seq write; 1400 KIOPS random read, 200 KIOPS random write
- Superior Quality of Service (QoS) with 7 nines of latency consistency
- eTLC 3D NAND, 1-3 DWPD
- Up to 25% lower power than other Gen 4 SSDs with industry leading KIOPs/Watt
- Hardware accelerated architecture virtually eliminates throttling
- Leading edge, trusted industry security standards
- Open Compute Project (OCP) NVMe Cloud SSD 1.0a support

Product Family Overview

Model	Form Factor	Capacity	DWPD
DC4800	EDSFF E1.S SSD U.2 SSD	960GB, 1.92TB, 3.84TB, 7.68TB	1
DC4800E	EDSFF E1.S SSD U.2 SSD	800GB, 1.6TB, 3.2TB, 6.4TB	3

Key Features

- Capacities: DC4800: 960GB, 1.92TB, 3.84TB, 7.68TB
  DC4800E: 800GB, 1.6TB, 3.2TB, 6.4TB
- Security and Encryption: TCG OPAL 2.0, AES XTS 256, TRNG
- Secure Boot with ECDSA-256 and SHA3-512
- High Reliability: End to End data path protection, SRAM/DRAM ECC, Power Loss Protection
- Sector Size: 512, 4096
- Enhanced NAND level reliability: In storage RAID with LUN level protection, L2P Mapping Index Check, 4KB LDPC multi code rates
- Multiple Namespace (16)
- NVMe MI 1.0, SMART and Health Logs/Telemetry
- OCP NVMe Cloud SSD 1.0a Support

Specifications

	DC4800		DC4800E		
	EDSFF E1.S	U.2	EDSFF E1.S	U.2	
NAND Type	eTLC				
Performance					
Host Interface Rate (maximum)	PCIe Gen4 x4				
Capacities	960GB, 1.92TB, 3.84TB, 7.68TB		800GB, 1.6TB, 3.2TB, 6.4TB		
Sequential Read (maximum)	Up to 6900MB/s	Up to 7025MB/s	Up to 6900MB/s	Up to 7025MB/s	Thread Count = 1 Queue Depth = 128 IO Size = 128KB 1MB/s=2^{20} Byte/s
Sequential Write (maximum)	Up to 4200MB/s	Up to 4300MB/s	Up to 4200MB/s	Up to 4300MB/s	
Random Read Performance (KIOPS)	Up to 1350K IOPS	Up to 1400K IOPS	Up to 1350K IOPS	Up to 1400K IOPS	Thread Count = 1 Queue Depth = 128 IO Size = 4KB Sustained
Random Write Performance (KIOPS)	Up to 190K IOPS	Up to 200K IOPS	Up to 380K IOPS	Up to 400K IOPS	
Random Read Latency (µs)	80				Thread Count = 1 Queue Depth = 1 IO Size = 4KB Typical
Random Write Latency (µs)	15				
Latency QoS (99.9%) (Queue Depth 1 | 64)					
99.9% QoS – Random Read (µs)	110 | 240				Thread Count = 1 Queue Depth = 1 | 64 IO Size = 4KB
99.9% QoS – Random Write (µs)	30 | 1200		30 | 1000		
Electrical Specification					
Supply Voltage Min | Max (V)	10.8 | 13.2				
Active Power Consumption (W)	< 13				
Idle Power Consumption (W)	< 1.0				
Reliability, Mechanical					
MTBF (Hours)	2M				
UBER	1 Sector per 10^{17} Read				
Retention	2 Months @ 40°C (EOL)				
DWPD 5 yrs	1		3		
Enclosure	5.9, 9.5mm	15mm	5.9, 9.5mm	15mm	

SMART® Modular Technologies
A PENGUIN SOLUTIONS™ BRAND

For more information, please visit: **www.smartm.com**

**Product images are for promotional purposes only. Labels may not be representative of the actual product.*

Headquarters/North America:
T: (+1) 800-956-7627 • T: (+1) 510-623-1231
F: (+1) 510-623-1434 • E: info@smartm.com

Latin America:
T: (+55) 11 4417-7200 • E: sales.br@smartm.com

Asia/Pacific:
T: (+65) 6678-7670 • E: sales.asia@smartm.com

EMEA:
T: (+44) 0 7826-064-745 • E: sales.euro@smartm.com

Customer Service:
T: (+1) 510-623-1231 • E: customers@smartm.com