

## DuraFlash

# MP3000 | PCIe NVMe | M.2 2280 & 22110 SSDs

SMART's DuraFlash MP3000 PCIe NVMe M.2 SSDs incorporate the latest generation 3D NAND-technology to deliver high performance with endurance up to one drive writes per day (1 DWPD) for five years. The MP3000 SSDs offer better cost per bit over previous 64-layer and 96-layer NAND generations without sacrificing performance and reliability.

SMART's MP3000 SSDs feature a PCIe Gen4 x4 interface and are compliant to NVMe 1.4 specification. The increased bandwidth offered by PCIe 4.0 improves the efficiency of performing workloads. They support TCG Opal 2.0 as standard, and are easily integrated into a host system without any BIOS modifications or additional drivers. The MP3000 products incorporate on-board error detection and correction, and static wearleveling algorithms to provide reliable operation over the product life cycle.

## Features & Benefits

- Self-Encrypted Drive (SED) with TCG Opal 2.01 Support
- Quality of Service (QoS) with 3 Nines of Latency Consistency
- Secure Boot with PKI-Based Firmware Authenticity Verification
- The Latest Generation 3D NAND Technology
- PCIe Gen4 x4 NVMe 1.4 Compliant
- 1 DWPD For 5 Years, Enterprise Workload
- Namespace Management (Up to 16 Namespaces)
- 512-Bytes and 4096-Bytes LBA Formats
- SMBus NVMe-MI Support
- SafeDATA<sup>™</sup> Power-Loss, Data-Protection Technology
- Redundancy Coding for Enhanced Data Reliability
- End-to-End Data Path Protection with Internal Memory Error Detection and Correction

## **Product Family Overview**

Form Factor	Capacity	Sequential Performance
M.2 2280 SSD	240GB to 1920GB	Up to 3500MB/s Read Up to 2000MB/s Write
M.2 22110 SSD	240GB to 1920GB	
EDSFF E1.S	240GB to 1920GB	

3D

M.2 22110



## Applications

- Al
- Data Center
- HPC
- Networking
- Storage
- Telecommunication

## Specifications

	M.2 2280 SSD	M.2 22110 SSD	
NAND Type	eTLC		
Performance			
Host Interface Rate (maximum)	PCIe Gen4 x4		
Capacities	240GB to 1920GB		
Sequential Read (maximum)	Up to 3500MB/s		
Sequential Write (maximum)	Up to 2000MB/s		
Random Read (maximum)	Up to 400K IOPS		
Random Write (maximum)	Up to 160K IOPS		
Reliability			
MTBF	> 2,000,000 hours		
	1920GB: 3500 TBW		
Endurance	960GB: 1700 TBW		
(JEDEC Enterprise Workload) <sup>1</sup>	480GB: 800 TBW		
	240GB: 350 TBW		
DWPD	1		
SafeDATA	Standard		
Error Correction	LDPC		
Data Security			
Encryption	AES-256, TCG OPAL 2.0		
Power			
Input Voltage	VCC: 3.3 V ± 5%		
Environmental			
Obash	1500 g half-sine, 0.5 msec	1500 g half-sine, 0.5 msec, 1 shock along each axis,	
Shock	X, Y, Z in each direction		
Vibration	20G 80-2000Hz, 1.52mm 20-80Hz, 3 axis		
0 // T	Commercial: 0°C to +70°C		
Operating Temperature	Industrial: -40°C to +85°C		
Storage Temperature	-40°C to +85°C		
Humidity	40°C, Operation: 90% RH, Storage: 93% RH		
Physical			
Length	80.0 mm	110.0 mm	
Width	22.0 mm	22.0 mm	
Height	3.65 mm	3.65 mm	

## **Ordering Information**

Part Number	Density			
MP3000   PCIe NVMe   M.2 2280 SSD				
Commercial Operating Temperature (0°C to +70°C)				
SRMP81920F1N2AC2	1920GB			
SRMP8960GF1N2AC2	960GB			
SRMP8480GF1N2AC2	480GB			
SRMP8240GF1N2AC2	240GB			
MP3000   PCIe NVMe   M.2 2280 SSD				
Industrial Operating Temperature (-40°C to +85°C)				
SRMP81920F2N2AC2	1920GB			
SRMP8960GF2N2AC2	960GB			
SRMP8480GF2N2AC2	480GB			
SRMP8240GF2N2AC2	240GB			
MP3000   PCIe NVMe   M.2 22110 SSD				
Commercial Operating Temperature (0°C to +70°C)				
SRMP11920F1N2AC2	1920GB			
SRMP1960GF1N2AC2	960GB			
SRMP1480GF1N2AC2	480GB			
SRMP1240GF1N2AC2	240GB			
MP3000   PCIe NVMe   M.2 22110 SSD				
Industrial Operating Temperature (-40°C to +85°C)				
SRMP11920F2N2AC2	1920GB			
SRMP1960GF2N2AC2	960GB			
SRMP1480GF2N2AC2	480GB			

<sup>1</sup>Endurance is directly related to the User Specific Workload.



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

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