



## DuraFlash™

# MP3000 | PCIe NVMe | EDSFF E1.S SSD

SMART Modular's Enterprise and Data Center SSDs are an ideal solution for capturing, storing and analyzing very large amounts of data. The high performance, E1.S form factor and 12V operation are specifically optimized for scale-out main storage in servers. They fit vertically in 1U servers to provide improved cooling and maximum system capacity (up to 32 EDSFF SSDs in a 1U server).

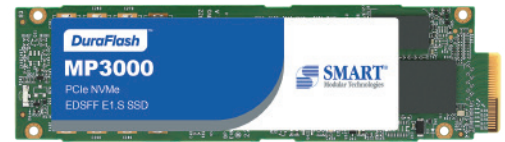
SMART Modular's EDSFF E1.S SSDs support a full range of command sets and provide the security and reliability needed by the most demanding data center applications.

### Features & Benefits

- The Latest Generation 3D NAND Technology
- Quality of Service (QoS) with 3 Nines of Latency Consistency
- PCIe Gen4 x4 NVMe 1.4 Compliant
- 1 DDPD For 5 Years, Enterprise Workload
- SafeDATA™ Power-Loss, Data-Protection Technology
- Advanced Security Including: TCG OPAL 2.0, AES 256 Encryption, and Secure Boot with PKI-Based Firmware Authenticity Verification
- E1.S 5.9mm 12W Form Factor (31.5mm x 111.49mm x 5.9mm)
- Fits in Common Datacenter System Chassis (1U, 2U, etc.)
- Designed to be Front Panel Accessible
- Up to 32 EDSFF SSDs in a 1U Server (up to 256TB Total Capacity)
- Cost Benefit to System Designs with 12V Only for Main Power
- Full Range of NVMe Command Sets Available
- Supports Hot-Plug Insertion and Removal
- Capacity Ranges: 240GB to 1.92TB

### 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	



### Applications

- AI
- Data Center
- HPC
- Networking
- Storage
- Telecommunication

## Specifications

MP3000   PCIe NVMe   EDSFF E1.S SSD	
NAND Type	eTLC
<b>Performance</b>	
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
<b>Reliability</b>	
MTBF	> 2,000,000 hours
Endurance (JEDEC Enterprise Workload) <sup>1</sup>	1920GB: 3500 TBW 960GB: 1700 TBW 480GB: 800 TBW 240GB: 350 TBW
DWPD	1
SafeDATA	Standard
Error Correction	LDPC
<b>Data Security</b>	
Encryption	AES-256, TCG OPAL 2.0
<b>Power</b>	
Input Voltage	VCC: 12V ± 10%
<b>Environmental</b>	
Shock	1500 g half-sine, 0.5 msec, 1 shock along each axis, X, Y, Z in each direction
Vibration	20G 80-2000Hz, 1.52mm 20-80Hz, 3 axis
Operating Temperature	Commercial: 0°C to +70°C Industrial: -40°C to +85°C
Storage Temperature	-40°C to +85°C
Humidity	40°C, Operation: 90% RH, Storage: 93% RH
<b>Physical</b>	
Length	111.49 mm
Width	31.5 mm
Height	5.9 mm

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

## Ordering Information

Part Number	Density
<b>MP3000   PCIe NVMe   EDSFF E1.S SSD</b> <b>Commercial Operating Temperature (0°C to +70°C)</b>	
SRE1S1920F1N2AC2	1920GB
SRE1S960GF1N2AC2	960GB
SRE1S480GF1N2AC2	480GB
SRE1S240GF1N2AC2	240GB
<b>MP3000   PCIe NVMe   EDSFF E1.S SSD</b> <b>Industrial Operating Temperature (-40°C to +85°C)</b>	
SRE1S1920F2N2AC2	1920GB
SRE1S960GF2N2AC2	960GB
SRE1S480GF2N2AC2	480GB
SRE1S240GF2N2AC2	240GB



For more information, please visit: [www.smartm.com](http://www.smartm.com)

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