

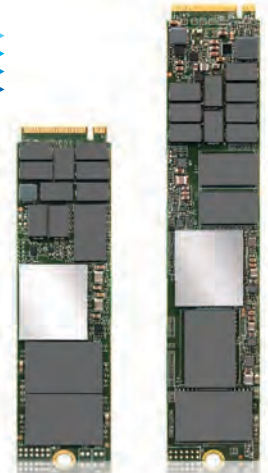


## DuraFlash™

# SP2800 | M.2 2280 & M.2 22110 PCIe NVMe

SMART's DuraFlash SP2800 products are best in-class PCIe NVMe SSDs with the functionality, performance and reliability for mission-critical applications. These drives target server, storage cache/accelerators, networking, and data communications applications requiring reliable internal storage with a small footprint. They are also a natural fit for enterprise applications, including computing, medical, transportation, video surveillance and other industrial applications.

The SP2800 M.2 2280 & M.2 22110 PCIe NVMe SSDs feature a PCIe Gen3 x4 interface and are compliant to NVMe 1.3 specification. They support TCG Opal 2.0 as standard, and are easily integrated into a host system without any BIOS modifications or additional drivers. The SP2800 products incorporate on-board error detection and correction, and static wear-leveling algorithms to provide reliable operation over the product life cycle.



### Features & Benefits

- PCIe Gen3 x4 NVMe 1.3 Compliant
- 1 DDPD Version Available with eTLC NAND
- TCG OPAL 2.0 and AES 256 Encryption for Data Security and Data Sanitize
- End-to-End Data Path Protection
- 3D NAND Technology with High Endurance
- SafeDATA™ Technology as a Standard Feature for eTLC Version (SafeDATA safeguards the integrity, functionality and data of the SSD in the event of sudden power loss.)

### Applications

- Data Center
- Networking
- Storage Server
- Telecom

### Product Family Overview

	Capacity	Sequential Performance
<b>M.2 2280</b>	240GB to 1920GB	Up to 3300MB/s Read; Up to 2600MB/s Write
<b>M.2 22110</b>	240GB to 1920GB	Up to 3300MB/s Read; Up to 2600MB/s Write

## M.2 2280 Specifications

SP2800 M.2 2280 PCIe NVMe		
NAND Type	TLC	eTLC
<b>Performance</b>		
Host Interface Rate (maximum)	PCIe Gen3 x4	
Capacities	240GB to 1920GB	
Sequential Read (maximum)	Up to 3300 MB/s	
Sequential Write (maximum)	Up to 2600 MB/s	
Random Read (maximum)	Up to 300K IOPS	
RandomWrite (maximum)	Up to 300K IOPS	
<b>Reliability</b>		
MTBF	> 2,000,000 hours	
Endurance (JEDEC Enterprise Workload) <sup>1</sup>	1920GB: 1200 TBW	1920GB: 4000 TBW
	960GB: 600 TBW	960GB: 2000 TBW
	480GB: 300 TBW	480GB: 1000 TBW
	240GB: 120 TBW	240GB: 450 TBW
DWPD	0.3	1
SafaData	-	Standard
Error Correction	LDPC	
<b>Data Security</b>		
Encryption	AES-256, TCG OPAL 2.0	
<b>Power</b>		
Input Voltage	VCC: 3.3 V ± 5%	
<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	80.0 mm	
Width	22.0 mm	
Height	3.65 mm	

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

## M.2 2280 Ordering Information

Part Number	Density
<b>M.2 2280 TLC</b>	
<b>Commercial Operating Temperature (0°C to +70°C)</b>	
SRMP81920TCS1A71	1920GB
SRMP8960GTCS1A71	960GB
SRMP8480GTCS1A71	480GB
SRMP8240GTCS1A71	240GB
<b>M.2 2280 TLC</b>	
<b>Industrial Operating Temperature (-40°C to +85°C)</b>	
SRMP81920TIS1A71	1920GB
SRMP8960GTIS1A71	960GB
SRMP8480GTIS1A71	480GB
SRMP8240GTIS1A71	240GB
<b>M.2 2280 eTLC (SafeDATA)</b>	
<b>Commercial Operating Temperature (0°C to +70°C)</b>	
SRMP81920F1S1A71	1920GB
SRMP8960GF1S1A71	960GB
SRMP8480GF1S1A71	480GB
SRMP8240GF1S1A71	240GB
<b>M.2 2280 eTLC (SafeDATA)</b>	
<b>Industrial Operating Temperature (-40°C to +85°C)</b>	
SRMP81920F2S1A71	1920GB
SRMP8960GF2S1A71	960GB
SRMP8480GF2S1A71	480GB
SRMP8240GF2S1A71	240GB

## M.2 22110 Specifications

SP2800 M.2 22110 PCIe NVMe		
NAND Type	TLC	eTLC
<b>Performance</b>		
Host Interface Rate (maximum)	PCIe Gen3 x4	
Capacities	240GB to 1920GB	
Sequential Read (maximum)	Up to 3300 MB/s	
Sequential Write (maximum)	Up to 2600 MB/s	
Random Read (maximum)	Up to 300K IOPS	
RandomWrite (maximum)	Up to 300K IOPS	
<b>Reliability</b>		
MTBF	> 2,000,000 hours	
Endurance (JEDEC Enterprise Workload) <sup>1</sup>	1920GB: 1200 TBW	1920GB: 4000 TBW
	960GB: 600 TBW	960GB: 2000 TBW
	480GB: 300 TBW	480GB: 1000 TBW
	240GB: 120 TBW	240GB: 450 TBW
DWPD	0.3	1
SafaData	-	Standard
Error Correction	LDPC	
<b>Data Security</b>		
Encryption	AES-256, TCG OPAL 2.0	
<b>Power</b>		
Input Voltage	VCC: 3.3 V ± 5%	
<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>		
Width	110.0 mm	
Width	22.0 mm	
Height	3.65 mm	

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

## M.2 22110 Ordering Information

Part Number	Density
<b>M.2 22110 TLC</b>	
<b>Commercial Operating Temperature (0°C to +70°C)</b>	
SRMP11920TCS1A71	1920GB
SRMP1960GTCS1A71	960GB
SRMP1480GTCS1A71	480GB
SRMP1240GTCS1A71	240GB
<b>M.2 22110 TLC</b>	
<b>Industrial Operating Temperature (-40°C to +85°C)</b>	
SRMP11920TIS1A71	1920GB
SRMP1960GTIS1A71	960GB
SRMP1480GTIS1A71	480GB
SRMP1240GTIS1A71	240GB
<b>M.2 22110 eTLC (SafeDATA)</b>	
<b>Commercial Operating Temperature (0°C to +70°C)</b>	
SRMP11920F1S1A71	1920GB
SRMP1960GF1S1A71	960GB
SRMP1480GF1S1A71	480GB
SRMP1240GF1S1A71	240GB
<b>M.2 22110 eTLC (SafeDATA)</b>	
<b>Industrial Operating Temperature (-40°C to +85°C)</b>	
SRMP11920F2S1A71	1920GB
SRMP1960GF2S1A71	960GB
SRMP1480GF2S1A71	480GB
SRMP1240GF2S1A71	240GB



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