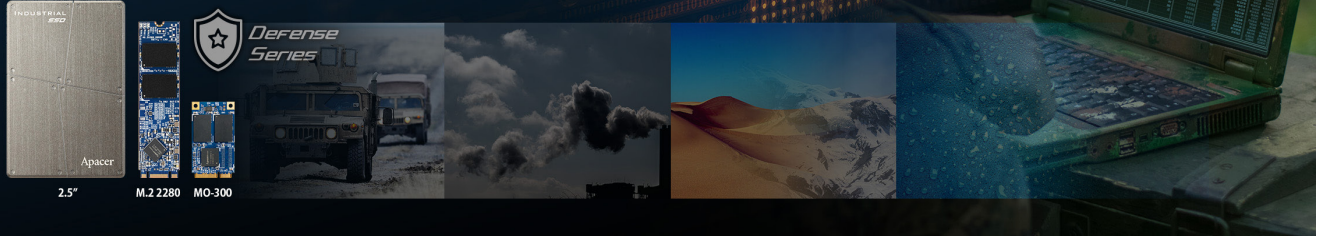


## Industrial Rugged SSDs SM23D Defense Series

A complete Solution for Secure Data Protection and Extreme Environments.



### SM23D Series

#### Product Features

- AES 256-bit Hardware Encryption
- Global Wear Leveling
- Power Failure Management
- SMART Read Refresh™

#### Security Features (optional)

- TCG Opal 2.0<sup>1</sup>/Self Encrypting Drives (SEDs)
- Instant Keychange
- MIL Erase<sup>2</sup>
- Digital Destruction
- Write Protect

#### Implementation Methods (optional)

- Software command
- Hardware
  - Connector pin
  - Pin headers
  - Slide switch

### SPECIFICATIONS

- Serial ATA Revision 3.2
- SATA 6 Gb/s
- ATA-8 command set
- Backward compatible with SATA 1.5/3 Gb/s

	2.5"	M.2 2280	MO300
<b>Configuration</b>			
Capacity <sup>3</sup>	32GB-512GB, 1TB	32GB-512GB, 1TB	32GB-512GB
NAND Flash Type	MLC		
<b>Performance</b>			
Sequential Read/Write (Max.)	560/510 MB/s		
4K Random Read/Write (Max.)	41,000/60,000 IOPS		
<b>Reliability</b>			
Endurance (Terabytes Written: TBW)(Max.)	Up to 2,222 TBW at 1TB		
MTBF	>5,000,000 hours		
<b>Features (optional)</b>			
<ul style="list-style-type: none"> <li>• Thermal Throttling</li> <li>• Conformal Coating</li> <li>• Nano Coating</li> <li>• Sidefill</li> <li>• 30μ Gold Finger</li> <li>• Wide Temperature</li> </ul>			
<b>Environment</b>			
Operating Temperature	<ul style="list-style-type: none"> <li>• Standard: 0°C to 70°C</li> <li>• Wide: -40°C to 85°C</li> </ul>		
Storage Temperature	-55°C to 100°C		
<b>Power Consumption</b>			
Supply Voltage	5.0 V ± 10%	3.3 V ± 5%	3.3 V ± 5%
Active Mode (mA)	590	725	730
Idle Mode (mA)	100	120	135
<b>Physical Characteristics</b>			
Dimensions <sup>4</sup> (mm)	100.00 x 69.84 x 9.30	<ul style="list-style-type: none"> <li>• 80.00 x 22.00 x 2.23</li> <li>• 80.00 x 22.00 x 3.58</li> </ul>	50.80 x 29.85 x 4.85

### MIL-STD Environmental Test

Item	Test Methods
Shock	MIL-STD-202G, Condition A MIL-STD-883K, Condition B
Vibration	MIL-STD-810G, Method 514.6, Procedure I, Category 24 MIL-STD-810G, Method 514.6, Procedure I, Category 7
Humidity	MIL-STD-810G, Method 507.5, Procedure II
High Temp.	MIL-STD-810G, Method 501.5, Procedure II
Low Temp.	MIL-STD-810G, Method 502.5, Method 501.5, Procedure II
Thermal Shock	MIL-STD-810G, Method 503.5, Procedure I-C
Altitude	MIL-STD-810G, Method 500.6, Procedure I
Salt Fog	MIL-STD-810G, Method 509.5, Procedure I
Radiation Test	MIL-STD-810G, Method 505.5, procedure II

1. TCG Opal 2.0 can only be triggered via software commands and cannot be implemented together with any of the other Security features.  
 2. Includes NSA9-12, DoD 5220.22-M, NSA Manual 130-2, USA-AF AFSSI 5020, USA-Army 380-19, USA Navy NAVSO P-5239-26, NISPOMSUP Chap 8, Sect. 8-501 and IREC (IRIG) 106.  
 3. TCG Opal 2.0 is not supported on 1TB capacity.  
 4. Two options are available in M.2 2280 dimensions: single side (80.00 x 22.00 x 2.23) and double side (80.00 x 22.00 x 3.58).