

The Most **Reliable**  
Storage For Industries

**SV240-M280 FIPS 140-2**



TM

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## SV240-280 FIPS 140-2

### Overview

Apacer's SV240-M280 is a solid-state drive with military-grade encryption that conforms to the FIPS 140-2 Level 2 cryptographic standard, designed with compact M.2 form factor and compliant with SATA III standard with excellent performance. Utilizing 3D NAND for higher capacity up to 1920GB and providing more power efficiency than 2D NAND, the hardware encrypted SSD provides enhanced data security and delivers exceptional read/write speed, making it the ideal solution for industries that require the high demand for FIPS 140-2 Certification.



The FIPS 140-2 validated SV240-M280 incorporates a variety of cutting-edge technologies featuring multiple approaches to data protection. Designed and built under the rigorous testing verification process conducted by the National Institute of Standards for Technology (NIST), the FIPS validation provides the strength of encryption algorithms, unbreakable user authentication methods and secure Data Encryption Key (DEK) management to eliminate the most sophisticated cybersecurity threats. The Level 2 validation ensures tamper-evidence through the use of special coatings, seals and labels to prevent security information from being detected. The SSD also delivers enhanced data security storage by implementing the AES 256-bit hardware encryption and Opal specifications.

In addition to data safety, SV240-M280 also features a variety of reliability features implemented on both hardware and firmware levels. On the hardware level, SV240-M280 is built with not only a powerful SATA controller that supports on-the-module ECC as well as LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability, but also a built-in thermal sensor to monitor the temperature of the SSD via S.M.A.R.T health monitoring to prevent overheating.

On the firmware level, SV240-M280 comes with an error-checking mechanism called End-to-End Data Protection to ensure all data in transit is protected against transient errors, thereby enhancing protection as well as the trustworthiness and reliability of the drive. SMART Read Refresh helps avoid read disturbances and ensure the health of all blocks in the NAND flash, thereby extending the expected operational lifetime multiplied by Global Wear Leveling. Data integrity and stability of data transmission can be further guaranteed by DataDefender, ensuring that products are protected from power disruptions and can function smoothly even in harsh environments. Moreover, the level of protection against data loss increases with DataRAID to provide fault tolerance and improve data availability in the event of a drive failure. With these technologies available for employment, mission-critical data is safeguarded against unauthorized access and protected from errors and power outages at all times, and no data will be compromised as SV240-M280 adheres to the FIPS 140-2 Level 2 standard.

Apacer SV240-280 FIPS 140-2 is a military-grade industrial SSD designed for security-conscious companies and organizations that require high standard for data cryptography. With exceptional performance, enhanced security and reliability features, SV240-280 FIPS 140-2, combined with the capability for customization, provides industry-best secure SSD solutions with FIPS 140-2 validation for customers ranging from government, defense and healthcare sectors to financial institutions to tailor to their needs.

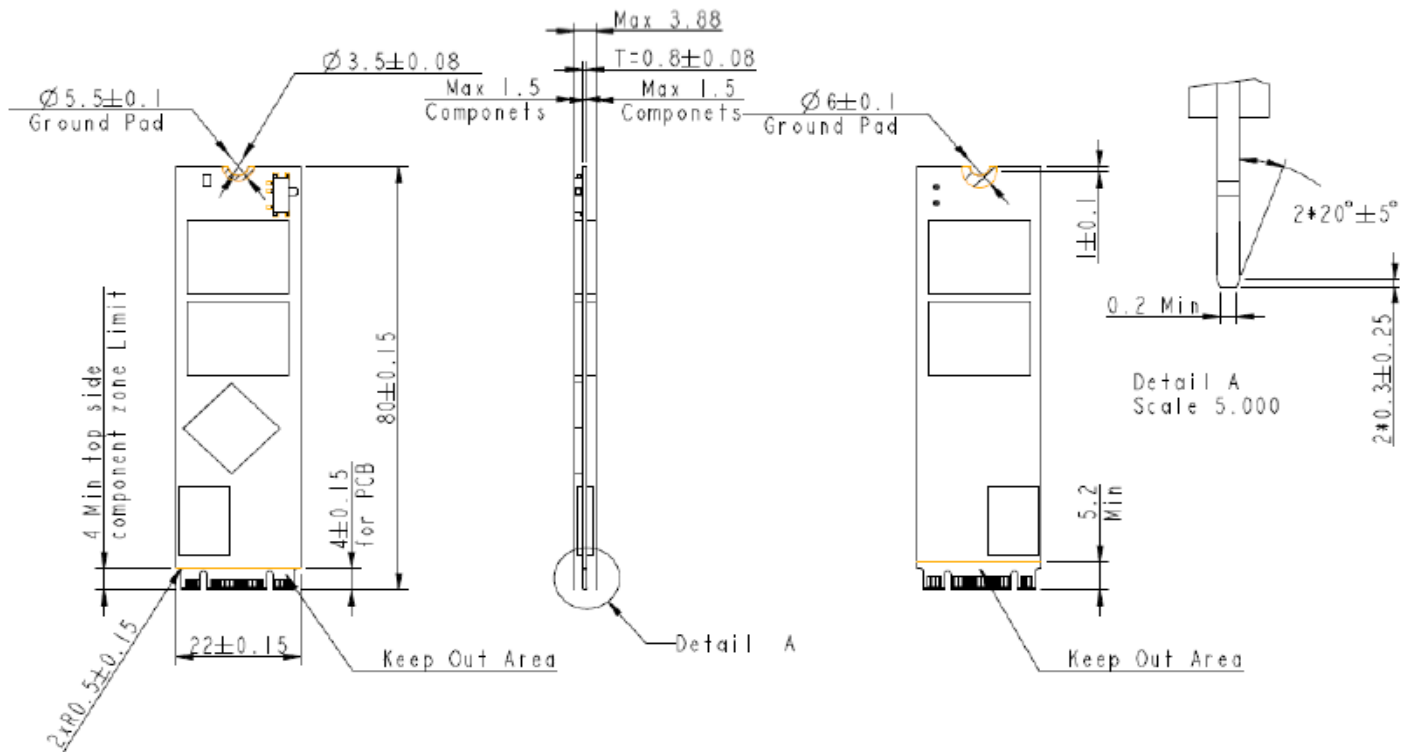
## Feature

- FIPS 140-2 Validated
- Supports TCG Opal 2.0 / AES 256-bit Encryption
- Wide Temperature
- SMART Read Refresh™
- S.M.A.R.T.

## Specifications

<b>Model</b>	SV240-280 FIPS 140-2
<b>Interface</b>	SATA 3.2 (6Gb/s)
<b>Connector</b>	M.2 B & M key
<b>Form Factor</b>	M.2 2280-D5-B-M
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	240GB~1920GB
<b>External DRAM</b>	Yes
<b>Sustained Read Performance (MB/sec)</b>	Up to 560
<b>Sustained Write Performance (MB/sec)</b>	Up to 500
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPs (4K Random Write)</b>	84K
<b>Standard Operating Temperature ( °C )</b>	0 ~ + 70
<b>Extended Operating Temperature ( °C )</b>	-40 ~ + 85
<b>Storage Temperature ( °C )</b>	-55 ~ + 100
<b>H/W Write Protect</b>	-
<b>Thermal Sensor</b>	Yes
<b>Shock</b>	Operating: Acceleration, 50(G)/11(ms)/half sine (compliant with MIL-STD-202G) Non-operating: Acceleration, 1500(G)/0.5(ms)/half sine (compliant with MIL-STD-883K)
<b>Vibration</b>	Operating: 7.69 GRMS, 20~2000 Hz/random (compliant with MIL-STD-810G) Non-operating: 4.02 GRMS, 15~2000 Hz/random (compliant with MIL-STD-810G)
<b>Operating Voltage</b>	5V ± 10%
<b>Power Consumption</b>	Active mode: 625 mA / Idle mode: 95 mA
<b>Dimension (L x W x H )</b>	22.00 x 80.00 x 3.88 (mm)
<b>MTBF (hours)</b>	>3,000,000

## Mechanical Specification



Unit:mm

**For more information,  
contact your Apacer representative**

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