

Apacer

The Most **Reliable**
Storage For Industries

PV250-M280



Overview

Apacer PV250-M280 is a high-performance SSD designed with M.2 2280 dimensions, fully compliant with the PCIe Gen4 x4 interface and NVMe 2.0 specifications. This enables it to operate efficiently in power management modes, significantly reducing power consumption. Built with a powerful PCIe controller that supports on-the-module ECC and an efficient wear-leveling scheme, PV250-M280 delivers exceptionally low latency and outstanding data transfer performance. Its compact and high-speed design makes it the ideal choice for larger, faster hosts deployed in applications that demand superior performance.



Utilizing 3D NAND technology for higher capacities up to 3840GB and offering superior power efficiency compared to 2D NAND, PV250-M280 integrates an LDPC (Low-Density Parity Check) ECC engine to enhance SSD endurance and data reliability. It features a built-in thermal sensor to monitor SSD temperatures via S.M.A.R.T commands, complemented by thermal throttling that dynamically adjusts frequency scaling to ensure sustained performance and prevent overheating. The addition of a heat spreader provides exceptional thermal dissipation, keeping the drive cool while maintaining peak performance. To further enhance durability and resilience against thermal and mechanical stresses, the SSD incorporates Sidefill technology, allowing it to function reliably in environments with high vibration and extreme temperature fluctuations. For demanding applications, End-to-End Data Protection safeguards data integrity at multiple stages, ensuring reliable data transfers.

In terms of security, PV250-M280 offers robust data protection with Advanced Encryption Standard and Trusted Computing Group (TCG) Opal to safeguard against unauthorized access. It also incorporates various advanced features, including flash block management, power failure management, TRIM, page mapping, Hyper Cache technology, over-provisioning, SMART Read Refresh, NVMe secure erase, and power saving modes.

With exceptional performance, proven reliability, and enhanced data protection, PV250-M280 is the ideal storage or cache solution for a variety of applications, from industrial and imaging to computing and enterprise markets.

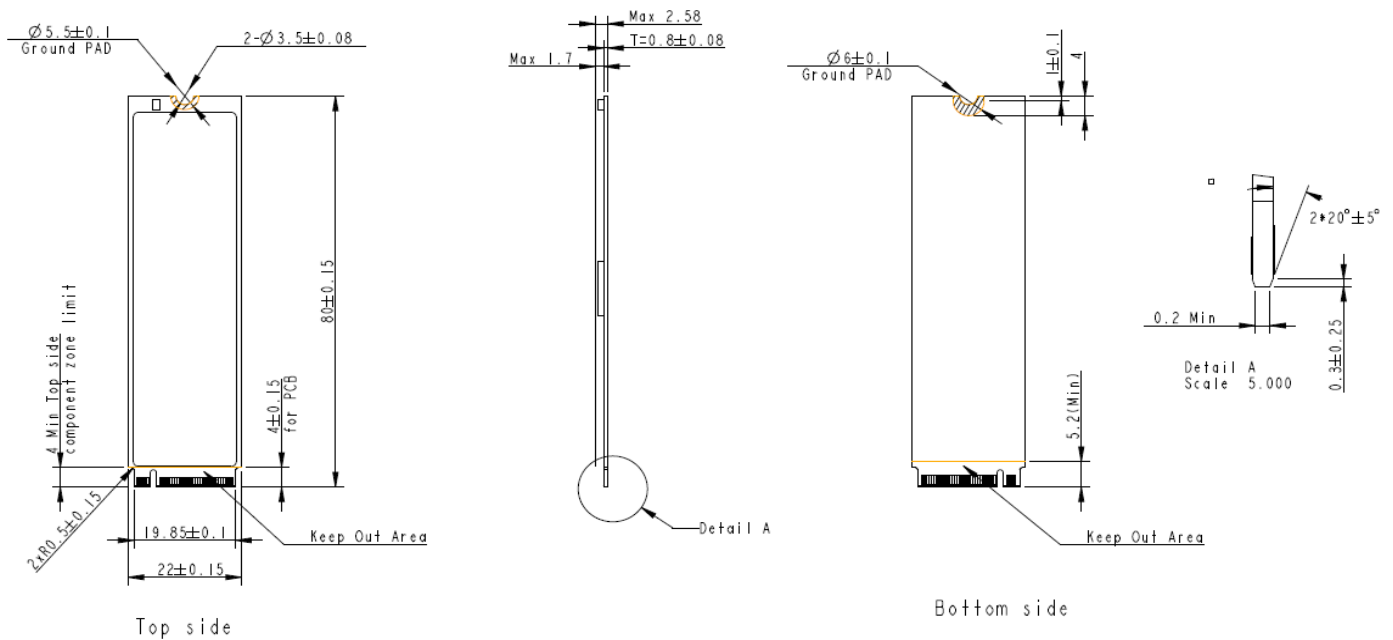
Feature

- Low-Density Parity-Check (LDPC) Code
- Global Wear-leveling
- Flash Bad-block Management
- End-to-End Data Protection
- TCG Opal 2.0
- Sidefill Technology
- Power Failure Management
- Flash Translation Layer: Page Mapping
- TRIM
- Hyper Cache Technology
- Over-provisioning
- SMART Read Refresh™
- NVMe Secure Erase
- Power Saving Modes

Specifications

Model	PV250-M280
Interface	PCIe Gen4 x4
Connector	Single-sided M.2 2280-M
Form Factor	M.2 2280
NAND Flash Type	3D TLC
Capacity	120GB~3840TB
External DRAM	No
Sustained Read Performance (MB/sec)	Up to 3,740
Sustained Write Performance (MB/sec)	Up to 3,280
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPs (4K Random Write)	662K
Standard Operating Temperature (°C)	0 ~ 70 (120GB~3840GB)
Extended Operating Temperature (°C)	-40 ~ 85 (120GB~1920GB)
Storage Temperature (°C)	-55 ~ 100
Housing	No
H/W Write Protect	-
Screw Hole	-
Cable-less Solution	-
Thermal Sensor	Yes
Shock	Operation: Acceleration, 50(G)/11(ms)/half sine (Compliant with MIL-STD-202G) Non-operation: Acceleration, 1500(G)/0.5(ms)/half sine (Compliant with MIL-STD-883K)
Vibration	Operation: 7.69 GRMS, 20~2000 Hz/random (Compliant with MIL-STD-810G) Non-operation: 4.02 GRMS, 15~2000 Hz/random (Compliant with MIL-STD-810G)
Operating Voltage	3.3V ±5%
Power Consumption	Active Mode: 1260 mA / Idle Mode: 300mA
Dimension (L x W x H)	22.00 x 80.00 x 2.58 (max.)
MTBF (Hours)	>3,000,000

Mechanical Specification



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

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