# Apacer

# The Most **Reliable**
# Storage For Industries

## PV250-M280

# Overview

Apacer PV250-M280 is a fully lead-free SSD engineered for high reliability and eco-conscious performance. By incorporating lead-free resistors, low-temperature solder, and underfill technology, it enhances structural strength while minimizing environmental impact. This combination of durability and sustainability ensures stable operation in demanding industrial and embedded applications.

Compliant with NVMe 1.4 protocol and PCIe Gen4 x4 interface, PV250-M280 offers outstanding data transfer speeds and low latency to meet the demands of modern computing applications. It also supports Host Memory Buffer (HMB) to improve performance efficiency without requiring additional DRAM, making it suitable for space- and power-constrained platforms.

To maintain long-term stability, PV250-M280 integrates advanced flash management technologies, including LDPC ECC, bad block management, global wear leveling, DataDefender™, TRIM, page mapping, Hyper Cache, over-provisioning, and Smart Read Refresh, and. These functions collectively ensure endurance, consistent performance, and data integrity across diverse workloads.

Reliability is further strengthened through multiple hardware and firmware-level protection mechanisms. PV250-M280 includes AES encryption, a thermal sensor, sidefill, and End-to-End Data Protection. Additionally, Apacer's CoreGlacier™ thermal management technology provides dynamic temperature monitoring and adaptive throttling to prevent overheating during sustained high workloads. Unlike conventional thermal control, CoreGlacier™ optimizes heat dissipation efficiency while minimizing performance degradation, ensuring stable throughput and extending SSD lifespan under continuous operation.

With its combination of eco-friendly design, cutting-edge performance, and reinforced reliability features, Apacer PV250-M280 stands out as a robust storage solution for industrial, enterprise, and embedded systems.
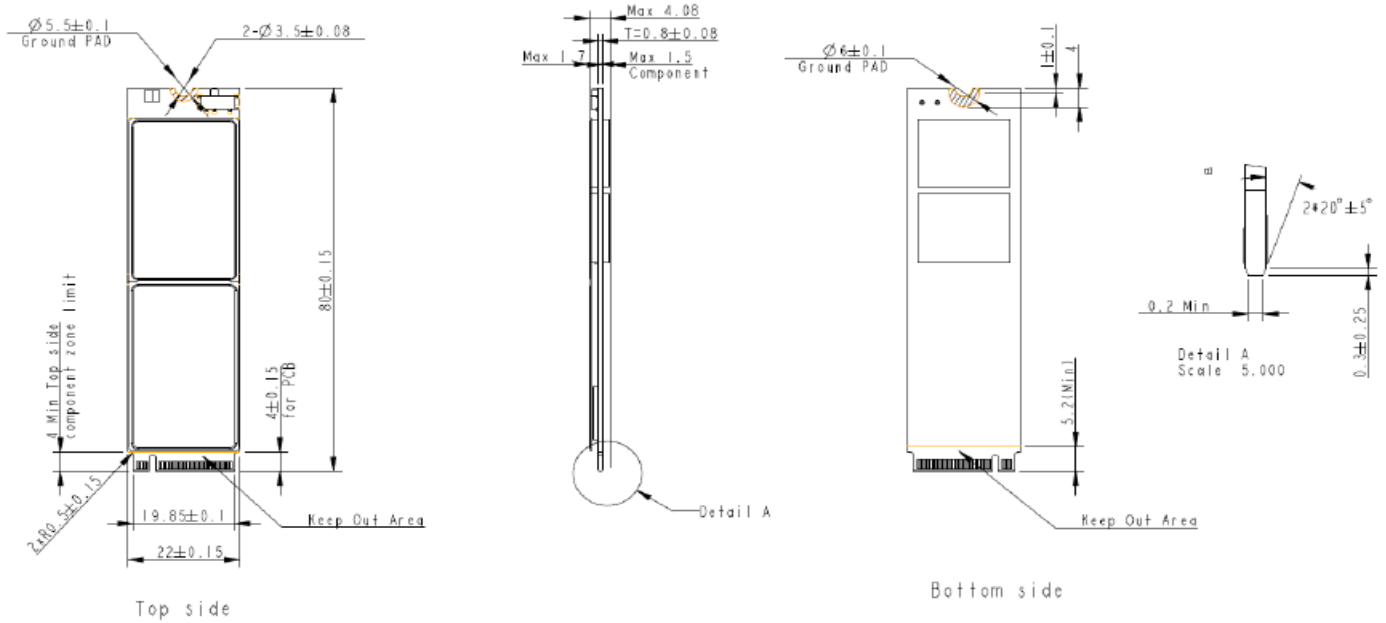
# Features

- Low-Density Parity-Check (LDPC) Code

- Global Wear Leveling

- Flash bad-block management

- Flash Translation Layer: Page Mapping

- DataDefender$^{TM}$

- S.M.A.R.T.

- TRIM

- SMART Read Refresh$^{TM}$

- NVMe Secure Erase

# Specifications

| | |
|---|---|
| Model Name | PV250-M280 |
| Interface | PCIe Gen4 x4 |
| Connector | Double-sided: M.2 2280 M key |
| Form Factor | M.2 2280 |
| NAND Flash Type | 3D TLC |
| Capacity | 120GB-1920GB |
| External DRAM | No |
| Sustained Read Performance (MB/sec.) | Up to  3,300 |
| Sustained Write Performance (MB/sec.) | Up to 3,020 |
| ECC Engine | Low-Density Parity-Check (LDPC) Code |
| IOPS (4K Random Write) | 560K |
| Standard Operating Temperature ( °C ) | 0 ~ + 70 |
| Extended Operating Temperature ( °C ) | -40°C to 85°C |
| Storage Temperature ( °C ) | -55°C  ~ 100°C |
| Housing | - |
| Thermal Sensor | Yes |
| Shock | Operation: Acceleration, 50(G)/11(ms)/half sine (compliant with MIL-STD-202G) 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: 1185 mA / Idle mode: 295mA |
| Dimension (L x W x H ) | 22.00 x 80.00 x 4.08(max.) |
| MTBF (Hours) | >3,000,000 |

# Mechanical Specifications



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

### Global Presence