

# Apacer

The Most **Reliable**  
Storage For Industries

PV250-M242



### Overview

Apacer's PV250-M242 is the fastest SSD designed with M.2 2280 mechanical dimensions, fully compliant with the PCIe Gen4 x4 interface and NVMe 2.0 specifications. This allows it to operate in power management modes, significantly reducing power consumption. Equipped with a powerful PCIe controller supporting on-the-module ECC and an efficient wear-leveling scheme, PV250-M242 delivers exceptionally low latency and outstanding performance in data transfer. With its compact size and high-speed storage, PV250-M242 is the ideal choice for larger, faster hosts deployed across a wide range of applications that demand exceptional performance.



Utilizing 3D NAND technology for higher capacities of up to 960GB and offering greater power efficiency than 2D NAND, PV250-M242 is equipped with an LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and enhance data reliability. Additionally, it features a built-in thermal sensor to monitor the SSD temperature via S.M.A.R.T commands and is configured with thermal throttling to dynamically adjust frequency scaling, ensuring sustained performance while preventing overheating. The inclusion of CoreGlacier technology helps maintain low temperatures while delivering high-speed performance. Furthermore, to enhance product reliability and resistance to thermal and mechanical shocks, PV250-M242 incorporates Sidefill technology, enabling normal operation in high-vibration and extreme environmental conditions. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points, enabling reliable data transfers.

From a security standpoint, Advanced Encryption Standard (AES) provides robust data security, offering users peace of mind by safeguarding their data against unauthorized access at all times.

On top of that, PV250-M242 features CoreSnapshot 2, a system disaster's savior, to offer an instant whole disk backup and recovery mechanism for SSDs to solve unexpected data loss or OS crash immediately, reducing downtime and maximizing output.

## Feature

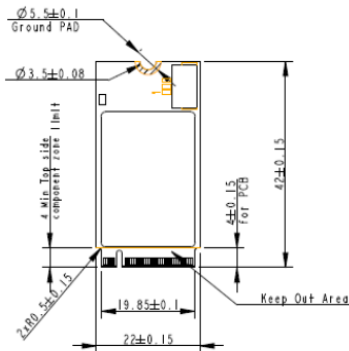
- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- DataDefender™
- CoreSnapshot 2
- S.M.A.R.T.
- TRIM
- Hyper Cache Technology
- Over-provisioning
- SMART Read Refresh™
- NVMe Secure Erase

## Specifications

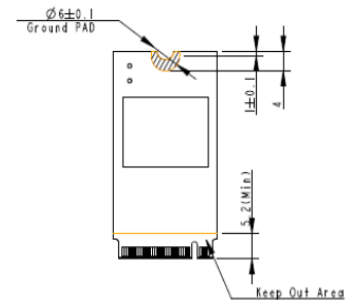
<b>Model</b>	PV250-M242
<b>Interface</b>	PCIe Gen4 x4
<b>Connector</b>	Double-sided M.2 2242-M key 3-pin CoreSnapshot 2 connector
<b>Form Factor</b>	M.2 2242
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	120GB-480GB
<b>External DRAM</b>	No
<b>Sustained Read Performance (MB/sec)</b>	Up to 3,740
<b>Sustained Write Performance (MB/sec)</b>	Up to 3,065
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPs (4K Random Write)</b>	610K
<b>Standard Operating Temperature ( °C )</b>	0 ~ + 70
<b>Extended Operating Temperature ( °C )</b>	-40°C to 85°C
<b>Storage Temperature ( °C )</b>	-55 ~ + 100
<b>Housing</b>	-
<b>Thermal sensor</b>	Yes
<b>Shock</b>	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)
<b>Vibration</b>	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)
<b>Operating Voltage</b>	3.3 V ± 5%
<b>Power Consumption</b>	Active mode: 1,285 mA / Idle mode:310 mA
<b>Dimension (L x W x H )</b>	Double-sided:22.00 x 42.00 x 4.73(max.),(unit: mm)
<b>MTBF (hours)</b>	>3,000,000

## Mechanical Specification

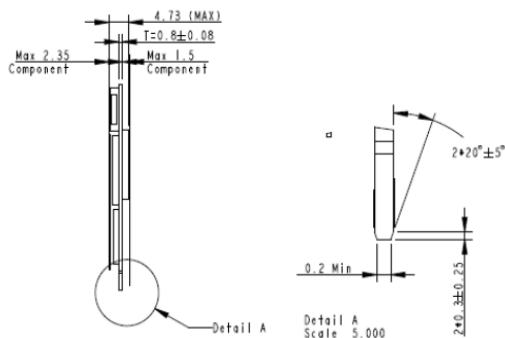
Top View



Bottom View



Side View



For more information,  
contact your Apacer representative

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