

# Apacer

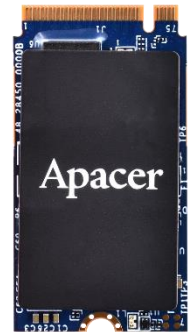
The Most **Reliable**  
Storage For Industries

PT250-M242



### Overview

Apacer PT250-M242 is the fastest SSD designed as M.2 2242 mechanical dimensions which provides full compliance with PCIe Gen4 x4 interface and NVMe 2.0 specifications, allowing it to operate in power management modes and greatly save on power consumption. Built with a powerful PCIe controller that supports on-the-module ECC as well as efficient wear leveling scheme, PT250-M242 delivers exceptionally low latency and outstanding performance in data transfer, reaching up to 347,000/604,000 and 3,700/3,200 MB/s in IOPS and sequential read/write. With the compact and high-speed storage, PT250-M242 is the ideal choice for larger, faster hosts deployed in a wide range of applications that require outstanding performance.



Utilizing 3D NAND for higher capacity up to 1TB and providing more power efficiency than 2D NAND, PT250-M242 is not only implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability, but also equipped with a built-in thermal sensor to monitor the temperature of the SSD via S.M.A.R.T commands and configured with thermal throttling to dynamically adjust frequency scaling to enhance data reliability and provide sustained performance while overheating. To ensure that products continue to operate normally in high vibration and under extreme environmental changes, Apacer provides Sidefill technology to increase product reliability and resistance to various thermal and mechanical shocks as well as a graphene heat spreader to help keep an SSD cool and functioning correctly. For highly-intensive applications, End-to-End Data Protection ensures that data integrity can be assured at multiple points in the path to enable reliable delivery of data transfers.

In terms of security, Advanced Encryption Standard (AES) and Trusted Computing Group (TCG) Opal (optional) ensure data security and provide users with peace of mind knowing their data is safeguarded against unauthorized use at all times. PT250-M242 also adopts the latest page mapping file translation layer and comes with various implementations including flash block management, DataDefender, TRIM, power saving modes, Hyper Cache technology, SMART Read Refresh, and NVMe secure erase. With exceptional performance, trustable reliability and enhanced data protection, PT250-M242 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

## Feature

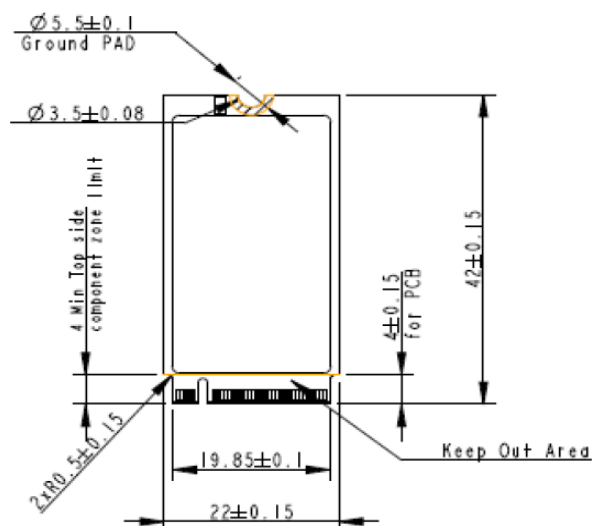
- Adopts advanced LDPC ECC engine with 3D NAND flash memory to improve reliability
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- Supports SSDWidget 2.0 and S.M.A.R.T function
- Heat spreader technology
- DataDefender™
- Support TCG Opal 2.0/AES 256-bit encryption
- End-to-End Data Protection
- TRIM Support
- SMART Read Refresh™
- NVMe Secure Erase

## Specifications

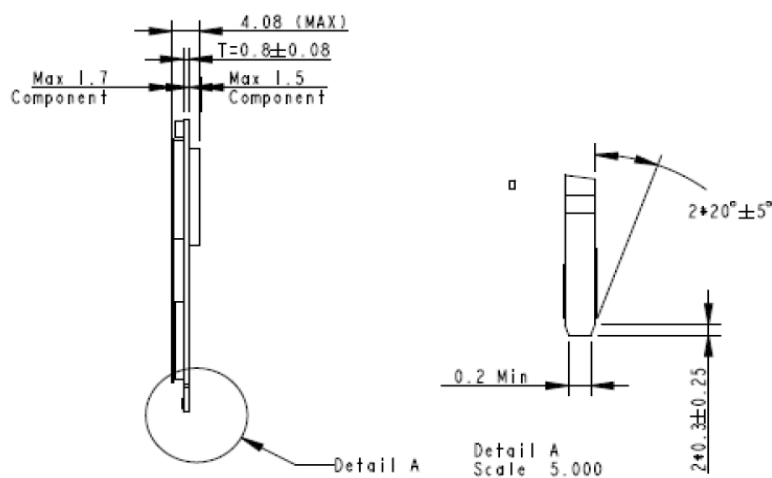
<b>Model</b>	PT250-M242
<b>Interface</b>	PCIe Gen4 x4
<b>Connector</b>	M.2 M Key
<b>Form Factor</b>	M.2 2242
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	256GB~1TB
<b>External DRAM</b>	No
<b>Sequential Read Performance (MB/sec)</b>	Up to 3,700
<b>Sequential Write Performance (MB/sec)</b>	Up to 3,200
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPs (4K Random Write)</b>	604K
<b>Standard Operating Temperature ( °C )</b>	0 ~ +70
<b>Extended Operating Temperature ( °C )</b>	-
<b>Storage Temperature ( °C )</b>	-55 ~ +100
<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>	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>	3.3V ± 5%
<b>Power Consumption</b>	Active mode: 1320 mA / Idle mode:305 mA
<b>Dimension (L x W x H )</b>	22.00 x 42.00 x 4.08 (max.) (mm)
<b>MTBF (hours)</b>	>3,000,000

## Mechanical Specification

Top View



Side View



Unit: mm

For more information,  
contact your Apacer representative

### Global Presence

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