

Apacer

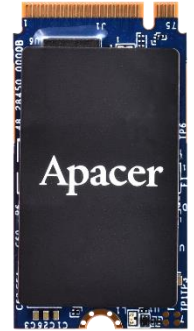
The Most **Reliable**
Storage For Industries

PH250-M242



Overview

Apacer PH250-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, PH250-M242 delivers exceptionally low latency and outstanding performance in data transfer. With the compact and high-speed storage, PH250-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 320GB and providing more power efficiency than 2D NAND, PH250-M242 is implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability. With Apacer's SLC-liteX technology, PH250-M242 performs with higher number of P/E cycles up to 30,000 times. Furthermore, PH250-M242 is 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) ensures data security and provides users with peace of mind knowing their data is safeguarded against unauthorized use at all times. PH250-M242 also adopts the latest page mapping file translation layer and comes with various implementations including flash block management, DataDefender™, TRIM, power saving modes, SMART Read Refresh, and NVMe secure erase. With exceptional performance, trustable reliability, and enhanced data protection, PH250-M242 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

Feature

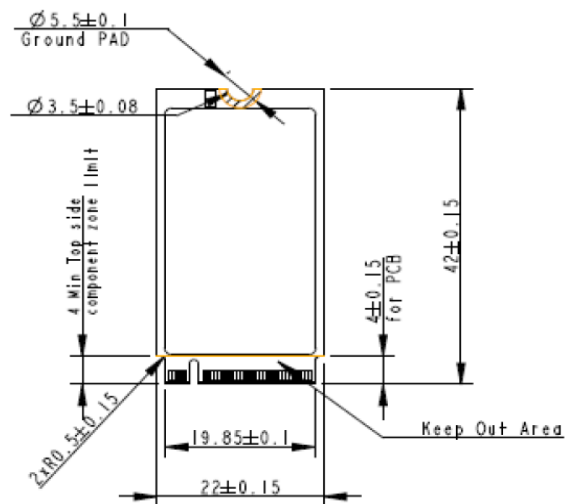
- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- DataDefender™
- S.M.A.R.T.
- TRIM
- SLC-liteX (P/E cycle: 100K)
- SMART Read Refresh™
- NVMe Secure Erase

Specifications

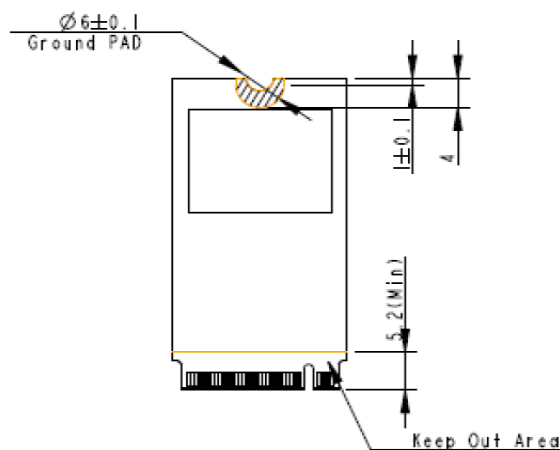
Model	PH250-M242
Interface	PCIe Gen4 x4
Connector	Double-sided: M.2 2242 M key
Form Factor	M.2 2242
NAND Flash Type	3D TLC
Capacity	160GB-320GB
External DRAM	No
Sequential Read Performance (MB/sec)	Up to 3,740
Sequential Write Performance (MB/sec)	Up to 2,855
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPs (4K Random Write)	544K
Standard Operating Temperature (°C)	0 ~ +70
Extended Operating Temperature (°C)	-40 ~ +85
Storage Temperature (°C)	-55 ~ +100
Thermal sensor	Yes
Shock	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)
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: 1315 mA / Idle mode: 305mA
Dimension (L x W x H)	22.00 x 42.00 x 4.08 (max.) (mm)
MTBF (hours)	>3,000,000

Mechanical Specification

Top View



Bottom side



Unit: mm

For more information,
contact your Apacer representative

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