Apacer

The Most **Reliable** Storage For Industries

PT230-M242

Overview

PT230-M242

Apacer PT230-M242 is a high-performance SSD designed in M.2 2242 mechanical dimensions, offering full compliance with PCIe Gen3 x4 interface and NVMe 1.4 specifications. It supports power management modes, significantly reducing power consumption. Built with a powerful PCIe controller that features on-the-module ECC and an efficient wear leveling scheme, PT230-M242 delivers exceptionally low latency and outstanding data transfer performance. Its compact design and high-speed storage make it the ideal choice for larger, faster hosts deployed across a wide range of applications requiring top-tier performance.

Utilizing 3D NAND technology for capacities up to 1TB and providing greater power efficiency than 2D NAND, PT230-M242 is equipped with an LDPC (Low-Density Parity Check) ECC engine to enhance endurance and improve data reliability. It also features a built-in thermal sensor to monitor SSD temperature via S.M.A.R.T commands and incorporates thermal throttling to dynamically adjust frequency scaling, ensuring data reliability and sustained performance under overheating conditions. Additionally, the inclusion of a heat spreader provides exceptional thermal dissipation, keeping the drive cool while maintaining maximum performance. To further enhance durability and resilience against thermal and mechanical stresses, PT230-M242 is equipped with Sidefill technology, enabling stable operation even in environments with high vibration and extreme temperature fluctuations. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points along the data transfer path, providing dependable data delivery.

In terms of security, PT230-M242 offers robust data protection with Advanced Encryption Standard to safeguard against unauthorized access. It also incorporates various advanced features, including flash block management, DataDefender, TRIM, page mapping, Hyper Cache technology, DataRAID, SMART Read Refresh, NVMe secure erase, and power saving modes.

With exceptional performance, proven reliability, and enhanced data protection, PT230-M242 is the ideal storage or cache solution for a variety of applications, including industrial, imaging, computing, and enterprise markets.

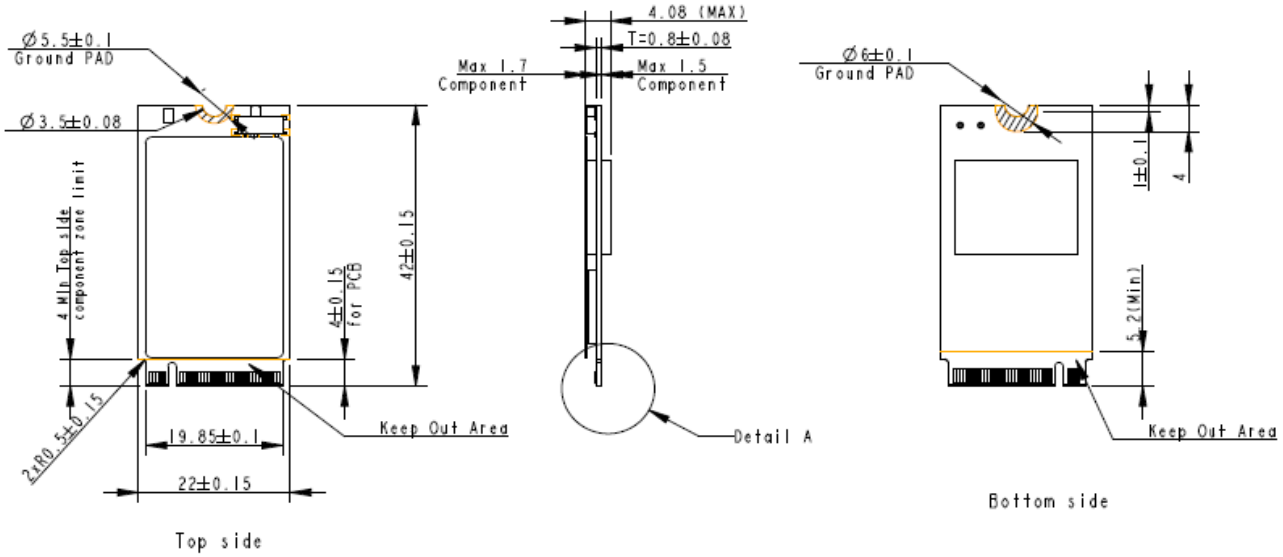
Features

- Low-Density Parity-Check (LDPC) Code
- Global Wear-leveling
- Flash Bad-block Management
- End-to-End Data Protection
- Flash Translation Layer: Page Mapping
- DataDefender™
- TRIM
- Hyper Cache Technology
- DataRAID
- SMART Read Refresh
- NVMe Secure Erase

Specifications

Model Name	PT230-M242
Interface	PCIe Gen3 x4
Connector	Single-sided: M.2 2242-M Double-sided: M.2 2242-M
Form Factor	M.2 2242
NAND Flash Type	3D TLC
Capacity	128GB-1TB
External DRAM	No
Sustained Read Performance (MB/sec.)	Up to 3560
Sustained Write Performance (MB/sec.)	Up to 2550
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	-
Standard Operating Temperature (°C)	0 ~ 70
Storage Temperature (°C)	-55 ~ 100
Housing	No
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	3.3 V ± 5%
Power Consumption	Active Mode: 1,155mA / Idle Mode: 200mA
Dimension (L x W x H)	Single-sided: 22.00 x 42.00 x 2.58 (max.) Double-sided: 22.00 x 42.00 x 4.08 (max.)
MTBF (Hours)	>3,000,000

Mechanical Specifications



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