The Most **Reliable**
Storage For Industries

PT250-M230

Overview

Apacer PT250-M230 is a high-performance SSD designed in the M.2 2230 form factor, fully compliant with PCIe Gen4 x4 interface and NVMe 1.4 specifications. This design enables efficient power management modes, significantly reducing power consumption. Equipped with a powerful PCIe controller that supports on-the-module ECC and an efficient wear leveling scheme, PT250-M230 delivers exceptionally low latency and outstanding data transfer performance. With its compact and high-speed storage, PT250-M230 is ideal for advanced host systems across a wide range of applications that demand exceptional performance.

Utilizing 3D NAND technology for capacities up to 1TB and offering greater power efficiency than 2D NAND, PT250-M230 features an LDPC (Low-Density Parity Check) ECC engine to enhance SSD endurance and increase data reliability. Additionally, it is equipped with a built-in thermal sensor to monitor the SSD's temperature via S.M.A.R.T commands and is configured with thermal throttling to dynamically adjust frequency scaling, ensuring data reliability and sustained performance under overheating conditions.

To further mitigate heat-related damage, PT250-M230 integrates a heat spreader that efficiently transfers heat while maintaining high-speed performance. To ensure stable operation in high-vibration and extreme environmental conditions, PT250-M230 incorporates Sidefill technology to enhance product reliability and resistance to various thermal and mechanical shocks. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points along the data transfer path, enabling reliable data delivery.

In terms of security, PT250-M230 offers robust data protection with Advanced Encryption Standard (AES) and Trusted Computing Group (TCG) Opal (optional) to safeguard against unauthorized access. It also includes advanced features such as bad block management, DataDefender, TRIM, page mapping, Hyper Cache technology, Smart Read Refresh, and power-saving modes.

With exceptional performance, proven reliability, and enhanced data protection, PT250-M230 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

· Bad Block Management

· Flash Translation Layer: Page Mapping

· DataDefender^{TM}

· S.M.A.R.T.

· TRIM

· Over-provisioning

· Hyper Cache Technology

· SMART Read Refresh^{TM}
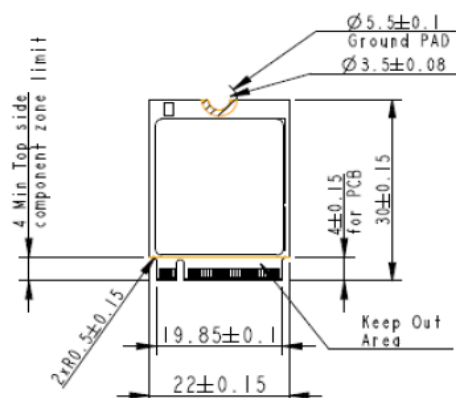
Specifications

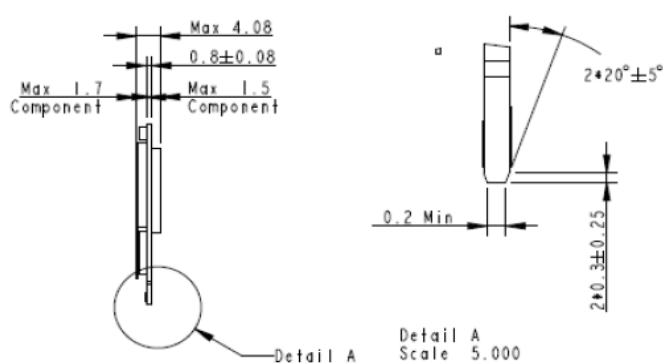|	
Model Name	PT250-M230
Interface	PCIe Gen4 x4
Connector	Double-sided: M.2 2230 M key
Form Factor	M.2 2230
NAND Flash Type	3D TLC
Capacity	64GB~1024GB
External DRAM	No
Sustained Read Performance (MB/sec.)	Up to 3740
Sustained Write Performance (MB/sec.)	Up to 3020
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	624K
Standard Operating Temperature (°C)	0°C ~ 70°C
Extended Operating Temperature (°C)	-
Storage Temperature (°C)	-55°C ~ 100°C
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	3.3V ±5%
Power Consumption	Active Mode: 1220 mA / Idle Mode: 300mA
Dimension (L x W x H)	22.00 x 42.00 x 4.08 (max.)
MTBF (Hours)	>3,000,000

Mechanical Specifications

Table 10-1 Physical Information

Parameter	Unit	120 GB	240 GB	480 GB	960 GB
Length	mm	30.00 ± 0.15			
Width		22.00 ± 0.15			
Height (Max.)		4.08			
Weight	g ± 5%	3.08	3.54	3.52	3.60

Top View

Side View

For more information,
contact your Apacer representative

Global Presence