

The Most **Reliable** Storage For Industries

PT1C0-M280



Overview

PT1C0-M280

Apacer PT1C0-M280 is the fastest SSD designed with M.2 2280 mechanical dimensions, providing full compliance with the PCIe Gen5 x4 interface and NVMe 2.0 specifications. This allows it to operate in power management modes and significantly reduce power consumption. Built with a powerful PCIe controller that supports on-the-module ECC as well as an efficient wear leveling scheme, PT1C0-M280 delivers outstanding performance in data transfer. With its compact and high-speed storage, PT1C0-M280 is the ideal choice for larger, faster hosts deployed in a wide range of applications that demand exceptional performance.



Utilizing 3D NAND technology to achieve higher capacities of up to 4TB and offering superior power efficiency compared to 2D NAND, PT1C0-M280 incorporates an LDPC (Low Density Parity Check) ECC engine to extend endurance and improve data reliability. Additionally, it is equipped with thermal throttling, which dynamically adjusts frequency scaling to maintain data reliability and ensure sustained performance even during overheating conditions.

To further mitigate heat-related damage, PT1C0-M280 integrates a heat spreader that efficiently transfers heat while maintaining high-speed performance. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points along the data transfer path, providing reliable data delivery. PT1C0-M280 also incorporates various advanced features, including bad block management, power failure management, TRIM, page mapping, Hyper Cache technology, Smart Read Refresh, and power saving modes.

With exceptional performance, proven reliability, and enhanced data protection, PT1C0-M280 is an ideal storage or cache solution for a variety of applications, including industrial, imaging, computing, and enterprise markets.

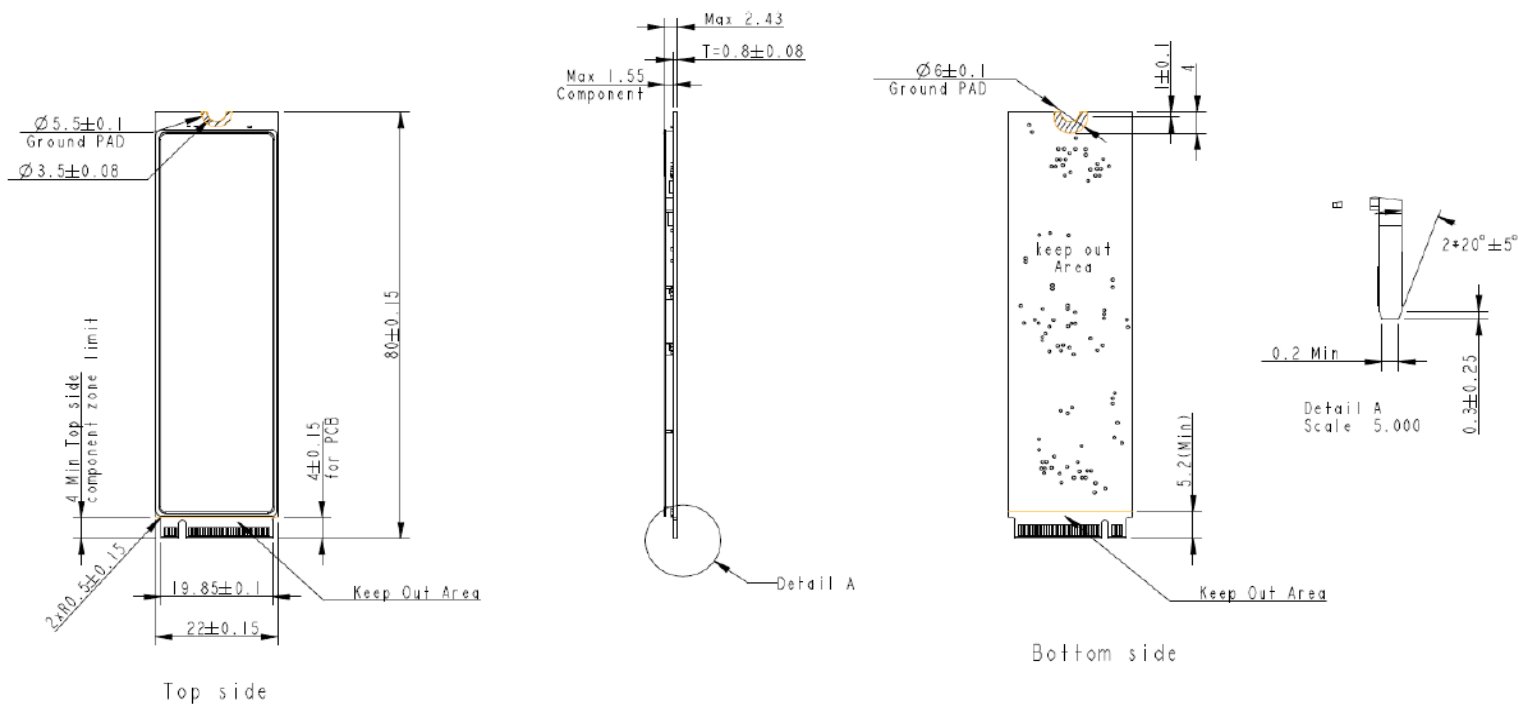
Features

- M.2 2280 PCIe Gen5 x4 interface
- 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 S.M.A.R.T function
- Apacer patented graphene heat spreader design (Patent No. I875365)
- Power Failure Management
- End-to-End Data Protection
- TRIM Support
- SMART Read Refresh™
- NVMe Secure Erase

Specifications

Model Name	PT1C0-M280
Interface	PCIe Gen5 x4
Connector	Single-sided M.2 2280 M Key
Form Factor	M.2 2280
NAND Flash Type	3D TLC
Capacity	512GB~4TB
External DRAM	No
Sustained Read Performance (MB/sec.)	Up to 10000
Sustained Write Performance (MB/sec.)	Up to 8700
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	1618K
Standard Operating Temperature (°C)	0 ~ 70
Extended Operating Temperature (°C)	-40 ~ 85
Storage Temperature (°C)	-55 ~ 100
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: 1395 mA / Idle mode: 505 mA
Dimension (L x W x H)	22.00 x 80.00 x 2.58 mm (max.)
MTBF (Hours)	>3,000,000

Mechanical Specifications



**For more information,
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