

Apacer

The Most **Reliable**
Storage For Industries

PT180-M280



PT180-M280

Overview

Apacer PT180-M280 is the fastest SSD designed as M.2 2280 mechanical dimensions which provides full compliance with PCIe Gen4 x4 interface and NVMe 1.4 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, PT180-M280 delivers outstanding performance in data transfer, reaching up to 714,000/929,000 and 5,055/3,915 MB/s in IOPS and sequential read/write. With the compact and high-speed storage, PT180-M280 is the ideal choice for larger, faster hosts deployed in a wide range of applications that require outstanding performance.



PT180-M280 utilizes 3D NAND for higher capacity up to 2TB and provides more power efficiency than 2D NAND. The PCIe SSD is not only implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability, but also configured with thermal throttling to dynamically adjust frequency scaling to enhance data reliability and provide sustained performance while overheating. PT180-M280 is also designed with heatsink to help keep an SSD cool and functioning correctly, while still allowing the drive to deliver high-speed performance. 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 flash management, PT180-M280 adopts the latest page mapping file translation layer and comes with various implementations including power saving modes, flash block management, power failure management, S.M.A.R.T., TRIM, Hyper Cache technology and SMART Read Refresh™. With exceptional performance, trustable reliability and cost effectiveness, PT180-M280 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

PT180-M280

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 S.M.A.R.T function
- Heatsink Design
- Power Failure Management
- AES 256-bit hardware encryption
- End-to-End Data Protection
- TRIM Support
- Over-Provision
- SMART Read Refresh™
- NVMe Secure Erase

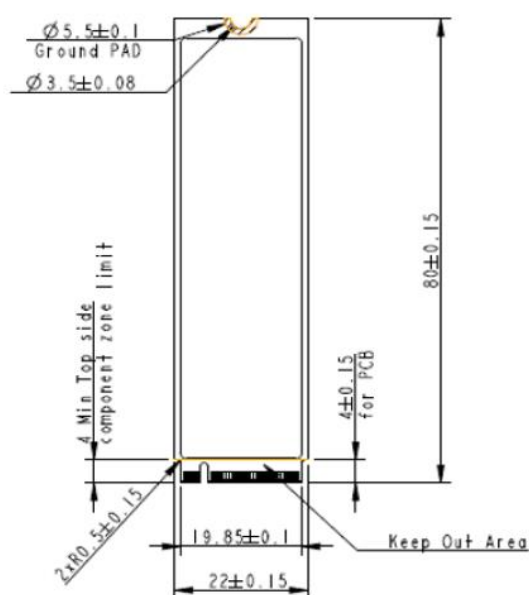
Specifications

Model	PT180-M280
Interface	PCIe Gen4 x4
Connector	M.2 M Key
Form Factor	M.2 2280 Single side, M key
NAND Flash Type	3D TLC
Capacity	256GB~2TB
External DRAM	No
Sequential Read Performance (MB/sec)	Up to 5055
Sequential Write Performance (MB/sec)	Up to 3915
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	929K
Standard Operating Temperature (°C)	0 ~ + 70
Extended Operating Temperature (°C)	-
Storage Temperature (°C)	-40 ~ + 100
Thermal Sensor	Yes
Shock	Operation: 50G/11ms (compliant with MIL-STD-202G) Non-operation: 1500G/0.5ms (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: 1465 mA / Idle mode: 45 mA
Dimension (L x W x H)	Single side: 22.00 x 80.00 x 2.43 (mm)
MTBF (hours)	>3,000,000

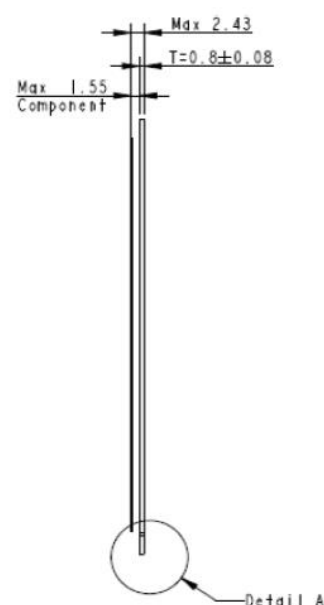
Mechanical Specification

Single Side

Top view



Side view



Unit: mm

For more information,
contact your Apacer representative

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