Apacer

The Most **Reliable** Storage For Industries

PV25P-M280

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Overview

Apacer PV25P-M280, utilizing 3D NAND for higher capacity up to 1920GB and providing more power efficiency than 2D NAND, is the fastest SSD designed as M.2 2280 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, PV25P-M280 delivers exceptionally low latency and outstanding performance in data transfer. With the compact and high-speed storage, PV25P-M280 is the ideal choice for larger, faster hosts deployed in a wide range of applications that require outstanding performance.

PV25P-M280 is not only implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability, but also 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. Featuring CorePower technology, PV25P-M280 guarantees data integrity and stability of data transmission in the event of an unexpected power loss by implementing backup power supply with tantalum capacitors that allow sufficient time to move all cached data to NAND flash. To increase product reliability and resistance to various thermal and mechanical shocks, PV25P-M280 also provides Sidefill technology to ensure that products continue to operate normally in high vibration and under extreme environmental changes. 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. PV25P-M280 also adopts the latest page mapping file translation layer and comes with various implementations including power saving modes, wear leveling, flash block management, TRIM, Hyper Cache technology, over-provisioning, and SMART Read Refresh™. With exceptional performance, trustable reliability and enhanced data protection, PV25P-M280 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

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Feature

- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- S.M.A.R.T. Function
- TRIM Supporot
- Hyper Cache Technology
- Over-provisioning
- SMART Read Refresh™
- End-to-End Data Protection
- NVMe Secure Erase

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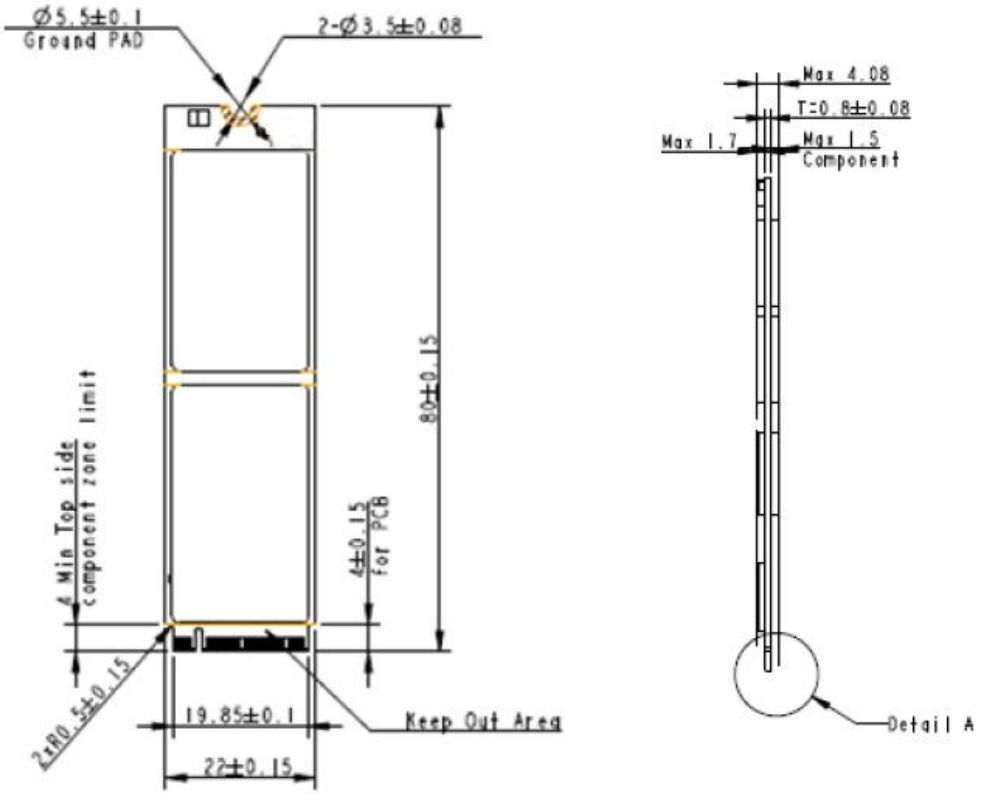
Specifications

Model	PV25P-M280
Interface	PCIe Gen4 x4
Connector	Double-sided: M.2 2280 M key
Form Factor	M.2 2280
NAND Flash Type	3D TLC
Capacity	240GB~3840GB
External DRAM	No
Sequential Read Performance (MB/sec)	Up to 3,675
Sequential Write Performance (MB/sec)	Up to 3,215
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPs (4K Random Write)	600K
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: 1185 mA / Idle mode: 220mA
Dimension (L x W x H)	22.00 x 80.00 x 4.08 (max.)
MTBF (hours)	>3,000,000

Mechanical Specification



Unit: mm

For more information, contact your Apacer representative

Global Presence

Taiwan (Headquarters)
Apacer Technology Inc.
Tel: +886-2-2267-8000
Fax: +886-2-2267-2261

Europe
Apacer Technology B.V.
Tel: +31-40-267-0000
Fax: +31-40-290-0686

U.S.A.
Apacer Memory America, Inc.
Tel: +1-408-518-8699
Fax: 1-510-249-9551

Shanghai
Apacer Electronic(Shanghai) Co., Ltd.
Tel: +86-21-6228-9939

Japan
Apacer Technology Corp.
Tel: +81-3-5419-2668
Fax: +81-3-5419-0018

India
Apacer Technologies Pvt. Ltd.
Tel: +91-80-41529061~3
Fax: +91-80-41700215