

Apacer

The Most **Reliable**
Storage For Industries

PV25C-M280



Overview

Apacer's PV25C-M280 is the fastest SSD designed with M.2 2280 mechanical dimensions, fully compliant with the PCIe Gen4 x4 interface and NVMe 2.0 specifications. This allows it to operate in power management modes, significantly reducing power consumption. Equipped with a powerful PCIe controller supporting on-the-module ECC and an efficient wear-leveling scheme, PV25C-M280 delivers exceptionally low latency and outstanding performance in data transfer. With its compact size and high-speed storage, PV25C-M280 is the ideal choice for larger, faster hosts deployed across a wide range of applications that demand exceptional performance.



Utilizing 3D NAND technology for higher capacities of up to 960GB and offering greater power efficiency than 2D NAND, PV25C-M280 is equipped with an LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and enhance data reliability.

Additionally, it features a built-in thermal sensor to monitor the SSD temperature via S.M.A.R.T commands and is configured with thermal throttling to dynamically adjust frequency scaling, ensuring sustained performance while preventing overheating. The inclusion of CoreGlacier technology helps maintain low temperatures while delivering high-speed performance. Furthermore, to enhance product reliability and resistance to thermal and mechanical shocks, PV25C-M280 incorporates Sidefill technology, enabling normal operation in high-vibration and extreme environmental conditions. For highly-intensive applications, End-to-End Data Protection ensures data integrity at multiple points, enabling reliable data transfers.

From a security standpoint, Advanced Encryption Standard (AES) provides robust data security, offering users peace of mind by safeguarding their data against unauthorized access at all times.

On top of that, PV25C-M280 features CoreSnapshot 2 technology coupled with Double-barreled Solution or CoreRescue OOB Module (optional) to optimize the stability of system operation and management. CoreSnapshot 2 ensures that PV25C-M280 can function normally and return to normal operation in the event of unexpected system failures to reduce downtime and maximum output, while the DBS Cloud Edition or OOB Module extends the practical operating lifespan and integrates seamlessly with alternated RDM.

Feature

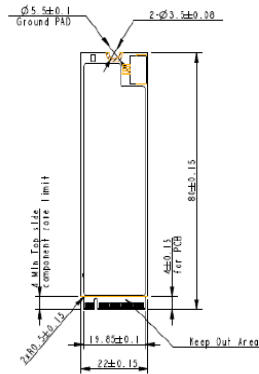
- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- DataDefender™
- CoreSnapshot 2
- S.M.A.R.T.
- TRIM
- Hyper Cache Technology
- Over-provisioning
- SMART Read Refresh™
- NVMe Secure Erase

Specifications

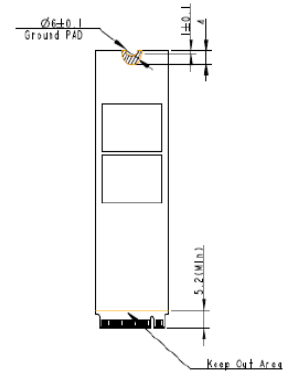
Model	PV25C-M280
Interface	PCIe Gen4 x4
Connector	Double-side: M.2 2280-D5-M key 3-pin CoreSnapshot 2 connector
Form Factor	M.2 2280
NAND Flash Type	3D TLC
Capacity	120GB-960GB
External DRAM	No
Sustained Read Performance (MB/sec)	Up to 3,740
Sustained Write Performance (MB/sec)	Up to 3,330
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPs (4K Random Write)	667K
Standard Operating Temperature (°C)	0 ~ + 70
Extended Operating Temperature (°C)	-40°C to 85°C
Storage Temperature (°C)	-55 ~ + 100
Housing	-
Thermal sensor	Yes
Shock	Operation: Acceleration, 50(G)/11(ms)/half sine (compliant with MIL-STD-202G) 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: 1,225 mA / Idle mode:235 mA
Dimension (L x W x H)	Double-sided:22.00 x 80.00 x 4.73(max.),(unit: mm)
MTBF (hours)	>3,000,000

Mechanical Specification

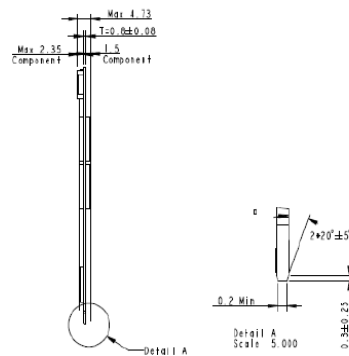
Top View



Bottom View



Side View



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