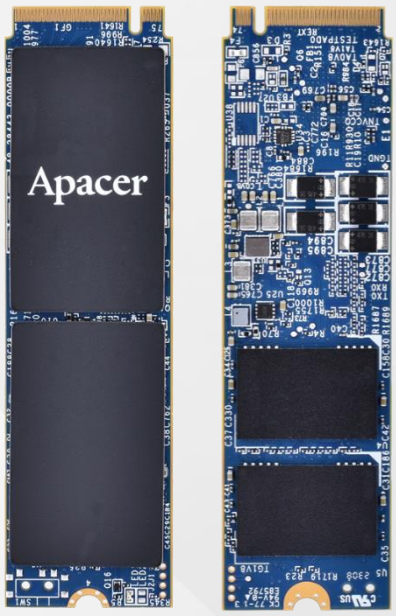
Apacer

The Most **Reliable** Storage For Industries

PV25E-M280



Windows Server 2019 Certified

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PV25E-M280

Overview

Apacer PV25E-M280 is a high-performance and high endurance NVMe SSD designed as the standard M.2 form factor utilizing 112-layer 3D TLC NAND Flash. PV25E-M280 supports PCIe Gen4 x4 interface and provides full compliance with NVMe 2.0 specifications, allowing the PCIe SSD to operate more effectively than SATA SSDs and greatly save on power consumption. PV25E-M280 delivers outstanding, stable performance up to 3,715 MB/s for sequential read and 3,315 MB/s for sequential write and ultra-low latency with optimized QoS. PV25E-M280 also presents better energy efficiency than traditional hard drives, extended endurance of up to 1.27 drive writes per day for 5 years and all the advantages of NAND Flash management technologies to ensure data integrity and highest levels of reliability, making it particularly suited for read-intensive, mixed-use workload applications.

PV25E-M280 features enterprise-class reliability features implemented on both hardware and firmware levels. On the hardware level, PV25E-M280 is built with a powerful PCIe controller that supports on-the-module ECC as well as LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability. PV25E-M280 also supports CorePower technology, which can maintain data transmission and prevent data loss or equipment failure, by implementing backup power supply with tantalum capacitors, when the SSD faces an emergency power outage. To increase product reliability and resistance to various thermal and mechanical shocks, PV25E-M280 also provides Sidefill technology to ensure that products continue to operate normally in high vibration and under extreme environmental changes.

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Overview

On the firmware level, PV25E-M280 is designed with an error-checking mechanism called End-to-End Data Protection to ensure all data in transit is protected against transient errors. To maintain consistent performance in the process of data transmission, PV25E-M280 is configured with thermal throttling technology coupled with built-in thermal sensor to monitor the temperature of the SSD via S.M.A.R.T health monitoring and dynamically adjust frequency scaling to enhance data reliability and provide sustained performance while overheating.

In addition to data reliability, PV25E-M280 also incorporates a variety of cutting-edge technologies featuring multiple approaches to data protection and security. PV25E-M280 provides exceptional performance by offloading computational tasks to a dedicated processor with AES 256-bit hardware encryption, and with the hardware-based technology, PV25E-M280 offers data security to safeguard the drive against unauthorized access at all times. To add an additional level of protection, PV25E-M280 supports SMART Read Refresh, developed particularly for read-intensive applications, to avoid read disturb errors from occurring to ensure health status of all blocks of NAND flash.

Apacer PV25E-M280 is an enterprise-class SSD designed for server applications that require consistent performance, low latency and continuous large file transfers for 24/7 uptime and reliability. With superior performance, instant responsiveness, advanced power loss protection technology and highest standard of reliability – whether in terms of data security, data integrity and data protection, Apacer PV25E-M280 is an ideal solution for enterprise servers, data centers and cloud service providers.

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Feature

· Enterprise SSD PV25E Series

· CorePower

· QoS 99.9%

· Warrany:5 years

· DWPD>1

· AES 256-bit Encryption

· Thermal Sensor

· Thermal Throttling

· Over-Provisioning

· Low-Density Parity-Check (LDPC) Code

· Global Wear Leveling

· S.M.A.R.T.

· SMART Read Refresh™

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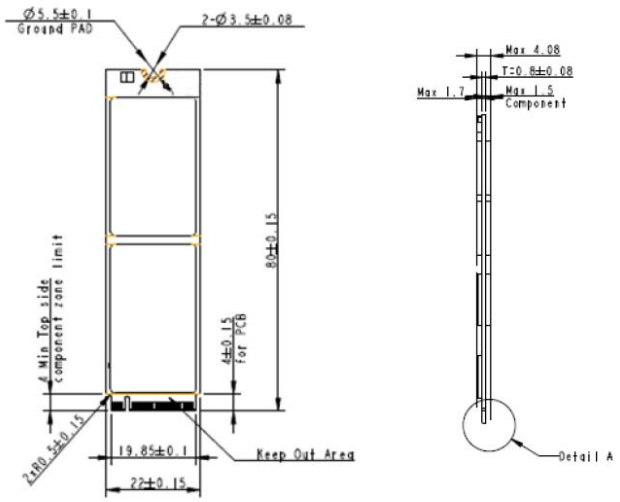
Specifications

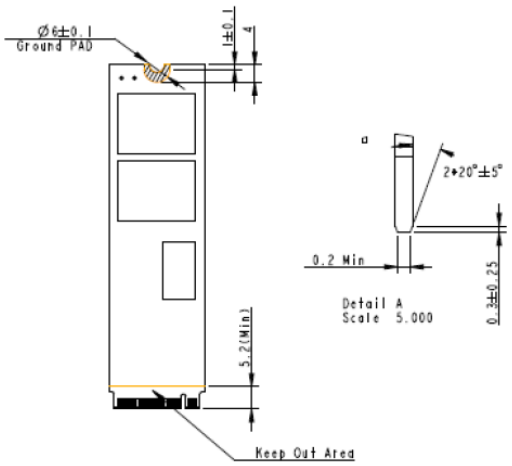
Model	PV25E-M280
Interface	PCIe Gen4 x4
Connector	Double-sided: M.2 2280 M key
Form Factor	M.2 2280
NAND Flash Type	3D TLC
Capacity	240GB~1920GB
External DRAM	No
Sequential Read Performance (MB/sec)	Up to 3715
Sequential Write Performance (MB/sec)	Up to 3315
Sustained Read Performance (MB/sec)	Up to 3240
Sustained Write Performance (MB/sec)	Up to 715
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	666K
Random R/W latency	91/93 µs
Random R/W QoS	0.3/6.8 ms
Standard Operating Temperature (°C)	0 ~ + 70
Storage Temperature (°C)	-55 ~ + 100
Housing	Yes
Thermal sensor	Yes
Shock	Operation: Acceleration, 50(G)/11(ms)/half sine (compliant with MIL-STD-202G) Non-operation: Acceleration,1,500(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: 6.16 W/Idle mode: 1.07 W
Inrush current	6.74 A
Dimension (L x W x H)	22.00 x 80.00 x 4.08(max.), unit: mm
MTBF (hours)	>3,000,000

Mechanical Specification

Top side



Bottom side



Unit: mm

For more information, contact your Apacer representative

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