

Apacer

The Most **Reliable**
Storage For Industries

PV180-μSSD



Overview

Apacer PCIe BGA SSD PV180-μSSD presents a revolutionary breakthrough of NAND flash storage technology. This micro sized SSD delivers all the technological benefits in NAND based storage solution with ultra speed PCIe Gen4 x4 interface in an embedded BGA form factor, compatible with JEDEC PCIe M.2 1620. Formed in a size of an IC chip, the performance level can reach up to 3,745 MB/s for read and 3,015 MB/s for write.



PV180-μSSD is built with a powerful PCIe controller that supports on-the-module ECC as well as efficient wear leveling scheme, and implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance and increase data reliability. Furthermore, PV180-μSSD is 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. 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.

Security-wise, 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. PV180-μSSD also 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, over-provisioning and DataRAID™.

Apacer PV180-μSSD boasts micro size, high-speed performance, low power consumption, shock resistance, high stability and reliability. PV180-μSSD will be adopted by many high-end industrial and 5G high-speed applications, including the Industrial IoT, cloud computing, servers and networking, defense, gaming, and high-performance computing.

Feature

- Support LDPC ECC
- Global Wear-Leveling Technology
- TRIM Support
- Hyper Cache Technology
- End-to-End Data Protection
- Thermal Sensor
- Power Failure Management
- S.M.A.R.T. and SSD Widget 2.0
- Write protect (Optional)

Specifications

Model	PV180-μSSD
Interface	PCIe Gen4 x4
Form Factor	PCIe BGA SSD (291 Ball)
NAND Flash Type	3D eTLC
Capacity	240GB~960GB
External DRAM	Yes
Sequential Read Performance (MB/sec)	Up to 3,745
Sequential Write Performance (MB/sec)	Up to 3,015
Sustained Read Performance (IOPS)	392K
Sustained Write Performance (IOPS)	710K
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPs (4K Random Write)	710K
Standard Operating Temperature (°C)	-40 ~ + 85
Storage Temperature (°C)	-40 ~ + 85
Thermal sensor	Yes
Operating Voltage	– 3.3V ± 5% or 2.5V ± 5% – 1.2V ± 5% – 0.85V ± 5%
Power Consumption	Active mode: 1255 mA / Idle mode: 240mA
Dimension (L x W x H)	20.00 x 16.00 x 1.65 mm
MTBF (hours)	>3,000,000

Mechanical Specification



For more information,
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