

Apacer

The Most **Reliable**
Storage For Industries

PH150-μSSD



PH150-μSSD

Overview



Apacer PCIe BGA SSD PH150-μSSD (M.2 1620) 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 Gen3 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 2,260 MB/s for read and 1,530 MB/s for write.

Regarding reliability, PH150-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. With Apacer's SLC-liteX technology, PH150-μSSD performs with higher number of P/E cycles up to 30,000 times. Furthermore, PH150-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) and Write Protect ensure data security and provide users with peace of mind knowing their data is safeguarded against unauthorized use at all times. PH150-μSSD also adopts the latest page mapping file translation layer and comes with various implementations including flash block management, power saving modes, power failure management, TRIM, Hyper Cache technology, DataRAID, and NVMe secure erase.

Apacer PH150-μSSD boasts micro size, high-speed performance, low power consumption, shock resistance, high stability and reliability. PH150-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
- Write protect (Optional)
- SLC-LiteX

Specifications

Model	PH150-μSSD
Interface	PCIe Gen3 x4
Form Factor	PCIe BGA SSD (291 Ball)
NAND Flash Type	3D TLC
Capacity	40GB~160GB
External DRAM	No
Sustained Read Performance (MB/sec)	Up to 2260
Sustained Write Performance (MB/sec)	Up to 1530
ECC Engine	Low-Density Parity-Check (LDPC) Code
IOPS (4K Random Write)	186K/343K
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% 0.9V ± 5%
Power Consumption	Active mode: 795 mA / Idle mode: 260 mA
Dimension (L x W x H)	16.00 x 20.00 x 1.15 (mm)
MTBF (hours)	>2,000,000

Mechanical Specification



Table 10-1 Physical Dimensions

Parameter	Unit	60 GB	120 GB
Length	mm	20	
Width		16	
Height		1.15	

For more information,
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