

# Apacer

The Most **Reliable**  
Storage For Industries

PH930-M280



## PH930-M280

### Overview

Apacer PH930-M280 is the fastest SSD designed as M.2 2280 mechanical dimensions which provides full compliance with PCIe Gen4 x4 interface and NVMe 1.4 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, PH930-M280 delivers exceptionally low latency and outstanding performance in data transfer. Random performance is further enhanced by engineering the internal controlling unit of the SSD with DRAM. With the compact and high-speed storage, PH930-M280 is the ideal choice for larger, faster hosts deployed in a wide range of applications that require outstanding performance.



Utilizing 3D NAND for higher capacity up to 640GB and providing more power efficiency than 2D NAND, PH930-M280 is not only implemented with LDPC (Low Density Parity Check) ECC engine and SLC-liteX technology to extend SSD endurance with P/E cycles up to 100,000 times 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. To ensure that products continue to operate normally in high vibration and under extreme environmental changes, Apacer provides Sidefill technology to increase product reliability and resistance to thermal and mechanical stress. CoreGlacier™ is also available to keep the temperature low, while still allowing the drive to deliver high-speed performance. 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, while Signed Firmware allows firmware to be updated in a secure way with a digital signature. PH930-M280 also adopts the latest page mapping file translation layer and comes with various implementations including flash block management, DataDefender™, TRIM, power saving modes, and SMART Read Refresh™. With exceptional performance, trustable reliability, and enhanced data protection, PH930-M280 is definitely the ideal storage or cache solution for a variety of applications ranging from industrial, imaging, computing to enterprise markets.

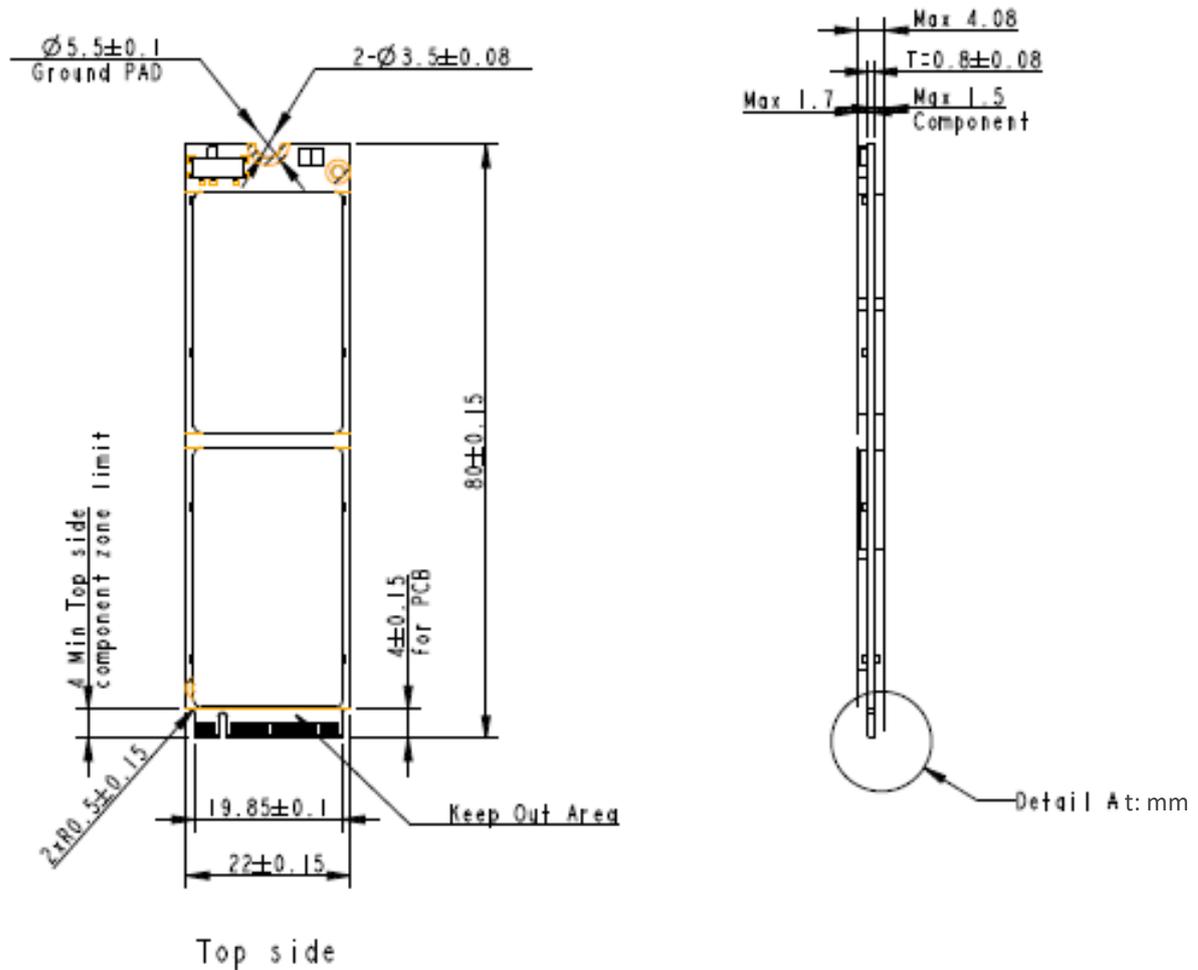
## Feature

- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- DataDefender™
- S.M.A.R.T.
- TRIM
- SLC-liteX (P/E cycle: 100K)
- SMART Read Refresh™

## Specifications

<b>Model</b>	PH930-M280
<b>Interface</b>	PCIe Gen4 x4
<b>Connector</b>	75-pin M.2 module pinout
<b>Form Factor</b>	Double-sided: M.2 2280-M
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	160GB~640GB
<b>External DRAM</b>	Yes
<b>Sustained Read Performance (MB/sec)</b>	Up to 7105
<b>Sustained Write Performance (MB/sec)</b>	Up to 5955
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPS (4K Random Write)</b>	934K
<b>Standard Operating Temperature ( °C )</b>	0 ~ + 70
<b>Storage Temperature ( °C )</b>	-55 ~ + 100
<b>Thermal Sensor</b>	Yes
<b>Shock</b>	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)
<b>Vibration</b>	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)
<b>Operating Voltage</b>	3.3 V ± 5%
<b>Power Consumption</b>	Active mode: 2565 mA / Idle mode: 510 mA
<b>Dimension (L x W x H )</b>	Double side: 22.00 x 80.00 x 4.08 (max) (mm)
<b>MTBF (hours)</b>	>3,000,000

## Mechanical Specification



For more information,  
contact your Apacer representative

### Global Presence

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