

# Apacer

The Most **Reliable**  
Storage For Industries

PV220-M242



## PV220-M242

### Overview

Apacer PV220-M242 is the fastest SSD designed as M.2 2242 mechanical dimensions which provides full compliance with PCIe Gen3 x4 interface and NVMe 1.3 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, PV220-M242 delivers outstanding performance in data transfer, reaching up to 209,000/311,000 and 2,390/2,210 MB/s in IOPS and sequential read/write. With the compact and high-speed storage, PV220-M242 is the ideal choice for larger, faster hosts deployed in a wide range of applications that require outstanding performance.

PV220-M242 utilizes 3D NAND for higher capacity up to 960GB and provides more power efficiency than 2D NAND. The PCIe SSD is not only implemented with LDPC (Low Density Parity Check) ECC engine to extend SSD endurance 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 increase product reliability and resistance to various thermal and mechanical shocks, PV220-M242 also provides Sidefill to ensure that products continue to operate normally in high vibration and under extreme environmental changes, as well as heat spreader 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.

Security-wise, Advanced Encryption Standard (AES) and Trusted Computing Group (TCG) Opal (optional) ensure data security and provide users with peace of mind knowing their data is safeguarded against unauthorized use at all times. PV220-M242 also adopts the latest Page Mapping file translation layer and comes with various implementations including power saving modes, Wear Leveling, flash block management, S.M.A.R.T., TRIM, NVMe secure erase, Over-Provisioning, Hyper Cache technology, DataDefender™ and DataRAID™.

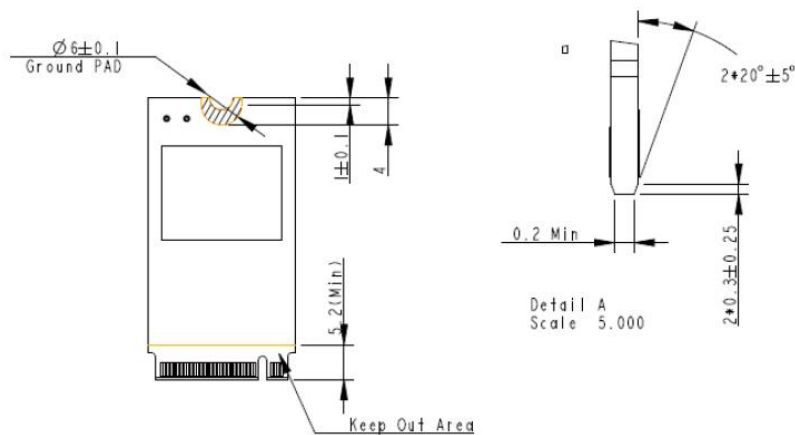
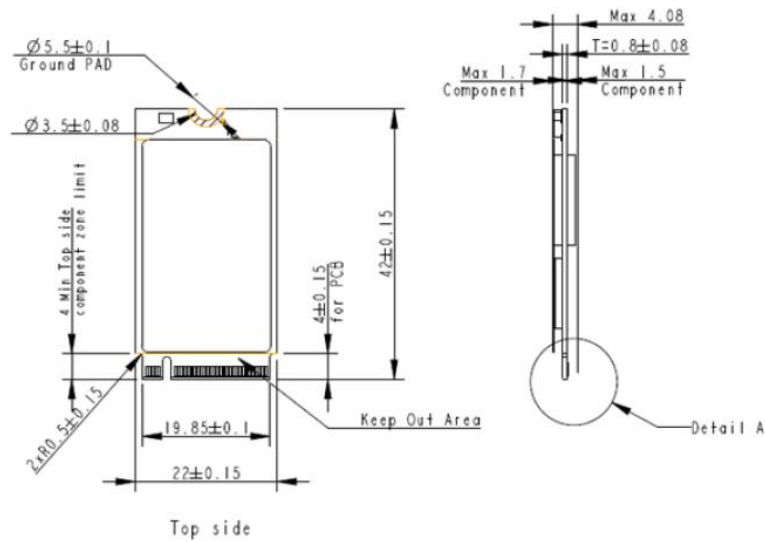
## Feature

- Adopts advanced LDPC ECC engine with 3D NAND flash memory to improve reliability
- Heat spreader technology
- Global Wear Leveling
- Flash bad-block management
- Flash Translation Layer: Page Mapping
- S.M.A.R.T.
- DataDefender™
- TRIM support
- Hyper Cache Technology
- Over-Provisioning
- DataRAID™
- NVMe Secure Erase
- Supports TCG Opal 2.0 / AES 256-bit encryption

## Specifications

<b>Model</b>	PV220-M242
<b>Interface</b>	PCIe Gen3 x4
<b>Connector</b>	M.2 M Key
<b>Form Factor</b>	M.2 2242
<b>NAND Flash Type</b>	3D TLC
<b>Capacity</b>	240GB-960GB
<b>External DRAM</b>	No
<b>Sequential Read Performance ( MB/sec )</b>	Up to 2390
<b>Sequential Write Performance ( MB/sec )</b>	Up to 2210
<b>ECC Engine</b>	Low-Density Parity-Check (LDPC) Code
<b>IOPS (4K Random Write)</b>	311K
<b>Standard Operating Temperature ( °C )</b>	0 ~ + 70
<b>Extended Operating Temperature ( °C )</b>	-40 ~ + 85
<b>Storage Temperature ( °C )</b>	-55 ~ + 100
<b>Thermal Sensor</b>	No
<b>Shock</b>	Operation: 50G/11ms (compliant with MIL-STD-202G) Non-operation: 1500G/0.5ms (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>	3.3V ±5%
<b>Power Consumption</b>	Active mode: 1255 mA / Idle mode: 240mA
<b>Dimension (L x W x H )</b>	22.00 x 42.00 x 4.08 (max) (mm)
<b>MTBF (hours)</b>	>3,000,000

## Mechanical Specification



Unit: mm

For more information,  
contact your Apacer representative

### Global Presence

Taiwan (Headquarters)  
Apacer Technology Inc.  
Tel: +886-2-2267-8000  
Fax: +886-2-2267-2261

Europe  
Apacer Technology B.V.  
Tel: +31-40-267-0000  
Fax: +31-40-290-0686

U.S.A.  
Apacer Memory America, Inc.  
Tel: +1-408-518-8699  
Fax: 1-510-249-9551

China  
Apacer Electronic(Shanghai)  
Co., Ltd.  
Tel: +86-21-6228-9939

Japan  
Apacer Technology Corp.  
Tel: +81-3-5419-2668  
Fax: +81-3-5419-0018

India  
Apacer Technologies Pvt. Ltd.  
Tel: +91-80-41529061~3  
Fax: +91-80-41700215