

Industrial Rugged SSD

A complete Solution for Secure Data Protection and Extreme Environments.



PV25D Rugged Series

Product Features

- AES 256-bit Hardware Encryption
- Low-Density Parity-Check (LDPC) Code
- Global Wear Leveling
- DataDefender™
- Smart Read Refresh™
- NVMe Secure Erase
- Host Memory Buffer (HMB)
- End-to-End Data Protection
- CoreGlacier™

Security Features (optional)

- TCG Opal 2.0¹/ Self Encrypting Drives (SEDs)
- Instant Keychange
- MIL Erase²
- Digital Destruction
- Write Protect

Implementation Methods (optional)

- Software command
- Hardware
 - Connector pin
 - Slide switch

MIL-STD Environmental Test

Item	Test Methods
Shock	MIL-STD-202G, Method 213B, Condition A
	MIL-STD-883K, Method 2002.5, Condition B
Vibration	MIL-STD-810G, Method 514.6, Procedure I, Category 24
	MIL-STD-810G, Method 514.6, Procedure I, Category 7
Humidity	MIL-STD-810G, Method 507.5, Procedure II
High Temp.	MIL-STD-810G, Method 501.5, Procedure II
	MIL-STD-810G, Method 501.5, Procedure I
Low Temp.	MIL-STD-810G, Method 502.5, Procedure II
	MIL-STD-810G, Method 502.5, Procedure I
Thermal Shock	MIL-STD-810G, Method 503.5, Procedure I-C
Altitude	MIL-STD-810G, Method 500.5, Procedure I
Salt Fog	MIL-STD-810G, Method 509.5, Procedure I
Radiation	MIL-STD-810G, Method 505.5, procedure II

Specifications

- Compliant with PCIe Express 4.0
- Compliant with NVMe 1.4
- Compatible with PCIe Gen4 x4 interface

	M.2 2242	M.2 2280
Configuration		
Capacity	Double-sided: 240, 480, 960, 1920GB	
NAND Flash Type	3D TLC (BiCS5)	
Performance		
Sequential Read/Write (Max.)	3,325/3,020 MB/s	
4K Random Read/Write (Max.)	560,000/559,000 IOPS	
Reliability		
Endurance (Drive Writes Per Day: DWPD ³)(Max.)	Up to 2.13 DWPD at 1920GB	
MTBF	>5,000,000 hours	
Features (optional)	<ul style="list-style-type: none"> • Thermal Throttling • Conformal Coating <ul style="list-style-type: none"> • Nano Coating • Sidefill • 30µ Gold Finger 	
Environment		
Operating Temperature	<ul style="list-style-type: none"> • Standard: 0°C to 70°C • Wide: -40°C to 85°C 	
Storage Temperature	-55°C to 100°C	
Power Requirement		
Supply Voltage	3.3V ± 5%	
Power Consumption⁴		
Low Power PS4 (L1.2)	< 5.5 mW	
Read (mA)	770 (rms)	770 (rms)
Write (mA)	395 (rms)	395 (rms)
Idle (mA)	110 (rms)	110 (rms)
Peak (mA)	395 (rms)	395 (rms)
Physical Characteristics		
Form Factor	M.2 2242-M	M.2 2280-M
Dimensions (mm)	22.00 x 42.00 x 4.08	22.00 x 80.00 x 4.08

1. TCG Opal 2.0 can only be triggered via software commands and cannot be implemented together with any of the other Security features.
 2. Includes NSA9-12, DoD 5220.22-M, NSA Manual 130-2, USA-AF AFSSI 5020, USA-Army 380-19, USA Navy NAVSO P-5239-26, NISPOMSUP Chap 8, Sect. 8-501 and IREC (IRIG) 106.
 3. DWPD (Drive Write Per Day) is calculated based on the number of times that user overwrites the entire capacity of an SSD per day of its lifetime during the warranty period.
 4. The RMS value is measured with IOMeter 1GB Seq. Read/Write QD32/T1.