

Embedded Solutions



PCIe M.2 SSDs

MTE712P

Transcend's M.2 SSD MTE712P is a Power Loss Protection (PLP) SSD. During unexpected power outages, the built-in tantalum capacitor provides power to the controller and DRAM cache, ensuring data integrity and storage reliability. The MTE712P also complies with the TCG (Trusted Computing Group) Opal 2.0 standards. Data is protected using the hardware-based AES 256-bit encryption and LBA (Logical Block Address) sector-specific permissions.

Transcend's MTE712P features the 112-layer 3D NAND flash and a PCI Express (PCIe) Gen 4 x4 interface, achieving never-before-seen transfer speeds. Its built-in DRAM cache enables fast random read and write speeds, and improves drive endurance. In addition, the 30µ" gold finger PCB, Corner Bond technology, and anti-sulfur resistors guarantee its reliability in harsh conditions. Transcend's MTE712P is also 100% chamber tested in-house for extended operating temperatures ranging from -40°C to 85°C.

Hardware Features

- Compliant with NVMe specification 1.4
- PCIe Gen 4 x4 interface
- DDR4 DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Anti-sulfur technology implemented to prevent sulfurization in the environment

Ordering Information

256GB	TS256GMTE712P
512GB	TS512GMTE712P
1TB	TS1TMTE712P
2TB	TS2TMTE712P

Firmware Features

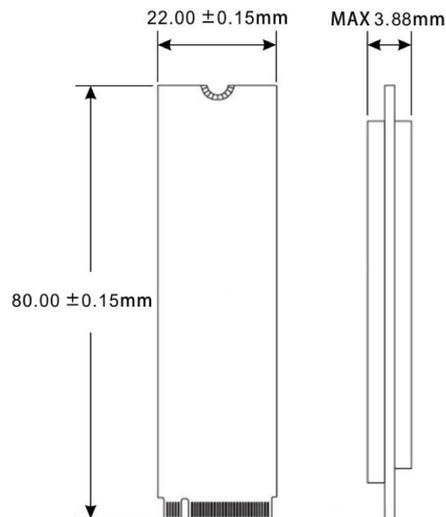
- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices
- Dynamic thermal throttling
- Full drive encryption with Advanced Encryption Standard (AES)
- Compliant with TCG Opal specifications and IEEE 1667 standards

*Supports Microsoft® eDrive standard

Specifications

Appearance	Dimensions	80 mm x 22 mm x 3.88 mm (3.15" x 0.87" x 0.15")
	Weight	9 g (0.32 oz)
	M.2 Type	2280-D2-M (Double-sided)
	Form Factor	M.2 2280
Interface	Bus Interface	NVMe PCIe Gen4 x4
Storage	Capacity	256 GB / 512 GB / 1 TB / 2 TB
	Flash Type	112-layer 3D NAND flash
Operating Environment	Operating Voltage	3.3V±5%
	Operating Temperature	Wide Temp. -40°C (-40°F) ~ 85°C (185°F)
	Storage Temperature	-55°C (-67°F) ~ 85°C (185°F)
	Humidity	5% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
	Vibration (Operating)	20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)
Power	Power Consumption (Operation)	4 watt(s)
	Power Consumption (IDLE)	1.35 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 3,800 MB/s Write: Up to 3,100 MB/s
	4K Random Read/Write (IOmeter)	Read: Up to 350,000 IOPS Write: Up to 340,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 4,320 TBW
	Drive Writes Per Day (DWPD)	1.97 (3 yrs)
Warranty	Certificate	CE / UKCA / FCC / BSMI
	Warranty	Three-year Limited Warranty

Mechanical Dimensions



Product specifications are subject to change without notice. Pictures shown may differ from actual products. Total accessible capacity varies depending on operating environment. Due to the complexity and variety of industrial applications, Transcend cannot guarantee 100% compatibility with all platforms and under all scenarios. For special applications and environments, it is strongly suggested that you contact Transcend beforehand for clarification.