Transcend®

www.transcend-info.com

Embedded Solutions

PCIe M.2 SSDs

MTE712A & MTE712A-I

Transcend's M.2 SSD MTE712A is a self-encrypting drive (SED) that complies with the TCG Opal 2.0 standards. Data is protected using the hardware-based AES 256-bit encryption and LBA (Logical Block Address)sector-specific permissions.

The MTE712A features the 112-layer 3D NAND flash and the PCI Express (PCIe) Gen 4 x4 interface, achieving never-before-seen transfer speeds. Its built-in DRAM cache allows faster random speeds while the 30μ" gold finger PCB, Corner Bond technology, and anti-sulfur resistor guarantee its reliability in harsh conditions. The MTE712A is fully tested in-house, operating stably in an extended operating temperature ranging from -20℃~75℃.

Transcend also offers the MTE712A-I with wide temperature (-40℃~ 85℃) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- Compliant with PCI Express specification 4.0
- Compliant with NVM Express specification 1.4
- PCIe Gen 4 x4 interface
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Anti-sulfur technology implemented to prevent sulfurization in the environment

Firmware Features

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

*Supports Microsoft® eDrive standard
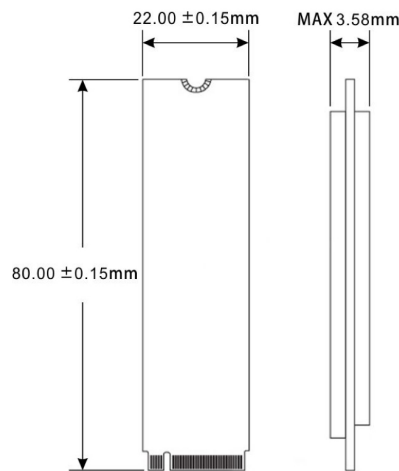
Ordering Information

256GB	TS256GMTE712A
	TS256GMTE712A-I
512GB	TS512GMTE712A
	TS512GMTE712A-I
1TB	TS1TMTE712A
	TS1TMTE712A-I
2TB	TS2TMTE712A
	TS2TMTE712A-I

Specifications

Appearance	Dimensions	80 mm x 22 mm x 3.58 mm (3.15" x 0.87" x 0.14")
	Weight	10 g (0.35 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	Extended Temp. -20°C (-4°F) ~ 75°C (167°F) 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)	5.6 watt(s)
	Power Consumption (IDLE)	1.28 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: up to 3,800 MB/s Write: up to 3,200 MB/s
	4K Random Read/Write (IOmeter)	Read: up to 350,000 IOPS Write: up to 330,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	up to 4,000 TBW
	Drive Writes Per Day (DWPD)	1.84 (3 yrs)
Warranty	Certificate	CE / FCC / BSMI / UKCA
	Warranty	Three-year Limited Warranty

Mechanical Dimensions

22.00 ±0.15mm   MAX 3.58mm

80.00 ±0.15mm

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.

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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