

Embedded Solutions



PCIe M.2 SSDs

MTE480T & MTE480T-I

Transcend's M.2 SSD MTE480T 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.

Transcend's MTE480T features the 112-layer 3D NAND flash, a high-speed PCI Express (PCIe) Gen 4 x4 interface, and a powerful controller, achieving never-before-seen transfer speeds. In addition, the 30μ" gold finger PCB, Corner Bond technology, and anti-sulfur resistors guarantee its reliability in harsh conditions. Transcend's MTE480T is also 100% chamber tested in-house for extended operating temperatures of -20°C~75°C.

Transcend also offers the MTE480T-I with wide temperature (-40°C~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- Compliant with NVM Express specification 1.4
- Compliant with PCI Express specification 4.0
- PCIe Gen 4 x4 interface
- Anti-sulfur technology implemented to prevent sulfurization in the environment
- 30μ" PCB gold finger

Firmware Features

- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices
- Advanced Global Wear-Leveling and Block management for reliability
- Dynamic thermal throttling
- Built-in LDPC ECC (Error Correction Code) functionality
- Compliant with TCG Opal specifications and IEEE 1667 standards

Ordering Information

256GB	TS256GMTE480T TS256GMTE480T-I
512GB	TS512GMTE480T TS512GMTE480T-I
1TB	TS1TMTE480T TS1TMTE480T-I
2TB	TS2TMTE480T TS2TMTE480T-I

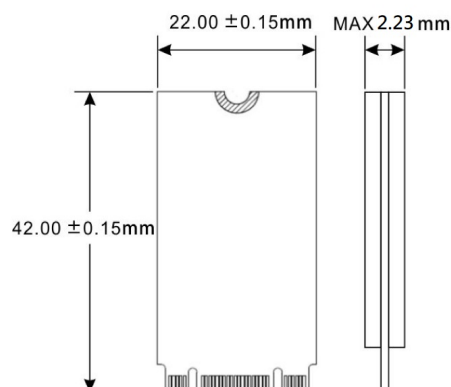
*Supports Microsoft® eDrive standard



Specifications

Appearance	Dimensions	42 mm x 22 mm x 2.23 mm (1.65" x 0.87" x 0.09")
	Weight	5 g (0.18 oz)
	M.2 Type	2242-S2-B-M
	Form Factor	M.2 2242
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)	5.8 watt(s)
	Power Consumption (IDLE)	0.72 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 5,000 MB/s Write: Up to 4,100 MB/s
	4K Random Read/Write (IOMeter)	Read: Up to 500,000 IOPS Write: Up to 415,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 2640 TBW
	Drive Writes Per Day (DWPD)	1.2 (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.

