

## Embedded Solutions



### PCIe M.2 SSDs

# MTE380T & MTE380T-I

Transcend's M.2 SSD MTE380T 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 MTE380T 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 MTE380T is also 100% chamber tested in-house for extended operating temperatures of -20°C~75°C.

Transcend also offers the MTE380T-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 PCI Express specification 4.0
- Compliant with NVM Express specification 1.4
- Space-saving M.2 form factor (30mm) – ideal for mobile computing devices
- PCIe Gen 4 x4 interface
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed

## Firmware Features

- 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
- Advanced Garbage Collection
- Advanced Global Wear-Leveling and Block management for reliability
- Dynamic thermal throttling

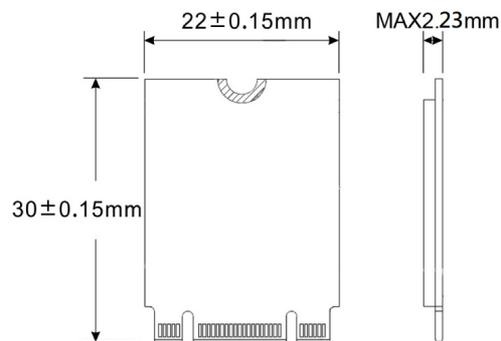
## Ordering Information

512GB	TS512GMTE380T TS512GMTE380T-I
1TB	TS1TMTE380T TS1TMTE380T-I

## Specifications

<b>Appearance</b>	Dimensions	30 mm x 22 mm x 2.23 mm (1.18" x 0.87" x 0.09")
	Weight	4 g (0.14 oz)
	M.2 Type	2230-S3-M
	Form Factor	M.2 2230
<b>Interface</b>	Bus Interface	NVMe PCIe Gen4 x4
<b>Storage</b>	Capacity	512 GB / 1 TB
	Flash Type	112-layer 3D NAND flash
<b>Operating Environment</b>	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)
<b>Power</b>	Power Consumption (Operation)	3.3 watt(s)
	Power Consumption (IDLE)	0.73 watt(s)
<b>Performance</b>	Sequential Read/Write (CrystalDiskMark)	Read: Up to 3,300 MB/s Write: Up to 1,700 MB/s
	4K Random Read/Write (IOmeter)	Read: Up to 123,000 IOPS Write: Up to 390,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 660 TBW
	Drive Writes Per Day (DWPD)	1.2 (3 yrs)
<b>Warranty</b>	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.