

## Embedded Solutions



### PCIe M.2 SSDs

## MTE490A & MTE490A-I

Transcend's M.2 SSD MTE490A is built with the BiCS8 218-layer 3D NAND flash, delivering enhanced storage density and an optimized architecture for outstanding performance and stability. Combined with a high-speed PCIe Gen 4 x4 interface, it fully unleashes the potential of next-generation NAND, ensuring fast and reliable data access.

The MTE490A is engineered for demanding industrial environments, featuring a 30 $\mu$ " gold finger PCB, Corner Bond technology, and anti-sulfur resistors to reinforce critical components and enhance durability. Rigorously tested, it supports an extended temperature range of -20°C to 75°C, maintaining stable operation even under rapid temperature fluctuations.

Compliant with the TCG Opal 2.0 standard, the MTE490A is a self-encrypting drive (SED) equipped with AES-256 hardware-based encryption and LBA-level management, providing advanced data protection for sensitive information. Transcend also offers the wide-temperature MTE490A-I, designed to operate reliably in extreme conditions from -40°C to 85°C. It is ideal for industrial systems requiring consistent performance, durability, and reliability under heavy workloads.

### Hardware Features

- Compliant with PCI Express specification 4.0
- PCIe Gen 4 x4 interface
- Anti-sulfur technology implemented to prevent sulfurization in the environment
- 30 $\mu$ " PCB gold finger
- Key components fortified by default with Corner Bond technology

### Firmware Features

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

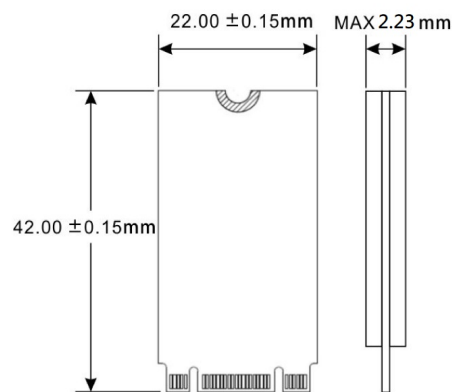
### Ordering Information

512GB	TS512GMTE490A TS512GMTE490A-I
1TB	TS1TMTE490A TS1TMTE490A-I

## Specifications

<b>Appearance</b>	Dimensions	42 mm x 22 mm x 2.23 mm (1.35" x 0.87" x 0.09")
	Weight	5 g (0.18 oz)
	M.2 Type	2242-S2-M
	Form Factor	M.2 2242
<b>Interface</b>	Bus Interface	NVMe PCIe Gen4 x4
<b>Storage</b>	Capacity	512 GB / 1 TB
	Flash Type	218-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	15 G, 11 ms, 3 axis
	Vibration (Operating)	20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)
<b>Power</b>	Power Consumption (Operation)	4.9 watt(s)
	Power Consumption (IDLE)	0.65 watt(s)
<b>Performance</b>	Sequential Read/Write (CrystalDiskMark)	Read: Up to 7,400 MB/s Write: Up to 6,500 MB/s
	4K Random Read/Write (IOMeter)	Read: Up to 1,000,000 IOPS Write: Up to 1,000,000 IOPS
	Terabytes Written (TBW)	Up to 1,700 TBW
<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.