

## Embedded Solutions



### PCIe M.2 SSDs

# MTE452T & MTE452T-I

3K P/E cycles

Transcend's MTE452T M.2 SSD features the PCI Express (PCIe) Gen 3 x2 interface and is compatible with NVM Express (NVMe) 1.3 specifications to achieve never-before-seen transfer speeds. The MTE452T features state-of-the-art 3D NAND technology, which allows 96 layers of 3D NAND flash chips to be vertically stacked. Compared to 3D NAND at 64 layers, this density breakthrough greatly improves storage efficiency. The MTE452T is built with DRAM cache for fast access, and is fully tested in-house to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles.

Transcend also offers the MTE452T-I with wide temperature (-40°C to 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

## Features

- DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Wide-temperature model available: promised operational reliability in a wide temperature range (from -40°C to 85°C)
- PCIe Gen 3 x2 interface
- Compliant with PCI Express specification 3.1
- Compliant with NVM Express specification 1.3
- Supports NVM command
- SLC caching technology
- Built-in LDPC ECC (Error Correction Code) functionality
- Dynamic thermal throttling
- Compliant with RoHS 2.0 standards
- Supports Transcend SSD Scope Pro software

## Ordering Information

### Standard (0°C~ 70°C)

128GB	TS128GMTE452T
256GB	TS256GMTE452T
512GB	TS512GMTE452T

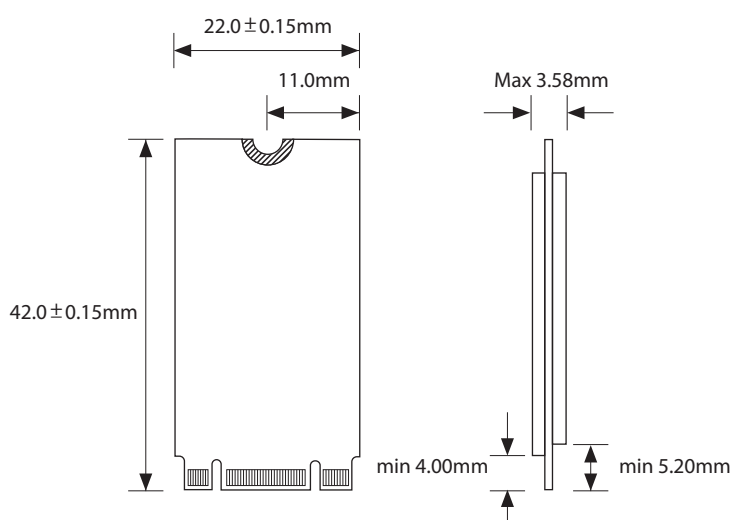
### Wide Temp. (-40°C~ 85°C)

128GB	TS128GMTE452T-I
256GB	TS256GMTE452T-I
512GB	TS512GMTE452T-I

## Specifications

Appearance	Dimensions	42.0 mm x 22.0 mm x 3.58 mm (1.65" x 0.87" x 0.14")
	Weight	5 g (0.18 oz)
	Form Factor	M.2
	M.2 Type	2242-D2-B-M (Double-sided)
Interface	Bus Interface	NVMe PCIe Gen3 x2
Storage	Flash Type	3D NAND flash
	Capacity	128 GB/256 GB/512 GB
Operating Environment	Operating Voltage	3.3V±5%
	Operating Temperature	Standard: 0°C (32°F) ~ 70°C (158°F)
		Wide Temp.: -40°C (-40°F) ~ 85°C (185°F)
	Storage Temperature	-40°C (-40°F) ~ 85°C (185°F)
	Humidity	5% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
Vibration	20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)	
Power	Power Consumption (Operation)	2.81 watt(s)
	Power Consumption (IDLE)	0.63 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark, max.)	Read: 1,700 MB/s; write: 1,250 MB/s
	4K Random Read/Write (IOmeter, max.)	Read: 200,000 IOPS; write: 250,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (Max.)	1,080 TBW
	Drive Writes Per Day (DWPD)	2 (3 yrs)
Warranty	Certificate	CE/FCC/BSMI
	Warranty	Three-year Limited Warranty
Note	<ul style="list-style-type: none"> <li>Speed may vary due to host hardware, software, usage, and storage capacity.</li> <li>The workload used to rate DWPD may be different from your actual workload, which may vary due to host hardware, software, usage, and storage capacity.</li> </ul>	

## 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.



Please feel free to contact us with any special requests you might have.

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