Transcend®

www.transcend-info.com

Embedded Solutions

PCIe M.2 SSDs

MTE452T2

Transcend's MTE452T2 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 MTE452T2 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, and its built-in DRAM cache allows faster access. Applied with 30μ" gold finger PCB and Corner Bond technology, the MTE452T2 is fully tested in-house to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles and an extended operating temperature ranging from -20℃~75℃.

Hardware Features

- DDR3 DRAM Cache embedded
- PCIe Gen 3 x2 interface
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Key components fortified by default with Corner Bond technology
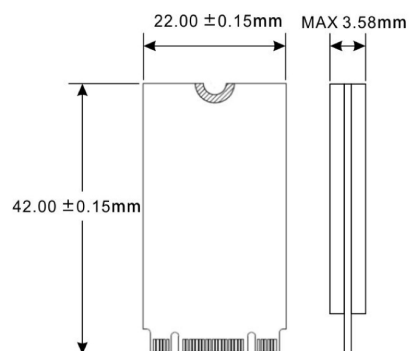- Promised operational reliability in an extended temperature range (from -20°C to 75°C)

Firmware Features

- Supports NVM command
- SLC caching technology
- Built-in LDPC ECC (Error Correction Code) functionality
- Dynamic thermal throttling
- Advanced Garbage Collection

Ordering Information

128GB	TS128GMTE452T2
256GB	TS256GMTE452T2
512GB	TS512GMTE452T2

Specifications

Appearance	Dimensions	42 mm x 22 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	Extended -20°C (-4°F) ~ 75°C (167°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)	2.81 watt(s)
	Power Consumption (IDLE)	0.63 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark, max.)	Read: up to 1,700 MB/s Write: up to 1,250 MB/s
	4K Random Read/Write (IOmeter, max.)	Read: up to 200,000 IOPS Write: up to 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

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.

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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