



SATA III M.2 SSDs

MTS580T & MTS580T-I

Transcend's MTS580T industrial-grade SATA III M.2 2242 DRAM-less SSD features BiCS8 218-layer 3D NAND flash memory. Its DRAM-less architecture helps reduce power consumption and system costs, while the compact M.2 2242 form factor is ideal for space-constrained embedded systems and industrial equipment.

The MTS580T supports an extended operating temperature range of -20°C to 75°C, while the wide-temperature MTS580T-I operates from -40°C to 85°C. The entire series features 30µ" PCB gold fingers and Corner Bond technology, and is fully tested in-house to help ensure durability and stability during long-term operation in demanding industrial environments.

Hardware Features

- Compliant with RoHS standards
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Space-saving M.2 form factor (42mm) – ideal for mobile computing devices
- Supports Transcend Scope Pro software

Firmware Features

- Built-in LDPC ECC (Error Correction Code) functionality
- Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection
- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices
- NCQ command for better performance

Ordering Information

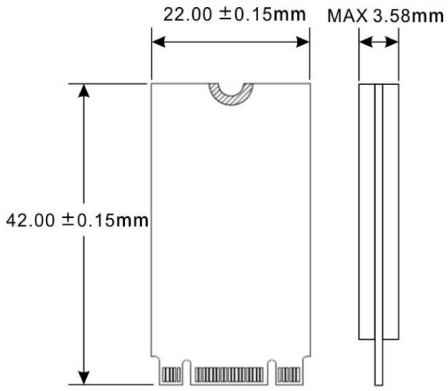
128GB	TS128GMTS580T TS128GMTS580T-I
256GB	TS256GMTS580T TS256GMTS580T-I
512GB	TS512GMTS580T TS512GMTS580T-I
1TB	TS1TMTS580T TS1TMTS580T-I
2TB	TS2TMTS580T TS2TMTS580T-I

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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)
	M.2 Type	2242-D2-B-M (Double-sided)
	Form Factor	M.2 2242
Interface	Bus Interface	SATA III 6Gb/s
Storage	Capacity	128 GB / 256 GB / 512 GB / 1 TB / 2 TB
	Flash Type	218-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), Hz ~ 2,000 Hz (frequency)
Power	Power Consumption (Operation)	0.58 watt(s)
	Power Consumption (IDLE)	0.2 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 560 MB/s Write: Up to 520 MB/s
	4K Random Read/Write (IOmeter)	Read: Up to 70,000 IOPS Write: Up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 5,400 TBW
	Drive Writes Per Day (DWPD)	2.46 (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.

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