Transcend®

www.transcend-info.com

Embedded Solutions

mSATA SSDs

MSA470T & MSA470T-I

Featuring the Serial ATA interface and built around a powerful controller, Transcend's SATA III 6Gb/s MSA470T mSATA SSD delivers blazing-fast performance. The MSA470T features the latest 112-layer 3D NAND technology for high storage efficiency, 30µ" PCB gold finger and Corner Bond technology for enhanced durability, built-in DRAM cache for fast access, an extended operating temperature range from -20°C to 75°C, and an endurance rating of 3K Program/Erase cycles for reliable operation. The compact mSATA form factor is just one-eighth the size of a standard 2.5" SSD, making it perfect for use in space-constricted portable devices such as Ultrabooks, tablet PCs, and slim servers.

Transcend also offers the MSA470T-I with wide temperature (-40℃ ~ 85℃) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- Compliant with RoHS 2.0 standards
- Compliant with JEDEC MO-300A
- DDR3 DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Supports Transcend Scope Pro software

Firmware Features

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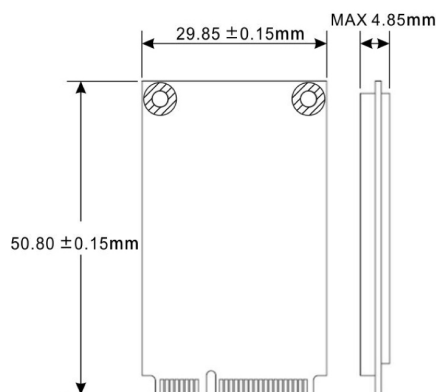- NCQ command for better performance

Ordering Information

128GB	TS128GMSA470T TS128GMSA470T-I
256GB	TS256GMSA470T TS256GMSA470T-I
512GB	TS512GMSA470T TS512GMSA470T-I
1TB	TS1TMSA470T TS1TMSA470T-I

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Specifications

Appearance	Dimensions	50.8 mm x 29.85 mm x 4.85 mm (2" x 1.18" x 0.19")
	Weight	8 g (0.28 oz)
	Pin Count	52 pin
	Form Factor	mSATA (MO-300A)
Interface	Bus Interface	SATA III 6Gb/s
Storage	Flash Type	112-layer 3D NAND flash
	Capacity	128 GB / 256 GB / 512 GB / 1 TB
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), 7 Hz ~ 2,000 Hz (frequency)
Power	Power Consumption (Operation)	3.6 watt(s)
	Power Consumption (Sleep)	0.7 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 90,000 IOPS Write: up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	up to 1,480 TBW
	Drive Writes Per Day (DWPD)	1.35 (3 yrs)
Warranty	Certificate	CE / FCC / BSMI / UKCA
	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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