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Embedded Solutions



mSATA SSDs

MSA510 & MSA510I

Supporting the next-generation Serial ATA interface and built around a powerful controller, Transcend's SATA III 6Gb/s MSA510 mSATA SSDs deliver blazing-fast performance and long-term reliability. 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 MSA510I with wide temperature (-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- Compliant with RoHS standards
- Promised operational reliability in a wide temperature range (from -40°C to 85°C)
- DDR3 DRAM Cache embedded
- Supports Transcend Scope Pro software
- High-quality MLC NAND flash and SLC mode (also called SuperMLC) for exceptional endurance and reliability

Ordering Information

16GB	TS16GMSA510
32GB	TS32GMSA510
	TS32GMSA510I
64GB	TS64GMSA510
128GB	TS128GMSA510

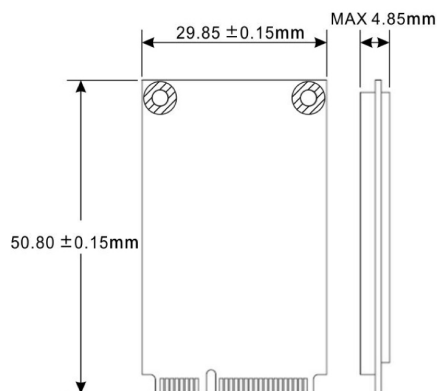
Firmware Features

- Built-in ECC (Error Correction Code) functionality
- Advanced Garbage Collection
- Power-saving partial and slumber modes
- Security Command
- Power-saving DevSleep (Device Sleep) mode

Specifications

Appearance	Dimensions	50.8 mm x 29.85 mm x 4.85 mm (2" x 1.18" x 0.19")
	Weight	9 g (0.32 oz)
	Pin Count	52 pin
	Form Factor	mSATA (MO-300A)
Interface	Bus Interface	SATA III 6Gb/s
Storage	Flash Type	MLC NAND flash (SLC mode)
	Capacity	16 GB / 32 GB / 64 GB / 128 GB
Operating Environment	Operating Voltage	3.3V±5%
	Operating Temperature	Standard Temp. 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	0% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
	Vibration (Operating)	20 G (peak-to-peak), 5 Hz ~ 800 Hz (frequency)
	Vibration (Non-operating)	5 G (peak-to-peak), 5 Hz ~ 800 Hz (frequency)
Power	Power Consumption (Operation)	2.87 watt(s)
	Power Consumption (Sleep)	0.33 watt(s)
Performance	Sequential Read/Write (ATTO, max.)	Read: up to 570 MB/s Write: up to 470 MB/s
	Sequential Read/Write (CrystalDiskMark)	Read: up to 530 MB/s Write: up to 450 MB/s
	4K Random Read/Write (IOMeter)	Read: up to 75,000 IOPS Write: up to 75,000 IOPS
	Mean Time Between Failures (MTBF)	1,500,000 hour(s)
	Terabytes Written (TBW)	up to 2,840 TBW
	Drive Writes Per Day (DWPD)	15.2 (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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