

## Embedded Solutions



mSATA SSDs

# SATA III 6Gb/s 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.

## Features

- RoHS compliant
- Wide-temperature model available: promised operational reliability in a wide temperature range (from -40°C to 85°C)
- Advanced Global Wear-leveling and Block management for reliability
- Built-in ECC (Error Correction Code) functionality
- DDR3 DRAM cache
- Supports Advanced Garbage Collection, Enhanced S.M.A.R.T. function, Security Command, and Device Sleep Mode (DevSleep)
- SuperMLC NAND Flash

## Ordering Information

### Standard (0°C~ 70°C)

8GB	TS8GMSA510
16GB	TS16GMSA510
32GB	TS32GMSA510
64GB	TS64GMSA510

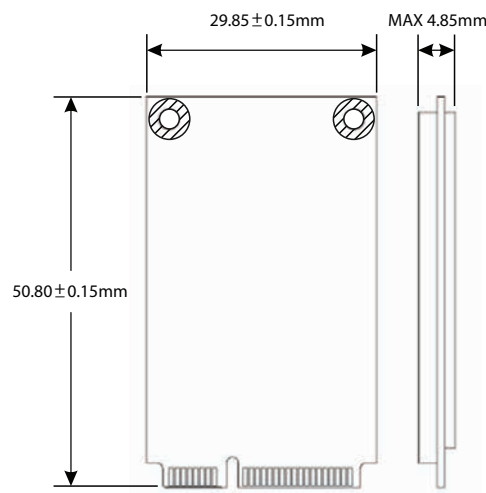
### Wide Temp. (-40°C~ 85°C)

32GB	TS32GMSA510I
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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	9 g (0.32 oz)
	mSATA Type	MO-300
	Pin	52 pin
	Form Factor	mSATA
Interface	Bus Interface	SATA III 6Gb/s
Storage	Flash Type	SuperMLC
	Capacity	8 GB/16 GB/32 GB/64 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	0% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
Power	Vibration (Operating)	3 G (peak-to-peak), 5 Hz ~ 800 Hz (frequency)
	Vibration (Non-operating)	5 G (peak-to-peak), 5 Hz ~ 800 Hz (frequency)
Performance	Power Consumption (Operation)	2.24 watt(s)
	Power Consumption (Sleep)	0.33 watt(s)
	Sequential Read/Write (ATTO, max.)	Read: 570 MB/s; write: 320 MB/s
	Sequential Read/Write (CrystalDiskMark, max.)	Read: 530 MB/s; write: 300 MB/s
	4K Random Read/Write (IOmeter, max.)	Read: 75,000 IOPS; write: 60,000 IOPS
	Mean Time Between Failures (MTBF)	1,500,000 hour(s)
Warranty	Terabytes Written (Max.)	1,160 TB
	Drive Writes Per Day (DWPD)	15.2 (3 yrs)
	Certificate	CE/FCC/BSMI
Note	Warranty	Three-year Limited Warranty
	<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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