

## Embedded Solutions



mSATA SSDs

# SATA III 6Gb/s MSA452T & MSA452T-I mSATA SSD

3K P/E cycles

Supporting the Serial ATA interface and built around a powerful controller, Transcend's SATA III 6Gb/s MSA452T mSATA SSD delivers blazing-fast performance, long-term reliability, and high cost-effectiveness. Featuring DRAM cache for fast access and state-of-the-art 96-layer 3D NAND flash, the MSA452T is fully tested to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles. 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 MSA452T-I with wide temperature (-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

## Features

- DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- 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
- Advanced Garbage Collection
- Security Command
- Built-in LDPC ECC (Error Correction Code) functionality
- Enhanced S.M.A.R.T. function for durability
- Compliant with RoHS 2.0 standards
- Power-saving DevSleep (Device Sleep) mode (optional)

## Ordering Information

Standard (0°C~ 70°C)

64GB	TS64GMSA452T
128GB	TS128GMSA452T
256GB	TS256GMSA452T
512GB	TS512GMSA452T
1TB	TS1TMSA452T

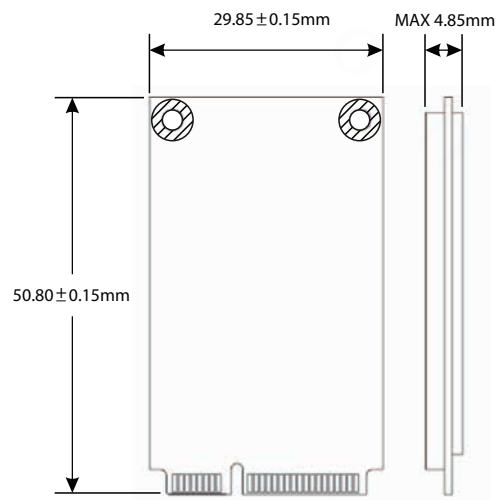
Wide Temp. (-40°C~ 85°C)

64GB	TS64GMSA452T-I
128GB	TS128GMSA452T-I
256GB	TS256GMSA452T-I
512GB	TS512GMSA452T-I
1TB	TS1TMSA452T-I

## 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)
	mSATA Type	MO-300
	Pin	52 pin
	Form Factor	mSATA
Interface	Bus Interface	SATA III 6Gb/s
Storage	Flash Type	3D TLC NAND flash
	Capacity	64 GB/128 GB/256 GB/512 GB/1 TB
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	5% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
Power	Vibration	20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)
	Power Consumption (Operation)	2.4 watt(s)
Performance	Power Consumption (Sleep)	0.4 watt(s)
	Sequential Read/Write (CrystalDiskMark)	Read: 560 MB/s; write: 520 MB/s
	4K Random Read/Write (IOMeter)	Read: 95,000 IOPS; write: 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	1,760 TBW
Warranty	Drive Writes Per Day (DWPD)	1.61 (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.