

## Embedded Solutions



mSATA SSDs

# MSA460T & MSA460T-I

Featuring the Serial ATA III 6Gb/s interface and built around a powerful controller, Transcend's MSA460T non-DRAM mSATA SSD features the latest 112-layer 3D NAND technology for high storage efficiency. In addition, the 30 $\mu$ m gold finger PCB, Corner Bond technology, and anti-sulfur resistors guarantee its reliability in harsh conditions. The MSA460T is also 100% chamber tested in-house for extended operating temperatures of -20 $^{\circ}$ C~75 $^{\circ}$ C. 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 MSA460T-I with wide temperature (-40 $^{\circ}$ C ~ 85 $^{\circ}$ C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

## Hardware Features

- Compliant with JEDEC MO-300A
- Anti-sulfur technology implemented to prevent sulfurization in the environment
- 30 $\mu$ m PCB gold finger
- Key components fortified by default with Corner Bond technology
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed

## Firmware Features

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

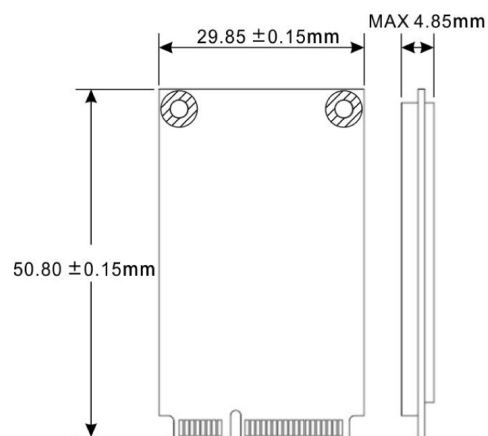
## Ordering Information

64GB	TS64GMSA460T TS64GMSA460T-I
128GB	TS128GMSA460T TS128GMSA460T-I
256GB	TS256GMSA460T TS256GMSA460T-I
512GB	TS512GMSA460T TS512GMSA460T-I
1TB	TS1TMSA460T TS1TMSA460T-I

## Specifications

<b>Appearance</b>	Dimensions	50.8 mm x 29.85 mm x 4.85 mm (2.0" x 1.18" x 0.19")
	Weight	8 g (0.28 oz)
	Form Factor	mSATA (MO-300A)
<b>Interface</b>	Bus Interface	SATA III 6Gb/s
<b>Storage</b>	Capacity	64 GB / 128 GB / 256 GB / 512 GB / 1 TB
	Flash Type	112-layer 3D NAND flash
<b>Operating Environment</b>	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 ~ 2000 Hz (frequency)
<b>Power</b>	Power Consumption (Operation)	1.0 watt(s)
	Power Consumption (Sleep)	0.2 watt(s)
<b>Performance</b>	Sequential Read/Write (CrystalDiskMark)	Read: Up to 560 MB/s Write: Up to 490 MB/s
	4K Random Read/Write (IOMeter)	Read: Up to 30,000 IOPS Write: Up to 80,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 245 TBW
	Drive Writes Per Day (DWPD)	1.75 (3 yrs)
<b>Warranty</b>	Certificate	CE / UKCA / FCC / BSMI / NCC
	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.