

mSATA SSDs

MSA530I

Transcend's MSA530I mSATA SSD features 218-layer 3D NAND flash and SLC Mode technology, delivering endurance rated for 100K P/E cycles. Its DRAM-less architecture helps reduce power consumption, while the mSATA interface makes it suitable for embedded systems and industrial equipment.

Designed for harsh industrial environments, the MSA530I supports operating temperatures from -40°C to 85°C. It also features 30μ" gold-plated fingers and Corner Bond technology to enhance durability and reliability.

Hardware Features

- Compliant with RoHS 2.0 standards
- Compliant with JEDEC MO-300A
- Endurance: 100K P/E cycles (Program/Erase cycles) guaranteed
- Key components fortified by default with Corner Bond technology (optional)
- 30μ" PCB gold finger

Ordering Information

40GB	TS40GMSA530I
80GB	TS80GMSA530I
160GB	TS160GMSA530I
320GB	TS320GMSA530I

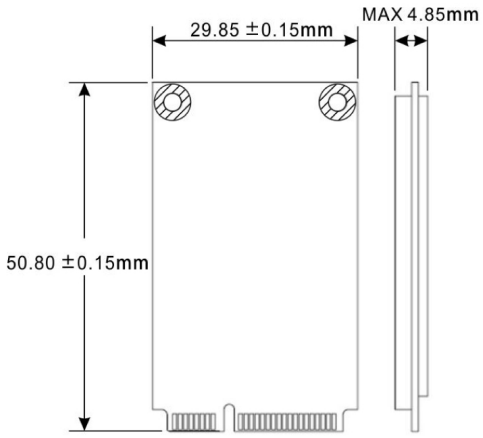
Firmware Features

- Built-in LDPC ECC (Error Correction Code) functionality
- Dynamic thermal throttling
- Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection
- Static Data Refresh

Specifications

Appearance	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)
Interface	Bus Interface	SATA III 6Gb/s
Storage	Capacity	40 GB / 80 GB / 160 GB / 320 GB
	Flash Type	218-layer 3D NAND flash (SLC mode)
Operating Environment	Operating Voltage	3.3V±5%
	Operating Temperature	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)	0.58 watt(s)
	Power Consumption (IDLE)	0.34 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 490 MB/s Write: Up to 500 MB/s
	4K Random Read/Write (IOmeter)	Read: Up to 40,000 IOPS Write: Up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 1,680 TBW
	Drive Writes Per Day (DWPD)	38.3 (3 yrs)
Warranty	Certificate	CE / UKCA / 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.