

mSATA SSDs

MSA480P

Transcend's MSA480P mSATA solid-state drive features BiCS8 218-layer 3D NAND flash, a DRAM-less architecture, and power loss protection (PLP) technology to help maintain data integrity during unexpected power loss. Its DRAM-less design helps reduce overall power consumption and system costs, while its mSATA form factor facilitates integration into existing embedded systems and industrial equipment.

Designed for demanding industrial environments, the MSA480P supports a wide operating temperature range of -40°C to 85°C. It also undergoes rigorous in-house testing to help ensure reliable and durable performance during extended operation and under fluctuating temperature conditions.

Hardware Features

- Compliant with RoHS 2.0 standards
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Power Loss Protection (PLP) to prevent data loss in the event of sudden power outage
- Promised operational reliability in a wide temperature range (from -40°C to 85°C)
- Supports Transcend Scope Pro software

Ordering Information

128GB	TS128GMSA480P
256GB	TS256GMSA480P
512GB	TS512GMSA480P
1TB	TS1TMSA480P
2TB	TS2TMSA480P

Firmware Features

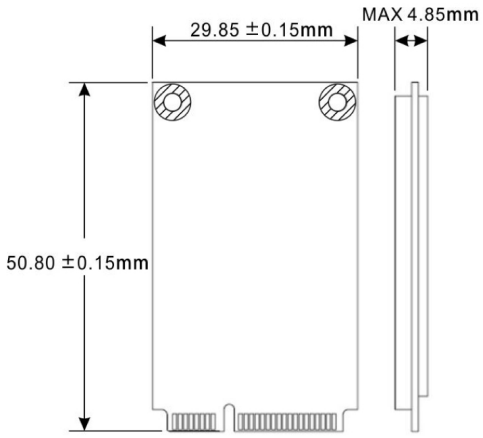
- Dynamic thermal throttling
- Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection
- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices
- Built-in LDPC ECC (Error Correction Code) functionality

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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)
	Pin Count	52 pin
	Form Factor	mSATA (MO-300A)
Interface	Bus Interface	SATA III 6Gb/s
Storage	Capacity	128 GB / 256 GB / 512 GB / 1 TB / 2 TB
	Flash Type	218-layer 3D NAND flash
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)	0.77 watt(s)
	Power Consumption (IDLE)	0.44 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 560 MB/s Write: Up to 510 MB/s
	4K Random Read/Write (IOmeter)	Read: Up to 70,000 IOPS Write: Up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 5,400 TBW
	Drive Writes Per Day (DWPD)	2.4 (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.

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