

Embedded Solutions



PCIe M.2 SSDs

MTE520I

Transcend's MTE520I PCIe Gen 4 x4 M.2 2242 solid-state drive (SSD) features BiCS8 218-layer 3D NAND flash and Transcend's SLC Mode technology, delivering an ideal balance of performance, reliability, and space efficiency. It is well suited for embedded systems, industrial panel PCs, and other space-constrained devices.

The MTE520I features a 30μ" gold finger PCB, Corner Bond technology, and anti-sulfur resistors to reinforce critical components and enhance durability. Supporting a wide operating temperature range of -40°C to 85°C, the MTE520I delivers stable performance in demanding industrial environments with drastic temperature fluctuations.

In addition, the MTE520I complies with the TCG Opal 2.0 security standard and supports self-encrypting drive (SED) functionality and AES-256 hardware encryption, providing robust data protection for sensitive information.

Hardware Features

- Compliant with RoHS 2.0 standards
- Compliant with NVMe specification 2.0
- Compliant with PCI Express specification 4.0
- Space-saving M.2 form factor (42mm) – ideal for mobile computing devices
- PCIe Gen 4 x4 interface

Ordering Information

80GB	TS80GMTE520I
160GB	TS160GMTE520I
320GB	TS320GMTE520I
640GB	TS640GMTE520I

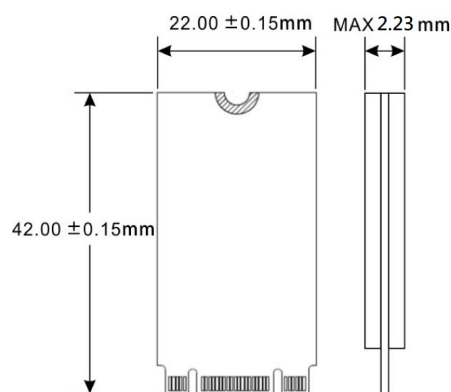
Firmware Features

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

Specifications

Appearance	Dimensions	42 mm x 22 mm x 2.23 mm (1.35" x 0.87" x 0.09")
	Weight	5 g (0.18 oz)
	M.2 Type	2242-S2-M
	Form Factor	M.2 2242
Interface	Bus Interface	NVMe PCIe Gen4 x4
Storage	Capacity	80 GB / 160 GB / 320 GB / 640 GB
	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)	3.79 watt(s)
	Power Consumption (IDLE)	0.66 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 7,430 MB/s Write: Up to 6,770 MB/s
	4K Random Read/Write (IOMeter)	Read: Up to 1,000,000 IOPS Write: Up to 1,045,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 22720 TBW
	Drive Writes Per Day (DWPD)	32.4 (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.