

## Embedded Solutions



### SATA III M.2 SSDs

## MTS970T & MTS970T-I

Transcend's M.2 SSD MTS970T features the SATA III 6Gb/s interface and the state-of-the-art 3D NAND technology, which allows 112 layers of 3D NAND flash chips to be vertically stacked. Compared to 3D NAND at 96 layers, this density breakthrough greatly improves storage efficiency, and its built-in DRAM cache allows faster access. Applied with 30μ" gold finger PCB and Corner Bond technology, the MTS970T is fully tested in-house to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles and an extended operating temperature ranging from -20°C~75°C.

Transcend also offers the MTS970T-I with wide temperature (-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

### Hardware Features

- Compliant with RoHS 2.0 standards
- Space-saving M.2 form factor (80mm) – ideal for mobile computing devices
- DDR3 DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Key components fortified by default with Corner Bond technology

### Firmware Features

- Dynamic thermal throttling
- Built-in LDPC ECC (Error Correction Code) functionality
- 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

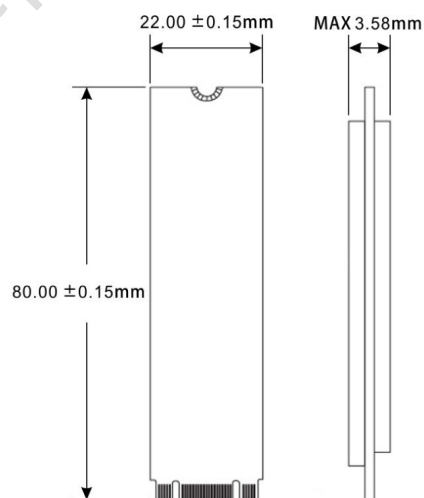
### Ordering Information

|       |                 |
|-------|-----------------|
| 128GB | TS128GMTS970T   |
|       | TS128GMTS970T-I |
| 256GB | TS256GMTS970T   |
|       | TS256GMTS970T-I |
| 512GB | TS512GMTS970T   |
|       | TS512GMTS970T-I |
| 1TB   | TS1TMTS970T     |
|       | TS1TMTS970T-I   |
| 2TB   | TS2TMTS970T     |
|       | TS2TMTS970T-I   |
| 4TB   | TS4TMTS970T     |
|       | TS4TMTS970T-I   |

## Specifications

|                       |                                         |                                                     |
|-----------------------|-----------------------------------------|-----------------------------------------------------|
| Appearance            | Dimensions                              | 80.0 mm x 22.0 mm x 3.58 mm (3.15" x 0.87" x 0.14") |
|                       | Weight                                  | 9 g (0.32 oz)                                       |
|                       | M.2 Type                                | 2280-D2-B-M (Double-sided)                          |
|                       | Form Factor                             | M.2 2280                                            |
| Interface             | Bus Interface                           | SATA III 6Gb/s                                      |
| Storage               | Capacity                                | 128 GB / 256 GB / 512 GB / 1 TB / 2 TB / 4 TB       |
|                       | Flash Type                              | 112-layer 3D NAND flash                             |
| Operating Environment | Operating Voltage                       | 3.3V±5%                                             |
|                       | Operating Temperature                   | Extended Temp.<br>-20°C (-4°F) ~ 75°C (167°F)       |
|                       |                                         | Wide Temp.<br>-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)     |
| Power                 | Power Consumption (Operation)           | 4.1 watt(s)                                         |
|                       | Power Consumption (IDLE)                | 1.2 watt(s)                                         |
| Performance           | Sequential Read/Write (CrystalDiskMark) | Read: Up to 560 MB/s<br>Write: Up to 520 MB/s       |
|                       | 4K Random Read/Write (IOmeter)          | Read: Up to 90,000 IOPS<br>Write: Up to 80,000 IOPS |
|                       | Mean Time Between Failures (MTBF)       | 3,000,000 hour(s)                                   |
|                       | Terabytes Written (TBW)                 | Up to 9680 TBW                                      |
|                       | Drive Writes Per Day (DWPD)             | 2.21 (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.