## SATA III M. 2 SSDs

## MTS960T \& MTS960T-I

Transcend's industrial M. 2 DRAM-less SSD MTS960T features the SATA III 6Gb/s interface and 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. The MTS960T can operate in an extended temperature range from $-20^{\circ} \mathrm{C}$ to $75^{\circ} \mathrm{C}$. Its space-saving M .2 form factor is ideal for space-limited devices. It is fully tested in-house to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles.

Transcend also offers the MTS960T-I with wide temperature $\left(-40^{\circ} \mathrm{C} \sim 85^{\circ} \mathrm{C}\right)$ 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 ( 80 mm ) - ideal for mobile computing devices
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Supports Transcend Scope Pro software
- Key components fortified by default with Corner Bond technology


## Firmware Features

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

Ordering Information

| 64GB | TS64GMTS960T <br> TS64GMTS960T-I |
| :--- | :--- |
| 128GB | TS128GMTS960T |
|  | TS128GMTS960T-I | | 256GB | TS256GMTS960T <br> TS256GMTS960T-I |
| :---: | :--- |
| 512GB | TS512GMTS960T <br>  <br> TS512GMTS960T-I |
| 1TB | TS1TMTS960T |
|  | TS1TMTS960T-I |
| 2TB | TS2TMTS960T |
|  | TS2TMTS960T-I |

EMBEDDED SOLUTIONS

## Specifications

|  | Dimensions | $80 \mathrm{~mm} \times 22 \mathrm{~mm} \times 2.23 \mathrm{~mm}$ (3.15" $\times 0.87{ }^{\text {" }}$ x 0.09") |
| :---: | :---: | :---: |
|  | Weight | $8 \mathrm{~g}(0.28 \mathrm{oz})$ |
|  | M. 2 Type | 2280-S2-B-M (Single-sided) |
|  | Form Factor | M. 22280 |
| Interface | Bus Interface | SATA III 6Gb/s |
|  | Capacity | $64 \mathrm{~GB} / 128 \mathrm{~GB} / 256 \mathrm{~GB} / 512 \mathrm{~GB} / 1 \mathrm{~TB} / 2 \mathrm{~TB}$ |
|  | Flash Type | 112-layer 3D NAND flash |
|  | Operating Voltage | $3.3 \mathrm{~V} \pm 5 \%$ |
| Operating | Operating Temperature | Extended Temp. $-20^{\circ} \mathrm{C}\left(-4^{\circ} \mathrm{F}\right) \sim 75^{\circ} \mathrm{C}\left(167^{\circ} \mathrm{F}\right)$ <br> Wide Temp. $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right) \sim 85^{\circ} \mathrm{C}\left(185^{\circ} \mathrm{F}\right)$ |
| Environment | Storage Temperature | $-55^{\circ} \mathrm{C}\left(-67^{\circ} \mathrm{F}\right) \sim 85^{\circ} \mathrm{C}\left(185^{\circ} \mathrm{F}\right)$ |
|  | Humidity | 5\% ~ 95\% |
|  | Shock | $1500 \mathrm{G}, 0.5 \mathrm{~ms}, 3$ axis |
|  | Vibration (Operating) | 20 G (peak-to-peak), $7 \mathrm{~Hz} \sim 2,000 \mathrm{~Hz}$ (frequency) |
|  | Power Consumption (Operation) | 1.4 watt(s) |
|  | Power Consumption (IDLE) | 0.3 watt(s) |
|  | Sequential Read/Write (CrystalDiskMark) | Read: Up to $560 \mathrm{MB} / \mathrm{s}$ Write: Up to $500 \mathrm{MB} / \mathrm{s}$ |
| Performance | 4K Random Read/Write (IOmeter) | Read: Up to 55,000 IOPS Write: Up to 80,000 IOPS |
|  | Mean Time Between Failures (MTBF) | 3,000,000 hour(s) |
|  | Terabytes Written (TBW) | Up to 4,376 TBW |
|  | Drive Writes Per Day (DWPD) | 1.95 (3 yrs) |
|  | Certificate | CE / UKCA / FCC / BSMI |
| Wa | 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.

