



Embedded Solutions

PCIe M.2 SSDs

MTE652T & MTE652T-I



Transcend's MTE652T M.2 SSD features the PCI Express (PCIe) Gen 3 x4 interface and is compatible with NVM Express (NVMe) 1.3 specifications to achieve never-before-seen transfer speeds. The MTE652T features state-of-the-art 3D NAND technology, which allows 96 layers of 3D NAND flash chips to be vertically stacked. Compared to 3D NAND at 64 layers, this density breakthrough greatly improves storage efficiency. The MTE652T is built with DRAM cache for fast access, and 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 MTE652T-I with wide temperature (-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- DDR3 DRAM Cache embedded
- Promised operational reliability in a wide temperature range (from -40°C to 85°C)
- PCIe Gen 3 x4 interface
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Key components fortified by default with Corner Bond technology

Ordering Information

| | |
|-------|----------------------------------|
| 128GB | TS128GMTE652T TS128GMTE652T-I |
| 256GB | TS256GMTE652T TS256GMTE652T-I |
| 512GB | TS512GMTE652T TS512GMTE652T-I |

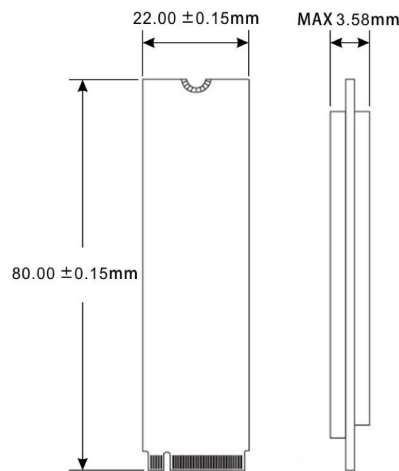
Firmware Features

- Supports NVM command
- SLC caching technology
- Built-in LDPC ECC (Error Correction Code) functionality
- Dynamic thermal throttling
- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices

Specifications

| | | |
|------------------------------|---|---|
| Appearance | Dimensions | 80 mm x 22 mm x 3.58 mm (3.15" x 0.87" x 0.14") |
| | Weight | 9 g (0.32 oz) |
| | Form Factor | M.2 |
| | M.2 Type | 2280-D2-M (Double-sided) |
| Interface | Bus Interface | NVMe PCIe Gen3 x4 |
| Storage | Flash Type | 3D NAND flash |
| | Capacity | 128 GB / 256 GB / 512 GB |
| Operating Environment | Operating Voltage | 3.3V±5% |
| | Operating Temperature | Standard Temp. 0°C (32°F) ~ 70°C (158°F) |
| | | 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 ~ 2000 Hz (frequency) |
| Power | Power Consumption (Operation) | 3.3 watt(s) |
| | Power Consumption (IDLE) | 0.6 watt(s) |
| Performance | Sequential Read/Write (CrystalDiskMark) | Read: up to 2,100 MB/s Write: up to 1,250 MB/s |
| | 4K Random Read/Write (IOMeter) | Read: up to 190,000 IOPS Write: up to 290,000 IOPS |
| | Mean Time Between Failures (MTBF) | 3,000,000 hour(s) |
| | Terabytes Written (TBW) | up to 1,080 TBW |
| | Drive Writes Per Day (DWPD) | 2 (3 yrs) |
| Warranty | Certificate | CE / 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.

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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