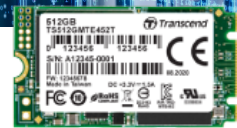




[www.transcend-info.com](http://www.transcend-info.com)

## Embedded Solutions



### PCIe M.2 SSDs

## MTE452T2

Transcend's MTE452T2 M.2 SSD features the PCI Express (PCIe) Gen 3 x2 interface and is compatible with NVMe Express (NVMe) 1.3 specifications to achieve never-before-seen transfer speeds. The MTE452T2 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, and its built-in DRAM cache allows faster access. Applied with 30μ" gold finger PCB and Corner Bond technology, the MTE452T2 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.

### Hardware Features

- DDR3 DRAM Cache embedded
- PCIe Gen 3 x2 interface
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Key components fortified by default with Corner Bond technology
- Promised operational reliability in an extended temperature range (from -20°C to 75°C)

### Ordering Information

|       |                |
|-------|----------------|
| 128GB | TS128GMTE452T2 |
| 256GB | TS256GMTE452T2 |
| 512GB | TS512GMTE452T2 |

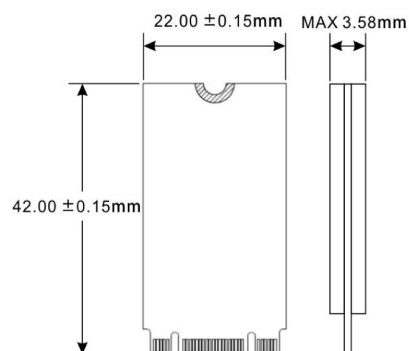
### Firmware Features

- Supports NVM command
- SLC caching technology
- Built-in LDPC ECC (Error Correction Code) functionality
- Dynamic thermal throttling
- Advanced Garbage Collection

## Specifications

|                              |                                               |                                                       |
|------------------------------|-----------------------------------------------|-------------------------------------------------------|
| <b>Appearance</b>            | Dimensions                                    | 42 mm x 22 mm x 3.58 mm (1.65" x 0.87" x 0.14")       |
|                              | Weight                                        | 5 g (0.18 oz)                                         |
|                              | Form Factor                                   | M.2                                                   |
|                              | M.2 Type                                      | 2242-D2-B-M (Double-sided)                            |
| <b>Interface</b>             | Bus Interface                                 | NVMe PCIe Gen3 x2                                     |
| <b>Storage</b>               | Flash Type                                    | 3D NAND flash                                         |
|                              | Capacity                                      | 128 GB / 256 GB / 512 GB                              |
| <b>Operating Environment</b> | Operating Voltage                             | 3.3V±5%                                               |
|                              | Operating Temperature                         | Extended<br>-20°C (-4°F) ~ 75°C (167°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)       |
| <b>Power</b>                 | Power Consumption (Operation)                 | 2.81 watt(s)                                          |
|                              | Power Consumption (IDLE)                      | 0.63 watt(s)                                          |
| <b>Performance</b>           | Sequential Read/Write (CrystalDiskMark, max.) | Read: up to 1,700 MB/s<br>Write: up to 1,250 MB/s     |
|                              | 4K Random Read/Write (IOMeter, max.)          | Read: up to 200,000 IOPS<br>Write: up to 250,000 IOPS |
|                              | Mean Time Between Failures (MTBF)             | 3,000,000 hour(s)                                     |
|                              | Terabytes Written (Max.)                      | 1,080 TBW                                             |
|                              | Drive Writes Per Day (DWPD)                   | 2 (3 yrs)                                             |
| <b>Warranty</b>              | 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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