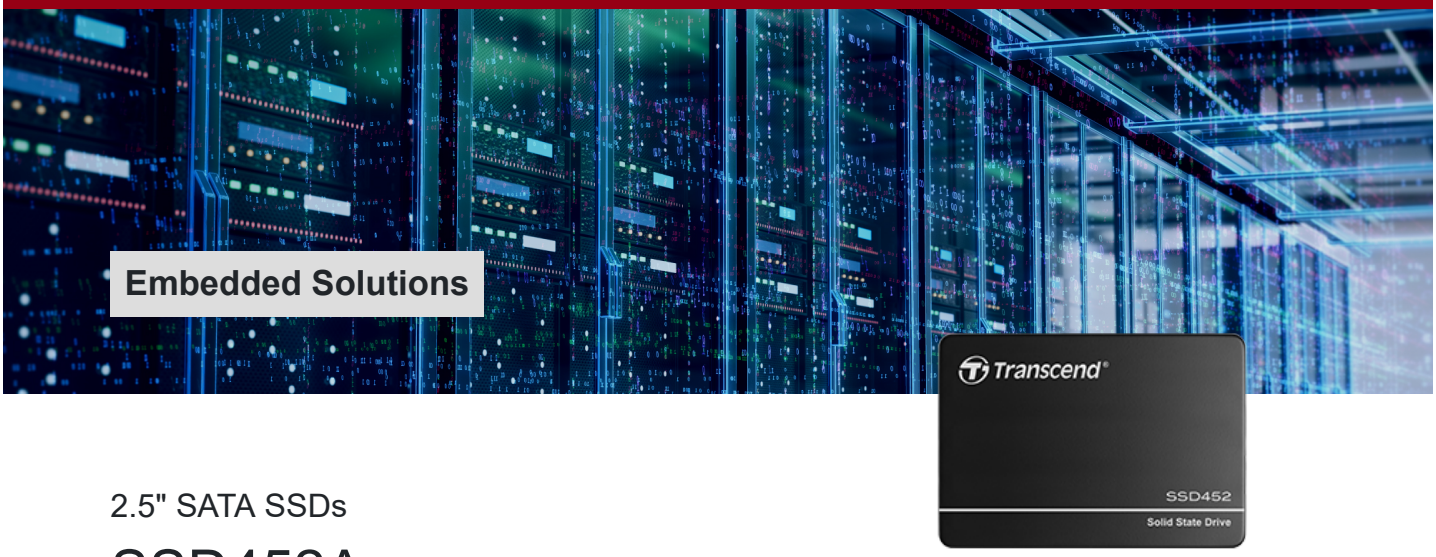
Transcend®
www.transcend-info.com




2.5" SATA SSDs

# SSD452A

Transcend's SSD45A features the SATA III 6Gb/s interface and the 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. The SSD452A is compliant with the TCG Opal 2.0 standards. Data is secured by encryption and hierarchical permission. It 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℃~75℃.

## Hardware Features

- Compliant with RoHS 2.0 standards
- DDR3 DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Promised operational reliability in an extended temperature range (from -20°C to 75°C)
- Supports Transcend Scope Pro software

## Ordering Information

| | |
|---|---|
| 64GB | TS64GSSD452A |
| 128GB | TS128GSSD452A |
| 256GB | TS256GSSD452A |
| 512GB | TS512GSSD452A |
| 1TB | TS1TSSD452A |
| 2TB | TS2TSSD452A |

## Firmware Features

- Dynamic thermal throttling
- Advanced Global Wear-Leveling and Block management for reliability
- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices
- TRIM command for better performance
- NCQ command for better performance

*Supports Microsoft® eDrive standard

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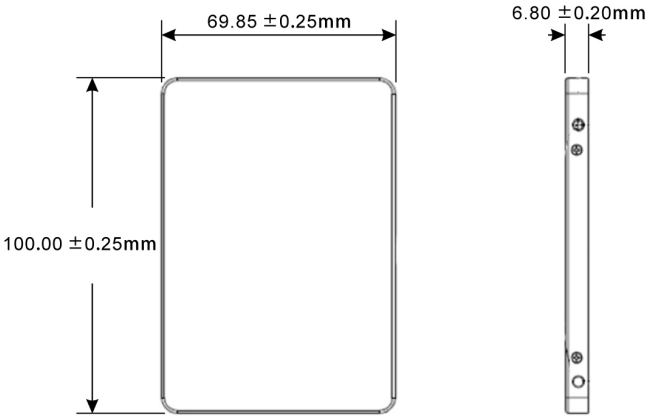
## Specifications

| | | |
|---|---|---|
| **Appearance** | Dimensions | 100 mm x 69.85 mm x 6.8 mm (3.94" x 2.75" x 0.27") |
| | Weight | 54 g (1.90 oz) |
| | Form Factor | 2.5" |
| **Interface** | Bus Interface | SATA III 6Gb/s |
| **Storage** | Flash Type | 3D NAND flash |
| | Capacity | 64 GB / 128 GB / 256 GB / 512 GB / 1 TB / 2 TB |
| **Operating Environment** | Operating Voltage | 5V±5% |
| | Operating Temperature | Extended Temp.<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 ~ 2,000 Hz (frequency) |
| **Power** | Power Consumption (Operation) | 3.5 watt(s) |
| | Power Consumption (Sleep) | 0.4 watt(s) |
| **Performance** | Sequential Read/Write (CrystalDiskMark) | Read: up to 560 MB/s<br>Write: up to 410 MB/s |
| | 4K Random Read/Write (IOmeter) | Read: up to 65,000 IOPS<br>Write: up to 75,000 IOPS |
| | Mean Time Between Failures (MTBF) | 3,000,000 hour(s) |
| | Terabytes Written (TBW) | up to 440 TBW |
| | Drive Writes Per Day (DWPD) | 1.61 (3 yrs) |
| **Warranty** | Certificate | CE / FCC / BSMI / UKCA |
| | 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.

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# 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.

## US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

## EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660