Embedded Solutions
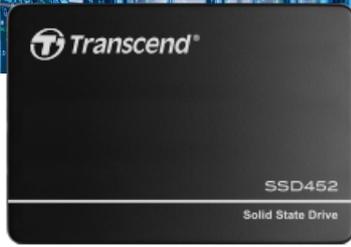
2.5" SATA SSDs

SSD452K & SSD452K-I

Transcend's SSD452K features the SATA III 6Gb/s interface and 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 SSD452K 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 SSD452K-I with wide temperature (-40℃ ~ 85℃) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- DDR3 DRAM Cache embedded
- Supports Transcend Scope Pro software
- Compliant with RoHS 2.0 standards
- Promised operational reliability in a wide temperature range (from -40°C to 85°C)
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed

Firmware Features

- Dynamic thermal throttling
- Advanced Garbage Collection
- Enhanced S.M.A.R.T. function for durability
- Advanced Global Wear-Leveling and Block management for reliability
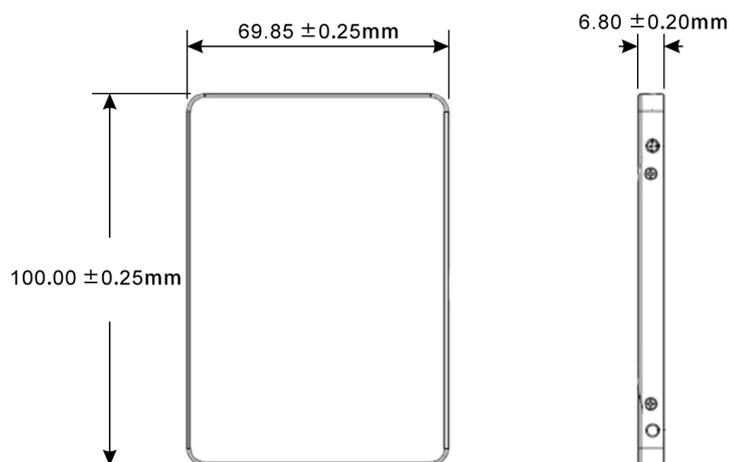- Built-in LDPC ECC (Error Correction Code) functionality

Ordering Information

64GB	TS64GSSD452K TS64GSSD452K-I
128GB	TS128GSSD452K TS128GSSD452K-I
256GB	TS256GSSD452K TS256GSSD452K-I
512GB	TS512GSSD452K TS512GSSD452K-I
1TB	TS1TSSD452K TS1TSSD452K-I
2TB	TS2TSSD452K TS2TSSD452K-I

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	Standard 0°C (32°F) ~ 70°C (158°F) Wide Temp. -40°C (-40°F) ~ 85°C (185°F)
	Storage Temperature	-40°C (-40°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)	3.5 watt(s)
	Power Consumption (Sleep)	0.5 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark, max.)	Read: up to 560 MB/s Write: up to 520 MB/s
	4K Random Read/Write (IOmeter, max.)	Read: up to 90,000 IOPS Write: up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (Max.)	3,520 TBW
	Drive Writes Per Day (DWPD)	1.61 (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.