



## Embedded Solutions



# 2.5" SATA SSDs SSD452P & SSD452P-I

Transcend's SSD452P 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, and its built-in DRAM cache allows faster access. The SSD452P is fully tested in-house, boasting an endurance rating of 3K Program/Erase cycles and an extended operating temperature ranging from -20°C~75°C. The built-in Power Loss Protection (PLP) further ensures data integrity in mission-critical applications.

Transcend also offers the SSD452P-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
- Supports Transcend Scope Pro software
- Power Loss Protection (PLP) to prevent data loss in the event of sudden power outage
- Extended Temp. (-20°C ~ 75°C) and Wide Temp. (-40°C ~ 85°C) options available

### Firmware Features

- Dynamic thermal throttling
- Advanced Garbage Collection
- Advanced Global Wear-Leveling and Block management for reliability
- Power-saving DevSleep (Device Sleep) mode
- Built-in LDPC ECC (Error Correction Code) functionality

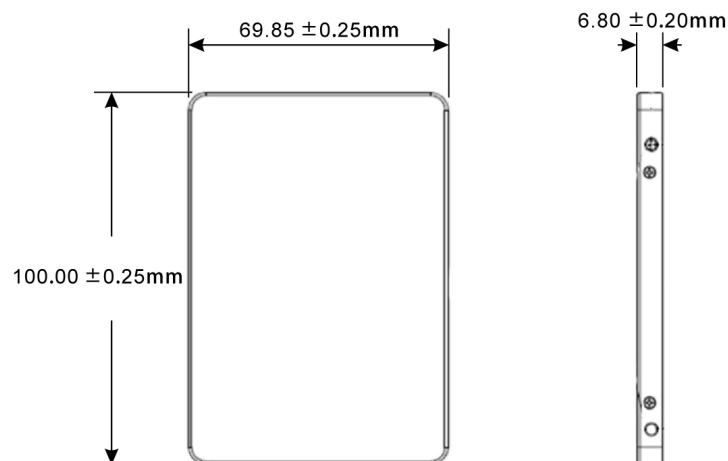
### Ordering Information

64GB	TS64GSSD452P TS64GSSD452P-I
128GB	TS128GSSD452P TS128GSSD452P-I
256GB	TS256GSSD452P TS256GSSD452P-I
512GB	TS512GSSD452P TS512GSSD452P-I
1TB	TS1TSSD452P TS1TSSD452P-I

## Specifications

<b>Appearance</b>	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"
<b>Interface</b>	Bus Interface	SATA III 6Gb/s
<b>Storage</b>	Capacity	64 GB / 128 GB / 256 GB / 512 GB / 1 TB
	Flash Type	3D NAND flash
<b>Operating Environment</b>	Operating Voltage	5V±5%
	Operating Temperature	Extended Temp. -20°C (-4°F) ~ 75°C (167°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)
<b>Power</b>	Power Consumption (Operation)	3.3 watt(s)
	Power Consumption (IDLE)	0.5 watt(s)
<b>Performance</b>	Sequential Read/Write (CrystalDiskMark)	Read: up to 560 MB/s Write: up to 520 MB/s
	4K Random Read/Write (IOMeter)	Read: up to 90,000 IOPS Write: up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	up to 1,760 TBW
	Drive Writes Per Day (DWPD)	1.61 (3 yrs)
<b>Warranty</b>	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.