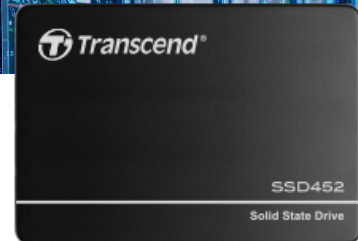**Embedded Solutions**

2.5" SATA SSDs

SSD452P

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. Applied with Corner Bond technology, 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 Intelligent Power Shield (IPS) further ensures data integrity in mission-critical applications.

Hardware Features

- Promised operational reliability in an extended temperature range (from -20°C to 75°C)
- DDR3 DRAM Cache embedded
- Key components fortified by default with Corner Bond technology
- Supports Transcend Scope Pro software
- Intelligent Power Shield (IPS) to prevent data loss in the event of sudden power outage

Firmware Features

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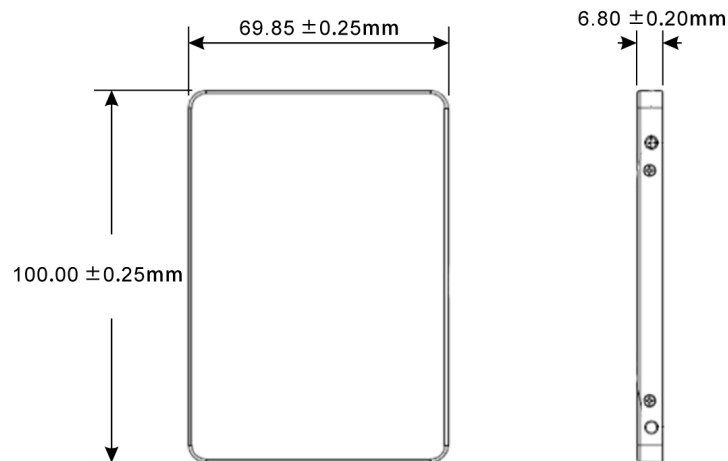- Built-in LDPC ECC (Error Correction Code) functionality

Ordering Information

64GB	TS64GSSD452P
128GB	TS128GSSD452P
256GB	TS256GSSD452P
512GB	TS512GSSD452P
1TB	TS1TSSD452P
2TB	TS2TSSD452P

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 -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)
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.