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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 ($-40^{\circ}C \sim 85^{\circ}C$) 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

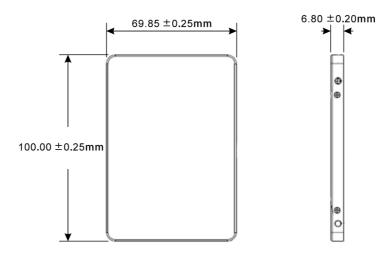
64GB	TS64GSSD452P TS64GSSD452P-I
128GB	TS128GSSD452P TS128GSSD452P-I
256GB	TS256GSSD452P TS256GSSD452P-I
512GB	TS512GSSD452P TS512GSSD452P-I
1TB	TS1TSSD452P TS1TSSD452P-I
2TB	TS2TSSD452P TS2TSSD452P-I



Specifications

Forn 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 Voltage SV±5% Operating Temperature SV±5% Operating Temperature Storage Temperature Vide Temp. -20°C (4°F) ~ 75°C (167°F) Vide Temp. -20°C (4°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 (Operation) 3.5 watt(s) Power Consumption (Operation) 3.5 watt(s) Power Consumption (Sleep) 0.5 watt(s) Power Consumption (Sleep) 0.5 watt(s) Power Consumption (Sleep) 0.5 watt(s) Parabytes Writte (IOmeter) Read: up to 90,000 IOPS Write: up to 85,000 IOPS Write: up to 85,000 IOPS Write: up to 85,000 IOPS Write: up to 3,520 TBW Drive Writes Per Day (DWPD) Ibite Stree Paid (DWPD) 1.61 (3 yrs) Warranty Cetifficate Cet /FCC / BSMI			
Form Factor2.5"InterfaceBus InterfaceSATA III 6Gb/sStorageFlash Type3D NAND flashCapacity64 GB / 128 GB / 256 GB / 512 GB / 1 TB / 2 TBOperating Voltage5V±5%Operating TemperatureExtended 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)Minitia Temperature20°G (60°C (100°C) - 85°C (185°F)PowerPower Consumption (Operation)3.5 watt(s)PowerPower Consumption (Operation)3.5 watt(s)PowerSequential Read/Write (Crystal/DiskMark)Read: up to 560 MB/s Write: up to 520 MB/sPerformanceKandom Read/Write (IOmeter)Sout(s)Main Time Between Failures (MTBF)3,000,000 hour(s)Time Write: Write: Per Day (DWPD)1.61 (3 yrs)WarrantyCertificateCE / FCC / BSMI	Appearance	Dimensions	100 mm x 69.85 mm x 6.8 mm (3.94" x 2.75" x 0.27")
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 Poperating Voltage 5V±5% perating Voltage 5V±5% perating Temperature -20°C (-4°F) ~ 75°C (167°F) Wide Temp. -20°C (-40°F) ~ 85°C (185°F) -40°C (-40°F) ~ 85°C (185°F) Environment Storage Temperature -55°C (-67°F) ~ 85°C (185°F) Mundity 5% ~ 95%		Weight	54 g (1.90 oz)
Fiash Type 3D NAND flash Gapacity 64 GB / 128 GB / 256 GB / 512 GB / 1 TB / 2 TB Operating Voltage 5V±5% Operating Voltage 5V±5% Operating Temperature 52°C ((4°F) - 75°C (167°F) Wide Temp. -40°C (4°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) Power Power Consumption (Operation) 3.5 watt(s) Power Consumption (Sleep) 0.5 watt(s) Power Consumption (Sleep) 0.5 watt(s) Power Consumption (IPME) Read: up to 560 MB/s Write: up to 520 MB/s Mean Time Between Failures (MTBF) 3,000,000 hour(s) Mean Time Between Failures (MTBF) 3,000,000 hour(s) Terabytes Writen (TBW) up to 3,520 TBW Drive Writes Per Day (DWPD) 1.61 (3 yrs) Warranty Certificate CE / FCC / BSMI		Form Factor	2.5"
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Warranty Certificate CE / FCC / BSMI		Terabytes Written (TBW)	up to 3,520 TBW
Warranty		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.