



Embedded Solutions



Half-Slim SSDs

HSD452T & HSD452T-I

Equipped with the SATA III 6Gb/s interface, a powerful controller, and state-of-the-art 96-layer 3D NAND flash, Transcend's HSD452T Half-Slim SSDs feature the latest Corner Bond technology for enhanced durability, built-in DRAM cache for fast access, an extended operating temperature range from -20°C to 75°C, and an endurance rating of 3K Program/Erase cycles for reliable operation. Following the MO-297 standard set by JEDEC, HSD452T SSDs undergo extensive reliability testing to ensure the utmost quality and performance, best suited to read-heavy applications and space-limited mobile devices such as industrial control systems, medical equipment, mobile devices, and POS terminals.

Transcend also offers the HSD452T-I with wide temperature (-40°C ~ 85°C) capabilities to ensure sustained functionality, enhanced endurance and optimal reliability in mission-critical applications.

Hardware Features

- Compliant with RoHS 2.0 standards
- DDR3 DRAM Cache embedded
- Compliant with JEDEC MO-297
- Key components fortified by default with Corner Bond technology
- Power Shield (PS) to ensure data transfer integrity and minimize data corruption in the drive during an abnormal power outage

Ordering Information

64GB	TS64GHSD452T TS64GHSD452T-I
128GB	TS128GHSD452T TS128GHSD452T-I
256GB	TS256GHSD452T TS256GHSD452T-I

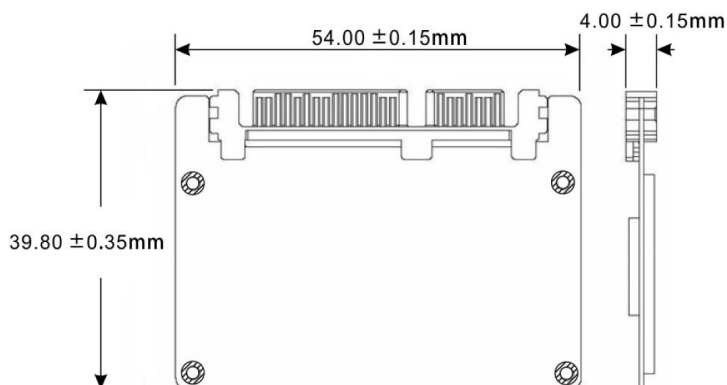
Firmware Features

- 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
- Built-in LDPC ECC (Error Correction Code) functionality
- Power-saving DevSleep (Device Sleep) mode (HSD452T)
- Dynamic thermal throttling

Specifications

Appearance	Dimensions	54.0 mm x 39.8 mm x 4 mm (2.13" x 1.57" x 0.15")
	Weight	9 g (0.32 oz)
	Pin Count	7+15 pin
	Form Factor	Half-slim (MO-297)
Interface	Bus Interface	SATA III 6Gb/s
Storage	Capacity	64 GB / 128 GB / 256 GB
	Flash Type	3D NAND flash
Operating Environment	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)	
Power	Power Consumption (Operation)	2.4 watt(s)
	Power Consumption (Sleep)	0.6 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: up to 560 MB/s Write: up to 410 MB/s
	4K Random Read/Write (IOMeter)	Read: up to 55,000 IOPS 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.