



SSD470K & SSD470K-I

Transcend's SSD470K features the SATA III 6Gb/s interface and state-of-the-art 3D NAND technology, which allows 112 layers of 3D NAND flash chips to be vertically stacked. Compared to 3D NAND at 96 layers, this density breakthrough greatly improves storage efficiency, and its built-in DRAM cache allows faster access. The SSD470K is fully tested in-house to guarantee reliability in mission-critical applications, boasting an endurance rating of 3K Program/Erase cycles and an extended operating temperature ranging from -20°C~75°C.

Transcend also offers the SSD470K-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

- Compliant with RoHS 2.0 standards
- DDR3 DRAM Cache embedded
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- · 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

### Firmware Features

- · Dynamic thermal throttling
- · NCQ command for better performance
- · TRIM command for better performance
- · Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection

## **Ordering Information**

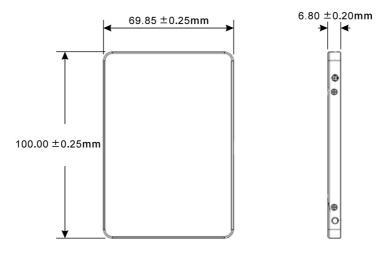
128GB	TS128GSSD470K
	TS128GSSD470K-I
256GB	TS256GSSD470K
	TS256GSSD470K-I
512GB	TS512GSSD470K
	TS512GSSD470K-I
1TB	TS1TSSD470K
	TS1TSSD470K-I
2TB	TS2TSSD470K
	TS2TSSD470K-I
4TB	TS4TSSD470K
	TS4TSSD470K-I



# **Specifications**

Form Factor 2.5"  Interface Bus Interface SATA III 6Gb/s  Storage Flash Type 112-layer 3D NAND flash  Capacity 128 GB / 256 GB / 512 GB / 1 TB / 2 TB / 4 TB  Operating Voltage 5V±5%  Extended Temp20°C (-4°F) ~ 75°C (167°F) Wide Temp40°C (-40°F) ~ 85°C (185°F)	Appearance We	eight	,
Form Factor   2.5"			54 g (1.9 oz)
Storage   Bus Interface   SATA III 6Gb/s	_	To atox	
Flash Type	Fol	orm Factor	2.5"
Capacity	Interface Bu	ıs Interface	SATA III 6Gb/s
Capacity		ash Type	112-layer 3D NAND flash
Departing Temperature		apacity	128 GB / 256 GB / 512 GB / 1 TB / 2 TB / 4 TB
Operating Temperature         -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 Consumption (Operation)         5 watt(s)           Power Consumption (Sleep)         1.3 watt(s)           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 9680 TBW           Drive Writes Per Day (DWPD)         2.16 (3 yrs)           Certificate         CE / FCC / BSMI / UKCA	Op	perating Voltage	5V±5%
Storage Temperature	0.0	and in a Tananaratura	
Humidity 5% ~ 95%  Shock 1500 G, 0.5 ms, 3 axis  Vibration (Operating) 20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)  Power Consumption (Operation) 5 watt(s)  Power Consumption (Sleep) 1.3 watt(s)  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 9680 TBW  Drive Writes Per Day (DWPD) 2.16 (3 yrs)  Certificate CE / FCC / BSMI / UKCA	Operating	perating temperature	
Shock   1500 G, 0.5 ms, 3 axis	<b>Environment</b> Sto	orage Temperature	-55°C (-67°F) ~ 85°C (185°F)
Vibration (Operating)  Power Consumption (Operation)  Power Consumption (Sleep)  1.3 watt(s)  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 Write: up to 85,000 IOPS  Mean Time Between Failures (MTBF)  Terabytes Written (TBW)  Drive Writes Per Day (DWPD)  Certificate  20 G (peak-to-peak), 7 Hz ~ 2000 Hz (frequency)  5 watt(s)  Read: up to 560 MB/s Write: up to 85,000 IOPS  Write: up to 85,000 IOPS  4K Random Read/Write (IOmeter)  Up to 9680 TBW  Certificate  CE / FCC / BSMI / UKCA	Hu	ımidity	5% ~ 95%
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Performance         4K Random Read/Write (IOmeter)         Write: up to 85,000 IOPS           Mean Time Between Failures (MTBF)         3,000,000 hour(s)           Terabytes Written (TBW)         up to 9680 TBW           Drive Writes Per Day (DWPD)         2.16 (3 yrs)           Certificate         CE / FCC / BSMI / UKCA	Se	equential Read/Write (CrystalDiskMark)	·
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Drive Writes Per Day (DWPD)  2.16 (3 yrs)  Certificate  CE / FCC / BSMI / UKCA		ean Time Between Failures (MTBF)	3,000,000 hour(s)
Certificate CE / FCC / BSMI / UKCA	Ter	rabytes Written (TBW)	up to 9680 TBW
	Dri	ive Writes Per Day (DWPD)	2.16 (3 yrs)
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Warranty Three-year Limited Warranty		arranty	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.