

SSD 2.5inch 512GB RAID SSD-512GS-2TR



* Specifications, color and design of the products are subject to change without notice.

Specifications

Item		Specifications
Model name / Maker		TS512GSSD452K / Transcend
Form factor		2.5inch
Host interface		SATA III (6.0Gbps)
Installed Memory		3D TLC NAND Flash memory
Transfer velocity	Total capacity	512GB
	Read	560 Mbit/sec *1
Transfer velocity	Write	520 Mbit/sec *1
Input voltage		+5VDC (±5%)
Current consumption	Idle	0.4W (Max)
	Read	2.8W (Max)
	Write	2.9W (Max)
Environment		
Operating	Temperature	0 - +70°C
	Humidity	5 - 95%RH (With no condensation)
	Corrosive gases	None
	Swept sine vibration	20G or less (7 - 2,000Hz, 3axis)
	Shock	1500G or less (0.5ms, 3axis)
Non-operating	Temperature	-40 - +85°C
	Humidity	5 - 95%RH (With no condensation)
	Corrosive gases	None
	Swept sine vibration	20G or less (7 - 2,000Hz, 3axis)
	Shock	1500G or less (0.5ms, 3axis)
Total capacity (TBW)		880TB
Physical dimensions (mm)		69.85(W)×100.00(D)×6.8(H)
Weight		54g (Max)

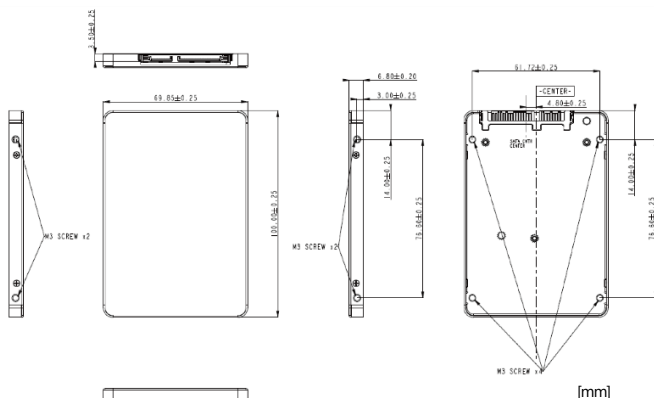
*1 It might differs depending on the software or host to be used.

Included Items

Product [SSD-512GS-2TR] ...1

Product Guide ...1

Physical Dimensions



This product is a solid state drive in accordance with 2.5-inch SATA standard.

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* Visit the CONTEC website to check the latest details.

* The information in the data sheets is as of September 2023.

Connector Pin Assignment

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
S1	GND	S2	A+	S3	A-	S4	GND
S5	B-	S6	B+	S7	GND		
P1	N.C.	P2	N.C.	P3	DEVSLP	P4	GND
P5	GND	P6	GND	P7	5V	P8	5V
P9	5V	P10	GND	P11	DAS	P12	GND
P13	N.C.	P14	N.C.	P15	N.C.		

About write endurance

SSD has write endurance which limits the number of times each memory may be written, due to the characteristic of the memory that is used. Write endurance can be calculated by the following formula as a reference value:

The write endurance of SSD is determined with the total capacity.

Life expectancy can be calculated by the number of writing per day.

The number of writing into drive per day (DWPD) = $\frac{\text{SSD's TBW(TB)} \times 1000}{365 \text{ days} \times \text{years} \times \text{SSD user capacity}}$

The actual TBW is determined by the free space (available space for user).

If the SSD has 128GB capacity and TBW = 80TB, and the user available space (rewrite area) is 1/2 size, the expected life can be calculated with an assumption that TBW is half of 40TB.

When the 4MB file of 128GB capacity and TBW = 80TB, user available space (rewrite area) is 2/3 size is made, and rewrites once per 10 seconds.

Writing size per day = $4 \times 6 \times 60 \times 24 = 34.56\text{GB}$

Write endurance = $80(\text{TB}) \times 2/3 \times 1000 / 34.56(\text{GB}) / 365 \approx 4.3(\text{years})$

These are reference values. Confirm its longevity by the following S.M.A.R.T. after installing the specific software (*) and implement tentative writing.

* Life expectancy can be obtained by installing the self- diagnosis program that acquires S.M.A.R.T. information of SSD.

Target Products

This product is the FA computer (VPC series) and custom-made PC (Solution-ePC)

* The RAID model requires two hard disks of the same type.