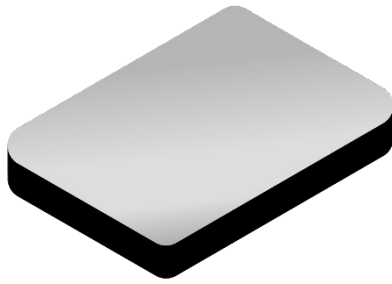


SSD 2.5inch 512GB RAID SSD-512GS-2TAR



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

Specifications

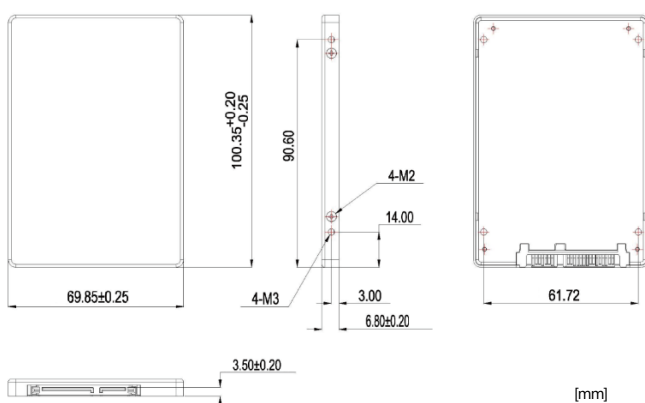
Item	Specifications
Model name / Maker	SP512GISSD355SV0J0 / Silicon Power Computer & Communications Inc.
Form factor	2.5inch
Host interface	SATA III (6.0Gbps)
Installed Memory	3D TLC NAND Flash memory
Total capacity	512GB
Transfer velocity	Read 520 Mbit/sec *1 Write 480 Mbit/sec *1
Input voltage	+5VDC (±5%)
Current consumption	Idle 110mA (typ.) Read 435mA (typ.) Write 525mA (typ.)
Environment	
Operating	Temperature 0 - +70°C Humidity 10 - 95%RH (With no condensation) Corrosive gases None Swept sine vibration 15G or less (10 - 2,000Hz) Shock 1500G or less (0.5ms)
Non-operating	Temperature -55 - +95°C Humidity 10 - 95%RH (With no condensation) Corrosive gases None Swept sine vibration 15G or less (10 - 2,000Hz) Shock 1500G or less (0.5ms)
Total capacity (TBW)	748TB
Physical dimensions (mm)	69.85(W)×100.35(D)×6.80(H)
Weight	75g (Max)

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

Included Items

Product [SSD-512GS-2TAR] ...1
Product Guide ...1

Physical Dimensions



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

- * The contents in this document are subject to change without notice.
- * 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		
P8	N.C.	P9	N.C.	P10	N.C.	P11	GND
P12	GND	P13	GND	P14	5V	P15	5V
P16	5V	P17	GND	P18	GND	P19	GND
P20	N.C.	P21	N.C.	P22	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.

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

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.

$$\begin{aligned} \text{Writing size per day} &= 4 \times 6 \times 60 \times 24 = 34.56\text{GB} \\ \text{Write endurance} &= 80(\text{TB}) \times 2/3 \times 1000 / 34.56(\text{GB}) / 365 \approx 4.3(\text{years}) \end{aligned}$$

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.