

2.5-inch SATA SSD TLC BiCS4 Wide Temperature SSD-xxS-2TPW Series



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

Specifications

Item	Specifications	
Host interface	SATA III (6.0Gbps)	
Installed Memory	TLC NAND Flash memory (BiCS4)	
Total capacity	SSD-128GS-2TPW: 114,473 MB	
	SSD-256GS-2TPW: 228,936 MB	
LBA	SSD-512GS-2TPW: 457,862 MB	
	SSD-1TS-2TPW: 915,715 MB	
Transfer velocity	Read *1	SSD-128GS-2TPW: 430 MB/sec SSD-256GS-2TPW: 550 MB/sec SSD-512GS-2TPW: 550 MB/sec SSD-1TS-2TPW: 550 MB/sec
	Write *1	SSD-128GS-2TPW: 210 MB/sec SSD-256GS-2TPW: 440 MB/sec SSD-512GS-2TPW: 510 MB/sec SSD-1TS-2TPW: 490 MB/sec
Input voltage	+5VDC (±5%)	
Current consumption	Idle (Typ.)	SSD-128GS-2TPW: 155mA SSD-256GS-2TPW: 160mA SSD-512GS-2TPW: 180mA SSD-1TS-2TPW: 189mA
	Read (Typ.)	SSD-128GS-2TPW: 285mA SSD-256GS-2TPW: 303mA SSD-512GS-2TPW: 310mA SSD-1TS-2TPW: 310mA
	Write (Typ.)	SSD-128GS-2TPW: 228mA SSD-256GS-2TPW: 301mA SSD-512GS-2TPW: 308mA SSD-1TS-2TPW: 310mA
Environment Requirements	Operating temperature	-40 ~ +85°C
	Storage temperature	-40 ~ +85°C
	Humidity	10 ~ 95%RH (With no condensation)
	Corrosive gases	None
	Swept sine vibration	20G or less (7 ~ 2,000Hz)
NAND Flash memory life span	3,000cycles	
	Physical dimensions (mm)	
Weight	Approx. 60g (Max.)	

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

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	N.C.	P4	GND
P5	GND	P6	GND	P7	5V	P8	5V
P9	5V	P10	GND	P11	DAS/DSS	P12	GND
P13	N.C.	P14	N.C.	P15	N.C.		

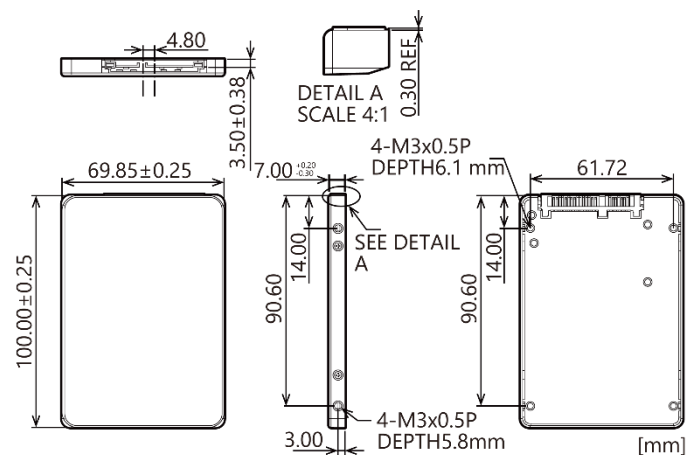
This product is a solid state drive in accordance with 2.5-inch SATA standard.

Write Protect compatible.

SSD-128GS-2TPW	2.5inch 128GB SATA SSD TLC Wide Temperature
SSD-256GS-2TPW	2.5inch 256GB SATA SSD TLC Wide Temperature
SSD-512GS-2TPW	2.5inch 512GB SATA SSD TLC Wide Temperature
SSD-1TS-2TPW	2.5inch 1TB SATA SSD TLC Wide Temperature

- * The contents in this document are subject to change without notice.
- * Visit the CONTEC website to check the latest details in the document.
- * The information in the data sheets is as of December, 2025.

Physical Dimensions



About write endurance

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

Write endurance (years) = Total rewrite life (cycles) / (The number of annual consumed blocks / The total number of blocks)

Example :

Capacity: 128GB, Rewrite life: 3,000cycles

When the file of 4MB is made, and it rewrites it once per 10 seconds.

The number of annual consumed blocks = (4 x (60 / 10) x 60 x 24 x 365) / 18 = 700,800(blocks)

Life = 3,000 / (700,800 / 7,200) ≈ 30.82 (years)

For other capacities, replace the number of annual consumed blocks and the total number of blocks with the following.

In the case of SSD-256GS-2TPW, the number of annual consumed blocks: 700,800, the total number of blocks: 14,400

For the SSD-512GS-2TPW, the number of annual consumed blocks: 700,800, total number of blocks: 28,800

For the SSD-1TS-2TPW, the number of annual consumed blocks: 700,800, total number of blocks: 57,600

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

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