

# SATA III 6Gb/s M.2 2280 Solid State Drive



The DATARAM SSDM2-SATA M.2 (Solid State Drive) family fully consists of semiconductor devices using NAND Flash Memory which provide high reliability and high performance for a storage media. The SSD does not have any moving parts such as platter (disk) and head media, which provides a better solution in a notebook PC, Tablet PC and industrial PC for a storage device providing higher performance, reduced latencies, and a low power consumption in a small form factor.

# **Identification/Capacity**

SSDM2-SATA-128GB SSDM2-SATA-256GB SSDM2-SATA-512GB SSDM2-SATA-1TB

# Form Factor:

M.2 2280

### **Host interface:**

SATA 6.0Gbps (SATA-III) SATA 3.0Gbps (SATA-II) SATA 1.5Gbps (SATA-I)

### **Power Consumption**

Active write: 4280mW Active read: 2780mW

## **Performance**

Host transfer rate:

Sequential Read: Up to 500MB/s Sequential Write: Up to 550MB/s

Access Time: 0.2ms Seek Time: 0ms

# **Temperature**

Operating: 0°C to 70°C

### **MTBF**

- 1,000,000 Hours

# Shock

Shock: 1500G, duration 0.5ms, Half Sine Wave Vibration: 7~800Hz, 3.08Grms, 30min/axis (X,Y,Z)

SSDM2-SATA 27-Jan-2021



# SSDM2-SATA M.2

# SATA III 6Gb/s M.2 2280 Solid State Drive

### **Features**

- Capacity: 128GB, 256GB, 512GB, 1TB
- Form Factor: 80mm M.2 (80mm SATA B Key)
- Reliable TLC NAND type flash
- Electrically fully complies with the SATA -II/SATA -III standards
- Complies with the slot B primary key SSD SATA pin out
- Modules with the "B" and "M" key for ultimate performance SSD or cache
- Data retention: JESD47 compliant
- S.M.A.R.T. command transport (SCT) technology
- Enhanced endurance by dynamic/static wear-leveling
- Hardware LDPC ECC engine
- Data integrity under power-cycling
- 3 Year Limited Warranty or Maximum TBW
- 100% tested HW and SW

# **Data Transfer Speeds**

Capacity	Data Transfer Speed (R / W)				
	Seq. read	Seq. write	4K Q32T1 read	4K Q32T1 write	
128GB	550	500	220	210	
256GB	550	500	220	210	
512GB	550	500	230	210	
1TB	550	500	260	270	

### **Endurance**

Capacity	TBW	DWPD
128GB	50TB	0.357
256GB	100TB	0.357
512GB	200TB	0.357
1TB	400TB	0.357

# **Absolute Maximum Rating**

V <sub>cc</sub>	Power Supply Voltage	-0.3 to +3.6	V
V <sub>IN</sub>	Input Voltage	-0.5 to Vcc +0.5	V
T <sub>STG</sub>	Storage Temperature	-55 to 115	°C
T <sub>OPR</sub>	Commercial Grade	0 to +70	°C

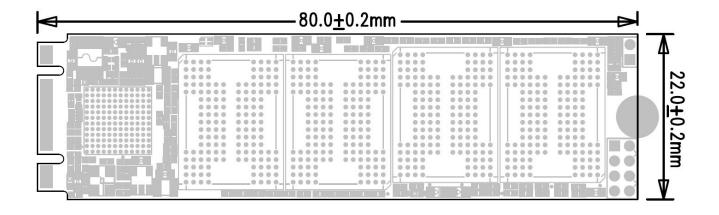


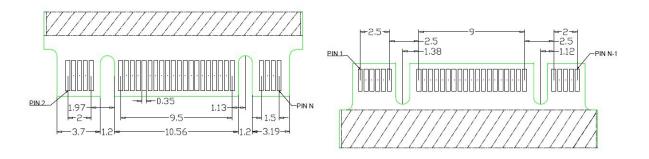
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# **Mechanical Specification**

Length: 80.0 ± 0.2 mm Width: 22.0± 0.2 mm Thickness: 2.20 ± 0.15 mm

Weight: <7.0g





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