



DuraFlash™

R800 | SATA | M.2 2280 SSD

SMART's DuraFlash R800 SATA M.2 2280 solid state drives bring the advantages of non-volatile memory to embedded computing applications. The R800 are enterprise feature rich and reliable mass storage in a M.2 SATA form factor available in both commercial and industrial temperature ranges.

SMART's R800 SATA M.2 2280 SSDs are offered with Triple-Level Cell (TLC) 3D NAND. The R800 product lines offer excellent sustained random read/write and sustained sequential read/write performance. The R800 is suitable for applications that cannot tolerate variations in performance.



Features & Benefits

- Advanced Static and Dynamic Wear-Leveling
- Advanced Error Detection/Correction Circuitry for Superior Data Reliability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) Support
- Supports for 48bit LBA Addressing with Larger Maximum Transfer Size

Product Family Overview

Capacity	Sequential Performance
R800 SATA M.2 2280 SSD	
480GB to 1920GB	Up to 550MB/s Read; Up to 530MB/s Write

Applications

- ATCA Compute Blades
- Enterprise
- Distributed Scale-Out Cloud Servers
- Industrial Control
- NAS / SAN Storage Systems
- Single-Board Computers for Defense, Gaming and Industrial Control Applications
- Telecom and Networking Routers and Switches
- x86 Server-Storage Appliances

Specifications

R800 SATA M.2 2280 SSD	
NAND Type	TLC
Performance	
Host Interface Rate (maximum)	6Gb/s (Backwards compatible to 3Gb/s & 1.5Gb/s)
Capacities	480GB to 1920GB
Sequential Read (maximum)	Up to 550MB/s
Sequential Write (maximum)	Up to 530MB/s
Reliability	
Data Reliability	< 1 Non-Recoverable Error in 10 ¹⁷ bits read
Data Retention	10 years >90% life remaining 1 year at the end of life
Endurance (JEDEC Enterprise Workload) ¹	1920GB: 1210 TBW 960GB: 595 TBW 480GB: 295 TBW
Error Correction	LDPC (Equivalent to 130 bits/2KB)
Environmental	
Shock	1500 g half-sine, 0.5 msec, 1 shock along each axis, X, Y, Z in each direction
Vibration	20G 80-2000Hz, 1.52mm 20-80Hz, 3 axis
Operating Temperature	Commercial: 0°C to +70°C Industrial: -40°C to +85°C
Storage Temperature	-40°C to +85°C
Humidity	40°C, Operation: 90% RH, Storage: 93% RH
Altitude	24,384 m [80,000 ft]
Physical	
Length	80.0 mm
Width	22.0 mm
Height	3.5 mm

¹Endurance is directly related to the User Specific Workload.



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