



DuraFlash™

RD230 | SD 6.1 | SD Card

SMART's DuraFlash, high-capacity, RD230 SD Cards are fully SD UHS-I compliant. The RD230 SD Cards are offered in commercial, extended and industrial temperature with capacities from 16GB to 256GB for RD230 SE and from 4GB to 64GB for RD230 UE. They are specifically designed to meet strict environmental requirements as in networking, industrial, gaming and automotive applications.

Incorporating onboard error detection and correction algorithms and static and dynamic wear-leveling techniques, SMART's RD230 SD Cards ensure years of reliable operation over a product's life.



Features & Benefits

- Capacities:
 - RD230 SE: 64GB to 256GB (SDXC), 16GB to 32GB (SDHC)
 - RD230 UE: 64GB (SDXC), 4GB to 32GB (SDHC)
- SD UHS-I Compliant
- Support C-Temp (0°C to +70°C), E-Temp (-25°C to +85°C) and I-Temp (-40°C to +85°C)
- Low Power Dissipation
- Onboard Wear-Leveling

Applications

- Automotive
- Gaming
- Industrial
- Networking

Product Family Overview

Capacity	Sequential Performance
RD230 SE SD 6.1 SD Card	
64GB to 256GB (SDXC)	Up to 101MB/s Read; Up to 96MB/s Write
16GB to 32GB (SDHC)	Up to 101MB/s Read; Up to 39MB/s Write
RD230 UE SD 6.1 SD Card	
64GB (SDXC)	Up to 95MB/s Read; Up to 85MB/s Write
4GB to 32GB (SDHC)	Up to 95MB/s Read; Up to 85MB/s Write

Specifications

	RD230 SE	RD230 UE
NAND Type	TLC	pSLC
Performance		
Host Interface Rate (maximum)	SD 6.1 (SDR 104)	
Capacities	64GB to 256GB (SDXC)	64GB (SDXC)
	16GB to 32GB (SDHC)	4GB to 32GB (SDHC)
Sequential Read (maximum)	Up to 101 MB/s	Up to 95 MB/s
Sequential Write (maximum)	Up to 96 MB/s (64GB to 256GB)	Up to 85 MB/s
	Up to 39 MB/s (16GB to 32GB)	
Reliability		
MTBF	> 3,000,000 hours	
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 (Sequential Workload) ¹	256GB: 700 TBW	64GB: 1,680 TBW
	128GB: 350 TBW	32GB: 840 TBW
	64GB: 175 TBW	16GB: 420 TBW
	32GB: 87 TBW	8GB: 210 TBW
	16GB: 43 TBW	4GB: 105 TBW
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	
	Extended: -25°C to +85°C	
	Industrial: -40°C to +85°C	
Storage Temperature	-40°C to +85°C	
Humidity	40°C, Operation: 90% RH, Storage: 93% RH	
Physical		
Length	32.0mm	
Width	24.0mm	
Thickness	2.1mm	

¹Endurance is directly related to 128k sequential write workload.

Ordering Information

Part Number	Density
RD230 SE SD 6.1 SD Card Commercial Operating Temperature (0°C to +70°C)	
SV9SDEGPHJETC51	256GB
SV9SDDGPHJETC51	128GB
SV9SDCGPHJETC51	64GB
SV9SDBGPHJETC51	32GB
SV9SDAGPHJDT C51	16GB
RD230 SE SD 6.1 SD Card Extended Operating Temperature (-25°C to +85°C)	
SV9SDDGPHJETE51	128GB
SV9SDCGPHJETE51	64GB
SV9SDBGPHJETE51	32GB
SV9SDAGPHJDT E51	16GB
RD230 SE SD 6.1 SD Card Industrial Operating Temperature (-40°C to +85°C)	
SV9SDEGPHJETI51	256GB
SV9SDDGPHJETI51	128GB
SV9SDCGPHJETI51	64GB
SV9SDBGPHJETI51	32GB
SV9SDAGPHJDT I51	16GB
RD230 UE SD 6.1 SD Card Commercial Operating Temperature (0°C to +70°C)	
SV9SDCGPHJEU C51	64GB
SV9SDBGPHJEU C51	32GB
SV9SDAGPHJEU C51	16GB
SV9SD8GPHJEU C51	8GB
SV9SD4GPHJDU C51	4GB
RD230 UE SD 6.1 SD Card Extended Operating Temperature (-25°C to +85°C)	
SV9SDCGPHJEU E51	64GB
SV9SDBGPHJEU E51	32GB
SV9SDAGPHJEU E51	16GB
SV9SD8GPHJEU E51	8GB
RD230 UE SD 6.1 SD Card Industrial Operating Temperature (-40°C to +85°C)	
SV9SDCGPHJEU I51	64GB
SV9SDBGPHJEU I51	32GB
SV9SDAGPHJEU I51	16GB
SV9SD8GPHJEU I51	8GB

DuraFlash Product Grading System

SE Standard Endurance | TLC

HE High Endurance | eTLC

PE Premium Endurance | eTLC (OP 28%)

UE Ultra Endurance | pSLC



For more information, please visit: www.smartm.com

Headquarters/North America:

T: (+1) 800-956-7627 • T: (+1) 510-623-1231
F: (+1) 510-623-1434 • E: info@smartm.com

Latin America:

T: (+55) 11 4417-7200 • E: sales.br@smartm.com

Asia/Pacific:

T: (+65) 6678-7670 • E: sales.asia@smartm.com

EMEA:

T: (+44) 0 7826-064-745 • E: sales.euro@smartm.com

Customer Service:

T: (+1) 510-623-1231 • E: customers@smartm.com