



DuraFlash™

RD230m | SDHC/SDXC microSD Memory Card

SMART's DuraFlash, high-capacity, RD230m SDHC/SDXC microSD Memory Cards are fully UHS-I SDR 104 compliant. The RD230m SDHC/SDXC microSD Cards are offered in commercial, extended and industrial temperature with capacities from 16GB to 256GB for the 3D TLC version and from 4GB to 64GB for the pSLC version. They are specifically designed to meet strict industrial operating and environmental requirements as in IIoT, medical, automotive and military applications.

Incorporating onboard error detection and correction algorithms and static and dynamic wear-leveling techniques, SMART's RD230m SDHC/SDXC microSD Memory Cards ensure years of reliable operation over a product's life.



Features & Benefits

- Capacities:
 - TLC: 64GB to 256GB (SDXC), 16GB to 32GB (SDHC)
 - pSLC: 64GB (SDXC), 4GB to 32GB (SDHC)
- SD UHS-I Compliant
- Designed with 3D TLC NAND
- 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
- IIoT
- Medical
- Military

Product Family Overview

Capacity	Sequential Performance
RD230m SDHC/SDXC microSD Card (TLC)	
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 42MB/s Write
RD230m SDHC/SDXC microSD Card (pSLC)	
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

RD230m SDHC/SDXC microSD Card		
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 42 MB/s (16GB to 32GB)	
Reliability		
MTBF	> 3,000,000 hours	> 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	
Storage 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	15.0mm	
Width	11.0mm	
Thickness	1.0mm	

¹Endurance is directly related to the User Specific Workload.

Ordering Information

Part Number	Density
RD230m SDHC/SDXC microSD Card (TLC) Commercial Operating Temperature (0°C to +70°C)	
SV9UDEGPHJETC51	256GB
SV9UDDGPHJETC51	128GB
SV9UDCGPHJETC51	64GB
SV9UDBGPHJETC51	32GB
SV9UDAGPHJDT51	16GB
RD230m SDHC/SDXC microSD Card (TLC) Extended Operating Temperature (-25°C to +85°C)	
SV9UDDGPHJETE51	128GB
SV9UDCGPHJETE51	64GB
SV9UDBGPHJETE51	32GB
SV9UDAGPHJDE51	16GB
RD230m SDHC/SDXC microSD Card (TLC) Industrial Operating Temperature (-40°C to +85°C)	
SV9UDEGPHJETI51	256GB
SV9UDDGPHJETI51	128GB
SV9UDCGPHJETI51	64GB
SV9UDBGPHJETI51	32GB
SV9UDAGPHJDTI51	16GB
RD230m SDHC/SDXC microSD Card (pSLC) Commercial Operating Temperature (0°C to +70°C)	
SV9UDCGPHJEU51	64GB
SV9UDBGPHJEU51	32GB
SV9UDAGPHJEU51	16GB
SV9UD8GPHJEU51	8GB
SV9UD4GPHJDU51	4GB
RD230m SDHC/SDXC microSD Card (pSLC) Extended Operating Temperature (-25°C to +85°C)	
SV9UDCGPHJEU51	64GB
SV9UDBGPHJEU51	32GB
SV9UDAGPHJEU51	16GB
SV9UD8GPHJEU51	8GB
RD230m SDHC/SDXC microSD Card (pSLC) Industrial Operating Temperature (-40°C to +85°C)	
SV9UDCGPHJEU51	64GB
SV9UDBGPHJEU51	32GB
SV9UDAGPHJEU51	16GB
SV9UD8GPHJEU51	8GB



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