

MicroSD and SD cards are available in three capacity standards: SDSC (Standard Capacity), SDHC (High Capacity) and SDXC (extended Capacity) and with bus up to UHS-I. Selected models have an additional SPI interface. Small dimensions, low power consumption and wide range of available capacities (from 128 MB to 256 GB) and wide selection of NAND types (SLC, pSLC, MLC, 3D TLC and 3D pSLC) make microSD and SD cards a go-to storage solution for many industrial designers.



	microSD					SD				
Flash type	3D TLC	3D pSLC	MLC	pSLC	SLC	3D TLC	3D pSLC	MLC	pSLC	SLC
Program/Erase cycles	3 000	30 000	3 000	20 000	60 000	3 000	30 000	3 000	20 000	60 000
Capacity	16 – 256 GB	16 – 128 GB	4 – 64 GB	2 – 32 GB	128 MB – 4 GB	32 – 256 GB	16 – 128 GB	4 – 128 GB	2 – 64 GB	128 MB – 32 GB
Interface	UHS-I			High Speed for 2 GB, Rest UHS-I	128 MB – 2 GB High Speed 4 GB UHS-I	UHS-I				128 MB – 2 GB High Speed 4 GB – 32 GB UHS-I
Key features	Static and Dynamic Wear Leveling Bad Block Management S.M.A.R.T. Auto-Read Refresh Data Clone System (only for MLC) Build from major IC grades FIX BOM (optional) PCN and EOL notification									
Operating temperature (°C)	0 – 70 -25 – 85 -40 – 85									
Storage temperature (°C)	-40 – 85									
Maximum transfer speed (MB/s)	Read: up to 95 Write: up to 80		Read: up to 95 Write: up to 90		Read: up to 20 Write: up to 20	Read: up to 95 Write: up to 80		Read: up to 95 Write: up to 90		Read: up to 65 Write: up to 55
Maximum power consumption (mA)	< 400									
MTBF	> 3 000 000									
Environmental tests resistance	High/Low temperature High Humidity (55%, 95% RH) Temperature Cycle (30 min, 20 cycles) Shock (1 500 G, Half Sin Pulse) Vibration (80 – 2 000 Hz/20 G in 3 Axis) Free Fall (1.5 m) Torque (0.1 N/m, 30 sec/5 times) Bending (>10 N for 1 min/5 times) Salt Spray (3% NaCl, 35°C/24 h) Waterproof (IPX7, 1 m immersion for 30 minutes) X-Ray (70 – 140 keV for 30 minutes) Switch Cycle (0.4 – 0.5 N/1 000 times) Durability test (EIA 364-13 10 000 times) Contact ESD (±4 KV contact 25 times, ±8 KV air 10 times)									
Dimensions ((L × W × H) (mm))	15 × 11 × 1					32 × 24 × 2.1				