

## SD Card Datasheet for 128GB UHS-1 Class 10

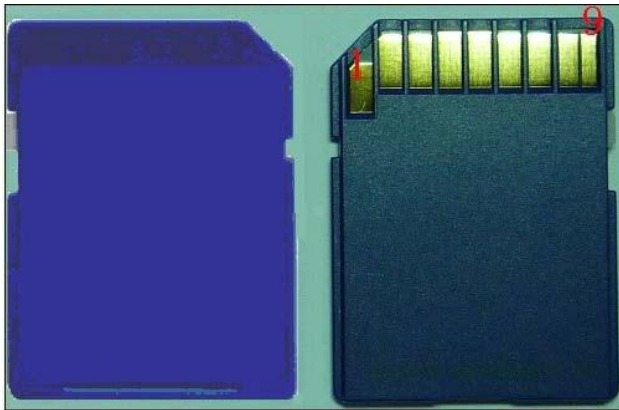
### Specifications

<b>Model</b>	SDXC Card 128GB UHS-1 Class 10
<b>Interface</b>	SD3.0
<b>Form Factor</b>	SD
<b>Controller</b>	SMI
<b>Flash</b>	Toshiba/Intel/Micron
<b>Sustained Read Performance (MB/sec)</b>	Up to 80
<b>Sustained Write Performance (MB/sec)</b>	Up to 30
<b>Manufacturer</b>	MRT
<b>Extended Operating Temperature (°C)</b>	-40 ~ + 85
<b>Storage Temperature (°C)</b>	-40 ~ + 100
<b>Shock</b>	(Operating) 1,500G, 0.5ms
<b>Vibration</b>	Operating: 7.69(Grms), 20~2000(Hz)/random (comply with MIL-STD-810G) Non-operating: 4.02(Grms), 15~2000(Hz)/random (comply with MIL-STD-810G)
<b>Operating Voltage</b>	3.3 V ± 5%
<b>Power Consumption</b>	Active mode: 120 mA & Idle mode: 260 uA
<b>Dimension (L x W x H )</b>	32x24x2.1 (mm)
<b>File system</b>	exFAT

## FEATURES SUMMARY

- Capacity: 8~256GB
- Compliant SD Specification V3.0.
- On card error correction.
- Voltage range for communication: 2.7~3.6V.
- Low power consumption:  
Automatic power down and automatic wake up, smart power management.
- No external programming voltage required.
- Damage free powered card insertion and removal
- Mechanical Write Protection Switch
- Easy handling for the end user.
- Reliable electrical interconnection.
- Bearing textual information and image.
- In System Programming (ISP) function to update the firmware on demand.
- Noise-free operation.

## Sample Picture



Front

Back

**Table 1. Pin Assignment**

Pin No	SD Mode			SPI Mode		
	Name	Type	Description	Name	Type	Description
1	Dat2	I/O/PP	Data Line [Bit 2]	RSV		Reserved
2	CD/DAT 3	I/O/PP 3	Card Detect / Data Line [Bit 3]	CS	I3	Chip Select
3	CMD	PP	Command/Response	DI	I	Data In

4	VSS	S	Supply voltage ground	VSS	S	Supply voltage ground
5	VDD	S	Supply voltage	VDD	S	Supply voltage
6	CLK	I	Clock	SCLK	I	Clock
7	VSS	S	Supply voltage ground	VSS	S	Supply voltage ground
8	DAT0	I/O/P P	Data Line [Bit 0]	DO	O/PP	Data Out
9	DAT1	I/O/P P	Data Line [Bit 1]	RSV		Reserved

S: power supply; I: input; O: output; PP: I/O using push-pull drivers

### Current Consumption

Standby current: 250uA (Maximum value)  
Standby current: 120uA (average value)  
Operating current: 130mA (Maximum value)

Operating current: 60mA (average value)

\*Test condition: GL828 card reader (Voltage 3.3V), Fluke187 multimeter.

**Table 2. Operational Environment**

Parameter	Range	
Temperature	Operating	0 ~ 70°C
	Non-Operating	-40 ~ 85°C
Humidity	Operating	25% to 85%, non-condensing
	Non-Operating	25% to 85%, non-condensing
Durability	Insertion/removal cycles	10,000
Data Retention		10 years

**Table 3. Physical Dimension Specifications (Unit in mm)**

Type	Measurement
Length	32.00mm ±0.10mm
Width	24.00mm ±0.10mm
Thickness	2.10mm ±0.15mm
Weight	Approx.2.0 gram

**Mechanical form factor as follows: (Unit in mm)**

