Samsung microSD Card Sonic the Hedgehog™ PRO Plus

2025 Data Sheet

Revision 1.0



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1. TECHNICAL SPECIFICATIONS

Samsung microSD Card Sonic the Hedgehog™ PRO Plus					
Hardware Information	Form Factor	microSDXC™			
	User Capacity	128GB	256GB	512GB	1TB
		128,144,375,808 Bytes[1]	256,288,751,616 Bytes[1]	512,644,612,096 Bytes[1]	1,025,356,333,056 Bytes[1]
	Bus Speed Mode	UHS-I SDR104[2] / UHS-I DDR200[3] with Samsung microSD Reader			
	Dimensions	15 x 11 x 1 (mm) (L x W x H)			
	Weights	Approx. 0.25g (Card only)			
Performance	Speed Class	Class 10, V30[4]			
	App Perf. Class	A2[5]			
	Speed Grade	Grade 3 (U3)			
	Sequential Read Speed[6]	Up to 180MB/s			
	Sequential Write Speed[6]	Up to 130MB/s			
Reliability	Temperature	Operating : -25°C to 85°C			
		Non-Operating : -40°C to 85°C			
EMC Certifications		FCC (IC), CE (UKCA), VCCI, RCM			
Warranty		10 year limited[7]			

1) 1GB=1,000,000,000 bytes. Actual usable storage capacity may vary. User capacity measured with SD Formatter 3.1 tool with FAT file system.

2) 1.8V Signaling, Frequency up to 208 MHz, up to 104MB/sec, Max. Current Consumption 800mA (varies by test conditions)

3) 1.8V Signaling, Frequency up to 208 MHz, up to 200MB/sec, Max. Current Consumption 800mA (varies by test conditions)

4) Video Speed Class means sustained video capture rates of 30MB/s(V30) which enable to support real-time video recording to UHS Bus interface products. Transfer speeds may vary by host device.

5) Application Performance Class means Min. Random Read 4000 IOPS(A2), Random Write 2000 IOPS(A2), and Sustained Seq. Write 10MB/s(A1, A2), which makes app performance faster. Performances may vary by host device.

6) Performance results are based on internal testing conditions. Stated performance was achieved by using PRO Plus SD card with Samsung SD Card reader (ver2.0) in a controlled environment. Actual read/write speeds may vary depending on user environment. For more information, please see "4. Card Reader Compatibility."

7) Warranties provided herein do not extend to any use of the product for or with continuous recording instruments or any other write-intensive devices, including without limitation security cameras, surveillance systems, dashboard cameras, blackbox cameras, internet protocol/network cameras, continuous recording set top box devices and continuous data logging devices like servers, dedicated devices for benchmarking test, the primary drive for certain devices and any other excessive uses.

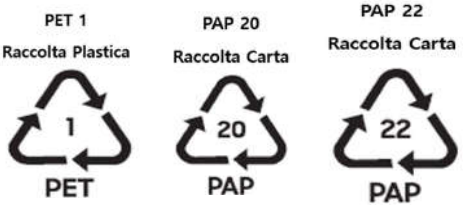
2. PRODUCT LINEUP

Form Factor	Lineup	Capacity	Model Name
microSD	Sonic the Hedgehog™ PRO Plus	128GB	MB-MD128SA/LC1
		256GB	MB-MD256SA/LC1
		512GB	MB-MD512SA/LC1
		1TB	MB-MD1T0SA/LC1

3. Regulatory Compliance







4. Card Reader Compatibility

Maximum read/write speeds are possible only when Sonic the Hedgehog™ PRO Plus card is used with specific Samsung SD Card reader (ver2.0 and ver3.0). Actual speeds may vary depending on user environment including host device and use conditions.

PRO Plus Reader (ver 1.0)	PRO Plus Reader (ver 2.0 and 3.0)
	
Up to 160MB/s	Up to 180MB/s

5. 6-Proof Features

Items	Conditions
Water-proof	1M depth, salt water (3% NaCl), 72hrs (*1TB : 1M depth, salt water (3% NaCl), 24hrs)
Temperature-proof	Operating temperatures of -25°C to 85°C (-13°F to 185°F) Non-operating temperatures of -40°C to 85°C (-40°F to 185°F).
X-Ray-proof	Withstands standard airport x-ray machines (Up to 100mGy, 210sec)
Magnetic-proof	Magnetic field equivalent of a high-field MRI scanner (Up to 15,000 gauss, 30secs)
Drop-proof	Withstand drops up to 5 meters (16.4 feet), 10 cycles *1TB : 1.5 meters (4.9 feet), 10 cycles
Wearout-proof	Up to 10,000 swipes

The multi-proof testing results reported herein were obtained under strictly controlled lab environment, as more fully described in the respective footnote for each test. Any attempt to replicate such results are not covered under Samsung's warranty program and Samsung disclaims any and all liability with respect to damages resulting from such attempts, including without limitation, damage to product, loss of property, or loss of data. For more information on Samsung's warranty policy, please visit: www.samsung.com/support.

6. REVISION HISTORY

Revision Number	Description	Revision Date
1.0	Initial Release	January 2025