Samsung micro SD UHS-I Card : PRO Plus Lineup

2021 Data Sheet

Revision 1.0



DISCLAIMER

SAMSUNG ELECTRONICS RESERVES THE RIGHT TO CHANGE PRODUCTS, INFORMATION AND SPECIFICATIONS WITHOUT NOTICE.

Products and specifications discussed herein are for reference purposes only. All information discussed herein may change without notice and is provided on an "AS IS" basis without warranties of any kind. This document and all information discussed herein remain the sole and exclusive property of Samsung Electronics. No license of any patent, copyright, mask work, trademark or any other intellectual property rights is granted by one party to the other party under this document by implication, estoppels or otherwise. Samsung products are not intended for use in life support, critical care, medical, safety equipment, or similar applications where product failure could result in loss of life or personal or physical harm, or any military or defense application, or any governmental procurement to which special terms or provisions may apply. For updates or additional information about Samsung products, contact your nearest Samsung Electronics' authorized representative.

COPYRIGHT © 2021

This material is copyrighted by Samsung Electronics. Any unauthorized reproductions, use or disclosure of this material or any part thereof, is strictly prohibited and is a violation under copyright law. The microSD, microSDHC and microSDXC mark and logo are trademarks of SD-3C LLC. All other marks are property of their respective owners.

TRADEMARKS & SERVICE MARKS

The Samsung Logo is the trademark of Samsung Electronics. Adobe is a trademark and Adobe Acrobat is a registered trademark of Adobe Systems Incorporated. All other company and product names may be trademarks of the respective companies with which they are associated.

1. TECHNICAL SPECIFICATIONS

Samsung microSD Card PRO Plus				
Hardware Information	Form Factor	microSDXC™		
	User Capacity	128GB	256GB	512GB
		128,010,158,080 Bytes[1]	256,020,316,160 Bytes[1]	512,007,077,888 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 160MB/s	Up to 160MB/s	Up to 160MB/s
	Sequential Write Speed[6]	Up to 120MB/s	Up to 120MB/s	Up to 120MB/s
Reliability	Temperature	Operating : -25°C to 85°C		
		Non-Operating : -40°C to 85°C		
	Durability	10,000 mating cycles		
	6-Proof Features[7]	Water-proof, Temperature-proof, X-ray-proof, Magnetic-proof, Drop-proof, Wearout-proof		
EMC Certifications		FCC (IC), CE (UKCA), VCCI, RCM		
Warranty		10 year limited[8]		

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) SDR104: 1.8V Signaling, Frequency up to 208 MHz, up to 104MB/sec, Max. Current Consumption 800mA (varies by test conditions)

3) DDR200 : 1.8V Signaling, Frequency up to 208 MHz, up to 200MB/sec, Max. Current Consumption 800mA (varies by test conditions)

4) V10, V30 : Video Speed Class means sustained video capture rates of 10MB/s(V10) and 30MB/s(V30) which enable to support real-time video recording to UHS Bus interface products. Transfer speeds may vary by host device.

5) A1, A2 : Application Performance Class means Min. Random Read 1500 IOPS(A1), 4000 IOPS(A2), Random Write 500 IOPS(A1), 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. Transfer speeds may vary by host device.

7) 1M depth, salt water, 72hrs. 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). Withstands standard airport x-ray machines (Up to 100mGy). Magnetic field equivalent of a high-field MRI scanner (Up to 15,000 gauss). Withstand drops up to 5meters (16.4feet). Up to 10,000 swipes. *Samsung is not liable for any i) damages and/or loss of data or ii) expenses incurred from memory card data recovery.

8) 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	PRO Plus	128GB	MB-MD128K
		256GB	MB-MD256K
		512GB	MB-MD512K

3. REVISION HISTORY

Revision Number	Description	Revision Date
1.0	Initial Release	August. 2021