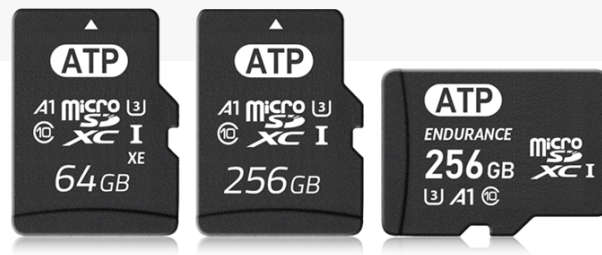




# microSD/microSDHC/microSDXC Card

The Global Leader in Specialized Storage and Memory Solutions



## Key Features

- SD Life Monitor
- High endurance
- Low latency
- Read Disturb Protector
- Power failure protection
- Industrial temperature
- 100% MP Level Test

These tiny yet feature-rich and reliable removable storage solutions are used extensively in data logging, navigation and surveillance systems, in-vehicle infotainment (IVI), drive recorders, and other demanding applications.

To ensure data integrity, ATP microSD cards feature AutoRefresh read disturb protection and Dynamic Data Refresh data retention management technologies to prevent errors in frequently read and seldom-accessed areas. The Sudden Power-Off Recovery (SPOR) mechanism recovers valid data during voltage fluctuations or power loss events.

ATP microSD cards in 3D triple level cell (TLC) NAND flash come in capacities up to 256 GB. They feature 4KB page management and SLC caching algorithm, which allows 1/2 random access time and low latency compared with traditional solutions. These cards meet Android A1 application performance (SDA spec) and consume less power, making them suitable for small handheld devices with limited battery life.

# Specifications

microSD/microSDHC/microSDXC Card							
Product Line	Premium			Superior			
	S800Pi	S750Pi	S700Pi	S750Sc	S700Sc	S650Si	S650Sc
Interface	512 MB to 2 GB, HS mode 4 GB to 8 GB, UHS-I			UHS-I			
Flash Type	SLC			3D TLC (pSLC mode)		3D TLC	
Form Factor	microSD Card						
Operating Temperature	-40 °C to 85 °C			-25 °C to 85 °C		-40 °C to 85 °C   -25 °C to 85 °C	
Power Loss Protection Options	Firmware Based						
Optional SED Features	-						
Capacity	512 MB to 8 GB		8 GB to 64 GB		8 GB to 64 GB		32 GB to 256 GB
Performance							
Sequential Read (MB/s) up to	68		99		95		99
Sequential Write (MB/s) up to	39		82		70		59
Endurance and Reliability							
Endurance (TBW) <sup>1</sup> up to	192 TB		3,490 TB		1,164 TB		3,490 TB   1,164 TB
Reliability MTBF @ 25 °C	>5,000,000 hours		>3,000,000 hours		>3,000,000 hours		>2,000,000 hours
Reliability Number of Insertions	20,000 (SDA spec minimum 10,000)						
Others							
Dimensions (mm)	15.0 x 11.0 x 1.0						
Certifications	CE, FCC, UKCA, RoHS						
Warranty	5 years			3 years		2 years   3 years	

microSD/microSDHC/microSDXC Card			
Product Line	Superior		
	S600Si	S600Sc	S600Sc
Interface	UHS-I		
Flash Type	3D TLC	MLC	3D TLC
Form Factor	microSD Card		
Operating Temperature	-40 °C to 85 °C	-25 °C to 85 °C	-25 °C to 85 °C
Power Loss Protection Options	Firmware Based		
Optional SED Features	-		
Capacity	32 GB to 512 GB	8 GB to 32 GB	32 GB to 512 GB
Performance			
Sequential Read (MB/s) up to	96	68	96
Sequential Write (MB/s) up to	66	24	66
Endurance and Reliability			
Endurance (TBW) <sup>1</sup> up to	1,396 TB	38 TB	1,396 TB
Reliability MTBF @ 25 °C	>2,000,000 hours		
Reliability Number of Insertions	20,000 (SDA spec minimum 10,000)		
Others			
Dimensions (mm)	15.0 x 11.0 x 1.0		
Certifications	CE, FCC, UKCA, RoHS		
Warranty	2 years		

Technologies & Add-On Services	S.M.A.R.T.	Firmware-based Power Loss Protection	AutoRefresh	Advanced Wear Leveling	Dynamic Data Refresh	Auto-Read Calibration	Secure Erase	Industrial Temperature	SiP	Complete Drive Test	Joint Validation
Premium	▲	○	○	○	▲	—	○	○	○	○	▲
Superior	▲	○	○	○	○	▲	○	▲	○	○	▲

<sup>1</sup> Under highest Sequential write value. May vary by density, configuration and applications.

▲: Customization option available on a project basis.

### Hot Items Ordering Information

Product Line	Flash Type	Capacity	Operating Temperature	P/N
S750Pi	3D pSLC	8 GB ~ 64 GB	-40°C~85°C	AF8GUD4A-EBAIM
				AF16GUD4A-EBAIM
				AF32GUD4A-EBAIM
				AF64GUD4A-EBAIM
S750Sc	3D pSLC	8 GB ~ 64 GB	-25°C~85°C	AF8GUD4A-EBAXM
				AF16GUD4A-EBAXM
				AF32GUD4A-EBAXM
				AF64GUD4A-EBAXM
S650Si	3D TLC	32 GB ~ 256 GB	-40°C~85°C	AF32GUD4-EBAIM
				AF64GUD4-EBAIM
				AF128GUD4-EBAIM
				AF256GUD4-EBAIM
S650Sc	3D TLC	32 GB ~ 256 GB	-25°C~85°C	AF32GUD4-EBAXM
				AF64GUD4-EBAXM
				AF128GUD4-EBAXM
				AF256GUD4-EBAXM

Product spec and its related information are subject to change without advance notice.  
Please refer to [www.atpinc.com](http://www.atpinc.com) for latest information

v1.0 012023

© Copyright 2022 ATP Electronics, Inc. All rights reserved.



The Global Leader in Specialized Storage and Memory Solutions

## WE BUILD WITH YOU

ATP TAIWAN (HQ)

TEL: +886-2-2659-6368  
sales-apac@atpinc.com

ATP USA

TEL: +1-408-732-5000  
sales@atpinc.com

ATP EUROPE

TEL: +49-89-374-9999-0  
sales-europe@atpinc.com

ATP JAPAN

TEL: +81-3-6260-0797  
sales-japan@atpinc.com

ATP CHINA

TEL: +86-21-5080-2220  
sales@cn.atpinc.com