

For the Most Demanding Applications: The SLC Memory Card Series S-600



New generation True SLC SD and micro SD Memory Cards based on Hyperstone S9

Key Benefits

- Market leading true industrial SLC flash storage
- Eliminates data corruption at high temperatures, non-continuous write bursts and intermitted power off events
- Best in class data retention and data integrity at extreme environmental conditions specifically for most demanding embedded applications
- Excellent write performance for random write use cases such as industrial data logging
- Robustness, data reliability and data integrity over the entire lifetime even if data has not been accessed for long periods

The new S-600(u) provides another generation of True SLC SD and microSD Memory Cards for most demanding industrial applications.

The series covers densities as low as 512MB up to 32GB. For mission critical use cases true SLC flash storage is still the golden standard when it comes to durability and data retention.

Only SLC offers 100,000 P/E cycles (Program/Erase Cycles), making it ideal for applications that require particularly robust, durable storage solutions. This is especially true for edge IoT applications in critical industrial environments, making the S-600 the first choice for devices such as PLCs, HMIs, sensors, switches, or gateways.

The S-600 series is the first range to incorporate the new Hyperstone S9 NAND Flash Controller, explicitly developed for use in industrial applications. Unique firmware features guarantee an extended lifetime of safe and reliable storage of even the smallest data. First-class data preservation and data integrity is delivered in all situations: in high temperature conditions, through non-continuous writes, or sudden power failures.

Robustly developed for industrial application, the S-600 series is rated for use at temperatures ranging from -40 to +85 °C, and is resistant to humidity, shock, and vibration.

S-600 memory cards are fully compatible up to SD 5.0 and support both the SPI mode in embedded systems and UHS-I interface mode. UHS Speed Class U3 and Speed Class 10 are achieved, as well as Video Speed Class V30. Sequential data rates are up to 95 MB/s read and 55 MB/s write. Typical application scenarios for the SD and microSD cards include IPCs, HMI units, POS/POI terminals, medical systems, energy metering, and transportation.

With the S-600 series, Swissbit is further expanding its range of single-level cell solutions, solidifying its position as one of the few manufacturers able to offer SLC memory technology for numerous form factors and interfaces.

Key Applications

- Data logging
- Industrial PCs
- HMI units
- POS/POI
- Medical systems
- Energy metering and generation
- Transportation

	S-600	S-600u
Type	SD Memory Card (SDHC / SDXC)	MicroSD Memory Card (SDHC / SDXC)
Interface Data Transfer Mode	UHS-1, up to speed class 10/U3/V30 according SD 5.0 specification	
Outline Dimensions	32 x 24 x 2.1 mm	15 x 11 x 0.7 x 1 mm
Flash Type	True industrial SLC	
Density Range	512 MB – 32 GB	512 MB – 2 GB
Data Retention	10 years @ life begin 1 year @ life end	
Endurance	100k P/E Cycles (True SLC)	
Operating Temperature	Extended: -25°C to +85°C Industrial: -40°C to +85°C	
Storage Temperature	Up to -40°C to +100°C	
Performance	Seq. Read / Write up to 95 / 55 MBs Rand 4K Read / Write up to 1,200 / 1,200 IOPS	
Voltage	2.7 – 3.6 V	

About Swissbit

Swissbit AG is the leading European manufacturer of storage, security and embedded IoT solutions for demanding applications. As trusted partner, Swissbit empowers the digital and connected world by reliably storing and protecting data in industrial, security and IoT applications.