Silicon Power
INDUSTRIAL

Industrial pSLC NAND

SD CARD
SDI530 SERIES
microSD CARD
SDT530 SERIES

SD 3.0	**UHS-I**
20K PE Cycles	**pSLC NAND**

PRODUCT FEATURES

- pSLC Flash Technology with 20K PE cycles endurance
- Global Wear Leveling , Static & Dynamic Wear Leveling and Early weak block retirement
- Sudden Power-Off Recovery (SPOR) resilient firmware with capability to avoid firmware crash when sudden power loss or unstable voltage occurs during operation mode and device initialization stage.
- Auto Read-Refresh, Read retry, Garbage collection
- SP Toolbox utility program to monitor Overall health status, Power Cycle count, Abnormal power cycle count,
- Bad block status including initial bad blocks, later bad blocks and spare blocks, Erase counts, ECC Uncorrectable counts.
- SP SMART Embedded applications with seamless integration with an edge’s device operating system.
- SP SMART IoT Sphere providing cloud service with alarm and notifications which monitors and analyzes the health and status of SP Flash products inside the connected devices.

PRODUCT SUMMARY

- Capacities : 4GB, 8GB, 16GB, 32GB
- Form Factor : SD Card, microSD Card
- Compliance : SD Specification: SD 3.0 UHS-I
- Speed Class: Class 10, U1
- Performance :

	4GB	8GB	16GB	32GB
Sequential Read (MB/s Max.)	90	90	90	90
Sequential Write (MB/s Max.)	31	33	42	42

** Actual performance may vary based on the specific model and capacity*

- Operating Temperature Range :

  Normal: -25 °C to 85 °C

  Wide: -40 °C to 85 °C
- Storage Temperature Range: -40 ˚C to 85 ˚C
- Operating Voltage: 3.3 V ± 10%
- Power Consumption (Maximum, unit: mA)

  Read : 160mA

  Write: 160mA

  Stand-by: 0.3mA

  ** Actual performance may vary based on the specific model and capacity*

- Data Retention @40 °C : 10 Years @ Life Begin; 1 Year @ Life End
- Endurance in Tera Bytes Written (TBW) : *(Unit: TB)*

Workload	4GB	8GB	16GB	32GB
TBW	32	64	128	256

- Mechanical (SDA Spec) :

  Bare Drop: 150cm free fall 6 faces

  Torque: 0.15N

  Bending: 10N-m
- BCH ECC up to 43 bits/1KB to ensure reliable 20K PE cycles with pSLC Flash
- Mean Time Between Failure: > =2,000,000 hours
- Serious quality control and assurance

  100% NAND Flash screening

  Duration: 10,000 cycles

  Compliant with SDA Spec. ISO 7816-1 to pass UV light exposure and X-ray exposure

  Reliability criteria compliant with international standards IEC-60068 (Environmental test) and IEC-61000-4-2 (ESD, Contact +/-4KV, Air discharge +/-8KV)