

## Industrial MLC NAND

SD CARD

**SDI330** SERIES

microSD CARD

**SDT330** SERIES

SD 3.0

UHS-I

3K PE Cycles

MLC NAND



## PRODUCT FEATURES

- MLC Flash Technology with 3K 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 : 8GB, 16GB, 32GB, 64GB
- Form Factor : SD Card, microSD Card
- Compliance : SD Specification: SD 3.0 UHS-I
- Speed Class: Class 10, U1
- Performance :

	8GB	16GB	32GB	64GB
Sequential Read (MB/s Max.)	85	85	85	85
Sequential Write (MB/s Max.)	20	30	30	30

*\* 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  $\pm$  10%
- Power Consumption (Maximum, unit: mA)  
Read : 400mA  
Write: 400mA  
Stand-by: 1mA  
*\* 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	8GB	16GB	32GB	64GB
TBW	9.6	19.2	38.4	76.8

- 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 3K PE cycles with MLC 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)