



## DuraFlash™

# XL+ | SD 3.01 | SD Card

SMART's DuraFlash high performance, industrial grade XL+ SD Cards support OEM markets such as networking, telecommunications and data communications, embedded computing, medical, automotive, and industrial applications. Offered in SLC NAND Flash, the XL+ SD Cards are available in capacities from 4GB to 32GB.

SMART's XL+ SD Cards comply with SD v3.01 SDSC, SDHC and SDXC Standard. Incorporating onboard error detection and correction algorithms, and static and dynamic wear-leveling techniques, the XL+ SD Cards ensure years of reliable operation over a product's life.



### Features & Benefits

- Capacities from 4GB to 32GB (SDHC)
- Low Power Dissipation
- Onboard Wear-Leveling
- RoHS Compliant
- Optional Industrial Temperature (-40°C to +85°C)

### Product Family Overview

Capacity	Sequential Performance
XL+   SD 3.01   SD Card	
4GB to 32GB (SDHC)	Up to 49MB/s Read; Up to 38MB/s Write

### Applications

- Airline Entertainment Systems
- Automotive Telematics, Navigation and Infotainment
- Defense
- Digital Commercial Camcorders
- Embedded Computing
- Gaming
- Industrial Meters and Industrial Control
- Networking
- Telecom and Communications

## Specifications

XL+   SD 3.01   SD Card	
NAND Type	SLC
<b>Performance</b>	
Sequential Read (maximum)	Up to 49MB/s
Sequential Write (maximum)	Up to 38MB/s
<b>Reliability</b>	
MTBF	> 1,000,000 hours
Data Reliability	< 1 Non-Recoverable Error in 10 <sup>14</sup> bits read
Data Retention	10 years >90% life remaining 1 year at the end of life
Endurance (Sequential workload)	32GB: 1620TBW 16GB: 800TBW 8GB: 400TBW
<b>Power</b>	
Vcc	2.7V – 3.6V
Read	< 200mA at 3.6V
Write	< 200mA at 3.6V
Idle	150µA typical
<b>Environmental</b>	
Shock (operational)	50G max. @ 11ms
Vibration	15G peak to peak
Operating Temperature	Commercial: 0°C to +70°C Industrial: -40°C to +85°C
Storage Temperature	Commercial: -25°C to +85°C Industrial: -40°C to +85°C
Humidity	5% to 95%
Altitude	up to 80,000 ft.
<b>Physical</b>	
Length	32.0mm
Width	24.0mm
Thickness	2.1mm
Weight	2.0g

## Ordering Information

Part Number	Density
<b>XL+   SD 3.01   SD Card</b>	
<b>Commercial Operating Temperature (0°C to +70°C)</b>	
SH9SD032GSNIDSC02	32GB
SH9SD016GSNICSC02	16GB
SH9SD008GSNICSC02	8GB
SH9SD004GSMIBSC02	4GB
<b>XL+   SD 3.01   SD Card</b>	
<b>Industrial Operating Temperature (-40°C to +85°C)</b>	
SH9SD032GSNIDSI02	32GB
SH9SD016GSNICSI02	16GB
SH9SD008GSNICSI02	8GB
SH9SD004GSMIBSI02	4GB



For more information, please visit: [www.smartm.com](http://www.smartm.com)

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