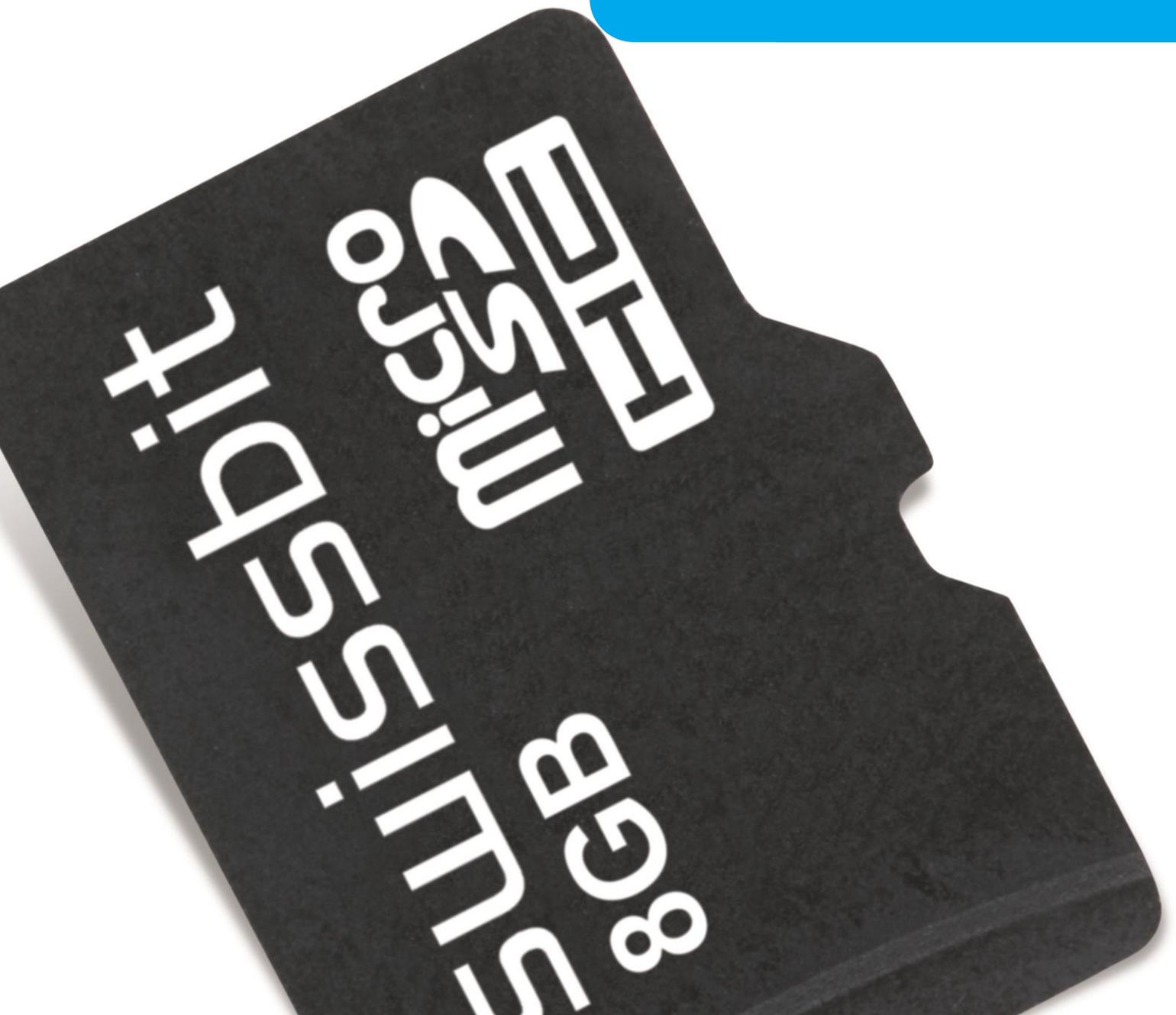# swissbit®

Product Fact Sheet

Industrial
MICRO SD Memory Card

S-300u Series
SPI, SD and SDHC compliant

S-300u Series
MICRO SD Memory Card

1 Feature summary

- Highly-integrated memory controller
    - Fully compliant with SD Memory Card specification SD1.01, SD1.1, SD2.0 and SD3.01 and MICRO SD Memory Card Addendum 4.00
- Standard MICRO SD Memory Card form factor
    - 15.0mm x 11.0mm x 0.7mm
- Operating voltage 2.7...3.6V
- Low-power CMOS technology
- High reliability
    - MTBF: > 3,000,000 hours
    - Number of insertions: > 10,000
    - Extended Temperature range −25° up to 85°C
    - Industrial Temperature range −40° up to 85°C
- Hot swappable
- High performance
    - Speed class
        - 2GB Card   speed class 6
        - 4GB, 8GB   speed class 10
    - SD burst up to 25MB/s
    - SD Low/High speed 0...25/50MHz clock rate
    - Flash burst up to 40MB/s
    - Flash Bus interleave
- Operating bus modes: SD 1 & 4bit and SPI
- Error Correction up to 24bit/1KB BCH ECC
- Wear Leveling: equal wear leveling of static and dynamic data
  The wear leveling assures that dynamic data as well as static data is balanced evenly across the memory. With that the maximum write endurance of the device is guaranteed.
- Write Endurance: Due to advanced wear leveling an even use of the entire flash is guaranteed, regardless how much "static" (OS) data is stored. Example: If the average file size is 10MByte and the total capacity is 8GByte, 48Mio write cycles can be performed.
- Available densities
    - 2, 4, and 8GBytes (SLC NAND Flash)
- Controlled BOM
- Life Cycle Management

2 Order Information

2.1 Standard product list

Table 1: Standard Product List

Density	general part number	current part number revision
2GB	SFSD2048NgBW1MT-t-ME-1x1-STD	SFSD2048N1BW1MT-t-ME-111-STD
4GB	SFSD4096NgBW1MT-t-DF-1x1-STD	SFSD4096N1BW1MT-t-DF-111-STD
8GB	SFSD8192NgBW1MT-t-QG-1x1-STD	SFSD8192N1BW1MT-t-QG-111-STD

g defines the product generation
x defines the FW
t defines the temperature range (E=−25°C to +85°C, I=−40°C to +85°C)

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3 System Specification

3.1 System Performance

System Performance		typ	max	Unit
Burst Data transfer Rate (max SD clock 50MHz)			25	MB/s
Sustained Sequential Read	2GB	20 [1][2]	24 [1][3]	
	4...8GB	20 [1][2]	24 [1][3]	
Sustained Sequential Write	2GB	11 [1][2]	12 [1][3]	
	4...8GB	17 [1][2]	22 [1][3]	

1. All values refer to Micron Flash 8/16Gb MICRO SD Memory Card in SD mode 50MHz, cycle time 20ns,
2. Sustained Speed measured with USB-SD Memory Card reader. It depends on burst speed, flash number, and file size.
3. Maximum values were measured with Testmetrix tester.

3.2 Power Consumption

Current Consumption @ 3.3V	Typ	Max	Unit
Write	60	70	mA
Read	50	60	
Sleep Mode	0.15	2	

3.3 Physical Dimensions

Physical Dimensions	Value	Unit
Length	15.0±0.1	mm
Width	11.0±0.1	
Thickness	0.7 (1.0)±0.1	
Weight (typ.)	0.4	g

3.4 Recommended Temperature Conditions

Parameter	Min	Typ	Max	Unit
Storage Temperature	-25	25	85	°C
Operating Temperature	-25	25	85	°C

3.5 Humidity and ESD

Parameter	Operating	Non Operating
Humidity (non-condensing)	operation: 95% RH @25°C storage: 93% RH @40°C, 500h	
EMC / EMI	Non Contact Pads area: ±8 kV (air discharge) Human body model according to IEC61000-4-2	Contact Pads: ±4 kV, Human body model according to IEC61000-4-2

3.6 Environmental Conditions

Parameter	Operating	Non Operating
UV light exposure	UV: 254nm, 15Ws/cm^2 according to ISO7816-1	
Durability	10,000 mating cycles	
Drop test	1.5m free fall	
Bending / Torque	10N / 0.10Nm ±2.5° max	

For more information on SD Memory Card Spec 3.01, please visit SD association (www.sdcard.org)

Why Swissbit?
Swissbit strives to create innovative technologies for future market opportunities utilizing a highly skilled in-house product research and development team. Swissbit maintains a marketing edge by continuing to manufacture world-class high quality memory products and providing customers with both high value and low cost of ownership achieved through efficient processes and procedures.

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X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Memory Cards *category:*

Click to view products by Swissbit *manufacturer:*

Other Similar products are found below :

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