



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Product Fact Sheet

Industrial  
MICRO SD Memory Card

**S-200u Series**

SPI and SD compliant



# S-200U SERIES

## MICRO SD Memory Card

### 1 Feature summary

- Highly-integrated memory controller
  - Fully compliant with SD Memory Card specification 2.0 and Micro SD Memory Card specification 2.0 addendum
  - Four integrated 4KByte Sector Buffers for fast data transfer
- Standard MICRO SD Memory Card form factor
  - 15.0mm x 11.0mm x 0.7mm
- 2.7...3.6V normal operating voltage
- 2.0...3.6V basic communication (CMD0, 15, 55 ACMD41) voltage
- Low-power CMOS technology
- 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.
- Patented power-off reliability
  - No data loss of older sectors
  - Max. 16 sectors data loss (old data kept) if power off during writing
- High reliability
  - Best available SLC NAND Flash technology
  - Designed for embedded market
  - 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
- CPRM keys optional
- High performance
  - SD burst up to 25MB/s
  - SD Low speed 0...25MHz clock rate
  - SD High speed 25...50MHz clock rate
  - Up to 21/18 MB/s sustained read/write speed
  - Flash burst up to 40MB/s
  - "Default speed cards" with disabled high speed mode available
- Available densities
  - up to 2GBytes
- Controlled BOM
- Life Time Monitoring SD/SPI with standard or vendor commands



## 2 Order Information

### 2.1 Standard product list

Table 1: General Product List

Capacity	Part Number
512MB	SFSD0512NgBN1TO-t-ME-1x1-STD
1GB	SFSD1024NgBN1TO-t-DF-1x1-STD
2GB	SFSD2048NgBN1TO-t-QF-1x1-STD

g defines the product generation

t defines the temperature range (E=-25°C to +85°C, I=-40°C to +85°C)

x defines the FW

### 2.2 Current standard product list

Table 2: General Product List

Capacity	Part Number
<b>Extended Temperature Range</b>	
512MB	SFSD0512N1BN1TO-E-ME-171-STD
1GB	SFSD1024N1BN1TO-E-DF-171-STD
2GB	SFSD2048N1BN1TO-E-QF-171-STD
<b>Industrial Temperature Range</b>	
512MB	SFSD0512N1BN1TO-I-ME-171-STD
1GB	SFSD1024N1BN1TO-I-DF-171-STD
2GB	SFSD2048N1BN1TO-I-QF-171-STD

### 2.3 Offered options for customer projects

- Customer specified strings and IDs (MID, OID, PNM, PRV)
- Customer specified capacities
- Preload service
- Customized printing and lasering
- Permanent write protected (ROM) with preloaded software
- Default speed mode
- Diagnostic documentation for Card Status Register access or vendor command extension values
- ...

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