

Preliminary spec. sheet (090318-V1.0)

INDUSTRIAL *Secure Digital (SD) Memory Card*



Compatibility :



Supported O.S. :



Certification :



INDUSTRIAL
CompactFlash Card

INDUSTRIAL
PCMCIA ATA Card

INDUSTRIAL
micro IDE Flash Disk

INDUSTRIAL
Solid State Disk

INDUSTRIAL
micro SATA Flash Disk

INDUSTRIAL
Rugged USB Disk

Operating temperature supports Industrial grade -40°C ~ 85°C

Features:

- NAND type SLC flash technology
- Fully compatible with the SD Card Specification Version 2.0
- 9 exposed contacts on one side
- Supports industrial grade operating temperature -40°C ~ 85°C
- Capacity from 128MB up to 2GB
- SD Card protocol compatible
- Supports SD mode and SPI mode
- Write Protect feature using mechanical switch
- Performance up to 19MB/sec



Specifications:

◆ Compatibility	SD Memory Card Specifications, Part 1, Physical Layer Specification, version 2.0 SD Memory Card Specifications, Part 2, File System Specification, Version 2.00 SD Memory Card Specifications, Part 3, Security Specification, Version 2.00 Compatible with Multimedia Card, System Specification, Version 4.2
◆ Flash technology	SLC-NAND type flash based
◆ Form-factor	Standard Size SD Memory Card
◆ Host Interface	9-pin connector
◆ Write Protection	Write protect feature using mechanical switch
◆ Performance	
● Sequential read	19 MB/sec (Max.)
● Sequential write	9.3 MB/sec (Max.)
● Average access time	1.0ms (estimated)
◆ Environmental specification	
● Operating temperature	Industrial grade -40°C ~ +85°C
● Non-operating temperature	Industrial grade -65°C ~ +100°C
● Humidity	25% ~ 95% non-condensing
● ESD Protection	
➢ Contact Pads:	±4kV, Human body model according to ANSI EOS/ESD-S5.1-1998
➢ Non Contact Pads Area:	±8kV (coupling plane discharge) ±15kV (air charge), Human body model per IEC61000-4-2

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● Vibration	1,000G Max.
● Shock	15G peak-to-peak
● Altitude	80,000 feet
◆ Power consumption	
● Power requirement	2.7V ~ 3.6V
● Reading mode	68mA(Max.)
● Writing mode	80mA(Max.)
● Standby mode	450µA (Type.)
◆ Reliability & Durability	
● Durability	10,000 inserting cycles
● Bending	10N
● Torque	0.15N, ± 2.5 deg.
● Drop Test	1.5M free fall
● WP Switch Cycle	1,000 cycles @ slide force 0.4N to 5N
● Wear-leveling	Dynamic wear-leveling algorithms
● MTBF	> 2,000,000 hours
● ECC	Correcting up to 8 bits data errors per 528 bytes data or 15 bits data errors per 539 bytes data automatically
● Endurance	> 2,000,000 cycles logically contributed by dynamic wear-leveling and advanced bad sector management
● Data reliability	algorithms
● Data retention	< 1 non-recoverable error in 10 ¹⁴ bits read 10 years
◆ Physical specification	
● Weight (max.)	2.0g/ 0.07oz
● Dimension(W x L x H)	32.0 x 24.0 x 2.1 (mm) / 1.26 x 0.95 x 0.08 (inch)
◆ Warranty	
● Industrial grade	5 years

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Industrial Secure Digital (SD) Memory Card
Operating temperature supports Industrial grade -40°C ~ 85°C

Part number list :

Product Picture	Capacity	-40° C~ 85° C
	128MB	WPSDC128M-IAISI
	256MB	WPSDC256M-IAISI
	512MB	WPSDC512M-IAISI
	1GB	WPSDC001G-IAISI
	2GB	WPSDC002G-IAISI

Part number decoder :

X1 X2 X3 X4 X5 X6 X7 X8 X9 — **X11 X12 X13 X14 X15**

X1 : Grade

W : Industrial grade – operating temp. -40° C ~ 85° C

X11 : Controller

I : InCOMM

X2 : The material of case

P : Plastic casing

X12 : Controller version

A,B,C.....

X3 X4 X5 : Product category

SDC : Secure Digital (SD) memory card

X13 : Controller grade

I : Industrial grade

X6 X7 X8 X9 : Capacity

128M: 128MB

256M: 256MB

512M: 512MB

001G: 1GB

002G: 2GB

X14 : Flash IC

S : Samsung SLC-NAND Flash IC

X15 : Flash IC grade / Type

I : Industrial grade

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