

## HERCULES Series Industrial 1.8" SATA Flash disk



### Product features

- ❖ SLC - NAND type flash technology
- ❖ 1.8" SATA drive form-factor
- ❖ Extremely rugged metal casing to endure harsh environments
- ❖ Standard SATA 7-pin(data) + 15-pin(power) connector
- ❖ Serial ATA 1.0a specification compliance
- ❖ Performance up to 45.0MB/sec
- ❖ Capacity from 128MB up to 16GB

### Product specifications

<b>Compatibility</b>	❖ Serial ATA standard rev. 1.0a
<b>Flash technology</b>	❖ SLC-NAND type flash based
<b>Form-factor</b>	❖ Rugged Metal 1.8" SATA hard disk drive
<b>Host Interface</b>	❖ Standard SATA 7-pin (data) + 15-pin (power) connector

#### Performance

Data transfer rate	❖ Serial ATA Gen-I (1.5Gb/s)
Sequential read	❖ 45.0 MB/sec (Max. /with dual flash)
Sequential write	❖ 31.0 MB/sec (Max. /with dual flash)
Average access time	❖ 0.2ms (estimated)

#### Environmental specification

Operating temp.	❖ STD. 0°C ~ 70°C / IND. -40°C ~ 85°C
Non-operating temp.	❖ STD. -20°C ~ 80°C / IND. -50°C ~ 95°C
Humidity	❖ 10% ~ 95% non-condensing
Vibration	❖ 15G compliance to MIL-STD-810F
Shock	❖ 1,500G compliance to MIL-STD-810F
Altitude	❖ 70,000 feet

#### Power consumption

Power requirement	❖ +5V ± 10%
Reading mode	❖ 260 mA(Max.)
Writing mode	❖ 220 mA(Max.)
Sleeping mode	❖ 140 mA(Max.)

#### Reliability

Wear-leveling	❖ Static wear-leveling algorithms
MTBF	❖ > 3,000,000 hours
ECC	❖ 4-bits per 512bytes block
Endurance	❖ > 2,000,000 cycles

#### Physical specification

Weight (max.)	❖ 59.4g / 2.10 oz.
Dimension(W x L x H)	❖ 69.85 x 60.00 x 9.50 (mm)

**Conformal coating** ❖ Option for special request

#### Warranty

Standard grade	❖ 3 years
Industrial grade	❖ 5 years

INDUSTRIAL  
CompactFlash Card

INDUSTRIAL  
PCMCIA ATA Card

INDUSTRIAL  
micro IDE Flash Disk

INDUSTRIAL  
micro SATA Flash Disk

INDUSTRIAL  
Solid State Disk

INDUSTRIAL  
Mini USB Flash Disk

INDUSTRIAL  
Card Reader

# Product Specifications

Operating temperature supports Standard grade 0°C ~ 70°C and Industrial grade -40°C ~ 85°C  
 Part number list - 1.8" rugged metal SATA flash disk

Product Picture	Capacity	0°C ~ 70°C	-40°C ~ 85°C
	<b>128MB</b>	SR8SF128M-MACSC	WR8SF128M-MAISI
	<b>256MB</b>	SR8SF256M-MACSC	WR8SF256M-MAISI
	<b>512MB</b>	SR8SF512M-MACSC	WR8SF512M-MAISI
	<b>1GB</b>	SR8SF001G-MACSC	WR8SF001G-MAISI
	<b>2GB</b>	SR8SF002G-MACSC	WR8SF002G-MAISI
	<b>4GB</b>	SR8SF004G-MACSC	WR8SF004G-MAISI
	<b>8GB</b>	SR8SF008G-MACSC	WR8SF008G-MAISI
	<b>16GB</b>	SR8SF016G-MACSC	WR8SF016G-MAISI

## Part number decoder

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

### Example

S R 8 S F 5 1 2 M — M A C S C — C

#### X1 ▣ Grade

**S** : Standard grade operating temp. 0°C ~ 70°C

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

#### X2 ▣ The material of case

**R** : Rugged metal casing

#### X3 X4 X5 ▣ Product category

**8SF** : 1.8" SATA flash disk

#### X6 X7 X8 X9 ▣ Capacity

**128M** : 128MB      **008G** : 8GB

**256M** : 256MB      **016G** : 16GB

**512M** : 512MB

**001G** : 1GB

**002G** : 2GB

**004G** : 4GB

#### X11 ▣ Controller

**M** : SMI (Hercules series)

#### X12 ▣ Controller version

**A,B,C**.....

#### X13 ▣ Controller grade

**C** : Commercial grade

**I** : Industrial grade

#### X14 ▣ Flash IC

**S** : Samsung SLC-NAND flash IC

#### X15 ▣ Flash IC grade / Type

**C** : Commercial grade

**I** : Industrial grade

#### C ▣ Reserved for specific requirement

**C** : Conformal-coating