



INDUSTRIAL  
CompactFlash Card

INDUSTRIAL  
PCMCIA ATA Card

INDUSTRIAL  
micro IDE Flash Disk

INDUSTRIAL  
micro SATA Flash Disk

INDUSTRIAL  
Solid State Disk

INDUSTRIAL  
Rugged Metal  
USB Flash Disk

INDUSTRIAL  
Adaptive  
Card Reader



### Product features

- ✦ IP-54 & IP-68 Waterproof metal casing design
- ✦ USB 2.0 interface downwards compatible to USB 1.1
- ✦ Supports Ready Boost for Microsoft Vista O.S.
- ✦ USB 2.0 Mass Storage compliant
- ✦ Capacities from 128MB up to 8GB (Industrial grade up to 4GB)
- ✦ Performance up to 21.9MB/sec


### Product specifications

<b>Compatibility</b>	✦ USB 2.0 and USB 1.1 backwards	✦ Supports partition management, password and security	
<b>Flash technology</b>	✦ SLC-NAND type flash based		
<b>Performance</b>		<b>Power consumption</b>	
Data transfer rate	✦ USB 2.0 supports transfer rates up to 480 Mb/s (60MB/s)	Power requirement	✦ 5V ± 10% via USB port
Sequential read	✦ 21.9 MB/sec (Max.)	Reading mode	✦ 108.6 mA (Max.)
Sequential write	✦ 19.1 MB/sec (Max.)	Writing mode	✦ 116.7 mA (Max.)
Average access time	✦ 0.6 ms (estimated)	Sleeping mode	✦ 86.7 mA (Max.)
<b>Environmental specification</b>		<b>Reliability</b>	
Operating temp.	✦ STD. 0°C - 70°C / IND. -40°C - 85°C	Wear-leveling	✦ Dynamic wear-leveling algorithms
Non-operating temp.	✦ STD. -20°C - 80°C / IND. -50°C - 95°C	MTBF	✦ > 1,000,000 hours
Humidity	✦ 10% - 95% non-condensing	ECC	✦ 8bit/12bit ECC (8bit/512Bytes & 12bit/512Bytes BCH ECC engines)
Vibration	✦ 16.3G compliance to MIL-STD-810F	Endurance	✦ > 2,000,000 cycles
Shock	✦ 1,500G compliance to MIL-STD-810F	<b>Physical specification</b>	
Altitude	✦ 70,000 feet	Weight (max.)	✦ 40 g / 1.41 oz.
<b>OS supported</b>	✦ Windows ME / 2000 / XP / Vista ✦ Mac9.x , Mac OS X / Win98SE need driver	Dimension(W x L x H)	✦ 54.00 x 19.90 x 19.90 (mm)
<b>Functionality</b>	✦ Supports auto-run function ✦ A bootable disk for system recovery	<b>Warranty</b>	✦ Standard grade : 3 years ✦ Industrial grade : 5 years

# Product Specifications

Operating temperature supports Standard grade 0° C ~ 70° C and Industrial grade -40° C ~ 85° C

## Part number list - Rugged metal USB flash disk - Generation 2

Product Picture	Capacity	0° C ~ 70° C	-40° C ~ 85° C
	<b>128MB</b>	SRUFD128M-ACCSC/2	WRUFD128M-ACISI/2
	<b>256MB</b>	SRUFD256M-ACCSC/2	WRUFD256M-ACISI/2
	<b>512MB</b>	SRUFD512M-ACCSC/2	WRUFD512M-ACISI/2
	<b>1GB</b>	SRUFD001G-ACCSC/2	WRUFD001G-ACISI/2
	<b>2GB</b>	SRUFD002G-ACCSC/2	WRUFD002G-ACISI/2
	<b>4GB</b>	SRUFD004G-ACCSC/2	WRUFD004G-ACISI/2
	<b>8GB</b>	SRUFD008G-ACCSC/2	No Industrial Grade Flash IC

## Part number decoder

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

W	R	U	F	D	1	2	8	M	—	A	B	I	S	I	/	2				
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### 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

**M** : Metal casing

### X3 X4 X5 ↗ Product category

**UFD** : USB flash disk

### X6 X7 X8 X9 ↗ Capacity

**128M** : 128MB      **002G** : 2GB

**256M** : 256MB      **004G** : 4GB

**512M** : 512MB      **008G** : 8GB

**001G** : 1GB

### X11 ↗ Controller

**A** : Alcor (Hammer 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

**1** : Generation 1 type housing

**2** : Generation 2 type housing

**3** : Generation 3 type housing