

# HERCULES-N Series

## SLC Industrial CompactFlash (CF) Card Rugged Metal Frame



### Product features

- SLC - NAND type flash technology
- Compatible with CompactFlash® specification 6.0
- CompactFlash® Type I form-factor
- Compatible with ATA/ATAPI-8 standard
- S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology)
- Data transfer mode support PIO 0-6, MWDMA 0-4, UDMA 0-7
- Supports PC Card Memory mode or True IDE mode
- Performance up to: Read 116 MB/sec ; Write 96 MB/sec
- Capacities from 2GB up to 64GB

### Product specifications

<b>Compatibility</b>	CompactFlash® specification 6.0	<b>Power consumption</b>	Power requirement	+5V 10% / +3.3V 5%
	Compatible with ATA/ATAPI-8		Reading mode	210 mA (Max.)
<b>Form-factor</b>	CompactFlash® Type I		Writing mode	210 mA (Max.)
<b>Flash technology</b>	SLC-NAND type flash based		Idle mode	6.6 mA (Max.)
<b>Performance</b>		<b>Reliability</b>		
Data transfer rate	PIO 0-6, MWDMA 0-4, UDMA 0-7	Wear-leveling	Global wear-leveling algorithms	
Sequential read	116 MB/sec (dual CH. Max.)	MTBF	> 3,000,000 hours	
Sequential write	96 MB/sec (dual CH. Max.)	Endurance	> 2,000,000 cycles	
Random access time	0.3ms (estimated)	ECC	72 bits per 1024 bytes block	
<b>Environmental specification</b>		Data retention	10 Years	
Operating temp.	STD. 0°C~70°C/IND. -40°C~+85°C	<b>Physical specification</b>		
Non-operating temp.	STD. -20°C~+80°C/IND. -50°C~+95°C	Weight (max.)	Plastic frame: 12.0 g / 0.42 oz.	
Humidity	10% ~ 95% non-condensing		Metal frame: 15.0 g / 0.53 oz.	
Vibration	15G compliance to MIL-STD-810F	Dimension(W x L x H)	42.8 x 36.4 x 3.3 (mm)	
Shock	1,500G compliance to MIL-STD-810F	<b>Conformal coating</b>	Option for special request	
Altitude	70,000 feet	<b>Warranty</b>		
		Standard grade	3 years	
		Industrial grade	5 years	

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

Part number list - SLC Industrial CF Card with standard plastic frame kit

Product Picture	Capacity	0° C ~ 70° C	-40° C ~ +85° C
	2GB	SPCFC002G-MNCTC-UF(/C)	WPCFC002G-MNITI-UF(/C)
	4GB	SPCFC004G-MNCTC-UF(/C)	WPCFC004G-MNITI-UF(/C)
	8GB	SPCFC008G-MNCTC-UF(/C)	WPCFC008G-MNITI-UF(/C)
	16GB	SPCFC016G-MNCTC-UF(/C)	WPCFC016G-MNITI-UF(/C)
	32GB	SPCFC032G-MNCTC-UF(/C)	WPCFC032G-MNITI-UF(/C)
	64GB	SPCFC064G-MNCTC-UF(/C)	WPCFC064G-MNITI-UF(/C)

Part number list - SLC Industrial CF Card with rugged metal frame kit

Product Picture	Capacity	0° C ~ 70° C	-40° C ~ +85° C
	2GB	SRCFC002G-MNCTC-UF(/C)	WRCFC002G-MNITI-UF(/C)
	4GB	SRCFC004G-MNCTC-UF(/C)	WRCFC004G-MNITI-UF(/C)
	8GB	SRCFC008G-MNCTC-UF(/C)	WRCFC008G-MNITI-UF(/C)
	16GB	SRCFC016G-MNCTC-UF(/C)	WRCFC016G-MNITI-UF(/C)
	32GB	SRCFC032G-MNCTC-UF(/C)	WRCFC032G-MNITI-UF(/C)
	64GB	SRCFC064G-MNCTC-UF(/C)	WRCFC064G-MNITI-UF(/C)

### Part number decoder



### Example

- X1** Grade
  - S : Standard grade operating temp. 0° C~70° C
  - W : Industrial grade operating temp. -40° C ~ +85° C
- X2** The material of casing
  - P : Plastic frame
  - R : Rugged metal frame
- X3 X4 X5** Product category
  - CFC : CompactFlash (CF) card
- X6 X7 X8 X9** Capacity
  - 002G : 2GB    004G : 4GB    008G : 8GB
  - 016G : 16GB    032G : 32GB    064G : 64GB
- X11** Controller
  - M : SMI (HERCULES Series)
- X12** Controller version
  - A,B,C,....
- X13** Controller grade
  - C : Commercial grade
  - I : Industrial grade
- X14** Flash IC
  - T : Toshiba SLC-NAND flash IC
- X15** Flash IC grade
  - C : Commercial grade
  - I : Industrial grade
- Z1 Z2** Data transfer rate and disk types
  - PF: optional as PIO-6 mode / Fixed disk type
  - PR: optional as PIO-6 mode / Removable disk type
  - UF: defaulted as UDMA-7 mode / Fixed disk type
  - UR: optional as UDMA-7 mode / Removable disk type
  - AA: optional as UDMA & PIO mode auto-detection / Fixed disk & removable disk type auto-detection
- C** Reserved for specific requirement
  - C : Conformal-coating

CFC Industrial CompactFlash Card

CFA Industrial CFast Card

AFC Industrial PCMCIA ATA Card

MIF Industrial micro IDE Flash Module

MSF Industrial micro SATA Flash Module

MUM Industrial micro USB Flash Module

MPM Industrial mini PCI-e Flash Module

MSM Industrial mini SATA Flash Module

SSD Industrial Solid State Disk

UFD Industrial Rugged Metal USB Flash Disk

SDC/H Industrial 5V & 3.3V Memory Card

AD Industrial Adapter Card-Drive

CFC Industrial CompactFlash Card

CFA Industrial CFast Card

AFC Industrial PCMCIA ATA Card

MIF Industrial micro IDE Flash Module

MSF Industrial micro SATA Flash Module

MUM Industrial micro USB Flash Module

MPM Industrial mini PCI-e Flash Module

MSM Industrial mini SATA Flash Module

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