

# HERCULES-K Series

MLC CompactFlash (CF) Card / Optional Rugged Metal Frame



## Product Feature


- MLC - NAND type flash technology
- Compatible with CompactFlash specification 4.1
- Compatible with ATA/ATAPI-7 standard
- Supports PC Card Memory mode or True IDE mode
- Data transfer mode support PIO 0~6, MWDMA 0~4, UDMA 0~7
- Supports Auto Stand-by mode and Auto Sleep mode
- Performance up to 110.0 MB/sec (Max.)
- Capacities from 4GB up to 128GB

## Product Specification


<b>Compatibility</b>	<ul style="list-style-type: none"> <li>➤ CompactFlash specification 4.1</li> <li>Compatible with ATA/ATAPI-7</li> </ul>	<b>Power consumption</b>	<ul style="list-style-type: none"> <li>Power requirement ➤ +5V±10%/+3.3V±5%</li> <li>Reading mode ➤ 148 mA (Max.)</li> <li>Writing mode ➤ 155 mA(Max.)</li> <li>Idle mode ➤ 4 mA (Max.)</li> </ul>
<b>Flash technology</b>	<ul style="list-style-type: none"> <li>➤ MLC-NAND type flash based</li> </ul>	<b>Reliability</b>	<ul style="list-style-type: none"> <li>Wear-leveling ➤ Global wear-leveling algorithms</li> <li>ECC ➤ 72 bits per 1024 bytes block</li> </ul>
<b>Performance</b>		<b>Physical specification</b>	<ul style="list-style-type: none"> <li>Weight (max.) ➤ Plastic frame: 12.0 g / 0.40 oz.</li> <li>➤ Metal casing 15.0 g / 0.50 oz.</li> <li>Dimension(W x L x H) ➤ 42.8 x 36.4 x 3.3 (mm)</li> </ul>
Data transfer rate	➤ PIO 0~6, MWDMA 0~4 UDMA 0~7	<b>Warranty</b>	<ul style="list-style-type: none"> <li>MLC(standard/wide temp.) ➤ 2 years / Within 3k Erasing counts</li> </ul>
Sequential read	➤ 110.0 MB/sec (Max.)		
Sequential write	➤ 110.0 MB/sec (Max.)		
Random access time	➤ 0.2ms (estimated)		
<b>Environmental specification</b>			
Operating temp.	➤ STD. 0°C~70°C/W.T. -40°C~+85°C		
Non-operating temp.	➤ STD. -20°C~+80°C/W.T. -50°C~+95°C		
<b>Conformal coating</b>	➤ Option for wide temperature		
Humidity	➤ 10% ~ 95% non-condensing		
Vibration	➤ 7 Hz to 2K Hz, 20G, 3 axes		
Shock	➤ 0.5ms, 1500G, 3 axes		
Altitude	➤ 70,000 feet		

Operating temperature supports standard grade 0°C ~ 70°C and wide temp. grade -40°C ~ +85°C

Part number list - MLC CF Card with standard plastic frame kit

Product Picture	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	4GB	SPCFC004G-MKCTMB-UF	WPCFC004G-MKCTMB-UF/C
	8GB	SPCFC008G-MKCTMB-UF	WPCFC008G-MKCTMB-UF/C
	16GB	SPCFC016G-MKCTMB-UF	WPCFC016G-MKCTMB-UF/C
	32GB	SPCFC032G-MKCTMB-UF	WPCFC032G-MKCTMB-UF/C
	64GB	SPCFC064G-MKCTMB-UF	WPCFC064G-MKCTMB-UF/C
	128GB	SPCFC128G-MKCTMB-UF	WPCFC128G-MKCTMB-UF/C

Part number list - MLC CF Card with rugged metal frame kit

Product Picture	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	4GB	SRCFC004G-MKCTMB-UF	WRCFC004G-MKCTMB-UF/C
	8GB	SRCFC008G-MKCTMB-UF	WRCFC008G-MKCTMB-UF/C
	16GB	SRCFC016G-MKCTMB-UF	WRCFC016G-MKCTMB-UF/C
	32GB	SRCFC032G-MKCTMB-UF	WRCFC032G-MKCTMB-UF/C
	64GB	SRCFC064G-MKCTMB-UF	WRCFC064G-MKCTMB-UF/C
	128GB	SRCFC128G-MKCTMB-UF	WRCFC128G-MKCTMB-UF/C

Remarks : Wide temperature grade -40°C ~ +85°C with special conformal coating treatment on PCBA.

### Part Number Decoder

X1 X2 X3 X4 X5 X6 X7 X8 X9 — X11 X12 X13 X14 X15 X16 — Z1 Z2 / C

Example

W P C F C 0 3 2 G — M K C T M B — U F / C

#### X1 Grade

S : Standard grade operating temp. 0° C~70 ° C  
W : Wide temp. grade operating temp. -40° C~+85° C

#### X2 The material of casing

P : Plastic frame kit  
R : Rugged metal frame kit

#### X3 X4 X5 Product category

CFC : CompactFlash (CF) card

#### X6 X7 X8 X9 Capacity

004G : 4GB      032G : 32GB  
008G : 8GB      064G : 64GB  
016G : 16GB    128G : 128GB

#### X11 Controller

M : HERCULES Series

#### X12 Controller version

A, B, C, D.....K

#### X13 Controller grade

C : Commercial grade

#### X14 Flash IC

T : Toshiba flash IC

#### X15 Flash IC grade

M : MLC-NAND flash IC

#### X16 Generation

B : 15 nm

#### 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 /  
FFixed disk & removable disk type auto-detection

#### C Reserved for specific requirement

C : Conformal-coating