

# HERMIT Series

## Industrial (Rugged Metal) PCMCIA ATA Card



### Product features

- SLC - NAND type flash technology
- Compatible with PC card standard and PCMCIA V2.1
- PCMCIA Type II form-factor
- Optional for standard casing and rugged metal casing
- Compatible with ATA/ATAPI-6 standard
- Data transfer mode support PIO 0-4 and UDMA 0-4
- Performance up to 40MB/sec
- Capacity from 128MB up to 16GB

### Product specifications

<b>Compatibility</b>	ATAPI-6 and True IDE mode	<b>Power consumption</b>	
<b>Flash technology</b>	SLC-NAND type flash based	Power requirement	+5V ± 10% / +3.3V ± 5%
<b>Form-factor</b>	PCMCIA Type II form-factor	Reading mode	124 mA (Max.)
<b>Host Interface</b>	Female 68 pins	Writing mode	121 mA (Max.)
<b>Performance</b>		Sleeping mode	1.8 mA (Max.)
Data transfer mode	PIO-4 mode or UDMA-4 mode (def.)	<b>Reliability</b>	
Data transfer rate	66.6 MB/sec (ATA-5 / UDMA-4)	Wear-leveling	Static wear-leveling algorithms
	16.6 MB/sec (ATA-3 / PIO-4)	MTBF	> 3,000,000 hours
Sequential read	40 MB/sec (Max. /with dual flash)	ECC	4 bits per 512 bytes block
Sequential write	20 MB/sec (Max. /with dual flash)	Endurance	> 2,000,000 cycles
Average access time	0.2 ms (estimated)	<b>Physical specification</b>	
<b>Environmental specification</b>		Weight (max.)	Standard casing 43.0 g / 1.52 oz. Metal casing 60.0 g / 2.12 oz.
Operating temp.	STD. 0°C ~ 70°C / IND. -40°C ~ +85°C	Dimension(W x L x H)	85.6 x 54.0 x 5.0 (mm)
Non-operating temp.	STD. -20°C ~ +80°C / IND. -50°C ~ +95°C	<b>Conformal coating</b>	Option for special request
Humidity	10% ~ 95% non-condensing	<b>Warranty</b>	
Vibration	15G compliance to MIL-STD-810F	Standard grade	3 years
Shock	1,500G compliance to MIL-STD-810F	Industrial grade	5 years
Altitude	70,000 feet		

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

### Part number list - Industrial PCMCIA ATA card with standard plastic frame kit

Product picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	128MB	SPAFC128M-HACSC-UF	WPAFC128M-HAISI-UF
	256MB	SPAFC256M-HACSC-UF	WPAFC256M-HAISI-UF
	512MB	SPAFC512M-HACSC-UF	WPAFC512M-HAISI-UF
	1GB	SPAFC001G-HACSC-UF	WPAFC001G-HAISI-UF
	2GB	SPAFC002G-HACSC-UF	WPAFC002G-HAISI-UF
	4GB	SPAFC004G-HACSC-UF	WPAFC004G-HAISI-UF
	8GB	SPAFC008G-HACSC-UF	WPAFC008G-HAISI-UF
	16GB	SPAFC016G-HACSC-UF	WPAFC016G-HAISI-UF

### Part number list - Industrial PCMCIA ATA card with rugged metal frame kit

Product picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	128MB	SRAFC128M-HACSC-UF	WRAFC128M-HAISI-UF
	256MB	SRAFC256M-HACSC-UF	WRAFC256M-HAISI-UF
	512MB	SRAFC512M-HACSC-UF	WRAFC512M-HAISI-UF
	1GB	SRAFC001G-HACSC-UF	WRAFC001G-HAISI-UF
	2GB	SRAFC002G-HACSC-UF	WRAFC002G-HAISI-UF
	4GB	SRAFC004G-HACSC-UF	WRAFC004G-HAISI-UF
	8GB	SRAFC008G-HACSC-UF	WRAFC008G-HAISI-UF
	16GB	SRAFC016G-HACSC-UF	WRAFC016G-HAISI-UF

### Remarks: The optional data-transfer modes and disk types are:

- PF: optional as PIO-4 mode / Fixed disk type
- PR: optional as PIO-4 mode / Removable disk type
- PA: optional as PIO-4 mode / Fixed disk & Removable disk type auto-detection
- UF: defaulted as UDMA-4 mode / Fixed disk type**
- UR: optional as UDMA-4 mode / Removable disk type
- UA: optional as UDMA-4 mode / Fixed disk & Removable disk type auto-detection
- AF: optional as UDMA & PIO mode auto-detection / Fixed disk type
- AR: optional as UDMA & PIO mode auto-detection / Removable disk type
- AA: optional as UDMA & PIO mode auto-detection / Fixed disk & Removable disk type auto-detection

CF

Industrial CompactFlash Card

Part number decoder

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

Example

S P A F C 0 0 8 G — K A C S C — U F / C

X1 Grade

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

X11 Controller

H : Hyperstone (HERMIT Series)  
 K : KTC (CHARIOT Series)

X2 The material of frame kit

P : Plastic frame kit  
 R : Rugged metal frame kit

X12 Controller version

A,B,C,.....

X3 X4 X5 Product category

AFC : PCMCIA ATA flash card

X13 Controller grade

C : Commercial grade  
 I : Industrial grade

X6 X7 X8 X9 Capacity

128M : 128MB    004G : 4GB  
 256M : 256MB    008G : 8GB  
 512M : 512MB    016G : 16GB  
 001G : 1GB        032G : 32GB  
 002G : 2GB        064G : 64GB

X14 Flash IC

S : Samsung 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-4 mode / Fixed disk type  
 PR: optional as PIO-4 mode / Removable disk type  
 PA: optional as PIO-4 mode / Fixed disk & Removable disk type auto-detection  
**UF: defaulted as UDMA-4 mode / Fixed disk type**  
 UR: optional as UDMA-4 mode / Removable disk type  
 UA: optional as UDMA-4 mode / Fixed disk & Removable disk type auto-detection  
 AF: optional as UDMA & PIO mode auto-detection / Fixed disk type  
 AR: optional as UDMA & PIO mode auto-detection / 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

ATA

Industrial PCMCIA ATA Card

MIF

Industrial micro IDE Flash Module

MSE

Industrial micro SATA Flash Module

MUM

Industrial micro USB Module

MPM

Industrial mini PCI-e Module

SSD

Industrial Solid State Disk

UED

Industrial Rugged Metal USB Flash Disk

SD

Industrial SD & SDHC Memory Card

AD

Industrial Adapter Card-Drive