

HERMIT Series

SLC Industrial PCMCIA ATA Card Rugged Metal Frame



Product features

- ❖ SLC - NAND type flash technology
- ❖ Compatible with PC card standard and PCMCIA V2.1
- ❖ PCMCIA Type II form-factor
- ❖ Compatible with ATA/ATAPI-6 standard
- ❖ Optional for standard casing and rugged metal casing
- ❖ Data transfer mode support PIO 0-4, MWDMA 0-2, UDMA 0-4
- ❖ Supports PC Card Memory mode or True IDE mode
- ❖ Performance up to: Read 40 MB/sec ; Write 20 MB/sec
- ❖ Capacities from 16MB up to 16GB

Product specifications

Compatibility	❖ PC card standard and PCMCIA V2.1	Power consumption	
	Compatible with ATA/ATAPI-6	Power requirement	❖ +5V 10% / +3.3V 5%
Flash technology	❖ SLC-NAND type flash based	Reading mode	❖ 124 mA (Max.)
Form-factor	❖ PCMCIA Type II form-factor	Writing mode	❖ 121 mA(Max.)
Host Interface	❖ Female 68 pins	Idle mode	❖ 1.8 mA (Max.)
Performance		Reliability	
Data transfer rate	❖ PIO 0-4, MWDMA 0-2, UDMA 0-4	Wear-leveling	❖ Static wear-leveling algorithms
	❖ 66.6 MB/sec (ATA-5 / UDMA-4)	MTBF	❖ > 3,000,000 hours
	❖ 16.6 MB/sec (ATA-3 / PIO-4)	Endurance	❖ > 2,000,000 cycles
Sequential read	❖ 40 MB/sec (Max. / 32GB)	ECC	❖ 4 bits per 512bytes block
Sequential write	❖ 27.8 MB/sec (Max. / 32GB)	Data retention	❖ 10 Years
Random access time	❖ 0.2ms (estimated)	Physical specification	
Environmental specification		Weight (max.)	❖ Standard casing 43.0 g / 1.52 oz.
Operating temp.	❖ STD. 0° C~70° C/IND. -40° C~+85° C		❖ Metal casing 60.0 g / 2.12 oz.
Non-operating temp.	❖ STD. -20° C~+80° C/IND. -50° C~+95° C	Dimension(W x L x H)	❖ 85.6 x 54.0 x 5.0 (mm)
Humidity	❖ 10% ~ 95% non-condensing	Conformal coating	❖ Option for special request
Vibration	❖ 15G compliance to MIL-STD-810F	Warranty	
Shock	❖ 1,500G compliance to MIL-STD-810F	Standard grade	❖ 3 years
Altitude	❖ 70,000 feet	Industrial grade	❖ 5 years

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
	16MB	SPAFC016M-HACSCN-UF(/C)	WPAFC016M-HAISIN-UF(/C)
	32MB	SPAFC032M-HACSCN-UF(/C)	WPAFC032M-HAISIN-UF(/C)
	64MB	SPAFC064M-HACSCN-UF(/C)	WPAFC064M-HAISIN-UF(/C)
	128MB	SPAFC128M-HACSCN-UF(/C)	WPAFC128M-HAISIN-UF(/C)
	256MB	SPAFC256M-HACSCN-UF(/C)	WPAFC256M-HAISIN-UF(/C)
	512MB	SPAFC512M-HACSCN-UF(/C)	WPAFC512M-HAISIN-UF(/C)
	1GB	SPAFC001G-HACSCN-UF(/C)	WPAFC001G-HAISIN-UF(/C)
	2GB	SPAFC002G-HACSCN-UF(/C)	WPAFC002G-HAISIN-UF(/C)
	4GB	SPAFC004G-HACSCN-UF(/C)	WPAFC004G-HAISIN-UF(/C)
	8GB	SPAFC008G-HACSCN-UF(/C)	WPAFC008G-HAISIN-UF(/C)
	16GB	SPAFC016G-HACSC-UF(/C)	WPAFC016G-HAISIN-UF(/C)
	16GB	SPAFC016G-HACMC-UF(/C)	WPAFC016G-HAIMI-UF(/C)
	32GB	SPAFC032G-HACMC-UF(/C)	WPAFC032G-HAIMI-UF(/C)

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

Product Picture	Capacity	0° C ~ 70° C	-40° C ~ +85° C
	16MB	SRAFC016M-HACSCN-UF(/C)	WRAFC016M-HAISIN-UF(/C)
	32MB	SRAFC032M-HACSCN-UF(/C)	WRAFC032M-HAISIN-UF(/C)
	64MB	SRAFC064M-HACSCN-UF(/C)	WRAFC064M-HAISIN-UF(/C)
	128MB	SRAFC128M-HACSCN-UF(/C)	WRAFC128M-HAISIN-UF(/C)
	256MB	SRAFC256M-HACSCN-UF(/C)	WRAFC256M-HAISIN-UF(/C)
	512MB	SRAFC512M-HACSCN-UF(/C)	WRAFC512M-HAISIN-UF(/C)
	1GB	SRAFC001G-HACSCN-UF(/C)	WRAFC001G-HAISIN-UF(/C)
	2GB	SRAFC002G-HACSCN-UF(/C)	WRAFC002G-HAISIN-UF(/C)
	4GB	SRAFC004G-HACSCN-UF(/C)	WRAFC004G-HAISIN-UF(/C)
	8GB	SRAFC008G-HACSCN-UF(/C)	WRAFC008G-HAISIN-UF(/C)
	16GB	SRAFC016G-HACSC-UF(/C)	WRAFC016G-HAISIN-UF(/C)
	16GB	SRAFC016G-HACMC-UF(/C)	WRAFC016G-HAIMI-UF(/C)
	32GB	SRAFC032G-HACMC-UF(/C)	WRAFC032G-HAIMI-UF(/C)

CF Industrial CompactFlash Card

CFast Industrial CFast Card

ATA 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

SD Industrial SD & SDHC Memory Card

AD Industrial Adapter Card-Drive

CF Industrial CompactFlash Card

CFast Industrial CFast Card

ATA 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

SD Industrial SD & SDHC Memory Card

AD Industrial Adapter Card-Drive

CF
Industrial CompactFlash Card

CFast
Industrial CFast Card

ATA
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

SD
Industrial SD & SDHC Memory Card

AD
Industrial Adapter Card-Drive

CF
Industrial CompactFlash Card

CFast
Industrial CFast Card

ATA
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

SD
Industrial SD & SDHC Memory Card

AD
Industrial Adapter Card-Drive

Part number decoder

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

Example

W P A F C 0 3 2 G — H A I M I N — U F / 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 casing**

P : Plastic frame

R : Rugged metal frame kit

X3 X4 X5 ➤ **Product category**

AFC : PCMCIA ATA flash card

X6 X7 X8 X9 ➤ **Capacity**

016M : 16MB **001G** : 1GB

032M : 32MB **002G** : 2GB

064M : 64MB **004G** : 4GB

128M : 128MB **008G** : 8GB

256M : 256MB **016G** : 16GB

512M : 512MB **032G** : 32GB

X11 ➤ **Controller**

H : Hyperstone (HERMIT Series)

X12 ➤ **Controller version**

A,B,C,....

X13 ➤ **Controller grade**

C : Commercial grade

I : Industrial grade

X14 ➤ **Flash IC**

S : Samsung flash IC

M : Micron SLC-NAND flash IC

X15 ➤ **Flash IC grade**

C : Commercial grade

I : Industrial grade

X16 ➤ **New generation Flash IC**

N : Samsung New generation flash IC

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

UF: defaulted as UDMA-4 mode / Fixed disk type

UR: optional as UDMA-4 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