

Product Specifications

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HERMIT Series Industrial (Rugged metal) PCMCIA ATA card



Product features

- ❖ SLC - NAND type flash technology
- ❖ Compatible with PC card standard and PCMCIA V.2.1
- ❖ PCMCIA Type II form-factor
- ❖ Optional for standard casing and rugged metal casing
- ❖ Compatible with ATA/ATAPI-6 standard
- ❖ Data transfer mode support PIO 0-6 and UDMA 0-5
- ❖ Performance up to 40MB/sec
- ❖ Capacity from 128MB up to 16GB

Product specifications

Compatibility ❖ ATAPI-6 and True IDE mode

Flash technology ❖ PCMCIA Type II form-factor

Form-factor ❖ SLC-NAND type flash based

Host Interface ❖ Female 68 pins

Performance

Data transfer mode ❖ PIO-4 mode or UDMA-4 mode (def.)

Data transfer rate ❖ 66.6MB/sec (ATA-5 / UDMA-4)

❖ 16.6MB/sec (ATA-3 / PIO-4)

Sequential read ❖ 40 MB/sec (Max. /with dual flash)

Sequential write ❖ 20 MB/sec (Max. /with dual flash)

Average access time ❖ 0.2ms (estimated)

Environmental specification

Operating temp. ❖ STD. 0°C ~ 70°C / IND. -40°C ~ 85°C

Non-operating temp. ❖ STD. -20°C ~ 80°C / IND. -50°C ~ 95°C

Humidity ❖ 10% ~ 95% non-condensing

Vibration ❖ 15G compliance to MIL-STD-810F

Shock ❖ 1,500G compliance to MIL-STD-810F

Altitude ❖ 70,000 feet

Power consumption

Power requirement ❖ +5V ± 10% / +3.3V ± 5%

Reading mode ❖ 124mA(Max.)

Writing mode ❖ 121mA(Max.)

Sleeping mode ❖ 1.8mA(Max.)

Reliability

Wear-leveling ❖ Static wear-leveling algorithms

MTBF ❖ > 3,000,000 hours

ECC ❖ 4-bits per 512bytes block

Endurance ❖ > 2,000,000 cycles

Physical specification

Weight (max.) ❖ Standard casing 43.0g/ 1.52 oz.

❖ Metal casing 60.0g/ 2.12 oz.

Dimension(W x L x H) ❖ 85.6 x 54.0 x 5.0 (mm)

Conformal coating ❖ Option for special request

Warranty

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 - Standard PCMCIA ATA card casing

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 - Rugged metal PCMCIA ATA card casing

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

INDUSTRIAL
CompactFlash Card

INDUSTRIAL
PCMCIA ATA Card

INDUSTRIAL
micro IDE Flash Disk

INDUSTRIAL
micro SATA Flash Disk

INDUSTRIAL
Solid State Disk

INDUSTRIAL
USB Flash Disk

INDUSTRIAL
APU as Card Reader

Product Specifications

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 Adapter Card Reader

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 5 1 2 M — H 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

X2 ▶ The material of case

P : Plastic frame kit

R : Rugged metal frame kit

X3 X4 X5 ▶ Product category

AFC : PCMCIA ATA flash card

X6 X7 X8 X9 ▶ Capacity

128M : 128MB

256M : 256MB

512M : 512MB

001G : 1GB

002G : 2GB

004G : 4GB

008G : 8GB

016G : 16GB

Z1 Z2 ▶ Data transfer rate

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**

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 SLC-NAND Flash IC

X15 ▶ Flash IC grade / Type

C : Commercial grade

I : Industrial grade

C ▶ Reserved for specific requirement

C : Conformal-coating