

CHARIOT Series

Industrial (Rugged Metal) High Capacity PCMCIA ATA Card



Product features

- SLC - NAND type flash technology
- Compatible with PC card standard
- 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 0-5
- Performance up to 36 MB/sec
- Capacity from 1GB up to 64GB

Product specifications

Compatibility	ATAPI-6 and True IDE mode	Power consumption	
Flash technology	SLC-NAND type flash based	Power requirement	+5V ± 10% / +3.3V ± 5%
Form-factor	PCMCIA Type II form-factor	Reading mode	65 mA (Max.)
Host Interface	Female 68 pins	Writing mode	95 mA (Max.)
Performance		Sleeping mode	6 mA (Max.)
Data transfer mode	PIO-4 mode or UDMA-5 mode (def.)	Reliability	
Data transfer rate	100.0 MB/sec (ATA-6 / UDMA-5) 16.6 MB/sec (ATA-3 / PIO-4)	Wear-leveling	Dynamic wear-leveling algorithms
Sequential read	36 MB/sec (Max. /with dual flash)	MTBF	> 3,000,000 hours
Sequential write	34 MB/sec (Max. /with dual flash)	ECC	4 bits per 512bytes block
Average access time	0.2 ms (estimated)	Endurance	> 2,000,000 cycles
Environmental specification		Physical specification	
Operating temp.	STD. 0°C ~ 70°C / IND. -40°C ~ +85°C	Weight (max.)	Standard casing 43.0g/ 1.52 oz. Metal casing 60.0g/ 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	Grounding	Plastic frame kit with EMI CLIPS CONTACT
Vibration	15G compliance to MIL-STD-810F	Conformal coating	Option for special request
Shock	1,500G compliance to MIL-STD-810F	Warranty	
Altitude	70,000 feet	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 - Industrial PCMCIA ATA card with standard plastic frame kit

Product picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	1GB	SPAFC001G-KACSC-UF	WPAFC001G-KAISI-UF
	2GB	SPAFC002G-KACSC-UF	WPAFC002G-KAISI-UF
	4GB	SPAFC004G-KACSC-UF	WPAFC004G-KAISI-UF
	8GB	SPAFC008G-KACSC-UF	WPAFC008G-KAISI-UF
	16GB	SPAFC016G-KACSC-UF	WPAFC016G-KAISI-UF
	32GB	SPAFC032G-KACSC-UF	WPAFC032G-KAISI-UF
	64GB	SPAFC064G-KACSC-UF	WPAFC064G-KAISI-UF

Remark: Grounding / Plastic frame kit with EMI CLIPS CONTACT

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

Product picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	1GB	SRAFC001G-KACSC-UF	WRAFC001G-KAISI-UF
	2GB	SRAFC002G-KACSC-UF	WRAFC002G-KAISI-UF
	4GB	SRAFC004G-KACSC-UF	WRAFC004G-KAISI-UF
	8GB	SRAFC008G-KACSC-UF	WRAFC008G-KAISI-UF
	16GB	SRAFC016G-KACSC-UF	WRAFC016G-KAISI-UF
	32GB	SRAFC032G-KACSC-UF	WRAFC032G-KAISI-UF
	64GB	SRAFC064G-KACSC-UF	WRAFC064G-KAISI-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-5 mode / Fixed disk type

UR: optional as UDMA-5 mode / Removable disk type

UA: optional as UDMA-5 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

CFast
Industrial CFast Card

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

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

X2 ➤ **The material of frame kit**

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

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

X11 ➤ **Controller**

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

C : Commercial grade
I : Industrial grade

C ➤ **Reserved for specific requirement**

C : Conformal-coating