

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)	Wear-leveling	Dynamic wear-leveling algorithms
	16.6 MB/sec (ATA-3 / PIO-4)	MTBF	> 3,000,000 hours
Sequential read	36 MB/sec (Max. /with dual flash)	ECC	4 bits per 512bytes block
Sequential write	34 MB/sec (Max. /with dual flash)	Endurance	> 2,000,000 cycles
Average access time	0.2 ms (estimated)	Physical specification	
Environmental specification		Weight (max.)	Standard casing 43.0g/ 1.52 oz.
Operating temp.	STD. 0°C ~ 70°C / IND. -40°C ~ +85°C		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

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

- 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