



# California Peripherals & Components, Inc.

## Industrial Solid State Flash Storage

### Industrial PC Card PCMCIA Type II ATA



The California PC FLASH Industrial PC Card / PCMCIA ATA Flash Cards utilize **NAND Type SLC flash memory** for fast read / write times. The California PC FLASH PCMCIA ATA Flash Cards have an **COMMERCIAL TEMPERATURE rating of 0°C to +70°C** to fulfill specialized applications in normal commercial operating environments. With the great advantages of non-volatile and solid state, the PCMCIA ATA Flash Cards are more robust than conventional hard disk drives and consume around 10% of the power required by small mechanical disk drives. PC Card / PCMCIA ATA Flash Cards are used with Handheld PCs, PDAs, Digital Cameras, Laptops and Desktop PCs as data storage devices. When a PCMCIA ATA Flash Card is inserted into an IDE adapter, it performs like a traditional rotating disk drive. California PC FLASH's PCMCIA ATA Flash Cards offer the ideal solution for critical applications requiring a long term supply using consistent components.

California PC FLASH  
Type II PC Card  
(PCMCIA)

Industrial Grade  
Commercial Temp

#### Features:

- ATA/True IDE Mode compatible
- NAND type SLC flash based
- High performance and Commercial Temp **-0°C to +70°C**
- Designed for Harsh Environments
- Operating modes supports PC Card Memory Mode, PC Card I/O Mode, True-IDE Mode
- Reliable wear-leveling algorithm to ensure the best of flash endurance
- Supports Ultra DMA Mode (128MB or higher)
- Data Transfer Rate of 66.6Mbyte/sec under UDMA-4 mode
- +5 Volts or +3.3 Volts  $\pm$  5% operation
- Very Low Power Consumption
- MTBF > 2,000,000 hours
- Capacity: 16MB, 32MB, 64MB, 128MB, 256MB, 512 MB, 1GB, 2GB,4GB, 8GB
- Vibration 20G
- Shock 1,500G
- RoHS Compliant

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### Performance

Data Transfer Mode	PIO Mode 4 (default) or UDMA Mode 4
Sequential Read	29Mbytes / sec Max.
Sequential Write	19Mbytes / sec Max.
Average Access Time	2ms (estimated)
Sleep to Write	7ms Max.
Sleep to Read	4ms Max.

### Environmental Specifications

Temperature	Operating: Non-Operating	0°C ~ +70°C -20°C ~ +80°C
Humidity	Operating & Non-operating:	5% ~ 95% non-condensing
Acoustic Noise	Operating & Non-Operating	0dB
Vibration	Operating & Non-operating	20G
Shock	Operating & Non-operating	1500G

### Power Consumption

DC Input Voltage)	+3.5V ± 5% +5V ± 10%
Sleep Mode:	2.3mA (Typ.)
Read Mode:	57.7mA (Typ.)
Write Mode:	60mA (Typ.)

### Reliability

MTBF	> 2,000,000 hours
ECC	4 bits ECC code
Endurance	> 2,000,000 cycles logically contributed by wear-leveling and advanced bad sector management algorithms
Data Reliability	< 1 non-recoverable error in 10 <sup>14</sup> bits read
Data Retention	10 years
Warranty	3 Years

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### Physical Specifications

Length	85.5 ± 0.1 mm (3.366 ± .004 in)
Width	54.4 ± 0.1 mm (2.142 ± .004 in)
Thickness	3.3 ± 0.1 mm (.130 ± .004 in) Interface Height / 5.0 mm (0.197 inches) Body Height (Type II)
Weight (maximum)	28.6 g (1.0 oz) maximum

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### Part Numbers\*

16MB	FPC-16MB-02	1GB	FPC-1024MB
32MB	FPC-32MB	2GB	FPC-2048MB
64MB	FPC-64MB	4GB	FPC-4096MB
128MB	FPC-128MB	8GB	FPC-8192MB
256MB	FPC-256MB	16GB	Use FCF-16GB with FCFPC-ADPT-02
512MB	FPC-512MB		

*\*Removable disk mode by Default – Also available in FIXED disk mode “F”*

- F = Fixed
- A = Auto Detect
- D2 = Multi Word DMA 2, Removable
- U4 = Ultra DMA 4, Removable
- D2A = Multi Word DMA 2, Auto Detect
- U4A = Ultra DMA 4, Auto Detect
- D2F = Multi Word DMA 2, Fixed Disk
- U4F = Ultra DMA 4, Fixed Disk

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ALSO AVAILABLE IN INDUSTRIAL TEMPERATURE VERSIONS RATED AT -40°C to +85°C

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