

2.5" IDE Flash Disk Drive Industrial Grade

The California PC FLASH **Industrial Grade IDE 2.5" Flash Disk Drive** uses NAND Type SLC flash memory for fast read/write times. The California PC FLASH 2.5" IDE Industrial Grade Flash Disk Drive is rated to an **INDUSTRIAL TEMPERATURE of (-40°C ~+85°C)** for use in applications in normal or harsh operating environments. With the great advantages of non-volatile and solid state, the 2.5" IDE Industrial Grade Flash Disk Drives are ideal replacements for conventional rotating hard disk drives. The industry standard IDE 44 pin interface simplifies the integration of the IDE flash disk into almost any computing platform. No system modifications are required to place a California PC FLASH IDE Flash Disk Drive in an existing application, making it easy to upgrade computing platform reliability to solid state perfor-



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Features:

- 2.5 inch form factor and 44 pin IDE interface
- NAND SLC flash memory
- High performance and Industrial Temp **-40°C ~+85°C**
- Designed for Harsh Environments
- PIO-4 or UDMA-4 mode (ATAPI-5)
- Wear-Leveling and advanced bad sector management algorithms for Endurance
- Low Power Consumption
- MTBF > 2,000,000 hours
- Capacity: 128MB, 256MB, 512 MB, 1GB, 2GB,4GB, 8GB,16GB, 32GB
- Vibration 20G peak to peak maximum
- Shock 1,500G
- RoHS Compliant

Environmental Specifications

Temperature	Operating: Non-Operating	-40°C ~ +85°C -50°C ~ +95°C
Humidity	Operating & Non-operating:	5 ~ 95% non-condensing
Acoustic Noise	Operating & Non-Operating	0dB
Vibration	Operating & Non-operating	20G
Shock	Operating & Non-operating	1,500G

California Peripherals & Components, Inc.
216 Avenida Fabricante, Ste 108
San Clemente, CA 92672

Phone: (949) 487-1213
Fax: (949) 487-1866
Toll Free: (877) 487-1213

E-mail: sales@CaliforniaPC.com

For more product info visit:
www.CaliforniaPC.com

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Industrial Temperature Solid State Flash Storage

INDUSTRIAL TEMPERATURE

-40°C

+85°C

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Power Consumption

DC Input Voltage	+5V ± 10%
Sleep Mode:	2mA (Typ.)
Read Mode:	85mA (Typ.)
Write Mode:	90mA (Typ.)

Performance

Data Transfer Mode	PIO-4 or UDMA-4 mode
Sequential Read	29.0MB/sec Max. (UDMA Mode)
Sequential Write	19.0MB/sec Max. (UDMA Mode)
Average Access Time	1ms

Reliability

MTBF	> 2,000,000 hours
ECC	Enhanced management per 4-bits ECC code
Endurance	Greater than 2,000,000 cycles logically contributed by wear-leveling and advanced bad sector management algorithms
Data Reliability	< 1 non-recoverable error in 10 ¹⁴ bits read
Data Retention	10 years
Wear-leveling Algorithms	Supported
ECC Technology	4 bits Error Correction Code
Warranty	3 Years and Compatibility Guaranteed

Physical Specifications

Dimensions	100.18 mm (L) 69.93 mm (W) x 9.5 mm (H)
Mounting Holes	76.61 mm to center of holes (length wise)

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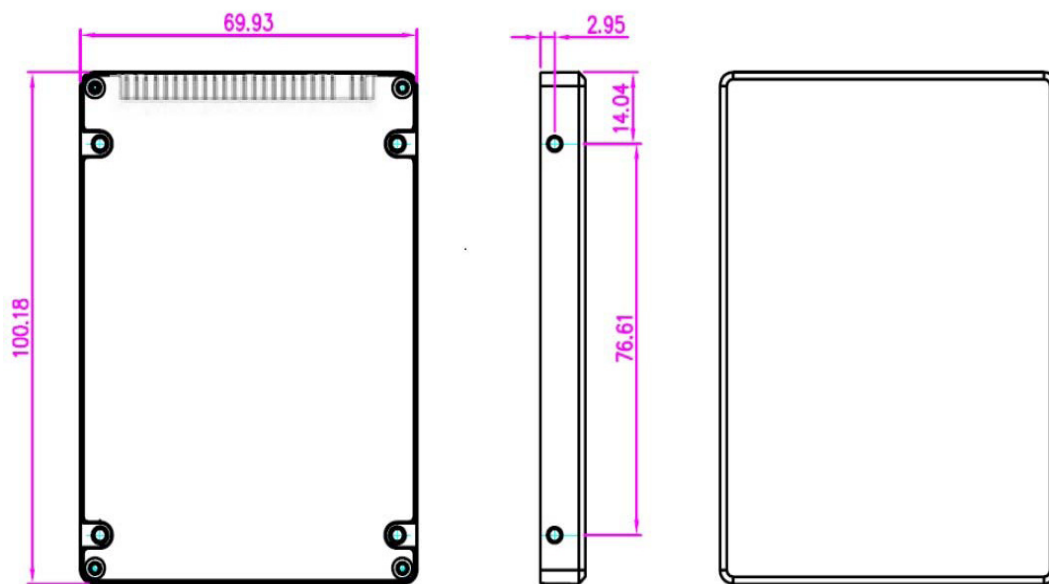
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Dimensions 2.5 inch form factor:



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INDUSTRIAL TEMPERATURE

-40°C

+85°C

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Industrial Temperature Solid State Flash Storage

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Power Cycling Test Report:

Test Procedure	Power Cycle
Test Method	Test on the flash disk drive with 8883 controller and SLC flash (128MB or higher capacity) 1. Power on. 2. Copy 10 files consecutively. 3. When copying the 10th file, perform sudden power shut down. 4. Power on. 5. Delete 10th file. Compare whether the first 9 files are correct or not. 6. If correct, perform DOS format 7. Return to item 1 and repeat process.
Criteria	1,000 times
Test Times	16,522,520 times (= 1,000 hour / cycle)
Error Times	0
Test Result	PASS

Part Numbers*

16MB	FDK25I-16MB-02	1GB	FDK25I-1024MB
32MB	FDK25I-32MB-02	2GB	FDK25I-2048MB
64MB	FDK25I-64MB-02	4GB	FDK25I-4096MB
128MB	FDK25I-128MB	8GB	FDK25I-8192MB
256MB	FDK25I-256MB	16GB	FDK25I-16384MB
512MB	FDK25I-512MB	32GB	FDK25I-32GB

*Fixed, PIO 4 is Default

-D2 = Multi Word DMA 2

-U4 = Ultra DMA 4

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