Industrial Flash Module Series

The Best Flash Storage Solutions-iCF 1000+ & iFM/IFP 4000+/ 4400+

Points

- Noiseless
- High reliability-Power Cycling
- ISP (In System Programming)upgrade
- Better shock durability
- Low power consumption
- To operate under high temperature and low temperature

ISP (In System Programming) Architecture

The ISP architecture greatly enables iCF/EDC 4000 series to achieve upgradeable firmware for new application requirements.

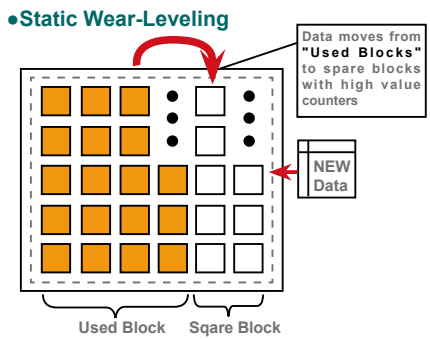
Power Cycling

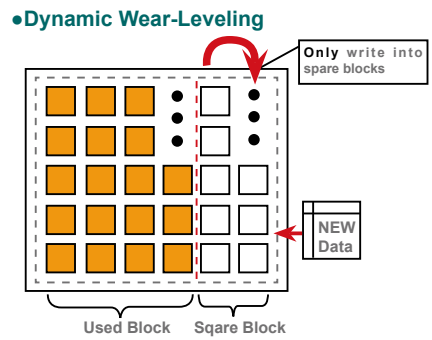
A strong Power Cycling management enhances data integrity and reliability. The new 4000 series passes complete and non-stopping power cycling tests more than 3000 times to achieve the high standard requirement.

Target Device	EDC 4000 40-pin 2 GB, dual
OS	Windows® XP Embedded
Motherboard	ASUS A7N8X
Power failure	3,000
Test result	pass

Static Wear-Leveling

The Static Wear-Leveling algorithm evenly distributes the data over the entire disk and greatly enables to extend product longevity. The Static Wear-Leveling is calculated to beat least four times the programming endurance of the dynamic wear-leveling.





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Ordering Information

IFD-180A[T]-[C]: 1.8" IDE Industrial Flash Disk, RoHS
IFD-250A[T]-[C]: 2.5" IDE Industrial Flash Disk, RoHS
[T]: Support operation temperature code:
[I]: Industrial level (-10°C~70°C) ;
[W]: Wide temperature level (-40°C~85°C)
[C]: Capacity code: 32MB, 64MB, 128MB...32GB

IFD (Industrial Flash Disk) Product Line		
Capacity		32 MB~32 GB
Form factor	0°C ~ 70°C	IFD-180A-xxxx: 1.8" disk form factor IFD-250A-xxxx: 2.5" disk form factor
	-40°C ~ 85°C	IFD-180W-xxxx/: 1.8" disk form factor IFD-250W-xxxx: 2.5" disk form factor
Connector		44-pin, 2.54 mm pitch IDE
Dimensions (WxHxD) mm		IFD-180A/W-xxxx: 78 x 54.3 x 7.6 IFD-250A/W-xxxx: 100.2 x 69.8 x 9.2
Housing		IFD-180A: ABS Mechanical Cover IFD-250A: Al-Mg Alloy
Operating envirnoment		0°C ~ 70°C for industrial version -40°C ~ 85°C for Wide-Temp. version
Orientation endurance		Shock: 1000 G, Vibration: 15 G
Reliability		IDE compatible Support auto stand-by and sleep mode Built- in ECC (Error Correction Code) function Built-in embedded flash file system Dynamic wear-leveling algorithms to substantially increase longevity of flash media

Industrial Flash Module Series

iCF/iFM Series Specification

Item		iCF 1000	iCF 1000+	iFM 4000/iFM 4400 iFP-2000	iFM 4000+/iFM4400+ iFP-2000+	iFM-3000I
Picture						
Part no.	-10°C~+70°C	ICF-1000I-xxx	ICF-1000IP(S/D)-xxx	IFM-4000I-xxx/IFM-4400I-xxx IFP-2000I-xxx	IFM-4000IP(S/D)-xxx/IFM-4400IP(S/D)-xxx IFP-2000IP(S/D)-xxx	IFM-3000IS
	-40°C~+85°C	ICF-1000W-xxx	ICF-1000WP(S/D)-xxx	IFM-4000W-xxx/IFM-4400W-xxx IFP-2000W-xxx	IFM-4000WP(S/D)-xxx/IFM-4400WP(S/D)-xxx IFP-2000WP(S/D)-xxx	N/A
Capacities		32 MB~8 GB	128 MB~8 GB	32 MB~8 GB	128 MB~8 GB	128 MB ~ 8 GB
Interface		50-pin CF Type1		40-pin or 44-pin IDE/ATA		Serial ATA I
IDE transfer mode		PIO mode 0-4 MwDMA mode 0-2 UltraDMA mode 0-2	PIO mode 0-6 MwDMA mode 0-4 UltraDMA mode 0-4	PIO Mode 0-4 MwDMA Mode 0-2 UltraDMA Mode 0-2	PIO Mode 0-4 MwDMA Mode 0-2 UltraDMA Mode 0-4	
Data transfer rate		32 MB~2 GB(single): Read-10 MB/sec./Write-6 MB/sec. 2 GB~8 GB(dual): Read-20 MB/sec./Write-11 MB/sec.	32 MB~2 GB(single): Read-20 MB/sec./Write-8 MB/sec. 1 GB~8 GB(dual): Read-40 MB/sec./Write-20 MB/sec.	32 MB~2 GB(single): Read-10 MB/sec./Write-6 MB/sec. 2 GB~8 GB(dual): Read-20 MB/sec./Write-11 MB/sec.	32 MB~2 GB(single): Read-20 MB/sec./Write-8 MB/sec. 1 GB~8 GB(dual): Read-40 MB/sec./Write-20 MB/sec.	128MB~8GB (single) Read-20 MB/ sec. Write-20 MB/sec.
Protocol mode		PCMCIA v2.1 and PC card v2.1 ATA standard compatible	PCMCIA v2.1 and PC card v3.0 ATA standard compatible	N/A		
Access mode		Memory mode, I/O mode, Ture-IDE mode				
Storage temp.		-45°C~+95°C				
Humidity		10%~95% non-condensing				
Vibration		5 G(7~2000 Hz)				5 G(7~500 Hz)
Shock		50 G/10 ms				
ECC technology		High reiability based on the internail ECC function				
MTBF		>3,000,000 hours				
R/W endurance		2,000,000 times				
Wear-leveling		Support				
DC input voltage		+3.3V/+5V single power supply operation				+5V single power supply operation
Power mode		Auto stand-by and sleep mode				Auto stand-by
Power consumption		150 mA(max.)				230 mA(max.)
Enclosure material		CF and plastic frame with metal cover				PC mechanical cover and UL-9
Dimensions		42.8x36.4x3.3 mm(WxLxH)		Vertical 40-pin:60.2x27.8x6.4 mm ; Vertical 44-pin:50.3x27.3x5.8 mm Horizontal 40-pin:55x32.4x9 mm ; Horizontal 44-pin:48.2x32.6x8.6 mm		21.00 x 39.35 x 8.00 mm (WxLxH)
Certificate		CE,FCC,ROHS				

iFD Series Specification

Item		iFD-2500	iFD-M250I	iFD-2500C(2500W)	iFD-2500I
Picture					
Part no.	-10°C~+70°C	IFD-2500I-xxx	IFD-M250I-xxx	IFD-2500CS-xxx/IFD-2500CD-xxx	IFD-2500IS-xxx
	-40°C~+85°C	IFD-2500W-xxx	N/A	IFD-2500WS-xxx/IFD-2500WD-xxx	N/A
Capacities		32 MB~8 GB	128 MB~8 GB	128 MB~8 GB	8 GB~128 GB
Interface		44-pin(2.0 mm) IDE/ATA		Serial ATA I	Serial ATA II
Transfer mode		PIO mode 0-4 MwDMA mode 0-2 UltraDMA mode 0-2	PIO mode 0-6 MwDMA mode 0-2 UltraDMA mode 0-4	N/A	N/A
Burst speed rate		66.6 MB/sec.	N/A	150 MB/sec.	300 MB/sec.
Data transfer rate(max.)		Read-30 MB/sec. Write-22 MB/sec.	Single: Read-18MB/sec. Write-7MB/sec. Dual: Read-38MB/sec. Write-18MB/sec.	Single: Read-20MB/sec. Write-20MB/sec. Dual: Read-30MB/sec. Write-30MB/sec.	Read-60 MB/sec. Write-40 MB/sec.
Storage temp.		-45°C~+95°C			
Humidity		10%~95% non-condensing			
Vibration		2 G(7~700 Hz)			
Shock		1500 G/0.5 ms			
ECC technology		High reiability based on the internail ECC function			
MTBF		>3,000,000 hours			
R/W endurance		2,000,000 times			
Wear-leveing		Support			
DC input voltage		+5V single power supply operation			
Enclosure material		Metal mechanical cover			
Dimensions		69.8x100.1x9.5 mm(WxLxH)		69.63x99.88x9.3 mm(WxLxH)	
Certificate		CE,FCC,ROHS			