

Embedded Flash Module >>>

the best solution
Flash Storage device





266 X
Ultra Speed

EDC/iCF 4000 Series

■ EDC/iCF 4000 Series supports PIO/MwDMA/UltraDMA modes with IDE/ATA interface and enhances the data transfer rate up to the performance of Read/Write: 40MB/20MB per second, which speeds up the booting process and upgrades the working environment efficiently.

■ Static Wear-Leveling :

The Static Wear-Leveling algorithm evenly distributes the data over the entire disk and greatly enables to extend product lifespan. The Static Wear-leveling could prolong the programmed endurance of flash chips, comparing with dynamic wear leveling.

■ Power Cycling :

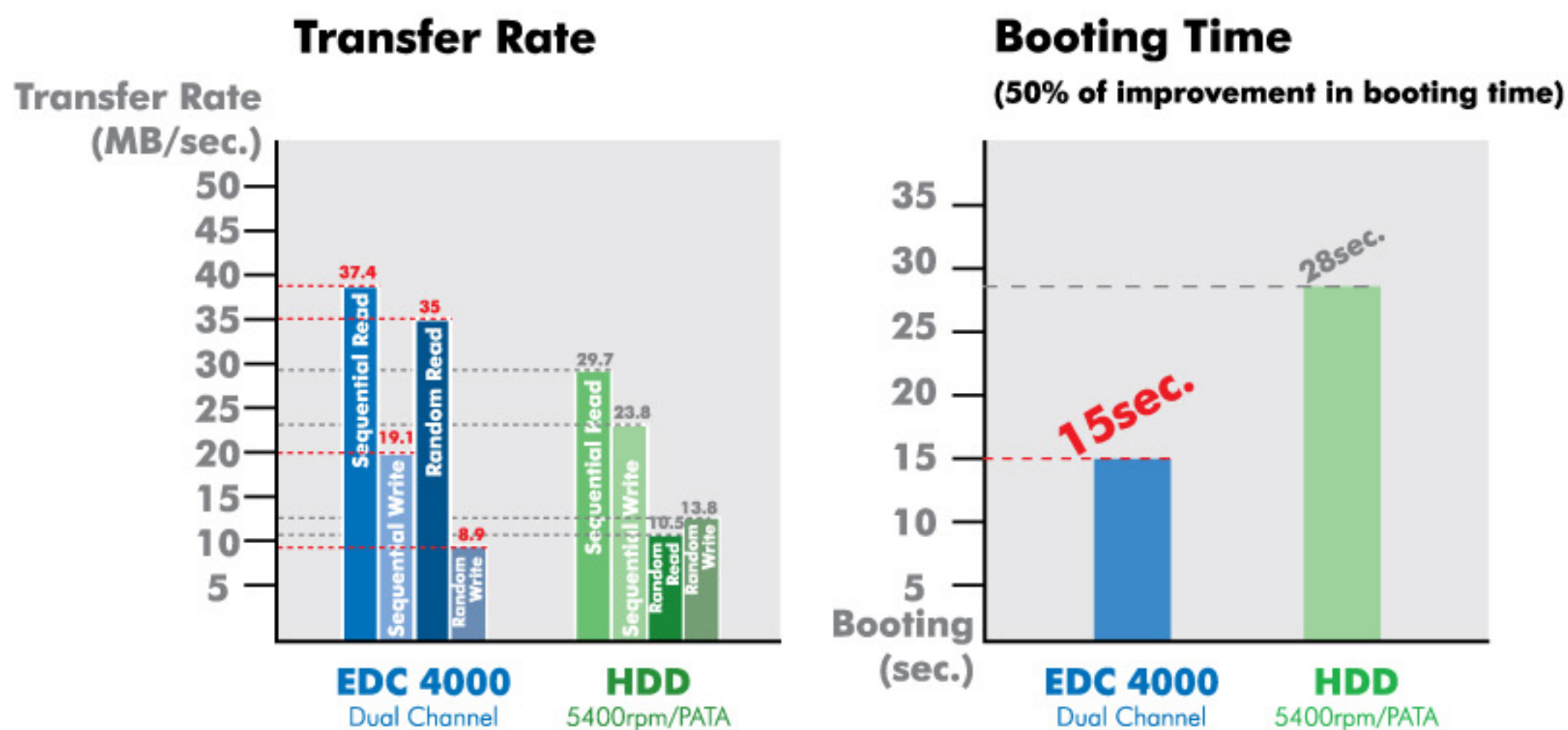
A strong Power Cycling management enhances data integrity and reliability. The new 4000 series passes complete and continuous power cycling tests more than 3000 times to achieve the high standard requirement.

Target Device	iCF4000 1GB
OS	Embedded Windows XP
Mother Board	ASUS A7N8X
Power Failure	3000

■ ISP (In System Programming) Architecture :

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

■ Comparison Chart : 4000 Series & HDD

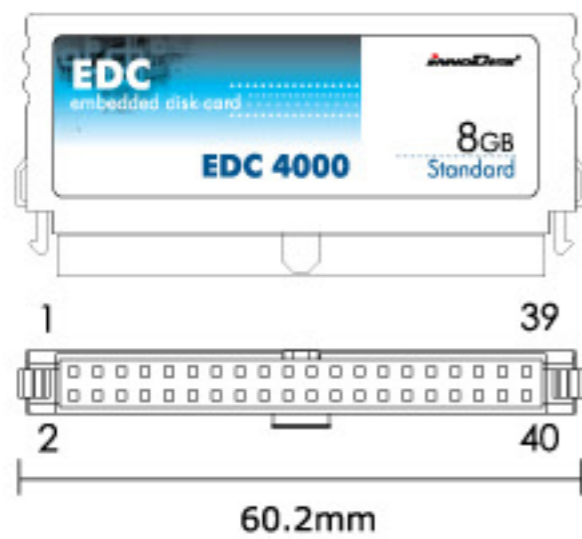




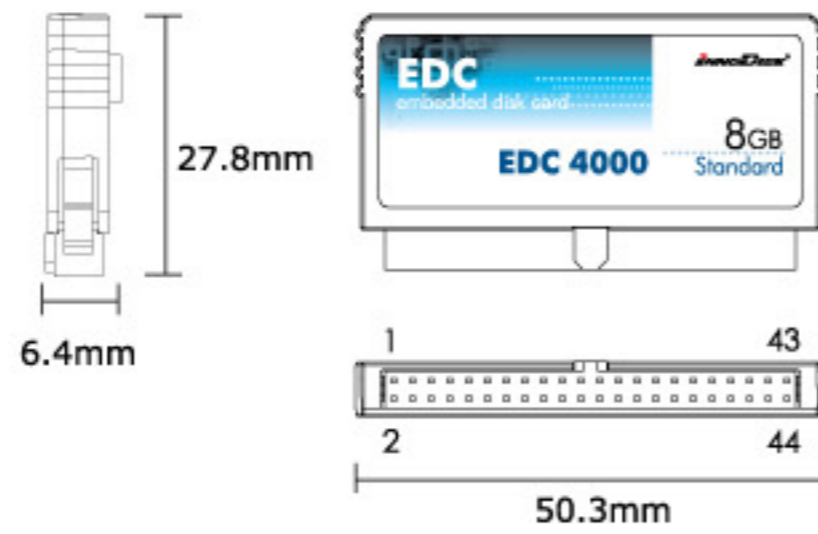
EDC/iCF 4000 Series

EDC&iCF 4000 Series Mechanical Drawing

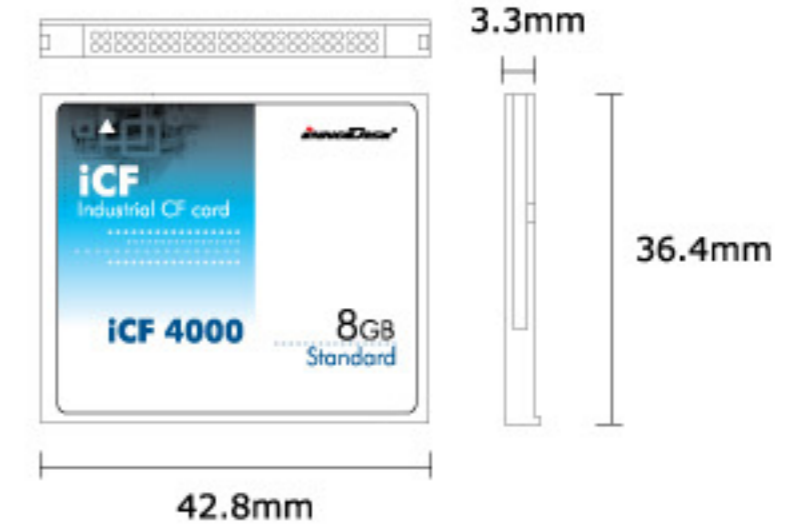
40 pin



44 pin



iCF



EDC&iCF 4000 Series Specification

-40°C~+85°C
Wide Temp.
Available

-40°C~+85°C
Wide Temp.
Available

Item	EDC 4000 / EDC 4000 Horizontal	iCF 4000
Capacities	128MB~8GB	128MB~16GB
IDE Transfer Mode	PIO Mode 0-4 MwDMA Mode 0-2 UltraDMA Mode 0-4	PIO Mode 0-6 MwDMA Mode 0-4 UltraDMA Mode 0-4 *Comply with CF 3.0 Standard
Interface	44pin or 40pin IDE/ATA	50pin CompactFlash
Drive Config.	Switch Master/Slave	N/A
Protocol Mode	ATA-6	PCMCIA v2.1 and PC Card CF 3.0 standard compatible
Access Mode	IDE Mode	Memory mode, I/O Mode, Ture-IDE Mode
Data Transfer Rate	128MB~2GB(Single): Read-20MB/sec. (max.) Write-10MB/sec. (max.) 1GB~16GB(Dual): Read-40MB/sec. (max.) Write-20MB/sec. (max.)	
Burst Transfer Rate	66.6MB/sec.	
Environmental Specification		
Operation Temp.	0°C~+70°C(Standard) -40°C~+85°C(Industrial)	
Storage Temp.	-55°C~+95°C	
Humidity	10%~95% non-condensing	
Vibration(Operation)	5G(7~2000Hz)	
Shock	50G/10ms	
System Reliability		
ECC technology	High Reliability based on the internal ECC function	
MTBF	>3,000,000 hours	
R/W Endurance	2,000,000 times	
Wear-leveling	Support	
Power Requirement		
DC input voltage	+3.3V~+5V single power supply operation	
Power mode	Auto stand-by and sleep mode	
Power consumption	150mA(max.)	
Physical Specification		
Enclosure Material	PC Mechanical Cover and UL-94	CF card plastic frame with metal cover
Dimension	40 pin : 60.2 x 6.4 x 27.8mm(W x L xH) 44 pin : 50.3 x 5.8 x 27.3mm(W x L xH)	42.8 x 36.4 x 3.3 mm(W x L xH)



Embedded Flash Storage Device

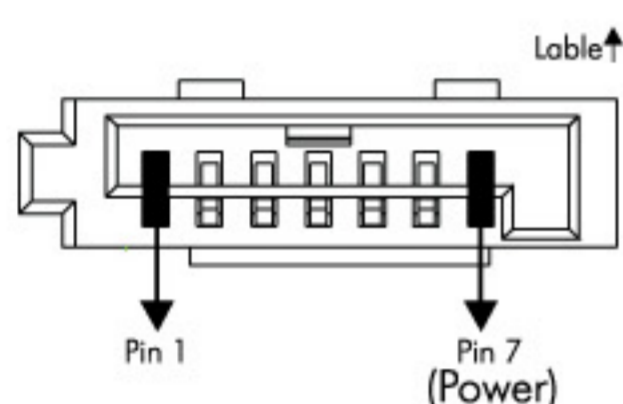
SATADOM[®]

Innovation • Technology • Competitiveness

■ SATA interface ■ Smallest size ■ Built-in Power pin



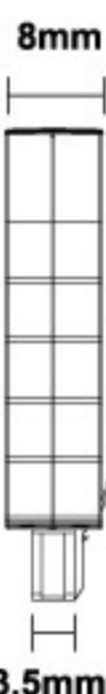
■ Compact Design(Patent)



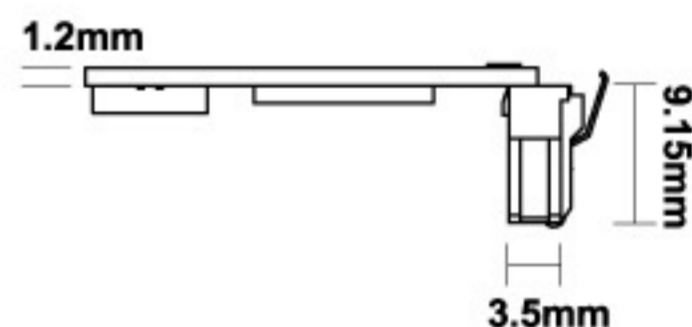
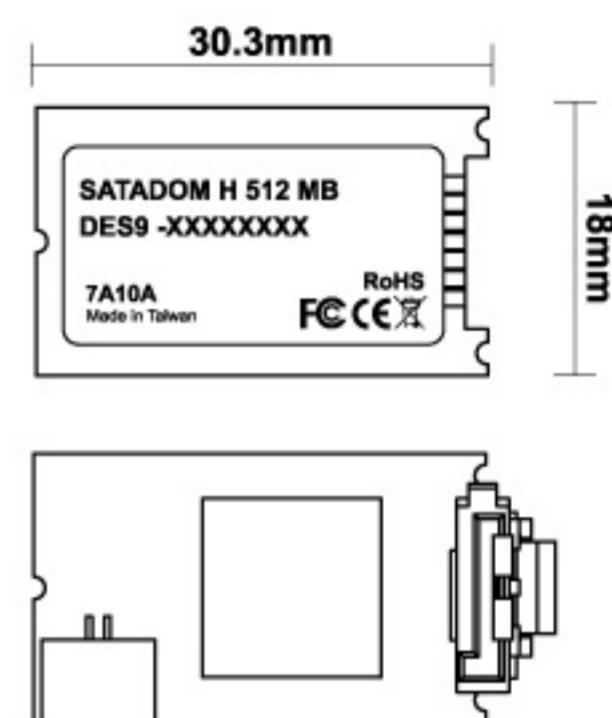
7Pin Header	Signal	Function
Pin 1	GND	Shielding
Pin 2	A+	Differential signal to A
Pin 3	A-	Differential signal to A-
Pin 4	GND	Shielding
Pin 5	B-	Differential signal to B
Pin 6	B+	Differential signal to B
Pin 7	GND/VCC(+5V)	Shielding/Power

■ Mechanical Drawing

Vertical type



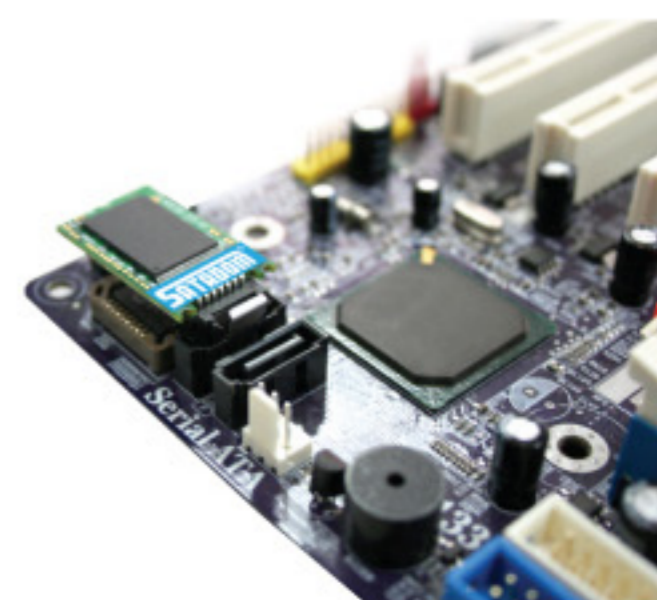
Horizontal type



■ SATADOM Specification

Item	SATADOM
Capacities	128MB~8GB
Interface	Serial ATA I
Burst Speed Rate	150MB/sec.
IDE Transfer Rate	PIO Mode 0-4 MwDMA Mode 0-2 UltraDMA Mode 0-2
Data Transfer Rate	Read : 24MB/sec Write:14MB/sec.
Environmental Specification	
Operation Temp.	0°C~+70°C (Standard) ; -40°C~+85°C (Industrial)
Storage Temp.	-55°C~+95°C
Humidity	10%~95% non-condensing
Vibration	5G(7~2000Hz)
Shock	50G/10ms
System Reliability	
ECC Technology	Built-in ECC corrects up to 8-bit per 512Bytes
MTBF	>3,000,000 hours
R/W Endurance	2,000,000 times
Wear-Leveling	Support
Power Requirement	
DC Input Voltage	+5V single power supply operation
Power Mode	Auto stand-by mode
Power Consumption	200 mA(max.)
Physical Specification	
Enclosure Material	PC mechanical cover and UL-94
Dimension	Vertical type: 20.5x39.2x8 mm(WxLxH) Horizontal type 18x30.3x9.15mm(WxLxH)

-40°C~+85°C
Wide Temp.
Available



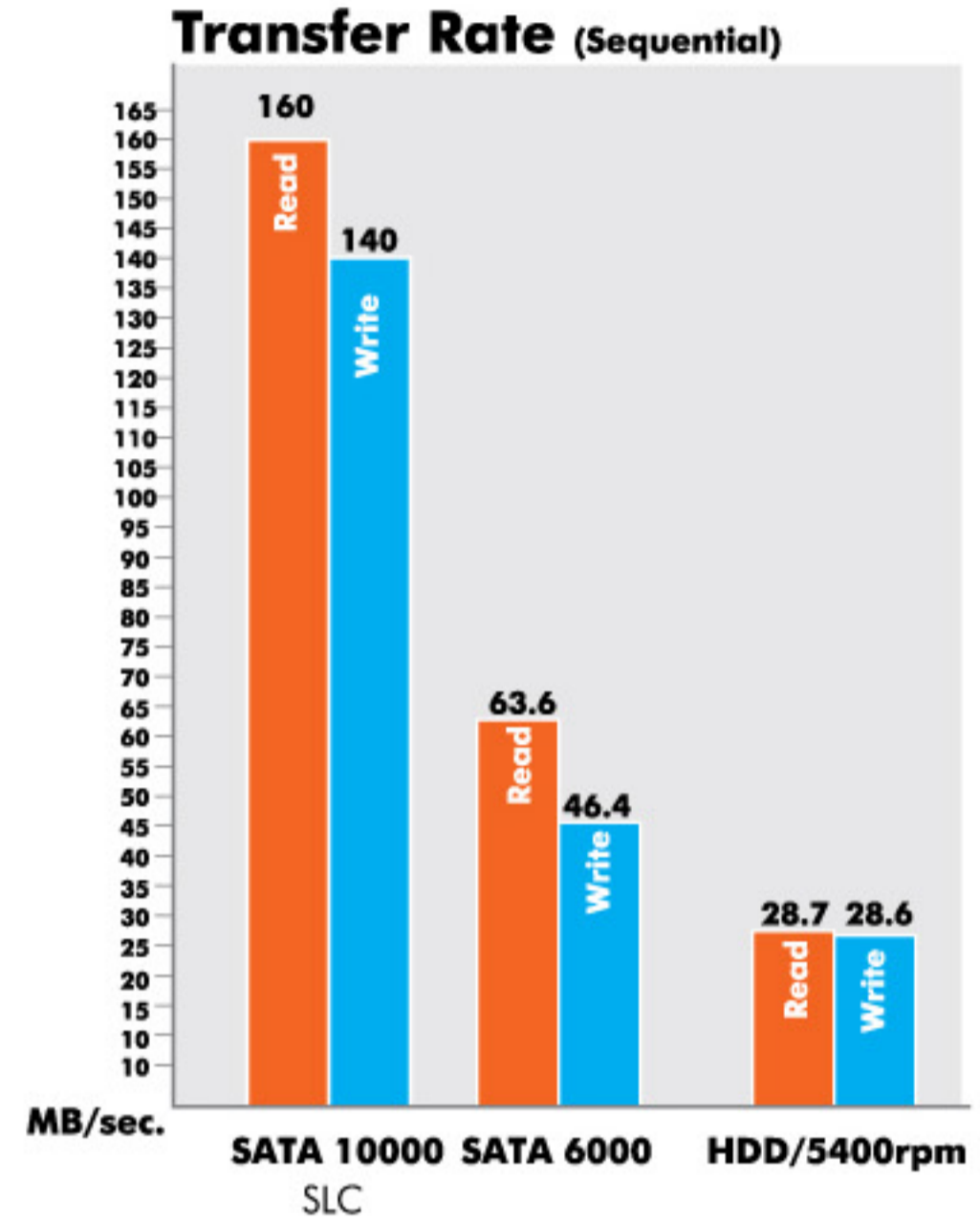


FiD 2.5" Series ATA/SATA

The 2.5-inch SSD series product (PATA/SATA) is based on cost effectiveness, high performance, and reliable solutions. The main benefits are faster transfers, ability to remove or add devices while operating (hot swapping), and more reliable operation with tighter data integrity checks.

	SSD WIN	HDD
System Boot-up	Faster	Slower
Power Consumption	Less	More
Reliability(Vibration/Shock)	More Durable	Less Durable
Noise	No Noise	Louder
Weight	Lighter	Heavier

Comparison Chart: SSD vs. HDD



SATA 10000

FiD 2.5" ATA&SATA Series Specification

Item	SLC	SLC	MLC
	SATA 10000 2.5" μSATA 10000 1.8"	-40°C~+85°C Wide Temp. Available	SATA 10000 2.5" SATA 10000 1.8"
Capacities	8GB~64GB		8GB~128GB
Interface	SATA II 3.0G		SATA II 3.0G
IDE Transfer Mode	PIO mode 0-4 UltraDMA mode 0-5		PIO mode 0-4 UltraDMA mode 0-5
Burst Speed Rate	300MB/sec.		300MB/sec.
Data Transfer Rate	Read:160MB/sec. (max.) Write:140MB/sec. (max.)		Read:140MB/sec. (max.) Write:90MB/sec. (max.)
Environmental Specification			
Operation Temp.	0°C~+70°C(Standard-MLC/SLC) ; -40°C~+85°C(Industrial-SLC)		
Storage Temp.	-55°C~+95°C		
Humidity	10%~95% non-condensing		
Vibration	5G(7~2000Hz)		
Shock	1500G/0.5ms		
System Reliability			
ECC Technology	High reliability based on the internal ECC function		
MTBF	>1,000,000 hours		
R/W Endurance	2,000,000 times		
Wear-Leveling	Support		
Power Requirement			
DC Input Voltage	+5V single power supply operation		
Power Mode	Auto stand-by mode		
Power Consumption	250mA(max.)		
Physical Specification			
Enclosure Material	2.5": Metal Mechanical Cover		
Dimension	SATA 2.5": 69.63 x 99.88 x 9.3 mm (W x L x H) Micro SATA 1.8": 54 x 78.5 x 5 mm (W x L x H)		

μSATA 10000 1.8"

SATA 10000 2.5"



SATA 6000 2.5"

ATA 6000 2.5"



SATA 4000 2.5"





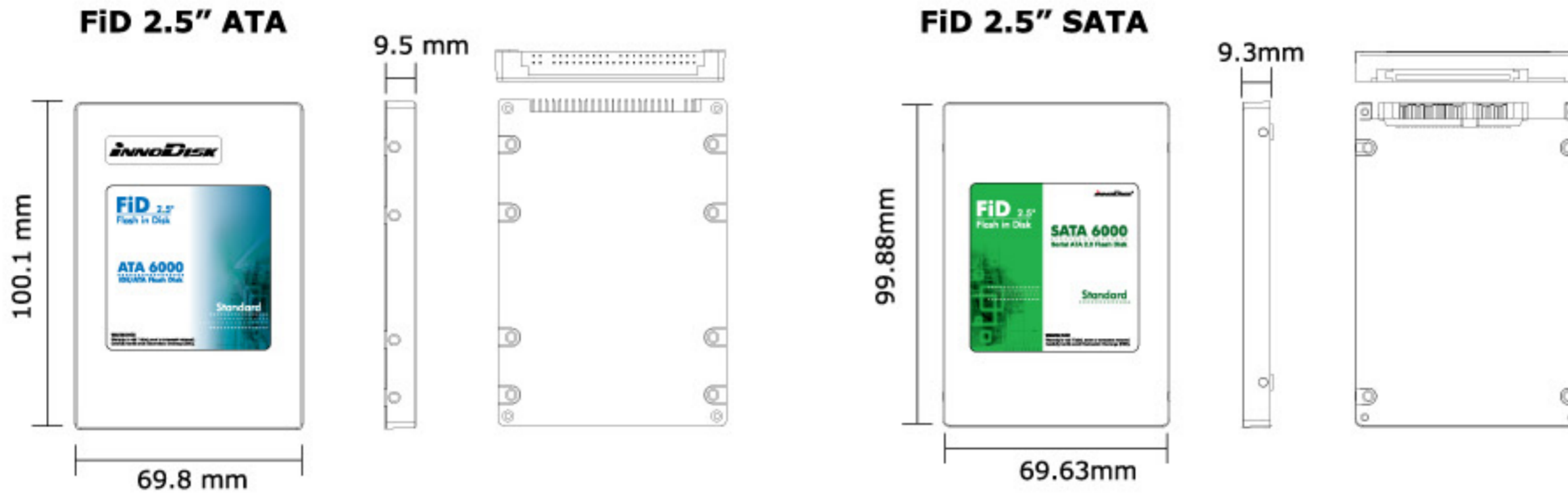
Embedded Flash Storage Device

FiD 2.5" Series ATA/SATA



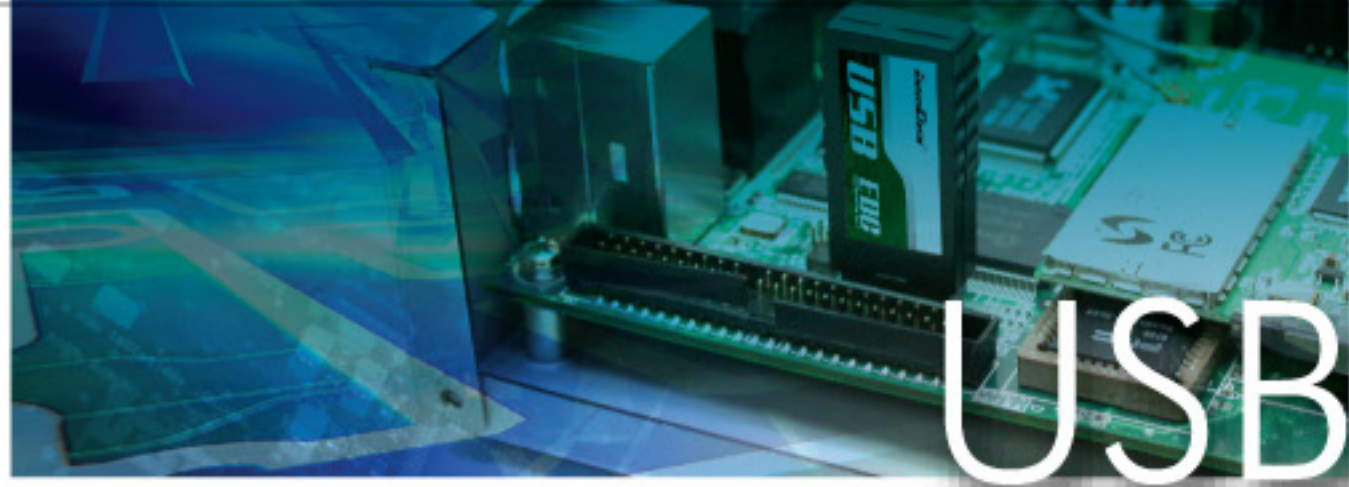
FiD 2.5" ATA&SATA Series Mechanical Drawing

ATA Mirror Disk



FiD 2.5" ATA&SATA Series Specification

Item	ATA Mirror Disk	ATA 6000 -40°C~+85°C Wide Temp. Available	SATA 4000 -40°C~+85°C Wide Temp. Available	SATA 6000 -40°C~+85°C Wide Temp. Available
Capacities	128MB~8GB	8GB~128GB	128MB~64GB	8GB~128GB
Interface	44pin(2.0mm) IDE/ATA	44pin(2.0mm) IDE/ATA	Serial ATA I	Serial ATA II
Drive Config. Jumper	N/A	Master/Slave	N/A	N/A
IDE Transfer Mode	PIO mode 0-4 MwDMA mode 0-2 UltraDMA mode 0-4	PIO mode 0-4 MwDMA mode 0-2 UltraDMA mode 0-5	PIO mode 0-4 MwDMA mode 0-2 UltraDMA mode 0-5	PIO mode 0-4 UltraDMA mode 0-6
Burst Speed Rate	Depends on CF Card	133MB/sec.	150MB/sec.	300MB/sec.
Data Transfer Rate	Depends on CF Card	Read:60MB/sec. (max.) Write:40MB/sec. (max.)	Read:37MB/sec. (max.) Write:34MB/sec. (max.)	Read:60MB/sec. (max.) Write:40MB/sec. (max.)
Environmental Specification				
Operation Temp.	0°C~+70°C(Standard)	0°C~+70°C(Standard) -40°C~+85°C(Industrial)	0°C~+70°C(Standard) -40°C~+85°C(Industrial)	0°C~+70°C(Standard) -40°C~+85°C(Industrial)
Storage Temp.	-55°C~+95°C			
Humidity	10%~95% non-condensing			
Vibration	5G(7~2000Hz)			
Shock	1500G/0.5ms			
System Reliability				
ECC Technology	High Reliability based on the internal ECC function			
MTBF	> 1,000,000 hours			
R/W Endurance	2,000,000 times			
Wear-Leveling	Support			
Power Requirement				
DC Input Voltage	+5V single power supply operation			
Power Mode	Auto stand-by mode			
Power Consumption	300mA(max.)	250mA(max.)	250mA(max.)	500mA(max.)
Physical Specification				
Enclosure Material	Metal Mechanical Cover			
Dimension	ATA: 69.8 x 100.1 x 9.5 mm (W x L x H) SATA: 69.63 x 99.88 x 9.3 mm (W x L x H)			



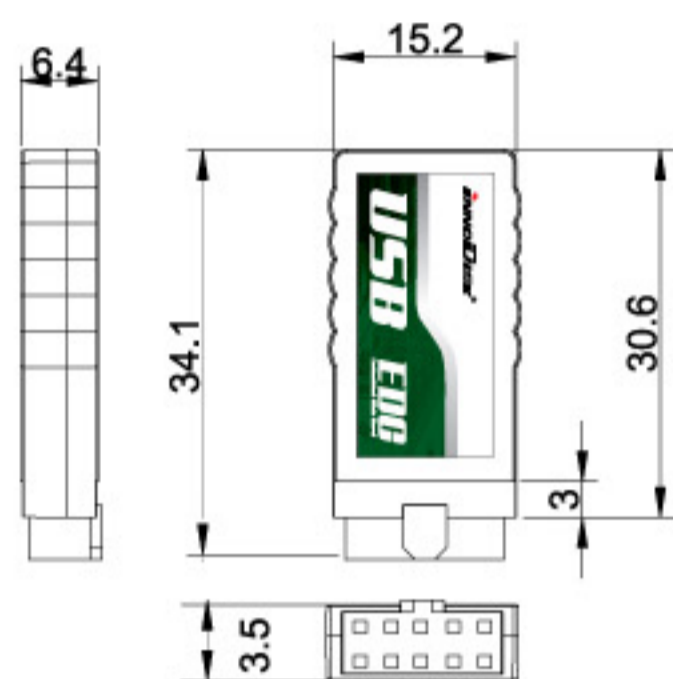
Embedded Flash Storage Device

USB EDC Series

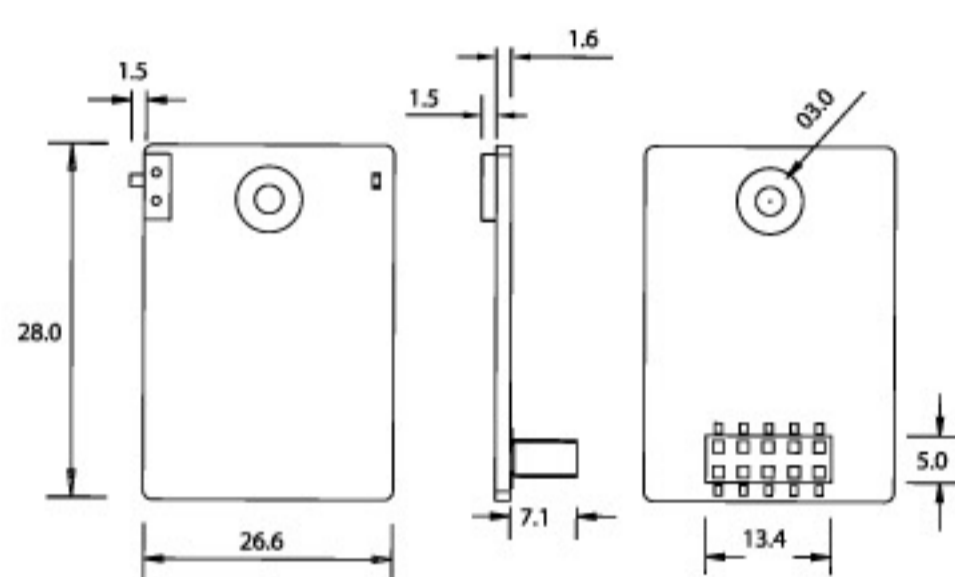


USB EDC Series Mechanical Drawing

USB EDC Vertical



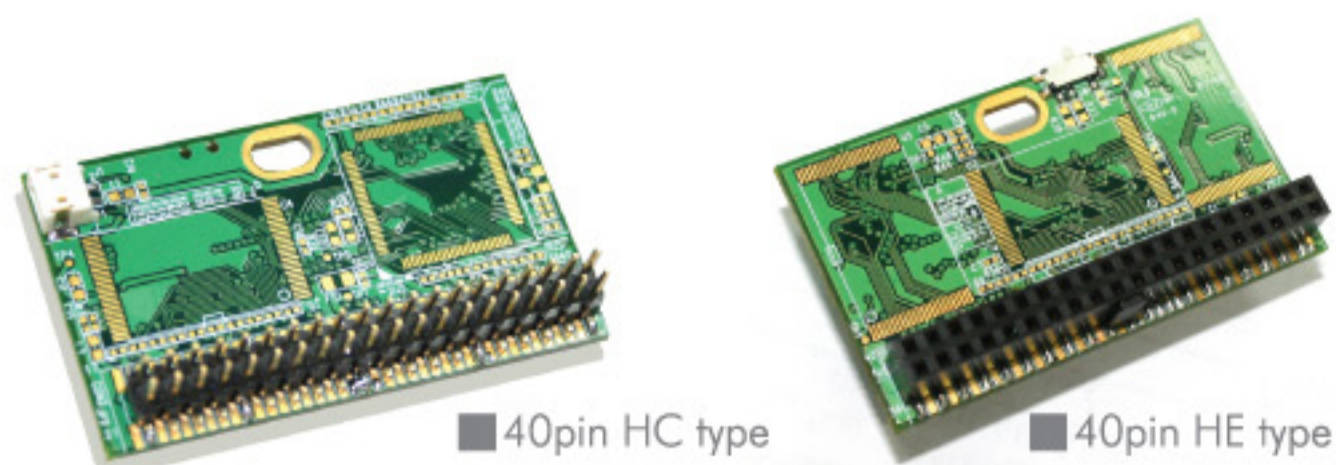
USB EDC Horizontal



USB EDC Series Specification

Item	USB EDC Vertical	USB EDC Horizontal
Capacities	256MB~2GB	256MB~4GB
Interface	Hi-Speed USB (USB2.0)	Hi-Speed USB (USB2.0)/2.00mm or 2.54 mm
Data Transfer Rate	Read: 17MB/sec. (max.) Write: 10MB/sec. (max.)	Read: 33MB/sec. (max.) Write: 22MB/sec. (max.)
Environmental Specification		
Operation Temp.	0°C ~ +70°C	
Storage Temp.	-55°C ~ +95°C	
Humidity	10% ~ 95% non-condensing	
System Reliability		
ECC Technology	High reliability based on the internal ECC function	
MTBF	>3,000,000 hours	
R/W Endurance	2,000,000 times	
Wear-Leveling	Support	
Power Requirement		
DC Input Voltage	+5V single power supply operation	
Power Mode	Auto Stand-by mode	
Power Consumption	90mA	
Physical Specification		
Enclosure Material	PC Mechanical Cover and UL-94	
Dimension	Vertical type: 15.2 x 6.4 x 34.1 mm (W x L x H) Horizontal Type: 26.6x 10.2 x 28 mm (W x L x H)	

EDC 4000 Horizontal Series Mechanical Drawing

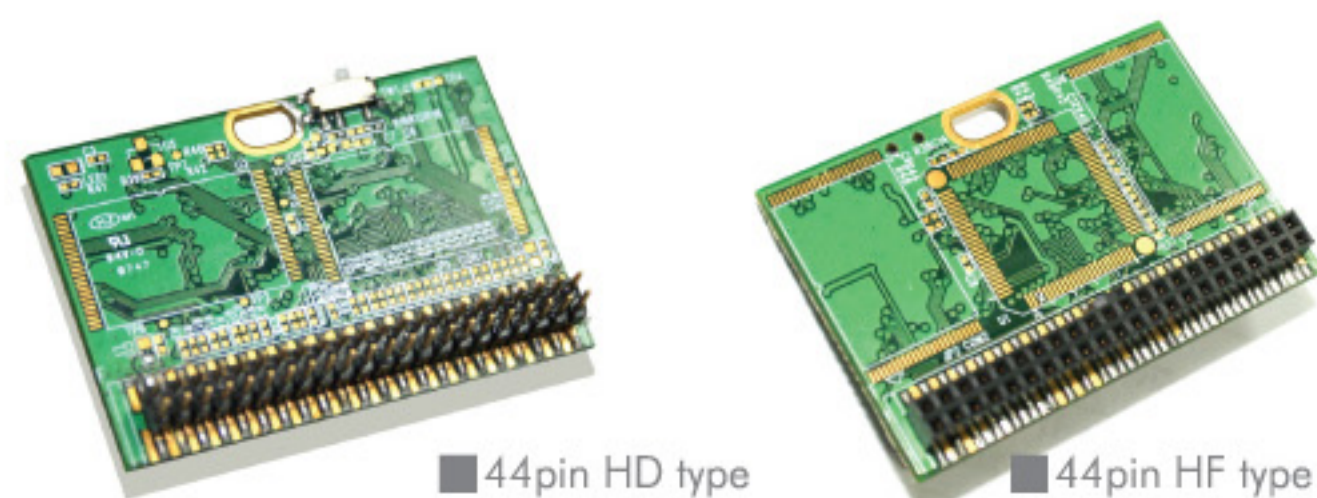


40pin HC type

40pin HE type

EDC 4000 Horizontal 40pin Dimension

	High/mm	Width/mm	Thickness/mm
HA(Female, pin 1 outside)	32.4	55.0	9.0
HB(Female, pin 1 inside)	32.4	55.0	9.0
HC(Male, pin 1 outside)	32.4	55.0	10.6
HD(Male, pin 1 inside)	32.4	55.0	10.6
HE(Female+Male, pin 1 outside)	32.4	55.0	18.0
HF(Female+Male, pin 1 inside)	32.4	55.0	18.0



44pin HD type

44pin HF type

EDC 4000 Horizontal 44pin Dimension

	High/mm	Width/mm	Thickness/mm
HA(Female, pin 1 outside)	48.0	32.6	5.7
HB(Female, pin 1 inside)	48.0	32.6	5.7
HC(Male, pin 1 outside)	48.0	32.6	8.6
HD(Male, pin 1 inside)	48.0	32.6	8.6
HE(Female+Male, pin 1 outside)	48.0	32.6	13.0
HF(Female+Male, pin 1 inside)	48.0	32.6	13.0

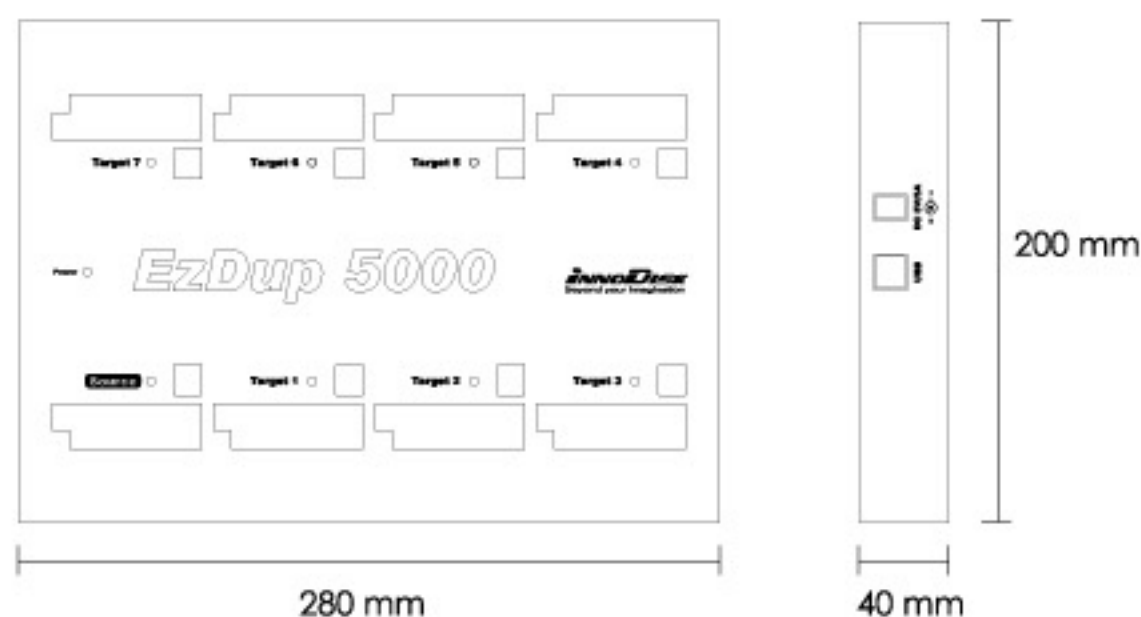


Embedded Flash Storage Device

Duplicate

EzDup 5000

■ EzDup 5000 Mechanical Drawing



■ CF Adaptor for option

Test Result

Capacities	Copy Time	Time to Verify	Total Time	Target Number
128MB	35 sec	33 sec	1 min 8 secs	7
256MB	1 min 17 secs	1 min 11 secs	2 mins 28 secs	7
512MB	2 mins 30 secs	2 mins	4 mins 30 secs	7
1 GB	4 mins 33 secs	4 mins 3 secs	8 mins 36 secs	7

**CPU : Pentium 4 CPU 3GHz Dual-Core / Memory : 512 MB RAM

■ EzDup 5000 Specification

Item	EzDup 5000
Maximum Disk quantity	1 to 7 duplication
Support type	40pin(2.54mm)/44pin(2.0mm),IDE-CF Adapter(Optional)
Interface	USB 2.0
Environmental Specification	
Operation Temp.	0°C ~ +50°C
Storage Temp.	0°C ~ +60°C
Humidity	10% ~ 95% non-condensing
Power Requirement	
AC Adapter	Input AC 100V~240V ; Output DC 5V/5A
Physical Specifications	
Dimension	280 x 200 x 40 mm(W x L x H)
Weight	EzDup 5000: 710g ; AC Adapter 380g
Minimum System Requirement	
CPU Inter Celeron 2.8 GHz	2.8 GHz
Memory 512MB	512MB
HDD Free Space 12MB	12MB
O.S. Windows XP	Windows XP

Accessories: Main Unit, USB Drive, AC Power Adaptor, USB Cable,
CF Adaptor(for option).

INNODISK[®]
Beyond your imagination

InnoDisk Corporation

10F, No. 465, Sec. 6, Zhongxiao E. Rd.,
Nangang District, Taipei 115, Taiwan, R.O.C.

<http://www.innodisk.com>

E-mail : sales@innodisk.com

TEL: +886-2-2653-5565

FAX: +886-2-2653-5965