

Small Form Factor SSD

SATADOM 6.0GHz/ USB3.0/ CF-SATA

C.C. Wu, InnoDisk



The logo for the Flash Memory Summit features a stylized yellow sunburst with multiple rays. The word "Flash" is in red, "Memory" is in blue, and "SUMMIT" is in white on a blue rectangular background.

Flash Memory Summit Agenda

- SATA DOM 6.0GHz
- USB3.0 OS Drive
- CF-SATA



InnoDisk SATADOM

D150Q/D150S SERIES SATA 3.0G

Features



Standard SATA ATA interface

A perfected ideal for embedded

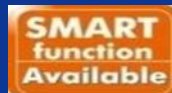
Varied mechanical design for your needs

Big capacity in small dimension

Robust in Anti-shock & vibration






Excellent data transfer speed

Build-in Pin7 VCC, which provide both power and I/O signals.



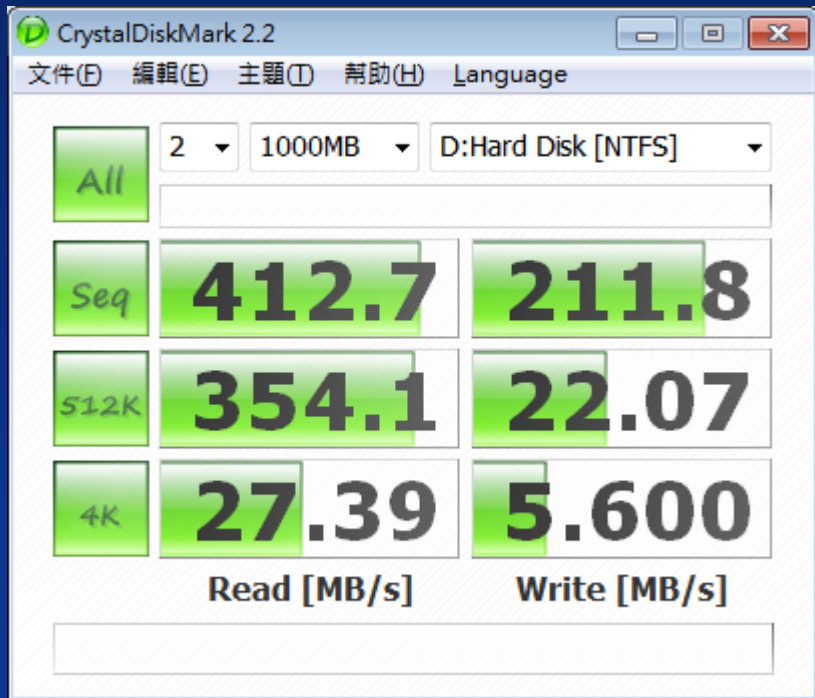
InnoDisk SATADOM family

SU

	SATADOM D150Q Series		InnoLite SATADOM D150Q Series	SATADOM D150S Series	
Types					
Model Name	D150QV	D150QV-L	InnoLite SATADOM D150QV	D150SV-L	D150SV
Dimension (mm)	25x39.4x6.5	35x30x9.5	25x39.4x6.5	32.8x29.6x8	20.8x32.8x8
Capacity	2GB ~32GB	4G ~64GB	8GB ~64GB	128MB ~8GB	128MB ~8GB
Flash Support	SLC @ TSOP or BGA		MLC	SLC @ TSOP or BGA	
Data Transfer Rate R/W	125 / 120 MB/s		120 / 42 MB/s	30 / 25 MB/s	
Power Consumption	1.6 W		1.6 W	0.83 W	
Launch Time	Q2' 2011	Q3' 2011	Q2' 2011	Q2' 2011	
Operation Temperature	0~+70°C(Standard) / -40~+85°C(Industrial)				
iSMART	Support				
Controller	ID101				
F/W Support	Excellent Firmware customize ability provided!!				

InnoDisk SATADOM 6.0 GHz

- 64GB SLC
- 4-Channel



New Features

- SATA III 6.0GHz
- Support 19/20 nm MLC
- Toggle/ONFI Flash Interface
- Low Power in idle Mode Design
- Up to 64GB SLC Solution





USB3.0 OS Drive

New story of USB OS drive

USB 3.0 OS Drive

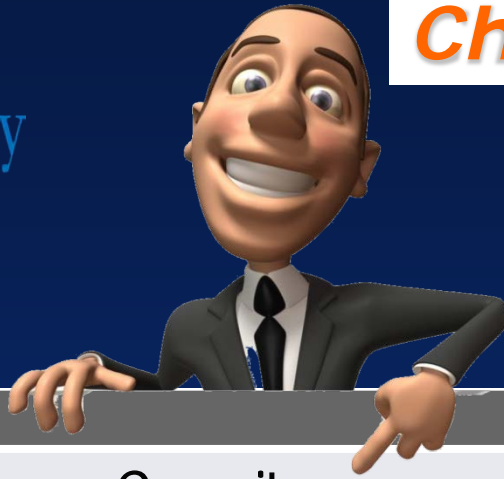


Amazing features...



- ❖ Super-speed USB 3.0 interface; backward compatible with USB 2.0/1.1
- ❖ Synchronous NAND flash architecture inside.
- ❖ High reliability based on the internal 43bit ECC / 1K Bytes
- ❖ Wear-leveling support
- ❖ OS installation: Windows 8, Fedora 16 (Linux)
- ❖ Customized VID/ PID with serial number





Charming Specification...



	USB 3.0 OS Drive
Capacity	8GB-64GB
Max. Channel	2
Sequential R/W(MB/sec, max.)	200/90
Max. Power consumption	0.6 W (5Vx120mA)
Dimension (W x L x H)	26.1 x 23.1 x 5.7 mm
Environment	Vibration: 10G @7~2000Hz, Shock: 500G @0.5ms, Storage Temperature: -55°C~+95°C
Operation Temp.	0°C~+70°C -40°C~85°C



What's the difference?

-USB 2.0 vs. USB 3.0

Item	USB 2.0	USB 3.0
Bandwidth	480 Mb/s (60 MB/s)	5 Gb/s (625 MB/s)
Actual data throughput	35~40 MB/s	360~420 MB/s
Native OS support	N/A	Windows 8
Date Transfer Mode	Single direction	Bi-Direction
Power consumption	w/o idle mode	support idle mode

Benefits of USB 3.0

Saves
over
67%
energy

Super
Speed
OS
drive

10
times
faster



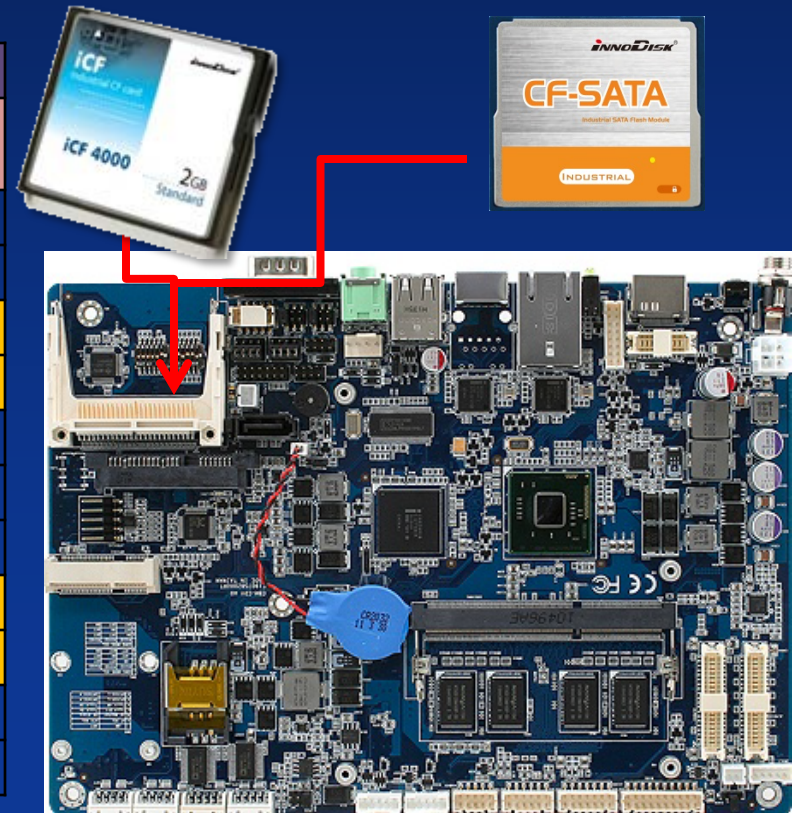
What is CF-SATA?



Compact Flash card? or CFAST?

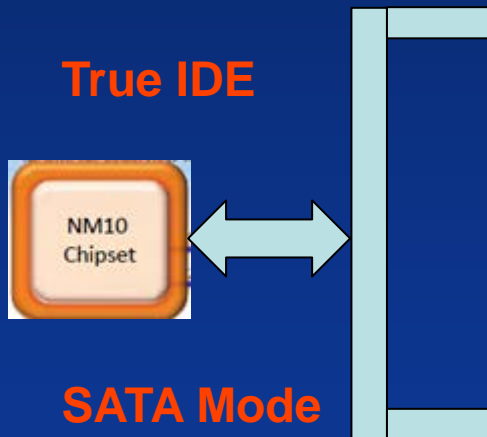
InnoDisk **CF-SATA** has the same mechanical design with Compact Flash card and complies with Serial ATA by extracting unusual pins from CF50 pin. Hence, Compact Flash card and CF-ATA can share with one CF50pin socket

SATA Signal		
Pin	Pure IDE Mode Defination	CF_SATA Protocol
1	DGND	DGND
8	DGND	AGND
10	DGND	TX+
11	DGND	TX-
12	DGND	AGND
13	VCC5	VCC5
14	DGND	AGND
15	DGND	RX-
16	DGND	RX+
17	DGND	AGND
38	VCC5	VCC5



Host with dual interfaces Design

- IDE + SATA Dual Interface

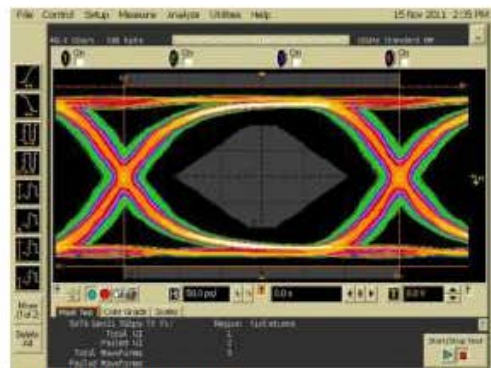
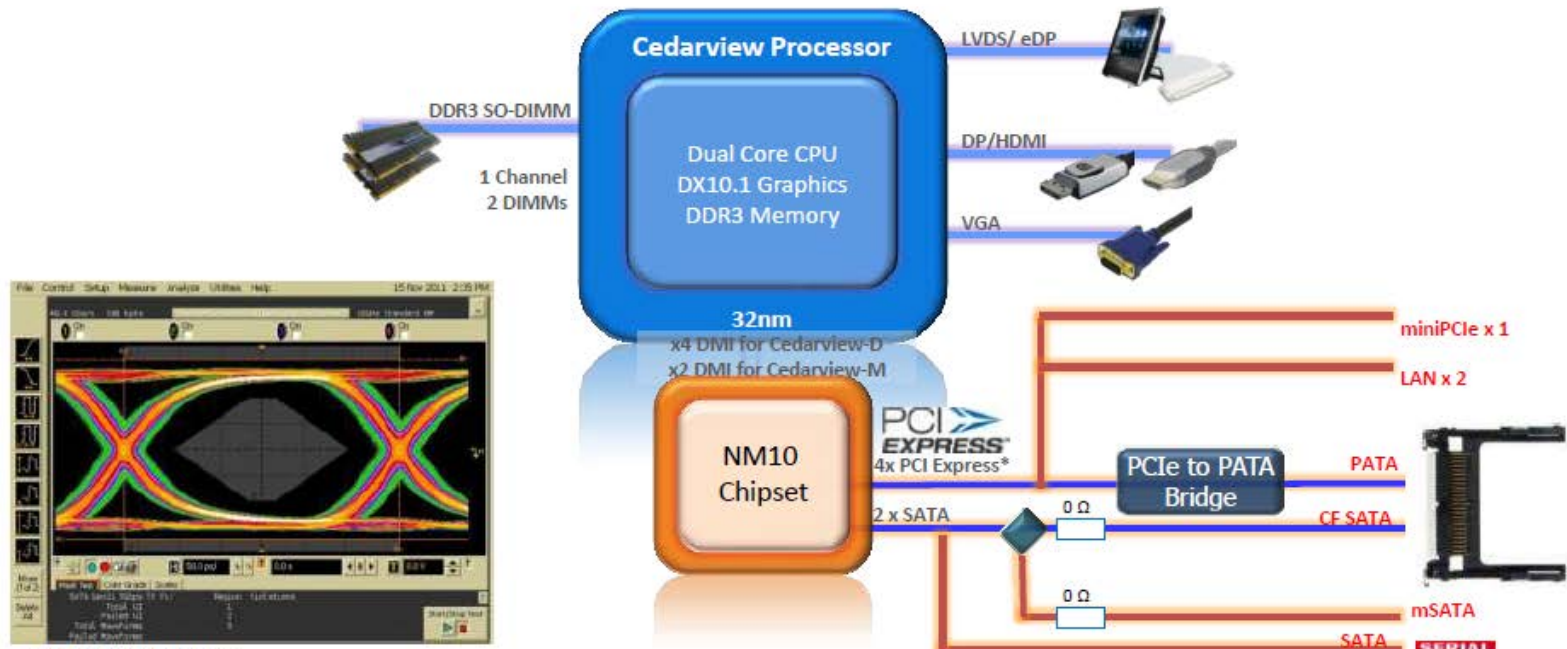


CF SATA (Pin Definition)

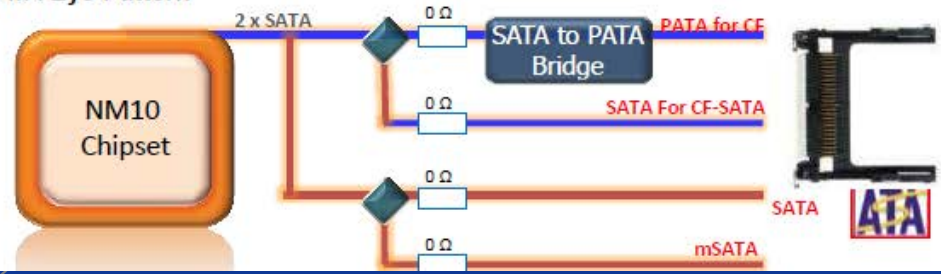
PC Card Memory/IO Mode				True IDE Mode			CFSATA
Pin Num	Signal Name	Pin Type	In, Out Type	Signal Name	Pin Type	In, Out Type	
8	A10	I	I1Z	GND	I	I1Z	GND
10	A09	I	I1Z	GND	I	I1Z	TX+
11	A08	I	I1Z	GND	I	I1Z	TX-
12	A07	I	I1Z	GND	I	I1Z	GND
13	VCC	-	Power	VCC	-	Power	VCC
14	A06	I	I1Z	GND	I	I1Z	GND
15	A05	I	I1Z	GND	I	I1Z	RX-
16	A04	I	I1Z	GND	I	I1Z	RX+
17	A03	I	I1Z	GND	I	I1Z	GND

SATA EYE Pattern




Cedar Trail Platform Overview



SATA Eye Pattern



Flash CF-SATA VS CF VS CFast

Product Picture			
Model Name	CF SATA	<i>Compact Flash Card</i>	CFast
Capacity	2GB ~ 32GB	128MB-32GB	2GB-32GB
Interface	50 Pin	50 Pin	7pin SATA signal + 17 power supply
Transfer Rate	SATA II	UDMA 0-6 MDMA 0-2 PIO 0-4	SATA II
Channels	4 Channels	2 Channels	4 Channels
Sequential R/W (MB/sec, max.)	120 / 95	40 / 20	130 / 120
Operation Voltage	5V	3.3V/5V	5V
Write Protect	Supported		
Security	Supported		
iSMART	Supported		
Dimension (LxWxH)	36.4x42.8x3.3mm	36.4x42.8x3.3mm	36.4x42.8x3.6mm
Cost	\$	\$ \$	\$ \$ \$



- Thanks
- Booth No. 724 & 726
- www.innodisk.com

