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# Introduction to Computer Forensics and Security

## **6G7Z1009**

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# Hardware Write Blockers



























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DC IN A

USB 2.0

800

800

400

IDE

Power

IDE Detect

Host Detect

Write Block

Activity

DC  
OUT





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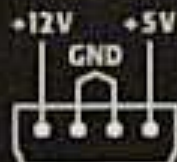
[www.digitalintel.com](http://www.digitalintel.com)

## UltraBlock - SATA

**FireWire800+USB2.0 Serial ATA Bridge**

DC INPUT: +5V --- 2.0A +12V --- 2.0A

DC OUTPUT (max): +5V --- 1.0A +12V --- 1.0A



View looking into  
male connector



### CAUTION:

Do not plug/unplug the DC Out connector  
while the "Power" LED is illuminated.

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## UltraBlock - SCSI

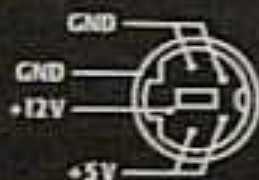
**FireWire800+USB2.0 SCSI Bridge**

DC INPUT: +5V  $\equiv$  2.0A +12V  $\equiv$  2.0A

DC OUTPUT (max): +5V  $\equiv$  1.0A +12V  $\equiv$  1.0A



View looking into  
male connector



### CAUTION:

Do not plug/unplug the DC Out connector  
while the "Power" LED is illuminated.

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DIGITAL INTELLIGENCE CARD READER



Digital Intelligence™  
READ ONLY





**TABLEAU**

**Forensic USB Bridge**

DC IN

● DC IN

● Host Detect

Power ●

Write Block ●

Activity ●

Device  
Detect ●

ON  
OFF

USB 2.0

Menu

Enter

FreeTime — Host — USB 2.0



















Logicube **SF-5000**  
LOGICUBE FORENSICS HARD DRIVE CAPTURE SYSTEM





SOURCE DRIVE

Physical Characteristics

Drive Model: FUJITSU MHK2120AT  
Serial: 01467297

Cylinders	Heads	Sectors	Total Sectors	Drive Size
23392	16	63	23579136	11.2 GB

Computed Hardware CRC Value: FEFDE010 Hex

Skipped Sectors: 0

DESTINATION DRIVE

Physical Characteristics

Drive Model: WDC WD1200JB-00CRA0  
Serial: WD-WMA8C3766323

Cylinders	Heads	Sectors	Total Sectors	Drive Size
232581	16	63	234441648	111.8 GB

Computed Hardware CRC Value: FEFDE010 Hex

```

* Location at source: 1105
* Description: (L200) (C10000)

=====
SESSION SETTINGS
=====
* Operating Mode: Fastwrite          Address Mode: LBA
* Verify: 1 SW-CMD32              Saved: 1 (00000001)
* Connection: 1 (1000)

100% WORM COPY COMPLETED. NEXT PROTECTED AREA MARK INITIATED
* Operator declined Full Destination Drive erase and proceed remainder
=====
* SOURCE DRIVE
=====
Physical Characteristics
=====
* Drive Model: FUJITSU M080200T
  Serial: 01607207

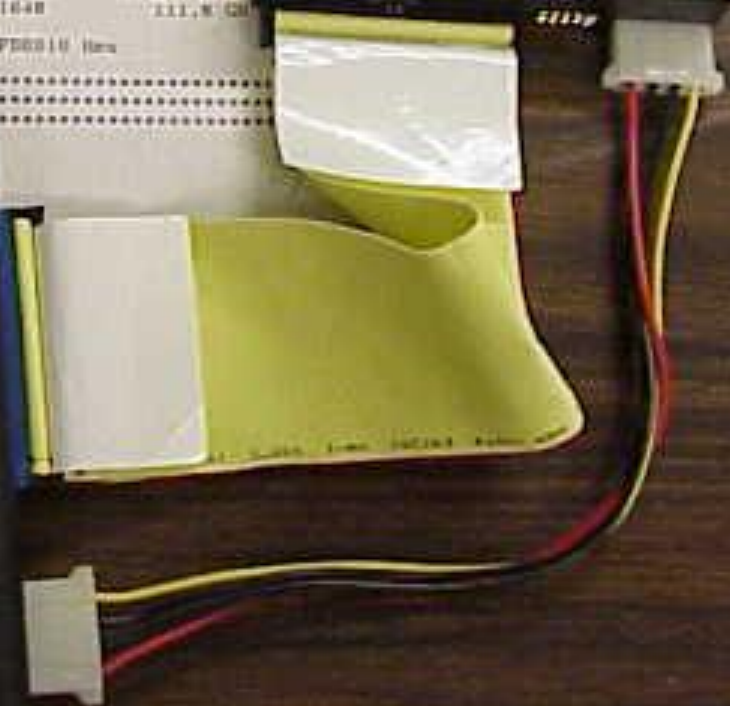
Cylinders  Heads  Sectors  Total Sectors  Drive Size
22200      16      63      22079136      11.2 GB

Computed Hardware CRC Value: FEF00210 Hex
Skipped Sectors: 0
=====
* DESTINATION DRIVE
=====
Physical Characteristics
=====
* Drive Model: WDC WD1200LJH-00C0A0
  Serial: WD-WMA9C376322

Cylinders  Heads  Sectors  Total Sectors  Drive Size
22200      16      63      22080160      11.2 GB

Computed Hardware CRC Value: FEF00010 Hex
=====

```





# Questions?

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# References

- ACPO Guidelines, Good Practice Guide for Computer-Based Electronic Evidence, [www.7safe.com](http://www.7safe.com).
- Access Data FTK Imager, [www.accessdata.com](http://www.accessdata.com)
- *M. Hatzesberger*, How to Forensically Acquire Data Using Software and Hardware Write-block Solutions.