Protecting Your Digital Assets™

CRU® WiebeTech® Forensic ComboDock

User Manual

Features

- Select either Write-Blocked or Read-Write mode on startup
- Compatible with CRU's Forensic Software Utility application
- Four separate host attachment options (USB 3.0, USB 2.0, FireWire 800, and eSATA) for compatibility with virtually any computer
- Multiple LEDs indicate operational status, including disk activity, hidden area detection, error state, and the status of power input and output
- LCD menu allows user to configure settings and view information on attached drives
- Able to detect and create hidden areas (HPAs or DCOs) found on hard drives
- Aluminum case for rugged durability and excellent heat dissipation
- Compatible with forensic acquisition and analysis software

CRU WIEBETECH

TABLE OF CONTENTS

1 PRE-INSTALLATION

1.1 PACKAGE CONTENTS

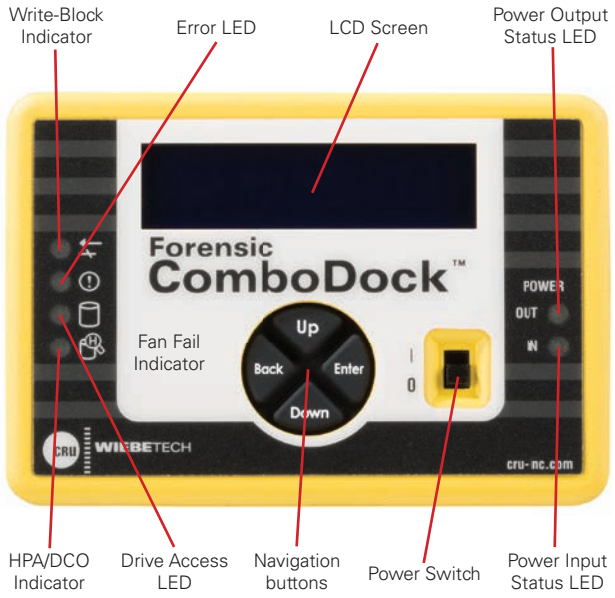
The following list contains the items that are included in the complete configuration for this device. Please contact CRU if any items are missing or damaged:

Accessories	Quantity
Forensic ComboDock	1
AC adapter and power cord	1
USB 3.0 cable	1
FireWire 800 cable	1
eSATA cable	1
SATA drive attachment cable	1
IDE cable	1
Molex Mini-Fit to legacy power cable	1
Metal drive plate	1
Packet of screws and bumpers	1
Quick Start Guide and Warranty Info	1

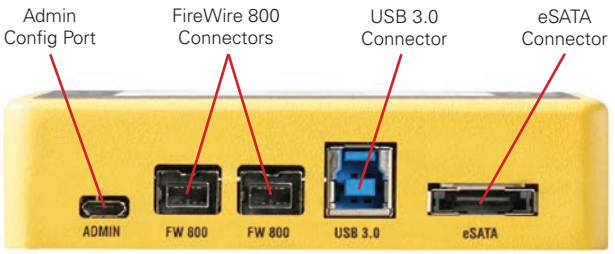
1.2 IDENTIFYING PARTS

Take a moment to familiarize yourself with the parts of the Forensic ComboDock. This will help you to better understand the following instructions.

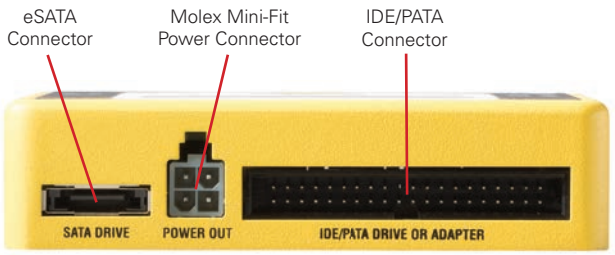
TOP VIEW



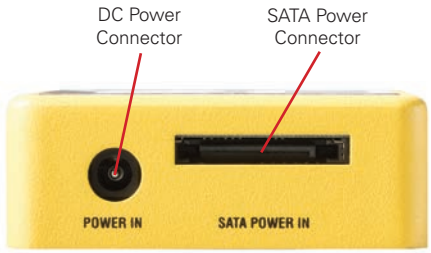
FRONT VIEW



REAR VIEW



SIDE VIEW



1.3 LED BEHAVIOR

LED	COLOR	STATE	DESCRIPTION
Power Out	Green	Solid	The Forensic ComboDock is powered on and outputting power.
Power In	Green	Solid	The Forensic ComboDock is connected to power.
Write-Block	Green	Solid	Write-Blocked mode is enabled.
Error	Red	Solid	There is a problem with the Forensic ComboDock. Please contact Technical Support.
Drive Access	Amber	Solid or Blinking	Data is currently being accessed from the attached drive.
HPA/DCO	Green	Solid	A host protected area (HPA) or device configuration overlay (DCO) has been detected on the attached drive.

1.4 WARNINGS AND NOTICES

Please read the following before beginning installation.

General Care

- The main circuit board of the Forensic ComboDock is susceptible to static electricity. Proper grounding is strongly recommended to prevent electrical damage to the enclosure or other connected devices, including the computer host. Avoid all dramatic movement, tapping on the unit, and vibration.
- Avoid placing the hard drives close to magnetic devices, high voltage devices, or near a heat source. This includes any place where the product will be subject to direct sunlight. Do NOT allow water to make contact with the drive or the Forensic LabDock.
- Remove the drives before transporting the Forensic ComboDock to prevent damage to the drive interfaces.

FORENSIC DEVICE USER ADVISORY

Before using this tool for accessing sensitive data, verify the write-blocking function of the product. You can do so by downloading and installing the Forensic Software Utility and following the instructions in its User Manual for performing a write-block test. See Section 5 for download and setup instructions.

1 INSTALLATION STEPS

a. Use the provided screws to attach the protective metal plate to the bottom of your 3.5" hard drive. This step is optional. The purpose of the bottom plate is to provide protection to the drive electronics of your hard drive.

b. If you're attaching an IDE/PATA drive, configure the jumpers on the rear of the drive to Master. Consult the instructions on your hard drive's label.

c. Connect the Forensic ComboDock to the drive (or adapter), using the IDE ribbon and the Molex Mini-Fit to legacy power cable for IDE/PATA drives or the unified SATA data/power cable for SATA drives.

d. If you're using an adapter, connect the drive to the adapter.

e. Connect the eSATA, FireWire, or USB cable from your computer to the corresponding port on the Forensic ComboDock.

f. Provide power to the Forensic ComboDock. Connect the included AC adapter or a SATA power cable from the inside of your computer case.

g. Turn on the power switch.

h. The "Select Mode" screen will display on the top LCD panel. Press the **Up** or **Down** buttons to select between "write-blocked" or "read-write" modes and then press **Enter**. "Write-blocked" will always be the default mode.

You are now ready to use the Forensic ComboDock to access the drive. If the hard drive is already formatted, it can be used right away. If the hard drive is brand new, or its format is not compatible with your computer, the drive will need to be formatted before

being used. Make sure that the Forensic ComboDock is in Read-Write Mode before attempting to format a drive attached to it. **Note that formatting a drive will erase all data on the drive, so be sure to back up your data before beginning this operation.**

2 HOW TO USE THE LCD INTERFACE

Use the LCD and 4-button navigation interface to view information about the attached drive and the Forensic ComboDock. On the 4-button interface, **Up** and **Down** allow you to scroll through options, while **Enter** selects an option and **Back** goes back to the previous screen.

MENU ITEM	SUBMENU ITEM	ACTION
View Drive Info	Disk Temp	Displays the temperature of the attached drive, displayed in °C.
	Capacity (MB)	Displays the capacity of the attached drive, measured in megabytes.
	Manufacturer	Displays the manufacturer of the attached drive.
	Model number	Displays the model number of the attached drive.
	Serial number	Displays the serial number of the attached drive.
	Firmware rev	Displays the firmware revision of the attached drive.
	HPA size (MB)	Displays the size of the host protected area, if any, on the attached drive. Measured in megabytes.
	DCO size (MB)	Displays the size of the device configuration overlay, if any, on the attached drive. Measured in megabytes.
	Disk health	Displays the S. M. A. R. T. status of the attached drive.
	Start/Stops	Displays how many times the attached drive has spun up and spun down.
	Power cycles	Displays how many power on/off cycles the attached drive has undergone.
	Bad sectors	Displays the number of bad sectors reported by the attached drive.
View Dock Info	Product Name	Displays the brand name of the product (e.g. Forensic ComboDock)
	Unique ID#	Displays the specific, unique number assigned to the unit for identification, akin to a serial number.
	Firmware Ver. #	Displays the version of the firmware currently installed on the Forensic ComboDock.
	Mode	Displays whether the Forensic ComboDock is running in Write-Blocked or Read-Write mode.
Create HPA/DCO	Supported in R/W Mode Only	Appears when the Forensic ComboDock is in Write-Blocked mode. The other two submenu options are disabled.
	Set DCO Size	This option is only available if no HPA exists on the drive. It allows you to set a new size for the DCO. Press **Up** or **Down** to set a new size for the HPA, and **Enter** to confirm the choice. The disk capacity available to a computer will be reduced by this amount. Set the value to 0 to have no DCO. Values exceeding the available capacity will not be accepted.
	Set HPA Size	Allows you to set a new size for an HPA. Press **Up** or **Down** to set a new size for the HPA, and **Enter** to confirm the choice. The disk capacity available to a computer will be reduced by this amount. Set the value to 0 to have no HPA. Values exceeding the available capacity will not be accepted.

3 HPA/DCO HANDLING

The Forensic ComboDock will check to see if any HPAs (host protected areas) or DCOs (device configuration overlays) are present after you have selected Write-Blocked or Read-Write mode on startup. If an HPA or DCO is detected, the Forensic ComboDock will indicate that one has been found and ask what you want to do with it. Use the **Up** and **Down** buttons to scroll through the options, shown below, and then press **Enter** to select an option.

DCO FOUND	HPA FOUND
Keep DCO – Leaves the DCO in place	**Keep HPA** – Leaves the HPA in place
Remove DCO – Permanently removes the DCO, exposing any hidden data within that area	**Remove HPA Temp** – Temporarily bypasses the HPA so that data within it can be accessed
	Remove HPA Perm – Permanently unhides the HPA

4 UPDATING FIRMWARE

CRU provides free firmware updates for the Forensic ComboDock through our Configurator application.

Download it here: www.cru-inc.com/support/software-downloads/configurator-software-download/

Setup Instructions

Connect a USB micro-B cable to the "Admin" port on the Forensic ComboDock and connect the other end to your computer. Then, turn on the Forensic ComboDock. Finally, open the Configurator application.

If your product is running outdated firmware, you will see a prompt asking you to update once you open the Configurator application. Follow the instructions on the prompt to update the firmware.

5 FORENSIC SOFTWARE UTILITY

The Forensic ComboDock is compatible with CRU's Forensic Software Utility application. This software allows you to perform a write-block test on your Forensic ComboDock, display details about attached drives, and save that data to a file for easy inclusion in a case report.

Download it here: www.cru-inc.com/support/software-downloads/forensic-software-utility/

Setup Instructions

Connect the Forensic ComboDock to your computer with an attached drive as you normally would and turn the Forensic ComboDock on. Then open the Forensic Software Utility.

For information on HPA/DCO handling, see Section 3.

6 TECHNICAL SPECIFICATIONS

Product Models	Forensic ComboDock (Model: FCDv5.5)
U.S. Patent No.	8,090,904
Drive Interface Types & Speeds	PATA/IDE: up to 133 MB/s SATA (with eSATA cable): up to 6 Gbps
Host Interface Types & Speeds	eSATA: up to 6 Gbps USB 3.0: up to 5 Gbps FireWire 800: up to 800 Mbps USB Micro-B: up to 480 Mbps (Admin configuration only)
Drive Types Supported	2.5" and 3.5" rotational and solid state SATA drives 3.5" rotational IDE/PATA drives 2.5" rotational IDE/PATA drives*, Hitachi 1.8" drives*, Toshiba 1.8" drives*, MacBook Air 2010*, MacBook Air 2011*, mSATA*, mini PCIe PATA*, mini PCIe SATA*, mini PCIe USB* *Requires the appropriate CRU SATA or PATA adapter
Host Data Connectors	One (1) USB 3.0 connector (backwards compatible with USB 2.0) One (1) eSATA connector Two (2) FireWire 800 connectors
Supported Operating Systems	Windows 10, 8, 7, and Vista Windows Server 2012 and 2008 product families Mac OS X 10.4.x or higher (USB 3 requires 10.8 or later) Linux distributions that support the connection type used
Compliance	EMI Standard: FCC Part 15 Class A, CE EMC Standard: EN55022, EN55024 RCM
Product Weight	0.4 pounds (0.18 kg)
Product Dimensions	2.95" x 4.33" x 1.06" (75mm x 110mm x 27mm)
Technical Support	Your investment in CRU products is backed up by our free technical support for the lifetime of the product. Contact us through our website, cru-inc.com/support or call us at 1-800-260-9800 or +1-360-816-1800.

Product Warranty
CRU warrants this product to be free of significant defects in material and workmanship for a period of two years from the original date of purchase. CRU's warranty is nontransferable and is limited to the original purchaser.

Limitation of Liability
The warranties set forth in this agreement replace all other warranties. CRU expressly disclaims all other warranties, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose and non-infringement of third-party rights with respect to the documentation and hardware. No CRU dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty. In no event will CRU or its suppliers be liable for any costs of procurement of substitute products or services, lost profits, loss of information or data, computer malfunction, or any other special, indirect, consequential, or incidental damages arising in any way out of the sale of, use of, or inability to use any CRU product or service, even if CRU has been advised of the possibility of such damages. In no case shall CRU's liability exceed the actual money paid for the products at issue. CRU reserves the right to make modifications and additions to this product without notice or taking on additional liability.

FCC Compliance Statement: "This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at this own expense.

In the event that you experience Radio Frequency Interference, you should take the following steps to resolve the problem:

1) Ensure that the case of your attached drive is grounded.
2) Use a data cable with RFI reducing ferrites on each end.
3) Use a power supply with an RFI reducing ferrite approximately 5 inches from the DC plug.
4) Reorient or relocate the receiving antenna.

CRU

Protecting Your Digital Assets™

FC Tested to comply with FCC standards
FOR OFFICE OR COMMERCIAL USE

For more information,
visit the CRU web site.

www.cru-inc.com

Part Number: A9-000-0056 Rev 1.2

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