

# **Hard Disk Drive Duplicator**

## **User Guide**

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# I. Product Introduction

## 1. Overview

This U-Reach HDD duplicator is an economical and powerful hard drive duplicator that makes HDD duplication fast and easy. There is no computer or additional software required. The full line HDD duplicators support from 1 target to 15 targets. Support high data transfer speed up to 60-80MB per second, and it takes one minute to copy around 4GB content. The three different copy modes (Only Data, All Partition and Whole HDD) can satisfy various needs of duplication; “Only Data” copy mode is fast copy mode to copy only data area instead of copying entire source HDD, it can greatly save elapsing time.

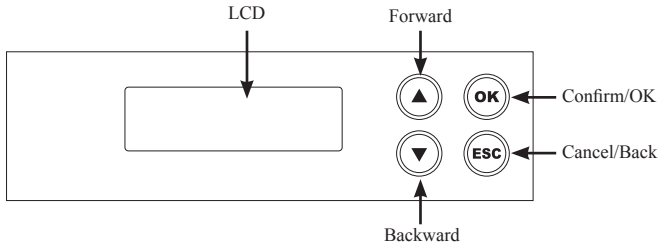
When you would like to recycle or discard a HDD, it is vital to ensure there is no important data left inside. U-Reach HDD duplicator supports professional erase capability. Besides Quick/Full Erase, it provides with DoD Erase and DoD EraseComp, which can completely erase the data from hard drives complying with Department of Defense standard (DoD 5220) and guarantee the data was completely deleted.

## 2. Features

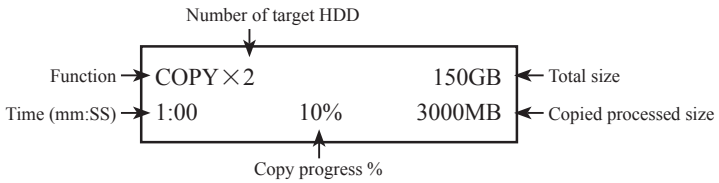
- Three copy modes: “Only Data”, “All Partition” and “Whole HDD” copy modes.
- High speed of copy, it takes for 1minute around 4GB, 8 hours for 2TB Data.
- Support DoD Erase to wipe out data efficiently.
- Easy firmware updating without complex procedure.
- Instant power on and off. Easy to boot up without waiting time.
- Support full range models from 1 target to 15 targets.
- Standalone, no PC or other installation required.

### 3. Basic Instruction

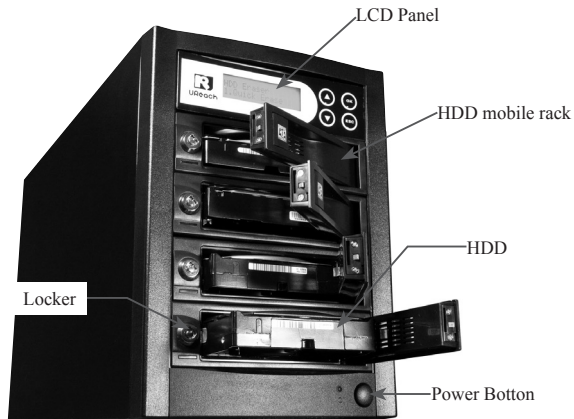
#### A. LCD and Buttons



#### B. LCD Configuration



#### C. System Overview



**\*\* Insert HDD into the rack slightly and close the door of rack.**

## 4. Function Table

Function	Description	
<b>1. Copy</b>	To copy source HDD to multiple target HDDs. Refer to function 6.Setup for 3 different copy mode selection.	
<b>2. Compare</b>	To compare data bit by bit between source and copied HDDs.	
<b>3. Copy+Compare</b>	It makes copy first and then compare copied HDD with source HDD to ensure data correctness.	
<b>4. Erase</b> Note: Function 6.3 can select to erase source HDD or not	<b>4.1 Quick Erase</b> Erase HDD's index table only, it takes short time to execute this function.	
	<b>4.2 Full Erase</b> Erase the whole HDD content.	
	<b>4.3 DoD erase</b> Erase HDDs three times complying with USA Department of Defense (DoD) standard.	
	<b>4.4 DoD EraseComp</b> Erase HDDs three times complying with n USA Department of Defense (DoD) standard and bit by bit to check if data is completely erased.	
<b>5. Utility</b>	<b>5.1 Show HDD info</b> Shows HDD's basic information such as HDD model name and capacity	
	<b>5.2 Update System</b>	<b>5.2.1 Update BIOS</b> To update the system firmware via the HDD.
		<b>5.2.2 Format HDD</b> To format the HDD with a 2GB FAT partition in order to quickly save firmware in the HDD.
	<b>5.3 System Info</b> This function will show information of the duplicator system, including controller model number and software version.	
<b>6. Setup</b>	<b>6.1 Copy Area</b> Setup copy mode.	<b>6.1.1 Only Data</b> Set to copy source HDD's data area only.
		<b>6.1.2 ALL partition</b> Set to copy source HDD's all partitions.
		<b>6.1.3 Whole HDD</b> Set to copy the whole source HDD.
	<b>6.2 Skip Error</b> Set to ignore error of source HDD while copying.	<b>6.2.1 0—100</b> Set to ignore error of source HDD.
	<b>6.3 Erase Master</b> Setup to erase source HDD or not.	<b>6.3.1 Disable</b> Disable erase source HDD.
		<b>6.3.2 Enable</b> Enable erase source HDD.

# II. Function Introduction

## 1. Copy

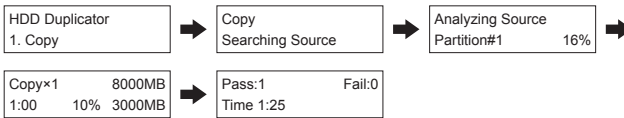
It copies data from source HDD to target HDD. Please make sure you have choose correct copy mode you like to use, about the three copy modes please refer to function [6.1 Copy Area] for details.

**\*\* The default setting is “Only Data Area”.**

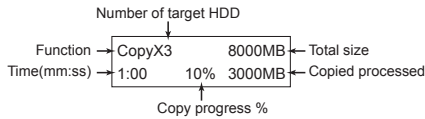
Steps of copy:

Put HDDs into duplicator→Select [1. Copy]→Press [OK]→Copy Processing→Copy finished→Press [ESC] to finish copy

**\*\*The function can be stopped while processing by pressing [ESC] for about 3~4 seconds.**



LCD indication in <Data Only> mode:



**\*\*Do not take out any HDD while copy is processing.**

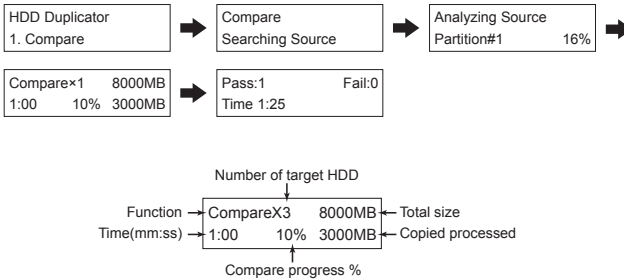
## 2. Compare

It is used to check if the data on source HDD is identical to target HDD after duplication.

Steps of compare:

Put HDDs into duplicator → Select [2. Compare] → Press [OK] → Compare Processing → Compare finished → Press [ESC] to finish compare

**\*\* The function can be stopped while processing by pressing [ESC] for about 3~4 seconds.**



## 3. Copy & Compare

It makes copy first and then compare copied HDD with source HDD to ensure data correctness.

## 4. Erase

Please choose the appropriate erase method when you like to dispose or re-use the HDDs.

\*\* *Function 6.3 Erase Master is to determine erase source HDD or not. The default setting is "Disable erase source HDD"*

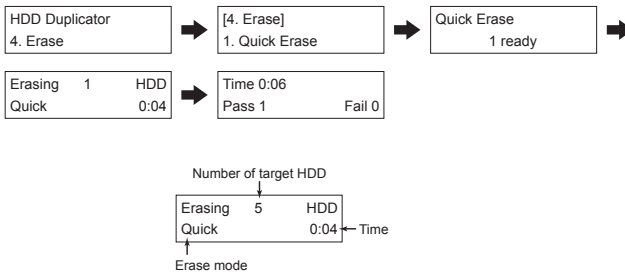
\*\* *The function can be stopped while processing by pressing [ESC] for about 3~4 seconds.*

### 4.1 Quick Erase

The function will ONLY erase the index of the HDD. It is the quickest way to erase HDD. It will damage the data in HDD, please make sure you have backup all important data before using this function.

Steps of Erase:

Put HDDs into duplicator→Select [4. Erase ]→Press [OK]→Select [4.1 Quick Erase ]→Press [OK]→Erase Processing→Erase finished→ Press [ESC] to finish erase

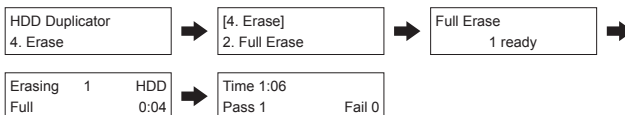


### 4.2 Full Erase

The function will erase the whole sectors on the target HDD. It will take longer time than quick erase. It will damage the data in HDD, please make sure you have backup all important data before using this function.

Steps of Erase:

Put HDDs into duplicator→Select [4. Erase ]→Press [OK]→Select [4.2 Full Erase ]→Press [OK]→Erase Processing→Erase finished→ Press [ESC] to finish erase



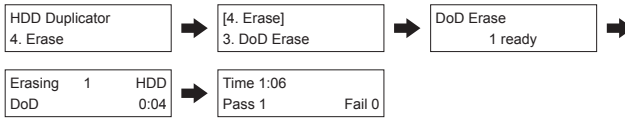


### 4.3 DoD Erase

This is to comply with the U.S.A. Department of Defense (DoD 5220) standard to fully erase the HDD three times bit by bit to rewrite HDD to guarantee the data was deleted. It will damage the data in HDD, please make sure you have backup all important data before using this function.

Steps of Erase:

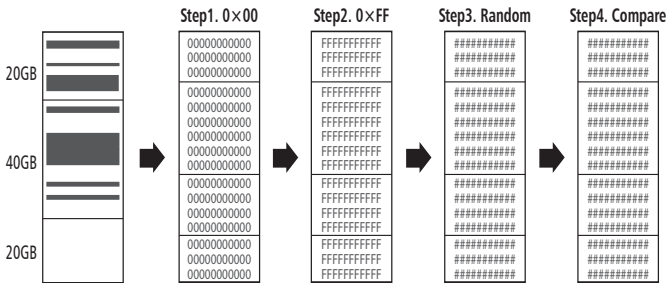
Put HDDs into duplicator → Select [4. Erase] → Press [OK] → Select [4.3 DoD Erase] → Press [OK] → Erase Processing → Erase finished → Press [ESC] to finish erase



### 4.4 DoD Erase Comp

Besides DoD erase, this function will also execute compare function to make sure the random bit was correctly written. This way of erase is to erase HDD over each sector three times: the first time with zeros (0x00), second time with 0xFF and the third time with random characters. There is one final pass to compare random characters by reading. It will damage the data in HDD, please make sure you have backup all important data before using this function.

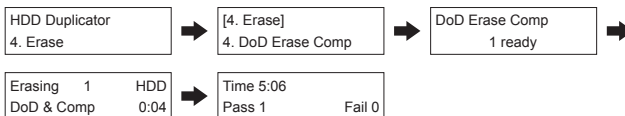
**DoD EraseComp Method:**



\*The erasing time of DoD Erase mode is three times longer than Full Erase mode, and the time of DoD EraseComp is four times longer than Full Erase mode.

Steps of Erase:

Put HDDs into duplicator → Select [4. Erase] → Press [OK] → Select [4.4 DoD Erase Comp] → Press [OK] → Erase Processing → Erase finished → Press [ESC] to finish erase



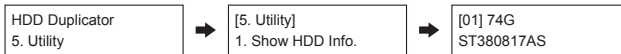
## 5. Utility

### 5.1 Show HDD Info.

This function will show HDD's basic information such as HDD capacity and model number.

Steps of Show HDD Info.:

Put HDDs into duplicator → Select [5. Utility] → Press [OK] → Select [5.1 Show HDD Info.] → Press [OK] → System shows the info. → Press [Forward]/[Backward] to check other HDDs' info. → Press [ESC] to finish

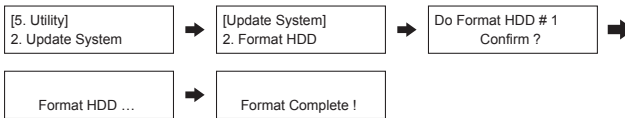


### 5.2 Update System

This is to update the system's firmware version.

You can follow the 3 steps to update system firmware:

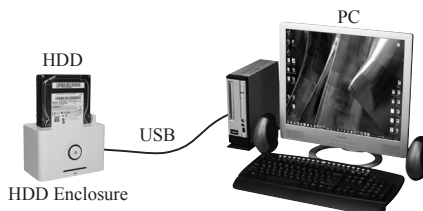
1. Place a HDD into the duplicator and execute function [5.2.2 Format HDD]. The HDD will be formatted to have a 2GB FAT partition. This purpose of format HDD before update firmware is to prepare a small FAT partition in HDD to quickly save firmware into HDD.



2. Save the un-zipped firmware to the HDD.

**\*\* DO NOT save the un-zipped file in a folder.**

*Tip: While download firmware from PC to HDD, you may use a USB HDD enclosure to speed up the firmware download.*



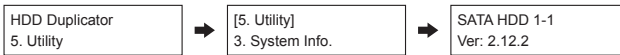
- Put the HDD back to the first rack of the duplicator. Execute function [5.2.1 BIOS Update] to start writing new firmware to the duplicator system.

## 5.3 System Info.

This function shows information of the duplicator includes model name and firmware version.

Steps of System Info.:

Put HDDs into duplicator → Select [5. Utility ] → Press [OK] → Select [5.3 System Info. ] → Press [OK] → System shows the info. → Press [ESC] to finish



## 6. Setup

### 6.1 Copy Area

#### 6.1.1 Only Data

It will copy source HDD's data area only instead of the whole HDD. The system will analyze the source HDD and identify the data area to copy. As long as the source HDD's data within the target HDD's space, the copy will be processed.

Steps of setup Only Data Area:

Select [6. Setup ]→Press [OK]→Select [6.1 Copy Area ]→Press [OK]→Select [Only Data Area] → Press [OK] to confirm the setting



Copy HDD in "Only Data" mode:

Copy×5	8000MB	← Data size
1:00	10%	3000MB ← Copied size

Copy scenario example

Source	Target HDD Capacity	Only Data
Partition/size 1/ 20GB 2/ 40GB 3/ 30GB 320GB	500GB	Partition/size 1/ 20GB 2/ 40GB 3/ 30GB 320GB 500GB
	320GB	1/ 20GB 2/ 40GB 3/ 30GB 320GB
	80GB	1/ 20GB 2/ 40GB 3/ 30GB Data is within 80GB, copy OK

\*\* The copy speed is around 60~80MB/Sec.

\*\* The copy time shown on this chart is based on 75MB/Sec.

**\*\* After copy, the remaining space in the copied HDD can be used by PC for further partitioning.**

## 6.1.2 All Partition

This mode will bit by bit copy all of the partitions no matter there is data exist or not. The capacity of target HDD has to be bigger than the partition required capacity.

Steps of setup All Partitions:

Select [6. Setup ]→Press [OK]→Select [6.1 Copy Area ]→Press [OK]→Select [All Partitions] → Press [OK] to confirm the setting.



Copy HDD in "All Partitions" mode:



Copy scenario example

Source	Target HDD Capacity	All Partition
Partition/size 1/ 20GB 2/ 40GB 3/ 30GB 320GB	500GB	Partition/size 1/ 20GB 2/ 40GB 3/ 30GB 320GB 500GB
	320GB	1/ 20GB 2/ 40GB 3/ 30GB
	80GB	Partition size over 80GB, copy failed

\*\* The copy speed is around 60~80MB/Sec.

\*\* The copy time shown on this chart is based on 75MB/Sec.

**\*\* After copy, the remaining space in the copied HDD can be used by PC for further partitioning.**

### 6.1.3 Whole HDD

It is to copy the whole source HDD, no matter of the content, format, partition or empty space. This mode will take much more time to duplicate the source HDD completely.

Steps of setup Whole HDD:

Select [6. Setup ]→Press [OK]→Select [6.1 Copy Area ]→Press [OK]→Select [Whole HDD] → Press [OK] to confirm the setting.



Copy HDD in “All Partitions” mode:



Copy scenario example

Source	Target HDD Capacity	Whole HDD
Partition/size 1/ 20GB 2/ 40GB 3/ 30GB 320GB	500GB	Partition/size 1/ 20GB 2/ 40GB 3/ 30GB 320GB 500GB
	320GB	1/ 20GB 2/ 40GB 3/ 30GB 320GB
	80GB	1/ 20GB 2/ 40GB 3/ 30GB Copy OK,the capacity shows on PC will be abnormal

\*\* The copy speed is around 60~80MB/Sec.  
 \*\* The copy time shown on this chart is based on 75MB/Sec.

**\*\* After copy, the remaining space in the copied HDD can be used by PC for further partitioning.**

\*\* When source HDD capacity is *SMALLER* or *EQUAL* to target HDD, for example: source 320GB to target 500GB, the result of copy will success. The rest space of target HDD still can be use after duplication.

\*\* When source HDD capacity is *BIGGER* than target HDD capacity, for example source 320GB to target 80GB, there are two different results:

- A. When the content is within the target HDD capacity, the duplication will success.
- B. When the content is located beyond the target HDD capacity, the duplication will fail due to the duplicator will copy whatever the data is, it will not change the data's location.

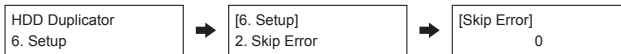
## 6.2 Skip Error

This function sets the number of error you like to skip during copy process.

\*\* If the HDD is very critical for content correctness, it is strongly recommended to keep the Skip Error to be "0".

Steps of Skip Error:

Select [6. Setup ]→Select [6.2 Skip Error] →Press [OK]→Select how many errors are allowed to ignore by [Forward]/[Backward] key → Press [OK] to confirm the setting



## 6.3 Erase Master

It is set to allow erase source HDD or not. Please make sure this setting before you execute erase function.

## III. FAQ

Q1: Can I change the HDD mobile rack by my own?

A1: If it is necessary to change HDD mobile rack by your own, it is strongly recommended to follow the instruction of manufacturer. Manufacturer is not responsible for the problem of copy quality which caused by changing the rack without following manufacturer's direction.

Q2: Does it need waiting time for boot on and shut down?

A2: This system supports instant power on and off, no need of waiting time. Thus, you can turn it off when it is not in use.

Q3: Can I interrupt the copy task while it is not finished?

A3: Yes, the program (copy, compare and erase) can be stop while it is processing by pressing [ESC] for about 3~4 seconds.



## IV. Specification

Model	HD-S01	HD-S03	HD-S05	HD-S07	HD-S11	HD-S15	
Target	1:1	1:3	1:5	1:7	1:11	1:15	
Interface	SATA						
Drive Capability	3.5" / 2.5"(adapter optional)						
Transfer Rate	50~80MB/Sec.						
Display	2x16 Backlight Monochrome LCD						
Input	4 push buttons (Forward/ Backward/ OK/ Cancel)						
Language Support	English, Japanese, Spanish, Portuguese						
Copy Mode	Only Data, All Partition, Whole HDD						
Erase Mode	Quick Erase, Full Erase, DoD Erase, DoD EraseComp						
Power	System require (max)	80W	180W	250W	300W	450W	500W
	Voltage	5, 12V					
Weight (kg)	6.0	6.5	8.2	10.0	13.0	15.0	
Dimension (L*W*H cm)	28*19*16	41*17*28	41*19*35	40*22*45	75*30*53	65*32*80	
Safety	FCC, CE, RoHS						

\* *The above information is for marketing reference only. The actual specification may subject to change without notice.*