



SATA III Ulrea-High Speed
1 to 1 SATA HDD/SSD
Sanitizer and Duplicator

User Guide

v A.02

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Product Disclaimer

U-Reach is not accountable for any incidental or consequential damages, which includes, but is not constrained to property harm, loss of time or data from use of a U-Reach product, or any other damages attributable to product malfunction or failure (including without limitation, those attributable to: (1) reliance of the materials provided, (2) costs of product replacement, (3) loss of use, data or profits, (4) delays or business interruptions, (5) and any principle of legal responsibility, arising out of or in reference to the use or overall performance or from delays in servicing or lack of ability to render service) of any U-Reach product. U-Reach makes every effort to ensure proper operation of all products. However, the customer is responsible to affirm that out of the U-Reach product meets the customer's quality requirement. The customer further acknowledges that fallacious operation of U-Reach product and/or software program, or hardware issues, can cause loss of data, defective formatting, or data loading. U-Reach will make efforts to resolve or repair any issues recognized by customer either within the warranty period or on a time and materials basis.

Specifications and features subject to change without notice or obligation.

Warranty

U-Reach provides a basic one-year parts and labor warranty for all of its products (excluding cables, adapters, and other consumable items). An optional extended warranty is also available for an added cost. Telephone and email support is available for the life of the product as defined by U-Reach.

All warranties will be restricted and defined by the market region from which customers purchased.

Piracy Statement

U-Reach accepts no responsibility for copyright infringement or misuse of any U-Reach equipment. Copying all forms of data: audio, video, or software without the permission of the copyright holder is illegal. It is the sole responsibility of the user to ensure that the legal copyrights of the copyright owners are respected.

Before You Start

Important Notice

- Carefully read the entire manual before operating.
- Make sure the source device is correct and functioning.
- Equal capacity of source and target is recommended for guaranteed data consistency.
- Using the Copy+Compare function provides the most flawless duplication.
- Damage incurred due to non-compliance with our operating instructions will void the warranty.
- Store the equipment safely when not in use and keep out of the reach of children.
- Please turn off duplicator before replacing sockets.
- Never turn off the power while the firmware updates.
- Use only approved, stable power sources.
- The power supply has overload protection. When it is overloaded and shutdown, please unplug the power cord for 2 minutes for discharging.
- Use product only in a clean, dry, dust-free, and ventilated area. Liquids or foreign debris can severely damage your duplicator.
- It is typical for the machine to heat up during operation.
- While in use, do not move the duplicator or remove SSDs.
- Static electricity may cause duplication error. Please pay attention to the duplicator's environment while operating equipment. Purchasing electricity elimination equipment helps avoid shock.
- Devices will operate at high-temperatures during selected tasks.
- Wear protective gloves to prevent burns when handling devices.
- Ensure machine and operator are properly grounded to prevent ESD.

Notice Symbols

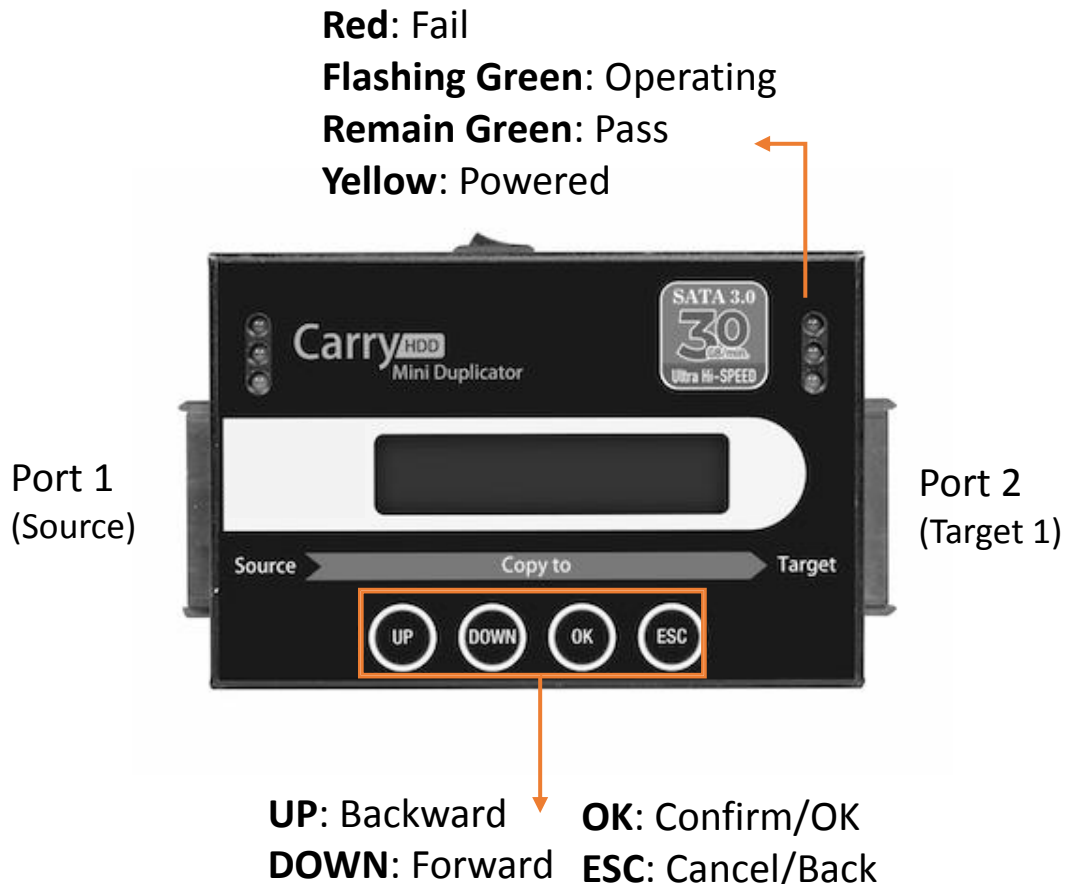
Special items, procedures, or notes to be observed prior to use:

Note	Refers to related duplicator operations, special details, tips, or suggestions for operational effectiveness.
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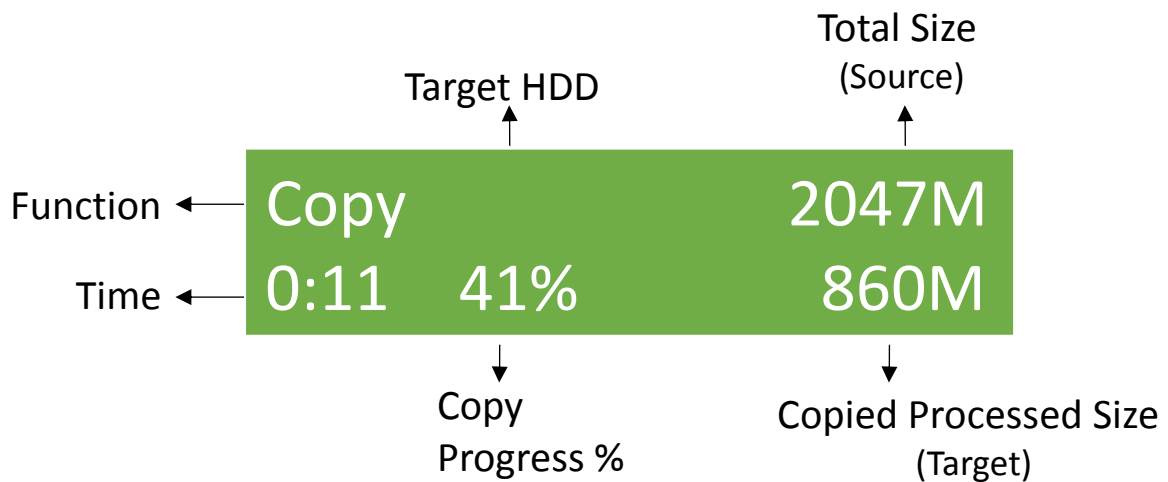
Caution	Refers to procedures that need to be adhered to or precautions.
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Product Overview

- Hardware overview



- LCD configuration



Function Table

Function	Description	
1. Copy	To copy source HDD to multiple target HDDs. Refer to function [6.1 Copy Area] for 4 different copy modes selection.	
2. Compare	To compare data bit for bit between source and target HDDs.	
3. Copy +Compare	It makes copy first and then compare target HDD with source HDD to ensure data correctness.	
4. Erase	4.1 Quick Erase To erase HDD's index table only, it takes short time to execute this function.	
	4.2 Full Erase To erase the whole HDD content.	
	4.3 DoD Erase To erase HDDs three times complying with USA Department of Defense (DoD) standard.	
	4.4 DoD EraseComp To erase HDDs three times complying with USA Department of Defense (DoD) standard and bit by bit to check if data is completely erased.	
	4.5 7-Pass Erase Erases device(s) 7 times complying with DoD 5220.22-M(ECE) Standards.	
	4.6 Secure Erase The international authorized high standard Secure Erase function. It is able to erase the area which is not loadable.	
	4.7 Enhanced Secure Erase Erases devices that support this feature.	
5. Utility	5.1 Show Disk Info. Displays basic information such as device model, name, capacity, etc.	
	5.2.1 Update BIOS To update the system firmware via the HDD.	
	5.2 Update System <table border="1" style="display: inline-table; vertical-align: top;"> <tr> <td>5.2.2 Create Update HDD</td> <td>To format the HDD with a 2GB FAT partition in order to quickly save the new firmware in the HDD.</td> </tr> </table>	5.2.2 Create Update HDD
5.2.2 Create Update HDD	To format the HDD with a 2GB FAT partition in order to quickly save the new firmware in the HDD.	

	5.3 System Info. This function will show information of the duplicator system, including controller model, number and software version.		
	5.4 Read Speed To show the speed of reading.		
	5.5 Write Speed To show the speed of writing.		
6. Setup	6.1 Copy Area	6.1.1 System and Files To copy source HDD's data area only.	
		6.1.2 ALL Partitions To copy source HDD's all partitions.	
		6.1.3 Whole HDD To copy the whole source HDD.	
		6.1.4 Percentage(%) To copy percentage range of source HDD.	
	6.2 Copy GPT Backup Area Enable this function to copy the end GPT format.		
	6.3 Skip Bad Sectors Skips bad sectors during Copy/Compare/Erase.		
	6.4 Language English / Japanese		
	6.5 Advanced Setup	6.5.1 Unknown Format	6.4.1.1 Copy Unknown Copy unknown area when the device cannot identify the format.
			6.4.1.2 Skip Unknown Skip copy unknown area when the device cannot identify the format.
		6.5.2 Erase Master (Setup to erase source HDD or not.)	6.4.2.1 Enable Enable erase source HDD.
			6.4.2.2 Disable Disable erase source HDD.
		6.5.3 Erase Pattern	6.4.3.1 ONE Byte A random character to be written into every byte.
			6.4.3.2 Big Random Data A set of random character to be written into a set of area.

	<p>6.5.4 Wait HDD Time Auto start time after plugging HDD from 0~30 seconds.</p> <table border="1" data-bbox="576 253 1458 573"> <tr> <td data-bbox="576 253 852 309" rowspan="4">6.5.5 Copy HPA Area</td> <td data-bbox="852 253 1458 309">No, Keep HPA</td> </tr> <tr> <td data-bbox="852 309 1458 365">No, Clear HPA</td> </tr> <tr> <td data-bbox="852 365 1458 421">No, Setting HPA</td> </tr> <tr> <td data-bbox="852 421 1458 477">Copy and Setting</td> </tr> <tr> <td data-bbox="576 477 852 573" rowspan="2">6.5.6 Clear HPA at Erase</td> <td data-bbox="852 477 1458 533">Clear HPA Setting</td> </tr> <tr> <td data-bbox="852 533 1458 573">Keep HPA Setting</td> </tr> </table> <p>6.5.7 Transfer Rate Select the proper transfer rate from UDMA2~UDMA7. UDMA7 is the fastest.</p> <p>6.5.8 Stop Motor Time Auto running time after stopping motor from 1~20 seconds.</p>	6.5.5 Copy HPA Area	No, Keep HPA	No, Clear HPA	No, Setting HPA	Copy and Setting	6.5.6 Clear HPA at Erase	Clear HPA Setting	Keep HPA Setting
6.5.5 Copy HPA Area	No, Keep HPA								
	No, Clear HPA								
	No, Setting HPA								
	Copy and Setting								
6.5.6 Clear HPA at Erase	Clear HPA Setting								
	Keep HPA Setting								
	<p>6.6 Restore Default Back to original manufacturer setting.</p>								

Functions

1. Copy

Step 1: Prepare source and target devices.

Note

Recommendation: Target device(s)' capacity must be equal to or larger than the source device capacity.

Step 2: Connect source and target devices.

Step 3: Proceed to copy.

Scroll to select "1. Copy", then press "OK" to start the duplication process.

Note

- Press "ESC" for 5 seconds to stop all the copy jobs.

Caution

It is recommended to reboot the machine after manually stopping the copy.

Step 4: Copy Completed!

2. Compare

Proceed to verify device(s).

Scroll to select "2. Compare", then press "OK" to start the verification process.

3. Copy+Compare

Sequentially automates from Function 1, Copy to Function 2, Compare.

Scroll to select "3. Copy+Compare", then press "OK" to start the automated duplication and verification process.

Caution

User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

4. Erase

There are 7 submenu modes.

Caution

Please back up all important data before using this function.

Step 1: Connect device(s) for sanitizing.

Note Source Port is disabled for erasing. Go to 6.8.2 to enable source port erasing.

Step 2: Enter function "4. Erase"

Scroll to select "4. Erase", then press "OK" to view the 7 erase modes.

Step 3: Select an Erase Function.

Here are a couple tips to see port details during erase:

- Press "▲" or "▼" to view real-time status of each port.
- Press "OK" to view the details of each port.

Step 4: Erase Completed

Here are a few tips to perform or stop an Erase job.

- Press "Asynchronous Erase Button" to start a new Erase job.
- Press "Asynchronous Erase Button" for 5 seconds to stop a single port.
- Press "ESC" for 5 seconds to stop all the erase jobs.

Caution User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

4.1 Quick Erase

This function will erase the index table from the connected device(s).

Scroll to select "4.1. Quick Erase", then press "OK" to start the erasing process.

4.2 Full Erase

This function will erase all data per NIST 800-88 Standards on the connected device(s).

Scroll to select "4.2 Full Erase", then press "OK" to start the erasing process.

4.3 DoD Erase

This function will erase all data per DoD 5220.22-M Standards on the connected device(s).

Scroll to select "4.3 DoD Erase", then press "OK" to start the erasing process.

4.4 DoD Erase Comp

This function will erase all data per DoD 5220.22-M Standards, then compare

erasure of the connected device(s).

Scroll to select "4.4 DoD EraseComp", then press "OK" to start the erasing and verifying process.

4.5 7-Pass Erase

This function will erase device(s) 7 times complying with DoD 5220.22-M(ECE) Standards.

Scroll to select "4.5 7-Pass Erase", then press "OK" to start the erasing process.

4.6 Secure Erase

This function erases the non-loadable areas complying with NIST 800-88 Standards.

Scroll to select "4.6 Secure Erase ", then press "OK" to start the erasing process.

Caution

If Secure Erase process is interrupted, the device will be locked. Please execute again and wait until it finishes.

4.7 Enhanced Secure Erase

This function erases devices that supports this feature.

Scroll to select "4.7 Enhanced Secure Erase", then press "OK" to start the erasing process.

5. Utility

This menu contains submenus related to device information, system information and updates.

Scroll to "5. Utility", then press "OK" to view the submenus.

5.1 Show Disk Info

This function will display basic information such as device model, name, capacity, etc...

Scroll to select "5.1 Disk Info", then press "OK" to view the connected device(s). Then scroll through to view connected device(s) by port number order.

5.2 Update System

This function is to execute firmware updating of system.

You can follow the following steps to update the system firmware.

Step 1: Create an Update HDD

Place a SDD/HDD to the duplicator. Select function "5.2.2 Create Update HDD".

Step 2: Format BIOS HDD

Click "OK" to format the BIOS hard disk. One FAT, 2GB partition will be formatted in HDD. That would reduce searching time, and speed up firmware update.

Caution The data saved in this HDD will be erased.

Step 3: Download Firmware

Connect the BIOS HDD to PC. Download the latest firmware from PC and save it to HDD. Unzip BIOS, and save it to the root directory.

Step 4: Enter "Update BIOS"

Place the BIOS HDD into source port. Enter function "5.2.1 Update BIOS". Update will take about a minute to complete.

Caution Please do not disrupt during BIOS update, otherwise it would cause irretrievable error on duplicator. We are not held responsible for any damages.

5.3 System Info.

This function will display basic information such as controller, model number, software version, etc.

Scroll to select "5.3 System Info", then press "OK" to view all information.

5.4 Read Speed

This function is to measure the reading speed of the HDD by reading the whole HDD.

5.5 Write Speed

This function is to measure the writing speed of the HDD by writing the whole HDD.

Note This function will delete the content in HDD, so please make sure you have backup data before executing this function.

6 Setup

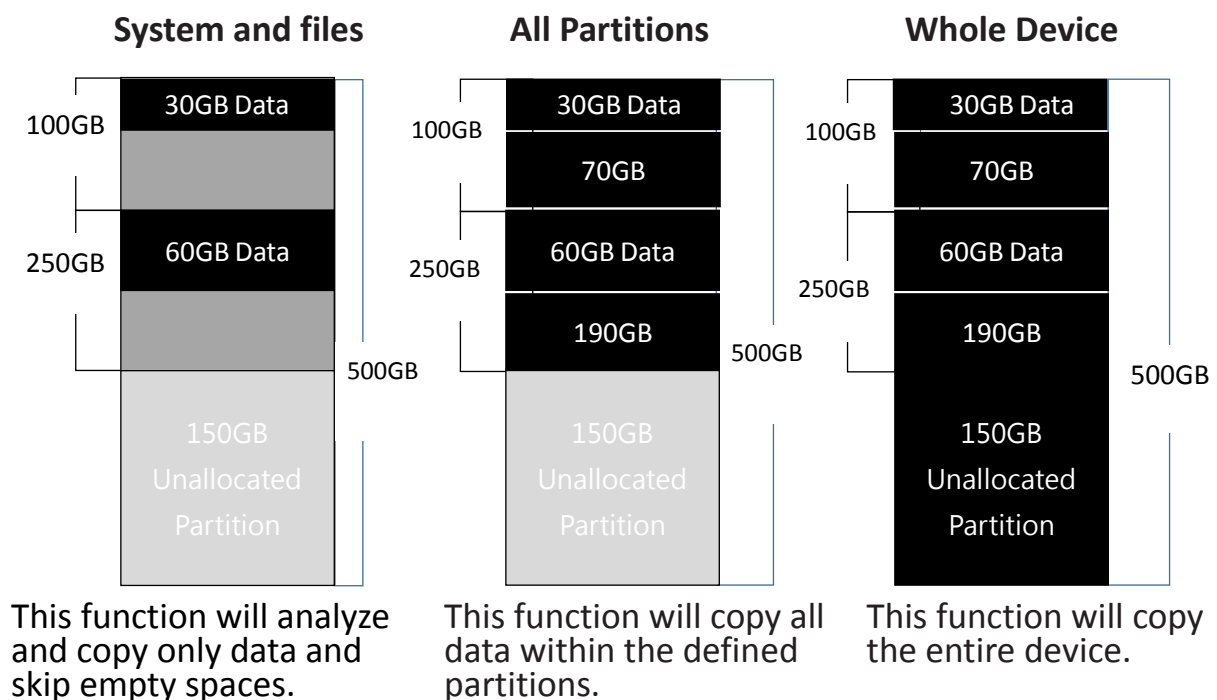
6.1 Copy Area

There are 4 submenu modes.

Scroll to select "6.1 Copy Area", then press "OK." Then scroll through to select one of the four copy methods.

- Selecting the Proper Copy Modes

Example: There are two defined partitions in a 500GB device. The charts below illustrate what portion would be duplicated.



- Copy and Compare Preparations

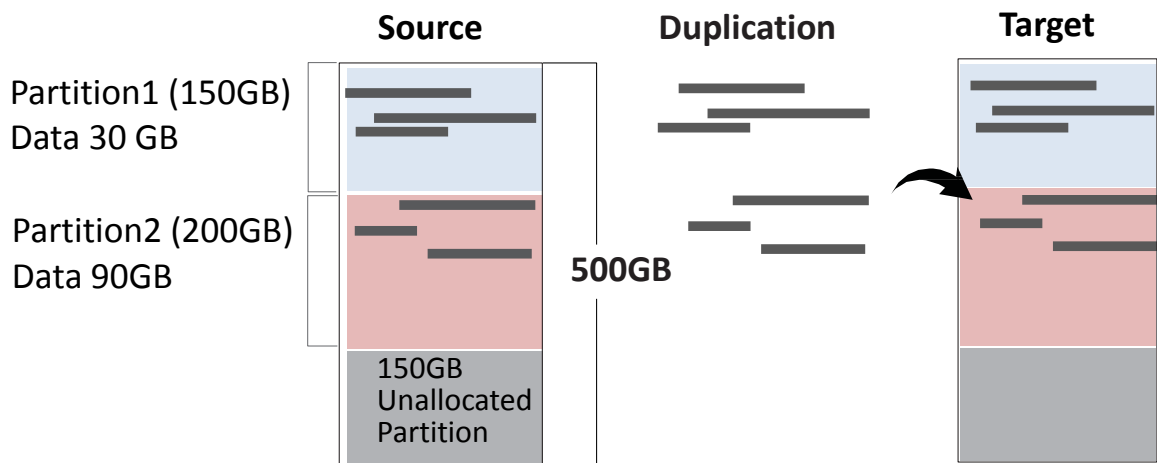
Please consider the following settings before proceeding with copy or compare:

- 6.1 Copy Area
- 6.2 Copy GPT Backup Area
- 6.3 Skip Bad Sectors
- 6.5.1 Unknown Format
- 6.5.5 Copy HPA Area

Using appropriate copy modes can greatly reduce operation time and increase efficiency. There are four copy modes with different copy methods.

6.1.1 System and Files

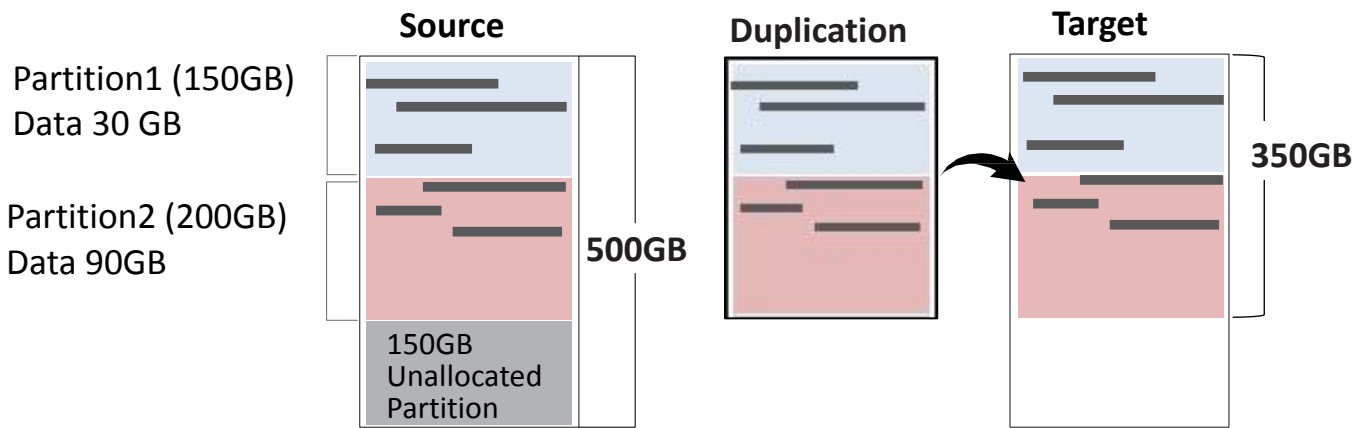
Copies data and skips empty space. Only supports standardized formats. Scroll to select "System and Files", then press "OK" to save the copy method. Allows user to copy source device's System and Files, instead of the entire device. The system will analyze the source device and identify the data area to copy. If the source device's data is within the target device's capacity, the copy will be processed. FAT16/32/64, NTFS, EXT2/EXT3/EXT4, and HFS/HFS+/HFSX are supported in this copy mode.



Only 120G data area will be copied.

6.1.2 All Partitions

Copies all partitions and data, unallocated partitions not included. Scroll to select "All Partitions", then press "OK" to save the copy method. The target device's capacity must be equal to or larger than the source device's capacity.



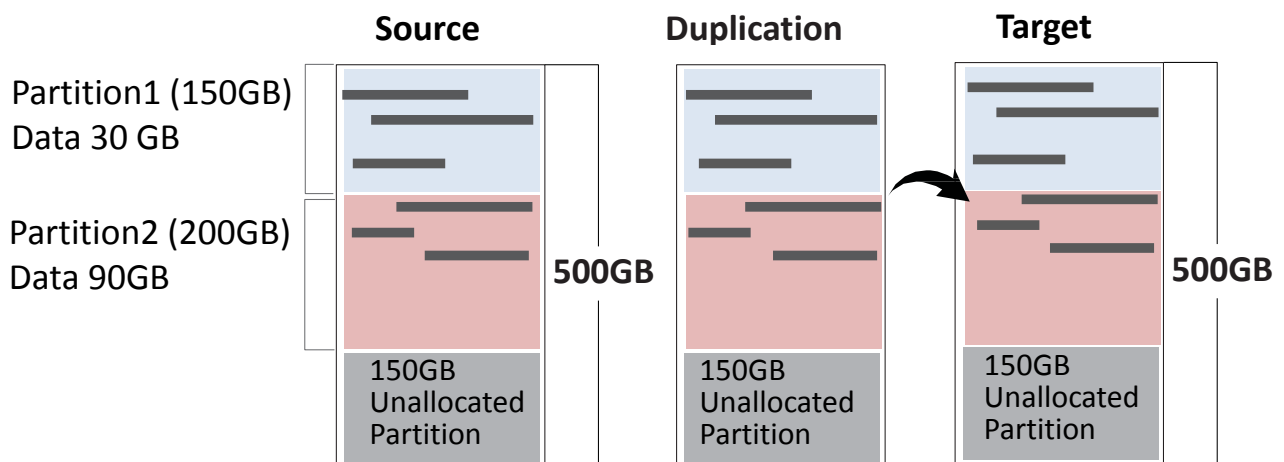
350GB of all Partitions along with its contents will be copied.

6.1.3 Whole HDD

Copies all source data bit by bit.

Scroll to select "Whole Device", then press "OK" to save the copy method.

Copies the whole source device, irrespective of content, format, partition or empty space. This mode does not analyze the data.

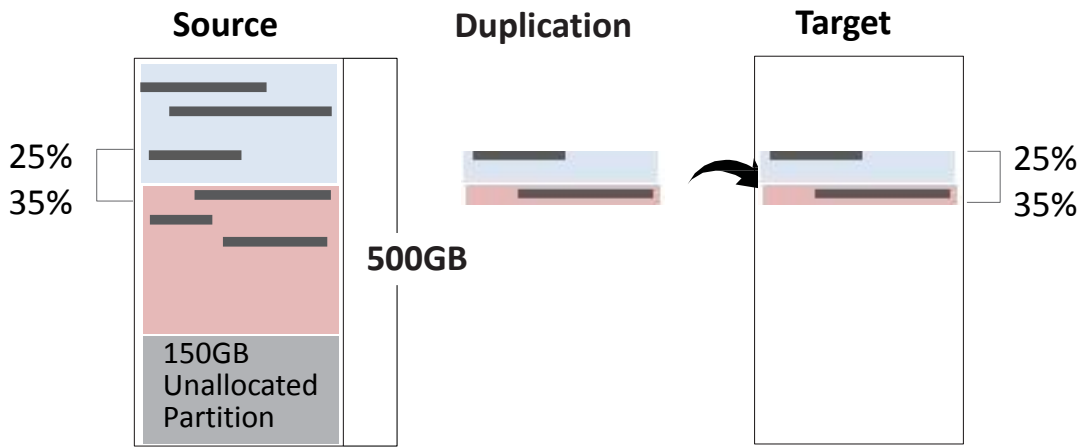


All 500GB of data will be copied.

6.1.4 Percentage (%)

Select percentage of source capacity to copy.

Scroll to select "Percentage", set the upper and lower %, then press "OK" to save the copy method.

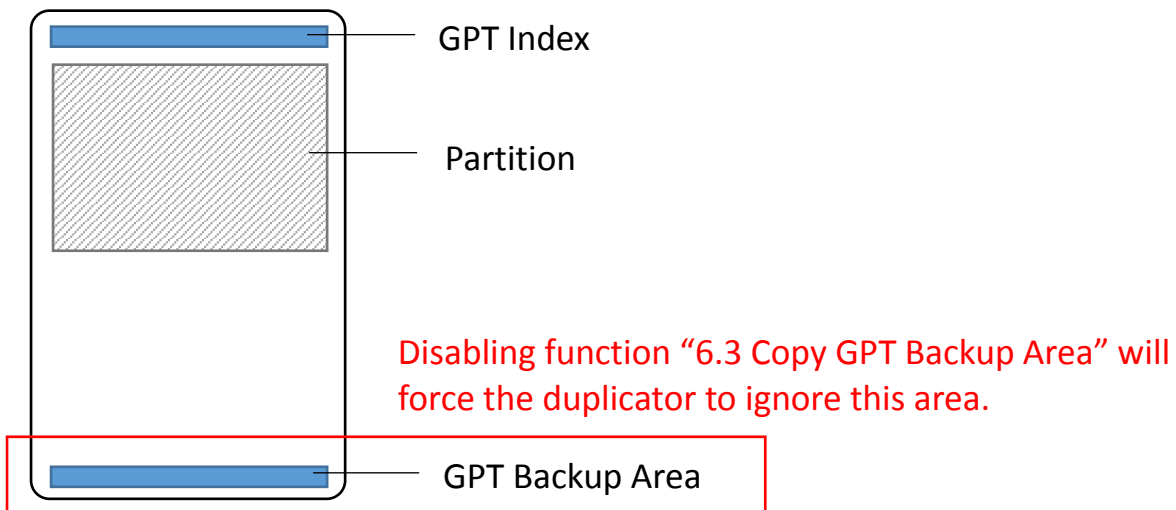


Only copies the selected area.

6.2 Copy GPT Backup Area

Disabling this function allows the duplicator to copy from big capacity device to small capacity device(s).

Caution The partition size of the source HDD must be smaller than target capacity.



Caution If function is disabled, the target HDD will reconstruct the GPT Backup Area by Windows system. It may require the HDD to restart in order to work.

6.3 Skip Bad Sectors

Skips bad sectors during Copy/ Compare/ Erase.

Scroll to select "6.3 Skip Bad Sectors", then press "OK" to scroll through the available values for skipping bad sectors. If the device data is critical and needs to be a full clone, it is recommended to set "Skip Error" at "0." Bad sectors can be set as unlimited or at a value from 0 to 65,535.

Caution The “Copy+Compare” function is advised for enhanced copy accuracy.

6.4 Language

Select English or Japanese.

Scroll to select "6.4 Language", then press "OK." Then scroll through to select the desired language.

6.5 Advanced Setup

6.5.1 Unknown Format

This function only works with “6.1 Copy Area >> System and Files.”

Scroll to select "6.5.1 Unknown Format", then press "OK".

Unknown format includes all forms of modified and proprietary data and partitions.

① Copy Unknown

Copy unknown format(s).

Scroll to select "6.5.1 Unknown Format >> Copy Unknown", then press "OK" to save this setting.

② Skip Unknown

Skip unknown format(s).

Scroll to select "6.5.1 Unknown Format >> Skip Unknown", then press "OK" to save this setting.

6.5.2 Erase Master

This function allows user to enable or disable the source port for sanitization.

Scroll to select "6.5.2 Erase Master", then press "OK." Then scroll through to select one of two settings.

① Disabled

Devices connected to source port cannot be erased.

Scroll to select "6.5.2 Erase Master >> Disabled", then press "OK" to save this setting.

② Enabled

Devices connected to source port can be erased.

Scroll to select "6.5.2 Erase Master >> Enabled", then press "OK" to save this setting.

6.5.3 Erase Pattern

Scroll to select "6.5.3 Erase Pattern", then press "OK". Then scroll through to select one of two settings.

① One Byte

Random character written per byte.

Scroll to select "6.5.3 Erase Pattern >> One Byte", then press "OK" to save this setting.

② Big Random Data

Random character written in a set of area.

Scroll to select "6.5.3 Erase Pattern >> Big Random Data", then press "OK" to save this setting.

6.5.4 Wait HDD Time

Sets device power up buffer time prior to copy, erase, etc...

Scroll to select "6.5.4 Wait HDD Time", then press "OK" to set buffer time from 3 to 30 seconds. The default is 15 seconds.

6.5.5 Copy HPA Area

This menu contains submenus related to HPA Copy Modes

Scroll to select "6.5.5 Copy HPA Area", then press "OK" to view the submenus. The default setting is: "Copy and Setting".

① Do Not Copy HPA

This menu contains submenu settings from which users can select.

Scroll to select "6.5.5 Copy HPA Area >> Do Not Copy HPA", then press "OK" view submenu settings.

- **Keep Target HPA**

Does not copy HPA data, but keeps target device 's original HPA setting.
Scroll to select "Keep Target HPA", then press "OK" to save this setting.

- **Clear Target HPA**

Does not copy HPA data and clears target device's HPA setting.
Scroll to select "Clear Target HPA", then press "OK" to save this setting.

② Setting Target HPA

Copies HPA setting from source device to target.

Scroll to select "6.5.5 HPA Copy Modes >> Setting Target HPA", then press "OK" to save this setting.

③ Copy and Setting

Copies HPA setting and data from source device to target.

Scroll to select "6.5.5 HPA Copy Modes >> Copy and Setting", then press "OK" to save this setting.

Caution

HPA function "Copy and Setting" may change the original parameter of target devices. To reset it, user must set "6.5.6 Clear HPA at Erase >> Clear HPA Setting" and then execute "4. Erase."

6.5.6 Clear HPA at Erase

Sets to clear HPA setting during erase.

Scroll to select "6.5.6 Clear HPA at Erase", then press "OK" to save this setting.

① Clear HPA Setting

Clears HPA setting and data during erase.

Scroll to select "6.8.9 Clear HPA at Erase >> Clear HPA Setting", then press "OK" to save this setting.

② Keep HPA Setting

Keeps original HPA setting and data during erase.

Scroll to select "6.8.9 Clear HPA at Erase >> Keep HPA Setting", then press "OK"

to save this setting.

6.5.7 Transfer Rate

Allows user to select the transfer rate.

Scroll to select "6.5.7 Transfer Rate", then press "OK". Select the desired transfer mode from UDMA2 to 7. The default is UDMA7.

6.5.8 Stop Motor Time

Sets device power down buffer time when tasks are completed.

Scroll to select "6.5.8 Stop Motor Time", then press "OK" to set buffer time from 1 to 20 seconds. The default is 5 seconds.

6.6 Restore Default

Restores all settings back to manufacturer defaults.

Scroll to select "6.6 Restore Defaults", then press "OK" to restore settings back to manufacturer defaults.

Specification Table

Product Name	SATA III 1-1 Ultra-High Speed HDD Duplicator	
Targets	1:1	
Transfer Speed	30GB/min. *Actual performance is dependent on HDD transfer speeds	
Capacity	Supports the latest market available capacity. Designed support capability up-to 18TB+.	
Display	Monochrome LCD	
Control Button	4 push buttons (UP, DOWN, OK, ESC)	
Compatible HDD	All major brand of 2.5"/3.5" IDE HDD, mSATA SSD, eSATA, microSATA, iVDR, cFast	
Duplication Mode	System and Files, All Partitions, Whole HDD, Percentage	
Support OS	All (Windows, Linux, RAID, etc)	
Support Format	Quick copy (System and Files): FAT16/32/64, NTFS, Linux (Ext2/3/4), Mac (HFS/HFS+/HFX), GPT, Dynamic	
	All Partitions/ Whole HDD/ Percentage Copy: Supports all formats.	
Power Supply	12V, 7A	
Temperature	Working	5 °C ~ 45 °C
	Storage	-20 °C ~ 85 °C
Humidity	Working	20 % ~ 80 %
	Storage	5 % ~ 95 %
Certifications	FCC, CE, RoHS	

*The above information is for marketing reference only.

The actual specification may subject to change without notice.