U-Reach PRO218 1 to 2 SATA HDD SSD Duplicator And Sanitizer User Manual

Carry Series
1 to 2 SATA HDD/SSD
Duplicator and Sanitizer
User Manual
v A.04

Contents

Product Disclaimer

U-Reach is not accountable for any incidental or consequential damages, including, but not limited to property harm, loss of time or data from use of any U-Reach product, or any other damages attributable to product malfunction or failure of including without limitation, those attributed to reliance of the materials provided, costs of product replacement, loss of use, data or profits, delays or business interruptions, any principle of legal responsibility arising from or in reference to the use, overall performance, delays in servicing, or lack of ability to render service of any U-Reach product. U-Reach makes every effort to ensure proper function of all products. However, the customer is responsible for verifying that the output of U-Reach product meets the customer's quality requirement.

The customer further acknowledges that improper use of U-Reach products, software program, and/or hardware issues can cause loss of data, defective formatting, or unreliable 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 are subject to change without notice or obligation.

Warranty

U-Reach provides a basic, one-year parts and labor warranty for all its products, excluding cables, adapters, and other consumable items. An extended warranty may be purchased.

Telephone and email support are available for the life of the product as defined by UReach.

All warranties are specific to a market region and will be defined per the market region in which the product was purchased.

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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

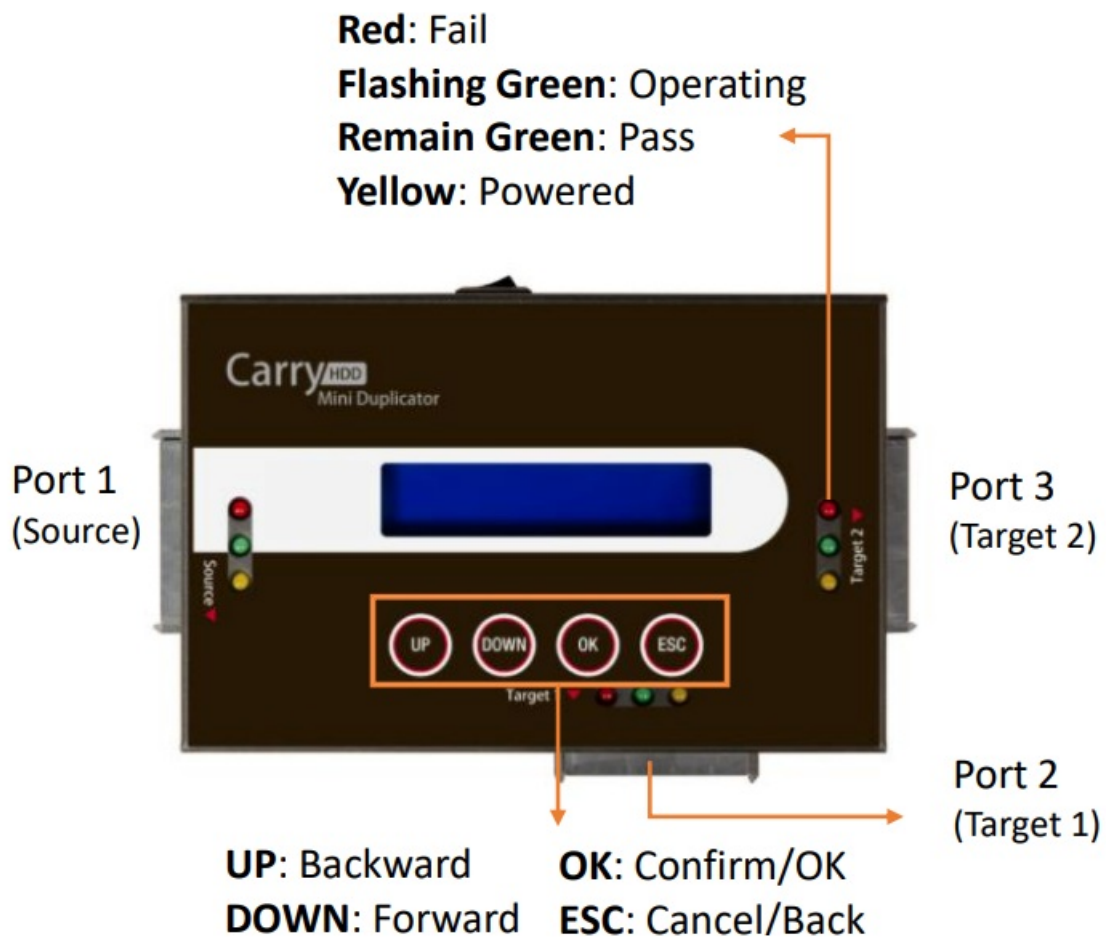Special items, procedures, or notes to be observed prior to use:
Note
Refers to related duplicator operations, special details, tips, or suggestions for operational effectiveness.
Caution Refers to procedures that need to be adhered to or precautions.

Product Overview

Hardware

Red: Fail
Flashing Green: Operating
Remain Green: Pass
Yellow: Powered

Carry HDD
Mini Duplicator

Port 1
(Source)

Source

Port 3
(Target 2)

Target 2

UP   DOWN   OK   ESC

Target

Port 2
(Target 1)

UP: Backward   **OK**: Confirm/OK
DOWN: Forward   **ESC**: Cancel/Back

LCD configuration

Target HDD

Total Size
(Source)

Function →

Copy   x1   2047M

Time →

0:11   41%   860M

Copy
Progress %

Copied Processed Size
(Target)

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 Update System — 5.2.1 Update BIOS To update the system firmware via the HDD.
	5.2 Update System — 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 Get Checksum This function will Calculates the CRC16 value of the HDD.		
6. Setup	6.1 Start-up Menu Sets default function to display during equipment initialization.		
	6.2 Copy Area	6.2.1 System and Files To copy source HDD's data area only.	
		6.2.2 ALL Partitions To copy source HDD's all partitions.	
		6.2.3 Whole HDD To copy the whole source HDD.	
		6.2.4 Percentage (%) To copy percentage range of source HDD.	
	6.3 Copy GPT Backup Area Enable this function to copy the end GPT format.		
	6.4 Skip Errors Skips bad sectors of source HDD during Copy/Compare/Erase.		
	6.5 Language English / Japanese		
	6.6 Delete Disk Signature After Copy		No
			Yes Do not copy the disk signature onto target devices.
	6.7 Advanced Setup	6.7.1 Unknown Format	Copy Unknown Copy unknown area when the device cannot identify the format.
			Skip Unknown Skip copy unknown area when the device cannot identify the format.
		6.7.2 Erase Master	Enable Enable erase source HDD.

		(Setup to erase source HDD or not.)	Disable Disable erase source HDD.
		6.7.3 Erase Pattern	ONE Byte A random character to be written into every byte.
			Big Random Data A set of random character to be written into a set of area.
		6.7.4 Skip Erase Errors Skip bad sectors during erase.	
		6.7.5 Wait HDD Time Auto start time after plugging HDD from 0-30 seconds.	
		6.7.6 Copy HPA Area	No, Keep Target HPA Does not copy HPA data, but keeps target device's original HPA setting.
			No, Clear Target HPA Does not copy HPA data and clears target device's HPA setting.
			No, Setting HPA Copies HPA setting from source device to target.
			Copy And Setting Copies HPA setting and data from source device to target.
		6.7.7 Clear HPA at Erase	Clear HPA Setting Clears HPA setting during erase.
			Keep HPA Setting Keeps original HPA setting during erase.
		6.7.8 Mark After Erase Creates watermark on the device(s) after erase job is completed.	
		6.7.9 Transfer Rate Select the proper transfer rate from UDMA2—UDMA7. UDMA7 is the fastest.	

		6.7.10 Stop Motor Time Auto running time after stopping motor from 1-20 seconds.
	6.8 Restore Default Back to original manufacturer setting.	

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.
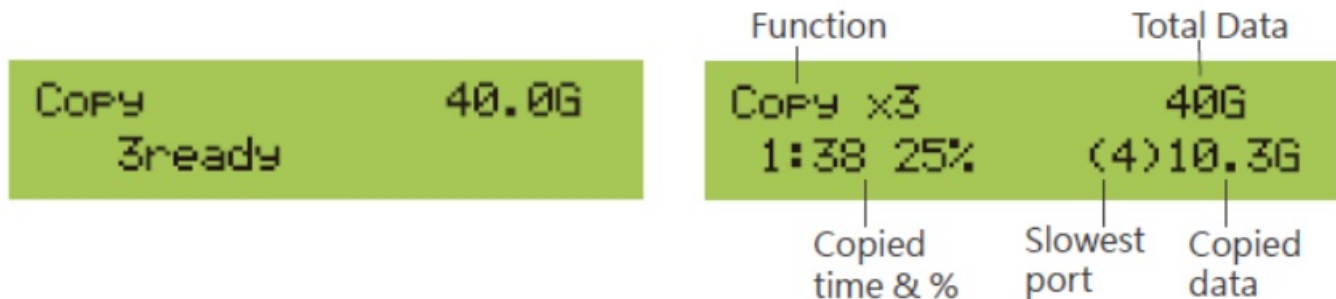
Step 2: Connect source and target devices.

Step 3: Proceed to copy.

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

Note

The number of working/connected targets will be displayed on LCD. Press "OK" to start.

The information below states what is displayed on the LCD during duplication.

- Press "▲ ▼" together for 5 seconds to stop operation on the slowest device.

  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!
The quantity of passed or failed target device(s), the copied duration, and CRC Value will be displayed on the LCD after duplication completes.

Compare
Proceed to verify device(s).
Scroll to select "2. Compare", then press "OK" to start the verification process.
Note
The number of working/connected targets will be displayed on the LCD. Press "OK" to start.
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.

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.

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 an 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 Get Checksum
This function will Calculates the CRC16 value of the HDD.
Setup
6.1 Start-up Menu
This function allows user to select the default function to display during equipment initialization.
Scroll to select "6.1 Start-up Menu", then press "OK." Then scroll through the available menus for startup.
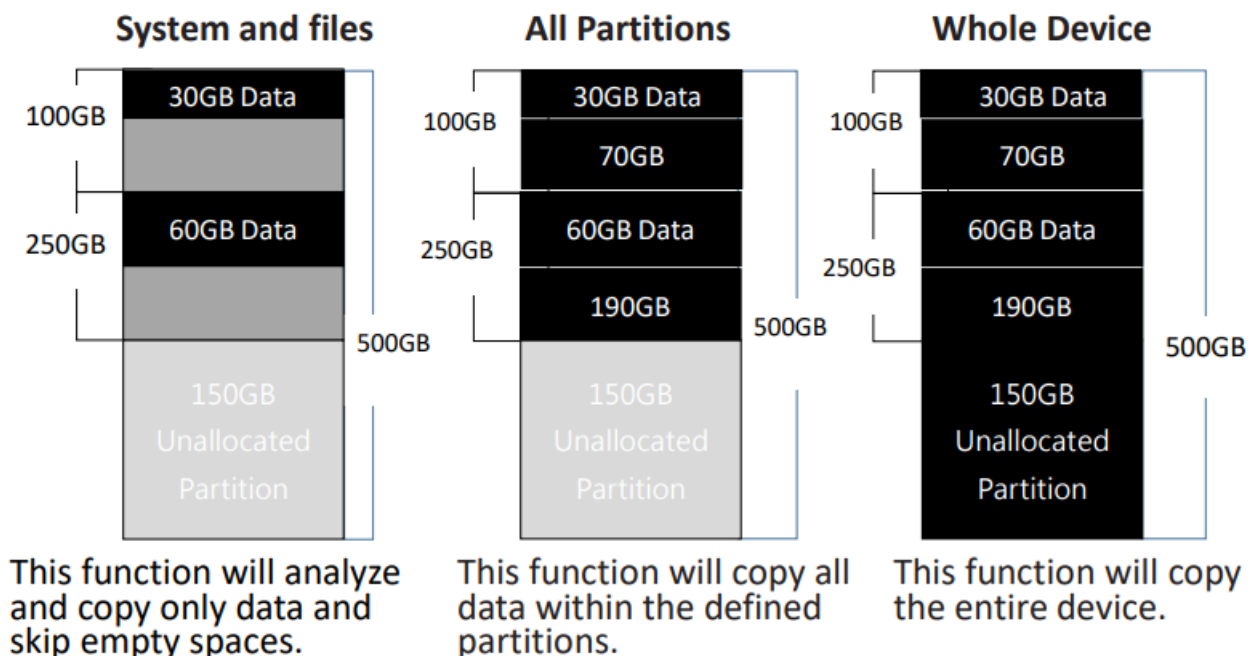## 6.2 Copy Area
There are 4 submenu modes.
Scroll to select "6.2 Copy Area", then press "OK." Then scroll through to select one of the four copy methods.

- Selecting the Proper Copy Modes

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

System and files	All Partitions	Whole Device
30GB Data	30GB Data	30GB Data
	70GB	70GB
60GB Data	60GB Data	60GB Data
	190GB	190GB
150GB Unallocated Partition	150GB Unallocated Partition	150GB Unallocated Partition
This function will analyze and copy only data and skip empty spaces.	This function will copy all data within the defined partitions.	This function will copy the entire device.

- Copy and Compare Preparations

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

  – 6.2 Copy Area

  – 6.4 Skip Errors

  – 6.7.1 Unknown Format

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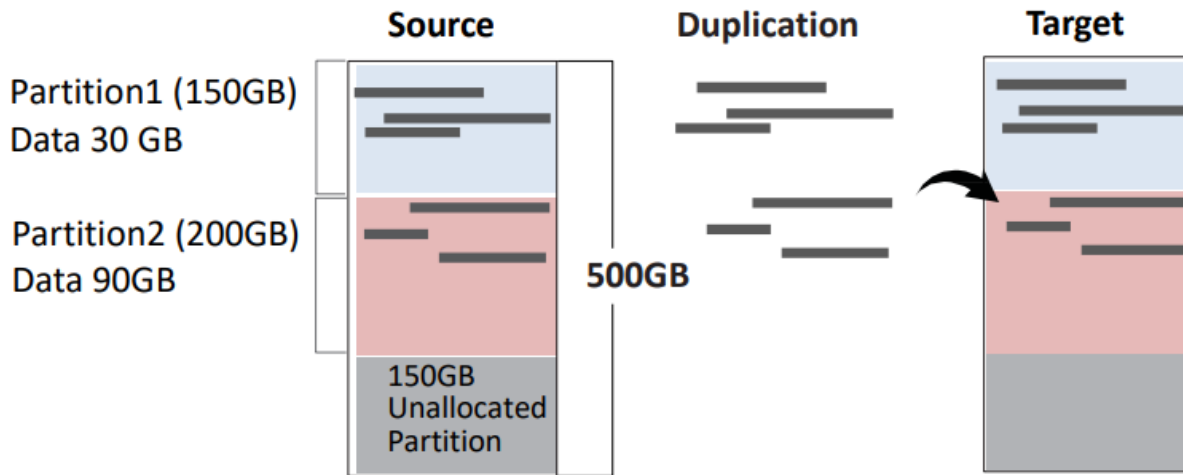

6.2.1 System and Files
Copies data and skips empty space. Only supports standardized formats.
Scroll to select "System and Files", then press "OK" to save the copy method.
Allows user to copy source device's System and Files, instead of the entire device. The system will analyze the source device and 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.

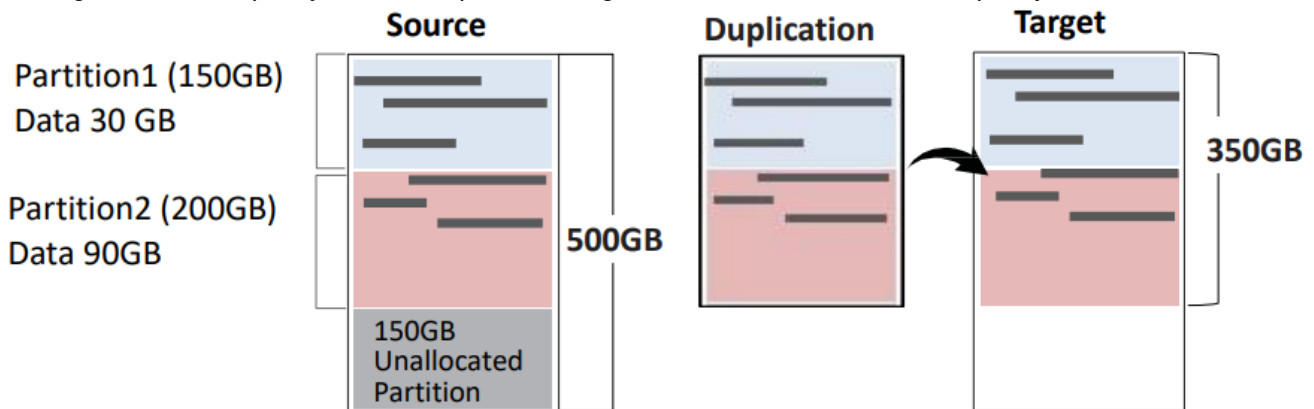Only 120G data area will be copied.

6.2.2 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.
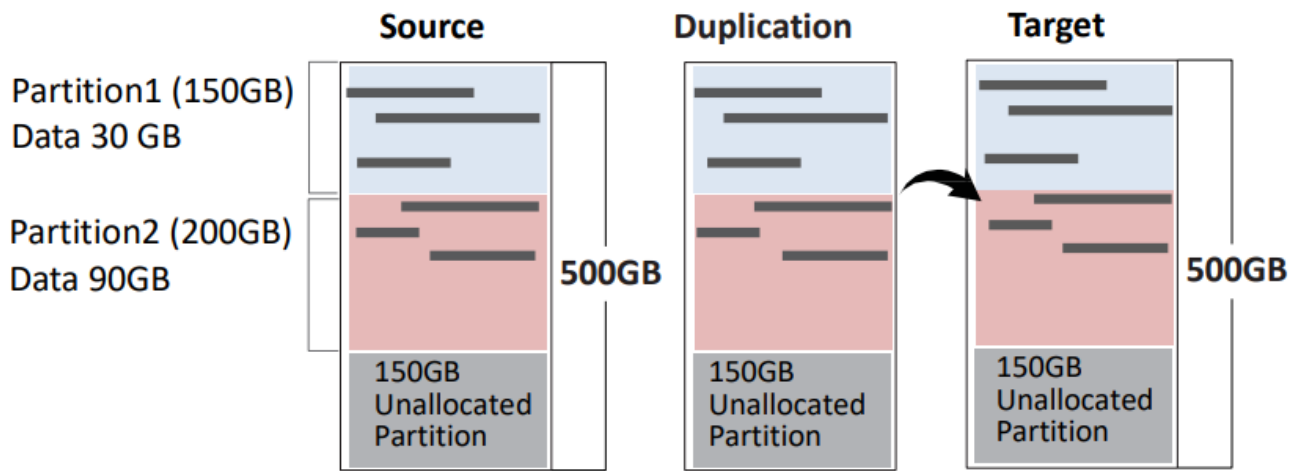
6.2.3 Whole HDD
Copies all source data bit by bit.
Scroll to select "Whole Device", then press "OK" to save the copy method.
Copies the whole source device, irrespective of content, format, partition or empty space. This mode does not analyze the data.
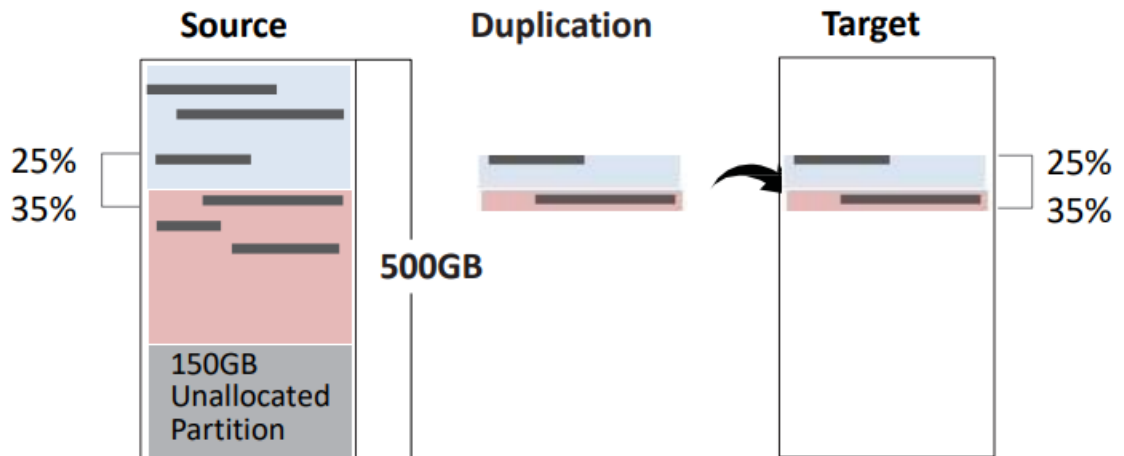
Source   **Duplication**   **Target**

Partition1 (150GB)
Data 30 GB

Partition2 (200GB)
Data 90GB

500GB

500GB

150GB Unallocated Partition

150GB Unallocated Partition

150GB Unallocated Partition

All 500GB of data will be copied.

6.2.4 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.
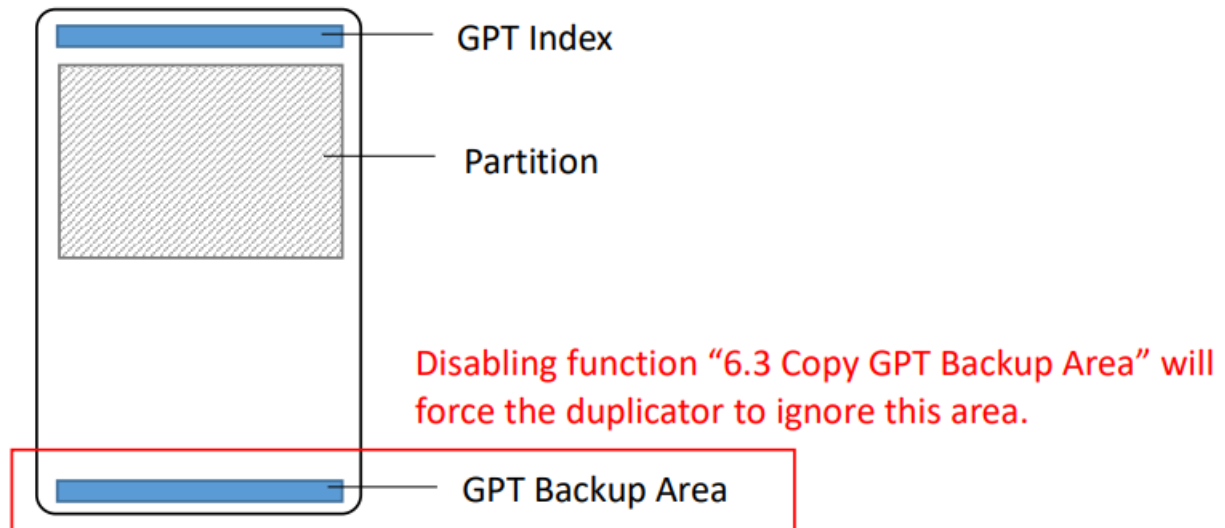

Source   **Duplication**   **Target**

25%
35%

500GB

25%
35%

150GB Unallocated Partition

Only copies the selected area.

6.3 Copy GPT Backup Area

Enabling this function allows the duplicator to copy from big capacity device to small capacity device(s).
Note
The partition size of the source HDD must be smaller than target capacity.

GPT Index

Partition

Disabling function "6.3 Copy GPT Backup Area" will force the duplicator to ignore this area.

GPT Backup Area

Caution

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

6.4 Skip Errors

Skips bad sectors during Copy/ Compare/ Erase.

Scroll to select "6.4 Skip Errors", 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.

6.5 Language

Select English or Japanese.

Scroll to select "6.5 Language", then press "OK." Then scroll through to select the desired language.

6.6 Delete Disk Signature After Copy

Set at "Yes" means do not copy the disk signature part.

This function is for Windows only. Windows will only recognize one device if you connect two or more with the same disk signature.

Caution

"Compare" function will always Fail if "Delete Disk Signature After Copy" is set at "Yes."

6.7 Advanced Setup

6.7.1 Unknown Format

This function only works with "6.2 Copy Area >> System and Files." Scroll to select "6.7.1 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 "6.7.1 Unknown Format >> Copy Unknown", then press "OK" to save this setting.

2. Skip Unknown

    Skip unknown format(s).

Scroll to select "6.7.1 Unknown Format >> Skip Unknown", then press "OK" to save this setting.

6.7.2 Erase Master

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

Scroll to select "6.7.2 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 "6.7.2 Erase Master >> Disabled", then press "OK" to save this setting.

2. Enabled

Devices connected to source port can be erased.

Scroll to select "6.7.2 Erase Master >> Enabled", then press "OK" to save this setting.

6.7.3 Erase Pattern
Scroll to select "6.7.3 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 "6.7.3 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 "6.7.3 Erase Pattern >> Big Random Data", then press "OK" to save this setting.

6.7.4 Skip Erase Errors
Skip source bad sectors during Erase. Bad sectors can be set as unlimited or at a value from 0 to 65,535.
Scroll to select "6.7.4 Skip Erase Errors", and press "OK" to scroll through the available values for skipping bad sectors.

6.7.5 Wait HDD Time
Sets device power up buffer time prior to copy, erase, etc…
Scroll to select "6.7.5 Wait HDD Time", then press "OK" to set buffer time from 3 to 30 seconds. The default is 15 seconds.

6.7.6 Copy HPA Area
This menu contains submenus related to HPA Copy Area.
Scroll to select "6.7.6 Copy HPA Area", then press "OK" to view the submenus.
The default setting is: "Copy and Setting".

1. No, Keep Target HPA

Does not copy HPA data but keeps target device 's original HPA setting.

2. No, Clear Target HPA

Does not copy HPA data and clears target device's HPA setting.

3. No, Setting Target HPA

Copies HPA setting from source device to target.

4. Copy and Setting

Copies HPA setting and data from source device to target.

Caution
HPA function "Copy and Setting" may change the original parameter of target devices.
6.7.7 Clear HPA at ERASE
Sets to clear HPA setting during erase.
Scroll to select "Clear HPA at Erase", then press "OK" to save this setting.

1. Release

Clears HPA setting and data during erase.

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

2. No Release

Keeps original HPA setting and data during erase.

Scroll to select "Clear HPA at Erase >> No Release", then press "OK" to save this setting.

6.7.8 Mark After Erase
Creates watermark on the device(s) after erase job is completed. This watermark will show when executing "5.1 Show Disk Info."

6.7.9 Transfer Rate

Allows user to select the transfer rate.

Scroll to select "6.7.9 Transfer Rate", then press "OK". Select the desired transfer mode from UDMA2 to 7. The default is UDMA7.

6.7.10 Stop Motor Time

Sets device power down buffer time when tasks are completed.

Scroll to select "6.7.10 Stop Motor Time", then press "OK" to set buffer time from 1 to 20 seconds. The default is 5 seconds.

6.8 Restore Default

Restores all settings back to manufacturer defaults.

Scroll to select "6.7 Restore Defaults", then press "OK" to restore settings back to manufacturer defaults.

*Specifications subject to change without notice.

Documents / Resources

R UReach **Carry Series** 1 to 2 SATA HDD/SSD Duplicator and Sanitizer User Manual v.A.04	**U-Reach PRO218 1 to 2 SATA HDD SSD Duplicator And Sanitizer** [pdf] User Manual PRO218 1 to 2 SATA HDD SSD Duplicator And Sanitizer, PRO218 1 to 2, SATA HDD SSD Duplicator And Sanitizer, HDD SSD Duplicator And Sanitizer, SSD Duplicator And Sanitizer, Duplicator And Sanitizer

Manuals+,