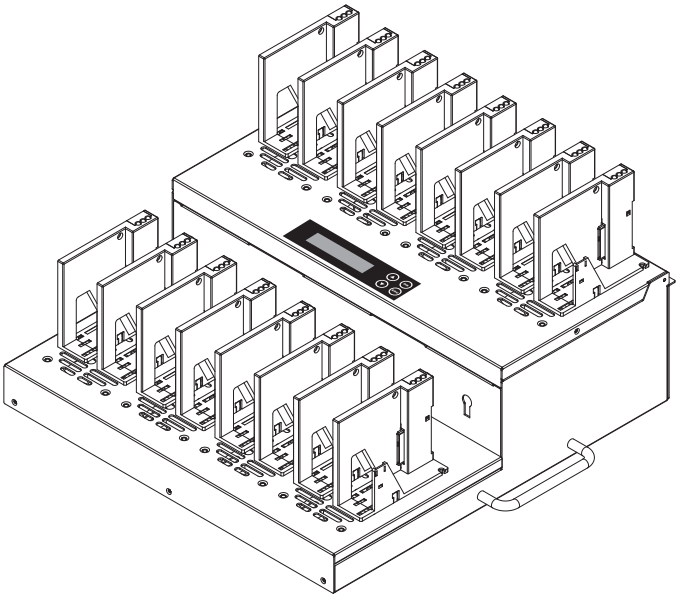
HDD Duplicator

IT Professional Series

1-3, 1-7, 1-15 User Guide

V2.0



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1. Overview

This HDD duplicator IT series is a high-end industrial standard 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 3 targets to 30 targets. Support high data transfer speed up to 110MB per second, and it takes one minute to copy around 6GB content. The three different copy modes (System and Files, All Partition and Whole HDD) can satisfy various needs of duplication; "System and Files" copy mode is fast copy mode to copy only data area instead of copying entire source HDD, it can greatly save elapsing time.

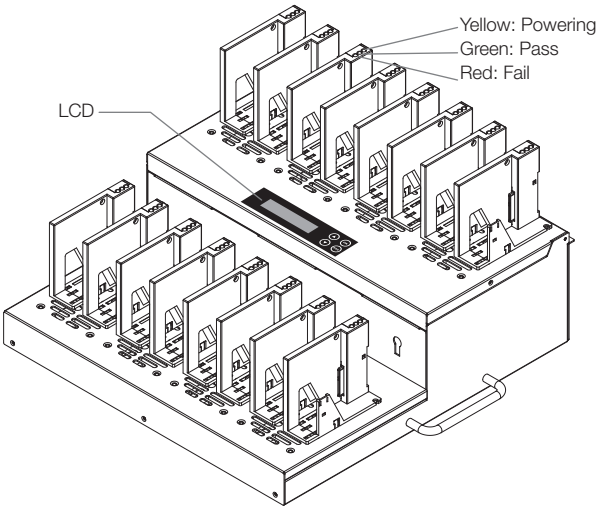
Applying smart power control technology, When copying finished, the machine will automatically cut off the power of each port to protect HDD during removal from the duplicator. The power of each port will be only be output when the operation is started. Besides Quick/Full Erase, it provides with DoD 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. As well as this, the modularized interface can remarkably reduce the time of repair and operation.

2. Features

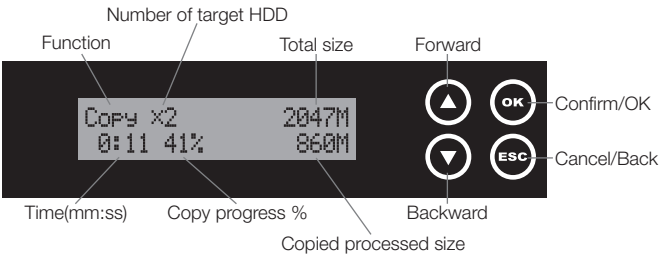
- Three duplication modes: "System and Files", "All Partition" and "Whole HDD" copy modes.
- Compatible with various file system format including 3TB advanced format HDD.
- Automatic power control to protect HDD from damage during insertion removal.
- 110MB/sec (6GB/min) in copy, compare and erase operations.
- 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 up to 15 targets.
- Standalone, no PC or other installation required.
- SATA interface support for SSD & HDD in 3.5"and 2.5".

3. Product Overview

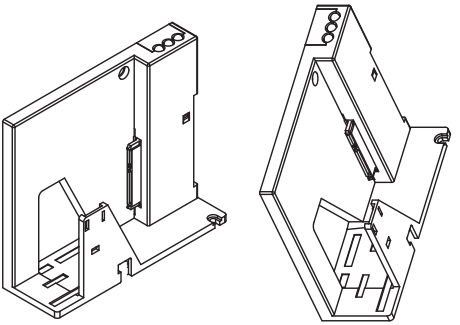
A. System Overview



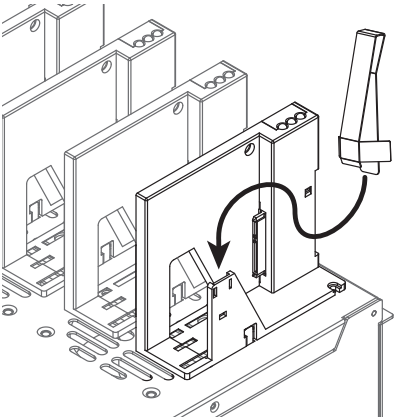
B. LCD Configuration



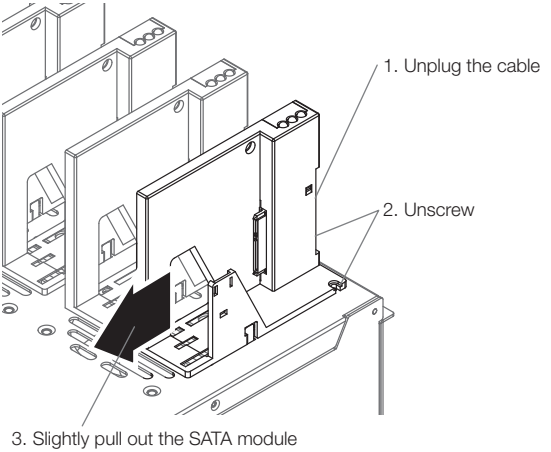
C. SATA Module



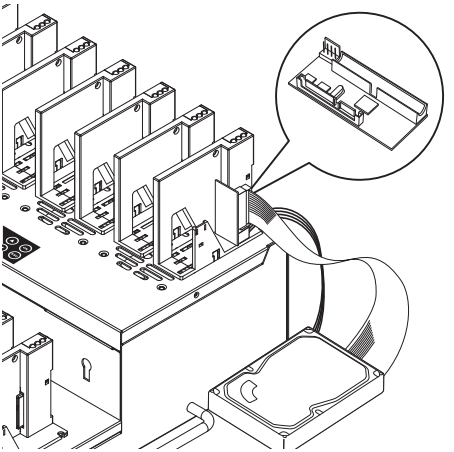
D. HDD Holder



E. How to assemble SATA module



F. IDE Module



Function	Description	
1. Copy	To copy source HDD to multiple target HDDs. Refer to function 6.Setup for 3 different copy mode selection.	
2. Compare	To compare data bit by bit between source and copied HDDs.	
3. Copy+Compare	It makes copy first and then compare copied HDD with source HDD to ensure data correctness.	
4. Erase Note: Function 6.3 can select to erase source HDD or not.	4-1 Quick Erase Erase HDD's index table only, it takes short time to execute this function.	
	4-2 Full Erase Erase the whole HDD content.	
	4-3 DoD erase Erase HDDs three times complying with USA Department of Defense (DoD) standard.	
	4-4 DoD EraseComp Erase HDDs three times complying with n USA Department of Defense (DoD) standard and bit by bit to check if data is completely erased.	
5. Utility	5-1 Show HDD info Shows HDD's basic information such as HDD model name and capacity.	
	5-2 Update System	5-2-1 Update BIOS To update the system firmware via the HDD.
		5-2-2 Format HDD To format the HDD with a 2GB FAT partition in order to quickly save 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 Show HDD HPA (IT700/1500 ONLY)	
	5-5 Remove HDD HPA (IT700/1500 ONLY)	
6. Setup	6-1 Copy Area Setup copy mode.	6-1-1 System and files Set to copy source HDD's data area only.
		6-1-2 ALL partition Set to copy source HDD's all partitions.
		6-1-3 Whole HDD Set to copy the whole source HDD.
	6-2 Skip Error Set to ignore error of source HDD while copying. (0 -100 Set to ignore error of source HDD.)	
	6-3 Erase Master Setup to erase source HDD or not.	6-3-1 Disable Disable erase source HDD.
		6-3-2 Enable Enable erase source HDD.
	6-4 Unknown Format	6-4-1 Copy unknown Copy unknown area when the device can not identify the format.
		6-4-2 Skip unknown Skip copy unknown area when the device can not identify the format.
	6-5 Transfer Rate Select the proper transfer rate UDMA2-7. 7 is the fastest.	
	6-6 Erase Pattern	6-6-1 ONE Byte A random character to be written into every byte.
		6-6-2 4MB Byte A set of random character to be written into a set of area.
	6-7 Copy HPA area	
	6-8 Restore Default Back to original manufacturer setting.	

3 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 "System and Files".

2. Compare

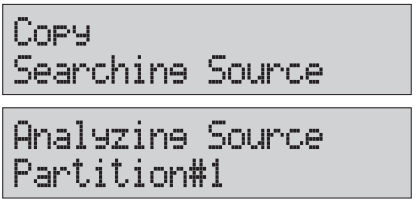
It is used to check if the data on source HDD is identical to target HDD after duplication.

3. Copy & Compare

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

Steps of Copy+Compare

① Plug in a HDD into the source port, select function Copy / Compare / Copy+Compare.



② Plug in the target HDDS, press OK to confirm.

③ when all targets are ready, press OK to start copy.

④ When finish copy, it show the copy reuslt.

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.

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.

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:

① Showing how many HDD are ready, press OK to start.

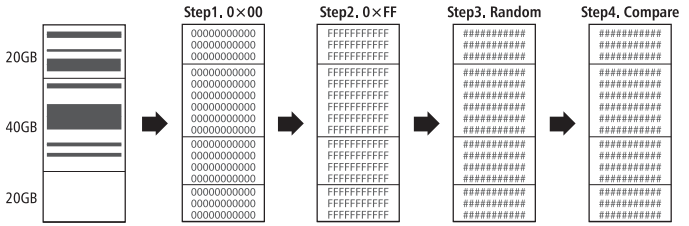
② Erasing.

④ Shows the result when finish.

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.

5. Utility

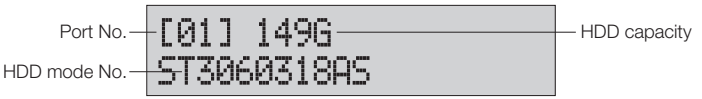
5-1 Show HDD Info.

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

Steps of Show HDD Info.:

① Select function.

② Shows HDD information.



5-2 Update System

You can follow the steps to update system firmware:

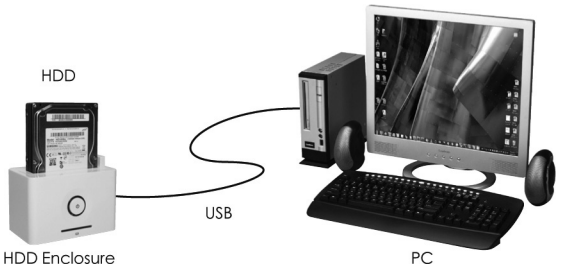
① Select Function 5.2.2

```
[Update System]
2.Format HDD
```

Format HDD

```
Do FORMAT HDD#1
     Confirm ?
```

② Download the BIOS from PC to your HDD.



③ Plug in HDD into duplicator, select function 5.2.1 to update BIOS.

```
[Update System]
1.Update BIOS
```

5-3 System Info.

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

```
HDD Dupe 1-3
Ver:2.27.1
```

5-4 Show HDD HPA

Show if your HDD contains any HPA area.

5-5 Remove HPA area

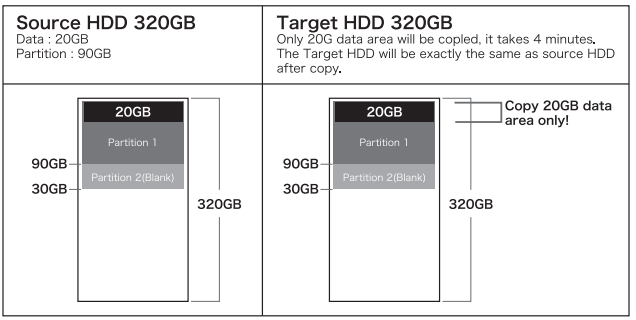
Remove source port HDD HPA area.

6. Setup

6-1 Copy Area

6-1-1 System and Files

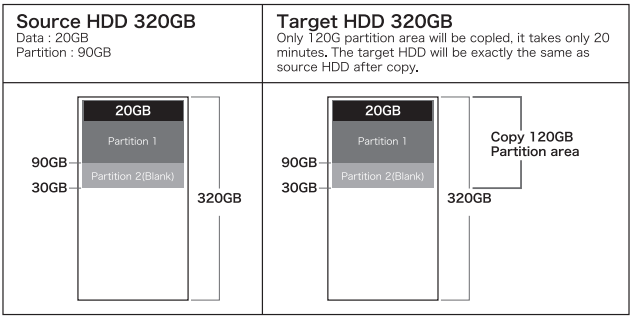
It will copy source HDD's System and Files instead of the whole HDD. The system will analyze the source HDD and identify the data area to copy. As long as the source HDD's data within the target HDD's space, the copy will be processed.



System and Files only supports FAT, NTFS and EXT2 / EXT3 for quick copy.

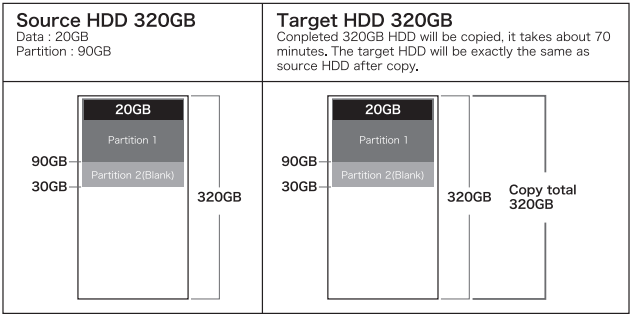
6-1-2 All Partition

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.



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.



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

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".

6-3 Erase Master

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

6-4 Unknown Format

This function allows you to select if you want to copy the unknown format area.

6-4-1 Copy unknown

Copy all the unknown area if device can not identify the format during copy.

6-4-2 Skip unknown

Skip the unknown area if device can not identify the format during copy.

6-5 Transfer Rate

You can select the best transfer rate from UDMA 2 to UDMA7 for your HDD duplication progress. If you are not confident on the HDD quality or you find a high failure rate on copy or compare. It is recommended to slow down the UDMA mode.

6-6 Erase Pattern

Select different erase method.

6-6-1 ONE Byte

A random character to be written into every byte.

6-6-2 4MB Byte

A set of random character to be written into a set of area.

6-7 COPY HPA Area

You can go to function 5.4 Show HDD HPA to check if your HPD contains HPA area.

Copy and Active : this function will copy and active HPA area and function.

Copy & Inactive: this function will copy HPA area but does not active HPA function.

No: Do not copy HPA area

6-8 Restore Default

Select and go back to the manufacturer's default setting.

4 FAQ

Q: If the copy process and speed not stable?
A: 1. Make sure if you have firmly install the HDD holder. Please refer to page 5 for installation information.
2. Go to function 6.7 Fan Control to switch fan. Fan will consume the power supply and might be the reason to affect copy process.
3. Change other brand of HDD to see if it can solve the issue.

Q: Does it need waiting time for boot on and shut down?
A: 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.

Q: Can I interrupt the copy task while it is not finished?
A: Yes, the program (copy, compare and erase) can be stoop while it is processing by pressing [ESC] for about 3~4 seconds.

Q: Can I copy 2.5" SATA HDD?
A: Yes, The SATA module rack can be applied on both 2.5" and 3.5" HDD without any additional adaptor.

Q: Can I copy IDE HDD?
A: Yes, an additional IDE module rack required.
Please contact your local agent for the accessories.

Q: Will it be safe if I remove the HDD right after copy process?
A: Yes, the device will automatically cut off power of each port to protect HDD during removal from the duplicator. The power of each port will be only be output when the operation is started.

Q: Can I copy SSD HDD?
A: Yes, but it will depend on if your SSD interface can be supported.

Product Name		IT Professional Series		
Model		IT300	IT700	IT1500
Target		1:3	1:7	1:15
HDD Interface		SATA, IDE(Optional)		
Display		Monochrome LCD		
Control Button		4 Push Buttons		
Compatible HDD		All Major Brand Of 2.5"/3.5" and SATA SSD		
Duplication Mode VS Support Format		System and files (FAT, NTFS, Linux)		
		All Oartition (All Format)		
		Whole HDD (All Format)		
Capacity		3TB above		
Power Supply		220W, Adjustable Voltage 100V~240V, 50/60Hz.		
Temperature	Storage	5ºC ~45ºC		
	Working	-20ºC ~85ºC		
Humidity	Storage	20%~80%		
	Working	5%~95%		
Option		IDE Module		
Safety		FCC, CE		