



CF/CFast 1-1 Portable Copier

CF121/CFast121

User Manual v1.0



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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 our 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 any our product. The performance, delays in servicing, or lack of ability to render service any our product. U-Reach makes every effort to ensure proper function of all products. However, the customer is responsible to verify that the output of our product meets the customer's quality requirement. The customer further acknowledges that improper use of our 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 is available for the life of the product as defined by U-Reach.

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

Piracy Statement

U-Reach accepts no responsibility for copyright infringement or misuse of any our equipment. Copying any form 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.

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 noncompliance with U-Reach 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 the socket.
- Never turn off the power while the firmware updating.
- Use only approved, stable power sources.
- 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 CF cards.
- Static electricity may cause duplication error. Please pay attention to the duplicator's environment and operator's equipment. Purchasing static electricity elimination equipment to avoid static electricity shock while in high static electricity areas.

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.

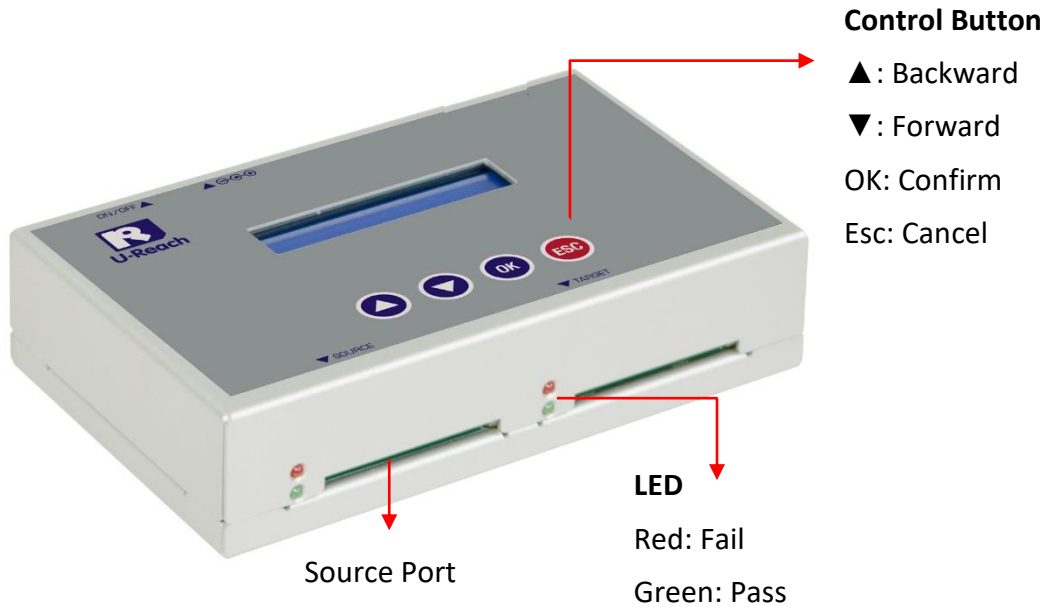
Product Overview

The new CF1-1 duplicator was designed with diversified media compatibility and high-speed performance in mind to not only flawlessly duplicate large capacity targets, but it is also portable so that you can copy CF cards anywhere. The user-friendly interface offers stress free operation with no steep learning curve to climb. Its ergonomic design facilitates efficient operation through simpler insertion and removal of flash cards and the new design allows for better space utilization.

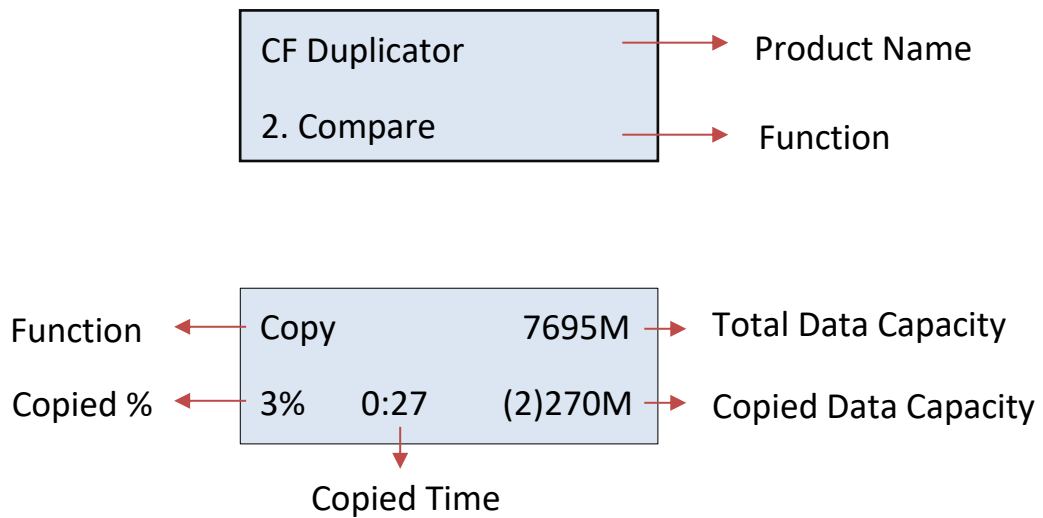
- Ultrahigh transmission speed.
- Real multitask processing capability. Whether copy, compare or format, each feature is independently executed. Each flash slot has an independent processing unit.
- Non-PC based, with no risk of virus infection.
- One touch copy. Real time information will be displayed on the LCD screen.
- Ultrahigh speed bit-for-bit hardware comparison.
- Reads CF card serial numbers.
- Small footprint design allows for portability.

Hardware Overview

Front View



LCD Display



Function Table

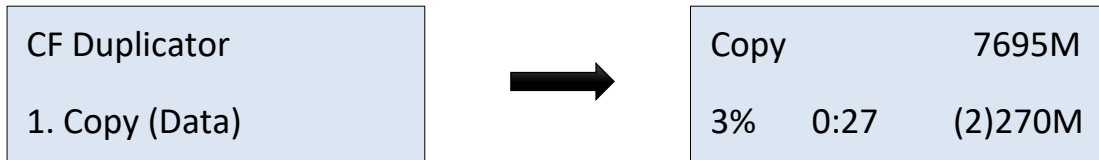
Function	Description	
1. Copy	Data and whole media duplication only.	
2. Compare	Bit-for-bit comparison between the source and target flash medias.	
3. Copy+Compare	First copies, then compares the target to the source once duplication is completed.	
4. Show CF Info.	This feature will show CF card's brand, FW Version, S/N, capacity, file format, and content size.	
5. System Info.	This feature will show system information, such as, model number and firmware version.	
6. Utility	6.1 Do Format	6.1.1 Auto Format Auto formats media to FAT16 or 32.
		6.1.2 FAT16 Format Formats media to FAT16.
		6.1.3 FAT32 Format Formats media to FAT32.
		6.1.4 Set FAT 16 Cluster Size Sets FAT16 Cluster size.
		6.1.5 Set FAT 32 Cluster Size Sets FAT 32 Cluster size.
	6.2 Quick Erase Erases flash media content, while keeping the FAT format.	
	6.3 Full Erase Fully erases flash data bit-for-bit, including format and content.	
6.4 DoD Erase Erases flash three times, complying with USA Department of Defense (DoD) standards.		
6.5 System Update System firmware update via the flash media.		
7. Setup	7.1 Copy Area	System and Files Automatically analyzes the source data's format and copies only the data area.
		Whole Media Copies the flash's entire content, including the empty space.
	7.2 Button Sound Enables or disables the audible beep.	

	7.3 Power Off Time Between Copy&Compare Sets the power off time between Copy and Compare.
	7.4 CF Transfer Mode Sets data transmission speed.
	7.5 Set to Default Reverts everything back to the original manufacturer settings.

Function

1. Copy

Before executing this function, please read "Setup Before Copy" to better understand the copy process and results.



Copy Area

Copy area setting → [7. Setup >> 7.1 Copy Area]

Before duplication, select the data area with "Copy area".

Select "System and Files"	Select "Whole Media"
1. Copy (Data)	1. Copy (Whole)

Note

- If flash card is removed during copy process, the system will stop immediately and the red light will illuminate to notify user that the copy has failed. Removing the flash card during copy is strongly discouraged as it will damage the flash card.
- Backup the data on target flash cards before starting the copying process as any preexisting data will be lost once copy is complete.

★ Setup Before Copy

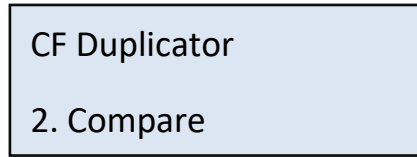
There are several sub-functions related to copy results, which can be adjusted in function [7. Setup] before copying.

1. Copy Area [Function 7.1]

2. Power Off Time Between Copy+Compare [Function 7.3]

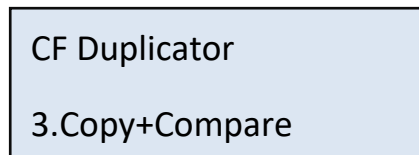
2. Compare

The compare function checks the accuracy of copy result. After the copy finishes, go to function 2 and press "OK" to start the compare process.



3. Copy+Compare

This is the most convenient function. Rather than going to function [2.Compare], then pressing "OK" after copy finishes, function [3.Copy+Compare] automatically runs the compare function after copy completion to ensure an accurate copy result.



★ How to Ensure Duplication is Correct?

CF121 provides the most precise "compare function" to provide our clients with the most reliable duplications. Using function [2. Compare] or [3. Copy+Compare] is strongly recommended for guaranteed copy accuracy.

- ❶ Execute Function [2. Compare] for data checking between source and targets after copy has concluded.
- ❷ Select Function [3. Copy+Compare] to automatically execute data comparison after copy has finished.

Note

1. These two functions will examine the contained data, post copy, via a strict bit-for-bit comparison. This highly increases data accuracy.
2. User is responsible for verification of targets' quality. Testing a few completed targets in a mass production environment for quality control is recommended.

4. Show CF Info

Check CF card Information

Go to function 4 and press "OK" to start to a read of CF card's Information. It will show 4 Information. CF card's brand, FW Version, S/N and capacity. Use ▲ ▼ to view the Information.

CF Duplicator 4. Show CF Info.	
[#1] CF P/N SanDisk SDCFH-004G-A11	[#1] F/W Version HDX 6.02
[#1] CF S/N ANZ101511005900	[#1] Cap. 3870M FAT32 230M

5. System Info

Check duplicator Information

Go to function 5 and press "OK" to start to a read of duplicator's firmware version and press ▼ to view more information, such as machine ID.

CF Duplicator 5. System Info.	
CF 1-1 Ver: 2.36.8	Machine ID: 68A4VE294A1B54

6. Utility

6.1 Do Format

Caution

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

6.1.1 Auto Format

This function formats flash into FAT. Plug in the flash media and press "OK". The system will automatically detect its capacity, then format the media per its capacity.

- If the flash media format is already FAT16 or FAT32, the format function won't alter its original format.
- If the original flash media is not FAT format, i.e. NTFS, Linux or FAT multipartition.

The system will format per flash's capacity. If capacity is above 2GB, the system will format the flash to FAT32 and below 2GB, the system will format the flash to FAT16.

Capacity < 2GB	Format FAT16
Capacity > 2GB	Format FAT32

Note

The source port will not perform any formatting because this function will delete the flash media's data.

6.1.2 FAT16 Format

Sets the FAT16 format.

6.1.3 FAT32 Format

Sets the FAT32 format.

6.1.4 Set FAT16 Cluster Size

Sets the FAT16 cluster size.

6.1.5 Set FAT32 Cluster Size

Sets the FAT32 cluster size.

★ Erase the Flash Card

Caution Flash data will be wiped out. Please make sure to backup all important data before using this function.

6.2 Quick Erase

This function erases flash data while keeping the format if the original flash format is FAT16/32. Use the ▲ ▼ buttons to view status, progress, and information.

Note Quick erase function will erase only FAT 16/32 formatted flashes.

[Utility]
2. Quick Erase

Do ERASE ALL
Confirm?

6.3 Full Erase

Completely erases the entire flash media, including format and content. This task takes longer. Pressing <ESC> during this process will abandon the task, but the original format and content will no longer be readable.

[Utility]
3. Full Erase

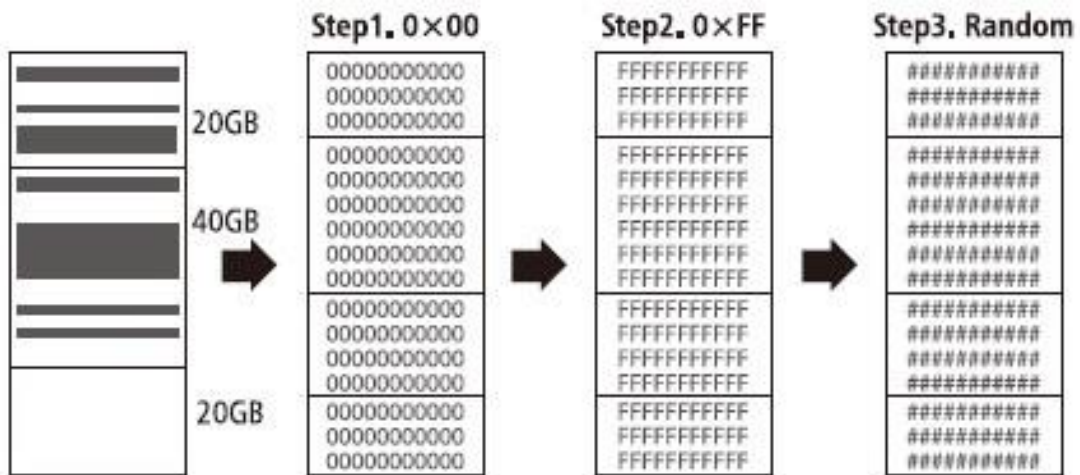
Do ERASE ALL
Confirm?

6.4 DoD Erase

DoD Erase complies with the U.S.A. Department of Defense (DoD 5220) standards by erasing the flash three times, which guarantees that data is completely scrubbed.

[Utility]
4. DoD Erase

Do ERASE ALL
Confirm?



Note

Use the ▲ ▼ buttons to view the status of each port during erase.

6.5 System Update

Save the firmware in a CF card and insert the card to source port. Go to function [6.5] system Update, and press OK to update duplicator’s firmware.

[Utility]
5. System Update

Caution

The firmware update process may take longer than 5 minutes. Please do not disrupt power or process during BIOS update. If interrupted, the system will become useless. The manufacturer will not be held responsible for any damages.

7. Setup

7.1 Copy Area

1 Copy Area: System and Files

Also known as "Quick Copy". The source's format is automatically analyzed and if it's recognizable, such as, FAT 16/32/64, NTFS, or Linux ext. 2/3/4, the system will copy the data only, rather than the entire flash.



Note If the file format is not recognized, the whole flash card, including empty space, will be copied even if you specify copy area in "System and Files".

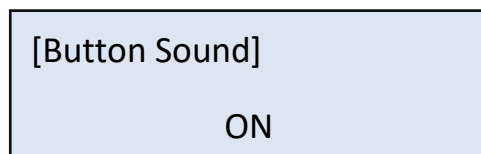
2 Copy Area: Whole Media

The system will copy the whole flash card, including empty space and format. This function is useful when users want to copy the whole flash or have a flash source with an unknown format. "Whole media" copies take a bit longer to complete.



7.2 Button Sound

Controls whether to hear a sound when a button is pressed.



7.3 Power Off Time Between Copy+Compare

The use of this setting is highly advised as it prevents data loss due to unstable flash. Users can set the time gap of power supply between copy and compare. The time gap can be set from 0 to 15 seconds. The default is "0".

[Power Off Time Between]
0

7.4 CF Transfer Mode

There are 7 CF transfer mode options to choose from. The default setting is UDMA4, which automatically adjusts the speed per your CF card. If unsure of the CF card's quality, you can manually reduce the transfer speed.

There are 7 transmission speed options:

- PIO Mode 4
- MDMA Mode 2
- UDMA Mode 0
- UDMA Mode 1
- UDMA Mode 2
- UDMA Mode 3
- UDMA Mode 4 (Default)

[Select Speed]
UDMA Mode 4

7.5 Set to Default

Restores original default settings.

Warning:
Clear Parameter to Default?

Complete
All Parameter was cleared!

Specification

Model Name	CF121	
Targets	1:1	
Specification	Maximum Transfer Speed	3.9GB/min(66MB/sec.) *Actual performance is dependent on CF transfer speeds*
	Capacity	Supports the latest market available capacity Designed support capability up-to 2TB
	Operating Type	Standalone, FPGA based operation (Non-PC based)
	Supported Languages	English
	LCD Display	Backlit Monochrome LCD Display
	LEDs	2 LED (Red/Green) Indicators per Port
	Control Panel	4 Push Buttons (▲, ▼, OK, ESC)
Features	Copy Modes	Quick Copy (Systems & Files Copy)
		Whole Media Copy
	Compare Function	Bit-by-bit data comparison
	Sanitization Modes	Quick Erase, Full Erase, DoD Erase
Compatibilities	Compatible Devices	CF Type I/II
	Compatible Device	CFast (with required adapter)
	Supported Formats	Quick Copy: FAT16/32/64, Windows (NTFS), and Linux (Ext2/Ext3/Ext4)
		Whole Media Copy: All Formats, including proprietary formats
	Supported O/S	All (Windows, Linux, and other standalone systems)
Hardware Specifications	Power Supply	5V 2A DC Adapter
	Working Temperature	5°C ~ 45°C (41°F ~ 113°F)
	Storage Temperature	-20°C ~85°C (-4°F ~ 185°F)
	Working Humidity	20% ~ 80%
	Storage Humidity	5% ~ 95%
	Dimensions	15*9.3*3.5 cm
	Weight	550g

*Specifications subject to change without notice.

1.0.1