# 2.5"/ 3.5" Dual SATA HDD Docking Station Clone & Erase

# **User Manual**



- ♦ Includes
- About the Docking Station
- HDD Installation Guide
- HDD Formatting Guide
- Clone Operation Guide
- Erase Operation Guide



# **About the Docking Station**



#### Red(s): only single red LED

Notice: More about LED diagnosis addressed at below NOTE session



### **Rear View**

### **Top View**



# **Hard Drive Installation Guide**

**STEP1:** Target the correct location of SATA connector(s)



**STEP2:** Install either 2.5" and/or 3.5"HDD/SSD(s) to the docking station and connect to the SATA connector(s) well.



## Hard Drive Formatting Guide

### Partition a volume under Windows<sup>®</sup> OS

**STEP1:** Right-click on "My Computer" icon and select the" Manage" column.



**STEP2:** Select "Disk Management" and you will see your hard drives showing "Unallocated".

example : 250GB & 750GB hard drives.



Disk 2: 698.63GB



STEP3: Right-click the circled block and select "Initialize Disk"

**Notice:** When pre-formatted/partitioned HDD(s) is used, you may observe **"Online"** instead of **"Not Initialized"**. In this case, you may skip Step3 and proceed to Step4 directly.



Notice: Win 7/8 provides options for "MBR" or "GPT". It is recommended "MBR" is selected if a HDD capacity does not exceed 2TB. "GPT" should be selected if the capacity is over 2TB.

La Computer Management		
File Action View Help		
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Computer Management (Local System Tools System Tools Event Viewer Sinared Folders Ovice Manager Storage Disk Management Services and Applications	Volume       Layout       Type       File System       Status         Image: C(:)       Simple       Basic       NTFS       Healthy (System, Boot, Page File, A         Image: C(:)       Simple       Basic       NTFS       Healthy (Logical Drive)         Image: C(:)       Simple       Basic       NTFS       Healthy (Primary Partition)         Image: C(:)       Image: C(:)       Simple       Basic       Nter         Image: C(:)       Image: C(:)       Image: C(:)	Active, Crash Dump, Primar GB NTFS Y (Logical Di

**STEP4:** After the hard drive(s) appears "Online," Right-click the "Unallocated" block and select "New Partition".

📕 Computer Management					
Bie Action View Window Here are a statement of the second sec	elp				
Computer Management (Local)  System Tools  System Tools  Shared Folders  Coal Users and Groups  Coal Users and Groups  Performance Logs and Alerts Device Manager  Storage  Storage  Disk Defragmenter  Disk Management	Volume Layou	ut Type ion Basic	File System NTFS	Status Healthy (System)	Capacity F 76.68 GB 7
Services and Applications	CDisk 0 Basic 76.68 GB Online	<b>(C:</b> 76.6 Heal	) 8 GB NTFS thy (System)		
	Cisk 1 Unknown 232.88 GB Online	232.i JUnal	38 GB ocated	New Partition	
	Cisk 2 Unknown 698.63 GB Not Initialized	698. Unal	63 GB ocated	Help	
	CD-ROM ( CD-ROM (D:) No Media	D			

**STEP5:** The "New Partition Wizard" will appear. Follow the instruction of the wizard to complete the partition.



**STEP6:** When new partition is completed, the hard drive will be recognized as a "New Volume". [New Volume drive letter may vary, ie: "New Volume (E:)"]

📕 Computer Management								
Eile Action View Window H	ielp							
	3							
Computer Management (Local)	Volume Layout	Type File System	Status	Capacity	Free Space	% Free	Fault Tolerance	Overhead
E System Tools	🗐 (C:) Partition	Basic NTFS	Healthy (System)	76.68 GB	74.96 GB	97 %	No	0%
E Shared Folders								
Correct Users and Groups								
Device Manager								
🖻 🕋 Storage								
Hemovable Storage     Kenovable Storage								
Disk Management								
E Services and Applications	🗇 Disk 0							
	Basic 76.68 GB	(C:)						
	Online	Healthy (System)						
	व्यDisk 1							
	Basic 232.88.GB	New Volume (E:)						
	Online	Healthy						
		600 62 CD						
	Not Initialized	Unallocated						
	ACD-ROM 0							
	CD-ROM (D:)							
	No Media							

### **STEP7:** Format the other hard drive in the same way to see below.

县 Computer Management								
📃 Eile Action View Window H	<u>t</u> elp							
	1							
Computer Management (Local) System Tools Shared Folders Couly Users and Groups Performance Logs and Alerts Device Manager Storage Coup Device Manager Device Manager	Volume Layout	Type File System Basic NTFS	Status Healthy (System)	Capacity 76.68 GB	Free Space 74.96 GB	% Free 97 %	Fault Tolerance	Overhead 0%
	Cisk 0 Basic 76.68 GB Online	<b>(C:)</b> 76.68 GB NTFS Healthy (System)						
	Cisk 1 Basic Basic Baline	New Volume (E: 232.88 GB NTF5 Healthy	)					
	GPDisk 2 Basic 198.63 GB Dnline	New Volume (F: 698.63 GB NTFS Healthy	)					
	CD-ROM (D:) No Media							

### Partition a volume under Mac<sup>®</sup> OS

1. Right click the **Go** icon and select **Utilities** from the drop-down window.



2. Select Disk Utility



3. Select **Partition** on the top of the window, then select 1 partition from the **Partition Layout.** 

120.03 GB FUJITSU MHY MAC OS Untitled 1.5 TB ST315003 41AS	First Ai Partition Layout:	id Erase Partition RAID Restore Partition Information Name: Untitled 1.	the first
Combo Drive	3 Partitions 4 Partitions 5 Partitions 6 Partitions 7 Partitions 8 Partitions 10 Partitions 11 Partitions 12 Partitions 13 Partitions 14 Partitions 15 Partitions 16 Partitions	Size: 1.5 TB To erase and partition the selected dis layout from the Partition Layout pop- options for each partition, and click A To resize a partition on the selected d resize control and click Apply. The selected partition won't be chang	sk, choose a up menu, set pply. isk, drag its ed.

4. Select **Options** at the bottom of the window

MAC OS	First Aid Partition Layout:	Erase Partition RAID Restore Partition Information
1.5 TB ST315003 41AS	1 Partition	Name: Untitled 1
📴 Untitled 1		Format: Mac OS Extended (Journaled) +
Combo Drive		Size: 1.50 TB
	Untitled 1	The selected partition will be created.

5. Select **GUID Partition Table.** Currently, most Mac computers are Intel based. To enhance the best compatibility, make sure **GUID Partition Table** is selected.

Note: For PPC Mac, please select Apple Partition Map

120.03 GB FUJITSU	Choose a partition scheme appropriate for the way you will use this disk:	D		
Untitled	• GUID Partition Table			
1.5 TB ST315003 4	To use the disk to start up an Intel-based Mac, or to use the disk as a non-startup disk with any Mac with Mac OS X version 10.4 or later.			
Combo Drive	Apple Partition Map	urnaled) ÷		
	To use the disk to start up a PowerPC-based Mac, or to use the disk as a non-startup disk with any Mac.	ted disk, choose a : pop-up menu, set click Apply.		
	To use the disk to start up DOS and Windows computers, or to use with devices that require a DOS-compatible or Windows-compatible partition.	eated.		
	Default Cancel OK			

6. Select Apply to finish formatting the hard drive

000	ST315003 41AS Media	
Verify Info Burn Mount	Eject Enable Journaling New Image Convert Resize Image	og
I20.03 GB FUJITSU MHY MAC OS Untitled I.5 TB ST315003 41AS Untitled 1 Combo Drive	First Aid     Erase     Partition     RAID     Restore       Partition     Layout:     Partition Information       1 Partition     *     Name:     Untitled 1       Format:     Mac OS Extended (journaled)     *       Size:     1.50     TB	
	To erase and partition the selected disk, choose a layout from the Partition Layout pop-up menu, set options for each partition, and click Apply. Untitled 1 The selected partition will be created.	
Disk Description : :	+ -         Options         Revert         Apply           \$T315003 41A5 Media         Total Capacity : 1.5 TB (1.500.301.910.016 Bytes)	
Connection Bus : Connection Type : USB Serial Number :	USB Write Status : Read/Write External S.M.A.R.T. Status : Not Supported 903FFFFFFFF Partition Map Scheme : GUID Partition Table	

7. Partition the other hard drive in the same way to make both HDDs work under Mac<sup>®</sup> OS.

### **Clone Operation Guide**

**STEP1:** Install at least two HDD/SSDs to the docking station

**NOTICE:** HDD combination can be of either or both 2.5" and/or 3.5" SATA HDDs, so long as the capacity of HDD2 is equal to or bigger than HDD1.



**STEP2:** Make sure power is turned on & **NO** USB cable is connected.



**STEP3:** Press & hold the clone button for at least 4 seconds, and clone operation will start having the RED Power LED disappear and all 4 LEDs turned on in orange.



**STEP4:** Following light-on of all 4 LEDs in orange, LEDs will then proceed to running back & forth indicating the clone progress. Each orange LED refers to every 25% of clone completion. It is only when every 25% of HDD1 is cloned to HDD2 that such LED will remain constantly on, leaving the other LED(s) in running stage. When Clone operation is fully completed, all LEDs will flash regularly in orange color until the device is power cycled.



**NOTICE:** Any time clone operation fails, LED on HDD2 flares in red, leaving the other LEDs off. Refer to Section 4.4 & 4.5 in "Normal & Clone Mode Table Chart" under "Diagnosis of LED" in below "NOTE" session for details.

## **Erase Operation Guide**

**STEP1:** Follow Step 1 & 2 from Clone Operation Guide **NOTICE:** Install at least 1 HDD/SSD to the docking station

**STEP2:** Pin & hold the erase button for at least 4 seconds. During this period, power & HDD2 LED light up in red. Then, operation will start swapping to all 4 LEDs in red.



**STEP3:** Following light-on of all 4 LEDs in red, LEDs will then proceed to running back & forth indicating the Erase progress. Each red LED refers to every 25% of Erase completion. It is only when every 25% of all HDD(s) is erased that such LED will remain constantly on, leaving the other LED(s) in running stage. When Erase operation is fully completed, all LEDs will flash regularly in red color until the device is power cycled.



**NOTICE:** Percentage of Erase completion attributes to erasing all sectors of the inserted HDD(s). For example, total no. of sectors for two 3TB HDDs is double

of that for one 3TB HDD, thus doubling the time it takes to observe the 4 erase progress LEDs(every 25%), thus complete the operation.

Any time erase operation fails, LED on HDD2 flares in red, leaving the other LEDs off. Refer to Section 7.4 & 7.5 in "Erase Mode Table Chart" under "Diagnosis of LED" in below "NOTE" session for details.

### Note

#### About Clone Function

- The capacity of HDD2 must be equal or bigger than HDD1.
- All data in HDD2 will be deleted once clone operation starts.

If the capacity for HDD2 is bigger than HDD1, capacity remains in HDD2 upon clone completion can be formulated to a new partition. Follow HDD Formatting Guide in the above session for further instructions.

It occurs that some remaining capacity in HDD2 may not be useable if HDD2 is over 2TB while HDD1 is in MBR mode. to overcome this issue, make sure HDD1 is in GPT mode.

- Make sure all HDDs have stopped rotating before Clone button is pressed.
- Power-cycle this device before you proceed with next operation.

### **About Erase Function**

- Definition of Erase: 1-PASS; writing "0" into each sector of the inserted HDD(s).
- Unlike Clone, Erase proceeds regardless of bad sector(s) with any HDD.
- Inserting one or both HDDs of any capacity is ok.
- All data in HDD1 & HDD2 will be deleted once erase operation starts. However there is 10-second buffer starting from blinking of 4 red LEDs. For users who change their mind about erasing HDDs, just turn of the main power of this device. In this case, original data will be retained.
- Make sure all HDDs have stopped rotating before Erase button is pressed.
- Power-cycle this device before you proceed with next operation.

### **About Power synchronization feature**

 This device detects PC power status and turn on & off itself automatically. When PC power off and/or hibernates, HDD(s) spin down and all LEDs off, except that Power LED remains constantly on in red until main power is shut down.

- a. In some OS, when system reaches sleep mode, only monitor and peripheral are turned off while motherboard is powered on. In this case, HDD and LED will be still on.
- b. To enhance smart power synchronization, do not turn off main power of this device.

#### About Use of this device

- Upon PC connection, this device operates by Normal mode(port multiplier).
   2 separate volumes will be recognized. Either 1 or 2 HDDs can be used at the same time.
- To operate Clone operation, this device requires 2 HDD/SSDs, whereas no restriction of number of HDDs is required on Erase operation.
- Removing HDD during clone or erase operation is forbidden. This will result in failure and stoppage of the operation.
- Using of both of the same HDDs under the same OS after clone operation completes may result in signature conflict, thus having the 2<sup>nd</sup> HDD unrecognized & forced to "Offline ①" status as below shows. To have both HDDs work under the same OS, right click the circled block and press "Online". Doing so will have this HDD assigned with a new signature, which makes it **NOT** identical to the source HDD(HDD1).

This practice is not recommended for those intending to use the cloned HDD(HDD2) as a system or replacement drive with original HDD.

<b>Disk 0</b> Basic 465.76 GB Online	<b>(D:)</b> 97.66 GB NTFS Healthy (System	(E:) 97.66 GB NTFS Healthy (Primary(C:) 97.66 GB NTFS Healthy (Boot, P(G:) 97.66 GB NTFS Healthy (Primary75.13 75.13 Unal									
<b>Disk 1</b> Basic 74.53 GB Online	<b>small SATA (H:)</b> 74.53 GB NTFS Healthy (Primary	Partition)				ш					
Contraction of the second seco	Online Properties		2.16 GE Unallo	3 cated							
<b>CD-RC</b> DVD (F:) No Media	Help										

### About HDD Support

- Installing HDD(s) over 2TB is possible. However, make sure to run this device under Vista<sup>®</sup>, Win7<sup>®</sup> & 8<sup>®</sup> OS and activate GPT mode when formatting this device to have it work correctly.
- This device is designed to host 2.5"(9.5mm) and 3.5"(26mm) SATA HDD/SSDs. Support for other HDD/SSDs are not guaranteed.

### About USB Connectivity

 The equipped USB3.0 port is downward compatible with USB2.0 PC/notebook by simply plug and play.

### About SATA Connectivity

- This device support HDD hot swapping. It is imperative that below are fully acknowledged before this is practiced.
  - a. Hot swapping while HDD(s) is working may result in wreckage of such HDD, ie: disk plate scratched, leading to HDD malfunctioning
  - b. Removing any HDD will result in re-detection of both or connected HDD by OS. In the meantime, file transferring in progress will be forced to stoppage, leading to file(s) corruption.

In conclusion, to prevent above catastrophe, it is strongly recommended that HDD swapping be practiced when the device is powered off & HDD(s) have come to full stop.

### About HDD sector support: 512byte vs. 4KB

• This device only supports HDDs of 512byte sectors. HDDs that use 4KB sector(the advanced format) will be asked for formatting before it can come to operation. All data will be lost. Make sure you back up all data before using 4KB sector HDD with this device.

### **Diagnosis of LEDs**

- This device consists of 4 LEDs
- Below charts describes LED activity under various conditions.

R: Read

W: Write

- S3: PC into sleep mode
- S4: PC into hibernation mode

#### Normal & Clone Mode Table Chart

	Configurations			Oper		Activities								
operat	ion						Clone	HDD	status			LED St	atus	
		PWR	USB	HDD1	HDD2	PC	button	HDD1	HDD2	Link	Power	HDD1		HDD2
1	Power OFF													
2	Power ON	•									Red			
3				Norr	nal mo	de– No	USB cat	ole con	nected					
3.1	No USB connected HDD1 inserted	•		•				OFF			Red			
3.2	No USB connected HDD2 inserted	•			•				OFF		Red			
3.3	No USB connected Both HDDs inserted	•		•	•			OFF	OFF		Red			
4				Clone	e opera	tion-No	USB ca	ble con	nected					
4.1	Both HDDs inserted									25%	50%	75%	100%	/ Clone Error
4.1	Clone started	•		•	•		•	UN	UN	Orange	Orange	Orange	Orange	
4.2	Clone Operation In progress	●		R●	w●			ON	ON		Orange running back & forth			& forth
4.3	Clone Operation Complete	•		•	•			OFF	OFF	Orange flash	Orange flash	Orange flash	Oi	range flash
4.4	Clone Operation Cannot start Or HDD1 > HDD2	•		•	•			OFF	OFF					Red flash
4.5	Clone Operation Failed	•		•	•			OFF	OFF					Red
5				No	ormal m	ode- US	SB cable	e conne	cted					
5.1	USB connected No HDD	•	•			•				Blue	Blue			
5.2	USB connected HDD1 inserted	•	•	R/W ●		•		ON		Blue	Blue	Blue flash		
5.3	USB connected HDD2 inserted	•	•		R/W ●	•			ON	Blue	Blue			Blue flash
5.4	USB connected HDD1/2 inserted	•	•	R/W ●	R/W ●	•		ON	ON	Blue	Blue	Blue flash		Blue flash

6	Power synchronization mode -Power saving												
6.1	PC enters Standby, Hibernate mode	•	•	•	•	S3,S4		OFF	OFF		Red		
6.2	PC Power OFF	•	•	•	•	OFF		OFF	OFF		Red		
6.3	USB Cable Removed	•		•	•	•		OFF	OFF		Red		

### **Erase Mode Table Chart**

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	Configurations			Oper	ation		Activities							
operat	operation						Fuene	HDD	status			LED St	atus	
			USB	HDD1	HDD2	PC	button	HDD1	HDD2	Link	Power	HDD1		HDD2
7				Erase	e opera	tion-No	USB ca	ble con	nected					
7.4	Both HDDs inserted									25%	50%	75%	100%	/ Clone Error
7.1	Erase started	•	•	•	•		-	ON	ON	Red	Red	Red		Red
7.2	Erase Operation In progress	•		w●	w●			ON	ON		Red running back & forth			forth
72	Erase Operation							OFF	OFF	Red	Red	Red		Pod flach
7.5	Complete	•		•	•			UFF	UFF	flash	Flash	flash		Neu liasii
7.4	Erase Operation	•		•	•			OFF	OFF					Red flash
7.5	Erase Operation	•		•	•			OFF	OFF					Red
	raileu						1							