

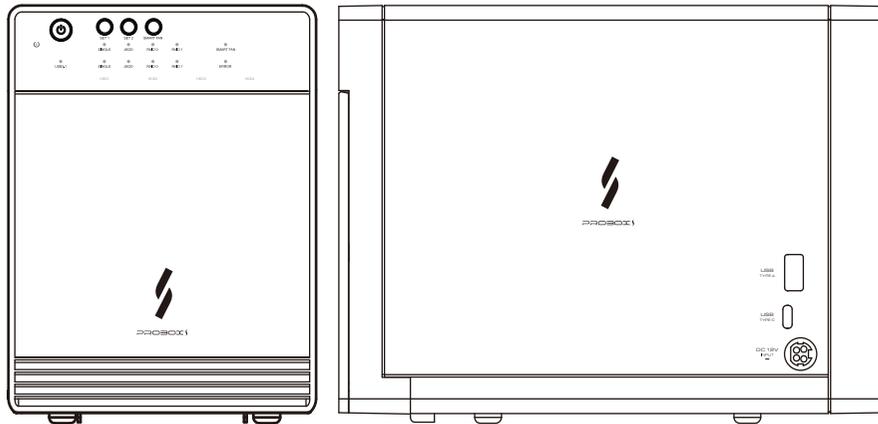


4x RAID with USB HUB Enclosure

2 X Single / RAID 0/1  USB-C / USB-A Hub

USB 3.1 Gen-II / Type-C

For 3.5" SATA HDD



USER'S MANUAL

Official website
www.mediasonicusa.com

Online forum
<http://forum.mediasonic.ca/>

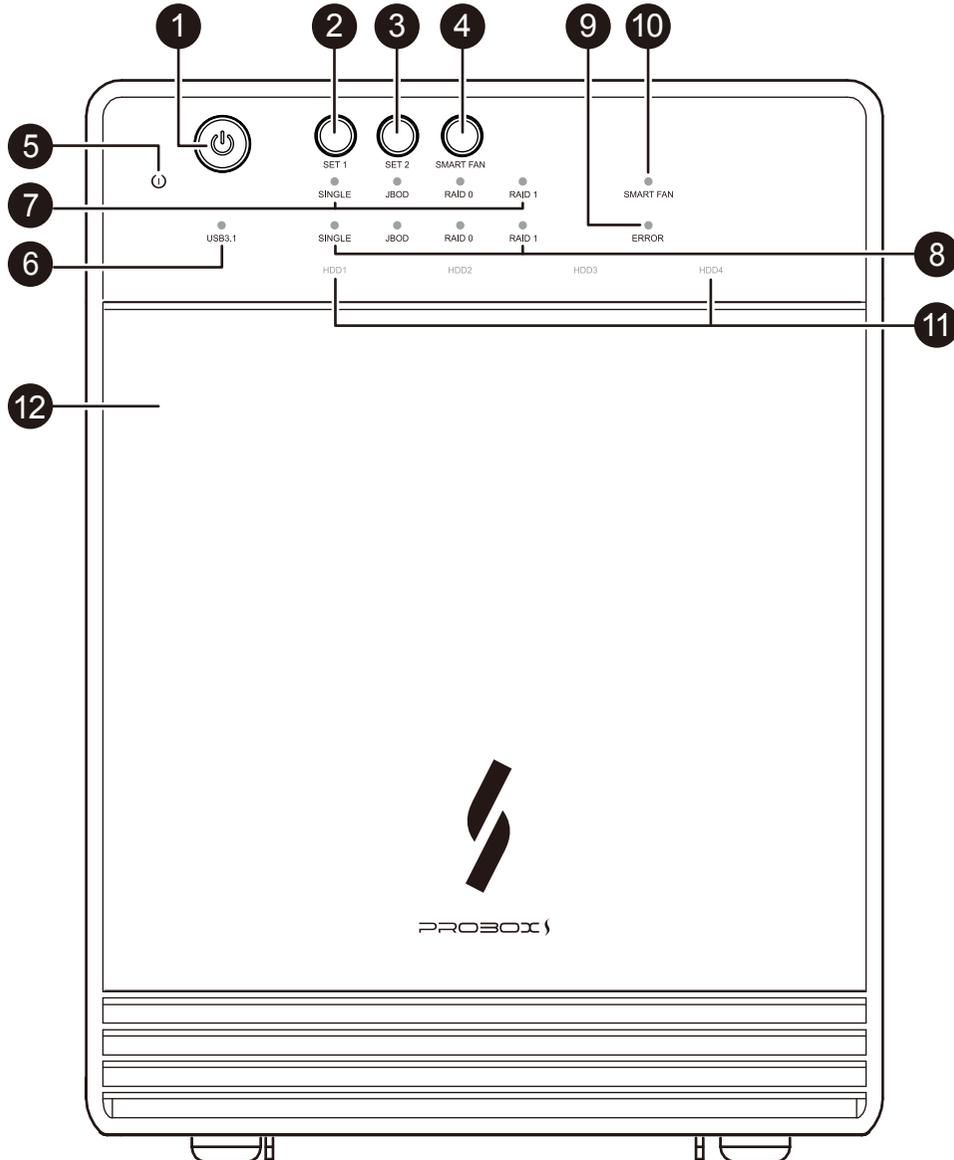
HFR7-SU31CH / Rev.02

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OVERVIEW

DIAGRAM of HFR7-SU31CH Front Panel



Switch Buttons Description

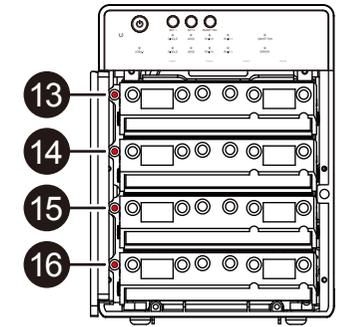
- ① Power button on | press the button
 off | press the button and hold it still
- ② SET 1 RAID button Select SET 1 RAID mode.
- ③ SET 2 RAID button Select SET 2 RAID mode.
- ④ Smart Fan button on/off setup

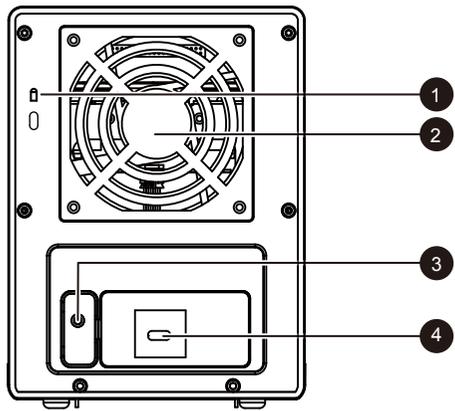
This Device is built in 2 sets of RAID.
This design will prevent accidental execution of this function.

LED Display Description

- ⑤ Power light Blue | power on
 Orange | hibernate
 Off | power off
- ⑥ USB light in use / in access
 * USB Type-C connection succeeded
- ⑦ SET 1 RAID mode indicator Orange | active
Single (Simulation of single mode)
JBOD Spanning (Spanning Mode/BIG)
RAID 0 (Striping Mode)
RAID 1
- ⑧ SET 2 RAID mode indicator Green | active
Single (Simulation of single mode)
JBOD Spanning (Spanning Mode/BIG)
RAID 0 (Striping Mode)
RAID 1
- ⑨ HDD error light
When RAID information, the device is not HDD inserted, format error or reconstruction, red light is always on
- ⑩ Smart Fan Status
ON | The fan is adjust the wind speed according to the temperature
OFF | The fan is running at low speed
- ⑪ HDD 1 ~ HDD 4 Status
Blue | active
Purple Flash | active
Purple Breathing LED | is under rebuilding (in RAID 1)
- ⑫ Hatch door on/off
- ⑬~⑯ HDD 1~HDD 4 Error / Rebuilding light
Red | is under rebuilding (in RAID 1)
Red Flash | When the devies is no hard disk and format error, LED will flash

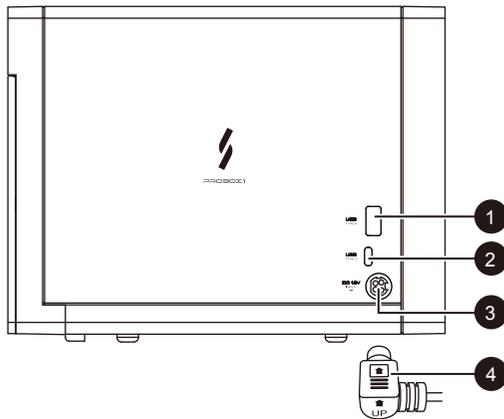
Single mode don't display HDD error light





Rear Description

- ① Security lock
- ② FAN Cover
- ③ RAID Mode Confirmation button
- ④ USB C type port (Connect to PC)

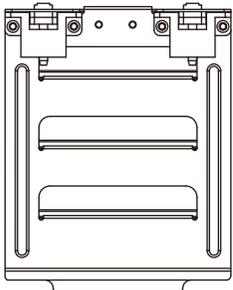


Side Description

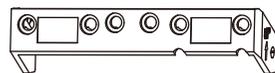
- ① USB A type port (HUB Feature)
- ② USB C type port (HUB Feature)
- ③ DC Input
- ④ DC Jack (To connect AC adapter)

Interior Accessories

① Metal Frame



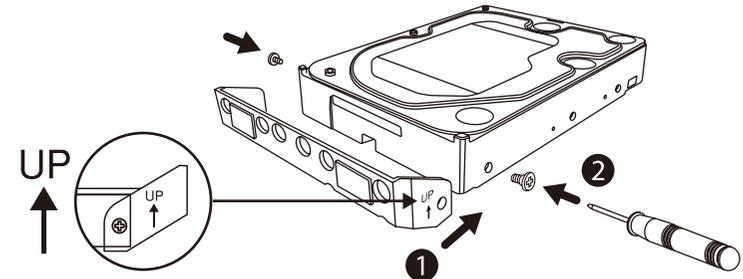
② HDD Handle



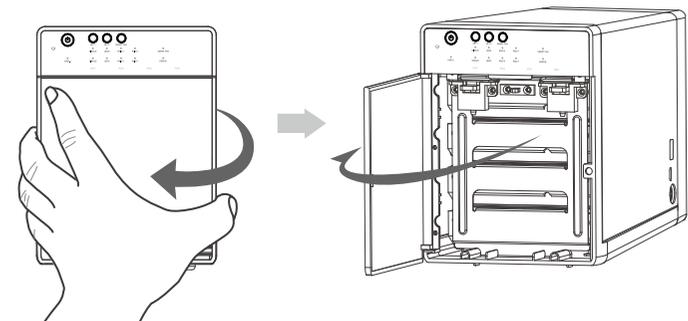
SELF-ASSEMBLY

Quick Installation Guide

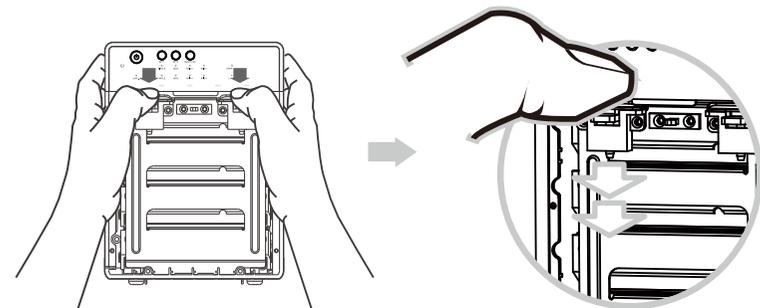
1. Please use the provided handles to secure the 4 HDDs with screws.



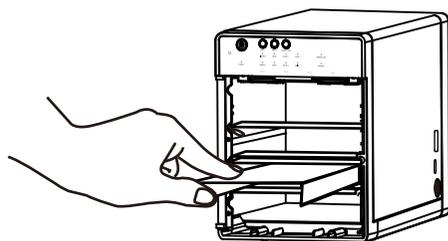
2. Open the cover.



3. Press down the 2 tabs to detach the metal frame and remove it.



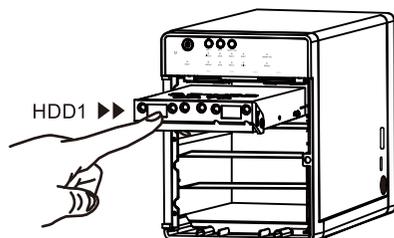
- Take the transport paper board out of the device.



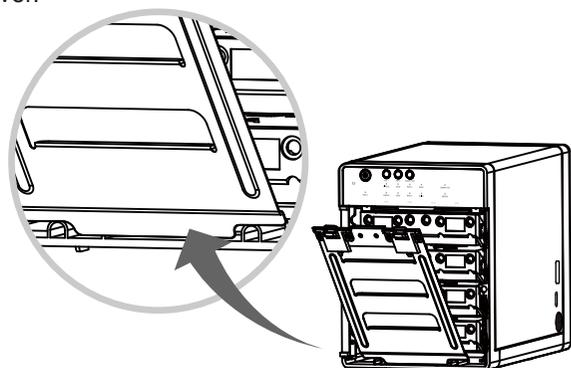
- Slide 4 HDDs into the chassis and make sure they are securely installed in order from top to bottom.

3.5 HDD

Make sure the HDD is securely installed first at all times. Otherwise the PC may not recognize the device.



- Reinstall the metal frame that was removed in Step 3. Please make sure the bottom of the frame stays inside the track before closing the cover.



- Connect the power supply to the device, plug in either USB-C cable in the rear panel and power on the device. Make sure computer is ON.

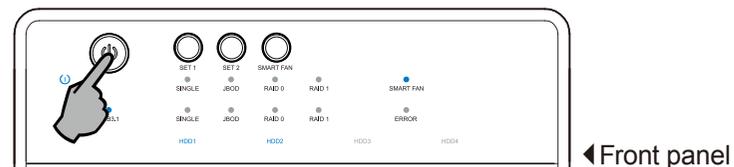
SETUP

RAID Mode Setup

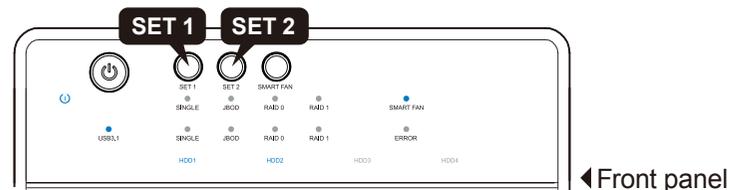
When using RAID function, HDDs with the same brand, model and capacity is strongly recommended.

There are several mode options for HFR7-SU31CH, Single, JBOD (Spanning), RAID 0 (Striping) and RAID 1. The enclosure is not default to any of the above. So If you just put hard drives in without setting a mode to use, the enclosure will just turn off after a few seconds of turning it ON.

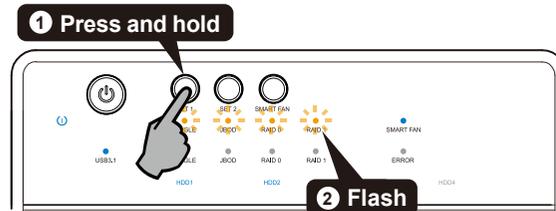
- First install the HDD from up to down in the enclosure. Make sure the PC is on and ready to go, Power on the device.



- The Device is built in 2 sets of RAID, and each RAID is constructed by 2 HDDs. There are two sets of Raid mode need to be setup properly before you using this device, finds "SET 1" and "SET 2" in the front panel on this device.

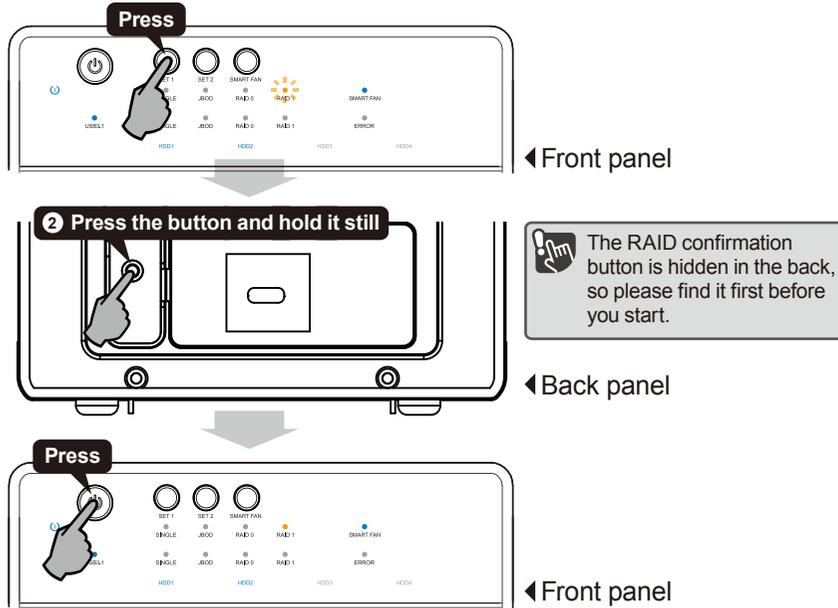


- The setup procedures are as follows:
 - Press and hold the "SET 1" button until the RAID option light starts to flash then let go of "SET 1" button.



Changing RAID mode may cause data lost, backup your data before making changes.
Do not use hard drives containing data to create a RAID array.

- Ⓑ Press "SET 1" again and again. until it lands on the raid mode you wish to use, then press and hold the "RAID mode Confirmation button" in the back of the device until enclosure shuts down.



- Ⓒ "SET 2" setup is the same as "SET 1"
- Ⓓ Power on the device again and the RAID mode set-up is completed. Now you just need to partition and format the drives.

RAID MATRIX LIMIT TABLE

● : Supported ○ : N/A

Raid Mode		HDD installed qty	
		HDDx1	HDDx2
SET 1 (HDD1+HDD2)	SINGLE	●	●
	JBOD (RAID 0 Spanning)	○	●
	RAID 0	○	●
	RAID 1	○	●
SET 2 (HDD3+HDD4)	SINGLE	●	●
	JBOD (RAID 0 Spanning)	○	●
	RAID 0	○	●
	RAID 1	○	●

RAID Mode Description

Single

- SINGLE Simulate as a 4-bay non-RAID enclosure, and you can separately access 4 hard drives.

RAID 0 Spanning (BIG) JBOD

- SPANNING Spanning concatenates multiple hard drives as a single large volume; resulting in a seamless expansion of virtual volumes beyond the physical limitations of separately connected hard drives. The data are written from HDD1 to HDD2.
 - Raid 0, JBOD Spanning Only , Non-Single JBOD

Note : Do not use hard drive with data to create any RAID mode.

RAID 0 Striping

- RAID 0 Striping is a method of concatenating multiple hard drives into one logical storage unit. It is the automated process of writing data across multiple drives simultaneously. Striping is used to increase the performance of disk reads. The multiple hard drives will write data in "column" effect. If one drive in a striped set fails, all of the data in the stripe set is lost.

RAID 1 Mirroring

- RAID 1 Mirroring is the automated process of writing data to multiple drives simultaneously. Mirroring is used to provide redundancy. If one drive fails, the redundant drive(s) will continue to store the data and provide access to it. The failed drive can then be replaced and the drive set can be rebuild.

RAID Mode Combination

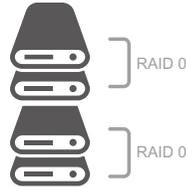
Convenience

4x Single Mode



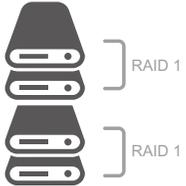
Best Performance

2x RAID 0 + 2x RAID 0



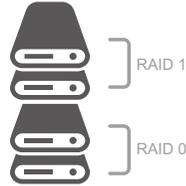
Ultra Security

2x RAID 1 + 2x RAID 1



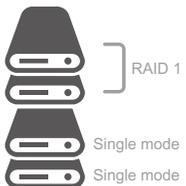
Security+performance

2x RAID 1 + 2x RAID 0



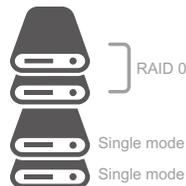
Convenience+security

2x RAID 1 + 2x Single



Convenience+performance

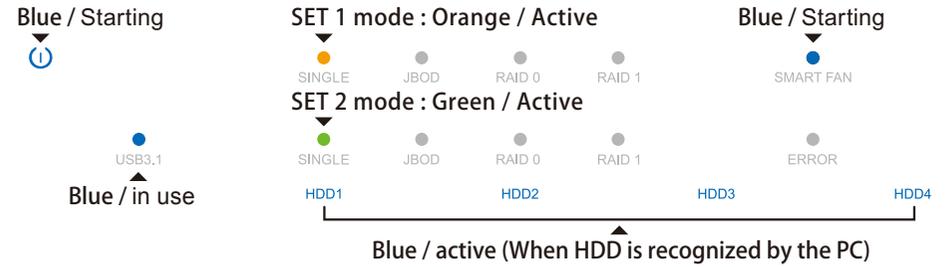
2x RAID 0 + 2x Single



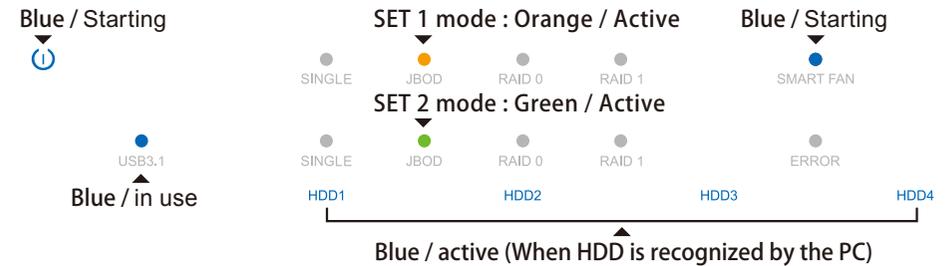
LED Display Status

RAID Configuration

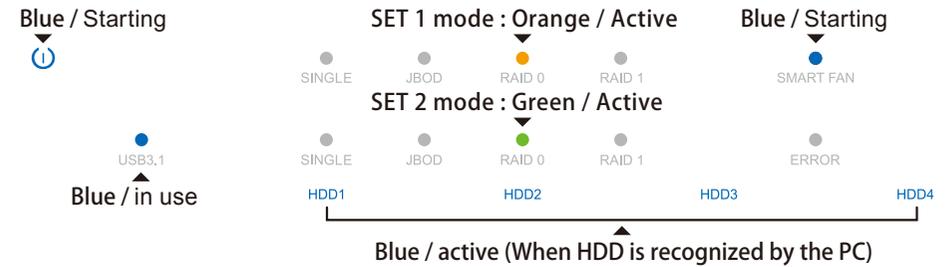
SINGLE



JBOD Spanning (BIG) RAID 0



RAID 0 Striping

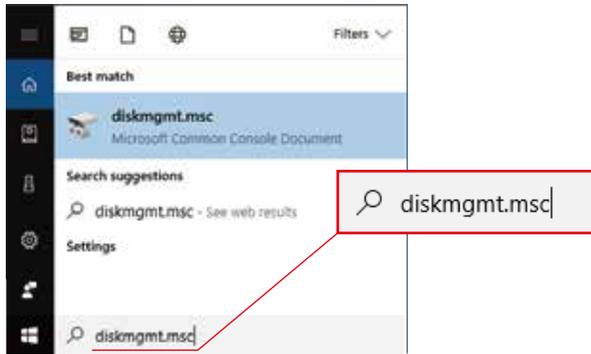


RAID 1 Mirroring



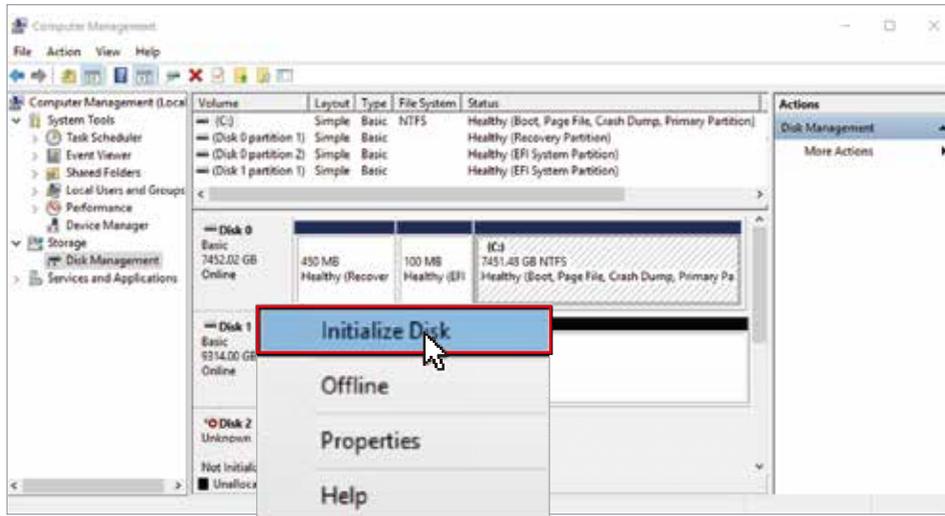
Initialization

Windows

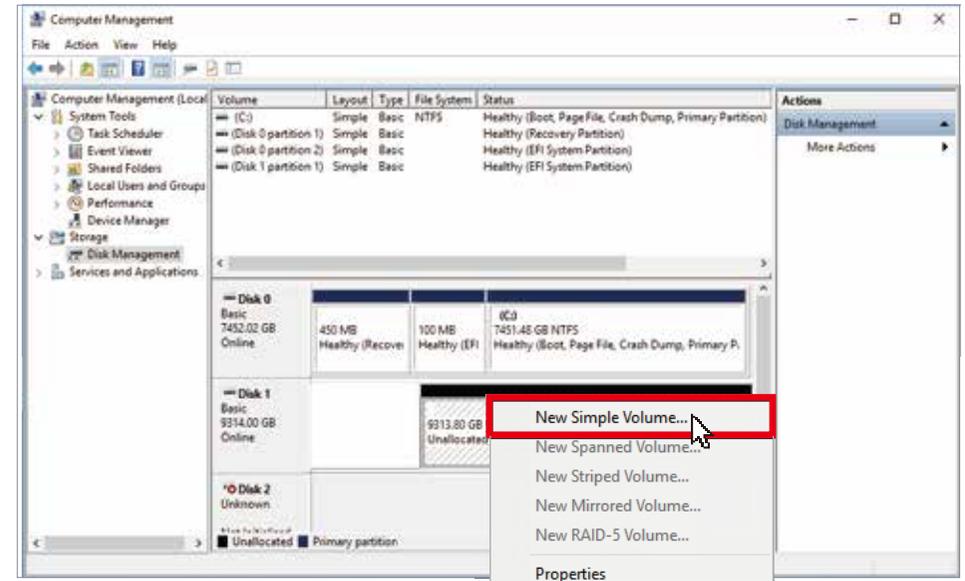


If the HDD is uninitialized, you may have to initialize it by doing steps as followed:
At first click "**Start**", "**Execute**" on your PC and key in "**diskmgmt.msc**".
After that please press "**Return**" key.

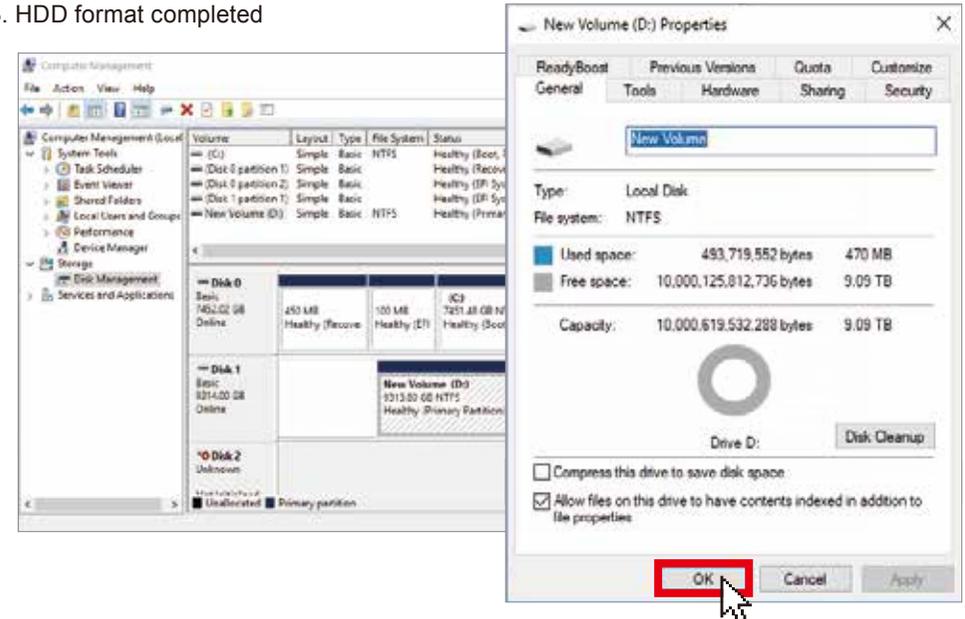
1. Start disk initialization



2. Create new partition and format disk



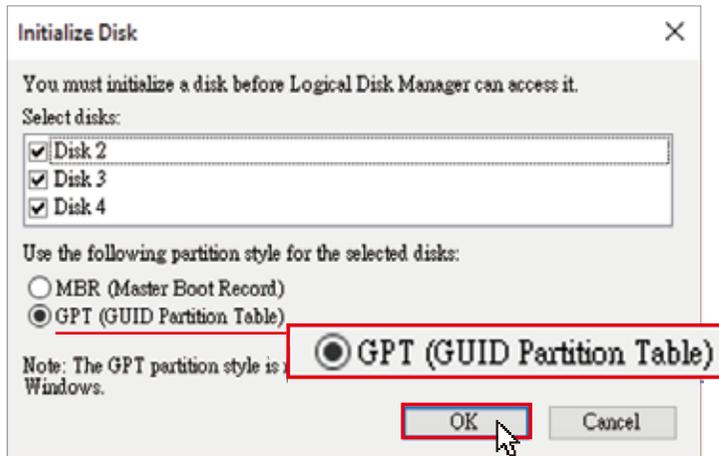
3. HDD format completed



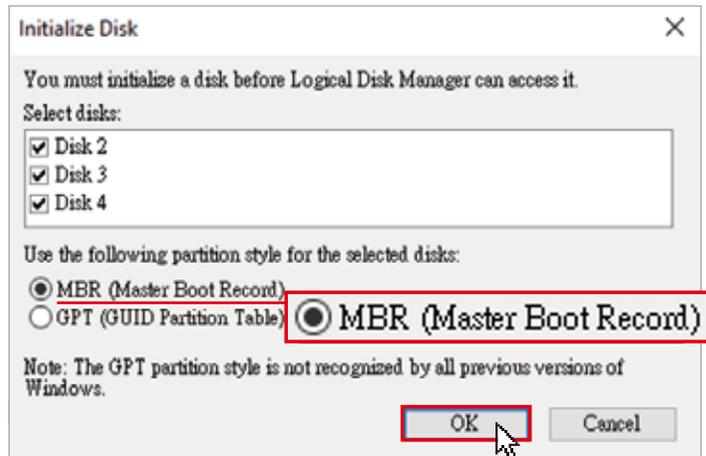
Start disk initialization

Please enable **GPT** if the total capacity is more than **2TB** and enable **MBR** if the total capacity is less than **2TB**.

Activate **GPT** if total volume is more than **2TB**



Activate **MBR** if total volume is less than **2TB**



Mac OS X 13 or later

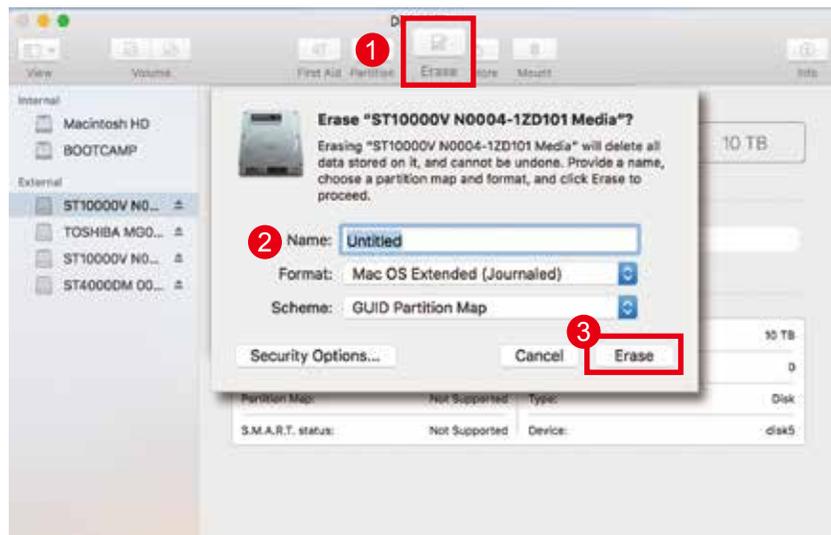
1. Click "Disk Utility" icon.



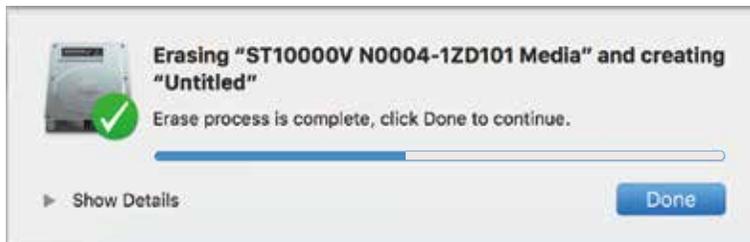
2. HDD initialize...



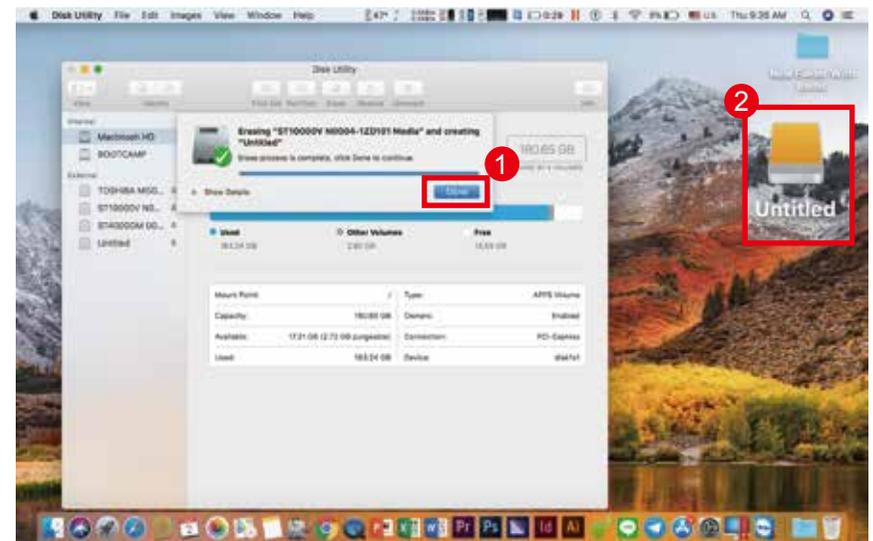
3. Click "Erase"



4. HDD format in process



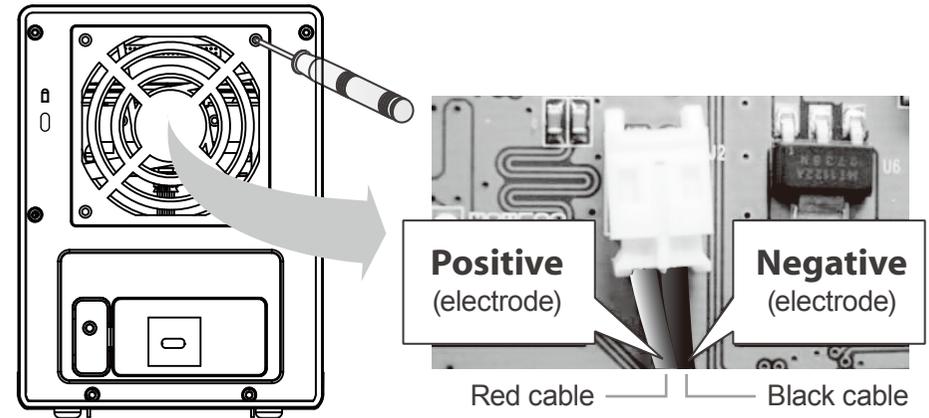
5. Format completed



Troubleshooting

1. Changing the RAID mode will cause data lost.
2. Please refer to the instructions when switching the RAID mode, otherwise set up might fail.
3. When using RAID function, HDDs with the same brand, model and capacity is strongly recommended.
4. When using RAID function, more than one HDD partition is not recommended.
5. Under Windows 7 / 8.1, users can enable GPT when initializing HDD with a total capacity of more than 2TB.
6. If users enable MBR by mistake, in order to clean the partition table, you have to switch to another RAID mode and do the RAID mode switch all over again referring to Setup. Then go back to the RAID mode you want, repeat the previous actions and enable GPT when initializing HDD.
7. For Macintosh users: the total capacity of more than 2TB could be recognized only for the operation system is 10.4.11 Tiger or later.
8. Rebuild time is based on the capacity, e.g. it takes about 1 hour for 200GB.
9. When the USB cable is plugged out, the device goes to sleeping mode automatically.
10. To take the HDD out from the device, slightly press down the handle and pull it out.
11. Setting up motherboard's power management in S3 is recommended.
(For more details, please refer to the user guide of motherboard BIOS setting).
12. If the device takes too long to initialize, please check if the HDD is securely installed.
13. If there is noise with the fan, power off the device, unscrew the fan, take out the cover, clean the fan and assemble it back.

14. If the noise is still present, you can change the fan with another identical fan of size 80 x 80 x 20 mm referring.



15. Operation Environment:

Temperature 0 ~ 60 °C
Humidity 90 % RH

16. Smart fan controlled by the built-in thermal sensor.

17. Operation System:

Windows 7 / Windows 10
(with GPT enabled, supports total capacity more than 2TB)
Mac OS X 13 or later