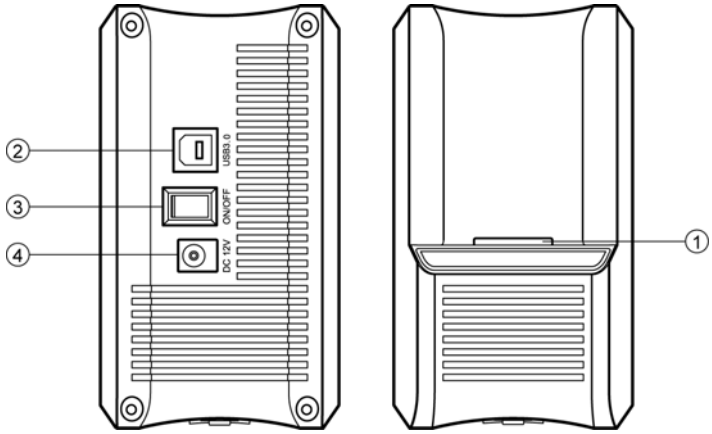
WELLAND

Dual-Bay SATA RAID Enclosure with USB3.0
Quick Install Guide

1. Getting Started

Kit Contents
- ME-541S Dual Bay Enclosure
- USB Cable
- Power Supply
- QIG (Quick Install Guide)

Product Overview
1. LED Indicator
2. USB3.0 Port
3. Power On/Off Switch
4. Power Socket

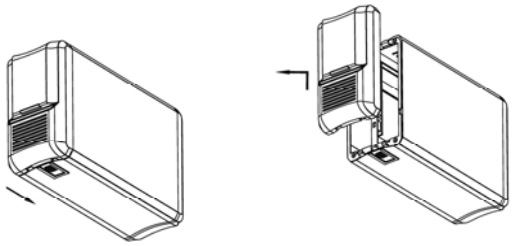


Minimum System Requirements
- Available OHCI-compliant USB port
- USB3.0-equipped WIN XP / VISTA / 7
- USB3.0-equipped Mac OS X 10.5 or above

2. Assembling The 3.5" SATA HDD

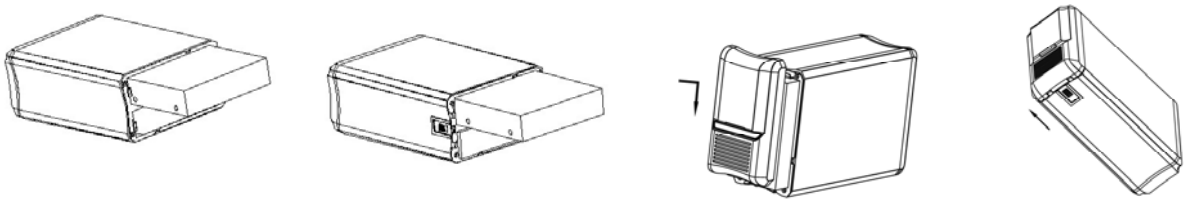
Please kindly open the caddy and insert the drive in the enclosure with correct position.

Step 1: Unlock the switch at the bottom side of the enclosure and take out the front panel smoothly.



Note : ME-541S features TOOL-FREE hard drive installation, no screws or screwdriver is required. The lock switch is at the bottom side of the enclosure.

Step 2: Install the hard drives with correct position. Set your RAID mode by adjusting the dip switch and put the front panel back to the enclosure.

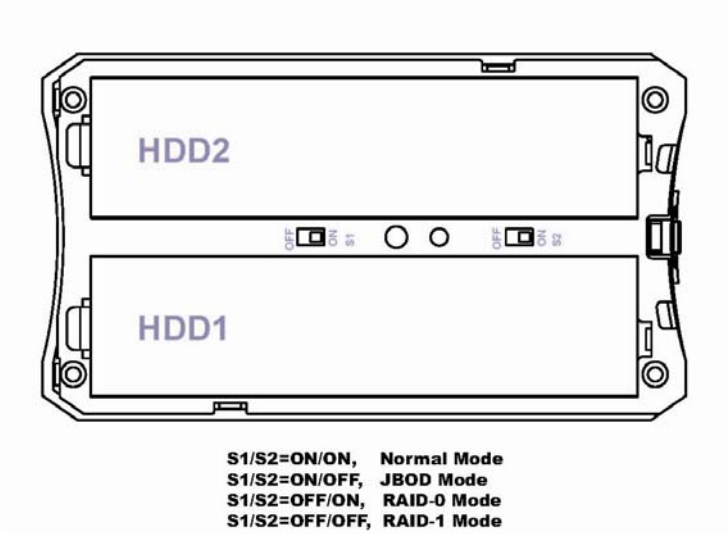


Note : In order to support combined capacity than 4TB , the OS needs to support large volumes (Windows Vista / 7 or above ; Mac OS X 10.5 or above)

Note : The maximum capacity support for Windows XP is 2TB, for Linux is 3TB. DO NOT insert hard drives if the existing data totals more than 2TB as Windows XP might overwrite or delete it.

3. RAID Mode Setting

The RAID mode can be changed by using the RAID switch. Please remove the front cover, and you will see the setup switch as below :



Note : Changing the RAID mode will require you to re-format the drives. Make sure to backup all existing data first !

Please follow below steps to select RAID mode.

1. Turn off the power.
2. Select your RAID mode. There are 2 switches, S1 and S2, they form 4 different RAID functions. Adjusting the switch to the correct position to form the RAID mode. Normal mode means non-RAID.
3. After the RAID mode is selected, install the hard drives and put on the front panel.
4. Turn on the power.
5. Format the drives. (This is the must when every time you change RAID modes, check chapter 4 for more info.)
6. You can use the drive now.

4. Formatting Hard Drive

Once you have created your new array, you will need to initialize it before it will be accessible to your OS. This involves partitioning and formatting your new RAID volume. This can be done by using the Disk Management Utility of your OS.

How to find your Disk Management Utility ?

Windows : Navigate to Disk Management : Start Menu > right-click (My) Computer . select "Manage" > select Disk Management

Mac : Click an empty space on your Desktop. Then select (from the top of the screen) Go > Utilities > Disk Utility.

Initializing and formatting your new array :

Windows XP / Vista / 7 :

A) Once in Disk Management, look for your drives in the bottom-right window. You may have to scroll down to find it. The disk(s) will most easily be recognized by their size. Ex. : If you are initializing a 1TB drive, look for a drive that is close to the same size, like 931.51GB. Once you've found it, take note of the disk number.

B) If the Initialization Wizard does not appear, right-click the disk number, and then select the "Initialize" option. If this option is not available, click the white box immediately to the right and select "New Partition" for XP and "New Simple Volume" for Vista/7.

C) Select "MBR/Primary Partition" and "NTFS" for XP, or for drives that are smaller than 1TB. For later versions of Windows (Vista and 7), select "GPT/GUID" and "NTFS". Or for drives that are larger than 1TB. Caution! GTP/GUID is not compatible with Windows XP!

D) Let Windows select a drive letter, as well as the rest of the options. The press "Finish". Double-check that Windows assigned a drive-letter to your new drive(s). Otherwise, you will not see the drive(s) in (My) Computer.

E) Now, look for your drive-letter(s) in (My) Computer and enjoy your new drive.

Mac OS X 10.5 or above

A) Once in Disk Utility, look for your drive in the left-hand column. It should be easily identified as a USB or DMI drive of a size close to it's stated size. Ex. : If you are Initializing a 1TB drive, look for a drive that is close to the same size, like 931.51GB.

B) Click on the first entry for your drive, the one closest to the top.

C) On the right, there will be a row listing operations you can perform on your drive. Select "Partition".

D) Now select "Volume Format > Mac OS Extended"

E) Click "Options", and select "Apple Partition Map".

F) Click "Partition".

G) Check for your drive in Computer and/or the Desktop and enjoy your new drive!

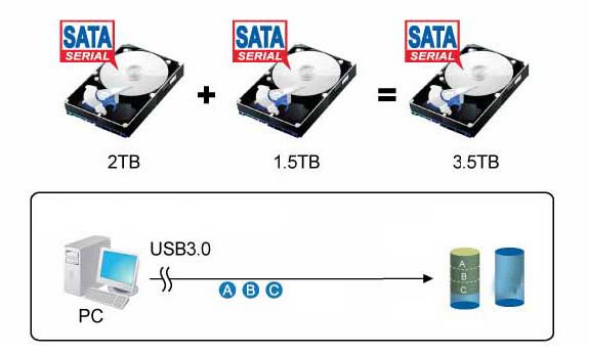
5. About RAID Mode

※ Normal Mode (Non-RAID) :

Normal mode is the default setting of this product, and this mode doesn't refer to any RAID functions. In normal condition, both hard disks are independent, and will be identified as two separate disks, users can choose any hard disk for storing files. If one of hard disks is damaged, the other hard disk would keep working correctly.

※ JBOD Mode (Spanning) :

In this mode, the system stores the same data redundantly on multiple disks that nevertheless appear to the operating system as a single disk. Although, JBOD also makes the disks appear to be a single one, it accomplishes that by combining the drives into one larger logical one. JBOD doesn't deliver any advantages over using separate disks independently and doesn't provide any of the fault tolerance or performance benefits of RAID.

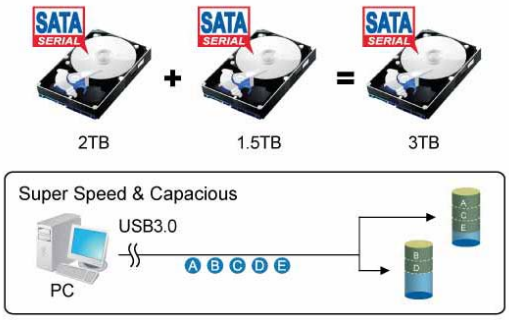


※ RAID 0 (FAST) Mode :

2 physical drives are stripped as 1 larger logical volume, RAID 0 offers the maximum possible capacity like in JBOD mode with greater speed than JBOD mode (each disk runs faster to a certain level).

Note : If 1 drive fails, the data on both disks will become inaccessible.

Note : When installing 2 unequal drive, the capacity is double of the smaller drive.

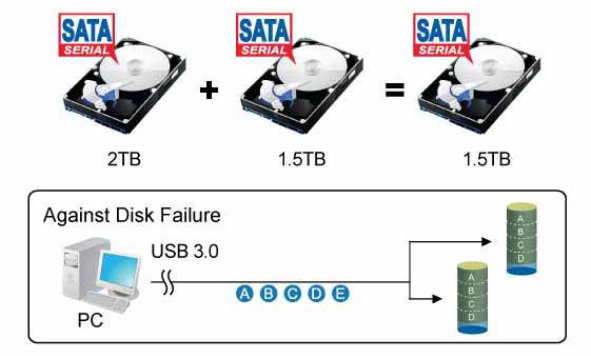


※ RAID 1（SAFE）Mode :

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

Note : When installing 2 equal drives, the capacity is equal to one of the two drives.

Note : When installing 2 unequal drives, the capacity is the smaller one.



6. Connecting The Drive

1. Connect one end of the USB cable into the USB Port of your HDD enclosure.
2. Connect the other end of the USB cable into any active USB port of the computer.
3. Connect power supply to the enclosure and power up the enclosure.
4. Let OS search and install the driver automatically.
5. Use the disk management tool (PC) or disk utility (MAC) to create a new partition and format the drives
6. Open “My Computer” to see your external hard drive ready to use.

Note : To enjoy USB 3.0 speed up to 5Gbps, your computer must be USB3.0 built-in or equipped with USB3.0 host PCI-e card.

7. Disconnecting The Drive

Caution : To prevent data loss, always shut down all active applications before turning off power.

Windows

1. Double-click the Safely Remove Hardware icon in your system tray (typically located on the bottom right corner of your desktop).
2. Select the appropriate device from the list and click "Stop". Click "OK" to confirm your selection of the drive to be disconnected.
3. Click "Close" and ensure that the drive is powered off already.

MAC

1. Find the Removable Disk icon associated with the drive that you want to disconnect and drag it to the Trash icon on your desktop.
2. After the disk icon disappears from the desktop and the drive is powered off, you may safely disconnect the USB cable from your computer.

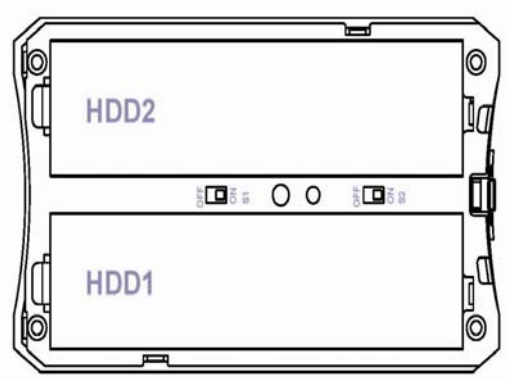
8. Rebuilding Hard Drive

One of the best reasons to use a RAID 1 array is that it automatically rebuilds after a drive-crash. The only thing the user will need to do is identify and replace the malfunctioning drive. The on-board circuitry will rebuild your RAID 1 array silently in the backfground while you are able to continue using your drive as normal.

It’s important to beware of the fault-tolerances of your RAID confiruguration. RAID 1 is the only mode that provides fault-tolerance. But if both drives die before you can replace either one, then your data may well be lost.

Note : If one drive fails under RAID 0 or JBOD, the data will be lost and the system can't be accessible until replacing hard drive.

When one drive fails, the HDD LED will display below status :
- HDD1 Fails : LED flashes once every 3 seconds when the power is on
- HDD2 Fails : LED keeps off



1. Check the HDD LED status and replace the faulty drive with a new drive. Turn off power when replacing the drive.
2. For RAID 1, the RAID array will be re-built automatically when putting a new drive with capacity larger or equal to the previous drive. During this process, the HDD LED will flash (HDD R/W). Rebuilding the RAID array will take several hours depending on the drive capacity. When the rebuilding process is OK, the HDD LED will keep light without flashing. If the capacity of the new drive is smaller than the previous drive, the rebuild process will not be completed.
3. For using RAID 0 and JBOD, restart the system and then format the drives again.
4. For Non-RAID (Normal Mode), simply format the new drive.

9. Troubleshooting

※ I can't see my drive(s) ?
A : If you have followed all the setup steps and your drive is operational, you should see it in your Disk Management Utility. If you can't, then check the bay itself using a known-working drive in the same slot. If that drive appears when inserted into the same slot, the previous drive may be defective.

※ I see my drive but it's offline ?
A : Just right-click the disk number and select Online

※ How do I create a drive that can be used on both Mac and Windows ?
A : You need to format a drive with the FAT32 file system. This can be most easily be done on a Mac, in Disk Utility.

※ But I can see my Windows disk on my Mac already ?
A : Yes, you can often see a Windows disk on a Mac or a Mac disk on Windows. You may even be able to pull files off of it. But you won't be able to write that disk unless it is formatted to FAT32.

※ How do I check the health of my slow or unresponsive disk ?
A : In Windows, you right-click the rectangle next to your disk number and select Properties > Tools > Check Now. This will also give you the option of repairing any corrupted data automatically. Also within the same window, you can select "Defragment Now". This can make a huge improvement with older drives. In Mac, select your disk from the left-hand column. Then, choose First Aid > Repair Disk Permissions. This may take some time. Once it's finished, it will tell you the status of the repair. You disk should be a lot faster and more stable now.

※ Why the RAID 1 backup function can't work after I replace the broken hard drive ?
A : Remember, if you want to replace the broken hard drive, the capacity of the new hard drive must be the same with the source disk or larger than the source disk. If not, RAID1 backup function will not be processed.

※ How to get further support information ?
A : Please check www.welland.com.tw for any product update or new information.

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