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Mediasonic probox 4 bay 3.5 sata hard drive enclosure manual

Introduction Prior to the rapid rise in popularity of Network Attached Storage (NAS) devices, consumers used to store large amounts of data on Direct Attached Storage (DAS) units. While USB 2.0 and Firewire used to be the interface of choice earlier, neither of them could maximize the bandwidth capabilities of the storage units (HDDs). USB 3.0 and eSATA serve the current day consumers in a more efficient way. We believe that the adoption of Thunderbolt in computing systems will make DAS units more relevant as the days go by. Today, we will take a look at the Mediasonic H82-SU3S2 3.5" USB 3.0 / eSATA Probox 8-bay external hard drive enclosure. Mediasonic's H82-SU3S2 is a branded version of ODM manufacturer Hotway's H82-SU3S2, and utilizes a bunch of JMicron bridge chips. The unit is capable of being connected to the PC through either USB 3.0 or eSATA. The latter case needs a port multiplier aware SATA host controller on the PC side if more than one drive bay is being used. The operation is in single mode (JBOD) only, making the unit quite straightforward to use for the consumer. Testbed Setup Despite having a variety of systems with eSATA ports at my disposal, I was unpleasantly surprised to discovered that almost none of them had port multiplier capability inbuilt.



These included boards based on the H55 and H65-M Intel chipsets as well as the AMD A50-M Hudson-M1.
The A75 chipset in the ASRock A75 Pro4 supposedly has port multiplier capability. Unfortunately, ASRock confirmed that the current BIOS for that motherboard was not capable of supporting port multiplication. In the process of sifting through the rest of the systems at my disposal, I found that the eSATA port on the Asus P8H77-M Pro that I had used for testing the HTPC credentials of Ivy Bridge was not from the H77 chipset, but, from a Marvell 88SE9172 SATA host controller. Though Asus doesn't specifically claim port multiplier support in the board, the data sheet for the Marvell controller indicated that it was compliant. In my initial testing, the port multiplier feature didn't work, but reinstalling the Marvell Magni driver after setting the eSATA port to be in AHCI mode resolved that issue (to some extent).



There were no such issues with USB 3.0 Mediasonic Probox 8-bay eSATA / USB 3.0 DAS Testbed Setup Processor Intel Core i7-3770K - 3.50 GHz (Turbo to 3.9 GHz) Intel HD Graphics 4000 - 650 MHz (Max. Dynamic Frequency of 1150 MHz) Motherboard Asus P8H77-M Pro uATX OS Drive Seagate Barracuda XT 2 TB Secondary Drives Kingston SSDNow V+ 128 GB SATA II SSD SNV325-S2/128GB Corsair Performance 3 Series SATA III SSD CSSD-P3128GB2 Memory G.SKILL ECO Series 4GB (2 x 2GB) SDRAM DDR3 1333 (PC3 10666) F3-10666CL7D-4GBECO CAS 9-9-9-24 Case Antec VERIS Fusion Remote Max Power Supply Antec TruePower New TP-550 550W Operating System Windows 7 Ultimate x64 SP1 Display Acer H243H . From the perspective of the Probox enclosure, two sets of SATA drives were used. OCZ provided us with some Vertex 4 64GB units for our NAS testbed (about which I will be writing soon), and I took the opportunity to sneak in eight of them for evaluating the Probox before embarking on that build. For meansurement of power consumption and performance under normal usage scenarios, a few mix-and-matched 7200rpm 1 TB hard drives (from Samsung and Seagate) were used. In the next section, we will briefly go over the internals of the Probox and the build quality. I have two of these boxes; both are configured as RAID boxes and have been in continuous use for years -- one of them since 2013. (One is RAID 10, the other RAID 5.) In that time I have had to replace three hard drives in the in-use units. At various times each box have been moved between USB and eSATA connection to the host PC. Both have always been consistent, solid performers. Neither has ever given me any trouble.WHAT IT IS: This is a simple and cost-effective external device. It functions well in either USB or eSATA mode. The box is self-contained and plug-and-play; it requires no drivers and adds little or no extra load to the host PC. I have never had a PC or Mac (with appropriate configuration) fail to recognize the box and "talk" to it as expected. In any RAID configuration, it appears and behaves just like any external hard drive. As JBOD, it shows up as multiple separate external devices. Within the limits of what it is and how it works with the connected computer (discussed more below), it just works and has always been extremely reliable. But you should think through what you are getting at this very economical price point (economical for a RAID box, that is).The device detects the power state of its connection to your computer; it will turn off automatically when you power down your computer and will power back up when you turn the computer back on. This is a FEATURE and is the intended operation. You do NOT have to turn it off and on manually. For many this is a great convenience. It is also a good thing for power and heat saving (as well as hard drive life span and reducing noise when the computer is not on).



But it can also be a negative depending on your use case (more on this below).In either SATA or JBOD or using eSATA or USB, I have never had a lick of trouble; the box just works. Lights on the box correctly indicate drive use and will tell you when a drive has failed. Power down and replace the failed drive; when you power back up in RAID mode the box will proceed to rebuild the array with no further action from you. (In JBOD mode, the new drive shows up in your operating system -- though of course you may need to go into disk manager to partition and format it before Windows can use it.)In terms of value for money, the performance is great for this price.WHAT IT IS NOT: You do get what you pay for. This is a very economical / cost-effective unit (for a multi-interface RAID unit).The device talks via eSATA OR USB. Most home-user class computers will not let you use both interfaces at the same time. For example: If you connect both at the same time, a Windows PC will only recognize the device on the eSATA connection (since the SATA bus is usually initialized before USB).Though the device does accept SATA III hard drives and works internally at 6Gb/sec speeds, it can only sustain those speeds to your computer when configured as JBOD. When configured for RAID it can only support 3 Gb/sec speeds (equivalent of SATA II, closer to USB 2 than 3 speed). That makes it great for backup and fine for accessing files one at a time (even playing music), but maybe not really solid for video streaming or disk-intensive gaming applications.The ventilation system is less than spectacular and needs to be kept clean or else lint buildup will make airflow a drive-killing problem over time. When closed up properly, the automatic fan settings on this box will make the drives inside tend to run hot (using HD Sentinel to monitor individual drive SMART temp reporting). That said, I have run these units for years on end without encountering unexpected / premature drive failure. I have also found the manual "high" fan setting works pretty well and is still pretty quiet -- not really noticeable if sitting under the desk. The unit will also run just fine with the front door down (open), which will cool everything down and keep it at more "normal" HD operating temps. The box front can be opened and closed without disturbing the drives inside while the unit is running (just be careful not to jiggle or move the box itself or drives inside while running). All box functions work just fine when the front is not closed, if you want increased cooling. (Just don't forget you left the box open when you are working around it or go to move it!)This box will NOT magically transform all the vagaries of PC external connectivity into the reliability of permanently connected internal drives. It is NOT a high-end NAS or internal RAID system powered by an expensive and high-capacity controller. All bets are off if you move the unit and/or accidentally jar or disconnect the cable when the unit is running -- or if your computer's power saving settings turn off the connection to this unit.



I have found the system works consistently as designed as a solid SATA II drive when connected via eSATA or USB (assuming the cable isn't accidentally jolted loose).You can use this box and it will be reliable attached to an always-on computer -- but first you need to expect to spend configuration time and might encounter some frustrations along the way. To get reliable, always-on connectivity with no unexpected disconnects, you are going to need to spend some time checking your computer BIOS and several settings in the operating system. Power saving settings that shut down your hard drives (SATA) or dormant devices (USB) will work just fine with internal and some external devices, but I hope it is obvious that they will cause this box to turn itself off. When the connection gets powered down, the device will see that as your PC turning off and in response it will turn itself off (which is exactly what it is supposed to do, as mentioned above).
Since the device is driverless, there is no software to keep it alive or magically reconnect it when/if you return and want to use it. When that happens, the only recourse is to power down your PC, then restart. It took me several tries to find and disable the various PC and operating system power-saving features; once I did that -- ensuring the PC / operating system did not time out / turn off its USB or eSATA connections -- the Mediasonic box became absolutely solid and reliable, working predictably in harmony with the PC to which it is connected.



Once everything was configured, it became another always-there drive that just.plain.works.As noted, this device does not come with external monitoring/control software. Out of the box, you need to look at the lights on the front to affirm it is configured and operating properly.
There is no software pop-up or alert on your computer desktop if your RAID array is degraded -- you have to actually look at the box. If you forget to look at the box, you might not notice a drive has failed until it's too late to rebuild the RAID array. On the flip side, those lights on the box do correctly indicate hard drive activity inside the box and do indicate if a drive has failed (or, once you replace the failed drive, when a RAID array is rebuilding). The lights are accurate but do not give you much of an indication as to progress of built-in functions; you're not going to get much of a clue as to how much longer that RAID rebuild is going to take.However and FWIW. I have found this device does correctly pass all needed information through for most disk diagnostic applications. HD Sentinel works well and accurately to report the status of every constituent disk drive (even when configured in RAID mode so that Windows thinks its just one big drive). I have also found by trial and error that several software distributions that come with other external RAID systems will also correctly read and report status of these boxes -- thought they still won't let you remotely configure or adjust what the RAID controller is doing. (For example, the software that comes with Sans Digital units will read and report on these Mediasonic boxes when configured as RAID units.) Your mileage may vary.Overall, this box is everything I had hoped and I have found it completely reliable. A bargain at a $150 price tag.