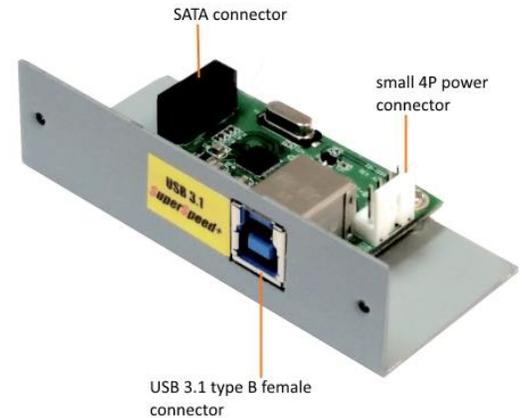## INTRODUCTION

This rack-mount SATA to USB 3.1 Converter is a perfect solution for turning any SATA device into the latest SuperSpeed+ USB 3.1 storage. When connecting to a USB 3.1 port, this converter can deliver a maximum data throughput up to 10 Gbps, doubling the speed of USB 3.0 and 20 times the speed of USB 2.0. Backward compatible to all previous USB standards, any SATA hard drives, SSD (Solid State Drive), and even optical drives can now be easily converted into USB 3.1 storage. Comes mounted on a SCIS-I bracket, this small converter can be easily mounted onto any storage enclosure with standard SCSI-1 (Centronic 50) cut out or standard Desktop computer chassis by using an optional PCI mounting bracket.

There is also choice of model with WRITE-PROTECT function. It is great way to ensure absolute protection on any hard drive or SSD against virus contamination or data tampering. It is a great tool for sharing drives containing important data among different users or for forensic application.

Below is an illustration of the installation of this converter onto an Addoncis storage tower or similar that has a SCSI- I cut out

Converter mounted inside Addonics Storage Tower IV

Converter mounted inside Addonics Storage Tower IV

FEATURES

Standard version, model: ADSAU31R

- Convert any type of SATA device including hard drives, SSD, and optical drives into the latest Superspeed+ USB 3.1 interface
- Superspeed+ USB 3.1 Type B connector supporting up to 10 Gbps maximum throughput
- Come with mounting bracket to install into enclosures with SCSI-1 (Centronic 50) cut out
- Optional PCI mounting bracket (PCISCBKT) for installing onto standard Desktop PC chassis
- Compatible with SATA I, SATA II, and SATA III devices
- Supports USB 3.1 (10 Gbps), USB 3.0 (5 Gbps), USB 2.0 (480 Mbps), USB 1.0 (12 Mbps), and LowSpeed (1.5 Mbps) transaction
- Choice of model with standard 512-byte sector format, 4K-sector* format or with WRITE-PROTECT function
- LED pins for drive activity signal
- OS independent, no driver required

*4K-sector formatting allows older OS such as Windows XP to use hard drive larger than 2 TB using MBR partition. This may cause incompatibility issue with other equipment that does not support 4K-sector formatted drive such as Addonics NAS adapter and NAS solution

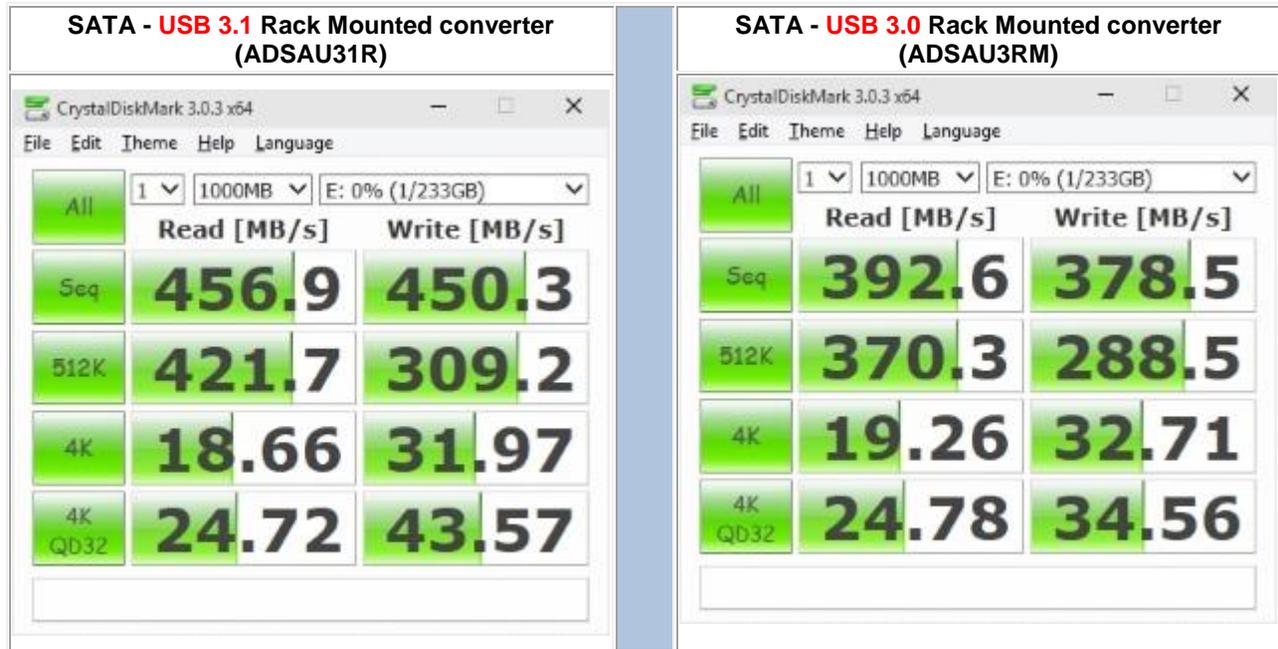## WRITE PROTECT version, model: ADSAU31R-WP

All features are identical as the standard version except the WRITE   function is disabled. This unique feature ensures absolute protection on any hard drive or SSD against virus contamination or data tampering. It is a great tool for sharing drives containing important data among different users or for forensic application. Drives connecting to this bridge appears as a READ only media, similar to CD or DVD disc.

- Same features as the standard version except READ only
- Protect drive against virus contamination or data tempering
- WRITE disabled at hardware level. No software hacking to circumvent the WRITE PROTECT function
- No volatile memory
- Drive appears to OS as READ only device. Options to format, delete and others that alter the content or structure of the drive are all disabled by the OS

Note: connecting this SATA - USB 3.1 converter to USB 3.0 port will limit the maximum performance to USB 3.0 speed

*Due to the high performance of the USB 3.1 interface, some generic USB 3.0 cables that we tested has resulted in performance degradation and unstable connectivity. **To ensure reliable performance, be sure to use a high quality or a certified USB 3.1 cable, similar to the Addonics USB 3.1/3.0 cable (AAU3AB6F)**.*

Performance measurement comparison between USB 3.1 and USB 3.0 SSD

SATA - USB 3.1 Rack Mounted converter (ADSAU31R)	SATA - USB 3.0 Rack Mounted converter (ADSAU3RM)

The above CrystalDiskMark results were measured based on the following set up:

- Desktop system equipped with Addonics USB 3.1 PCIe 2-Lane controller (AD2U31PX2) and Windows 7 64-bit
- Samsung 256G EVO mSATA SSD with rated READ and WRITE speed around 550 MB/sec
- SATA - USB 3.1 Rack Mounted converter (ADSAU3R1)
- SATA -USB 3.0 Rack Mounted converter (ADSAU3RM)

SPECIFICIATIONS

- USB 3.1 Type B upstream connector on board
- Compliant with Universal Serial Bus 3.1 Specification
- Supports SuperSpeed+ (10 Gbps), SuperSpeed (5 Gbps), HighSpeed (480 Mbps), FullSpeed (12 Mbps), and LowSpeed (1.5 Mbps) transaction
- Compliant with Serial ATA Specification Revision 2.6
- Supports Serial ATA transfer rate of 6.0 Gbps
- Supports ATA/ATAPI Packet Command Set
- Supports ATA/ATAPI LBA 48 Addressing mode
- Pin header on board for drive activity LED signal
- Onboard combo LED for power and drive activity
- Dimensions: 84mm(W) x 37mm(D) x 24mm(H)
- Weight: 52g
- Operating temperature range: 0 °C to +70 °C
- Operating humidity range: 5% to 90%
- Storage temperature range: -40 °C to +85 °C
- Storage humidity range: 5% - 95% (non condensing)
- 1 year warranty
- Fully RoHS compliance
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