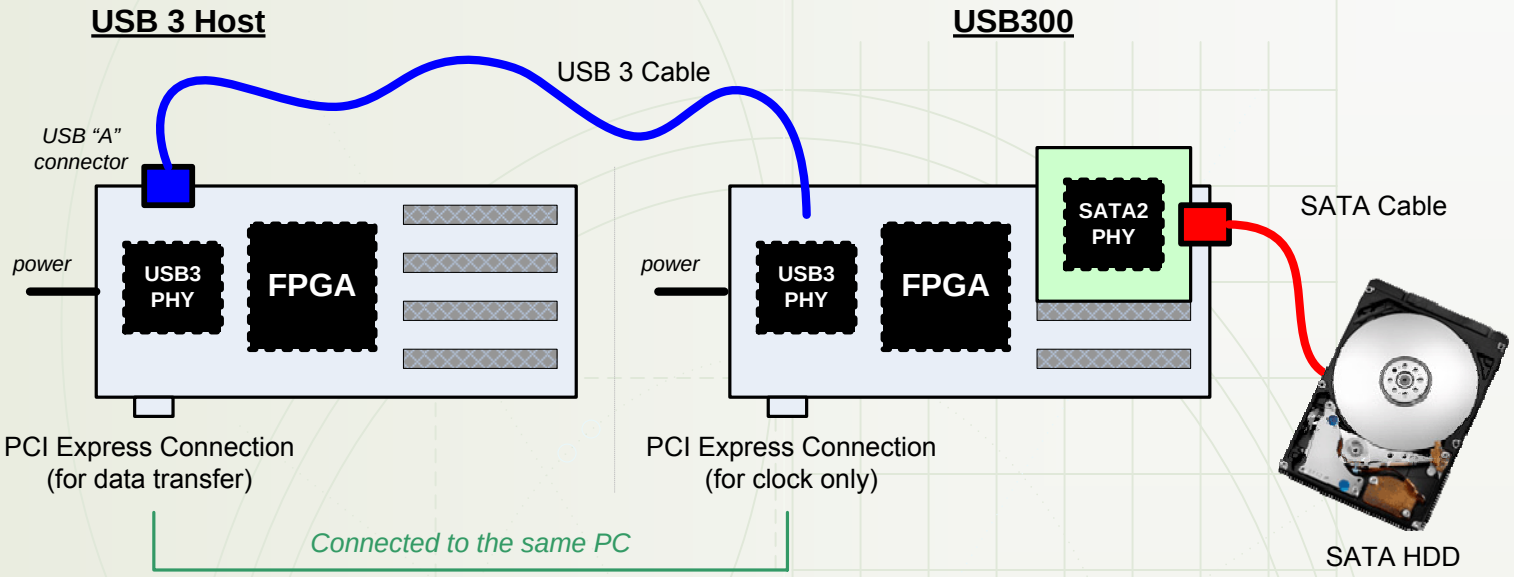
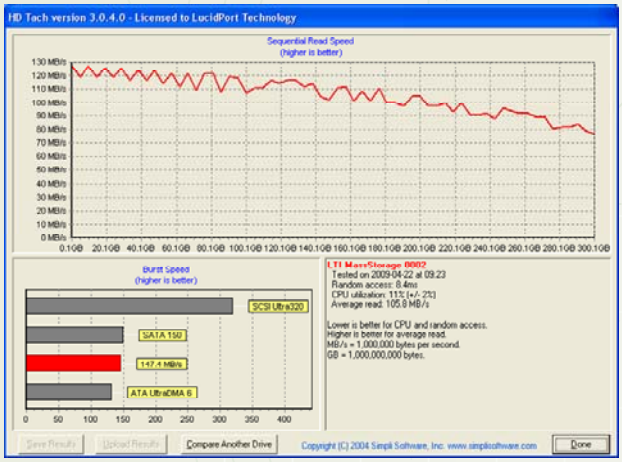
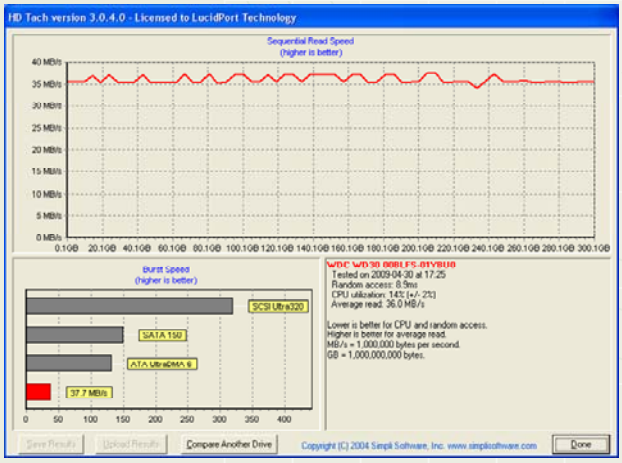
USB 3.0 to SATA Bridge Demonstration





HDD connected through USB 3.0 and the USB 300

- NEC USB 3.0 Host Adapter in FPGA (left)
- LucidPort USB300 Bridge in FPGA (right)
- USB300 connected to 10,000 rpm SATA-II "VelociRaptor" hard disk drive
- Data on the hard disk is read by the USB300 then sent to the USB 3 host adapter card in the PC (up to 130 Mbytes/sec)
- Existing USB 2.0 bridges provide 35 Mbytes/sec
- Increase disk performance with RAID0 striping and/or Solid State Drives (SSD)



HDD connected through USB 2.0

Host	*MSC (BOT) Protocol*	*UAS Protocol (calculated)*	*Relative CPU Utilization*
USB 3.0 (PCIe Card)	**147 Mbytes/sec**	**173 Mbytes/sec**	**11%**
USB 3.0 (Native)	**244 Mbytes/sec**	**336*** (SATA-II limited)	**14%**
USB 2.0 (Native)	**37 Mbytes/sec**	**40 Mbytes/sec**	**14%**
SATA-II (Native)	**130 Mbytes/sec (HDD) 270 Mbytes/sec (SATA)**		**7%**

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