World's first USB to SATA bridge chip

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Supporting the rapid transition to serial ATA storage, the OXU921S from Oxford Semiconductor is the world's first bridge chip to provide transparent data transfer between a USB2.0 port and an external SATA disk drive.

A highly integrated device, the bridge chip dramatically simplifies implementation of external hard disk and optical disk drives for both PC and Mac platforms. In its 128-pin QFP package, the OXU921S features an integral SATA Phy, USB2.0 Phy and ARM7TDMI processor. The USB mass storage device firmware provided with the chip ensures its full compatibility with standard operating system drivers.

The bridge chip's embedded USB2.0 Link and Phy support full and high-speed modes and offer backwards compatibility with USB1.1. The OXU921S has a 6kbyte cache for USB data, facilitating a data transmission speed up to 480Mbit/sec. The integrated SATA core and Phy operate at 1.5Ghz, resulting in a disk interface data rate of 150Mbytes/sec.

The use of a high-performance ARM7 processor, with 8Kbyte close coupled RAM, means users are free to create highly differentiated external SATA drive enclosures through custom firmware development. 12 GPIOs further extend the device's capability. An embedded UART is provided for use in code development and debug and firmware can be programmed through the USB port to help simplify manufacturing and in-field updates.

To optimise the firmware development process, the OXU921S shares a common software base with other Oxford Semiconductor devices and is backed by a full development kit and evaluation board. The OXU921S is available for sub 5.5 USD in 100K+ quantities.