

USB 3.0 to SATA Bridge Controller

The USB302 is a single chip USB 3.0 to SATA-II bridge designed for external storage devices. It supports SuperSpeed, Hi-Speed, and Full-Speed USB connections and is fully backward compatible to all USB 2.0 and USB 1.1 hosts. The USB302's low power architecture make it ideal for both self powered and USB powered designs.

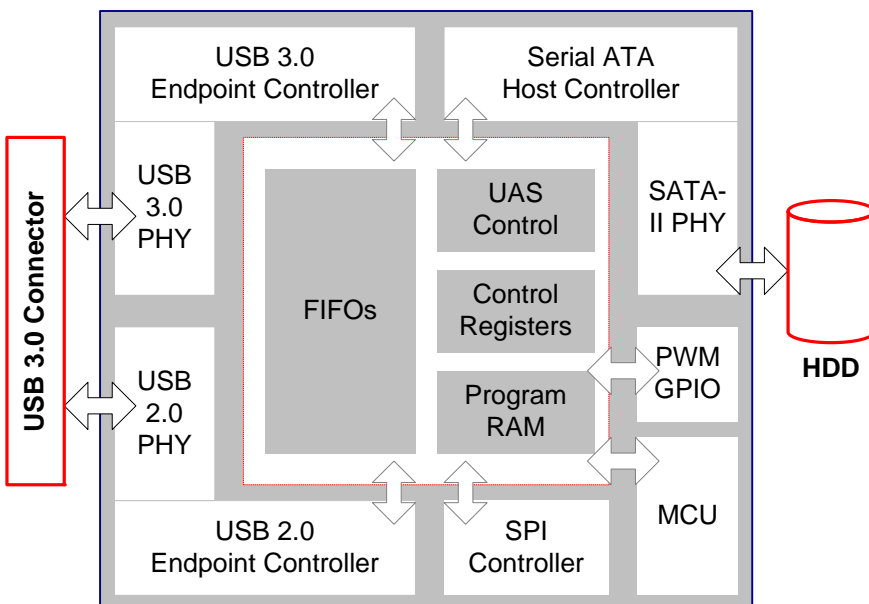
The USB302 attaches to any Serial ATA device. Its integrated SATA-II host controller automatically connects with all SATA based hard disks, solid state drives, optical drives, and RAID arrays. The USB302's support for USB Attached SCSI Protocol (UASP) and Native Command Queuing (NCQ) maximizes drive performance.



System Development

The USB302 reduces total BOM costs by keeping required support components to a minimum. It only needs a single voltage (3.3V) and a single crystal (30 MHz).

USB302 firmware is highly configurable and supports many premium features. These include automatic fan control, automatic standby timer, write protection, one touch backup, a soft power button, Blu-ray drive support, and various activity and free space LED indicators. Windows based mass production tools for disk format and serial number customization are also available.



Features

◆ USB Peripheral Interface

- SuperSpeed, Hi-Speed, and Full Speed USB Connections
- USB Mass Storage Class support
- UASP support for enhanced performance
- Operates self or USB bus powered
- Firmware upgradeable through USB

◆ SATA Host Interface

- Integrated 3 Gbps SATA-II PHY
- Hot Swap Drives
- Blu-ray/ ODD support
- Automatic spin/power down drive
- Native Command Queuing up to 32 commands
- RAID 0/1/JBOD port multiplier support

◆ General Features

- 6 GPIO pins with PWM
- Automatic Fan Control
- One Touch Backup
- Write Protect Switch
- Capacity LED indicator
- Soft Power Button
- Single voltage (3.3 V) and clock (30 MHz) requirement
- 6x6mm 48 pin QFN package (0.4mm pitch)

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