

USB 3.0 to SATA Bridge Controller

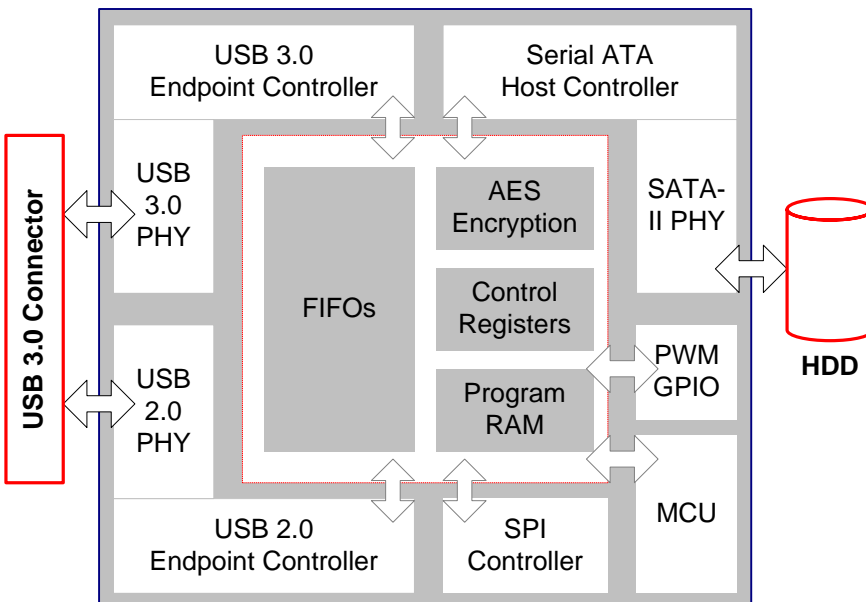
The USB300 is a single chip USB 3.0 to SATA-II bridge designed for external storage devices. It natively supports the standard USB mass storage class protocol. This means that the USB300 connects to most computers/operating systems (Windows, Linux, Macs, etc.) without additional drivers or firmware. 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 USB300 attaches to any Serial ATA device. Its integrated SATA-II host controller automatically connects at either 1.5 or 3.0 Gbps – working with all SATA based hard disks, solid state drives, and RAID arrays. The USB300's support for USB Attached SCSI Protocol (UASP) and Native Command Queuing (NCQ) maximizes disk performance.

System Development

The USB300 reduces total BOM costs by keeping required support components to a minimum. It only needs a single voltage regulator (3.3V to 1.0V) and a single crystal (30 MHz).

USB300 firmware is highly configurable and supports many premium features. These include encryption, automatic fan control, automatic power control, write protection, one touch backup, a safe remove button, read only partitions, various activity and free space LED indicators. Mass production tools for board testing 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
- Automatic spin/power down drive
- Support for drives bigger than 2 TB
- Native Command Queuing
- RAID 0/1 port multiplier support

◆ General Features

- Hardware based AES 128/256 encryption with ECB, CBC, and XTS
- Automatic Fan Control
- One Touch Backup
- Write Protect Switch
- Safe Remove Button
- Single voltage (3.3 V) and clock source (30 MHz) requirement
- 10x10mm 88 pin QFN package (0.4mm pitch)

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