



PL-2555 Hi-Speed USB Docking Controller

OVERVIEW

The PL-2555, an USB 2.0 docking IC, is consisted of four types of most commonly used peripheral interfaces, namely ATAPI (IDE), Parallel, Serial, and PS/2 interfaces. It is intended to provide an off-the-shelf single chip solution for portable equipments, such as notebook, to extend the peripheral capability via the USB2.0 bus with 480Mbps transfer rate. An USB 2.0 hub is embedded to achieve the most cost-effect goal for multi-peripheral solution.

To take advantage of Plug-and-Play, all the peripheral interfaces, except the serial interface, are implemented according to the related USB class specifications: a USB mass storage class for ATAPI devices; a USB printer class for printers; a USB HID device for keyboard and mouse. Since the default drivers are embedded within most of current OS, no extra driver is needed.

It is possible to configure the parallel controller to implement the ECP/EPP modes to work with parallel devices other than printers. For some specific applications, the parallel interface can be configured as an extra ATAPI (IDE) interface.

FEATURES

- Full compliance with the Universal Serial Bus Specification v2.0.
- On chip USB 2.0 PHY
- On chip 3.3V-2.5V 150mA regulator for core circuit in 0.25um process version
- Advanced power management mechanism.
- Consist of one hub, one ATAPI controller for IDE, one parallel controller for printer port or IDE, 3 serial controllers for one UART and 2 PS/2 ports
- Conform to USB mass storage class specification
- Conform to USB Printer Class Specification
- Conform to USB HID Class Specification
- Support ATAPI PIO/DMA/UDMA-66
- Support serial interface communication up to 1Mbps.
- Option external serial EEPROM interface to store vendor-specific information.
- Package type: LQFP128(TBD)

BLOCK DIAGRAM

