PL2586
USB2.0 High Speed 4-Ports Controller

OVERVIEW

The PL2586 is a high performance solution for USB 2.0 High Speed 4-port hub controller which fully complies with USB 2.0 specification and will attach to a USB host as a Full-Speed hub or as a Full-/Hi-Speed hub. The 4-port hub supports Low-Speed, Full-Speed, and Hi-Speed (if operating as a Hi-Speed hub) downstream devices on all of the enabled downstream ports. The PL2586 equips advanced serial interface technology to consume the least power when 4 DS (downstream) ports function simultaneously.

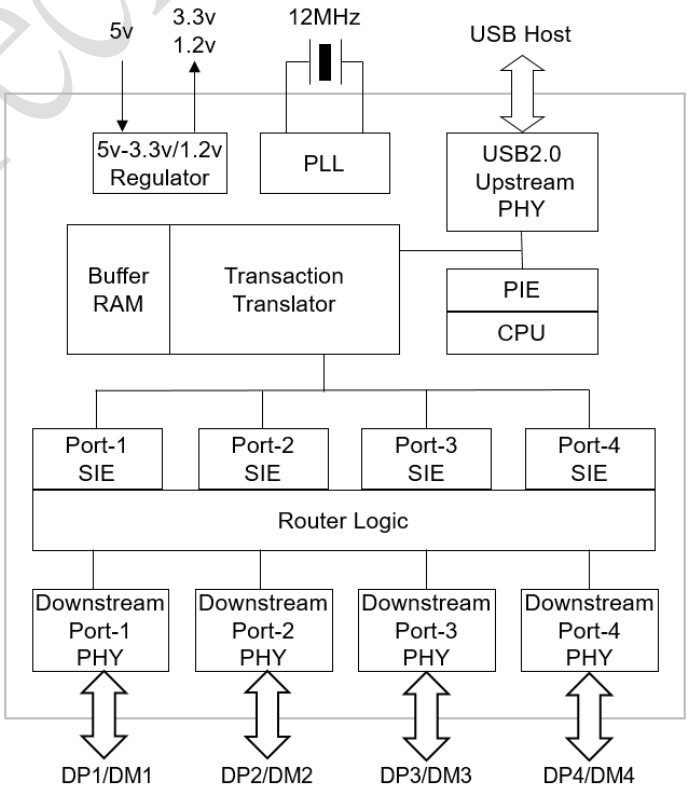
The PL2586 adopts Single Transaction Translator (STT) and Ganged power management to achieve cost effective solution. Users can also activate various Hub configuration options through external EEPROM.

The PL2586 supports SSOP28/QFN24 package targeting the mainstream standalone 4 ports Hub market. QFN24 package(4x4 mm^2) provides smaller footprint that targets space limited PCB layout environments such as embedded system or UMPC/MID applications.

FEATURES

- Compliant with USB Specification v2.0
  - Upstream Port supports high-speed (480MHz) and full-speed (12MHz) traffic
  - Configurable 4/3/2 downstream ports support high-speed, full-speed, and low-speed
  - Backward compatible to USB Specification v1.1
- Compliant with USB Battery Charging Specification Revision 1.2
- Integrated upstream 1.5KΩ pull-up downstream 15KΩ pull-down resisters
- Single Transaction Translator (Single TT)
- Ganged Power Control and Global Over Current detection for downstream ports
- On chip 5V to 3.3V and 3.3V to 1.2V regulator
- Automatic re-enumeration for switching between self-powered and bus-powered modes
- External EEPROM interface for customized information
- Two LED indicator modes for downstream ports
- Package type: SSOP28 / QFN24

BLOCK DIAGRAM



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