USB 2.0 Host Controller LSI for Mouse and Keyboard Use

- ● **USB software embedded**
- ● **Easy processor connection (UART)**
- ● **Easy to use: single power supply, supports various clocks**
- ● **Support for 8- and 16-bit processor control**

■ Overview

S1R72U01 is a dedicated USB 2.0 host controller for connected mouse devices or keyboards. All USB software required for a connected mouse or keyboard is embedded in the chip, which permits UART-based control and eliminates the need for special USB knowledge. Additionally, the chip supports connection and control with affordable 8- and 16-bit processors for fast, easy mouse or keyboard connections in embedded devices.

■ Features

- • Easy to use   No USB knowledge required—serial UART control possible

- • Optimal for small systems   Control possible with 8- or 16-bit processors
  Compact package supports various clocks

- • Mouse and keyboard support Human Interface Device class and USB Host stack built-in
  * No USB software needed

- • Easy connection   Serial UART for easy processor connections

- • Single power supply support Runs on a single 3.0–5.5 V power supply

- • Compact dimensions   7 mm² 48-pin QFN, 9 mm² 48-pin QFP

■ Specifications

1) USB host functions

- • One built-in USB host port

- • Embedded USB software (USB Host stack, Human Interface Device class)

- • USB Full-Speed and Low-Speed modes (12 and 1.5 Mbps)

- • Built-in host termination

- • VBUS supply (requires a 5 V power supply)

2) Other

- • Processor interface   Serial UART

- • Supply voltage   Single 3.0–5.5 V power supply
  Processor interface: 1.8–5 V

- • External clock   12 and 24 MHz quartz oscillators and ceramic resonators

                     * Direct 12 and 24 MHz input also supported

- • Package   QFN package: 7 mm² 48-pin, 0.5 mm pitch

                     QFP package: 9 mm² (including lead) 48-pin, 0.5 mm pitch

- • Operating temperature   -40–85°C

S1R72U01

■ Block Diagram
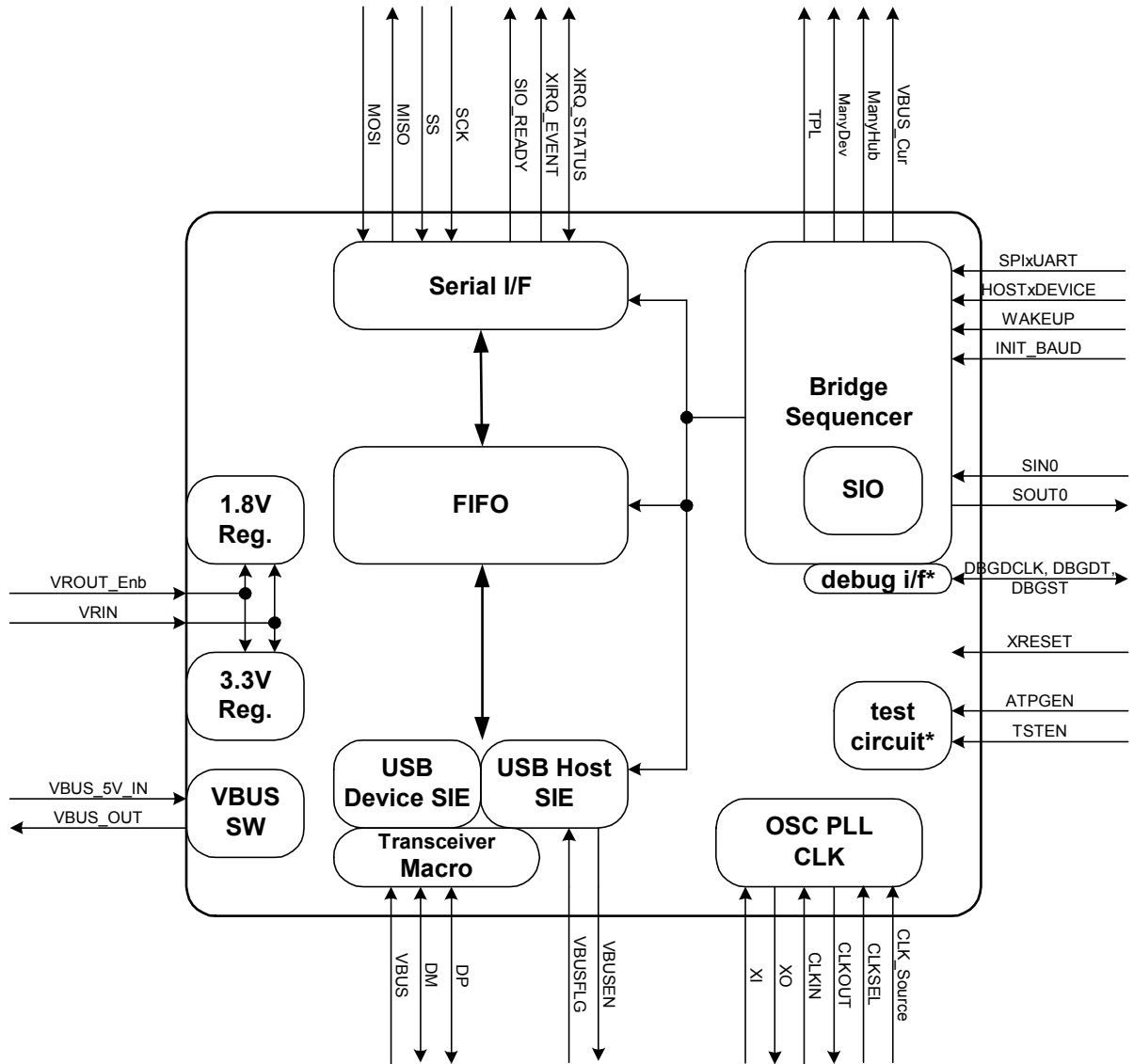
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