

## Interface IP

# USB2.0 PHY for TSMC 28nm HPC+ Multi-Port Transceiver

### Overview

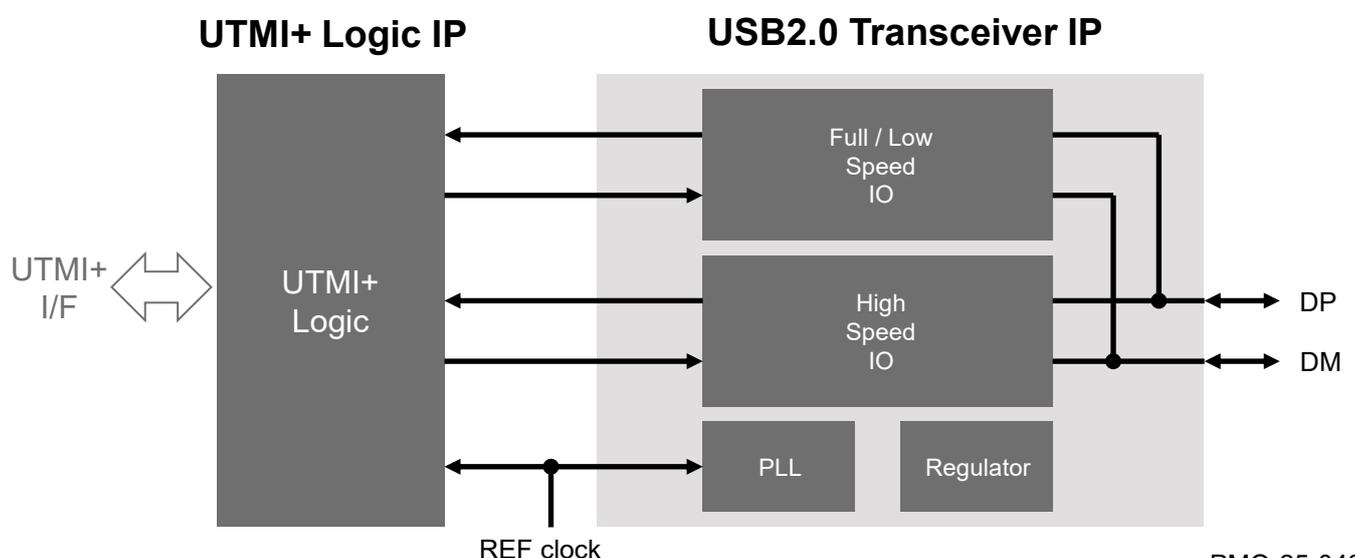
The Renesas USB2.0 Transceiver is useful analog Multi port transceiver hard macro for UTMI+ (USB2.0 Transceiver Macro cell Interface +) Level3 of TSMC 28nm HPC+ process. This macro can be configured to operate as a USB2.0 peripheral or USB2.0 host controller.

### Key Features

- Renesas USB2.0 Transceiver can be used for analog transceiver of following interface .
  - Universal Serial Bus Specification Revision 2.0 \*1
  - Battery Charging Specification Revision 1.2
- Supports Multi-port. ( 1 / 2 / 3 / 4 port type are available )
- Technology is TSMC 28nm HPC+ 1p10M .
- Supply voltage can be applied 0.90V for nominal and 1.0V for overdrive of core voltage, 1.8V and 3.3V for IO voltage.
- USB transfer mode is high-speed (480 Mbps), full-speed (12 Mbps), and low-speed (1.5 Mbps) modes.
- A terminal resistance, pull-up resistor, and pull-down resistor are included.
- Input reference clock is 48MHz, 30MHz, 24MHz and 20MHz.

\*Before purchasing or using any Renesas Electronics products listed herein, please refer to the latest product manual and/or data sheet in advance.

### Block Diagram



*\*This IP is contract design IP. Please contact for detail.*

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