

USB2.0 EHCI Host Controller IP Core

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Overview

The Renesas USB2.0 EHCI Host Controller IP is compliant with the Universal Serial Bus (USB) 2.0 Specification and Enhanced Host Controller Interface(EHCI) Specification. This IP is based on the proven controller uPD720102 adopted many products around the world. The system interface of this IP is AHB(AMBA®3 AHB-Lite) and the PHY interface is UTMI+(Level-3)/ULPI. This IP supports High Speed (480 Mbps), Full Speed (12Mbps) and Low Speed (1.5Mbps) transfer.

Key Features

General

- Compliant with Universal Serial Bus Specification Revision 2.0.
- Compliant with Enhanced Host Controller Interface(EHCI) Specification for USB Rev.1.1.
- Compliant with Open Host Controller Interface(OHCI) Specification for USB Rev.1.0a.
- Compliant with AMBA®3 AHB-Lite Protocol v1.0 Specification.
- Compliant with UTMI+ Specification Rev 1.0 Level-3.

USB function

- Supports up to 2 Downstream Port.
- Supports Control, Bulk, Interrupt and Isochronous transfers.
- Supports Battery Charging Specification Rev 1.2.

AHB I/F

- Conforms to AMBA®3 AHB-Lite.
- Data bus width: 32 bits
- Supports big endian and little endian.
- Provides master interface and slave interface.
- Supports the AHB-Lite specification.

RAM interface

- One 32-bit x 256-word 2-port SRAM device is needed as the buffer memory outside.

UTMI+ interface

- Supports two UTMI+ interface for High / Full / Low speed interface.
- The two ports share the same CLK source.

Related Products

- uPD720102 : USB2.0 EHCI host controller

