



DATA SHEET

O K I A S I C P R O D U C T S

Z0166
USB 2.0 Device Controller APB Wrapper
Virtual Component Soft IP

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Oki Semiconductor

USB 2.0 Device Controller APB Wrapper

Functional Overview

Oki's Z0166 APB Wrapper for USB 2.0 Device Controller is designed to manage the control and data flow between USB 2.0 Device Controller and ARM® APB (Advanced Peripheral Bus) Bridge. It provides all the necessary logic to manage the transmission and reception of the USB data by decoding the APB protocol and USB 2.0 Device Controller (UDC20) application interface protocol.

Features

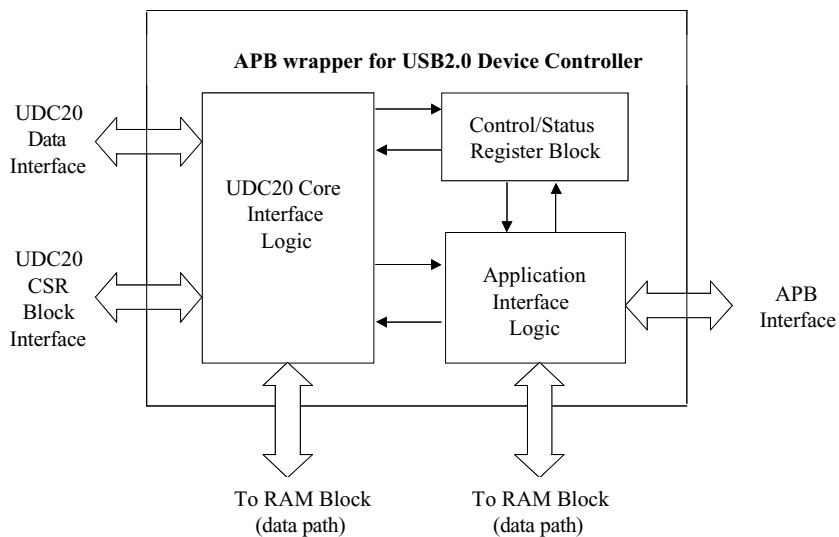
- USB 2.0 Device controller Rev 1.2b compliant
- Supports both Full speed (12 MHz) and High speed (480 MHz)
- Supports Isochronous, bulk and control transfers
- Supports four transmit FIFOs (one 64 Byte, two 512 bytes and one 2 kBytes)
- Supports four receive FIFOs (one 64 Byte, two 512 bytes and one 2 kBytes)
- Supports one control endpoint and six additional endpoints
- Customizable to specific application's requirement.

Target Application

USB applications requiring the AMBA™ (APB) ARM standard interface.



Block Diagram



Performance

Operating Conditions

Parameter	0.25 μm Technology			Units
	Min	Typ	Max	
Power Supply Voltage	2.25	2.5	2.75	V
Junction Temperature	-40	25	125	°C
Clock Frequency	-	-	30	MHz

Estimated Gate Count

Estimated Gate Count		
Parameter	0.25 μm	Units
Gate Count	12.29	KG
Logic Pin Count	460	

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