Features

- **500,000 Gates/250,000 Gates Metal Programmable Logic (through 5 Metal Layers) for AT91CAP9S500A/AT91CAP9S250A Respectively**
- **Ten 512 x 36-bit Dual Port RAMs**
- **Eight 512 x 72-bit Single Port RAMs**
- **High Connectivity for Up to Three AHB Masters and Four AHB Slaves**
- **Up to Seven AIC Interrupt Inputs**
- **Up to Four DMA Hardware Handshake Interfaces**
- **Delay Lines for Double Data Rate Interface**
- **UTMI+ Full Connection**
- **Up to 77 Dedicated I/Os**

1. Description

The Atmel® AT91 Customizable Microcontroller Processor (AT91CAP) concept allows customization of ARM7™ or ARM9™ platforms by adding specific peripherals and/or digital logic into a Metal Programmable Block (MPBlock). The AT91CAP is separated into two different areas:

1. AT91CAP hard part: A fixed area containing the ARM® processor, the ARM system, the internal memories and several peripherals described in the AT91CAP datasheet.
2. MPBlock part: Metal Programmable area dedicated to customization and using only the metal levels of the technology.

The User Guide shows the capabilities for customization of the AT91CAP9S500A/AT91CAP9S250A based on a concrete example.

The customization example includes the following objects:

- An AHB2APB Bridge creating a dedicated APB bus inside the MPBlock
- An AHB Peripheral DMA controller
- An APB Debug Unit (UART) connected to the Peripheral DMA Controller
- An Internal RAM Controller using the dedicated MPBlock RAM blocks

The User Guide first describes the AT91CAP9S500A/AT91CAP9S250A database in terms of directories and logical design structure. It then guides the user through the complete AT91CAP9S500A/AT91CAP9S250A customization flow using the given example.

Customizable Microcontroller Processor

AT91CAP9 MPBlock User Guide

Summary

NOTE: This is a summary document. The complete document is available under NDA. For more information, please contact your local Atmel sales office.

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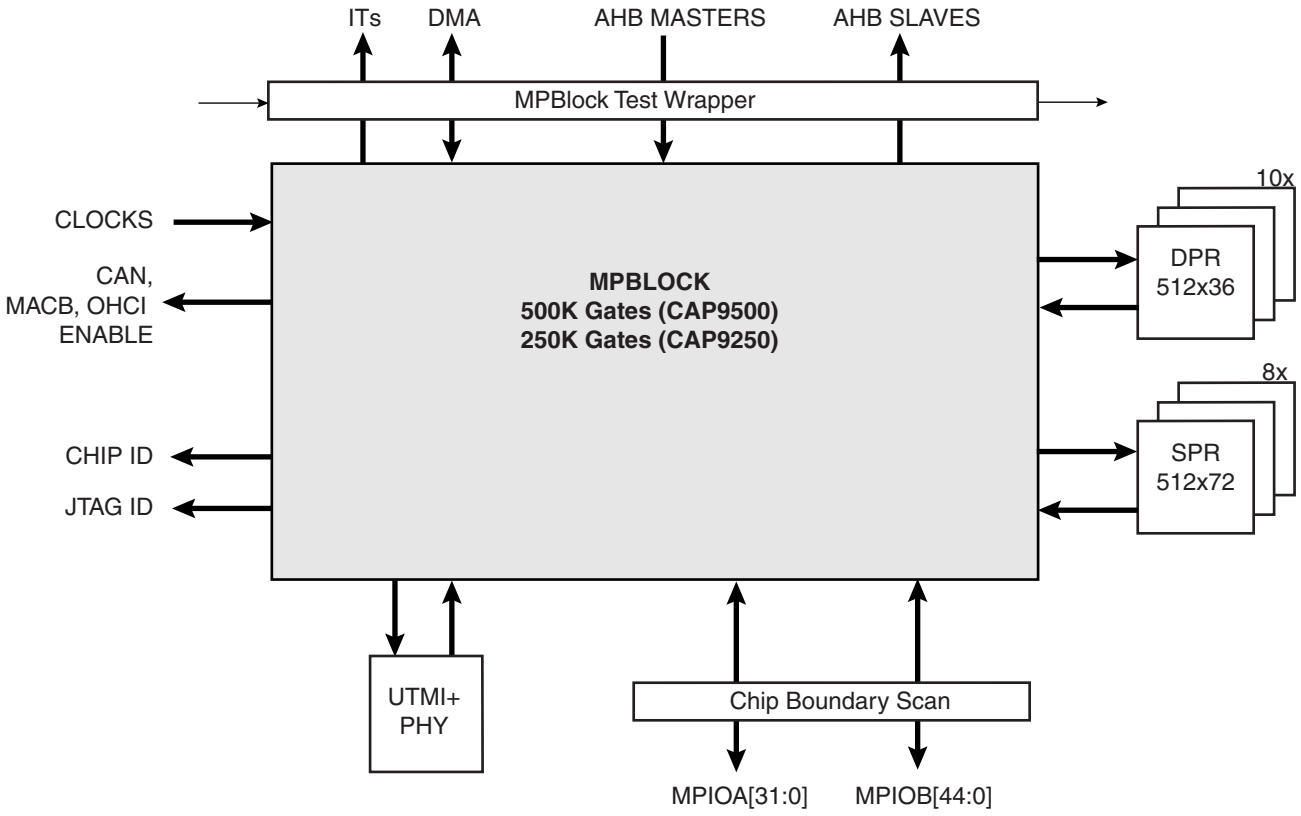
Figure 1-1. MPBlock Connectivity



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