

Lab 16 MPSoC: Multi Processor System on Chip Design

In Lab13, we implemented a uniprocessor system in order to have an overview of how to use the Xilinx EDK tool. Lab13 can be used as base system for the controller of your project (e.g. soccer project group). In this lab, we will develop a dual core system with two microblaze processors. This lab will be particularly useful for the development of the server.

Launch the Xilinx EDK.

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Important Updates and Notifications for EDK 12.1 – Please Read	
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For information about XPS design flows; refer to the EDK concepts, Tools, and Techniques Guide.	
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Select Dual Core System

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Add the interprocessor communication cores (*Mutex & Mailbox*) The Mutex core is used in the system to provide synchronization when accessing shared resources. The core has a configurable number of mutexes and has a write to lock scheme. The Mailbox core is used to pass messages between processor cores in FIFO fashion. The mailbox core offers an interrupt line if a core wants to indicate the presence of data.



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Add Shared and Private Peripherals to each processor (DRAM is shared between both processors)

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Write simple code for Processor 1

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And same code but with different ID for processor two





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