

Designing with AXI using Xilinx Vivado Environment (Part I)

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About Vivado

- Warning !
 - Vivado Supports only 7-series devices
 - ZYNQ-7000
 - ARTIX-7
 - KINTEX-7
 - VIRTEX-7
- You have Sparta/Virtex-6 device
 - You should use Xilinx XPS (EDK)
- Conclusion:
 - *In these videos I have to show both !*

Where to Get Vivado

- Download from Xilinx:
 - <http://www.xilinx.com/support/download.html>
- Where to get the license?
 - Many solutions...
 - Free evaluation license (30 days)
 - University Support
 - Europractice!
 - Web-Pack Edition
 - Board-locked license

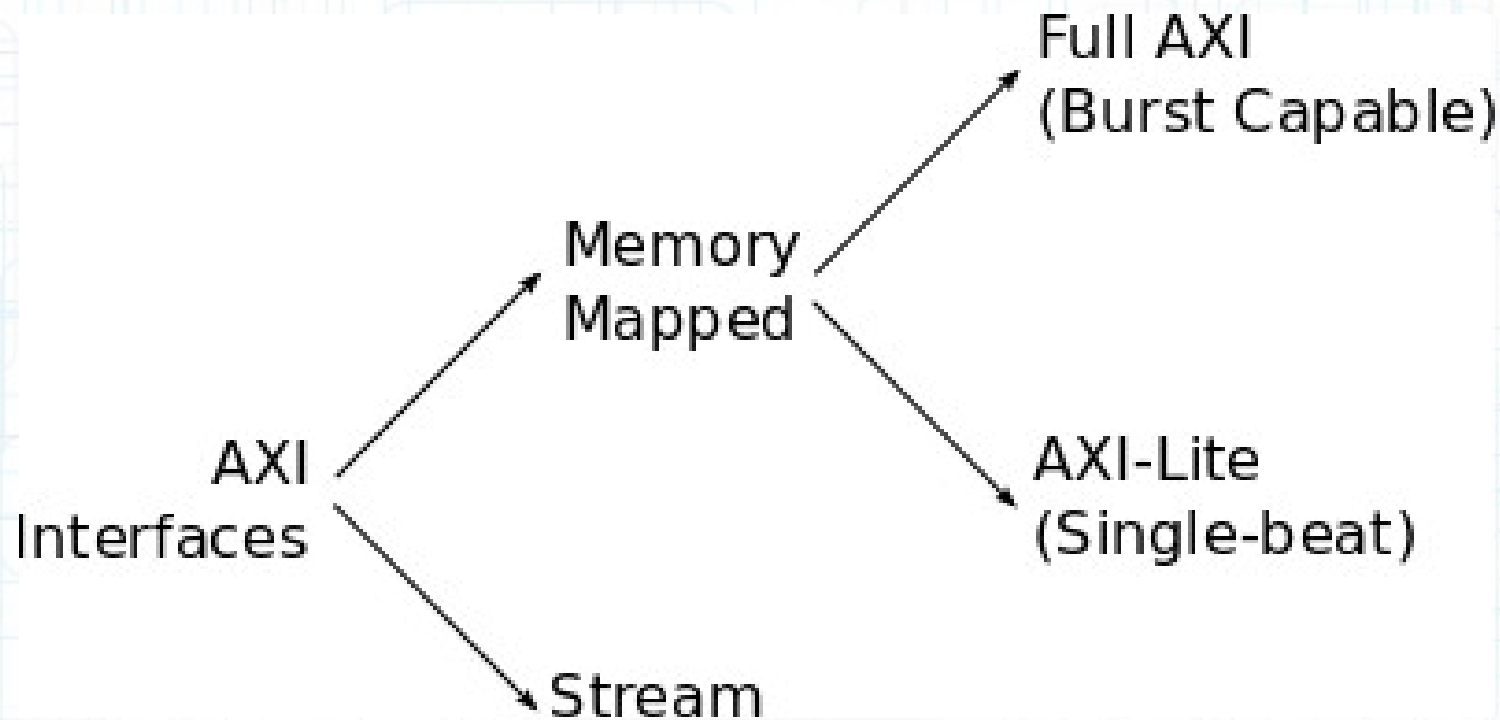
http://www.xilinx.com/products/design_tools/vivado/vivado-webkit.htm

http://www.europractice.stfc.ac.uk/software/software_price.html

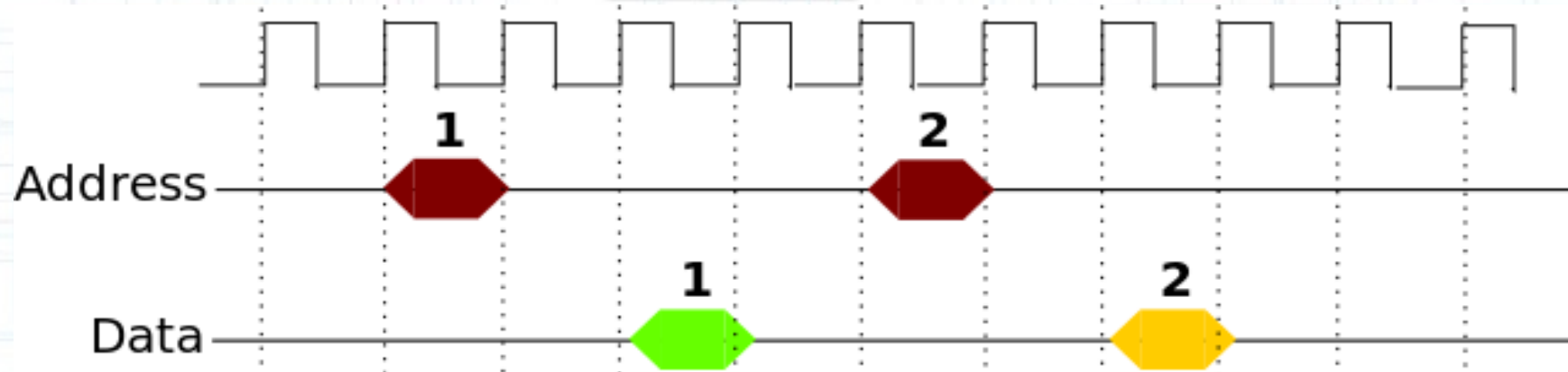
Example System

- Memory Mapped AXI interfaces
- AXI Masters:
 - MicroBlaze CPU
 - Note : Soon Instead of this block we are going to use ZYNQ's Dual Core ARM A9
- AXI Slaves:
 - AXI Interrupt Controller
 - AXI Timer
 - AXI UART
 - AXI DRAM Controller
 - AXI BRAM Controller

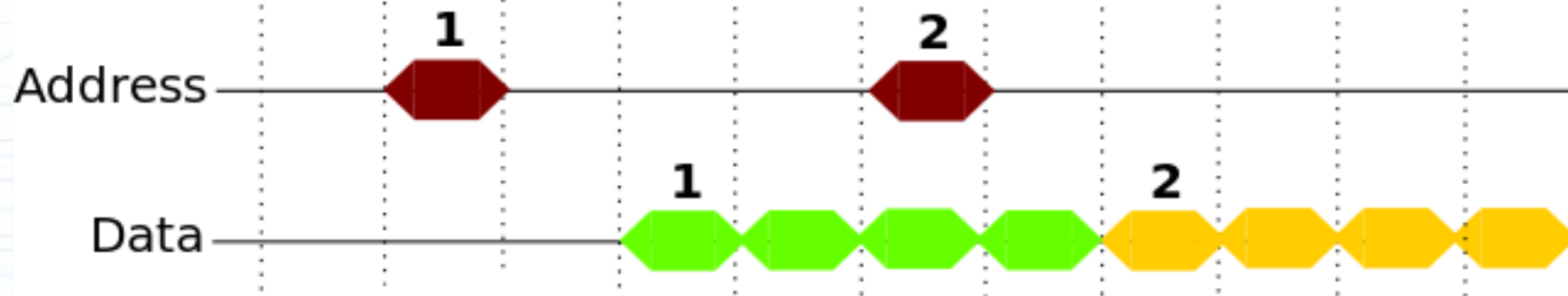
Review : AXI Interfaces



Burst AXI Transactions



BURST:

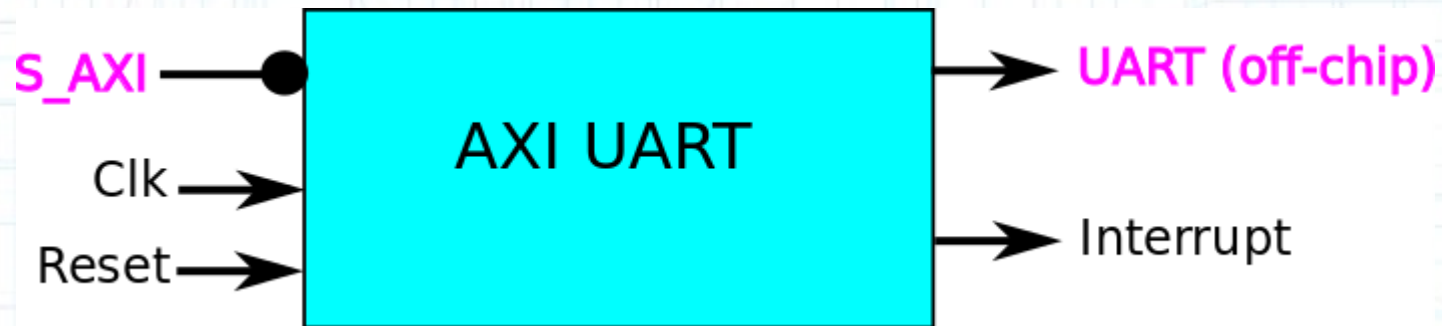
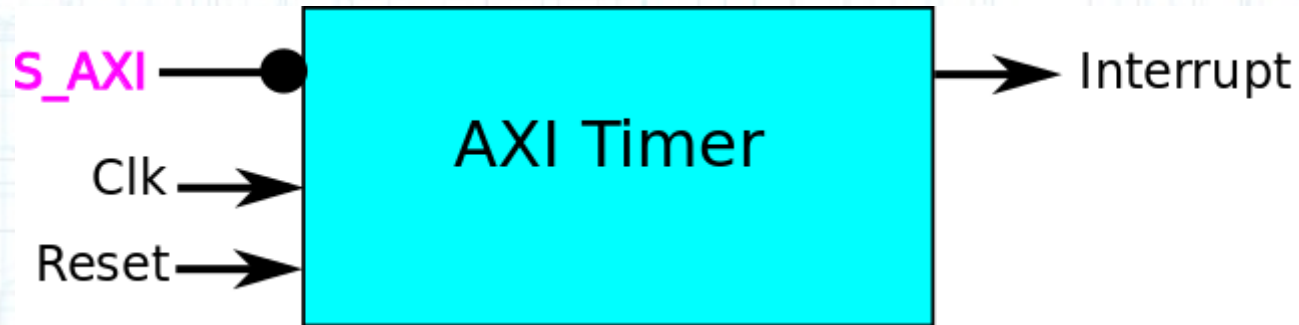


MicroBlaze CPU

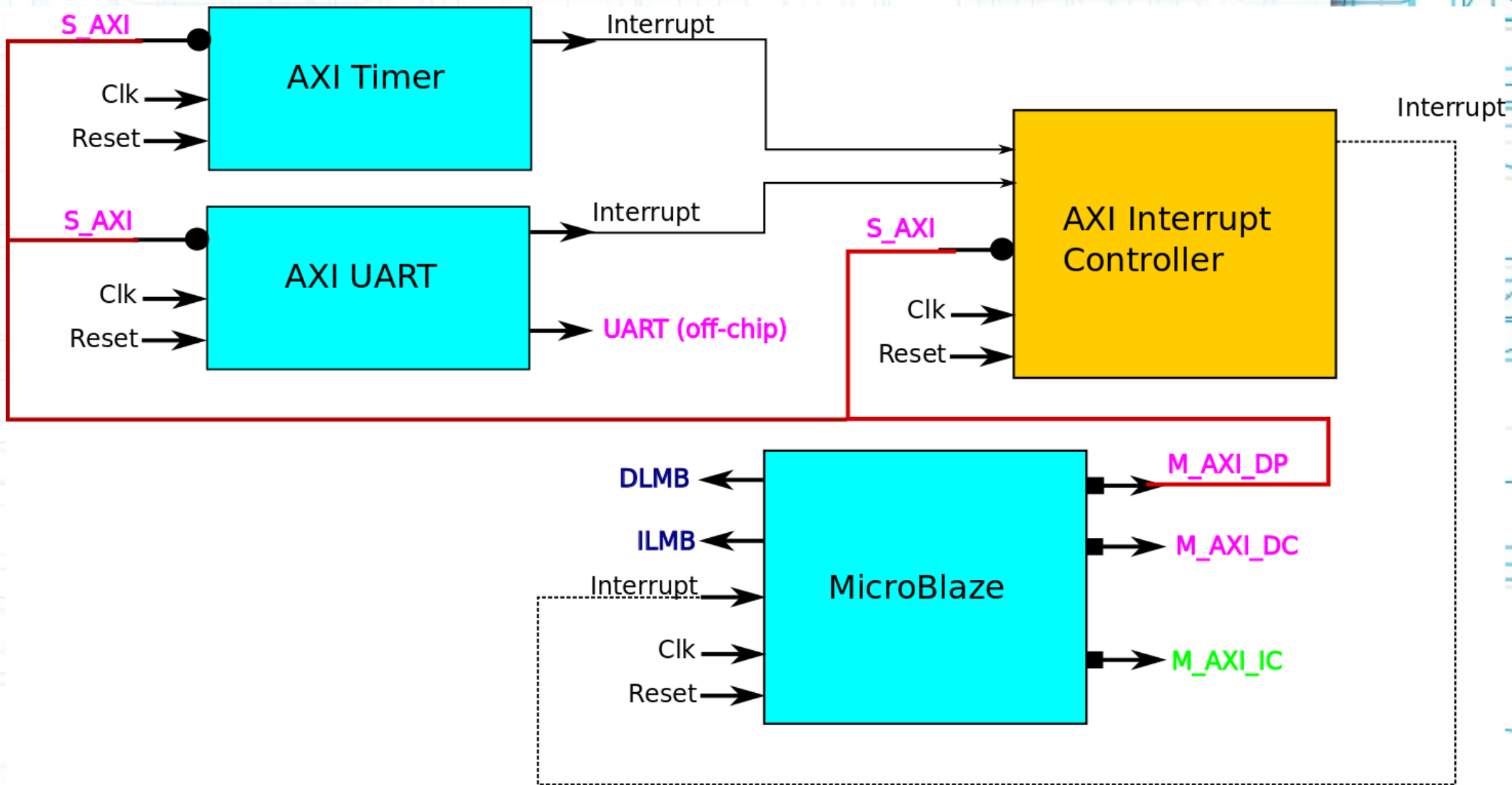
- This needs a full educational series for itself.
- Don't get worried if you don't understand every thing.
- Just focus on AXI interfaces for now!



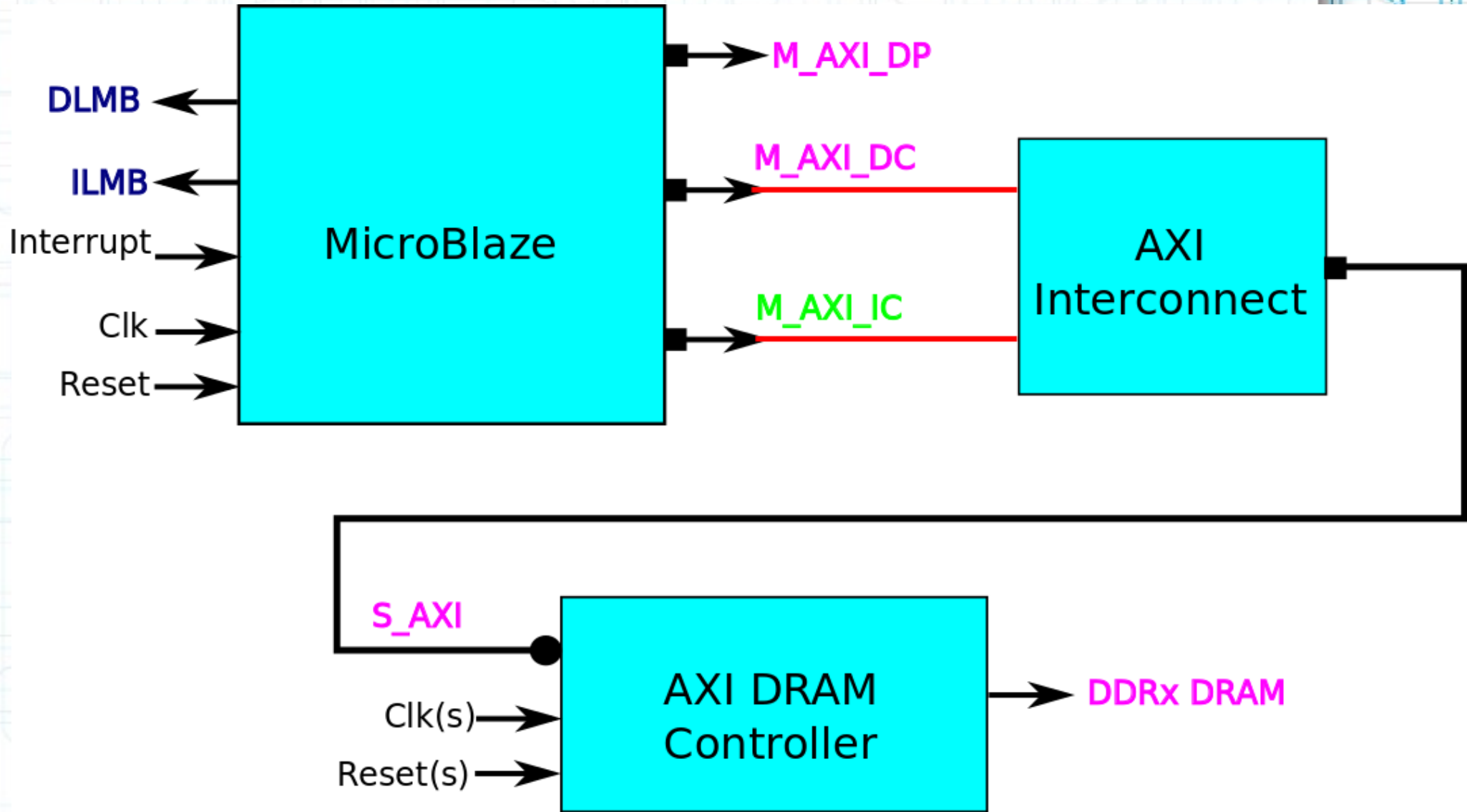
AXI Timer & UART



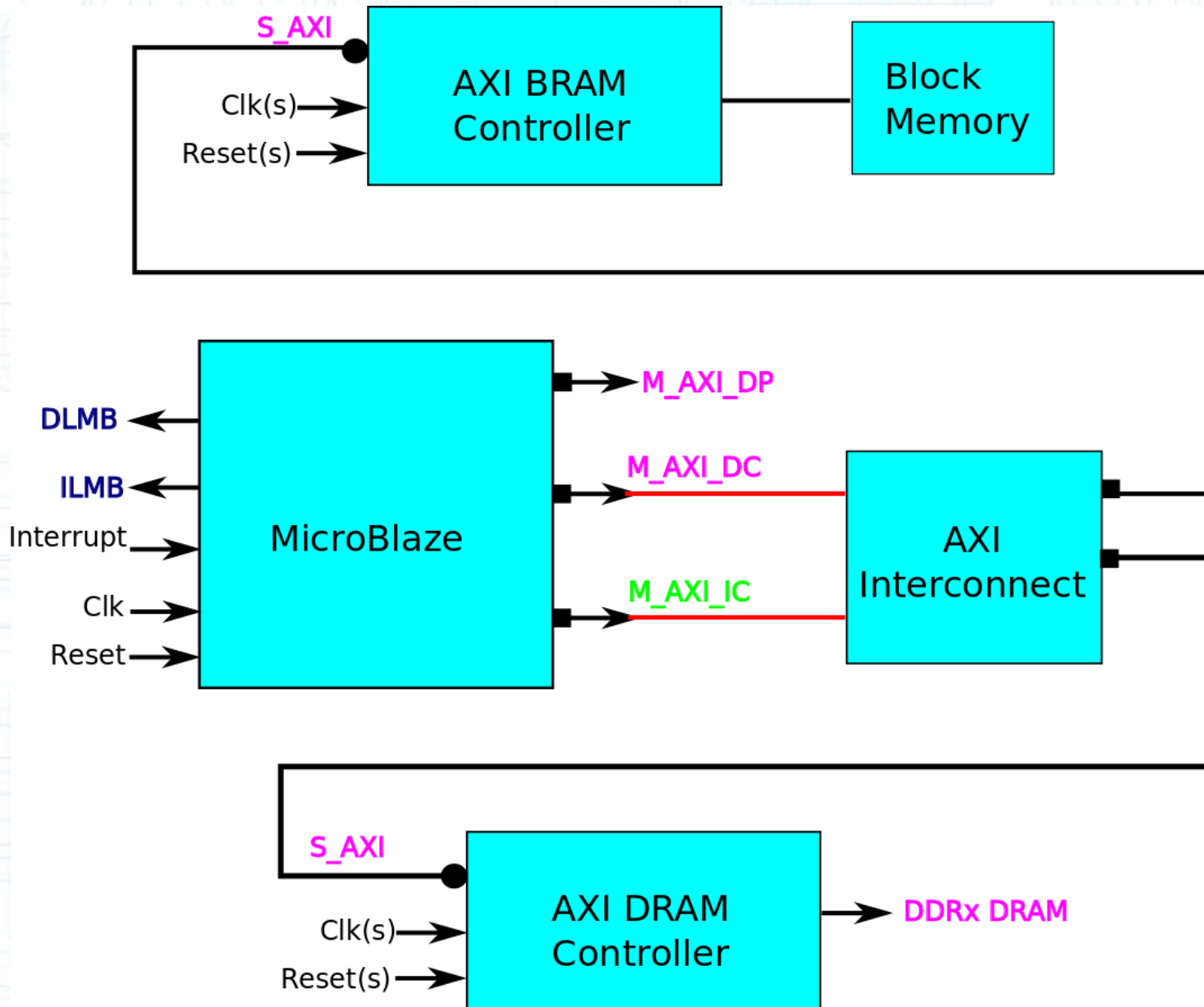
AXI Interrupt Controller



AXI DRAM Controller (MIG)



AXI BRAM Controller



Thanks ...

This is a personal hobby! But I would like to thank

- Prof. Luca Benini, of University of Bologna & ETHZ**
- Prof. Norbert Wehn of TU Kaiserslautern**

Latest Material ...

My personal web sites :

www.green-electrons.com

www.googoolia.com