

# Running Linux On MICROBLAZE

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## **Project Overview**

- The Overarching goal of this project is to run a form of Linux Operating system on a Nexys-A7 FPGA called Petalinux.
- PetaLinux is an embedded Linux Software Development Kit (SDK) targeting FPGA-based system-on-a-chip (SoC) designs or FPGA designs.

## **Components:**

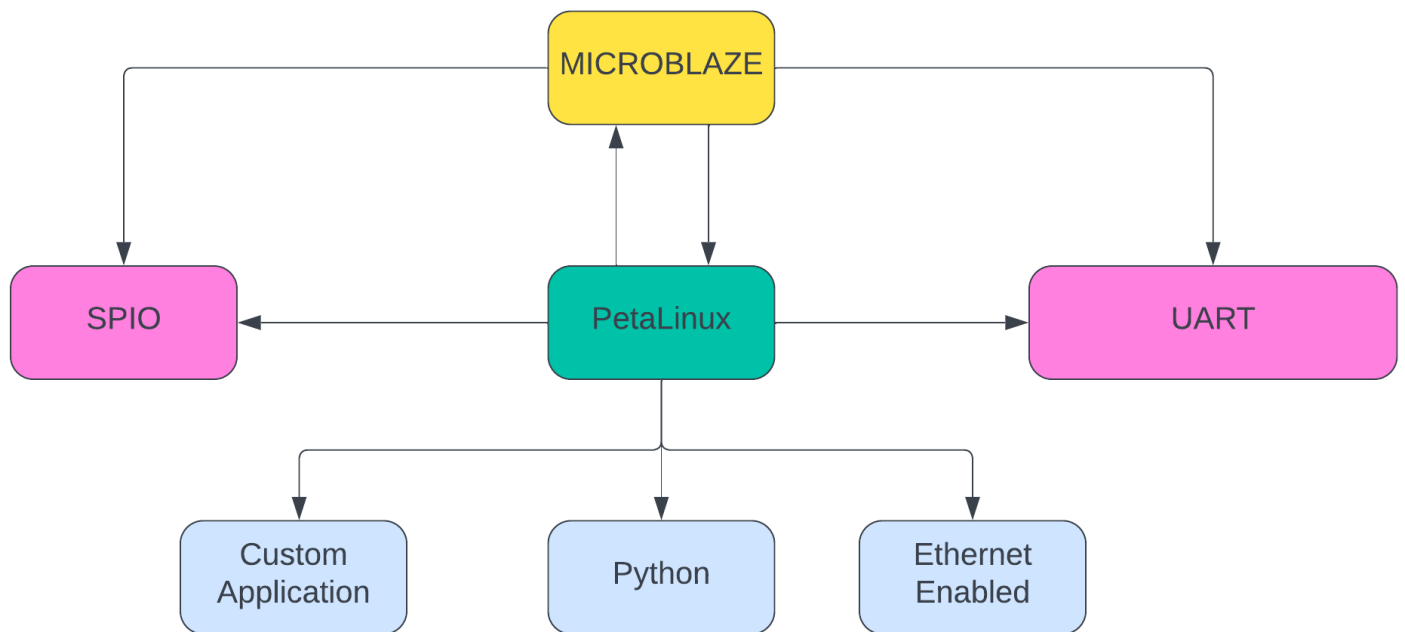
- Petalinux
- Hardware Design(XSA)
- Ethernet

## **Hardware Design**

Before attempting the actual integration of the Petalinux we aim to design the Hardware structure of the system, this would involve using most of the GPIOs available on the NexysA7 and also configuring the MicroBlaze Specifically for Linux.

## **Intended Functionality**

- Run Linux on the FPGA
- Run python
- SSH into the FPGA running Linux
- Custom Application



**Block diagram showing important components.**