# DE2i-150

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PSOCER The Purdue SOC Educational Resource: DE2i-150

## Welcome to the DE2i-150 Support Homepage at Purdue University

### What is this DE2i-150 thing ?

DE2i-150 is a powerful embedded platform comprising of an Intel Atom CPU coupled with an Altera Cyclone IV FPGA via a dual PCIe channel. This provides a flexible and extensible embedded platform where developers can use the FPGA for custom hardware designs and offload compute intensive software operations to hardware. Use the left Nav bar to go to the Basics page to learn more about this platform.

### Why this website ?

Being a relatively new platform in the market there exists little development support for this platform. Moreover given the nature of the design process which involves multiple tools, skills and the knowledge of both hardware and software development it can get overwhelming for users to get started and miss out on an amazing learning opportunity. Due to the lack of a cohesive single repository of information which can guide a user to start developing on this platform we decided to build this as a storehouse of support material around this platform.

This website consists of various tutorials and guides intended to help users create hardware designs on the FPGA and interface the designs to the on board Intel Atom core. With a variety of different skills and tools knowledge required to prototype on this platform it can be exceedingly overwhelming for beginner and even intermediate users to use this platform. We hope that by following the various tutorials on this website users feel comfortable with the design paradigms, tools and the skills used for hardware-software co-design.

We hope that by the end of it you will be able to:

1. Understand the design paradigms and process to build a heterogeneous system on the DE2i-150 platform.

2. Build your own designs which using the FPGA and the Atom processor.

Okay. So What next ? You mean for us or for you!

*For You:*

Navigate through the links on the left sidebar to get a feel for the development environment. Then try out a few sample demos provided. And then go on to build your own applications.

*For Us:*

1. We are currently piloting this framework in Purdue's undergraduate curriculum through the ECE 337 - ASIC Design Lab course. We are working with students to give wings to their ideas and accelerate their design process on this platform. Be sure to check out several interesting applications that we will make available here.
2. Through this effort we hope to enable more universities to encourage their students/researchers to use this platform for their needs. We are here to help!

3. We hope to move to a completely open source model where the users can contribute more freely to this ecosystem. We plan to get there soon! However if you do want to collaborate, contribute or just want to leave us some feedback you can reach us at de2i150.purdue@gmail.com

Sem rótulos