Starting Your First HPS Design

Users can refer to the document My_First_HPS.pdf from the manual folder in the DE0-Nano-SoC System CD.

This document describes the complete C/C++ design flow, including:
1. Create and build a C/C++ project.
2. Copy files to Linux running on DE0-Nano-SoC.
3. Launch executable files on Linux running on DE0-Nano-SoC.

Getting Help

For further discussion, support, and resources, please go to:
http://soc.terasic.com

What’s different between the DE0-Nano-SoC kit and the Atlas-SoC kit?

The hardware is the same for the DE0-Nano-SoC kit and the Atlas-SoC kit. The only difference is the getting-started process for the two kits. Users can freely use the DE0-Nano-SoC kit resources on the Atlas-SoC kit and vice versa.

For more details on the Atlas-SoC kit, please visit:
http://www.rocketboards.org/atlas-soc

What’s in the Box?

1. DE0-Nano-SoC Board
2. DE0-Nano-SoC Quick Start Guide
3. Type A to Mini-B USB Cable x1
4. Type A to Micro-B USB Cable x1
5. Power DC Adapter (5v)
6. 4GB microSD card (installed)

Users can download the DE0-Nano-SoC System CD from the link below:
http://soc.terasic.com

If you encounter any problems, please contact us via:
Email: support@terasic.com  Tel: +886-3-575-0880
1. Set the MSEL[4:0] = 00100 in Fast AS Mode.
2. Connect the power adapter to the power jack on the DE0-Nano-SoC.
3. All the FPGA user LEDs will be flashing.

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**Performing Power-on Test: FPGA Configuration**

5V Power Adapter

FPGA Configuration Mode Switch

FPGA User LEDs

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**Performing Power-on Test: HPS Boot First (Linux)**

5V Power Adapter

FPGA Configuration Mode Switch

FPGA User LEDs

USB Cable

MicroSD Socket

HPS User LED

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4. The FPGA will be configured in U-Boot and all the FPGA user LEDs will be flashing.
5. After Linux boot is successful, users will see the HPS user LEDs blinking for a while.
6. If UART terminal is launched, users can type "root" in the terminal to login Linux.

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**Contents of DE0-Nano-SoC System CD**

Users can download the DE0-Nano-SoC System CD from the link below:

http://soc.terasic.com

<table>
<thead>
<tr>
<th>Directory Name</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual</td>
<td>Contains the DE0-Nano-SoC documentations</td>
</tr>
<tr>
<td>Demonstrations</td>
<td>Contains design examples for DE0-Nano-SoC</td>
</tr>
<tr>
<td>Datasheet</td>
<td>Contains the datasheets of components on the DE0-Nano-SoC</td>
</tr>
<tr>
<td>Schematic</td>
<td>Contains the schematic of DE0-Nano-SoC</td>
</tr>
<tr>
<td>Tools</td>
<td>Contains the design tools for DE0-Nano-SoC</td>
</tr>
</tbody>
</table>

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**Getting Started with the DE0-Nano-SoC Board**

Users can refer to the document Getting_Started_Guide.pdf found in the DE0-Nano-SoC System CD manual folder. This guide contains a quick overview on the hardware and software setup including step-by-step procedures from installing the necessary software tools to using the DE0-Nano-SoC board.

The main topics that this guide covers are listed below:

1. Software Installation: Quartus II and EDS.
2. Development Board Setup: Power up the DE0-Nano-SoC.
3. Perform FPGA System Test: Download a FPGA SRAM Objective File (.sof).
4. Running Linux on DE0-Nano-SoC Board.

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**Starting Your First FPGA Design**

Users can refer to the document My_First_FPGA.pdf from the manual folder in the DE0-Nano-SoC System CD.

This document describes the complete FPGA design flow, including:

1. Create a new Quartus II project.
2. Add user logic and utilize MegaCore IPs.
3. Download a .sof file to the FPGA to view the result.

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www.terasic.com