

Orbit BoosterPack™ Basic Demo User Guide

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Overview

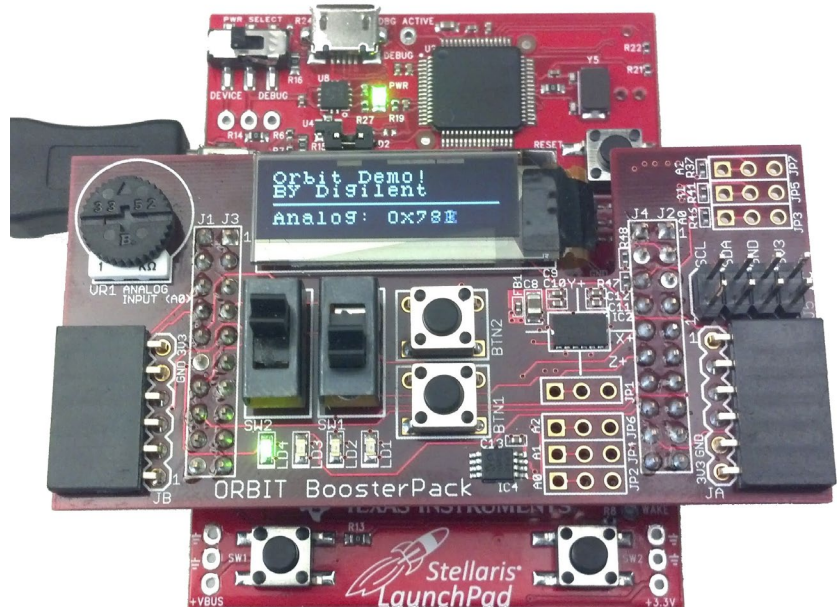
The Orbit BoosterPack Basic Demo is a simple program that shows the functionality of some features on the board.

Tools Needed to Run the Demo:

- LM Flash Programmer™
- Stellaris® ICDI drivers
- Stellaris® LaunchPad
- ORBIT BoosterPack™

Tools Needed to Alter the Demo:

- Code Composer Studio™ IDE v5



Functional Description

The demo project continuously reads the state of the switches, buttons, and potentiometer (labeled “VR1”) on the Orbit board. The switches and buttons control the four on-board user LEDs. The on-board OLED displays both a Digilent banner, and the contents of the conversion register from the analog-to-digital converter (ADC) that is connected to the potentiometer.

Turning on a switch, or pressing down a button will turn on the corresponding LED on the Orbit board.

The value of the ADC is continuously updated on the OLED display. Rotating the black wheel of the potentiometer counter clockwise, or clockwise, will change the value displayed. The value is represented in hexadecimal form.

Programming the Stellaris® LaunchPad

Please download the Stellaris® ICDI drivers and the Stellaris® Flash Programmer available at www.ti.com. For assistance installing the drivers, please see the “Stellaris Driver Installation Guide” available at www.ti.com.

Follow these steps to program the Stellaris® LaunchPad with the Orbit BoosterPack demo project.

- Set the “PWR SELECT” switch on the Stellaris® LaunchPad to “DEBUG”
- Connect the Stellaris® LaunchPad to the host computer with a USB Type A to Micro B cable. Connect the Micro B plug to the Micro-B receptacle labeled “DEBUG” on the Stellaris® LaunchPad
- Open LM Flash Programmer
- In the “Configuration” Tab, select “LM4F120 LaunchPad” from the Quick Set drop down box
- In the “Program” Tab, select the demo project binary file by clicking the “Browse” button and navigating to the “Binary” folder in the demo project download directory. Select the file named “OrbitDemo.bin”.
- Click the “Program” button.

Running the Demo

In order to run the demo, switch the Micro B plug to the Micro B receptacle labeled “DEVICE” on the Stellaris® LaunchPad, and turn the “PWR SELECT” switch to “DEVICE”.

Note: For more information on the Orbit BoosterPack, see the Orbit BoosterPack Reference Manual at: www.digilentinc.com. For a detailed description of the Stellaris® LaunchPad, or for more information on the Stellaris® Peripheral Library, please refer to the user manual available at www.ti.com. The demo project uses a ported version of the Diligent PmodOLED™ software library. For more information on the PmodOLED software library, see the User Guide available with the library download at: www.digilentinc.com.