Zynq UltraScale+ MPSoC ZCU106 Evaluation Kit

Quick Start Guide

The ZCU106 Evaluation Kit contains all the hardware, tools, and IP required to evaluate and develop your Zynq® UltraScale+™ MPSoC design.

This quick start guide provides instructions to set up and configure the board, run the built-in self-test (BIST), install the Xilinx tools, and redeem the license voucher. The guide also provides a link to additional design resources including reference design schematics and user guides.

ZCU106 Evaluation Kit

Power Supply and Power Cables

ZCU106 Base Board

Ethernet Cable

For more information, visit www.xilinx.com/zcu106.

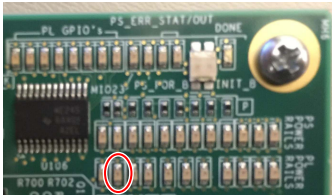# Built-In Self-Test (BIST) Instructions

ZCU106 Evaluation Kit

Power Good and DONE LEDs

STEP 1: Set Configuration Switches

Set mode switch SW6 to QSPI32.

Boot Mode	Mode Pins [0:3]			
QSPI32	**1**	**2**	**3**	**4**
	0	1	0	0

Note: For this DIP switch, in relation to the arrow, moving the switch toward the label ON is a 0. DIP switch labels 1 through 4 are equivalent to Mode pins 0 through 3. Set DIP switches labeled 1 to 4 to ON, OFF, ON, ON.

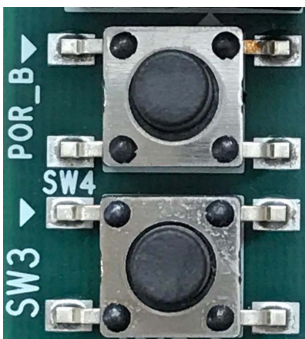
STEP 2: Connect Power

Plug the power supply into a power outlet with one of the included power cords.

Connect the 6-pin power supply plug to J52.

Turn on the board power with the SW1 slide switch.

If the three rows of Power Good LEDs glow green, the power system is good.

If the DONE LED circled here glows green, the Zynq UltraScale+ device has configured successfully.

STEP 3: Initialize Configuration

The built-in self-test (BIST) starts shortly after power on.

Note: Pressing the POR_B (SW4) switch causes the DONE LED to go out, the MPSoC to configure again, and the BIST to restart.

The PL GPIO LEDs flash on and off several times at the start of the BIST.

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STEP 4: Run the Built-In Self-Test

The BIST consists of a set of pass/fail tests that run sequentially. As each test passes, its corresponding LED glows green. If a test fails, its corresponding PL GPIO LED is off. The flashing LEDs are at the top right edge of the board. For SW13, up is ON or 1.

Note: To pass the PL DIP test, all the switches in SW13 must be up before any of them are moved down. The LEDs flash faster after you begin the DIP or pushbutton (PB) test.

- The Clock, BRAM, PL-DDR4, PS-DDR4, Flash, and I2C tests run without user input.

- The DIP switch test (SW13) waits for you to move all the DIP switches toward the label ON, and then back.

- The PB test waits for you to push all the pushbuttons. The N, W, S, and E pushbuttons can be pushed in any order, but push the center button (SW15) last.

- The LED for the test that is waiting for your input slowly flashes on and off.

Self-Test Assignments for PL LEDs

MSB→LSB							
7	6	5	4	3	2	1	0
Clock	BRAM	PL-DDR4	PS-DDR4	Flash	I2C	DIP	PB

Photo can vary from product.

Send Feedback
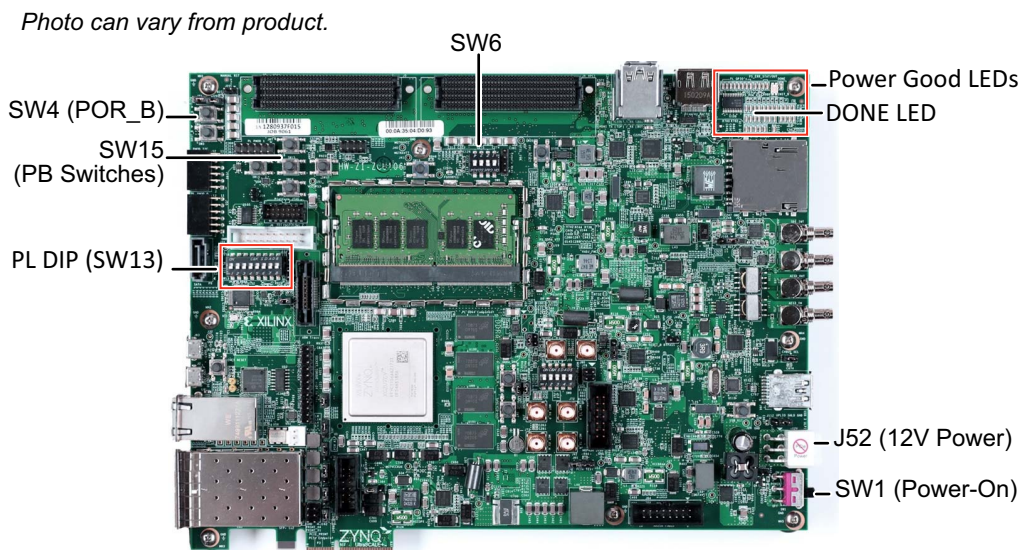
**Install Xilinx Tools and Redeem the License Voucher**

A Vivado® Design Suite: Design Edition voucher code is included with the ZCU106 Evaluation Kit. This Vivado license is node-locked and device-locked to the XCZU7EV device.

STEP 5: **Redeem the Vivado Tools License Voucher**

To redeem the voucher code, go to www.xilinx.com/getlicense and enter the voucher code shown on the *Quick Start Guide* in your kit. After it is redeemed, the licenses appear in your entitlement account, and you can generate a license file, which will be emailed to you. For additional assistance redeeming your voucher, go to www.xilinx.com/kits/voucher.

Note: This code can only be used once and must be redeemed within one year of purchase.

Important   Important
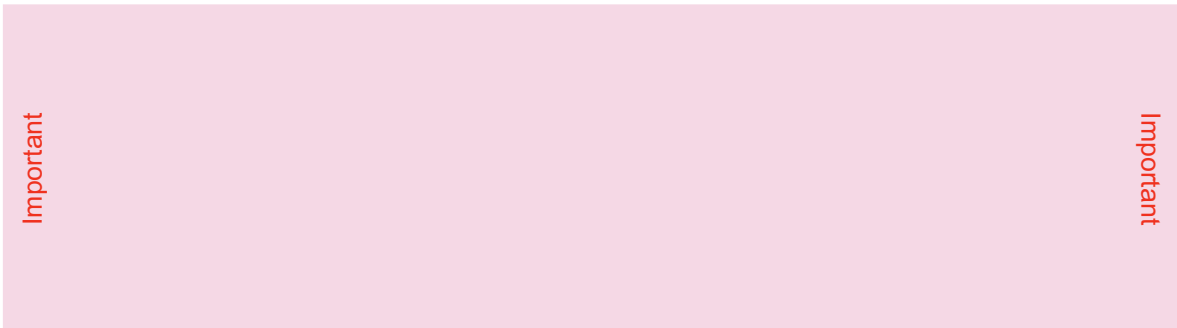
STEP 6: **Install the Vivado Design Suite**

   a. To install the Vivado Design Suite, go to www.xilinx.com/download. Select and download the latest version of Vivado tools for your operating system.
   b. The Vivado installation flow opens the Vivado License Manager. Under the **Get License** heading, select **Load License.** Click **Copy License.** In the **Select License File** dialog, navigate to where you saved the license file that was emailed to you in Step 5. Select the `.lic` file. Click **Open**.
   c. If you need assistance, review the Vivado installation guide at www.xilinx.com/kits/vivadoinstall.

Next Steps

Learn More
To learn more, please go to the product page (www.xilinx.com/zcu106) which provides an extensive collection of resources, including a detailed reference design guide, schematics, a hardware user guide, and other reference designs to accelerate you through developing your product. Also see the *H.264/H.265 Video Codec Unit LogiCORE IP Product Guide* (PG252).

Support
For support options related to this product, see the Xilinx Support website at www.xilinx.com/support.

Warranty
For the product warranty, go to www.xilinx.com/kits/warranty.

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