

Zynq UltraScale+ MPSoC ZCU104 Evaluation Kit

Quick Start Guide

This ZCU104 Evaluation Kit contains all the hardware, tools, and IP required to evaluate and develop your Zynq® UltraScale+™ MPSoC design. The ZCU104 reVISION package provides out-of-box SDSoc™ development environment software flow with OpenCV libraries, machine learning framework, and live sensor support.

Use this quick start guide 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 designs, schematics and user guides.

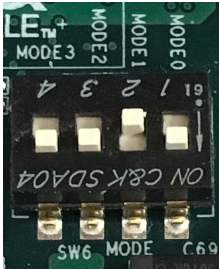
ZCU104 Evaluation Kit



For more information, visit www.xilinx.com/zcu104.

Built-In Self-Test (BIST) Instructions

ZCU104 Evaluation Kit

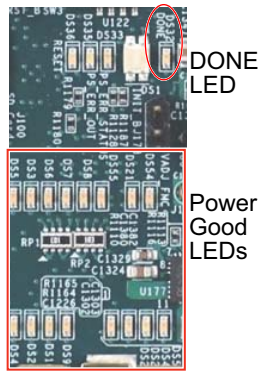


STEP 1: Set Configuration Switches

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.



DONE LED

Power Good LEDs

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 two rows of Power Good LEDs glow green, the power system is good. VADJ (DS8) will not be on.

If the DONE LED (DS32) circled here glows green, the Zynq UltraScale+ device has configured successfully.

STEP 3: Initiate Configuration

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

Note: Pressing the POR_B (SW4) or the SRST_B (SW3) button causes the DONE LED to go out, the device to configure again, and the BIST to restart.

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



STEP 4: Run the Built-In Self-Test

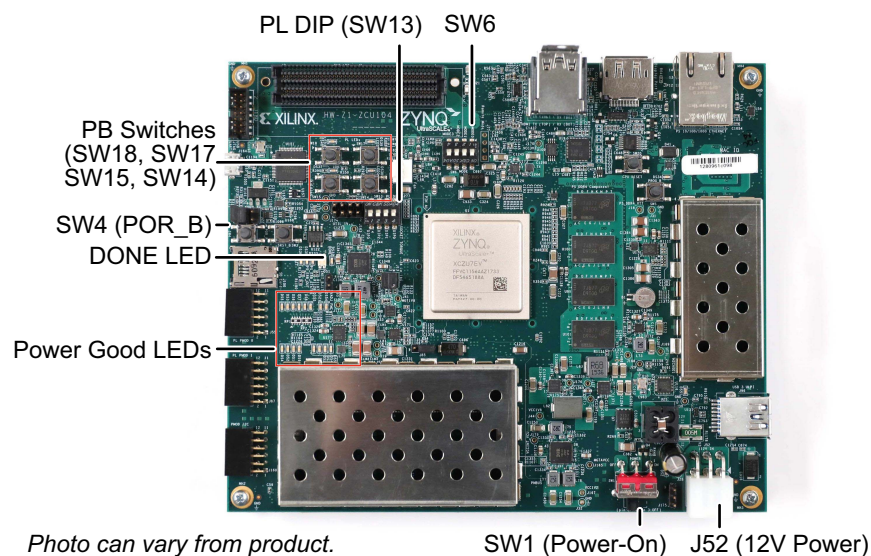
The BIST consists of a set of pass/fail tests that run sequentially. As each test passes, its corresponding LED glows green. If a test fails, its corresponding PL GPIO LED is off. The test status LEDs are next to each pushbutton (PB). For SW13, up is ON or 1.

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, EEPROM, 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 (SW14, SW15, SW17, and SW18). The pushbuttons can be pushed in any order. The LEDs are by the pushbuttons.
- The LED for the test that is waiting for your input blinks.

Self-Test Assignments for PL LEDs

MSB → LSB			
LED 3 - Top Left	LED 2 - Top right	LED 1 - Bottom left	LED 0 - Bottom right
Clocking and Memory	EEPROM and IIC	DIP Switch	Pushbuttons



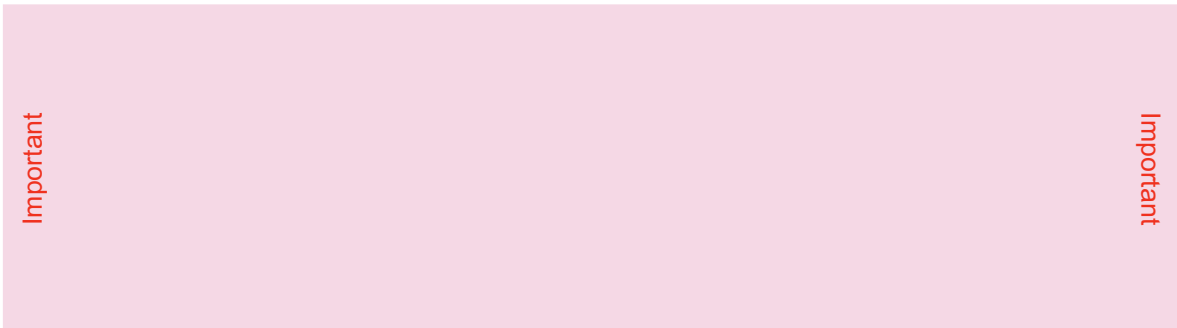
Install Xilinx Tools and Redeem the License Voucher

A SDSoC development environment voucher code is included with the ZCU104 Evaluation Kit. This license is node-locked and device-locked to the XCZU7EV device.

STEP 5: Redeem the SDSoC Development Environment 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.



STEP 6: Getting Started

To get started, see this ZCU104 Getting Started github site <https://github.com/Xilinx/ZCU104-reVISION-Getting-Started>.

Next Steps

Learn More

For additional information on using responsive and reconfigurable vision systems (reVISION), see www.xilinx.com/products/design-tools/embedded-vision-zone.html. 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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