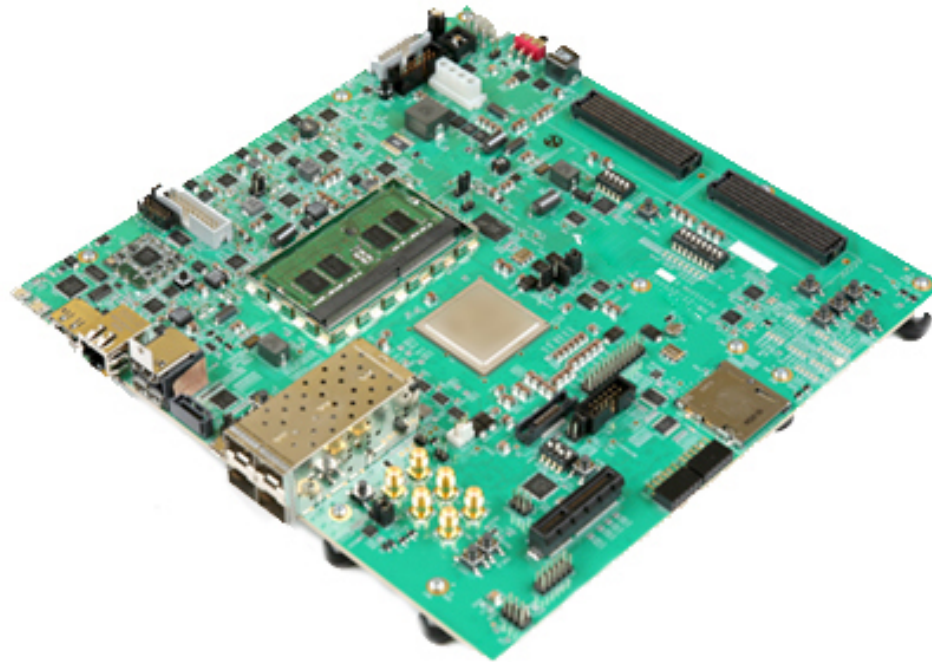





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# Zynq UltraScale+ MPSoC ZCU102 Evaluation Kit

by: AMD



The ZCU102 Evaluation Kit enables designers to jumpstart designs for Automotive, Industrial, Video and Communications applications.

Part Number: EK-U1-ZCU102-G

Lead Time: 6 weeks

Device Support: Zynq UltraScale+ MPSoC

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## OVERVIEW



## Product Description

The ZCU102 Evaluation Kit enables designers to jumpstart designs for automotive, industrial, video, and communications applications. This kit features a Zynq™ UltraScale+™ MPSoC with a quad-core Arm® Cortex®-A53, dual-core Cortex-R5F real-time processors, and a Mali™-400 MP2 graphics processing unit based on 16nm FinFET+ programmable logic fabric by AMD. The ZCU102 supports all major peripherals and interfaces, enabling development for a wide range of applications.

## Key Features & Benefits

- Optimized for quick application prototyping with Zynq UltraScale+ MPSoC
- DDR4 SODIMM – 4GB 64-bit w/ ECC attached to processing system (PS)
- DDR4 Component – 512MB 16-bit attached to programmable logic (PL)
- PCIe® Root Port Gen2 x4, USB3, Display Port, and SATA
- 4x SFP+ interfaces for Ethernet
- 2x FPGA Mezzanine Card (FMC) interfaces for I/O expansion, including 16 16.3Gb/s GTH transceivers and 64 user-defined differential I/O signals

## Featured AMD Devices



Featuring the **Zynq UltraScale+ XCZU9EG-2FFVB1156 MPSoC**

|                               |       |
|-------------------------------|-------|
| <b>System Logic Cells (K)</b> | 600   |
| <b>Memory (Mb)</b>            | 32.1  |
| <b>DSP Slices</b>             | 2,520 |
| <b>Maximum I/O Pins</b>       | 328   |



## PRODUCT INFORMATION

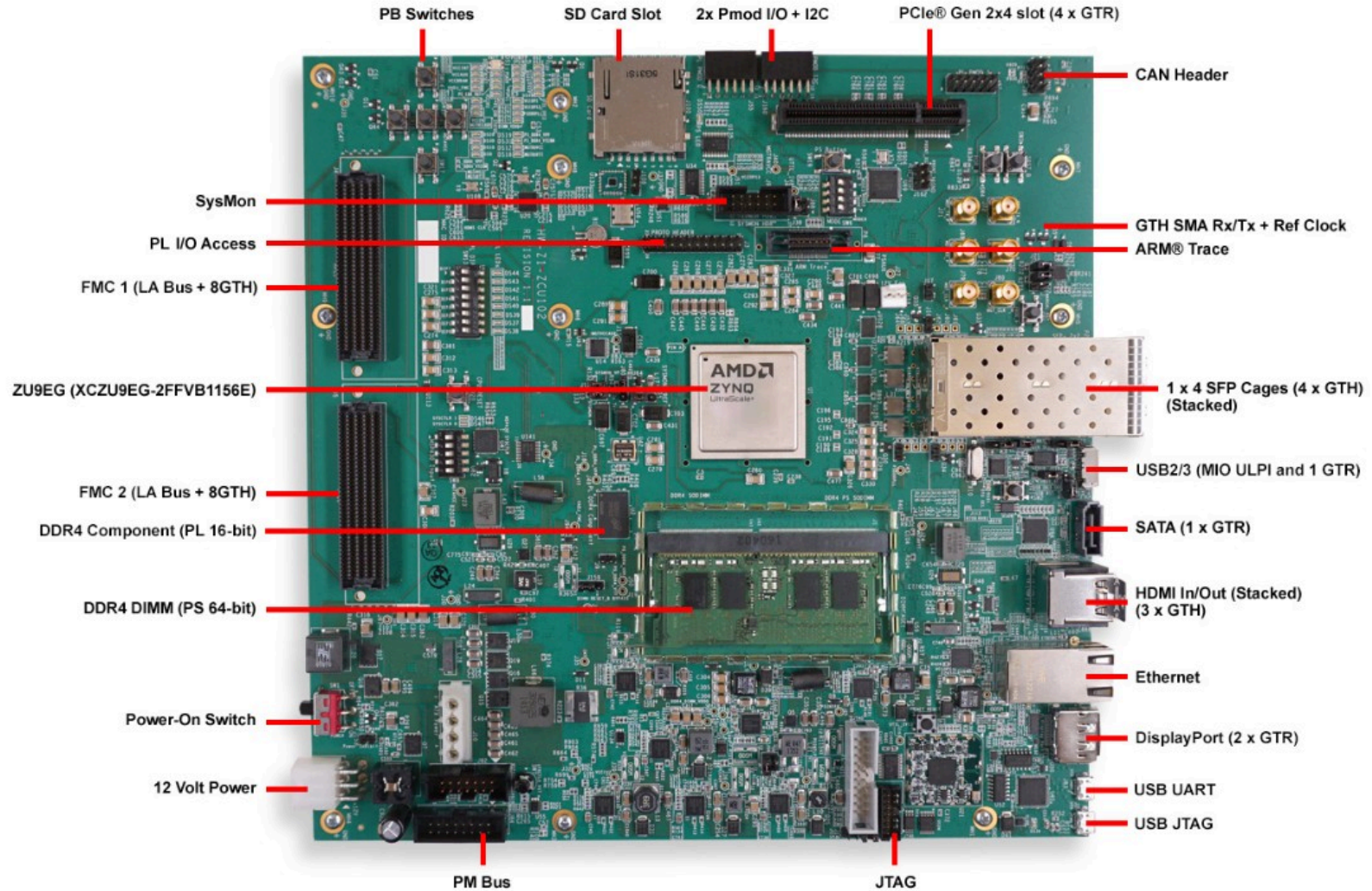
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Specifications

What's Inside

## Board Features

Featuring the **ZCU102 Evaluation Board**



### Configuration

### Memory

### Control & I/O

### Expansion Connectors

- Onboard JTAG configuration circuitry to enable configuration over USB
- Dual Quad-SPI flash memory
- Boot from SD card
- PS 4GB DDR4 64-bit SODIMM w/ ECC
- PL 512MB DDR4 component memory ([256 Mb x 16] devices) at 1200MHz / 2400Mbps DDR
- 8KB IIC EEPROM
- Dual 64MB Quad SPI flash
- SD card slot
- 6x Directional Push Buttons (5x PL, 1x PS)
- DIP switches (8x PL)
- PMBUS & System Controller MSP430 for power, clocks, and I2C bus switching
- USB2/3 (MIO ULPI and 1 GTR)\*\*
- 2x FMC-HPC connectors (16 GTH Transceivers, 64 differential user defined signals)
- 2x PMOD headers
- IIC

## Communication & Networking

- RGMII communications at 10, 100, or 1000 Mb/s. Serial GMII interface-supports a

## Display

- HDMI video input and output (3 GTH)
- External Retimer device driving an HDMI output connector

## Clocking

- Programmable clocks
- System clocks, user clocks, jitter attenuated clocks

## Power

- 12V wall adapter or ATX

1 Gb/s SGMII interface

- 4x SFP+ cage
- SMA GTH support (4x SMA Tx/Rx connectors)
- UART To USB bridge
- RJ45 Ethernet connector
- SATA (1 x GTR)\*\*
- PCIe Gen2x4 Root Port\*\*
- 9x GPIO user LEDs (8x PL, 1x PS)
- VESA DisplayPort 1.2 source-only controller supports up to two lanes of main link data at rates of 1.62 Gb/s, 2.70 Gb/s, or 5.40 Gb/s.
- 2x SMA MGT input clocks



*\*\* Switch enables either PCIe Root Port OR SATA, USB2/3 & DisplayPort*

## What's Inside



ZCU102 Evaluation Board

Featuring the Zynq UltraScale+  
XCZU9EG-2FFVB1156 MPSoC