

# Zynq UltraScale+ RFSoc ZCU208 Evaluation Kit

## OVERVIEW

Equipped with the industry's only single-chip adaptable radio device, the Zynq® UltraScale+™ RFSoc ZCU208 evaluation kit is the ideal platform for both rapid prototyping and high-performance RF application development. The included ZU48DR is Xilinx's highest ADC sample rate RFSoc device, designed for applications requiring wide instantaneous bandwidth. Eight integrated SD-FEC cores provide forward error correction at 80% lower power consumption than soft implementations, making the ZU48DR ideal for DOCSIS, microwave backhaul, and small cell applications.

Reference add-on cards and connectivity options make the ZCU208 kit suitable for developing, testing, and debug of next-generation products while reducing development complexity and improving time to market.

## KEY FEATURES

### Features Industry's Only Adaptable Single-Chip Radio Platform

- > Zynq UltraScale+ RFSoc Gen 3 ZU48DR on the ZCU208 board
- > Full sub-6GHz with extended mmWave and multi-band support
- > Integrated direct RF-sampling enabling RF design in the digital domain
- > 8x 14-bit resolution 5GSPS RF-ADCs
- > 8x 14-bit resolution 10GSPS RF-DACs
- > 8x SD-FEC cores
- > Lidless package for improved thermal dissipation

### Includes Add-On Cards for Evaluation and Rapid Prototyping

- > XM650 N79 band loopback add-on card for quick out of box evaluation
- > XM655 breakout add-on card for in-depth performance measurements
- > CLK104 RF clock add-on card for internal reference clocking and external sampling clocking

### Offers Flexible I/O Options

- > FPGA Mezzanine Card (FMC+) including 12x 33Gb/s transceivers and 34 user defined differential I/O signals
- > 2x 400pin RFMC 2.0 18GB/s interfaces
- > 2x2 SFP28 interfaces for 4 SFP/SFP+/zSFP+/SFP28 modules

### Comprehensive Development Tools and IP

- > Programmable configurations with Vivado® Design Suite and IP
- > RF Data Converter Evaluation Tool and RF Power Advantage Tool
- > Reference designs and board files for rapid development



## TARGET APPLICATIONS

### WIRELESS

- > 5G mmWave Intermediate Frequency (IF) Transceiver
- > 5G Sub-6GHz Massive-MIMO Radio
- > Fixed Wireless Access
- > Software Defined Radio
- > Microwave Backhaul

### AEROSPACE AND DEFENSE

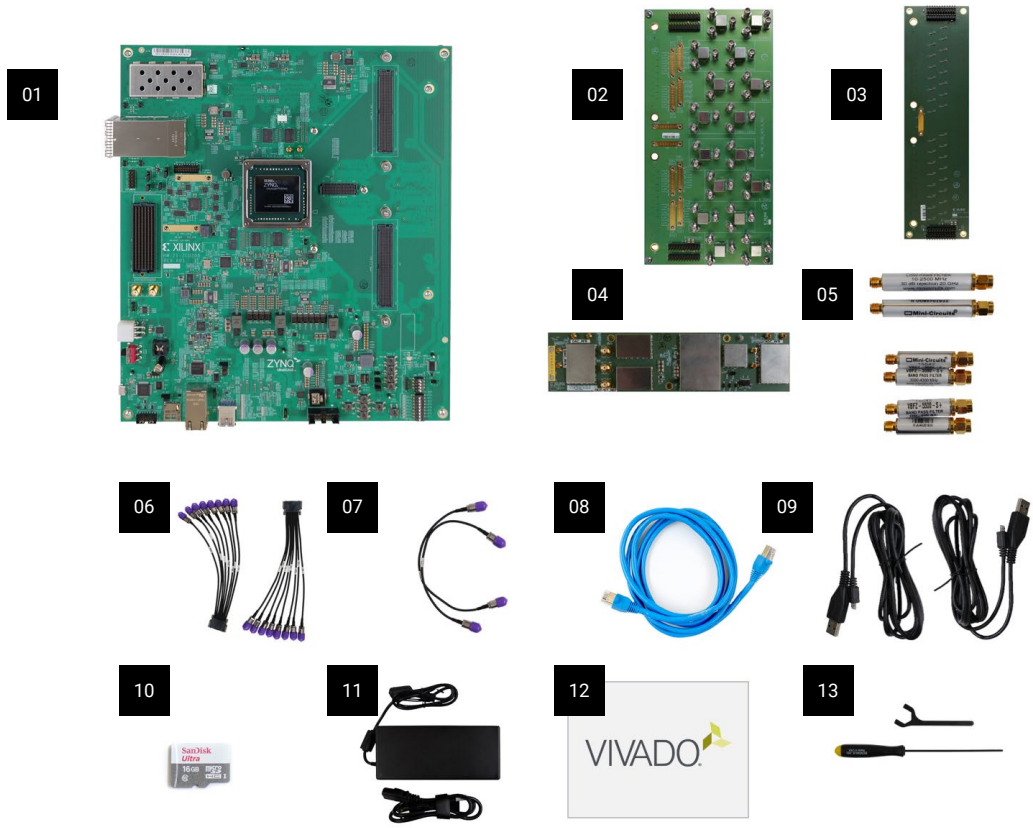
- > Digital Phased Array Radar
- > Terrestrial Satellite Communications

### CABLE ACCESS

- > Remote PHY for DOCSIS 3.1 and 4.0

### TEST AND MEASUREMENT

- > Spectrum Analyzers
- > High-Speed RF Testers



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| <ul style="list-style-type: none"> <li>01 ZCU208 Evaluation Board</li> <li>02 XM655 Breakout Add-On Card</li> <li>03 XM650 N79 Loopback Add-On Card</li> <li>04 CLK104 RF Clock Add-On Card</li> <li>05 6 Filters<br/>2 Low Pass: DC-2500MHz<br/>2 Mid-Band Pass: 3000-4300MHz<br/>2 High-Band Pass: 4900-6200MHz</li> </ul> | <ul style="list-style-type: none"> <li>06 2 Carlisle SMA 8 Cable Assemblies</li> <li>07 2 SMA Cables</li> <li>08 Ethernet Cable</li> <li>09 2 Micro USB Cables</li> <li>10 MicroSD Card</li> <li>11 Power Cords and Adapters</li> <li>12 Vivado® Design Suite: System Edition Voucher</li> <li>13 Hand Tools</li> </ul> |
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TAKE THE NEXT STEP

For more information, documents, and reference designs, or to purchase, visit [www.xilinx.com/zcu208](http://www.xilinx.com/zcu208)

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