

# Zynq UltraScale+ RFSoc ZCU216 Evaluation Kit

## OVERVIEW

Equipped with the industry's only single-chip adaptable radio device, the Zynq® UltraScale+™ RFSoc ZCU216 evaluation kit is the ideal platform for both rapid prototyping and high-performance RF application development.

Reference add-on cards and connectivity options make the ZCU216 kit suitable for developing, testing, and debug of next-gen products while reducing development complexity and improving time to market.

Co-optimized with Xilinx's comprehensive Vivado® Design Suite, the ZCU216 kit comes with design files, development tools, and IPs.

## KEY FEATURES

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

- > Zynq UltraScale+ RFSoc Gen 3 ZU49DR on the ZCU216 board
- > Full sub-6GHz with extended mmWave and multi-band support
- > Integrated direct RF-sampling enabling RF design in the digital domain
- > 16 14-bit resolution 2.5GSPS ADCs
- > 16 14-bit resolution 10GSPS DACs

### Reference Design and Add-on Cards for Fast Evaluation and Prototyping

- > XM650 16T16R loopback card for quick loopback test, multi-tile synchronization (MTS), and example reference layout for baluns
- > XM655 16T16R breakout card for in-depth performance measurements and external clocking
- > CLK104 add-on card for internal and external reference clocking

### Flexible I/O Options

- > FPGA Mezzanine Card (FMC+) interface for I/O expansion
- > 2 18GB/s 400pin RFMC2.0 interfaces
- > 4 SFP28 interfaces for high-speed I/Os

### Simplified Development Platform for Short Design Cycle

- > Simplified hardware design with fewer RF components vs. discrete solutions
- > Easy RF configuration enabled by Xilinx® Vivado® Design Suite, IPs, and RF evaluation tool



## TARGET APPLICATIONS

- > 5G Wireless in Sub-6Ghz
- > Millimeter Wave Intermediate Frequency (IF) Applications and Unlicensed Bands
- > Digital Phased Array Radar
- > Fixed Wireless Access
- > Terrestrial Satellite Communications
- > Test and Measurement



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|----|--|----|--|
| 01 | ZCU216 Evaluation Board  | 08 | 4 SSMP to SSMP Cables                        |
| 02 | XM655 16T16R Breakout Add-On Card  | 09 | 4 Joy Signal Jumper Cables                   |
| 03 | XM650 16T16R N79 Loopback Add-On Card  | 10 | Ethernet Cable                               |
| 04 | CLK104 RF Clock Add-On Card  | 11 | 2 Micro USB Cables                           |
| 05 | 6 Filters<br>2 Low Pass: DC-2500MHz<br>2 Mid Band Pass: 3000-4300MHz<br>2 High Band Pass: 4900-6200MHz | 12 | MicroSD Card                                 |
| 06 | 2 Carlisle SMA 8 Cable Assemblies  | 13 | Power Cords and Adapters                     |
| 07 | 2 SMA Cables   | 14 | Vivado® Design Suite: System Edition Voucher |
|    |  | 15 | Hand Tools                                   |

TAKE THE NEXT STEP

For more information, documents, and reference designs, or to purchase, visit [www.xilinx.com/zcu216](http://www.xilinx.com/zcu216)

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