

# 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 direct RF sampling with extended mmWave and multi-band support
- > 16 14-bit resolution 2.5GSPS RF-ADCs
- > 16 14-bit resolution 10GSPS RF-DACs

### Add-on Cards for Fast Evaluation and Rapid Prototyping

- > XM650 16T16R N79 band loopback add-on card for quick loopback test
- > XM655 16T16R breakout add-on card for in-depth performance measurements
- > CLK104 RF clock add-on card for internal reference and external sampling clocking

### Flexible I/O Options for Broad Application Development

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

### Comprehensive Development Tools and IPs

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



## TARGET APPLICATIONS

### Wireless

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

### Aerospace and Defense

- > Digital Phased Array Radar
- > Terrestrial Satellite Communications

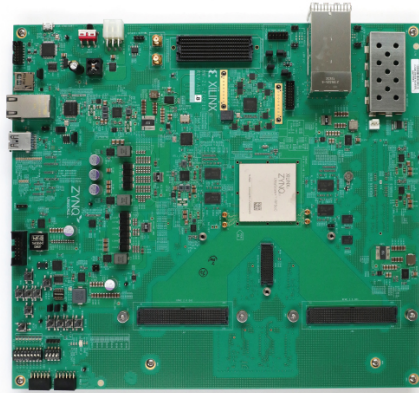
### Test and Measurement

- > Spectrum Analyzers
- > High-Speed RF Testers

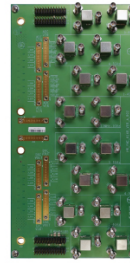
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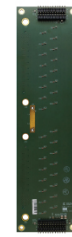
01



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01 ZCU216 Evaluation Board

02 XM655 16T16R Breakout Add-on Card

Reference Balun Layout and MTS Capability:

2 Channel from 10MHz-1GHz

2 Channel from 1GHz-4GHz

2 Channel from 4GHz-5GHz

2 Channel from 5GHz-6GHz

03 XM650 16T16R N79 band Loopback Add-on Card

1-16 Channel 4.5GHz-5GHz Loopback Capability

04 CLK104 RF Clock Add-on Card

Internal reference clocking

External sampling clocking

05 6 Filters

2 Channel from 1GHz-4GHz

2 Channel from 4GHz-5GHz

2 Channel from 5GHz-6GHz

06 2 Carlisle SMA 8 Cable Assemblies

07 2 SMA Cables

08 Ethernet Cable

09 2 Micro USB Cables

10 MicroSD Card

11 Power Cords and Adapters

12 Vivado Design Suite: System Edition Voucher

13 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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