

# Zynq RFSoc DFE ZCU670 Evaluation Kit

## OVERVIEW

Equipped with the industry's only single-chip adaptable radio device, now with hardened IP for the radio digital front-end (DFE), the Xilinx® Zynq® RFSoc DFE ZCU670 Evaluation Kit is the ideal adaptive radio prototyping platform for out-of-box evaluation and application development for 5G New Radio (5G NR) and a breadth of other RF applications.

The kit features the Zynq RFSoc DFE ZU67DR 8T8R device, representing a new class of adaptive SoCs that integrates more hardened IP than soft logic, thereby delivering the cost economies of an ASIC with the flexibility of a hardware adaptable platform. The kit comes with a breadth of connectivity options, expansion cards, software, and tools to build out and validate your system.

## HIGHLIGHTS

### The Only Adaptive SoC with a Fully Hardened Radio Subsystem

- > 8x 10GSPS DACs | 8x 2.95GSPS ADCs and 2x 5.9GSPS ADCs
- > RF input/output frequency up to 7.125GHz, 400MHz iBW
- > 3GPPP-compliant 5G NR cores: DUC, DDC, CFR, DPD, Low-PHY IP
- > Adaptive logic for differentiation and future market requirements
- > Arm® processing subsystem for DFE configuration and control

### Breadth of On-Board Connectivity Options

- > 4GB DDR4, 64-bit, 2666MT/s to programmable logic (PL)
- > 4GB DDR4 SODIMM, 64-bit at 2400MT/s to processing subsystem (PS)
- > Quad SFP/SFP+ cage assembly
- > 8 user-I/O, single-color LEDs

### Add-on Cards for Expansion, Rapid Prototyping, and System Validation

- > FPGA Mezzanine Card (FMC+) interface for I/O expansion
- > XM650 card for N79 band loopback test, and reference layout for baluns
- > XM755 breakout card for in-depth measurement and multi-tile sync



## TARGET APPLICATIONS

### 5G New Radio (5G NR)

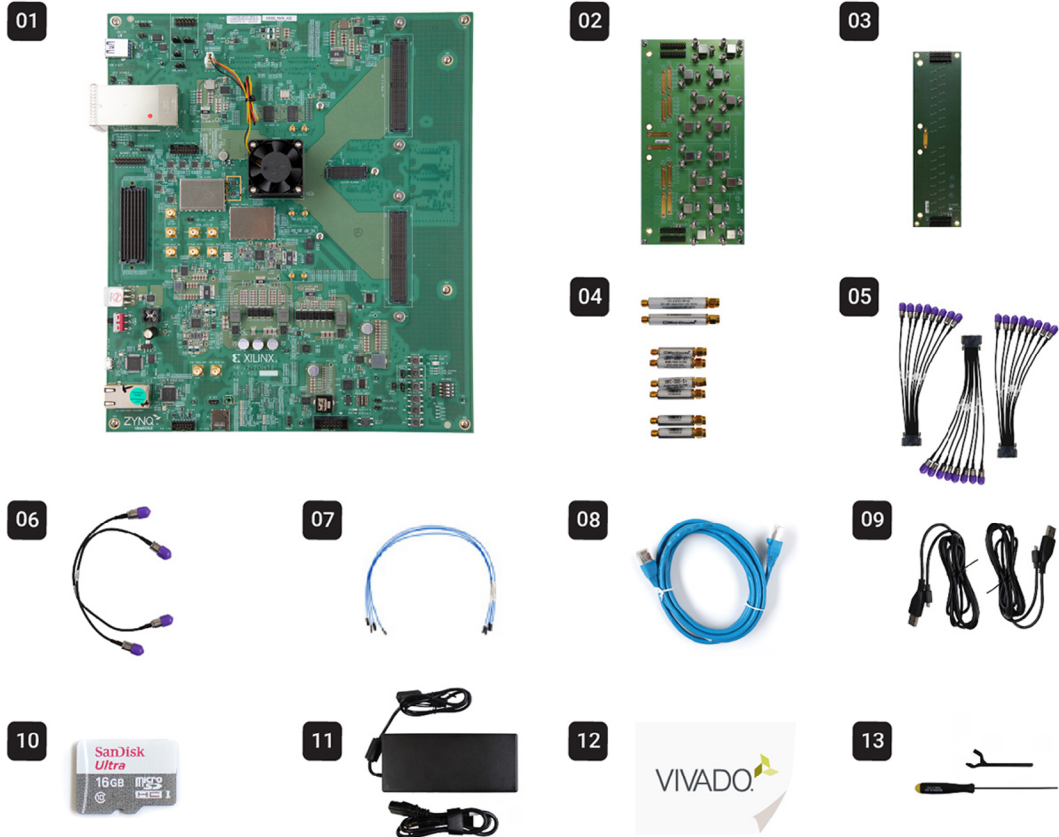
- > Massive-MIMO Macrocell
- > Multi-Mode (4G/5G) Macrocell
- > Fixed Wireless Access
- > Small Cell Nodes

### Aerospace and Defense

- > 5G for Government/Private Spectrum
- > Milcom and Satcom Modems
- > Data Links

### Test and Measurement

- > Portable Test Equipment
- > UE Emulation/RF Testers



- |    |  |    |                                       |
|----|--|----|---------------------------------------|
| 01 | ZCU670 Evaluation Board  | 07 | 4 Joy Signal Jumper Cables            |
| 02 | XM755 16T16R Breakout Add-on Card  | 08 | Ethernet Cable                        |
| 03 | XM650 16T16R N79 Band Loopback Add-on Card   | 09 | 2 Micro USB Cables                    |
| 04 | 8 Filters<br>2 Low Pass: DC-2500MHz<br>2 Mid-Band Pass: 3000-4300MHz<br>2 High-Band Pass: 4900-6200MHz<br>2 High-Band Pass: 5600-7000MHz | 10 | MicroSD Card                          |
| 05 | 3 Carlisle SMA Cable Assemblies  | 11 | Power Cords and Adapters              |
| 06 | 2 SMA Cables   | 12 | Vivado® ML Enterprise Edition Voucher |
|    |  | 13 | Hand Tools                            |

TAKE THE NEXT STEP

For more information, documents, and reference designs, or to purchase, visit [www.xilinx.com/zcu670](http://www.xilinx.com/zcu670)

Corporate Headquarters  
Xilinx, Inc.  
2100 Logic Drive  
San Jose, CA 95124  
USA  
Tel: 408-559-7778  
[www.xilinx.com](http://www.xilinx.com)

Xilinx Europe  
Xilinx Europe  
Bianconi Avenue  
Citywest Business Campus  
Saggart, County Dublin  
Ireland  
Tel: +353-1-464-0311  
[www.xilinx.com](http://www.xilinx.com)

Japan  
Xilinx K.K.  
Art Village Osaki Central Tower 4F  
1-2-2 Osaki, Shinagawa-ku  
Tokyo 141-0032 Japan  
Tel: +81-3-6744-7777  
[japan.xilinx.com](http://japan.xilinx.com)

Asia Pacific Pte. Ltd.  
Xilinx, Asia Pacific  
5 Changi Business Park  
Singapore 486040  
Tel: +65-6407-3000  
[www.xilinx.com](http://www.xilinx.com)

India  
Xilinx India Technology Services Pvt. Ltd.  
Block A, B, C, 8th & 13th floors,  
Meenakshi Tech Park, Survey No. 39  
Gachibowli(V), Seri Lingampally (M),  
Hyderabad -500 084  
Tel: +91-40-6721-4747  
[www.xilinx.com](http://www.xilinx.com)

