

Zynq RFSoc DFE ZCU670 Evaluation Kit

OVERVIEW

Equipped with the industry's only single-chip adaptable radio device—now with a 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)

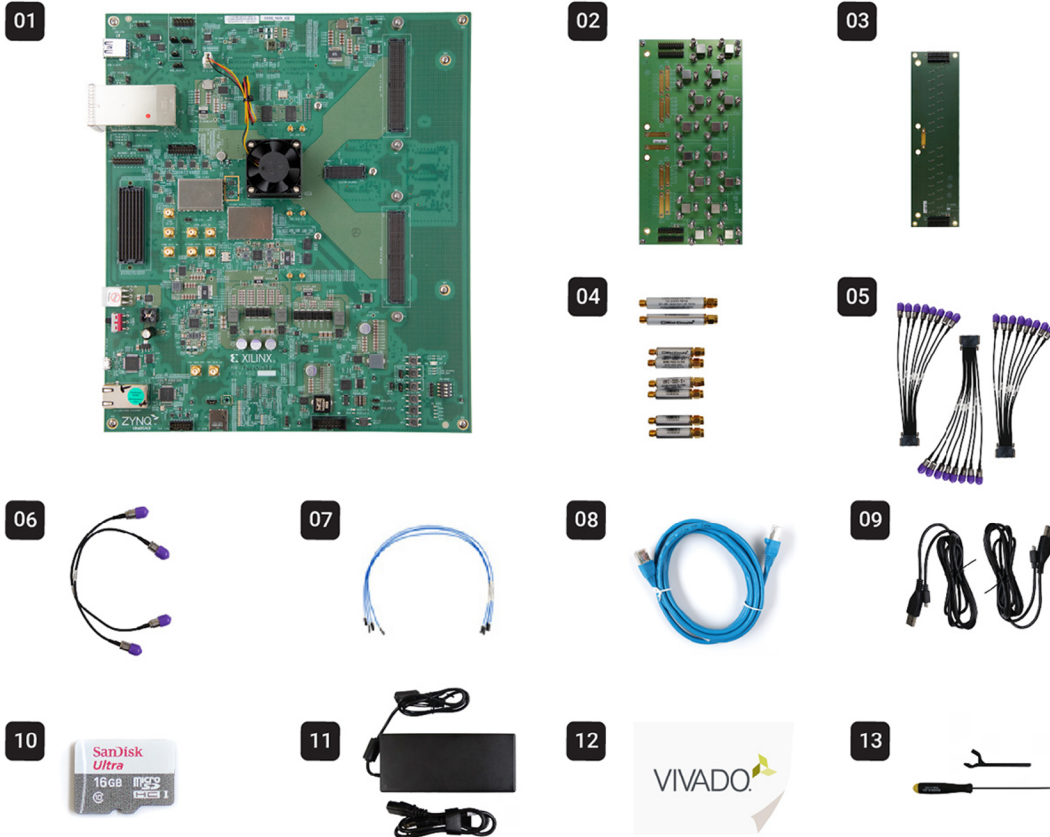
- > Massive-MIMO Macrocell
- > Multi-Mode (4G/5G) Macrocell
- > Fixed Wireless Access
- > Small Cell Nodes

Aerospace and Defense

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

Test and Measurement

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



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|----|------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------|
| 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
2 Low Pass: DC-2500MHz
2 Mid-Band Pass: 3000-4300MHz
2 High-Band Pass: 4900-6200MHz
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

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