

XRF16

Xilinx RFSoc System-on-Module

16-Channel / Gen-2 / 5GHz



PRODUCTION-READY 16X16 DIRECT-RF SAMPLING MODULE WITH 5 GHZ ANALOG BANDWIDTH

The Avnet XRF16™ RFSoc System-on-Module is designed for integration into deployed RF systems demanding small footprint, low power, and real-time processing. The XRF16 features the Xilinx Zynq® UltraScale+™ RFSoc Gen 2, with 16 RF-ADC and 16 RF-DAC channels.

An XRF Carrier Card and comprehensive software suite are available for rapid prototype, enabling you to develop application code for the XRF16 SOM that is ready for deployment when your custom carrier arrives. Example code and tutorials demonstrate Xilinx RFSoc multi-tile sync (multi-converter sync) and multi-board synchronized analog capture.

FEATURE LIST

Xilinx Zynq UltraScale+ Gen2 ZU39DR RFSoc

- 16x ADCs, 12-bit up to 2.220 GSPS
- 16x DACs, 14-bit up to 6.554 GSPS
- Quad-core Arm® Cortex®-A53 processing subsystem
- 1 GbE, PCIe Gen1/2, SATA, USB2/3
- UltraScale+ programmable logic

High-Speed Data Transfer

- 16x 28Gbps serial links for 10/40/100 GbE, PCIe Gen 3x16, eCPRI, OcuLink, and Aurora
- Quad Mesh™ firmware interface sustains 20 Gbps data exchange with four peers concurrently, facilitating tiling in high performance real-time systems

Clocks & Synchronization

- Ultra-low jitter programmable sampling clocks
- External or onboard 10 MHz reference clock
- Phase coherent synchronous sampling across all converters & multiple boards

Memory

- 2GB DDR4 @ Programmable Logic
- 2GB DDR4 @ Processor Subsystem
- 32GB eMMC persistent storage
- 128MB QSPI boot storage

System

- 4" x 5" footprint
- 5.5V to 16V input
- Temperature monitor
- Industrial temperature rated
- Air and conduction cooling options



KIT INCLUDES

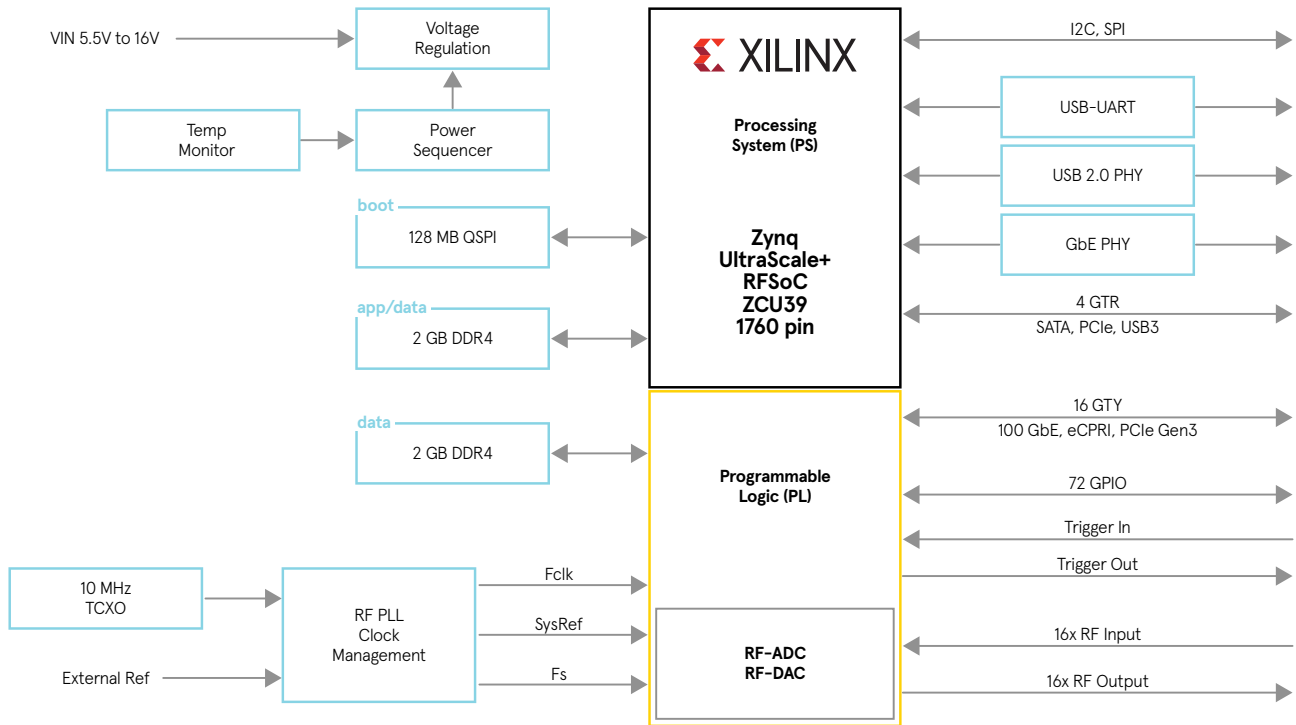
- XRF16 System-on-Module
- Software

TARGET APPS

- Phased Array Radar
- 5G Massive MIMO
- Hybrid Beamforming
- Signal Detection & Jamming
- Medical Imaging
- Multi-Channel RF Instrumentation

To purchase this kit, visit www.avnet.com/rfsocsom

BLOCK DIAGRAM



FEATURED MANUFACTURERS



PARTS

Part Number	Description	Resale
AES-XRF16-ZU39-G	XRF16™ Xilinx RFSoc System-on-Module 16-Channel / Gen-2 / 5 GHz	\$21,995 USD

RELATED PARTS

Part Number	Description	Resale
AES-XRF-CC-G	XRF16™ Carrier Card	\$4,995 USD
AES-ZU-RFSOC-SK-RVS-G	Avnet Zynq UltraScale+ RFSoc Development Kit with Qorvo RF Front End	\$9,495 USD

Countries Available for Purchase: Americas, EMEA

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