

XRF16 XILINX RFSOC GEN3 SYSTEM-ON-MODULE



Production-ready 16x16 direct-RF sampling module with 6 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 Gen3 ZU49DR, with 16 RF-ADC, 16 RF-DAC channels, and 6GHz RF bandwidth.

Combine the production-ready XRF16 module with the XRF16 Carrier Card and Avalon™ software suite to jumpstart proof-of-concept and application development. Then deploy your system with the same XRF16 module used for proof-of-concept. Example code and tutorials demonstrate Xilinx RFSoC multi-tile sync (multi-converter sync) and multi-board synchronized analog capture.

Features

Xilinx Zynq UltraScale+ Gen3 ZU49DR RFSoC

- 16x ADCs, 14-bit up to 2.5 GSPS
- 16x DACs, 14-bit up to 9.85 GSPS (10 GSPS available)
- 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 supporting 10/25/100 GbE and Xilinx Aurora
- Quad Mesh™ firmware interface streams data with four peers concurrently, facilitating tiling in high performance real-time systems

Clocks & synchronization

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

Memory

- 4GB DDR4 @ Programmable Logic
- 4GB 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

To purchase this kit, visit avnet.me/xrf16-som

For information about XRF products, visit avnet.me/xrf16gen3-som



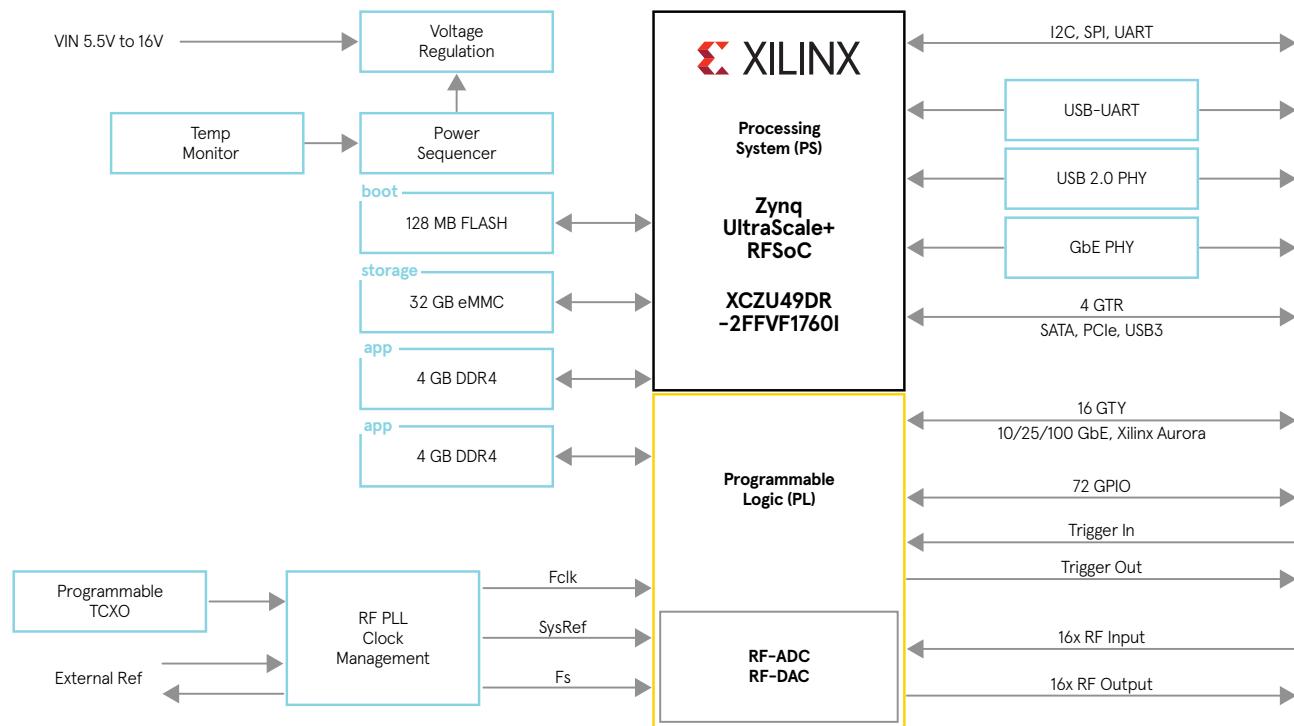
Kit includes

- XRF16 System-on-Module
- Avalon™ software

Target apps

- Phased array radar
- 5G massive MIMO
- Hybrid beamforming
- Signal detection & jamming
- Medical imaging
- Multi-channel RF instrumentation

Block diagram



Featured manufacturers



Parts

Part number	Description	Price
AES-XRF16-ZU49-G	XRF16™ Xilinx RFSoC System-on-Module 16-Channel / Gen-3 / 6 GHz	\$24,995 USD

Related parts

Part number	Description	Price
AES-XRF16-CC-G	XRF16™ Carrier Card	\$4,995 USD
AES-XRF8-ZU47-G	XRF8™ Xilinx RFSoC System-on-Module 8-Channel / Gen-3 / 6 GHz	\$22,995 USD
AES-XRF8-ZU48-G	XRF8™ Xilinx RFSoC System-on-Module 8-Channel / Gen-3 / 6 GHz with SD-FEC	Call for quote

Countries available for purchase: Americas, EMEA

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