Xilinx Tapped by Telefónica to Drive 5G Innovation using Open RAN Standards

Rich wireless services—ranging from VR/AR media offerings to connected cars and industrial IoT devices—will become a reality sooner than anticipated throughout Europe, thanks to the efforts of Telefónica and Xilinx. The multi-national telecoms carrier has brought together Xilinx and a number of leading hardware and software companies in its quest to disrupt the market and accelerate the development of open radio-access network (O-RAN) technologies in its 4G and 5G wireless networks.

Xilinx joins Altiostar, Gigatera Communications and SuperMicro, among others, in working with Telefónica on the design and development, integration efforts, operational procedures and testing activities required to build next-generation wireless radio networks using O-RAN. The first deployments will roll out in UK, Germany, Spain and Brazil this year.

The new O-RAN approach—supported by the global O-RAN Alliance, of which Xilinx is a member—represents a major paradigm shift in network technology. With O-RAN, baseband hardware utilizes standard servers, the interfaces between the network equipment are open and standardized, and the baseband software runs in the cloud. This open architecture increases flexibility for service providers, enabling them to accelerate the development of 5G networks.

In the initial Telefónica implementation, Xilinx's Zynq UltraScale+ RFSoC will be used in the 4G and 5G radio. Our breakthrough RFSoC integrates the front end of the RF signal chain, enabling users to dramatically increase performance and board density while greatly reducing power consumption. Xilinx technology supports multiple standards, multiple bands and sub-networks, providing Telefónica with a unique and flexible platform for radio, fronthaul, and acceleration to support 4G and 5G networks. And, equally as important, our devices can seamlessly be upgraded with a simple remote software update as standards evolve, making our adaptable devices ideal for major industry transformations such as this one.

Our work with Telefónica and other O-RAN partners enables carriers to deploy new services now and into the future. It also delivers greater interoperability across systems and reduces OpEx. Xilinx adaptive computing technology allows customers to future-proof infrastructure investments by enabling seamless, modular upgrades at different areas of the network for enhanced reliability and sustained long-term value that benefits everyone.

Open, standardized solutions built on collaboration – like this one through the O-RAN Alliance and led by Telefonica – will benefit the entire ecosystem, ultimately accelerating 4G and 5G deployments across providers and around the world. Xilinx is committed to open-source solutions and architectures because these standard, shared models means that innovation can happen faster and be adopted by more people.