Embedded Software Engineer

About the Role

We are seeking a skilled Embedded Software Engineer with a strong background in Xilinx Zynq-based systems and FPGA programming for advanced telecommunications applications. This role offers the opportunity to work on cutting-edge embedded platforms, contribute to system-level architecture, and collaborate closely with hardware, FPGA, and systems engineering teams to deliver high-performance solutions.

Key Responsibilities

- Design, develop, and optimize embedded software on ARM cores within Xilinx Zynq SoCs.
- Implement and debug bare-metal and embedded Linux applications, including device drivers, BSPs, and middleware.
- Collaborate with FPGA engineers to define hardware/software boundaries, interfaces, and data paths.
- Contribute to FPGA programming (VHDL/Verilog) for high-speed data processing in telecom applications.
- Integrate and validate embedded software with FPGA logic and telecom hardware platforms.
- Work with cross-functional teams to meet performance, reliability, and compliance requirements in telecommunications systems.
- Support system bring-up, debugging, and testing on target hardware.

Qualifications & Skills

- Bachelor's or Master's degree in Electrical Engineering, Computer Engineering, Computer Science, or related field.
- 3+ years of professional experience in embedded software development.
- Proficiency in C programming and real-time software development.
- Experience writing and debugging device drivers and working with low-level hardware interfaces (SPI, I²C, UART, Ethernet, etc.).
- Understanding of telecommunication protocols, high-speed serial interfaces, and DSP concepts.
- Strong problem-solving skills with experience in board bring-up and hardware/software integration.

- Familiarity with version control (Git), CI/CD pipelines, and Agile workflows.

Desirable skills

- Experience with Xilinx Zynq SoC platforms (ARM Cortex-A9/A53) and embedded Linux (Yocto, Petalinux, or similar).
- Hands-on experience with FPGA design (VHDL/Verilog/SystemVerilog) and debugging tools (Vivado, Chipscope, ModelSim, etc.).
- Experience with high-speed networking (Ethernet, optical, RF systems) in telecom environments.
- Knowledge of AXI bus architectures and custom IP integration in Zynq platforms.
- Exposure to secure boot, system reliability, and safety-critical software design.
- Previous contributions to telecommunication product development cycles from concept to deployment.