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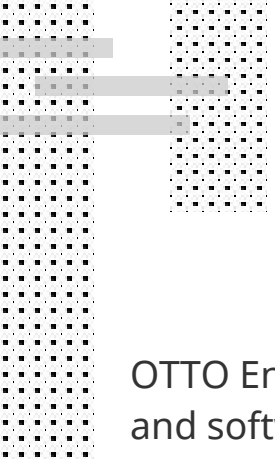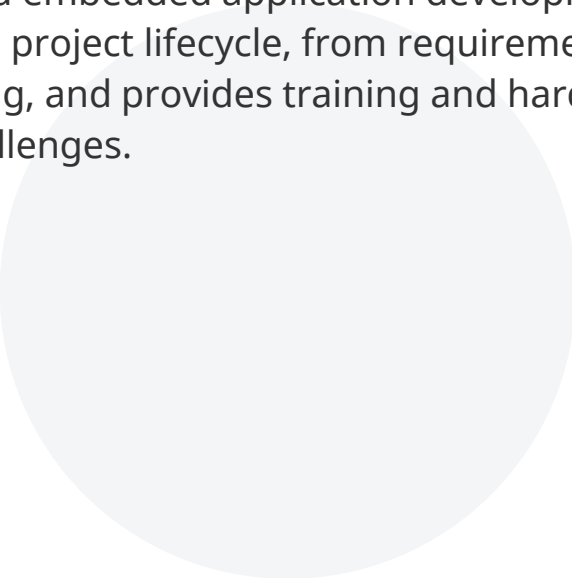
2026

ABOUT US

OTTO Engineering Services is a technology company specializing in embedded systems and software engineering. We offer expertise in embedded Linux and real-time operating systems, board support package (BSP) development and maintenance, porting and migration, and embedded application development. The company supports customers throughout the project lifecycle, from requirement analysis to implementation and testing, and provides training and hardware design services to meet industry-specific challenges.

Embedded Linux and FPGA Co-Design for a Single Board Computer

Internship Description

This internship aims at designing and integrating an embedded Linux solution for a Single Board Computer (SBC) based on a System-on-Chip (SoC) that includes an FPGA. The first part of the work consists of preparing and customizing a Linux image adapted to the target hardware platform.

The internship also involves the development of an FPGA IP core responsible for managing input/output signals via an SPI interface. A Linux kernel module will be developed to control and communicate with this FPGA IP from the operating system.

Finally, a C++ user-space application will be implemented to interface with the kernel module, allowing configuration, control, and data exchange between the application layer and the underlying hardware.

Keys : Linux, FPGA, VHDL, C/C++, SPI, kernel modules

Duration : 4-6 months

Design and Customization of a Real-Time Linux BSP with Xenomai on an ARM Platform

Internship Description

This internship focuses on the preparation and customization of a Linux Board Support Package (BSP) with Xenomai real-time extensions for a custom hardware platform based on a ARM CPU.

The work includes bringing up the Linux system on the custom board, configuring and integrating Xenomai to meet real-time constraints, and adapting the kernel, device tree, and drivers to the target hardware. Particular attention will be given to real-time performance validation, latency measurements, and system optimization.

The internship also involves debugging hardware–software interactions and documenting the BSP setup to ensure maintainability and reproducibility for future developments.

Keys : Linux, Xenomai, Device tree, kernel modules, C++

Duration : 4-6 months

Porting a Zephyr OS Board Support Package on a Custom Cortex-M33

Internship Description

This internship focuses on porting the Zephyr OS Board Support Package (BSP) for a custom hardware board based on a SoC integrating an ARM Cortex-M33 coprocessor.

The tasks include analyzing the SoC hardware architecture, creating and adapting Zephyr board definitions (Device Tree, Kconfig), configuring low-level peripherals (clocks, GPIOs, interrupts, memory), integrating startup code and drivers, and validating the BSP through functional testing.

The intern will work in an embedded systems environment using C/C++, ARM toolchains, and Zephyr RTOS, and will document the BSP porting process.

Keys : Zephir os, Device tree, kernel modules, C/C++

Duration : 4-6 months

If you wish to join us, please send your CV quoting the internship reference.

Email: career@otto-es.net