ESPRESSIF

Zephyr®

Zephyr on ESP Devices

Zephyr RTOS® is a real-time operating system optimized for IoT and embedded applications.

Developed by the **Linux Foundation**, it supports microcontrollers from multiple vendors, enabling code portability across different hardware families. Espressif actively contributes to its development, ensuring seamless integration with its hardware and expanding possibilities for IoT and AIoT, from consumer electronics to industrial automation.

With native **MCUBoot support** and robust over-the-air **(OTA) updates**, it is production-ready for secure, scalable IoT deployments enabling reliable firmware management, secure updates, and efficient operation of device fleets in the field.

Zephyr RTOS: Production-ready RTOS for ESP32, actively maintained by Espressif

Upstream Development and Support

Zephyr is a **flexible RTOS** supporting multiple hardware vendors, with applications built on its OS APIs. Espressif implements the Hardware Abstraction Layer for ESP32 series of SoCs, allowing developers to use familiar APIs without dealing with low-level hardware details.

Application

Zephyr RTOS®

Espressif HAL : GPIO, SPI, I2C, UART, Wi-Fi, BLE, IEEE802154

Hardware Platform

| ESP32-C	ESP32-S
ESP32-P	ESP32-H
ESP32	

Commitment to Open-Source

Espressif embraces open source by contributing to **Zephyr RTOS®**, supporting its community, plus is an active upstream contributor with dedicated engineers

This approach drives innovation, ensures stability, and fosters collaboration, enabling developers to share knowledge and enhance the ecosystem.
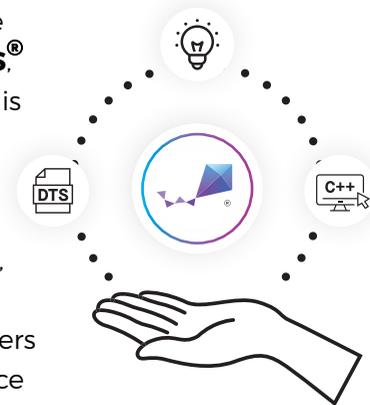
Get started today!

Get started with Zephyr® on Espressif today!

Explore our documentation, tools, and community support to build powerful IoT and embedded applications with ease.

Explore more at:
developer.espressif.com

ESPRESSIF

Zephyr®

for more information please visit https://developer.espressif.com/resources/