ESPRESSIF

Rust

Rust

Rust is more than a programming language—it's a **revolution** in systems programming. Designed for speed, reliability, and memory safety, it empowers developers with modern tools and high performance.

Supported by a passionate community, Rust fosters collaboration, sets industry standards, and drives open-source innovation. At its core, **Cargo** simplifies package management, making it seamless to build, distribute, and integrate Rust libraries, or crates.

Join the Rust community and be part of the future of safe, high-performance programming!

Rust no-std for Espressif Devices

Espressif is bringing Rust to its **ecosystem**, embracing its speed, **safety**, and modern development practices.

More than just support, we're building a complete ecosystem with tooling, documentation, and community collaboration to empower developers.

esp-hal	esp-wifi
esp-backtrace	esp-println
embassy	async
espflash	probe-rs

Supported SoCs

With a no-std approach, we're optimizing Rust for embedded systems. Leading the way is **esp-hal**, our first official Rust crate, now at **version 1.0**—the first of its kind in the embedded Rust ecosystem. This marks the beginning of a robust Rust experience on Espressif hardware.

ESP32	ESP32-S	ESP32-C	ESP32-H

Get started today!

Ready to **explore Rust** on Espressif hardware? Check out the documentation and start building with esp-hal today!

Explore more at:
github.com/esp-rs

For Slint on ESP32:
slint.dev/esp32

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Explore our Developer Resources

Documentation
Explore our documentation!
Find detailed API references, and the programming guide to help you get started with **ESP-IDF**.

idf.espressif.com

Developer Portal
Visit our Developer Portal!
Explore a wealth of resources, including technical **articles**, and **workshops** to help you level up your skills.

developer.espressif.com

GitHub
Explore our projects on GitHub!
Dive into our **open-source** repositories, contribute to the community, and stay up to date with our latest developments.

github.com/espressif

ESP32 Forum
Join us on our Forum!
Ask **questions**, share knowledge, and connect with other developers to get help and **discuss** our projects.

esp32.com

YouTube
Follow us on YouTube!
Watch hundreds of hours of **content**, including all **DevCon** talks, new product introductions, and more.

youtube.com/@EspressifSystems

Community
Join our community on Reddit!
Connect with over **100,000 developers**, share insights, ask questions, and stay updated on the latest discussions.

reddit.com/r/esp32

ESP-Registry
Find the most exciting ESP-IDF components!
Discover, download and publish **components** and examples for ESP-IDF.

components.espressif.com

ESP-RainMaker
A complete IoT solution!
An **IoT** cloud platform on AWS, offering control, scalability, and customization with its open-source SDK for your devices.

rainmaker.espressif.com

ESP-Insights
Identify issues faster!
A cloud **remote diagnostics** platform helps monitor, debug, and optimize IoT devices with real-time data and analytics.

insights.espressif.com

Matter SDK
Espressif's solution for Matter!
A **simplified** API and the required tools help **build** Matter-enabled smart-home devices with ease.

github.com/espressif/esp-matter