

# 1.4 FreeRTOS

So what is FreeRTOS? [\[4\]](#)

FreeRTOS is one of the most widely used RTOS implementations in the world of embedded systems and IoT. As its name implies, FreeRTOS is open-source and free to use.

Based on the previous explanation of RTOS, FreeRTOS acts as a lightweight OS that runs on a microcontroller (like the ESP32) to perform task scheduling, memory management, and inter-task communication. FreeRTOS provides an API that allows developers to:

- Create and manage multiple tasks that can run concurrently.
- Set priority scheduling so that important tasks (e.g., critical sensor readings) are always processed faster than low-priority tasks (e.g., logging).
- Use time-slicing and event-driven scheduling so that tasks outnumbering the available cores can still run according to their schedule.

---

Revision #1

Created 2025-08-29 13:33:54 UTC by NS

Updated 2025-08-29 13:34:52 UTC by NS