FreeRTOS

**FreeRTOS** is a popular real-time operating system kernel for embedded devices that has been ported to 35 microcontrollers. It is distributed under the GPL with an additional restriction and optional exception. The restriction forbids benchmarking while the exception permits users' proprietary code to remain closed source while maintaining the kernel itself as open source, thereby facilitating the use of FreeRTOS in proprietary applications.

How is it realized?

The kernel itself consists of only three C files. To make the code readable, easy to port, and maintainable, it is written mostly in C, but there are a few assembly functions included where needed.

Why should you use FreeRTOS?

* Provides a single and independent solution for many different architectures and development tools.
* Is known to be reliable. Confidence is assured by the activities undertaken by the SafeRTOS sister project.
* Is feature rich and still undergoing continuous active development.
* Has a minimal ROM, RAM and processing overhead. Typically, an RTOS kernel binary image will be in the region of 6K to 12K bytes.
* Is very simple - the core of the RTOS kernel is contained in only 3 C files. The majority of the many files included in the .zip file download relate only to the numerous demonstration applications.
* Is truly free for use in commercial applications (see license conditions for details).
* Comes with a porting, platform development, or application development service should it be required.
* Is well established with a large and ever-growing user base.
* Contains a pre-configured example for each port. No need to figure out how to setup a project - just download and compile!
* Has an excellent, monitored, and active free support forum.
* Has the assurance that commercial support is available should it be required.
* Provides ample documentation.
* Is very scalable, simple and easy to use.
* FreeRTOS offers a smaller and easier real-time processing alternative for applications where eCOS, embedded Linux (or Real Time Linux) and even uCLinux won't fit, are not appropriate, or are not available.