

RE Partner Solution

SEGGER emWin GUI, embOS RTOS



Solution Summary

emWin perfectly supports the low power and low resources constraints given by a low power design. embOS RTOS is the ideal partner for RE01 systems to manage all tasks in an efficient way, allowing to get the maximum out of a low power system.

Features/Benefits

- emWin

Industry Leading Embedded Graphics Library

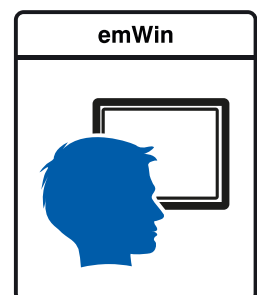
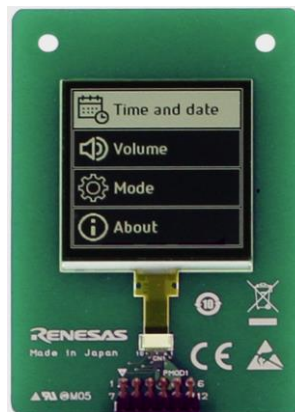
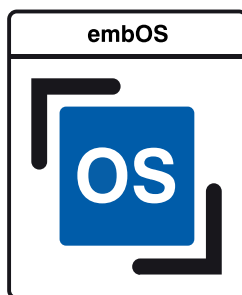
The professional embedded GUI emWin enables the [RE01](#) to create highly efficient and high-quality graphical user interfaces on any embedded system. emWin supports resource-constrained MCUs to run stunning interactive interfaces.

- embOS

embOS - (Real Time Operating System)

embOS is a priority-controlled RTOS. It is designed to be the foundation for developing embedded applications. It is the leading RTOS of over 25 years and has been deployed in several billion devices in a range of application areas.

Diagrams/Graphics



Target Markets and Applications

- Industrial Controls
- Smart Home
- Energy Saving IoT Appliance
- Home Appliance
- Health Care
- Aviation Electronic Equipment



■ emWin GUI embOS RTOS

emWin and embOS, both are supporting the focus of RE01 being an ultra-low power device in both active and standby modes, while pushing for high-speed operation at a low voltage.

Managing display screens always have side effects on consumption, memory requirements and performance.

Accommodating low power consumption for small devices means recognizing displays as a key component of that device.

The RE01 evaluation board has an extension with a low power MiP display.

emWin is a de facto GUI behind displays which require little computing power and memory beyond display memory.

Evaluation software package is available, including graphics software emWin and embOS.

<https://www.segger.com/evaluate-our-software/renesas/#renesas-ek-re01-256kb>

<https://www.segger.com/products/rtos/embos/>

<https://www.segger.com/products/user-interface/emwin>

Control features: example change the orientation of the display at runtime.

Requirements: just 138kB ROM, 21kB RAM

ROM memory :

90 kB for emWin

11 kB for resources (fonts and bitmaps) used in the sample

2 kB for the RTOS

35 kB for Renesas drivers

RAM memory usage is divided as follows:

4 kB used by the Renesas drivers

8 kB used as a display cache

6 kB used by emWin

3 kB used as task stack