**FreeRTOS Questions**

1) What’s the difference between Pre-emptive und Cooperative Multitasking?

2) What are advantages of the FreeRTOS?

3) What does the vTaskDelay do?

4) Which are the two delay functions and what are the differences of these functions?

5) In which file the kernel is been configured?

**Answers**

1)

• **Pre-emptive:** Always runs the highest available task. Tasks of identical priority share CPU time.

• **Cooperative:** Context switches only occur if a task blocks, or explicitly calls yield.

2)

• Simple, Portable, Royalty free, Concise

• Micro Real-time Kernel

• Choice of RTOS scheduling policy: Pre-emptive or Cooperative

• Messages Queue

• Semaphores (via macros)

• RTOS kernel uses multiple priority lists

• Ports are available for the most important microcontroller manufacturer

3)

● With vTaskDelay (and vTaskDelayUntil) a task hands over the control of a task for a defined time (or number of ticks).

4)

● **vTaskDelay** – Number of ticks is relative to the time at which the function is called.

● **vTaskDelayUntil** – relative time at which the task wishes to be unblocked

5)

● FreeRTOSConfig.h