RTC Scheduler Demo

# Overview

This demonstration uses the run to completion scheduler to flash green LEDs 4, 6 and 8 at different frequencies, and also to display elapsed time on the LCD. LED15 lights whenever the MCU is executing task code.

# Porting Notes

## RDK Selection

Select the RDK by defining RDKRL78G14 in r\_cg\_userdefine.h. Support for the G13 is incomplete in this port.

## Peripheral Use

The scheduler uses the Interval Timer to generate the 1 kHz interrupt needed for the periodic scheduler tick.

## Memory Size Optimization

This Glyph code has been modified to reduce memory requirements by changing most 32 bit variables and arguments to smaller sizes (16 and 8 bits).

Reduce ROM memory requirements further as needed using these methods:

* Include only the fonts needed, using glyph\_cfg.h.
* Set optimization for maximum size.
* Set library options to the smallest possible for printf, scanf and math.

# Comments and Suggestions

* Insert breakpoints in the tasks for debugging purposes.
* Monitor LED15 with an oscilloscope to see when the processor is active executing tasks vs. when it is idling in the scheduler awaiting ready tasks.
* Measure the execution time for the scheduler tick ISR. How much overhead does it produce given a 1000 Hz tick frequency? Ask class for suggestions on how to reduce the overhead.
* Advanced: Enable a power saving mode (stop or halt) and monitor the MCU current at JP1.