# MAX32600 LCD HelloWorld Demonstration

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## 1 Abstract

This document describes the HelloWorld sample application provided for the MAX32600. This application demonstrates how to configure several GPIO to blink the included LED's based on the SysTick timer, as well as how to scroll text over the included LCD using the provided firmware APIs.

## 2 Requirements

- MAX32600B EvKit (With LCD Screen)
- Sample code for this application located in `Firmware/Applications/HelloWorld`
- Olimex JTAG ARM-USB-TINY-H
- GNU ARM toolchain
- Optional: An oscilloscope for viewing the GPIO output signal.

## 3 Setup

- Load the compiled max32600.elf file onto the MAX32600 EvKit.

## 4 Observation

- The LCD Screen should scroll the text "Hello World MAX32600 Ev Kit. . . "
- The LED's should transition at a 4Hz rate, 50% duty cycle.
- THE LED's Should change its blinking pattern when the SW1 Test Button is pressed

# 5 Source Code Overview

## 5.1 Drivers In Use

- Instruction Cache
- Clock Manager
- Power Manager
- GPIO
- LCD

## 5.2 Interrupts Enabled

- SysTick
- GPIO

## 5.3 Code Operation

- Enable Instruction Cache
- Setup Clocks; system clock and systick
- Enable the RTC clock in ’run’ mode and drive systick
- Set GPIO for software controled output
- Set GPIO for software controled input
- Set IOMAN for mapping pins to LCD
- Setup and load LCD Message
- Configure the ARM systick interrupt with callback
- Wait for interrupts
- After a set number of interrupts, toggle the state of the green LED and move the LCD screen pointer.