Firmware for evaluation kit based on LED8102S LED driver with code examples for LED sequences

User interfaces and utilities	Button interface
Demonstration	LED sequence code examples
Hardware Abstraction	STM32Cube
Hardware	STM32F042
	STEVAL-LLL010V1

Features

- Manual mode control of LEDs through button interface
- Demo mode with several of automatic LED sequences
- Sample code to help users speed up custom application development
- Based on STM32Cube common architecture for STM32 microcontrollers

Description

The STSW-LLL010FW firmware runs on the STEVAL-LLL010V1 evaluation kit control board microcontroller to allow manual control of both the white LED and RGB LED sides of the kit LED panel board, as well as several demonstration sequences from the control board button interface. The demonstration sequences can be used as code examples to help develop custom firmware for specific applications, which can be loaded onto the microcontroller through the control board SWD interface.

In Manual mode, the button interface can be used to control the LEDs on the white LED side or the RGB LED side of the kit LED panel board.

On the white LED side, pressing the SEL (SW3) button on the control board toggles between the individual LEDs (indicated by a brief flashing sequence), and the UP (SW1)/DOWN (SW2) buttons allow brightness regulation. Pressing the FADE (SW5) button gradually fades all the LEDs in and out.

On the RGB LED side, the SEL (SW3) button selects an RGB or white channel, which is indicated by a brief flashing sequence. The UP (SW1)/DOWN (SW2) button can then control the corresponding LED brightness. Pressing the FADE (SW5) button gradually fades all the LEDs in and out.

The DEMO button (SW4) toggles between Manual mode and two automatic sequences for both the white and RGB sides of the LED panel board.

The first white LED demo fades each LED channel in and out individually at varying speeds, while the user can control global brightness through the UP (SW1)/DOWN (SW2) buttons. In the second white LED demo, each LED channel fades in and out simultaneously at different speeds, followed by a slow fading sequence applied globally.

The first RGB LED demo cycles continuously between three white points colors indicated by the three white LEDs at the bottom of the RGB panel, while the user can control global brightness through the UP (SW1)/DOWN (SW2) buttons. The second RGB LED demo gradually changes the LED colors from blue to green to red.

Product summary	
evaluation kit for LED8102S 8-channel LED driver with direct switch control	STEVAL-LLL010V1
8-channel LED driver with direct switch control	LED8102S
firmware for STEVAL-LLL010V1 with demonstration examples	STSW-LLL010FW
Applications	LED Lighting and Controls
	Human Machine Interface

Revision history

Table 1. Document revision history

Date	Version	Changes
06-Jul-2020	1	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY