32-bit MCUs

Lighting Control Module Reference Design based on Kinetis EA series MCU and E-switch (MC10XS3425)

Kinetis EA series MCUs for automotive provide a cost-effective ARM® Cortex® -M0+-based solution for a wide range of automotive applications and are pin-compatible across all of the Kinetis EA series and with future Kinetis automotive families.

Key Features

- 32-bit Kinetis KEAZ128 MCU in 64 LQFP package

- MC33662 LIN transceiver

- MC33901 CAN transceiver

- MC10XS3425 multi-chip high-side switch

- 4 LEDs

- 4 Potentiometers

- 4 User buttons

- SWD connector interface for debugging

- Light connector interface

Kit Contents

- Kinetis KEA128LEDLIGHTRD board

- DVD

- Quick Start Guide

Overview

The Kinetis EA lighting control solution is based on a Kinetis KEA128 MCU in a 64 LQFP package and a MC10XS3425 eXtreme switch to control automotive lighting and diagnose the status of the front headlamp with eXtreme switch; it is based on real automotive lights high and low beam, turning and braking. Communication through the system is realized by SPI. Freescale transceivers are implemented for LIN and CAN communication and also potentiometers are used to control the light level and status of the bulbs.

Availability

The complete solution is available to designers at a cost of $39 USD. The kit inculdes a Kinetis KEA128LEDLIGHTRD board, bill of materials, layout files, schematics and lighting software code with documentation. The board features LEDs, potentiometers, user buttons, LIN and CAN interfaces and SWD interface, all of these will accelerate debugging and lower development time and save cost. Additional drivers and documentation are available on the Kinetis EA web pages please visit **freescale.com/Kinetis/EAseries**.

Kinetis EA Lighting Control Reference Design Block Diagram

Freescale Silicon | Interface Circuits | External Connectors | Power
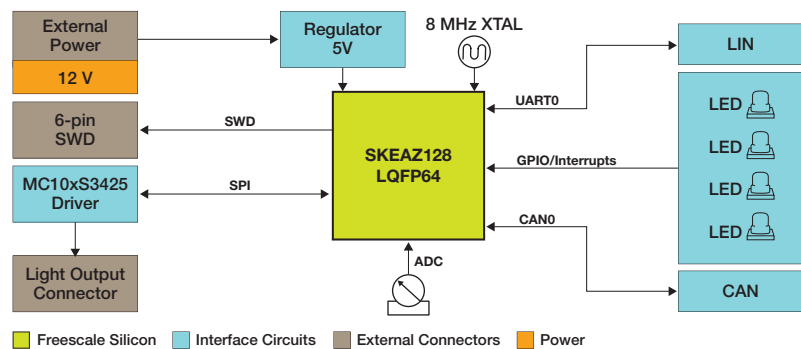
For current information about Kinetis products and documentation, please visit **freescale.com/Kinetis/EAseries**