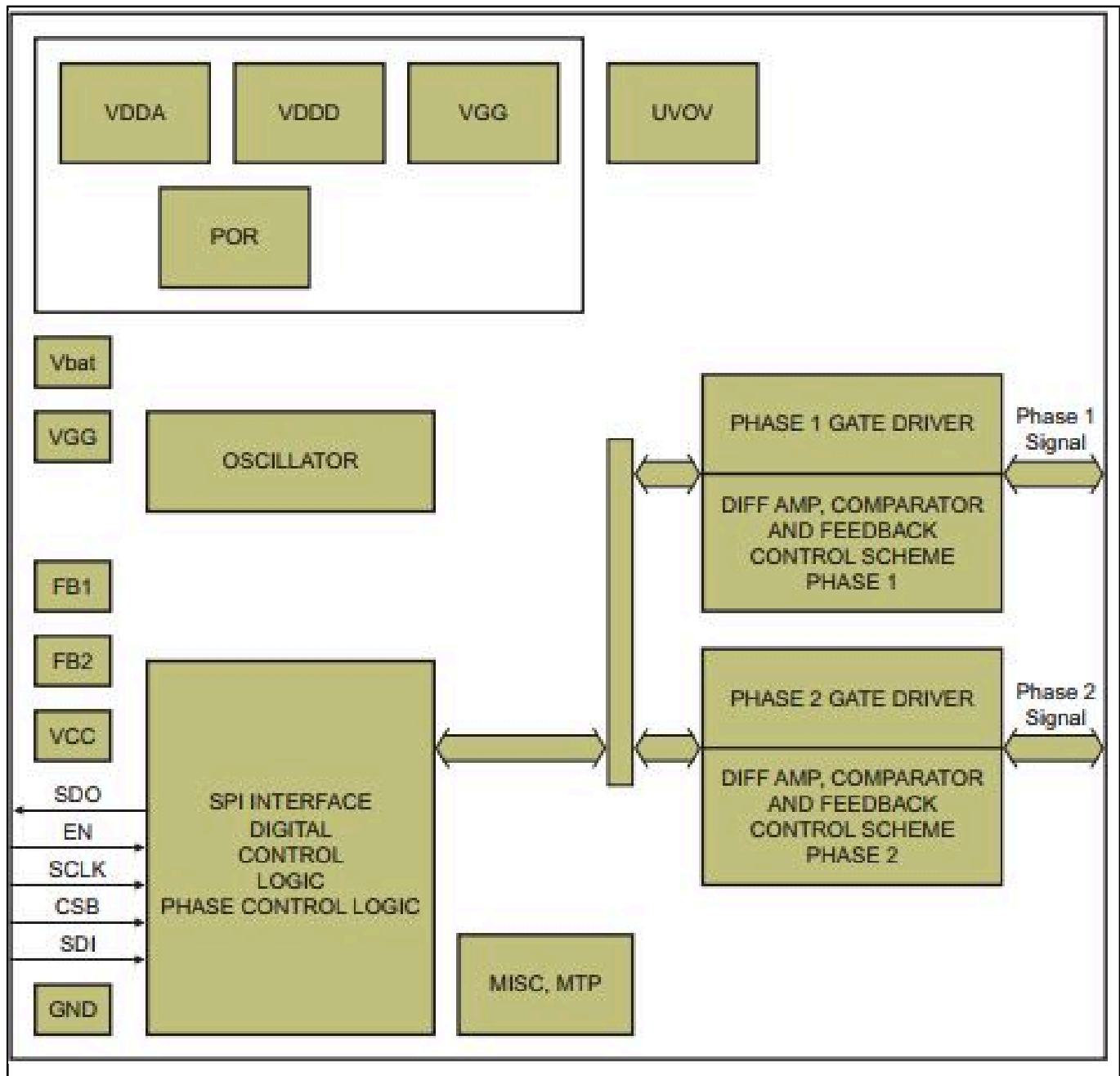# Two-Channel Automotive LED Buck Driver
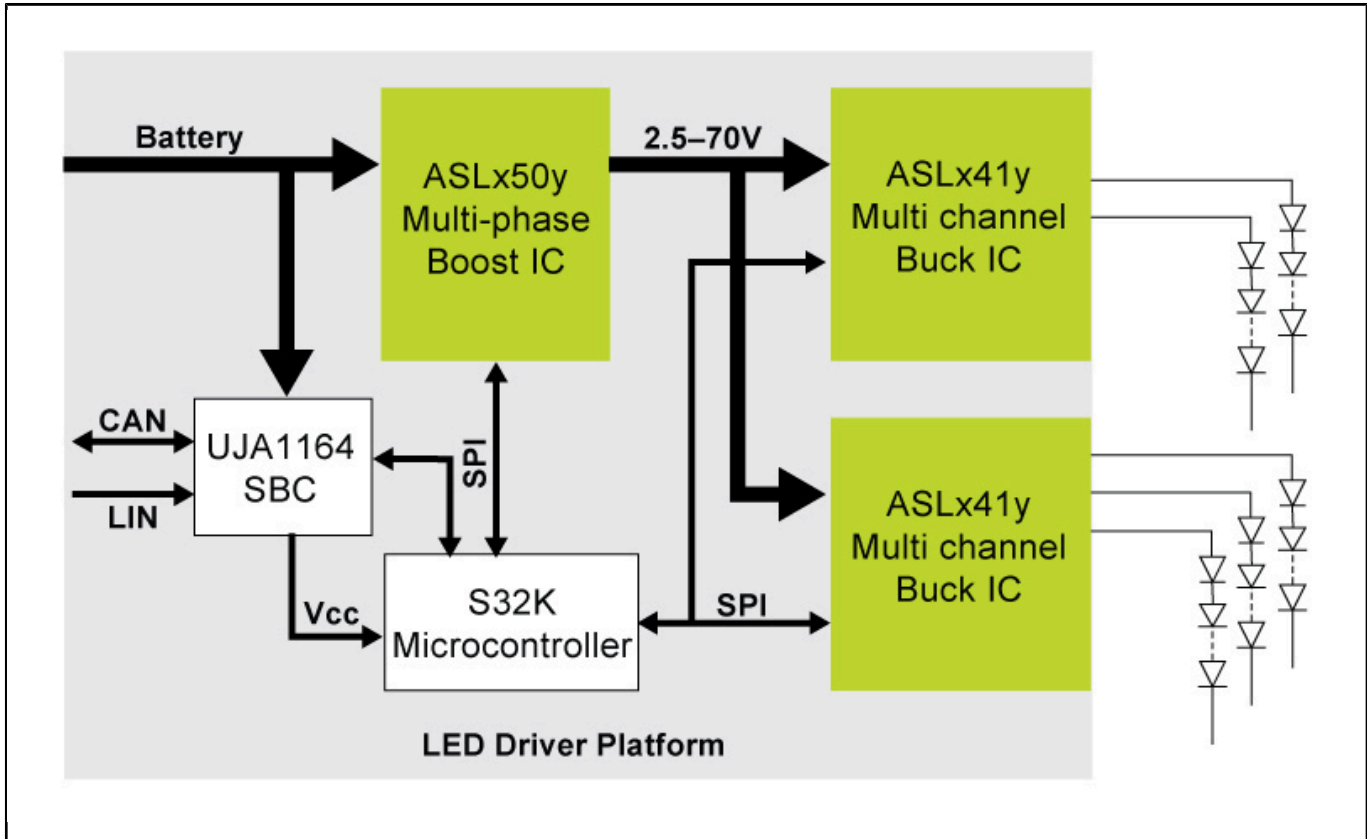
ASL241ySHN

Last Updated: Mar 18, 2024

The ASL2416SHN is a two-channel buck mode LED driver IC delivering constant average DC current to LEDs independent of the input voltage. It provides an SPI interface for extensive control and diagnostics communication with an external microcontroller. It supports up to two output channels meaning that with one driver IC, 1 or 2 LED strings can be driven independently of each other. It provides a cost-effective design solution, specifically targeting automotive exterior lighting applications. Read more on the $AUTOHREFLINK[151084170079172214393939:C:ASL2416SHN Data sheet].

The ASL2417SHN is a two-channel buck mode LED driver IC with a Limp Home mode feature. It provides an SPI interface for extensive control and diagnostic communication with an external microcontroller and integrates a customer programmable Limp Home mode. The driver IC allows configurable operation during the Limp Home mode in case SPI communication with the microcontroller has failed. Once the loss of SPI communication is detected, the Limp Home mode gets activated. During Limp-home mode, the outputs of the IC are operating according to a pre-defined condition stored in a non-volatile memory (NVM) programmable by the customer at their end of line. Read more on the $AUTOHREFLINK[151084192330073480913:C:ASL2417SHN Data sheet].

Two-channel Automotive LED Buck Driver Block Diagram

Led Lighting System Block Diagram Block Diagram

Block diagram — LED Driver Platform

- Battery → ASLx50y Multi-phase Boost IC
- 2.5–70V → ASLx41y Multi channel Buck IC
- CAN, LIN → UJA1164 SBC
- SPI connections between UJA1164 SBC, S32K Microcontroller, and ASLx41y Multi channel Buck ICs
- Vcc → S32K Microcontroller
- ASLx41y Multi channel Buck IC (second)

View additional information for Two-Channel Automotive LED Buck Driver.

Note: The information on this document is subject to change without notice.