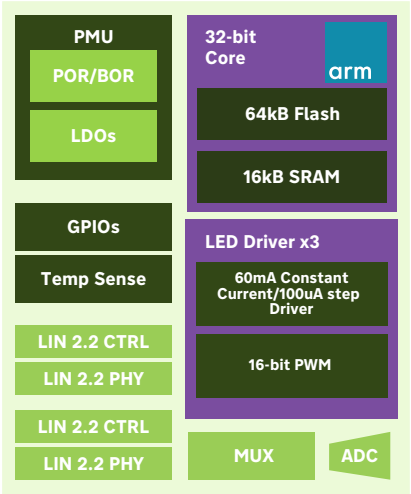
iND83215

Three-Way RGB LED Driver IC with Dual LIN Transceivers

iND83215 Features

- 3x 60mA high-brightness configurable LED drivers with 100uA steps
- 3x 16-bit PWM controllers
- 32-bit Arm® Cortex® M0 Processor
- 48kB Flash / 8kB SRAM
- Integrated LDOs
- up to 10 GPIOs
- 10-bit ADC
- Dual LIN 2.2 J2602 interface
- Optimized for Automotive applications



Applications

- Automotive interior lighting
- Consumer lighting products
- Industrial lighting

The iND83215 is an automotive-grade LED lighting IC driver with an integrated 32-bit Arm® Cortex® M0 processor, 48kB of Flash and 8kB of SRAM, creating a single-chip solution for interior lighting systems. This device has a faster clock than iND83209 for improved processing and faster pulse width modulation (PWM) clocking. The IC includes a flexible power management system, 3x open-drain LED I/O drivers with programmable current and 16-bit PWM, as well as device monitoring features and external interfaces for control and expandability.

The iND83215 can be connected directly to the automotive supply and withstand up to 45V load dump from a car battery. The integrated power management unit implements two on-chip voltage regulators with only one requiring an external capacitor.

The 3x LED drivers can each support a maximum of 60 mA constant current with a 100uA resolution at high-voltage (up to VBAT). An integrated temperature sensor ensures the chip does not exceed its operating range of -40°C to +125°C. There is one SPI Master, one UART, and two LIN transceivers and controllers (master and slave, version 2.2) that provide LIN auto-addressing functionality by using the LIN Switch Method (LSM). The device also features an integrated 10-bit ADC for monitoring purposes.

The iND83215 integrates up to ten GPIOs that enhance its functionality and flexibility, making the device suitable for general purpose microcontroller applications. For lighting applications, the device can be expanded to drive additional RGB LEDs by using external MUX switches to time-multiplex drive currents.

Evaluation kits are available to enable rapid development and testing of advanced lighting prototypes.

Ordering Information

Device Name	GPIO	Platform	Temp Range	Package	Pins
iND83215	6	Automotive	-40C to +125C	4x4 mm QFN	20 pins @ 0.5mm Pitch
iND83215A	10	Automotive	-40C to +125C	4x4 mm QFN	24 pins @ 0.5mm Pitch