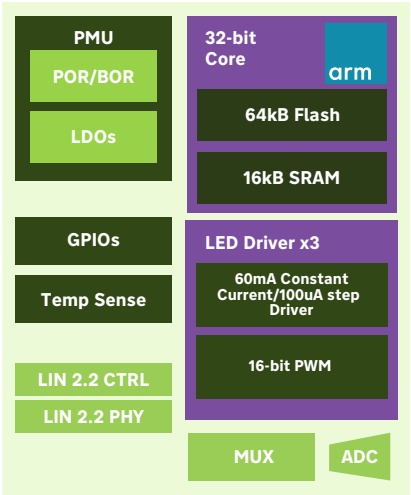
iND83212

Three-Way RGB LED Driver IC with Single LIN Transceiver

iND83212 Features

- 3x LED drivers
- 32-bit Arm® Cortex® M0 Processor
- 64kB Flash / 16kB SRAM
- Integrated LDOs
- 3x 60mA high brightness configurable LED drivers with 100uA steps
- 3x 16-bit PWM controllers
- 4 GPIOs
- 10-bit ADC
- LIN 2.2 J2602 interface
- Optimized for Automotive applications



Applications

- Automotive interior lighting
- Consumer lighting products
- Industrial lighting

The iND83212 is an automotive-grade LED lighting IC driver with an integrated 32-bit Arm® Cortex® M0 processor, 64kB of Flash and 16kB of SRAM, creating a single-chip solution for interior lighting systems. The IC includes a flexible power management system, and 3x open-drain LED I/O drivers running at up to VBAT with programmable current and 16-bit PWM, plus specific monitoring features and external interfaces. The iND83212 is designed to be connected directly to the automotive supply and can withstand a 45V load dump from the car battery.

The device contain 64kB of Flash and 16kB of SRAM.

The integrated power management unit implements two on-chip voltage regulators with only one of them requiring an external capacitor.

The 3x LED drivers each offer a maximum of 60 mA constant current with 100uA steps at high voltage (up to VBAT). An integrated temperature sensor ensures the chip does not exceed its specifications.

This device features four integrated GPIOs that expand functionality and flexibility, making it suitable for general purpose microcontroller applications. For lighting applications, the GPIO enables time-multiplexing to increase the number of driven RGB LEDs when combined with the 3x high-voltage open-drain IOs used for driving the LEDs. This device is suitable for applications requiring a temperature range of -40°C to +125°C.

There is one LIN slave transceiver and controller (version 2.2) for communication with the ECU and an integrated 10-bit ADC for monitoring purposes. The iND83212 is a cost-effective solution, ideally suited for applications that do not require LIN auto-addressing. For applications that do require auto-addressing, please refer to iND83215.

iND83212 comes in a low cost, 4x4mm 20-pin QFN package and is suitable for applications from -40C to +125C.

Ordering Information

Device Name	GPIO	Platform	Temp Range	Package	Pins
iND83212	4	Automotive	-40C to +125C	4x4 mm QFN	20 Pins @ 0.5 mm Pitch