

MLX81113/MLX81114

LIN RGB LED DRIVER FOR AUTOMOTIVE AMBIENT LIGHTING

SINGLE-CHIP RGB LED CONTROL

Like the chameleon we can set the RGB LED to every possible color.

MLX81113/MLX81114

The MLX81113 and MLX81114 ICs are fully integrated low-end LIN slaves for ambient light applications in automotive environments to drive via LIN bus RGB LEDs. It is suitable for bus systems according to LIN 2.x as well as SAE J2602. The MLX81114 extend the MLX81113 with a memory protection option.

The combination of a physical layer LIN transceiver and a LIN protocol controller together with current-controlled outputs make it possible to develop in a short timeframe simple, but powerful and cost-efficient ambient light modules connected to LIN bus systems.

KEY FEATURES

- Ø 16-bit pipelined RISC microcontroller with
 - 32 kByte Flash
 - System ROM with bootloader and LIN driver
 - 2 kByte RAM
 - 512 Byte EEPROM
- Math co-processor for 32-bit MUL/DIV operations
- S Watchdog timers with independent clocks
- Internal RC oscillator
- LIN protocol controller according to LIN 2.x and SAE J2602
 - Baudrate up to 19.2 kBaud
 - Frame processing
 - Low interrupt load to the application

- LIN transceiver according to LIN 2.x and SAE J2602
 - Support for autoaddressing according to bus shunt method
- ✓ 4x high voltage I/Os with free configurable current sources (up to 60 mA) for RGB+W
- Diagnostic capability for connected LED (short, open, threshold)
- ✓ 4x 16-bit PWM outputs

1138 2448

8468

- Configurable resolution
- Memory protection option (for the MLX81114)
- FOR MORE INFORMATION: WWW.MELEXIS.COM/MLX81113 WWW.MELEXIS.COM/MLX81114



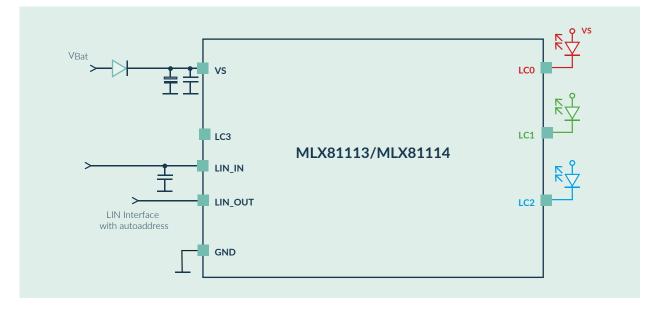
🔗 10 bit ADC with DMA

- Multiple channels (outputs, VS, temperature sensor, IOs)
- Different reference voltages
- Differential as well as single-ended measurement capability
- DMA access
- Low standby current consumption of typ. 25 μA (max 50 μA) in sleep mode
- Solution Integrated battery monitor including over- and under-voltage detection

- Ø Automotive temperature range of −40 °C to 125 °C
- Ø 28 V jump start
- ✓ Integrated temperature sensor
- Developed following ISO26262 supporting safety system up to ASIL-A
- Ø AECQ-100 qualified
- SOIC8 package with exposed pad
- OFN10 3x3 package with exposed pad



EASY APPLICATION CONFIGURATION



he above information is as if and beleved to be correct and accurate. Melevis disclaims any and all biblity including without imitation, special, consequential or incidental damages, and any and all waranties, express, stautory, implied, or by description, including waranties of fitness for particular purpose, non-infragement and mechanizability. Meloise reserves the right to change it at any time and without notice. Users should obtain the batest version of the information to verify is current. Uses must further determine the suitability of a product for its application, including the level of reliability, required and determine-whether it is fit for a particular purpose. Export control regulators may apply and export might require a provident and the mini-whether it is fit for a particular purpose. Export control regulators may apply and export might require a prova automation to verify Alexies products are intended for use in normal commercial applications. Unless otherwise agreed upon in writing, the products are rold espined, automated or warrated to be suitable in applications requiring extended temperature ange and/or unusual environmental requirements. High reliability polications, such as medical file-support or lifes stating equipment are specified on the index of the applications requiring extended temperature ange and/or unusual environmental requirements. High reliability polications, such as medical file-support or lifes stating are and continues.