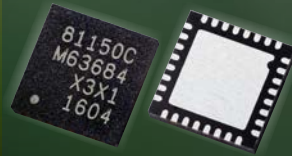# Melexis

## INSPIRED ENGINEERING

**MLX81150 / MLX90363 / MLX81106**

## COMPACT SOLUTION

## FOR SMART SYNCHRONIZED ACTUATORS

*The hummingbird's beating wings flap at extremely high frequencies, typically around 50 times per second. This allows it to fly at speeds exceeding 15 m/s, to fly backwards or to seemingly be suspended in the air in perfect balance. What better animal to reflect the motor/control driver and actuator capacities?*

## CONNECTING SMART ACTUATORS

Some automotive applications require a synchronized robust actuator solution for 2 or more motors, like the dual-wiper application. Melexis can offer a solid solution with its long experience on smart motor drivers, robust sensors and easy LIN communication interface.

### KEY FEATURES

**Triaxis®**

- MLX81150: smart LIN motor driver

  - Internal RC-Oscillator
  - Primary LIN interface to communicate with automotive ECU or next MLX81150 driver
  - 4 PWM driver outputs to power accurately a DC motor with a 4x FET bridge
  - IC is powered directly by 12V battery, IC can power low-voltage sensors
  - SPI interface to connect with smart sensor MLX90363
  - SPI interface to connect with 2nd LIN bus using MLX81106 gateway

- MLX90363: robust 360-deg Triaxis® sensor with digital output

  - Sensor is delivered fully calibrated over voltage and temperature
  - Sensor gives position readings and full diagnostic feedback to MLX81150 over SPI

- MLX81106: smart LIN gateway

  - Smallest and low-price SPI-to-LIN gateway in SO8 package
  - IC receives LIN messages from 1st MLX81150, and transfers to 2nd MLX81150 IC

- Total solution for synchronized actuators

  - High accuracy of positioning
  - Full diagnostics feedback for failsafe operation
  - Operation from -40°C to +150°C
  - Fast sensing and communication of two positions, allowing fast synchronization
  - MLX81150 and MLX81106 come with ready-to-use LIN communication software