HALIOS® Controller for Proximity and Gesture Recognition

E909.21

Production Data - Mar 15, 2018

RoHS
compliant

Features

- Patented HALIOS® (High Ambient Light Independent Optical System) control loop
- 4 LED Sending Channels, 100mA per channel
- 2 Receiving Channels
- 1 Compensator Channel
- Scalable HALIOS® frequency up to 1MHz
- 16 bit Harvard Architecture H430 CPU
- Configurable CPU system clock frequency: 4, 8, 12 and 24MHz
- 32k Byte Flash
- 4k Byte SRAM and 8k Byte SysROM
- Programmable window watchdog with independent clock
- 2 or 4 Wire JTAG debug interface
- 1 SPI (Slave)
- 1 High Speed-I²C, 3.4MHz (Slave)
- Ambient light immunity up to 200.000 lux
- Temperature Range -40°C to +85°C
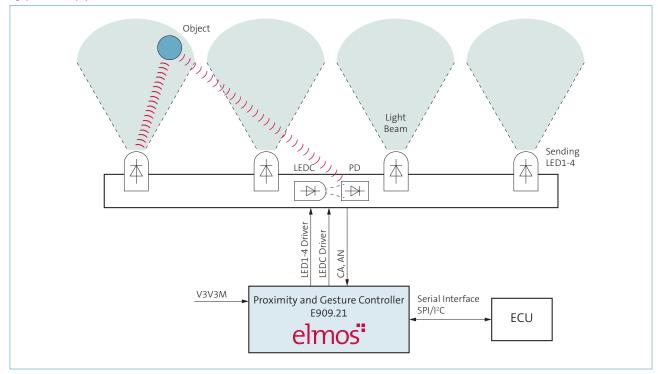- AEC-Q100 automotive qualified

General Description

The E909.21 controller for proximity and gesture recognition is based on the proven HALIOS® technology. The device is optimized for the use for automotive touch displays. The function principle is based on comparing the light beam, which is reflected by the object to be detected with a reference light beam for most robust object detection. As a result, the device offers best immunity against ambient light, improved sensitivity and automatic calibration over vehicle lifetime. The E909.21 is the first member of a complete product family, which enable scalable solutions for different display sizes, shapes and new HMI concepts.

Applications

- Proximity and gesture recognition for automotive touch displays
- Driver and passenger detection
- Wake-up function for displays
- Touchless control in harsh environments (e.g. explosion protected areas)

Ordering Information

Ordering-No.:	Temp Range	Package
E90921A61Cxxx*	-40°C to +85°C	QFN32L5

* empty flash, no bootloader, customer specific flash programming is negotiable on demand

Typical Application Circuit

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