DACOM West

MLX90129 RFID 13.56MHz Sensor TAG/Data Logger IC

The MLX90129 combines a precise acquisition chain, internal temperature sensor, interface for external resistive sensors, SPI port and a RF TAG frond-end.

It can be accessed and controlled through the ISO15693 RFID front-end or SPI port.
Without any other components than a 13.56MHz tuned antenna, it becomes a RFID thermometer.
With two differential sensor inputs many measurement applications can be implemented.
The on chip regulator allows power supply by RF field for battery-less Applications.

As Sensor-Interface acquisition chip the sensor output data is stored in the internal 3.5kbits user memory. The storage capacity can be extended by connecting an external EEPROM to the SPI port. The SPI port can also connect the MLX90129 to a µC which allows more specific applications, like adding actuating capability or RF transmission.

Features & Benefits

- Versatile A/D interface for resistive sensors
- ISO-15693 13.56MHz transponder
- Slave / Master SPI interface
- 4k-bit EEPROM with access protection
- Standalone data logging mode
- Ultra low power
- Internal 32.768MHz RC-Oscillator
- Battery or battery-less applications
- Low cost and compact design
- Battery supply: 3V optional
- Temperature range: −40°C to 105°C
- TSSOP20 Package

Evaluation Board

Application Examples
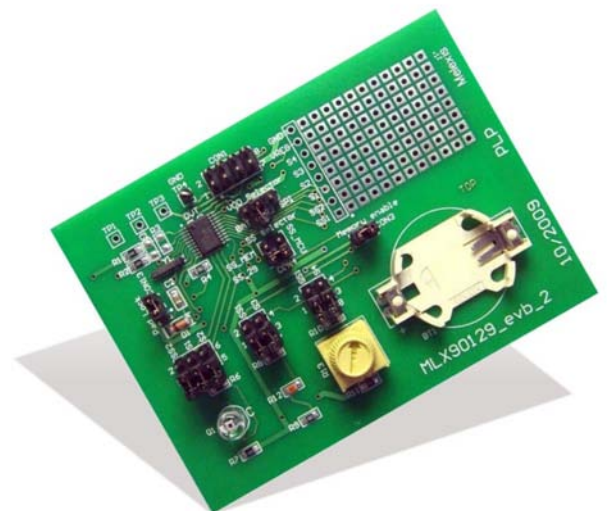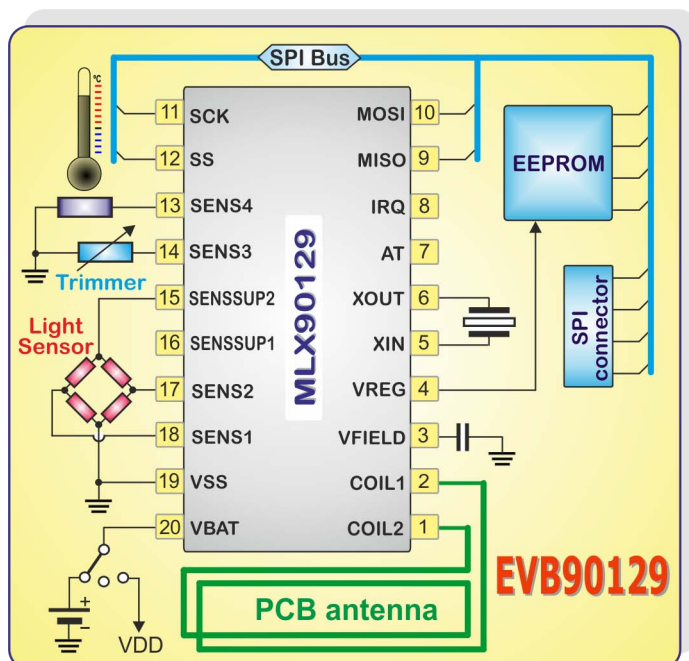
RFID Temperature Sensor TAG
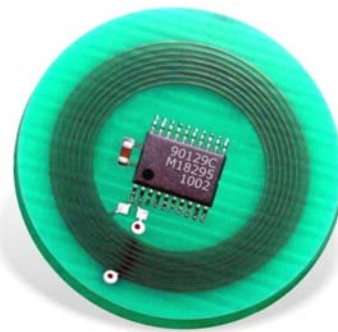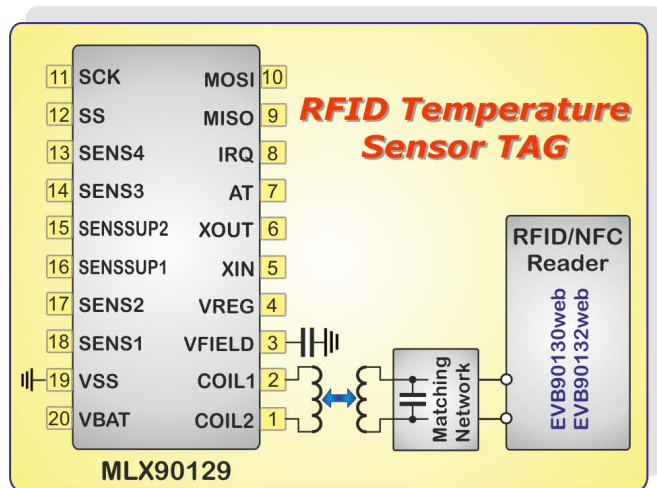
MLX90129
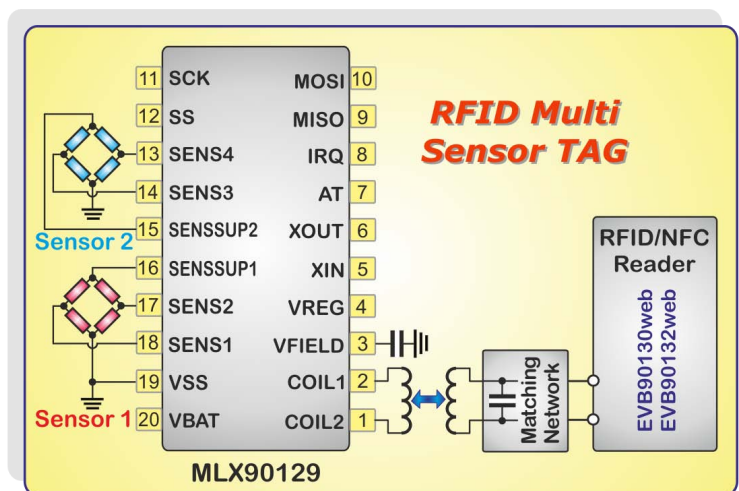

- Temperature Sensor on Chip

- Cold chain monitoring
- Multi Sensor TAG
- Asset management
- Security & integrity control
- Building automation
- Industrial- & medical control
- Residential control

RFID Multi Sensor TAG

MLX90129

Block Diagram MLX90129

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