

Product Information

MLX90121

13.56 MHz RFID Transceiver

The MLX90121 is an ISO compliant transceiver circuit for use with contact-less smart labels and smart cards, fully compliant with ISO 14443 and 15693 protocols.

Applications range from freight identification systems to access control.

Samples and Evaluation Boards are available!

- Complies with ISO 14443A/B, 15693 standards
- Provision for new ISO18000-3 Mode 1 standard compliance
- Programmable encoder for custom protocols
- Low external component count

Features

The main features include user selectable modulation depth in write mode, whereas single sub-carrier ASK, FSK and PSK modulations are recognized in the read mode. The receiver is based on a diode envelope detector, followed by an IF filter and amplifier. A logarithmic amplifier is used for single sub-carrier ASK detection, ensuring fast and clean data recovery. The limiting output of the log amp is used for FSK and PSK recovery. The transmitter uses a built in open drain output transistor, which can provide up to 200 milliwatts of RF power to a 50 Ohm load with a 5 V power supply using the recommended matching network. This is suitable for most short to mid-range applications. A simplified antenna and matching network can be used (such as in hand-held reader applications), at the expense of a reduced reading range. The chip is configured with a serial interface. A synchronization signal is available when majority voting is used. Digital part contains ASK, FSK (423 / 484kHz) and PSK (847kHz) decoders and a programmable encoder to facilitate data handling with a low cost microcontroller. The encoder can be programmed with 6 different patterns. The chip can also be used as an analog front-end, in direct mode.



Bus ICs

BLDC Motor
Control ICs

Pressure Sensors

Wireless ICs

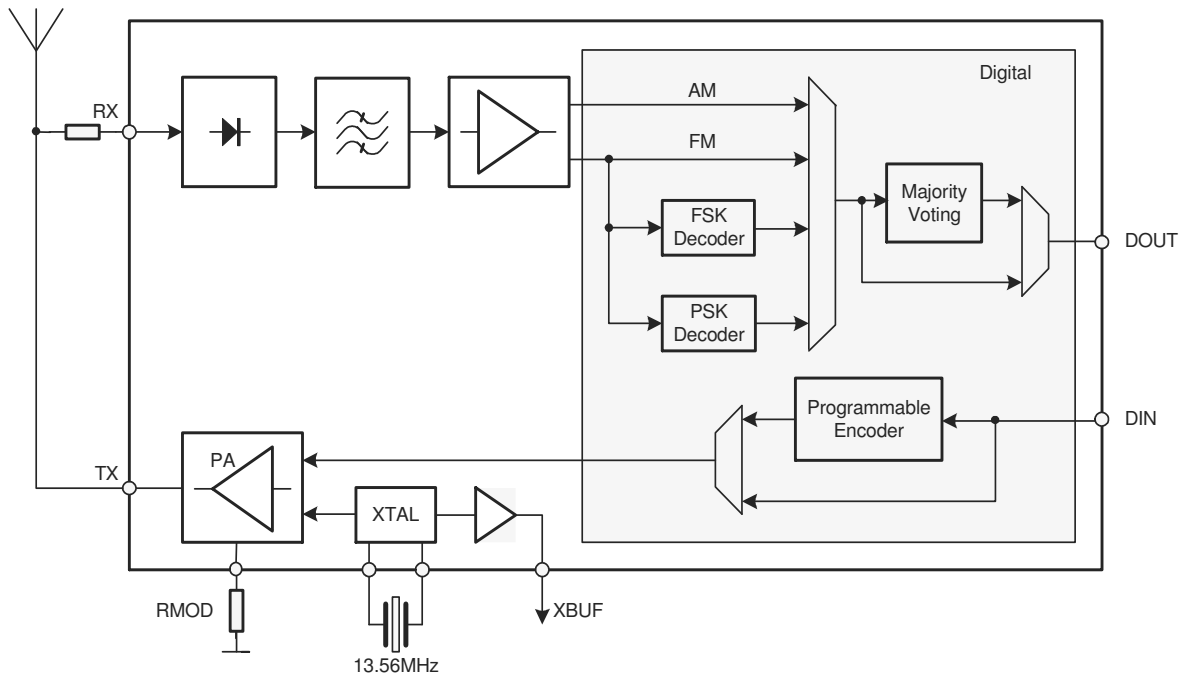
Hall Effect ICs
And Sensors

Optoelectronic
Sensors

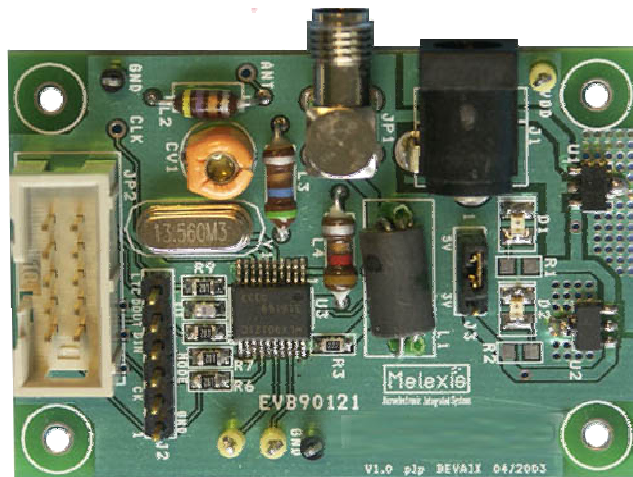
Sensor Interface ICs

Infrared Sensors

Block Diagram



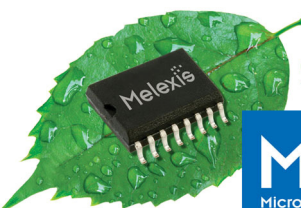
Demo Board Available



For additional information email info@melexis.com or go to our website at: www.melexis.com

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