

1Mbps, low power 2.4 GHz Transceiver

Description

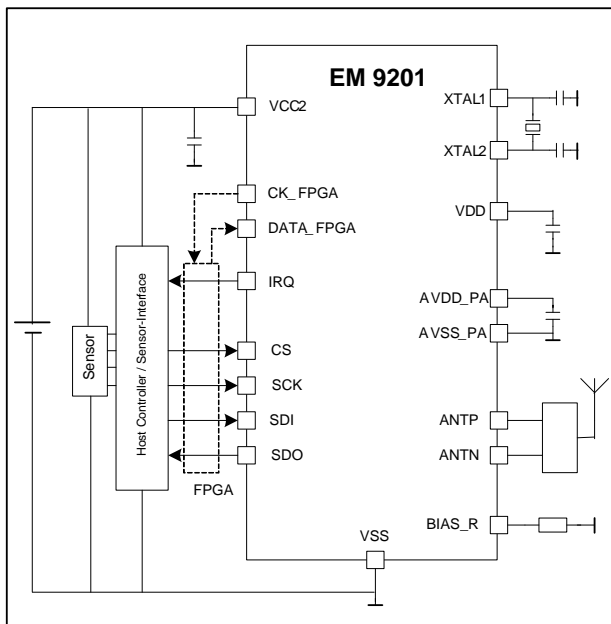
EM9201 is a 1Mbps low power, low-voltage 2.4GHz transceiver IC with built-in link-layer logic suitable for proprietary wireless links in the 2.4 GHz ISM band.

EM9201 features a radio core with a low-IF architecture and GFSK modulation scheme being compliant with the Bluetooth low energy technology standard.

Control of the link-layer logic is possible through a standard SPI interface. To achieve this, an external host-controller MCU is required.

EM9201 can operate from a 3V battery or any other source of power such as an external LDO regulator.

Typical Application Schematic



Features

- Wide operating voltage range from 1.9V to 3.6V
- Suitable for Lithium battery
- Bluetooth Low Energy-compliant GFSK modulation
- Low drift of PLL frequency by design
- 1Mb/s On air data rate
- High Performance:
 - Programmable RF output level from -18 dBm to +3dBm in 8 steps
- Compact radio design with low BOM cost
 - MLF24 4x4 package
 - Low-cost 26MHz crystal, frequency tolerance ± 30 ppm
 - No antenna matching elements needed through appropriate PCB antenna design : 200 Ω differential impedance of antenna port
- BLD function: battery level detection in accordance with selected battery
- Current consumption ($V_{CC2} = 2.5V$)
 - 14 mA in RX
 - 14 mA in TX (0dBm output power)
 - 0.8 μA in power-down mode

Typical Applications

- Remote sensing in general
- Wireless mouse, keyboard etc.
- Wireless sensors in watches
- Wireless sports equipment
- Alarm and security systems

Pin Assignment

