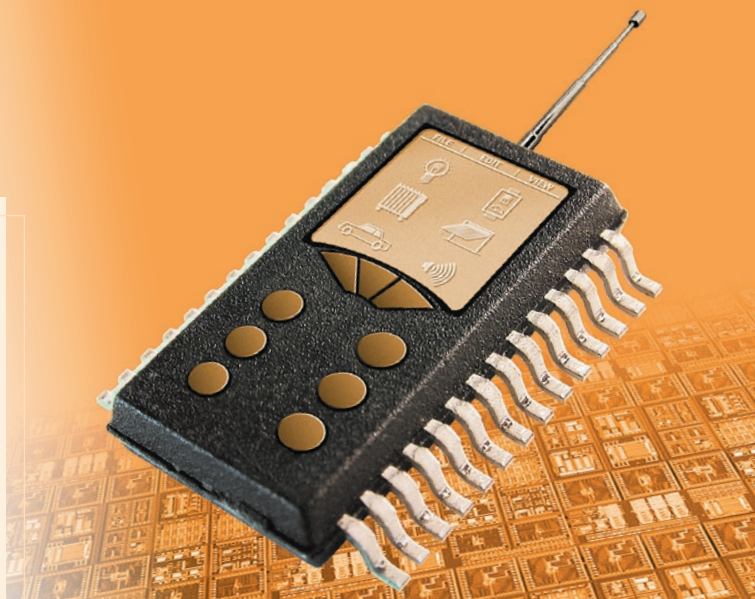
Chipcon Products
from Texas Instruments



CC900
RF Transceiver

The CC900 is a high performance single-chip FSK RF transceiver mainly intended for the 868 MHz and 915 MHz ISM/SRD bands. Its high receiver sensitivity (-110 dBm) enables a long communication range.

A high performance RF solution

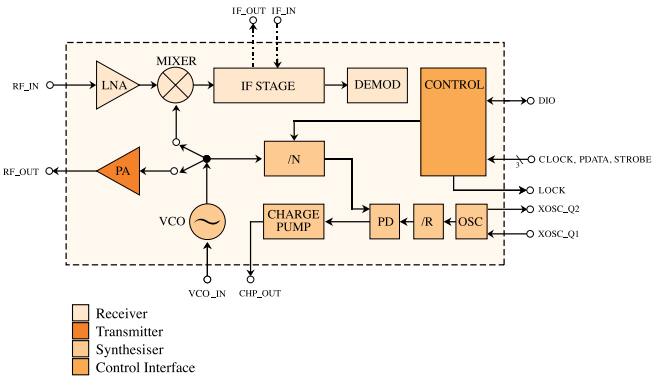
The CC900 is designed for high receiver sensitivity and flexibility. The programmable carrier frequency, ranging from 800 MHz to 1000 MHz, enables the chip to be used in applications for the worldwide market. A communication range exceeding 500 m can be reached with 4 dBm output power. The built-in, active power-down modes combined with a standby current as low as 0.2 µA extend battery life. The high level of integration significantly reduces system cost.

High flexibility and communication security

Virtually all radio parameters of the CC900 are programmable. The carrier frequency, frequency deviation, intermediate frequency, output power and more, are easily programmed through a three-bit serial interface. The extreme flexibility makes the CC900 ideal for a large number of applications. The Frequency Hopping Spread Spectrum (FHSS) option together with other features that improve communication security, makes the CC900 well-suited for critical applications such as wireless alarms and security systems. The fine frequency programming steps of 250 Hz enables narrow band communication without using an expensive TCXO.

All you need to get started..... and finished

The CC900 Development Kit makes it very easy to evaluate the performance of the CC900 chip, and in a short time, designers can develop their own RF modules based on this reference design. The SmartRF® Studio software package which is included, provides the flexibility needed to automatically generate configuration data used by the microcontroller.



Block diagram CC900

Based on Chipcon´s proprietary SmartRF® technology, the Chipcon RF-ICs offer the market´s most competitive solutions to meet the stringent demands of today´s wireless communication.

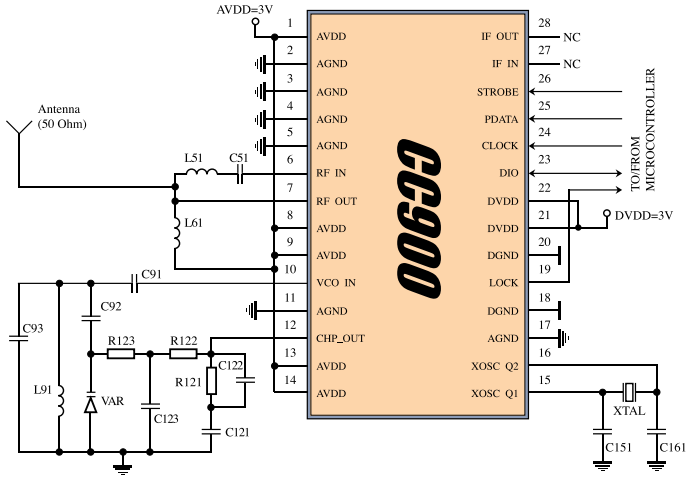
CC900

SmartRF® - Connecting Smarter

SmartRF®01-Product line

CC900 Features

- Single-chip RF Transceiver
- Programmable frequency (800-1000 MHz)
- Few external components required
- FSK modulation
- Low supply voltage (2.7 – 3.3 V)
- Very high receiver sensitivity (-110 dBm)
- Programmable output power ranging from –20 to 4 dBm
- Programmable frequency in 250 Hz steps
- Crystal temperature drift compensation possible without use of external TCXO
- Suitable for multi channel systems and frequency hopping protocols
- No external RF switch or IF filter required
- Single-port antenna connection
- Suitable for both narrow- and wide-band systems
- Small 28 pins SSOP package
- Complies with EN 300 220 and FCC CFR 47, part 15



CC900 Application circuit: Very few external components required

Applications

- Remote keyless entry
- Wireless alarm and security systems
- Home automation
- Automatic meter reading
- 868/915 MHz SRD band systems

Specifications		Min	Typ (868 / 915 MHz)	Max	Unit
General:	RF Frequency Range	800		1000	MHz
	Data Rate	0.3		9.6	kbit/s
TX Mode:	Output Power (programmable)	-20	0	4	dBm
	FSK Separation (programmable)	1		200	kHz
RX Mode:	Receiver Sensitivity		-110		dBm
Power Supply:	Supply Voltage	2.7		3.3	V
	Current Consumption, RX:		23		mA
	Current Consumption, TX, -20 dBm		25		mA
	Current Consumption, TX, -10 dBm		31		mA
	Current Consumption, TX, 0 dBm		54		mA
	Current Consumption, TX, 4 dBm		91		mA
	Current Consumption, power down		0.2	1	µA

TEXAS INSTRUMENTS

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