muRata
INNOVATOR IN ELECTRONICS

300 - 960 MHz RFICs

Short-range Radio Transceiver

TRC105
300 - 510 MHz

TRC103
863 - 960 MHz

ROHS Compliant

00K/FSK Modulation FHSS Capable Multi-Channel Small Size 5mm X 5mm

The TRC105 and TRC103 are single chip, multi-channel, low power RF transceivers. They are an ideal fit for low cost, high volume, two-way short-range wireless applications in the 300 to 960 MHz frequency range. Both are FCC & ETSI certifiable.

Wide range of frequencies with same pin-out

- 303-307MHz - TRC105[1]
- 310-319MHz - TRC105[1]
- 342-348MHz - TRC105[2]
- 365-381MHz - TRC105[2]
- 382-398MHz - TRC105[2]
- 402-407MHz - TRC105[1]
- 418-435MHz - TRC105[1]
- 447-451MHz - TRC105[2]
- 863-870MHz - TRC103[3]
- 902-928MHz - TRC103[3]
- 950-960MHz - TRC103[3]

[1] Available through Distributors in September 2016
[2] Available through Distributors in October 2016
[3] Currently available through Distributors - IN STOCK NOW!

Low-power consumption features

- Radio will allow microcontroller to sleep until data is received that requires processing
- Transmit / Receive FIFO can be loaded / unloaded with radio in sleep mode
- Transmit at high data rate to reduce transmitter on time and save power
- Utilizing the RSSI in receive mode, the transmit power can be adjusted to maintain the dat link and minimize power consumption

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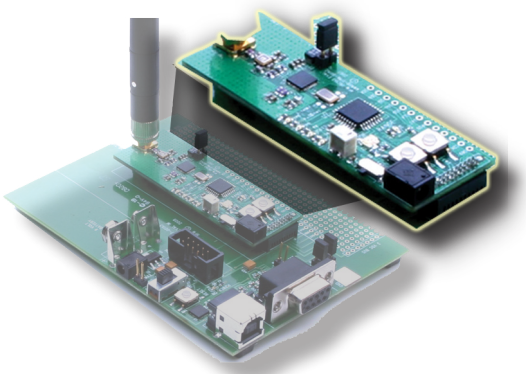


ROHS Compliant
FCC & ETSI Certifiable

Ideal for low-cost, high volume, two-way short-range wireless applicatiosn operating a variety of ISM band frequencies

Single-chip Multi-Channel Low-power Small size

- Ultra-low Receiver Current Consumption @ "'3.3 mA typical (TRC103) and "'3.5 mA typical (TRC105)
- High RX Sensitivity: -112 dBm typical (FSK)
- High Data Rate (Programmable): 32 kb/s OOK, 200 kb/s FSK
- Programmable Transmit Power: +13 dBm A

Easy design-in

All crltlcal RF and base-band functions are Integrated in the radios, minimizing external component count and simplifying design-in. A mlcrocontroller, RF SAW triter, 12.8 MHz crystal and a few passive components are all that is needed to create a complete, robust radio function. The TRC105/TRC103 incorporates a set of low-power states to reduce current consumption and extend battery llte. The small size with low power consumption of the TRC105/TRC103 make them ideal for a wide variety of short-range radio applications.

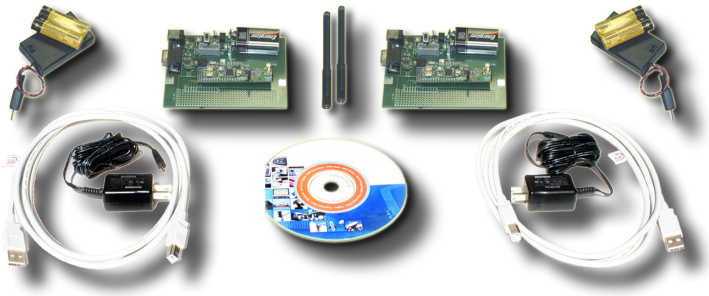
- Programmable 32-Blt Sync Byte
- Integrated PPL, IF, Baseband Circuitry
- Programmable TX/RX FIFP - 54-Byte
- Standard SPI Interface
- Integrated Crystal Oscllllatcr: 12.8 MHz Xtal Reference
- Programmable CLK Output Frequency
- Integrated RSSI - Dlgltal
- Integrated Packet CRC
- Integrated Data Whitening
- Integrated Manchester Encoding I Decoding
- Operating Voltage: 2 .1 V to 3. 6V

Long battery life

Includes a set of low-power states to reduce overall current consumption and extend battery life.

Fast-track your design -- order a Developer Kit today!

- Full development with Silicon Labs caos1 F310 IDE (sold separately)
- Individual parameter configuration
- 115.2 kb/s serial communication setup
- Example Code
- Two-way Communications Link (ComLink)
- Range Test
- Up to 100 kb/s data rate
- PData Terminal Program
- Diagnostic LEDs
- 64 Byte Packet Handling



Dev Kit contains:

- Two development boards
- Two USB 2.0 cables
- Two 2xAA battery packs
- Four AA batteries
- Two 9V batteries
- Two antennas with standard SMA connector
- Program CD that contains C code, RFDA 3.0 Software, and User Guide

How To Buy

Murata products are sold through a world-wide network of sales reps and distributors. Go to the Murata website at www.murata.com and visit the "Products - Wireless Connectivity Platforms" section to locate a sales/distribution partner near you.

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