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Technical Description

The CC2538EM is a development tool for IEEE802.15.4 solutions in the 2.4GHz ISM band. The CC2538 is a System-on-Chip solution tailored for 2.4 GHz Zigbee applications.

The CC2538EM board is equipped with a 2.4 GHz PCB antenna. The board does not have any form of housing or cover. The CC2538EM is an engineering development board and cannot be used in an end product.

The wireless control protocol is based on IEEE802.15.4 at 2.4GHz. The frequency range is 2405MHz to 2480MHz, with 5MHz channel spacing. The PHY layer uses a DSSS technique with a chip rate of 2Mbps and a data rate of 250kbps. The modulation format is half sine shaped O-QPSK.

The CC2538 System on Chip has a differential RF output. On the CC2538EM this differential output is fed to a balun and a filter towards a pcb antenna. The antenna gain is 5.8dbi.