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Technical Description

The SmartRFCC1110EM-868, see Figure 1, includes Texas Instruments' CC1110, which is a sub-1 GHz system-on-chip (SoC) designed for low power wireless applications. The CC1110 combines a sub-1 GHz transceiver and a single-cycle 8051 MCU, 32 kB of in-system programmable flash memory and 4 kB of RAM.

CC1110 has a balanced output (RF_N and RF_P), which is transformed to a single ended, 50 ohm signal through a passive component (capacitor/inductor) balun. The output of the balun is low pass filtered to attenuate harmonic radiation and then connected to a PCB antenna. For antenna performance please refer to design note DN024 (www.ti.com/lit/swra227).

The CC1110 on the SmartRFCC1110EM-868 needs to be programmed in order to operate within the 915 MHz frequency band, i.e. the user needs to configure the SmartRFCC1110EM-868 for operation in the 902-928 MHz frequency band using appropriate tools and software provided by TI.

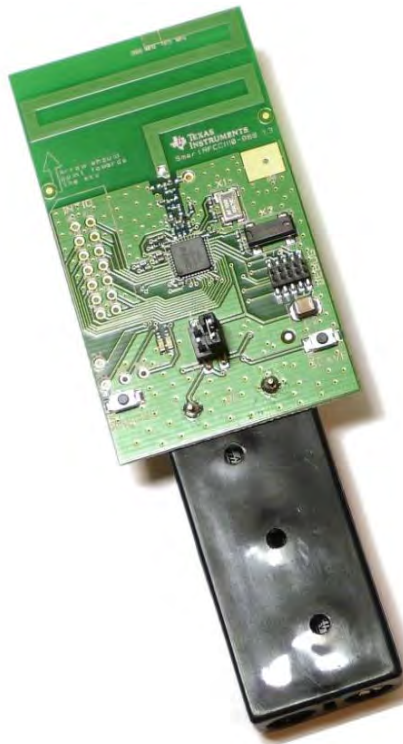


Figure 1 SmartRFCC1110EM-868