

Radio PHY

This page describes the physical radio configuration for use in sending packets over the air.

915MHz Mode

This is the primary (and currently, only) PHY configuration supported. It runs on 2MHz wide channels in the 915MHz ISM band, supporting data rates up to 250kbps.

Radio Configuration

- Modulation scheme: ~~2GFSK, 250kbps data rate~~ OQPSK, 250ksym/sec (500kbps), 500kHz deviation
- DSSS: Code length 32, spreading factor 8 (4 bits/chip), chip base 74 4A C3 9B
- Data whitening: Bit 0, PN9 polynomial, seed 0x01F0
- Preamble: 32 bits
 - The precise value of the preamble is one of the chip codes, so it's not specified
- Sync word: ??
 - TODO: can this be used as address filtering for devices?
- Forward error correction: None
- Checksum: CCITT_16, seed 0xffff, includes packet header

https://community.silabs.com/s/article/understanding-dsss-encoding-and-decoding-on-efr32-devices?language=en_US

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