

Technical Description of ETRX358x family

The Telegesis ETRX358x and ETRX358xHR modules are fully integrated low power 2.4GHz ZigBee® modules. On this module family an IEEE802.15.4-2003 compliant DSSS transceiver integrated into the Ember EM358x family of System-on-Chips together with an 32-bit ARM® Cortex™-M3 processor is used. The SoC's integrated receive channel filtering allows for robust co-existence with other communication standards in the 2.4 GHz spectrum, such as IEEE 802.11-2007 and Bluetooth. To maintain the strict timing requirements imposed by the ZigBee and IEEE 802.15.4-2003 standards, the EM358x integrates a number of MAC functions, AES128 encryption accelerator, and automatic CRC handling into the hardware. The MAC hardware handles automatic ACK transmission and reception, automatic backoff delay, and clear channel assessment for transmission, as well as automatic filtering of received packets.

The "HR" variants have a coaxial antenna output following the RF tuning and filtering whereas the non "HR" variants host an Antenova Rufa chip antenna as well as the appropriate tuning circuits.