

Theory of operation

The SKY300 Beacon has been designed to be a wearable tracker and emergency call device. It can be worn as a pendant or bracelet. It is based upon the TI CC2640 MCU and has an accelerometer and push button. The Beacon operates as a BLE non-connectable advertiser. It broadcasts an advertising packet once every 1.5 seconds with battery-level data, accelerometer data, RSSI value, and button status embedded in the advertising packet. The RSSI value is used for the tracking. The TX standard operation level is -12dBm with an option to increase the software power setting to 4 dBm which yields a max output power at the antenna of 2.3 dBm for 5 seconds when a button is pressed to increase the range of the call for assistance.