1. Objective
2. Component required (rating and specification of each component)
3. Principle of working
4. Block diagram and description
5. Circuit diagram
6. Description of circuit and components
7. Advantage and disadvantage
8. application
9. result(photo)
10. Problem during designing
11. Cost of the project

Main processor used is nrf52840 is NINA B3X package

KEY FEATURES

Bluetooth 5 ready multi-protocol radio

- 2Mbps

- Long range

- Advertising extensions

- Improved coexistence (CSA #2)

IEEE 802.15.4 radio support

- Thread

- Zigbee

32-bit ARM Cortex-M4F @ 64MHz

Up to 111 dB link budget for Bluetooth long range mode Full-speed 12Mbs USB controller NFC Tag-A Software stacks available as downloads Application development independent of protocol stack Programmable output power from +8dBm to -20dBm -96dBm Sensitivity for Bluetooth low energy On-air compatible with nRF51, nRF24L and nRF24AP Series Arm CryptoCell CC310 crytographic security module High-precision RSSI Wide supply voltage range + 1.7V to 5.5V QSPI/SPI/2-wire/I²S/PDM/QDEC Programmable Peripheral Interface - PPI High speed SPI interface 32MHz Quad SPI interface 32MHz EasyDMA for all digital interfaces RAM mapped FIFO using EasyDMA 12bit/200K SPS ADC 128 bit AES/ECB/CCM/AAR co-processor Single-ended antenna output (on-chip balun) On-chip DC-DC buck converter Quadrature demodulator Regulated supply for external components up to 25mA