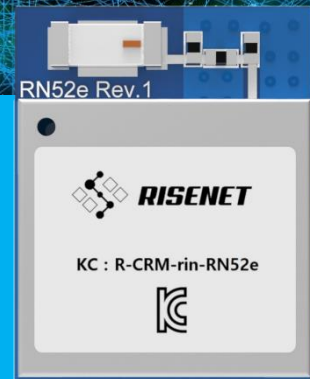


RN52m

BLE & 2.4GHz RF Module



RN52m is an ultra-low power 2.4 GHz wireless System on Chip (SoC) module, a 32 bit ARM® Cortex™-M4F CPU, flash memory, and analog and digital peripherals.

RN52m can support **Bluetooth® Low Energy** and a range of proprietary 2.4 GHz protocols, such as Gazell from Nordic Semiconductor.

Fully qualified Bluetooth Low Energy stacks for RN52m are implemented in the S132 series of SoftDevices.

The S132 series of SoftDevices are available for free and can be downloaded and installed on RN52m independent of your own application code.

Application

- Internet of Things (IoT)
 - Home automation
 - Building automation
 - Industrial
- Interactive entertainment devices
 - Remote control, 3D Glasses.
 - Gaming controller, Remote control toys
- Personal Area Networks
 - Health/fitness sensor and monitor devices
 - Medical devices, Key-fobs + wrist watch
- Mesh Network
 - BLE Mesh, Risenet Mesh

Features

- 2.4 GHz transceiver
 - -96 dBm sensitivity in Bluetooth® low energy mode
 - 215 EEMBC CoreMark® score
 - 1 Mbps, 2 Mbps Bluetooth® low energy mode
- TX Power -20 to +4 dBm in 4 dB steps
 - On-chip balun (single-ended RF)
 - 5.4 mA peak RX, 5.3 mA peak TX (0 dBm)
 - RSSI (1 dB resolution)
- ARM® Cortex®-M4 32-bit with FPU, 64 MHz
 - 58 µA/MHz running from flash memory
 - 51.6 µA/MHz running from RAM
 - Serial Wire Debug (SWD), Trace port
- S132 series SoftDevice ready
- Memory
 - 512 kB flash Program memory
 - 64 kB RAM
- Support for non-concurrent multiprotocol operation
 - On-air compatibility with nRF24L series
- Flexible Power Management
 - Supply voltage range 1.7 V to 3.6 V

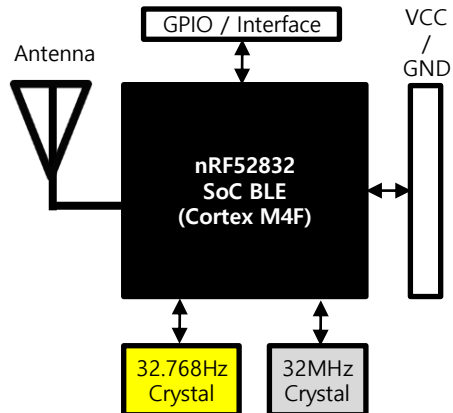


RN52m BLE & 2.4Ghz RF Module

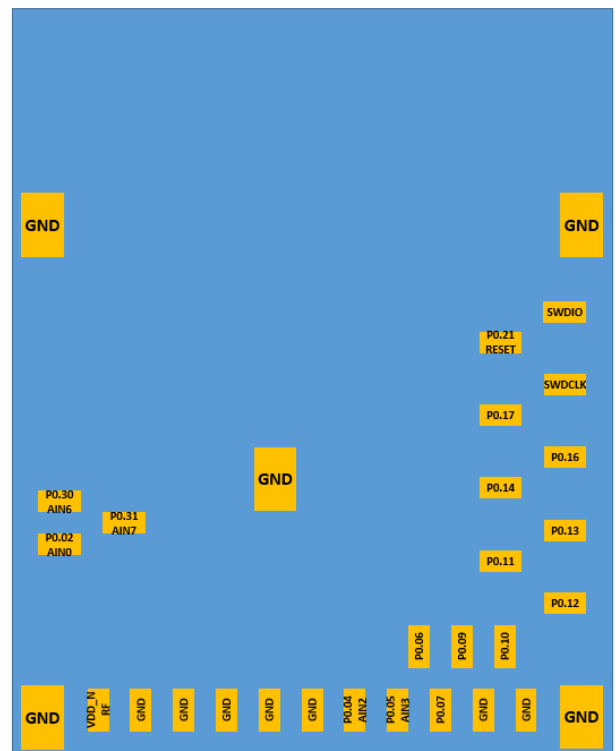
Features

Performance	
RF Chip	nRF52832
Data Rate (MAX)	2 Mbps
Transmit Power	< 4 dBm
Receiver Sensitivity	-96 dBm @ BLE mode
Features	
Frequency Band [MHz]	2400~2483.5 MHz
Modulation Techniques	GFSK
GPIO	16 Pins
Interface	SPI, UART, I2C
Operating Temperature	-25°C to +75°C
Dimensions (L x W x H)	17.5 ± 0.3 mm x 14.0 ± 0.3 mm x 3.0 ± 0.3 mm
Programmability	
RAM Memory	64 kByte
Flash Memory	512 kByte
Networking and Security	
Encryption	AES
Power Requirements	
Operating Voltage	1.7 to 3.6 V DCDC
Transmit Current consumption Radio	5.3 mA @ 0 dBm
Receiver Current consumption Radio	5.4 mA
Regulatory Approvals	
KC	○

Block Diagram



Pin Configuration



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