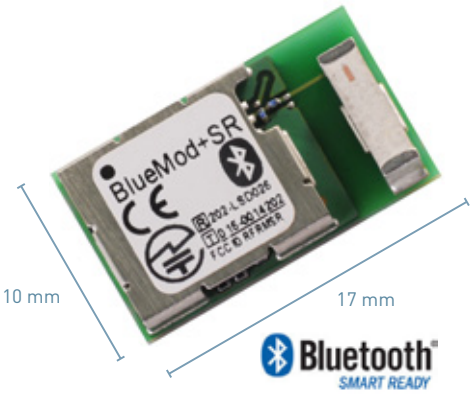
BlueMod+SR

Bluetooth® Smart Ready Dual Mode Module



Product Description

BlueMod+SR (Smart Ready) is the next generation Bluetooth solution for cable replacement applications. Regardless of whether the application requires high throughput or Low Energy consumption, BlueMod+SR offers the best of both worlds. The module offers NFC handover as an additional feature. NFC handover enables easy Bluetooth pairing for Bluetooth classic and Bluetooth Low Energy. Searching for Bluetooth devices over the air is no longer required.

The module has a very small form factor, dual mode Bluetooth 4.0 module (17x10x2.6 mm). Range in line of sight is about 100m.

Dual mode means it supports classic Bluetooth basic rate (BR) and enhanced data rate (EDR) operations as well as Bluetooth Low Energy (LE). Integration is easy and cost-effective thus reducing time to market and the overall development cost of new products.

For basic rate operations BlueMod+SR offers simple Serial Port Profile (SPP) connections with full Secure Simple Pairing. The module allows multiplexing solutions with two parallel connections. For basic and enhanced data rates the average net transmission speed is about 300 kbit/s.

For Low Energy operations the module offers the Terminal I/O profile. Terminal I/O allows transparent UART data and GPIO state transfer in Low Energy mode similar to SPP in basic rate mode. For Low Energy transmission with Terminal I/O the average transmission speed is about 50 kbit/s. In addition, the module comes with a generic GATT interface. This interface allows the use of any standard Bluetooth Low Energy profile.

The command interface is based on the well-known AT Command Set.

Key Benefits

- Bluetooth v4.0 dual mode compliant
- Master and slave mode support
- Simultanous BR/EDR and BLE connectivity
- Integrated antenna or external antenna
- NFC Support: Read and write of data to a dynamic NFC tag
- Pin to pin compatible with BlueMod+S modules (Bluetooth Low Energy)

NFC Handover

BlueMod+SR is able to read and write its Bluetooth address to a dynamic NFC tag which can be used for Bluetooth pairing. The NFC tag is connected to the BlueMod+SR via the I²C interface. The field detection function on the tag can be used to wake up the BlueMod+SR from standby and to initiate the Bluetooth communication.

Telit provides an NFC Utility App for Android devices for evaluating the NFC handover feature. The app can declare two intent filters for the NDEF data on the NFC tag, One for BR/EDR and one for Bluetooth Low Energy handover.

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BlueMod+SR

Profiles

- Classic Bluetooth SPP Profile
- GATT and Terminal I/O Profile
- 1 SPP and 1 Terminal I/O in parallel
- Supported NFC tags: NXP NT3H1101, NT3H1201

Optional Features

- BlueMod SR+ is available with or without antenna
  -Antenna internal: ceramic
  -Antenna external: pin

Environmental

- LGA pads
- Length x Width x Height
  -17x10x2.6 mm
- Temperature range:-30°C to +85°C

Interfaces

- UART: 9600 bps – 921600 bps (asynchronous)
- Other interfaces: I²C, SPI
- GPIOs: 11

Approvals

- Bluetooth 4.0,
- CE, FCC, IC, KCC, MIC

Electrical

- Power supply: 2.5V to 3.6V
- RF-Power (max) -23 to +8 dBm (software adjustable)
- Power consumption Transmission: 15-27 mA (depending on connection parameter)
- Power consumption idle: SPP: 0.75 mA
- Terminal I/O: 0.25 mA
- Power consumption deep sleep: 0.15 mA

Tools

- BlueEva+SR: Evaluation Kit

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