BlueMod+S
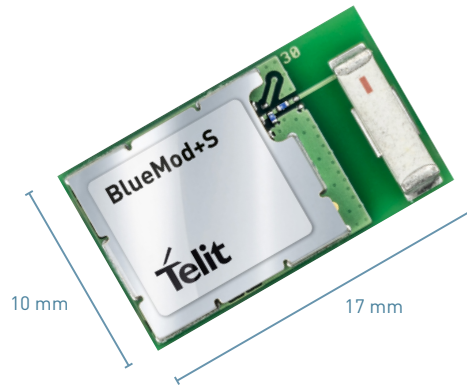
Single Mode Module

10 mm   17 mm

Product description

The BlueMod+S is a Bluetooth 4.1 Smart (BLE) solution designed to connect ultra low power wireless sensors and peripherals to Bluetooth v4.x equipped smartphones, tablets, and PCs with low energy consumption.
The module offers several features such as terminal I/O and GATT peripheral, GATT central with terminal I/O peripheral and Automation profile with ADC peripheral.

Profiles

Terminal I/O works similar to SPP and offers a simple point-to-point connection, including flow control over-the-air, for use cases that require low data rate and transparent data exchange. It is controlled by an AT command interface. The module also comes with a generic GATT interface. This interface allows the use of any Bluetooth Low Energy standard profile as well as customer specific proprietary profiles.

The Automation I/O profile is a standardized Bluetooth profile and supports on the BlueMod+S one analog signal and up to 8 GPIOs.Sensors with an analog interface can be directly connected to the A/D converter of theBlueMod+S. Telit provides an end to end solution for communication with iOS, Android and PC, so the sensor data can be easily send to the remote side. The firmware is designed for hostless battery driven operations and can be configured and updated over the air. The firmware also allows over the air GPIO access to control and read up to 8 GPIO signals or can automatically generate status notifications in case of a GPIO signal change.The functionality includes over the air access to measure voltage or can automatically generate status notifications in case A/D converter voltage rises/falls above/below a defined level.
In addition to the Automation I/O profile the modules comes with the Telit proprietary SCIS profile, which offers an over-the-air configuration interface for the module.

GATT Central and Terminal I/O Peripheral allows connecting up to 3 GATT based peripherals in parallel. These peripherals can be based on standardized GATT profiles or custom GATT profiles. At the same time the module can act as a Terminal I/O peripheral itself to easily transfer data to a smartphone, tablet or PC. The module is able to process broadcast information from (i)Beacons and pass the information to the host. This includes the RSSI value for location based services.

Key Benefits

- Bluetooth Smart module (BLE)

- Bluetooth Qualification 4.1

- CE, FCC, IC and KCC qualified

- Terminal I/O Peripheral and GATT server Sample Code for iOS and Android

- GATT Central and Terminal I/O peripheral in parallel

- Automation I/O Peripheral: Cable Replacement for Sensors

Family Concept

The BlueMod+S and BlueMod+SR as well as the BlueMod+S42 modules are mechanically and electrically compatible. The modules also have compatible software interfaces, and can easily be replaced by each other without additional changes to the hardware or software.

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BlueMod+S

Profiles

- Terminal I/O and GATT Peripheral
- GATT Central and Terminal I/O peripheral in parallel
- Automation I/O Peripheral

Environmental

- LGA pads
- Ceramic antenna
- Length x Width x Height: 17x10x2.6 mm
- Temperature range: -25°C to +75°C

Interfaces

- UART: 9600 bps – 921600 bps (asynchronous)
- Other interfaces: I²C, SPI
- GPIOs: Up to 19

Approvals

- Bluetooth Qualification 4.1
- CE, FCC, IC, KCC

Electrical & Sensitivity

- Power supply: 1.8V to 3.6V
- RF-Power (max): -30 to +5 dBm (software adjustable)
- Power consumption Transmission: 12 mA
- Power consumption stby: 21 µA
- Power consumption deep sleep: 3 µA

Tools

- BlueEva+S: evaluation kit
- BlueDev+S: development kit
- BlueDev+S/ANT: development kit

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