



BluesenseAT

The solution for mobile wireless data transmission

BluesenseAT is a miniaturized module for the simple integration of serial Bluetooth communication in mobile sensor-actuator networks. By means of AT commands, Bluetooth connections can be set up and digital data (or even analog, if desired) can be transmitted. The range and current consumption were optimized with regard to medical and mobile applications. Under normal conditions, the range is 25 m thanks to a special antenna design. Even if someone is standing in the way, the transmission range is still 15 m. The current consumption is less than 6 mA in sniff mode (1.28 sec intervals), which is especially advantageous for battery-operated applications.

BluesenseAT can be operated as a Bluetooth master or a slave. If it's operated in slave mode, it waits for a master to connect to it. Once the connection has been established, data is exchanged between the master and the slave.

If BluesenseAT is operated as a master, it initiates a connection to one slave in maximum. In master mode, you can actively search for Bluetooth modules nearby and connect to them by sending commands via UART to BluesenseAT.

With the help of BluesenseAT, you can wirelessly upgrade your own application quickly and cost-effectively without having to spend a lot of time becoming familiar with the technical details of Bluetooth technology.

Technical Specifications

1. Function description

- Configurable as master or slave
- Bluetooth cable replacement up to 115,2 kbit/s
- Low power mode useable
- Optimized for applications in the fields of sensor technologies or medical technology
- Class 2 Bluetooth device
- Bluetooth-Profile SPP
- Optional up to 8 A/D-Converter channels for analog data logging

2. Technical Data

- Power supply: 3,3 V +/- 0,1 V
- Current consumption: 220 μ A stand-by
1,4 mA idle-mode
35 mA TX 115,2 kbit/s
>6 mA low power mode active
- Dimensions: 37,6 mm x 21,5 mm x 7,4 mm
- Range: > 25m
- Interface: UART, 8 * 12Bit
A/D-Converter (optional)

3. Fulfilled Standards and Regulations

- EN 60601-1-2: Medical electrical equipment – Part 1-2: General requirements for safety – Collateral standard: Electromagnetic compatibility – Requirements and tests
- R&TTE Directive 99/5/EC: Directive 99/5/EC on Radio Equipment and Telecommunications Terminal Equipment and the Mutual Recognition of Their Conformity
- EN 300328: Electromagnetic compatibility and Radio spectrum Matters (ERM) – Wideband transmission systems
- EN 301489-1,-17: Electromagnetic compatibility and Radio spectrum Matters (ERM) – Electromagnetic Compatibility (EMC) standard for radio equipment and services – Part 1: Common technical requirements, Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

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