

Bluetooth Serial Port Adapter



Product Brief Bluetooth Dual-mode Serial Port Adapter RBS421

The Bluetooth Rugged Serial Port Adapter™ 421 is a complete wireless serial cable replacement device. The Serial Port Adapter has embedded Classic Bluetooth stack (SPP, DUN and PAN profiles), Bluetooth low energy stack with connectBlue Low Energy Serial Port Service, serial RS232/422/485 interface, and support for 7 slaves connected at the same time. With its IP65-classed housing, it is built for tough and demanding environments, in-door or out-door. The high receiver sensitivity and output power enables a range of up to 300m.

- IP65-classed rugged metal housing
- RS232/422/485 interface
- Bluetooth v4.0 with Low Energy and Classic Bluetooth
- Long range of 300m
- Dual-mode (Bluetooth Smart Ready)
- Embedded Bluetooth stack (SPP, DUN, PAN)
- connectBlue Low Energy Serial Port Service
- GATT support for Bluetooth Smart
- Wireless Multidrop™ with simultaneous connections to both Bluetooth low energy and Classic Bluetooth devices
- Extended Data Mode™ separated multipoint data channels
- Easy configuration by AT commands
- Radio type approved for Europe, US, Japan and Canada
- Compliant with EMC, Safety and Medical standards
- External antenna
- Industrial operating temperature range -30 to +85°C
- Custom factory configuration possible

Technical Data - Bluetooth Dual-mode Serial Port Adapter RBS421

Wireless Standard

Bluetooth low energy and Classic Bluetooth (Bluetooth Smart Ready)

Standard Specification

Bluetooth v4.0 with low energy and Classic Bluetooth (Qualified and Listed as Product)

Supported Bluetooth Profiles:

- Serial Port Profile (SPP)
- connectBlue Low Energy Serial Port Service
- GATT support for Bluetooth Smart
- Dial-up networking Profile (DUN GW, DUN DT)
- Personal Area Networking Profile (PAN) roles PANU & NAP

Radio, Chipset and Stack

External antenna (appr. max range & max output power incl. antenna): 300m & 13dBm

2.4 GHz channels: 1-79

Radio: Texas Instruments CC2564

Microprocessor: ST STM32F

Stack: connectBlue Embedded Bluetooth Stack

Type Approvals

Europe (ETSI R&TTE)

US (FCC/CFR 47 part 15 unlicensed modular transmitter approval)

Canada (IC RSS)

Japan (MIC - formerly TELEC)

Interface

RS232/422/485

Max baud rate: 460.8 kbit/s

Support for non-standard baud rates

Flow control: CTS/RTS or none

Features

All software embedded in the module (Bluetooth stack and application)

Configurable via AT commands (via Bluetooth or serial port)

Maximum number of simultaneous slaves: 7 using Classic Bluetooth only, 3 using Classic Bluetooth and Bluetooth low energy

GATT support for Bluetooth Smart/Bluetooth Low Energy

connectBlue Low Emission Mode® for not disrupting other 2.4GHz radios

Extended Data Mode™ for individually controlled multipoint data channels (different data can be sent to / received from each slave)

Simple Pairing

Quality of Service (QoS)

Repeater functionality for extended range

iPhone/iPod touch/iPad and Android support:

- Supports Bluetooth low energy connection with iOS devices
- Supports SPP/PAN Bluetooth connection with Google Android OS devices

Power

Power supply voltage: 8 - 30 VDC

Current consumption (minimum): 9 mA @30V

Current consumption (average Tx): 20 mA @30V

Connectors

Male 9-pin Dsub for serial interface

Binder 712 rugged plug for power supply

Mechanical

Operating temperature: -30°C to +85°C

Mounting holes

Housing: Metal, IP65

Dimensions: 76x85x35 mm

Certifications and Compliance

R&TTE Directive 1999/5/EC:

- Effective use of frequency spectrum: EN 300 328
- EMC: EN 301 489-1, EN 301 489-17, EN 61000-6-2
- Health and safety: EN 50371, EN 60950-1 and/or IEC 60950-1

Medical Electrical Equipment:

- IEC 60601-1-2

Article numbers

For article number descriptions, please see

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