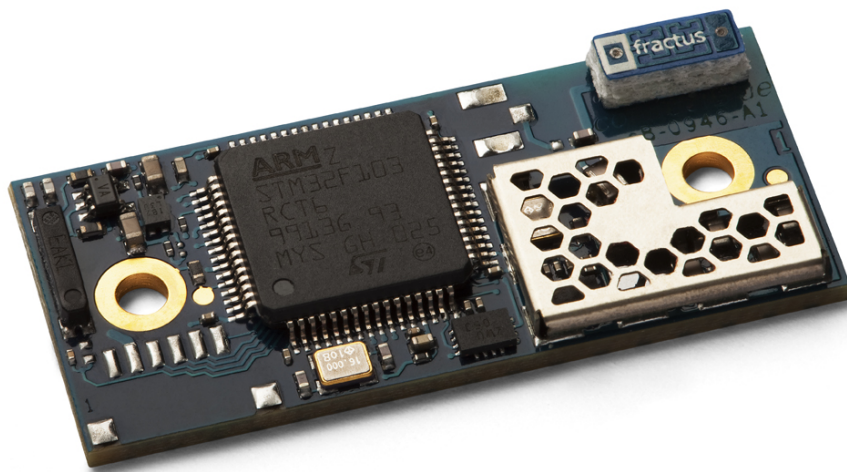


Bluetooth Serial Port Module



Product Brief OEM Bluetooth Serial Port Module OBS421

The Bluetooth Serial Port Module OBS421 is a Bluetooth v4.0 module with UART interface for transparent serial data transmissions. Since the module is a dual-mode module the serial data can be sent either using Classic Bluetooth technology via SPP, or using Bluetooth low energy technology via the connectBlue Low Energy Serial Port Service. With the Bluetooth stack embedded, you can be up and running quickly as there is no need for a driver or stack in your host. The module is fully Bluetooth qualified and radio type approved for Europe, Japan, US and Canada. It also has the connectBlue standard interface for compatibility over time and radio technologies.

- Bluetooth v4.0 with low energy* and Classic Bluetooth
- Dual-mode (Bluetooth Smart Ready device)*
- Embedded Bluetooth dual-mode stack (SPP, DUN, PAN)
- connectBlue Low Energy Serial Port Service*
- Android support
- iPhone support (Bluetooth low energy only)*
- Range up to 300m
- High Speed UART
- Throughput up to 1.3 Mbps (Classic Bluetooth)
- Easy configuration by AT commands
- Radio type approved for Canada, Europe, Japan and US
- Compliant with EMC, Safety and Medical standards
- Wireless Multidrop™ with simultaneous connections to both Bluetooth low energy and Classic Bluetooth devices
- Extended Data Mode™ for separated multipoint data channels
- Internal or external antenna
- Industrial and Automotive temperature range -30°C to +85°C**

Technical Data - OEM Bluetooth Serial Port Module OBS421

Wireless Standard

Bluetooth low energy technology and Classic Bluetooth

Standard Specification

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

Supported Bluetooth profiles and services:

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

Radio, Chipset and Stack

Internal antenna (range & max output power incl. antenna): 300m & 11dBm

External antenna (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 (R&TTE)

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

Canada (IC)

Japan

Interface

UART Logic-level

Via external transceiver, RS232 and RS422/485 option

Max baud rate: 1.5 Mbit/s

Support for non-standard baud rates

Flow control: CTS/RTS (hardware) or none

9 digital I/O pins

Features

Throughput: 1.3 Mbps (Classic Bluetooth)

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

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

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

Simple Pairing

Quality of Service (QoS)

Customer developed applications can be embedded

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: 3.0 - 6.0 VDC

Current consumption (minimum): 0.6 mA @3.0V

Current consumption (average Tx): 44 mA @3.0V

Connectors

Board-to-board connector

Solder land pads

JST 6-pin connector (optional)

U.fl. antenna connector (external antenna version only)

Mechanical

Operating temperature: -30°C to +85°C**

Machine mountable

Mounting holes

Dimensions: 16x36x3 mm (2 mm height on request)

Weight: 2 g

Certifications and Compliance

R&TTE Directive 1999/5/EC:

- Effective use of frequency spectrum: EN 300 328 V1.7.1 (2006-10)
- EMC: EN 301 489-1 V1.8.1 (2008-04), EN 301 489-17 V2.1.1 (2009-05), EN 61000-6-2 (2005)
- Health and safety: EN 50371:2002, EN 60950-1:2006 + A11:2009 and/or IEC 60950-1:2005 (2nd Edition)

Medical Electrical Equipment:

- IEC 60601-1-2 (2007)

Article numbers

For article number descriptions, please see www.connectblue.com

* Bluetooth low energy (Bluetooth v4.0) not supported by OBS421i-04, OBS421x-04, OBS421i-06, OBS421x-06

** JST version limited to -25°C to +85°C



connectBlue®

The strongest connection in a wireless world

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