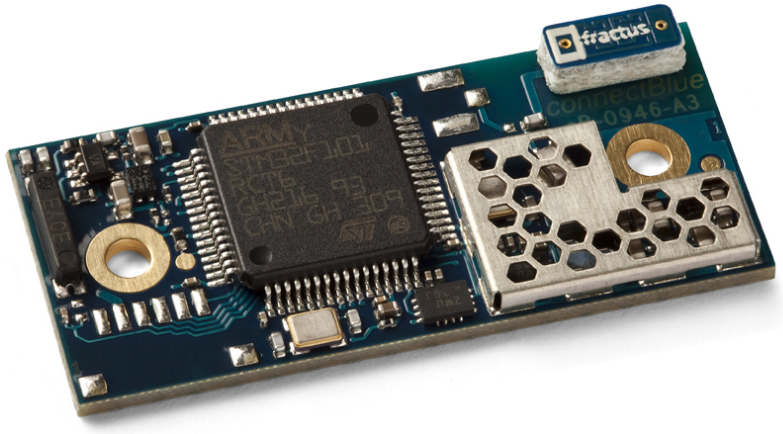
Bluetooth Serial Port Module



Product Brief Bluetooth Serial Port Module OBS419

The Bluetooth Serial Port Module 419 supports the Serial Port Profile (SPP) for fast and secure transparent serial data transmissions. The module has a small form factor, low build height, and supports Bluetooth v2.1+EDR. 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 US, Europe, Japan and Canada. It also has the connectBlue standard interface for compatibility over time and radio technologies.

- Embedded Bluetooth stack (SPP, DUN, PAN)
- Bluetooth v2.1+EDR Qualified as End Product
- Electrically, mechanically and software compatible with OBS411
- Supports SPP connections to Android devices
- High Speed UART
- Throughput up to 950 kbps
- Easy configuration by AT commands
- Radio type approved for US, Europe, Japan and Canada
- Compliant with EMC, Safety and Medical standards
- connectBlue Low Emission Mode™
- Wireless Multidrop™ with up to 3 slaves
- Extended Data Mode™ for separated multipoint data channels
- Internal or external antenna
- Industrial temperature range -30°C to +85°C*
- Possible to load customer specific configuration in production
- Individually tested in production

Technical Data - Bluetooth Serial Port Module OBS419

Wireless Standard
Classic Bluetooth technology

Standard Specification
Bluetooth v2.1+EDR Qualified and Listed as Product
Supported Bluetooth Profiles:
- 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): 75m & 6dBm
External antenna (range & max output power incl. antenna): 150m & 8dBm
2.4 GHz channels: 1-79
Radio: Texas Instruments CC2560
Microprocessor: ST STM32F10x
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
UART Logic-level
Via external transceiver, RS232 and RS422/485 option
Max baud rate: 1.25 Mbit/s
Support for non-standard baud rates
Flow control: CTS/RTS (hardware) or none
9 digital I/O pins

Features
Throughput: 950 kbps
All software embedded in the module (Bluetooth stack and application)
Configurable via AT commands (via Bluetooth or serial port)
Maximum number of slaves: 3 (point-to-point, point-to-multipoint)
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)
Repeater functionality for extended range
Supports SPP/PAN Bluetooth connection with Google Android OS devices

Power
Power supply voltage: 3.0 - 6.0 VDC
Current consumption (minimum): 0.63 mA @3.0V
Current consumption (average Tx): 20 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
Weight: 2 g

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 www.connectblue.com

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

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RoHS Pb

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