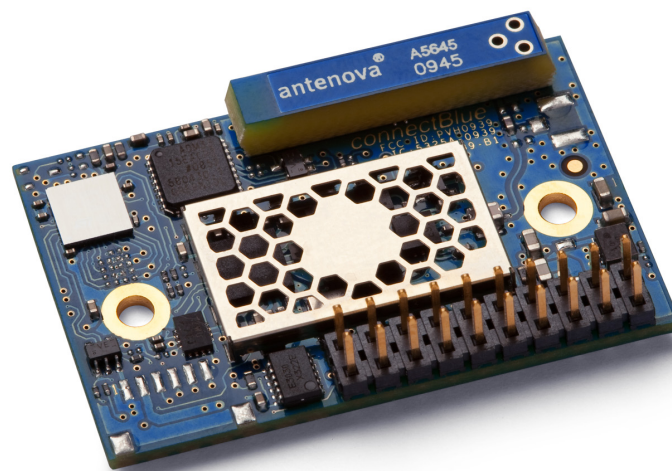


Bluetooth Serial Port Module



Product Brief OEM Bluetooth Serial Port Module OBS433

The Bluetooth Serial Port Module 433 supports the Serial Port Profile (SPP) for fast and secure transparent serial data transmissions, and the Personal Area Networking Profile (PAN) for transmission of Ethernet packages over Bluetooth. The high receiver sensitivity and output power enables a range of 1000m. The module supports Bluetooth v2.1+EDR (Bluetooth v3.0 prepared via firmware upgrade). With the Bluetooth stack embedded you get going quickly as you don't need a driver or stack in the host. The module is Bluetooth qualified and radio type approved for Europe, Japan, US and Canada. It also has the connectBlue interface for compatibility over time and radio technologies.

- Embedded Bluetooth stack (SPP, DUN, PAN profiles)
- Extreme range of 1000m
- Bluetooth v2.1+EDR qualified (v3.0 prepared)
- High Speed UART Logic Level & RS232

- Very high throughput and low latency
- Android support and iPhone / iPad / iPod touch support*
- Easy configuration by AT commands
- Radio type approved for Canada, Europe, Japan and US
- Compliant with EMC, Safety and Medical standards
- connectBlue Low Emission Mode™
- Wireless Multidrop™ with up to 7 channels
- Extended Data Mode™ for individual control of up to 7 channels
- Repeater functionality
- Digital I/Os over Bluetooth
- Internal or external antenna
- Industrial and Automotive temperature range

Wireless Standard

Classic Bluetooth technology

Standard Specification

Bluetooth v2.1+EDR (Qualified and Listed as Product)

Bluetooth v3.0 prepared via firmware upgrade

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): 800m & 17dBm

External antenna (range & max output power incl. antenna): 1000m & 17dBm

2.4 GHz channels: 1-79

Radio: ST-Ericsson STLC2500DB

Microprocessor: ST STM32F103RC

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 or RS232

Via external transceiver, 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: 1.4 Mbps

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

Configurable via AT commands (via Bluetooth or serial port)

Maximum number of slaves: 7 (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)

Customer developed applications can be embedded

Repeater functionality for extended range

iPhone/iPod touch/iPad and Android support:

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

Power

Power supply voltage: 3.3 - 6.0 VDC

Current consumption (minimum): 0.5 mA @3.3V

Current consumption (average Tx): 50 mA @3.3V

Connectors

Board-to-board connector

20-pin header connector (optional)

Solder land pads (optional)

JST 6-pin connector (optional)

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

Mechanical

Operating temperature: -40°C to +85°C

Machine mountable

Mounting holes

Dimensions: 23x36x4 mm

Weight: 5 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 +A1:2010 (EN 60950-1:2011-01) and/or IEC 60950-1:2005 (2nd Edition) + A1:2009

Medical Electrical Equipment:

- IEC 60601-1-2 (2007)

Article numbers

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

* Requires external hardware connected to host. For more information, see "Bluetooth Serial Port Adapter Compatibility iPhone, iPad and iPod" at support.connectblue.com

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



connectBlue®

The strongest connection in a wireless world

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