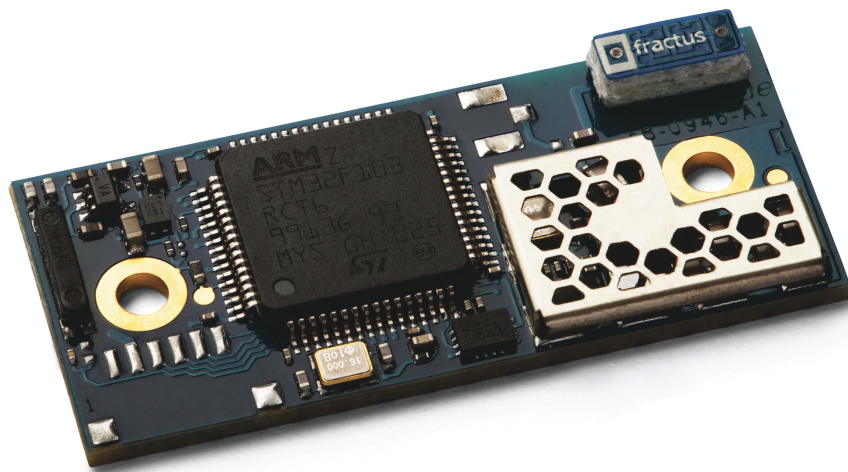


Bluetooth Serial Port Module



Product Brief OEM Bluetooth Serial Port Module OBS421

The Bluetooth Serial Port Module OBS421 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 2.1+EDR. Via an upcoming firmware upgrade, the module is prepared for Bluetooth 4.0 including Bluetooth low energy technology. 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, US and Canada. It also has the connectBlue standard interface for compatibility over time and radio technologies.

- Embedded Bluetooth stack (SPP, DUN, PAN)
- Bluetooth 2.1+EDR Qualified as End Product (Bluetooth 4.0 prepared via firmware upgrade)
- Android support
- Mid-range (0-300m)
- High Speed UART
- Very high throughput and low latency
- Easy configuration by AT commands
- Radio type approved for Europe, US and Canada
- Compliant with EMC, Safety and Medical standards
- connectBlue Low Emission Mode™
- Wireless Multidrop™ with up to 7 slaves
- Extended Data Mode™ for separated multipoint data channels
- Internal or external antenna
- Industrial and Automotive temperature range -30°C to +85°C*
- Possible to load customer specific configuration in production

Technical Data - OEM Bluetooth Serial Port Module OBS421

Bluetooth Support

Bluetooth version 2.1+EDR (Qualified and Listed as Product). Bluetooth version 4.0 prepared via firmware upgrade. Supported Bluetooth Profiles:

- Generic Access Profile (GAP)
- Serial Port Profile (SPP)
- Dial-up networking Profile (DUN GW, DUN DT)
- Personal Area Networking Profile (PAN) roles PANU & NAP

Output power: Class 1 +10 dBm (excluding antenna gain)

Receive sensitive level: -90 dBm (excluding antenna gain)

Range: 300 m (approximate, line-of-sight)

Multipoint connections: Up to 7 active slaves

Bluetooth Chipset and Stack

Radio: Texas Instruments CC2564

Microprocessor: ST STM32F

Stack: connectBlue Embedded Bluetooth Stack

iPhone/iPod touch/iPad and Android support

Supports SPP/PAN Bluetooth connection with iOS devices with firmware for use by MFi licensees (available on request). Supports SPP/PAN Bluetooth connection with Google Android OS devices.

Software

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

Configurable via AT commands (via Bluetooth or serial port)

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)

Hardware Interface

UART Logic-level

Supported baud rates: 1200 bit/s - 1.36 Mbit/s

Support for non-standard baud rates

Flow control: CTS/RTS (hardware) or none

9 digital IOs

Connectors

Board-to-board connector

Solder land pads

JST 6-pin connector (optional)

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

Power Supply

3.0 - 6.0 VDC

Current Consumption

Power save mode (stop mode): 0.6 mA

Connected, not transmitting: 29 mA

Transmitting @115.2 kbps (average): 44 mA

Dimension/Size

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

Weight: 2 g

Type Approval

R&TTE (Europe)

FCC/CFR 47 part 15 unlicensed modular transmitter approval

IC (Industrie Canada)

Environmental

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

Storage temperature: -40°C to +125°C*

Humidity RH 5-90% non-condensing

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

CB-OBS421i-04:

OEM Serial Port Adapter 421 with internal antenna, board-to-board and solder pads.

CB-OBS421x-04:

OEM Serial Port Adapter 421 with u.fl. connector for external antenna, board-to-board and solder pads.

CB-OBS421i-06:

OEM Serial Port Adapter 421 with internal antenna, JST wire connector, board-to-board and solder pads.

CB-OBS421x-06:

OEM Serial Port Adapter 421 with u.fl. connector for external antenna, JST wire connector, board-to-board and solder pads.

Accessory kits for evaluation, to be combined with an OBS421 module:

CB-ACC-26 (RS232/9-pin Dsub kit):

OEM Module Adapter 3 with 9-pin Dsub, Serial RS232 cable, USB Power cable, Configuration software.

CB-ACC-41 (USB kit):

USB Module Adapter (installs virtual COM-port), USB extension cable, Configuration software.

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



connectBlue™

The strongest connection in a wireless world

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