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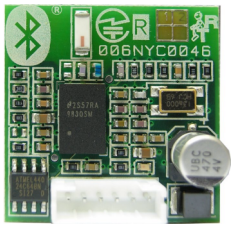
RoboTech
Bluetooth Serial Module

RBT-001



Data Sheet

Ver. 1.1

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Product Description

The RoboTech Bluetooth Serial Module is an effective and low-cost solution to free your hardware applications from wires.

Main features are:

- Compliant with the **Bluetooth 2.0** Specification
- Certified as an **end product**: no additional Bluetooth qualification is needed when using this module
- Backwards compatible to Bluetooth 1.x versions
- Class 2 operation (nominal range up to 30m)
- Low power consumption
- UART Command/Data Port supports for up to 921.6k baud rate
- Profiles: GAP, SDAP, SPP
- Integrated chip antenna
- Support for Adaptive Frequency Hopping (AFH) and 802.11 co-existence
- Small size (29x29mm)
- RoHS compliant
- Radio Type Approved for Europe and Japan

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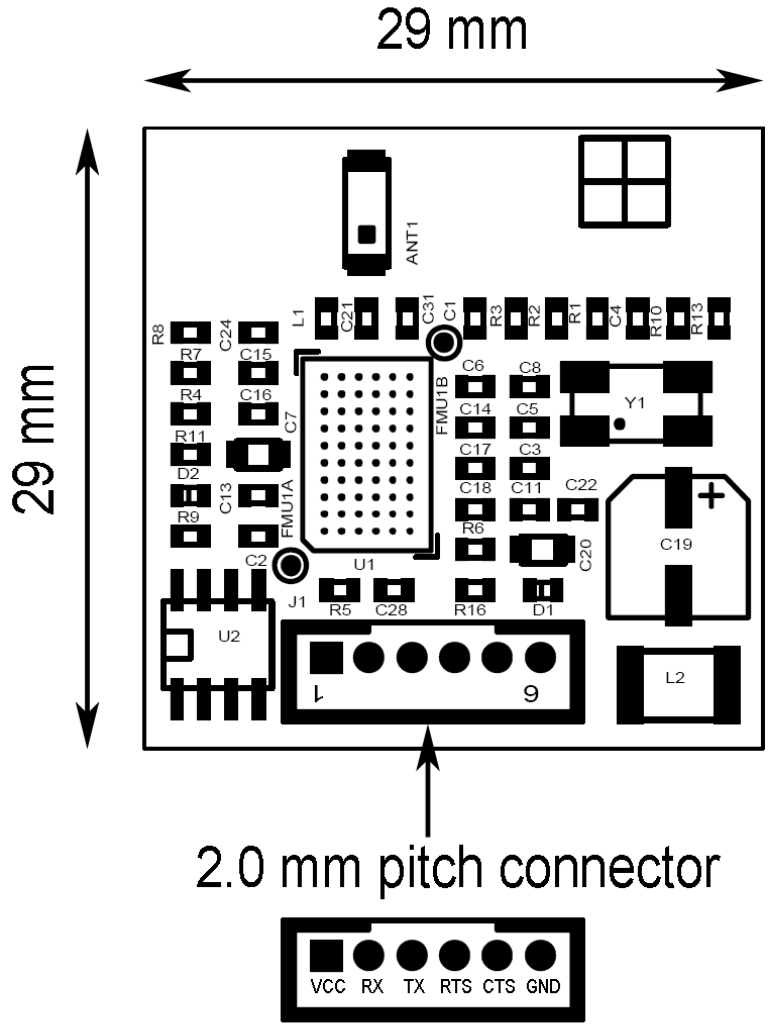
Technical specifications

Physical dimensions and pin assignment



Pin number	Pin name	Type (Input/Output)	Description
1	VCC	I	Voltage DC input (Typical 3VDC)
2	RX	I	Serial Port Receive Data (TTL level)
3	TX	O	Serial Port Transmit Data (TTL level)
4	RTS	O	Serial Port Request To Send (active low)
5	CTS	I	Serial Port Clear To Send (active low)
6	GND	-	Ground

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Recommended Operating Conditions

Symbol	Parameter	Min	Typ	Max	Unit
VCC	Voltage DC Input	2.5	3.0	3.3[1]	V
Ta	Ambient Operating Temperature Range	0	25	45	°C

1. Recommended maximum 3.0V for best RF performance

Digital DC Characteristics

Symbol	Parameter	Condition	Min	Max	Unit
V_{IH}	Logical 1 Input Voltage High	2.5V ≤ VCC ≤ 3.0V 3.0V ≤ VCC ≤ 3.3V	0.7 x VCC 2.0	VCC + 0.2 VCC + 0.2	V
V_{IL}	Logical 0 Input Voltage Low	2.5V ≤ VCC ≤ 3.0V 3.0V ≤ VCC ≤ 3.3V	-0.2 -0.2	0.25 x VCC 0.8	V
I_{OH}	Logical 1 Output Current	V_{OH} = 2.4V, VCC = 3.0V	-10		mA
I_{OL}	Logical 0 Output Current	V_{OL} = 0.4V, VCC = 3.0V	10		mA

Power Supply Requirements[1]

Symbol	Parameter	Min	Typ[2]	Max	Unit
I_{RXSL}	Receive Data in SPP Link, Slave[3]		26		mA
I_{RXM}	Receive Data in SPP Link, Master[3]		23		mA
I_{SnM}	Sniff Mode, Sniff interval 1 second[3]		5.6		mA
$I_{SC-TLDIS}$	Scanning, No Active Link, TL Disabled [3]		0.43		mA
I_{Idle}	Idle, Scanning Disabled, TL Disabled [3]		100		μA

1. Based on UART Baudrate 921.6kbit/s.
2. VCC = 3.3V, Ambient Temperature = +25 °C.
3. Average values excluding Leds

TL= Transport Layer

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