XBT Bluetooth Module 990.016

Description

The XBT is a miniature Bluetooth 2.0/1.2/1.1 module with a Class 1 high power amplifier and a ceramic antenna.
Its advanced design assures a communication distance of up to 100 meters with a baud rate speed up to 921Kbps. The power consumption is very low, starting at 250uA in standby to a maximum of 100mA.
The communication is reliable and secure, thanks to FHSS, 128 bit encryption and error correction schemes for packet delivery.
The 2x10 pin 2mm dot pitch design assures small dimensions and XBee™ module compatibility.
Most of the pin have the same functions of the XBee™ modules. The user can use the XBT module on almost every XBee™ based application, enhancing communication speed, lower power consumption and enjoying half duplex communications.
Great for developing wireless applications and/or to make multi purpose applications.

References:

RN-41 Bluetooth module Datasheet and Reference Guide: www.rovingnetworks.com

XBee™ Datasheet and Reference Guide:

www.maxstream.net

XBee is a Trademark of Maxstream/DIGI Inc.

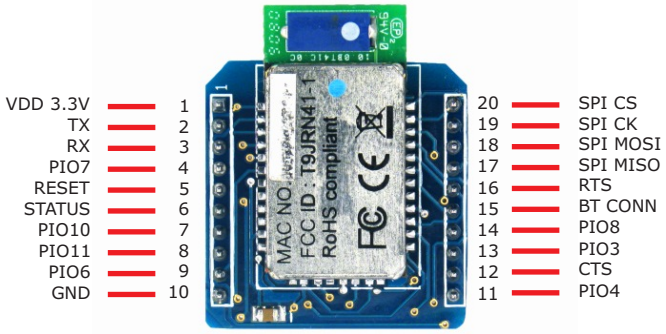
Technical Specifications

Frequency: 2402 ... 2480 MHz
VDD:3.3VDC - 100mA
Modulation: FHSS/CFSK
Channel Intervals: 1MHz
N. of Channels: 79
Trasmission rate (over the air): 721Kbps...2.0Mbps
Output Level: 15dBm max
Dimensions: 25 X 31 mm max height 10 mm
Operating Temp.: -40° to 85°C

Features

Baud Rate Speeds: 1.2 ... 921 Kbps
Class 1 radio, 100m distance
Auto-discovery/pairing, requires no software configuration (instant cable replacement)
Secure and robust communication link: FHSS (Frequency Hopping Spread Spectrum), 128 bit encryption, Error correction schemes for guaranteed packet delivery
XBee™ pin compatible, instant drop-in replacement
Easy to use: plug and play

Layout



PIN	XBT	XBEE	PIN	XBT	XBEE
1	VDD 3.3VDC	VDD 3.3VDC	20	SPI CS	AD0/DIO0
2	TX	TX	19	SPI CK	AD1/DIO1
3	RX	RX	18	SPI MOSI	AD2/DIO2
4	PIO7	DO8	17	SPI MISO	AD3/DIO3
5	RESET	RESET	16	RTS	RTS
6	STATUS	RSSI	15	BT CONN	ASSOCIATE
7	PIO10	PWM1	14	PIO8	VREF
8	PIO11	reserved	13	PIO3	ON/SLEEP
9	PIO6	DTR	12	CTS	CTS
10	GND	GND	11	PIO4	AD4/DIO4

Before plugging an XBT module in place of an XBee™ module, double check if all the XBT pins are compatible with the circuit. Users can cut the incompatible pins to avoid damages.

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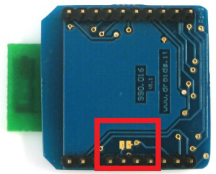
Back View



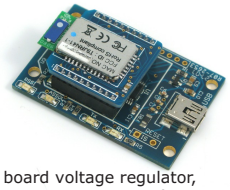
To connect RTS to CTS just short the small jumper with an iron solder and tin solder.

Applications:

990.001

On board voltage regulator, BT Status and Connection LED's. Small, versatile.

990.002



On board voltage regulator, USB connection, 4 LED's, small, reliable.

990.005

Multi Interface, Servo Controller, Motor Controller, I/O, ADC, more...

Getting Started:

To connect the XBT to a PC follow these easy steps:
1 - Turn on the PC Bluetooth device
2 - Turn on the XBT module
3 - Start the PC Bluetooth discovery services
4 - You will find a FireFly device
5 - Start pairing the FireFly device, default code 1234
6 - Done. Now you are connected with the XBT.
You will find a virtual COM port on the PC that communicates directly with the Bluetooth device.

Factory Default Settings:

Bluetooth Service Profile = Serial Port Profile (SPP)
Baud Rate = 115200bps 8N1
Device Mode = 0 (Slave)
Authentication Disabled
Encryption Disabled
Bonding Disabled
Power Mode = Auto low power discoverable mode
SNIFF mode disabled
Default PIN = 1234