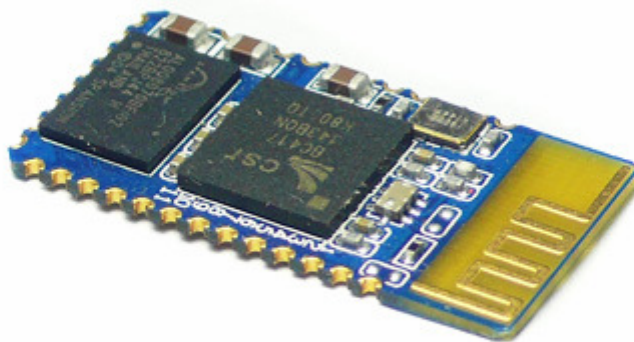


EPBM-COM Bluetooth module Datasheet

Translated and enhanced by Jack Wang

Seed Studio April 30, 2009

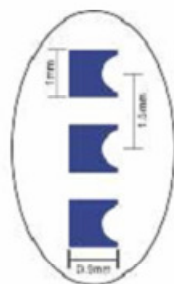
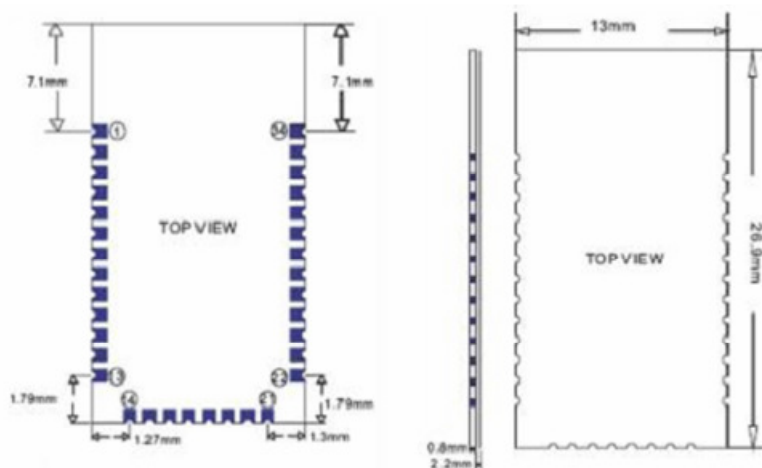


Overview

EPBM-COM Serial Bluetooth module employs Bluecore4-External chip from CSR, supports Bluetooth v2.0, industrial standard and super light dimension. It has onboard chip antenna to communicate directly with various bluetooth dongles and mobilephone. With new AT command support, you can even change the baud rate on the fly!

Basic Specification

- CSR chip, Bluetooth v2.0
- Wave band: 2.4GHz—2.8GHz, ISM Band
- Protocol: Bluetooth V2.0
- Power Class: (+6dbm)
- Reception sensitivity: -85dBm
- Voltage: 3.3 (2.7V—4.2V)
- Current: Paring - 35mA, Connected - 8mA
- Temperature: -40°C ~ +105°C
- User defined Baud rate: 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600, and 1382400.
- Dimension :26.9mm*13mm*2.2mm,
- Embedded system, easy wire replacement, Industrial wireless solution.
- Connectable with notebook, Bluetooth dongle, PDA and etc.



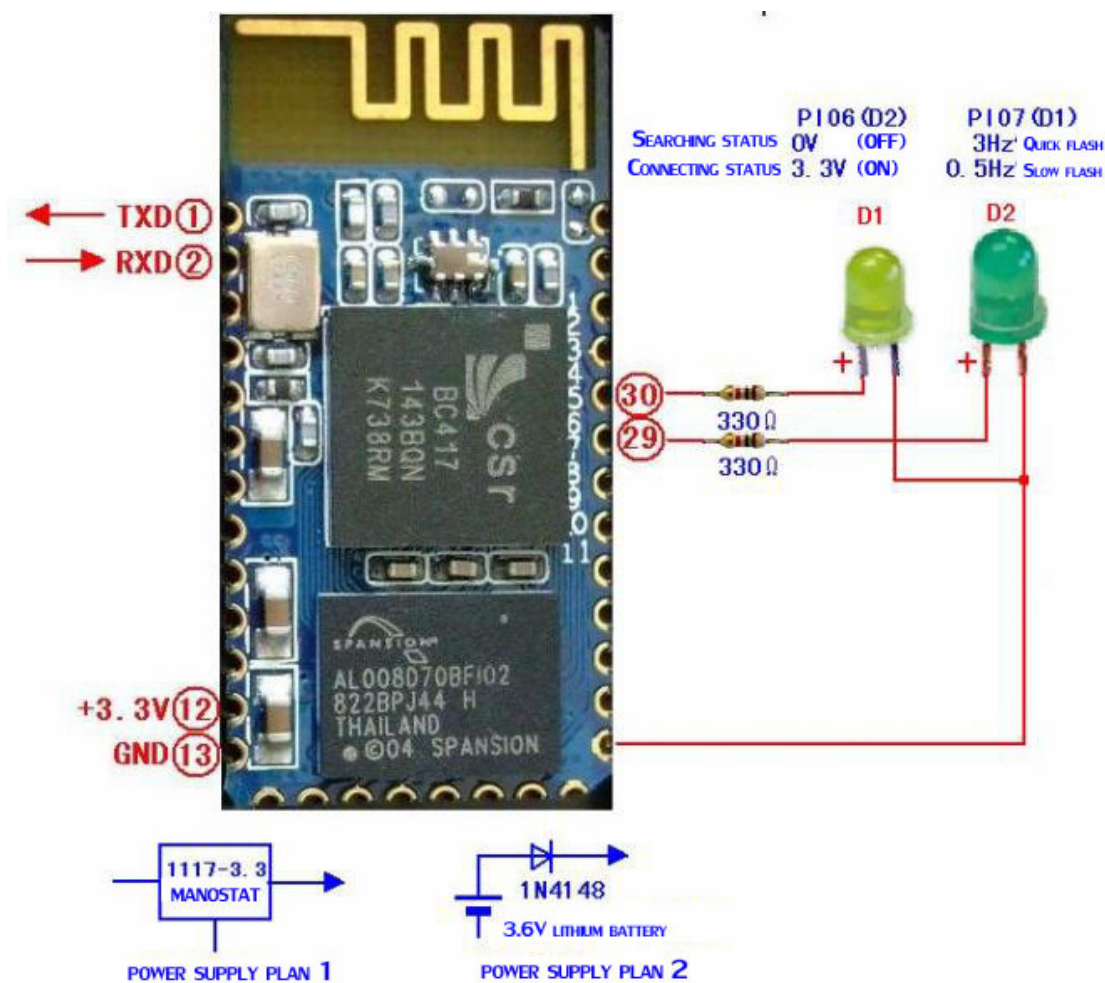
NO	PIN NAME	NO	PIN NAME	NO	PIN NAME
1	UART-TX	13	GND	25	PIO(2)
2	UART-RX	14	GND	26	PIO(3)
3	UART-CTS	15	USB D-	27	PIO(4)
4	UART-RTS	16	SPI-CSB	28	PIO(5)
5	PCM-CLK	17	SPI-MOSI	29	PIO(6)
6	PCM-OUT	18	SPI-MISO	30	PIO(7)
7	PCM-IN	19	SPI-CLK	31	PIO(8)
8	PCM-SYNC	20	USB D+	32	PIO(9)
9	AIO(0)	21	GND	33	PIO(10)
10	AIO(1)	22	GND	34	PIO(11)
11	RESET	23	PIO(0)		
12	3.3V	24	PIO(1)		

Usage

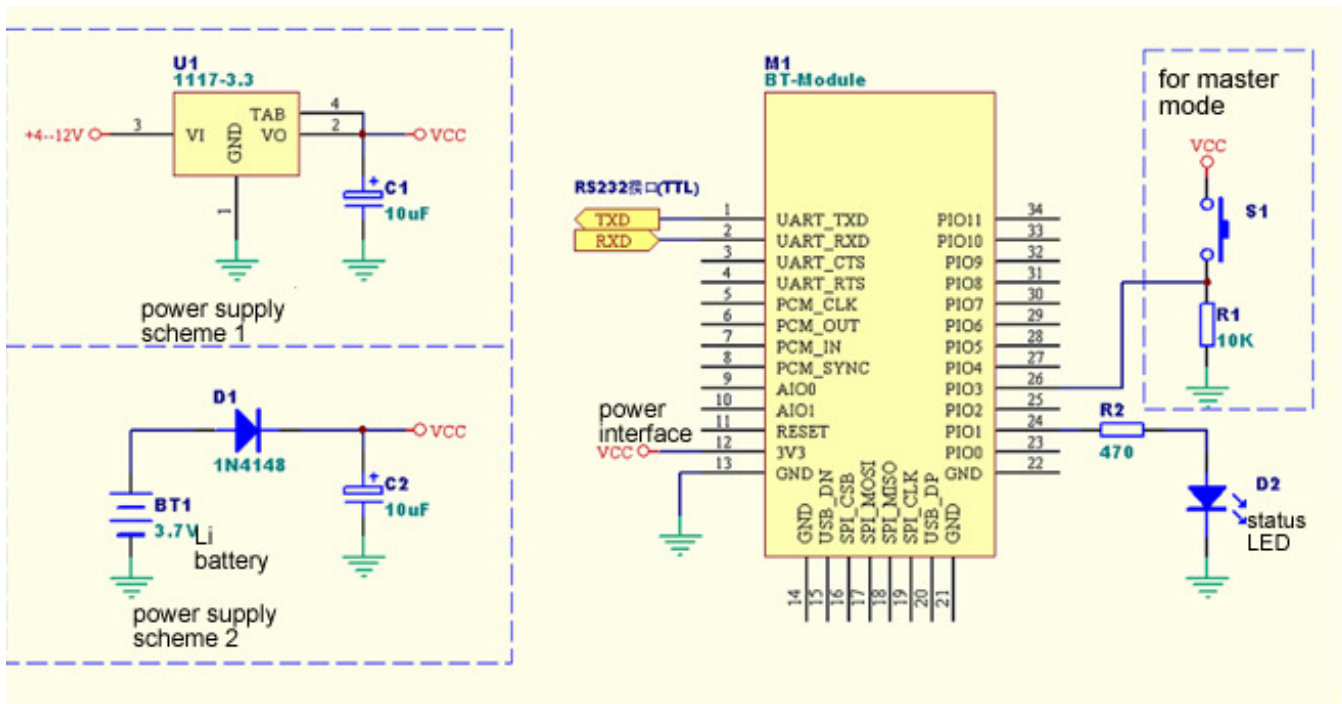
- **Coupled Mode:** Two modules will establish communication automatically when powered. (**Hint:** master blinks slower, while slave blinks faster)
- **PC hosted mode:** Pair the module with bluetooth dongle directly as virtual serial (paring code:1234)
- **Paring:** master and slave are remembered after first successful connection. When the slave and master are out of range, they will go to paring mode. To change paring, press S1.

LED status

- Blink – Pairing.
- Lit – Connection established.



Basic Wiring



AT commands list

Compatibility

You may change the baud rate by AT command to satisfy your application. Different baud rate modules can communicate after paired, but the baud rate should match with its device connected.

For example: Device A—115200—Module A ~~~Bluetooth~~~ Module B—9600—Device B.

Prerequisite for entering AT command:

1. Properly powered.
2. Serial connected with right baud rate.
3. Not paired with other module.

Setmode

Original serial setting: 115200, N, 8, 1.

1. AT command test:

Input (to terminal, no entry key): AT

Respond (from terminal): OK

2. Change baud rate. AT + BAUD(#)

Representative SN for (#)

1-----1200
2-----2400
3-----4800
4-----9600
5-----19200
6-----38400
7-----57600
8-----115200
9-----230400
A-----460800
B-----921600
C-----1382400

Example:

Input: AT+BAUD1

Respond: ok1200

Input: AT+BAUD1

Respond;OK2400

.....

Caution: Baud rate beyond 115200 are not supported by most PC system. To revise module with baud rate over 115200 requires microprocessor programming.

3, Change module name: AT+NAME(name)

Example:

Input: AT+NAMEbill-gates

Respond: OKsetname.

Note: All settings are auto saved after AT command setting.