



Flaircomm Microelectronics, Inc.

FLC-BTM701

Datasheet

www.flairmicro.com

Document Type: Bluetooth Module Datasheet

Document Number: FLC-BTM701-DS

Document Version: V1.0

Release Date:

Copyright 2017~ 2019 by Flaircomm Microelectronics Inc., All

Right Reserved

Without written permission from Flaircomm Microelectronics Inc., reproduction, transfer, distribution or storage of part or all of the contents in this document in any form is prohibited



Release Record

Version	Release Date	Comments
V1.0		Release

CONTENTS

1.INTRODUCTION	4
1.1 NAMING DECLARATION	4
1.2 BLOCK DIAGRAM	4
1.3 FEATURES	5
1.4 APPLICATIONS	5
2. GENERAL SPECIFICATION	5
3. PIN DEFINITION	6
3.1 PIN CONFIGURATION	7
3.2 PIN DEFINITION	7
4. MECHANICAL CHARACTERISTIC	9

TABLES AND FIGURES

Table 1: Naming Declaration	4
Table 2: General Specification	7
Table 3: Pin Definition	10
Figure 1: Block Diagram	5
Figure 2: Pin Configuration	8

1. Introduction

FLC-BTM701 is a small form factor, low power and highly economic Bluetooth radio module that allows OEM to add wireless capability to their products. The module supports multiple interfaces that make it simple to design into fully certified embedded Bluetooth solutions.

With FLC's AT+ programming interfaces, designers can easily customize their applications to support different Bluetooth profiles, such as SPP, DUN, HDP, and etc. The module supports Bluetooth® Enhanced Data Rate (EDR) and delivers up to 3 Mbps data rate for distances to 10M.

The module is an appropriate product for designers who want to add wireless capability to their products.

1.1 Naming Declaration

New Naming	Old Naming	Description
FLC-BTM701	NA	With a built-in antenna.

Table 1: Naming Declaration

1.2 Block Diagram

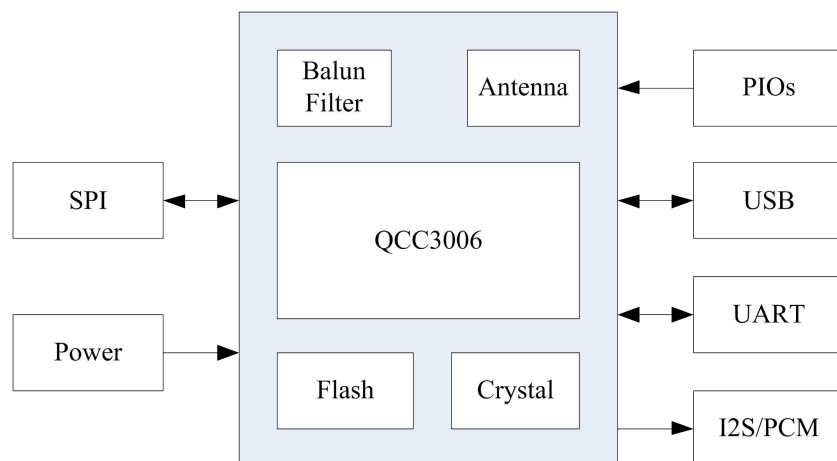


Figure 1: Block Diagram

1.3 Features

- Fully qualified single-chip dual mode Bluetooth v5.0
- On-board antenna design
- UART and USB programming and data interfaces
- PCM digital audio interface
- Small form factor
- SMT pads for easy and reliable PCB mounting
- RoHS compliant

1.4 Applications

- Cable replacement
- Measurement and monitoring systems
- Industrial sensors and controls
- Medical devices
- Industrial PCs and laptops

2. General Specification

Bluetooth Specification	
Standard	Fully qualified single-chip dual mode Bluetooth v5.0 , Class 1.5 ^a
Profiles	SPP, DUN, HDP, etc. detailed profiles depends on the firmware
Frequency Band	2.402GHz ~ 2.480GHz
Maximum Data Rate	3Mbps
Antenna	On-Board
Baseband Crystal OSC	26MHz
Interface	UART, PIO, AIO, USB, SPI, PCM
Sensitivity	-85dBm@0.1%BER
RF TX Power	7dBm
Power	
Supply Voltage	3.1V ~ 3.6V DC
Working Current	Depends on profiles
Standby Current	TBD
Operating Environment	
Temperature	-40°C to +85°C
Humidity	10%~90% Non-Condensing
Certifications	TBD
Environmental	TBD
Dimension and Weight	
Dimension	13.40mm x 25.80mm x 2.40mm
Weight	TBD

Table 2: General Specification

a) The maximum RF TX Power is 9dBm.

3. Pin Definition

3.1 Pin Configuration

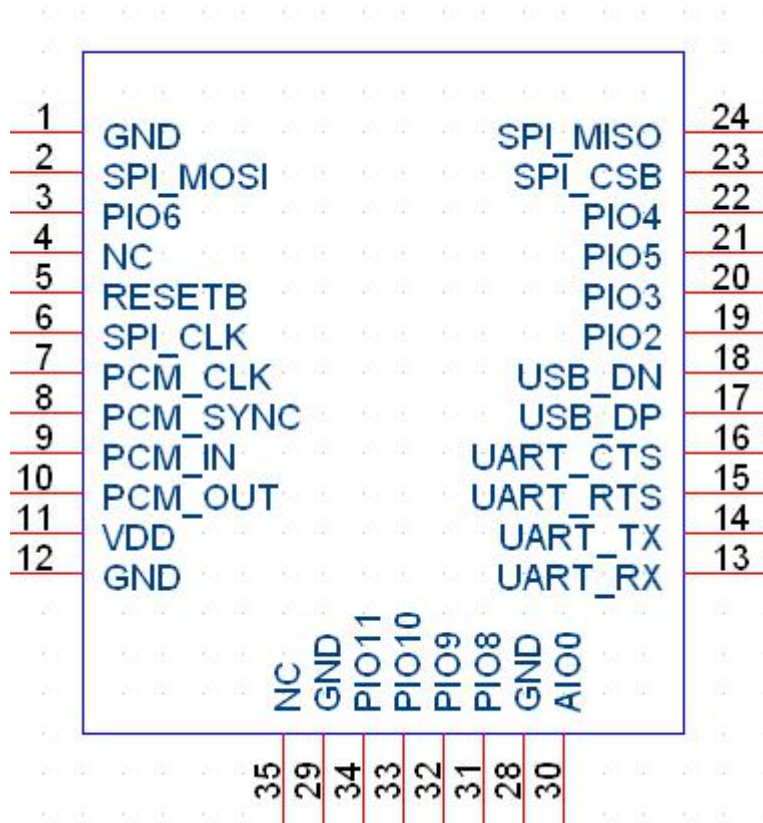


Figure 2: Pin Configuration

3.2 Pin Definition

Pin	Symbol	I/O Type	Description
1	GND	Ground	Ground
2	SPI_MOSI	CMOS input with weak internal pull-down	Serial Peripheral interface data input. Programming only.
3	PIO6	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
4	NC	Not connected	Not connected
5	RESETB	CMOS input with weak internal pull-up	Active LOW reset.

6	SPI_CLK	CMOS input with weak internal pull-down	Serial Peripheral interface clock. Programming only.
7	PCM_CLK	Bi-directional with weak internal pull-down	PCM interface, synchronous data clock. No connect if not use.
8	PCM_SYNC	Bi-directional with weak internal pull-down	PCM interface, synchronous data sync. No connect if not use.
9	PCM_IN	CMOS input with weak internal pull-down	PCM interface, synchronous data input. No connect if not use.
10	PCM_OUT	CMOS output, tri-state, with weak internal pull-down	PCM interface, synchronous data output. No connect if not use.
11	VDD	Power	3.3V regulated power supply
12	GND	Ground	Ground
13	UART_RX	CMOS input with weak internal pull-down	UART receive data input
14	UART_TX	CMOS output, tri-state, with weak internal pull-up	UART transmit data output
15	UART_RTS	CMOS output, tri-state, with weak internal pull-up	UART request to send, active low, set HIGH to disable host transmitter
16	UART_CTS	CMOS input with weak internal pull-down	UART Clear to send, active low, if set HIGH, disables transmitter
17	USB_DP	Bi-directional	USB data plus. Pull up 1.5K when active
18	USB_DN	Bi-directional	USB data minus.
19	PIO2	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
20	PIO3	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
21	PIO5	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
22	PIO4	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
23	SPI_CSB	CMOS input with weak internal pull-up	Chip select for synchronous serial interface, active low. Programming only.
24	SPI_MISO	CMOS output, tri-state,	Serial Peripheral interface data

		with weak internal pull-down	output. Programming only.
28	GND	Ground	Ground
29	GND	Ground	Ground
30	AIO0	Bi-directional	Programmable analog input/output
31	PIO8	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
32	PIO9	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
33	PIO10	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
34	PIO11	Bi-directional with programmable strength internal pull-up/down	Programmable input/output
35	NC	Not connected	Not connected

Table 3: Pin Definition

4. Mechanical Characteristic

