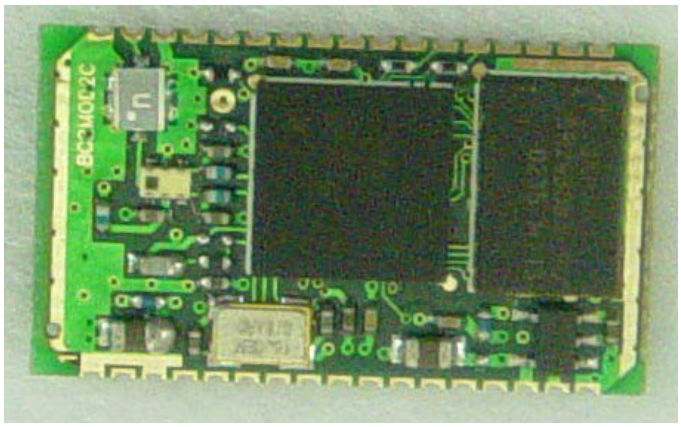
- Bluetooth Spec. v1.1 Compliant
- Class 2 type Output Power
- Support Firmware Upgrade
- Support Piconet, up to 7 Slaves
- Full Speed Bluetooth, 723K/57.6Kbps
- USB 1.1 and UART Host Interface
- PCM Audio Interface
- Low Voltage Power Supply, 2.7V to 3.6V
- Nominal Supply Voltage at 3.3V
- Built-in 8Mbit Flash Memory
- Low Power : Park, Sniff, Hold and Deep Sleep
- Surface-mount, Size: 25.0 x 14.5 x 2.3 mm



Product Description

The MODSMTC201 is a Class 2 Bluetooth sub-system using BlueCore2-External chipset from leading Bluetooth chipset supplier, Cambridge Silicon Radio.
It provides a fully compliant Bluetooth system for data and voice communications.
Interfaces with a host via USB or UART and support full data rate up to 723.2K/57.6Kbps.
Voice interface supported PCM protocol. The module and device firmware is fully compliant with the Bluetooth specification v1.1.

Applications

- PCs, PDAs
- Computer Accessories (CF Cards, USB Dongles PCMCIA, RS232 Adaptors, etc.)
- Embedded systems
- Cordless Audio application
- FAX, Printer Adaptors
- RS232 converters
- Industrial and consumer boards
- Headset , Hands-free

Electrical and RF datasheet

Absolute Maximum Rating	Min	Max
Storage Temperature	-40°C	+85°C
Supply Voltage, (VDD, VPA)	-0.30V	+3.60V

Recommended Operating Conditions	Min	Max
Operating Temperature Range	-25°C	+75°C
Supply Voltage, (VDD, VPA)	2.70V	+3.60V

Power Consumption	Units	Average	Peak
SCO Connection HV3 (1s interval sniff mode)	mA	32	-
SCO Connection HV1 (1s interval sniff mode)	mA	32	-
ACL Data Transfer 115.2Kbps UART	mA	28	-
ACL Data Transfer 721Kbps USB	mA	62	-
Peak Current during RF Burst	mA	78	-
Leakage Current (all off) supply connected	mA	NA	-

VDD = 3.3V; f = 2.45GHz; T=20°C

RF Specifications

Receiver	Units	Min	Typ	Max	Bluetooth Req
Sensitivity at 0.1% BER	dBm	Min	-80	-78	-70
Maximum Receiver Signal	dBm	-	-	-8	-8
C/I Co-Channel	dB	-	9	-	0
Adjacent Channel Selectivity C/I 1MHz	dB	-	-	0	11
2nd Adjacent Channel Selectivity C/I 2MHz	dB	-	-	-30	-30
3rd Adjacent Channel Selectivity C/I >3MHz	dB	-	-	-40	-40
Image Rejection C/I	dB	-	-	-9	-9

VDD = 3.3V; f = 2.45GHz; T=20°C

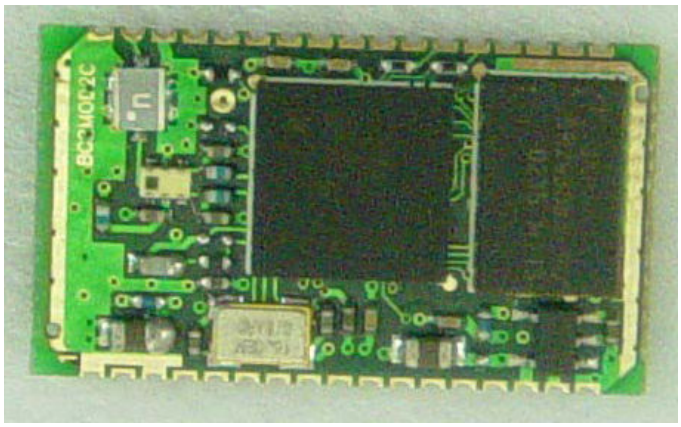
Transmitter	Units	Min	Typ	Max	Bluetooth Req
RF Output Power	dBm	-	-3	-	-6 to +4
RF Power Control Range	dB	-	NA	-	>16
RF Power Range Control Resolution	dB	-	-	-	-
20dB Bandwidth for Modulated Carrier	KHz	-	850	-	<1000
2nd Adjacent Channel Power (+/- 2MHz)	dBc	-	-	-	-20
3rd Adjacent Channel Power (+/- 3MHz)	dBc	-	-	-	-40

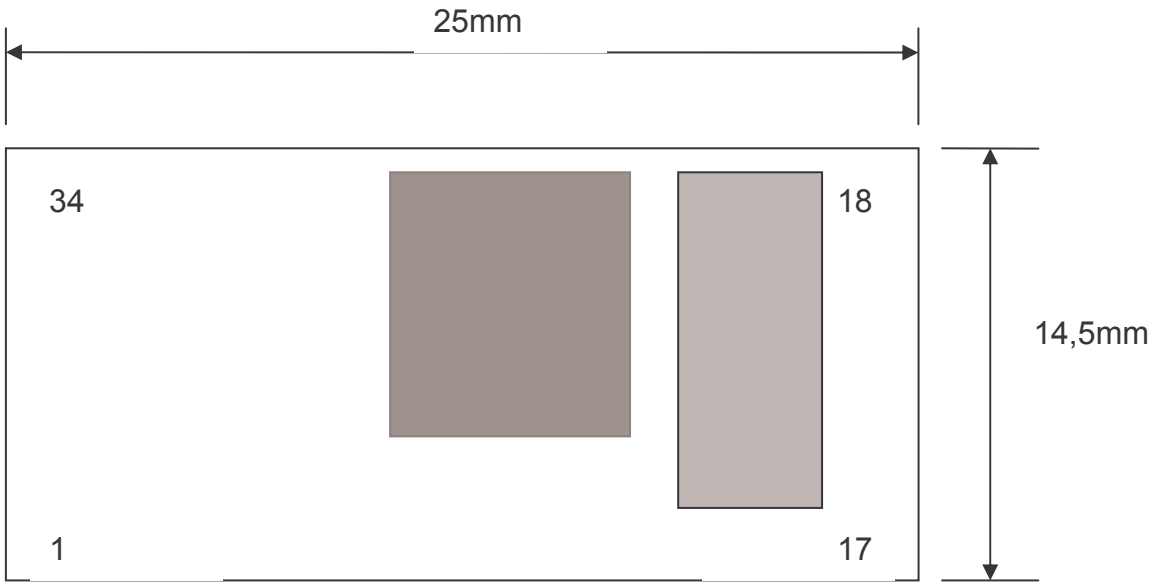
VDD = 3.3V; f = 2.45GHz; T=20°C

Pin assignment

Pin	Name	Type	Function	Note
1	GND	GND	Ground	
2	PIO9	Bi-directional	Programmable Input/Output Line	
3	GND	GND	Ground	
4	AIO0	Bi-directional	Programmable Input/Output Line	
5	PIO8	Bi-directional	Programmable Input/Output Line	
6	RESET	CMOS Input	Reset If High	
7	SPI_MISO	CMOS Output	Serial Peripheral Interface Data Output	
8	SPI_CSB	CMOS Input	Chip Select For Synchronous Serial Interface (Active Low)	
9	SPI_CLK	CMOS Input	Serial Peripheral Interface Clock	
10	SPI_MOSI	CMOS Input	Serial Peripheral Interface Data Input	
11	UART_CTS	CMOS Input	UART Clear To Send (Active Low)	UART
12	UART_TX	CMOS Output	UART Data Output (Active High)	UART
13	UART_RTS	CMOS Output	UART Request To Send (Active Low)	UART
14	UART_RX	CMOS Input	UART Data Input (Active High)	UART
15	1.8V Filter	-	Filter Capacitor for 1.8V	
16	VDD	Power Supply	+3.3V Power Supply	
17	GND	GND	Ground	
18	PCM_OUT	CMOS Output	Synchronous Data Output	
19	PCM_SYNC	Bi-directional	Synchronous Data Sync	
20	PCM_IN	CMOS Input	Synchronous Data Input	
21	PCM_CLK	Bi-directional	Synchronous Data Clock	
22	USB_DP	Bi-directional	USB Data Plus	USB
23	USB_DM	Bi-directional	USB Data Minus	USB
24	PIO7	Bi-directional	Programmable Input/Output Line	
25	PIO6	Bi-directional	Programmable Input/Output Line	
26	PIO5	Bi-directional	Programmable Input/Output line	
	USBDetach	CMOS_Input	Detaches From USB When This Input Is High	USB
27	PIO4	Bi-directional	Programmable Input / Output Line	
	USB_ON	CMOS Input	USB On (Input Senses When VBUS Is High)	USB
28	PIO3	Bi-directional	Programmable Input/Output Line	
	USB_WAKE_UP	CMOS Output	Output Goes High To Wake Up PC When In USB Mode	USB
29	PIO2	Bi-directional	Programmable Input/Output Line	
30	PIO1	Bi-directional	Programmable Input/Output Line	
31	PIO0	Bi-directional	Programmable Input/Output Line	
32	GND	GND	Ground	
33	ANT	Antenna	50 Ohm antenna interface	
34	GND	GND	Ground	

Mechanical dimensions





PCB pad

Pad dimensions	1mm by 1mm (on the PCB)
Pad Distance	1,27 mm (center by center)

Ask us directly for design support, Examples and Antenna issues.