

Module Features

- Bluetooth™ V1.1 Compliant
- Transmit Power +20dBm(Class1)
- 3.0V to 3.4V Operation
- Full Bluetooth data rate over UART and USB
- Four low power modes : Park, Sniff, Hold and Deep Sleep
- Support for up to seven slaves

General Description

ABM-200-1XXX is a Class1 surface mountable Bluetooth™ Module for Notebook PC, Desktop PC, Access Point, Serial Adapter applications.

It provides fully compliant Bluetooth system for data and voice communications. Physical interface to host (UART, USB) can support full Bluetooth data rate 723.2k/57.6kbps. A-Law, u-Law, 13bit or 16bit linear PCM, 8k sample/sec synchronous bidirectional audio interface is also available.

Application

- Laptop and Desktop PCs
- Access point
- Serial Adapter
- Personal Digital Assistants (PDAs)
- Domestic and Industrial Applications

ABM-200

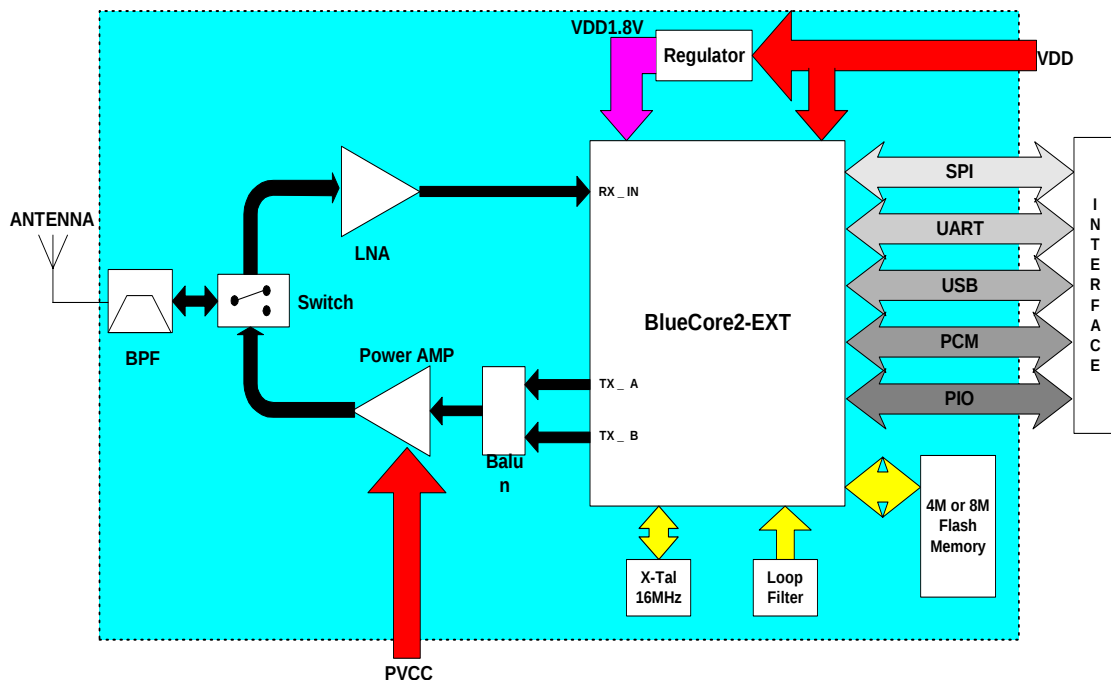
Class1 Bluetooth Module Production Information Data Sheet

ID : ABM-200-1XXX

May.2002

Features

- Size(27.5 X 15 X 2.8mm)
- Class1 Support(+20dBm)
- Surface Mountable
- Dual 3.3V Power Supply
- Support PCM interface for SCO



Electrical Characteristics

Absolute Maximum Ratings			
Parameter	Min	Max	Unit
Storage Temperature	-40	+85	°C
Supply Voltage(VDD)	2.7	3.6	DCV
Supply Voltage(PVCC)	3.0	3.6	DCV
Other Pin Voltage	$V_{ss}-0.4$	$V_{DD}+0.4$	DCV
Recommended Operating Conditions			
Parameter	Min	Max	Unit
Temperature	-20	+70	°C
Supply Voltage for UART	3.0	3.6	DCV
Supply Voltage USB	3.1	3.6	DCV

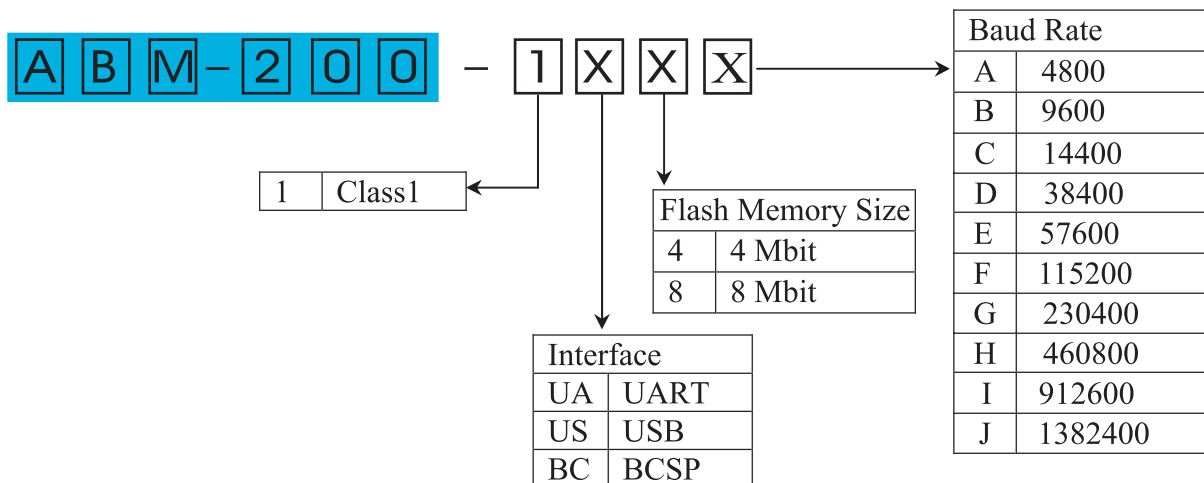
RF Specification

Transmitter Performance					
Parameter	Condition	Min	Typ	Max	Unit
Output Power	Normal/extreme test	-	18	20	dBm
Power Density	Normal/extreme test	-	-	20	dBm
Power Control	Normal/extreme test	$2\text{dB} \leq \text{Step size} \leq 8\text{dB}$			
Frequency Range	Normal/extreme test	2402	-	2480	MHz
20dB Bandwidth	Normal/extreme test	-	850	1000	KHz
Adjacent channel power	$\pm 2\text{MHz}$	-	-	-20	dBm
	$\pm 3\text{MHz}$	-	-	-40	dBm
	$\pm 4\text{MHz}$	-	-	-40	dBm
Modulation Characteristics	$\Delta F_{1\text{avg}}$	140	-	175	KHz
	$\Delta F_{2\text{max}}$	115	-	-	KHz
	$\Delta F_{2\text{avg}} / \Delta F_{1\text{avg}}$	-	-	80	%
Initial Carrier Frequency Tolerance		-75	-	75	KHz
Carrier Frequency Drift	One slot packet(DH1)	-25	-	25	KHz
	Three slot packet(DH3)	-40	-	40	KHz
	five slot packet(DH5)	-40	-	40	KHz
T					
P	Condition	Min	Typ	M	Unit
Out-of-Band Spurious Emissions	30MHz-1GHz	-	-	-36	dBm
	1GHz-12.75GHz	-	-	-30	dBm
	1.8GHz-5.3GHz	-	-	-47	dBm
	5.1GHz-5.3GHz	-	-	-47	dBm
Receiver Performance					
Parameter	Co	Min	Typ	Max	Unit
Sensitivity level	Single slot packets	-70	-83	-	dBm
Sensitivity level	Multi slot packets	-70	-	-	dBm
C/I performance	C/I co-channel	-	-	11	dB
	C/I1MHz (Adjacent channel selectivity)	-	-	0	dB
	C/I2MHz (2nd Adjacent channel selectivity)	-	-	-30	dB
	C/I $\geq 3\text{MHz}$ (3rd Adjacent channel selectivity)	-	-	-40	dB
Blocking performance	30MHz-2000MHz	-10	-	-	dBm
	2000MHz-2400MHz	-27	-	-	dBm
	2500MHz-3000MHz	-27	-	-	dBm
	3000MHz-12.75MHz	-10	-	-	dBm
Intermodulation Performance	n=5	-39	-	-	dBm
Maximun Input Level		-20	-10	-	dBm

Pin Description

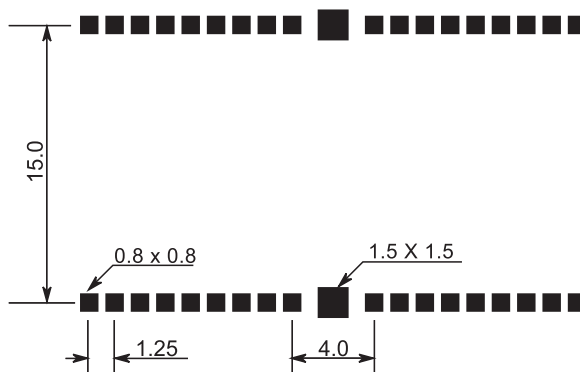
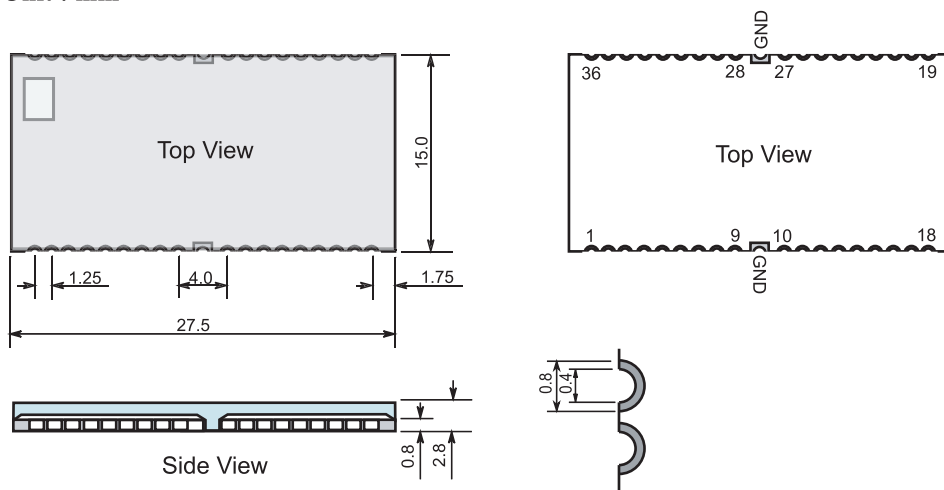
Pin No.	Pin Name	Description
1	GND	Common ground
2	PVCC	Power Amp Power Supply
3	AIO(0)	Programmable I/O terminal
4	AIO(1)	Programmable I/O terminal
5	PIO(0)	RX Enable
6	PIO(1)	TX Enable
7	PIO(2)	USB_PULL_UP
8	PIO(3)	USB_WAKE_UP
9	PIO(4)	USB_ON
10	PIO(5)	USB_DETACH
11	PIO(6)	CLK_REQ
12	PIO(7)	Programmable I/O terminal
13	PIO(8)	Programmable I/O terminal
14	PIO(9)	Programmable I/O terminal
15	RESET_IN	Module Reset INPUT
16	VDD	Core & Baseband Power Supply
17	GND	Common ground
18	GND	Common ground
19	USB+	USB Data plus
20	USB-	USB Data minus
21	PCM_SYNC	Synchronous data strobe
22	PCM_IN	Synchronous $8Kss^{-1}$ data input
23	PCM_OUT	Synchronous $8Kss^{-1}$ data output
24	PCM_CLK	Synchronous data clock
25	UART_RX	UART Data in
26	UART_TX	UART Data out
27	UART_RTS	UART ready to send
28	UART_CTS	UART clear to send
29	SPI_MOSI	Serial Peripheral Interface data input
30	SPI_CSB	Chip select for Synchronous Serial Interface active low
31	SPI_CLK	Serial Peripheral Interface clock
32	SPI_MISO	Serial Peripheral Interface data output
33	PIO(11)	Programmable I/O terminal
34	PIO(10)	Programmable I/O terminal
35	RF-IN_OUT	Connect to Antenna
36	GND	Common ground

Ordering information



Dimensions

Unit : mm



PCB Layout