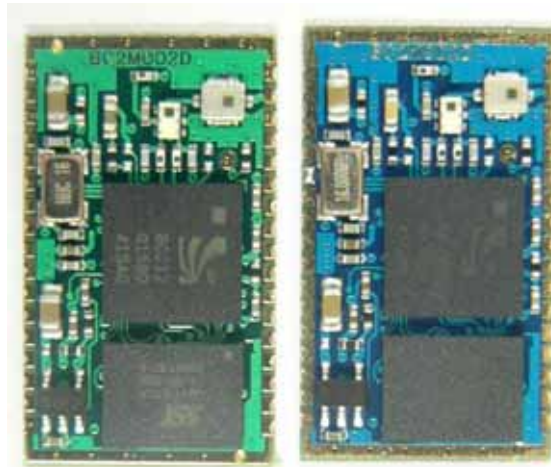


BTM-001

Bluetooth Module Data Sheet



BTM-001

Features

- Complete 2.4GHz radio transceiver and baseband
- Bluetooth™ version 1.1 compliant
- Small footprint (25mm x 14.5mm x 2.2mm)
- Bluetooth™ Class 2 operation (up to 10 meter range)
- Basic module as SMD type
- Antenna and interface options available
- Surface mountable
- CSR BlueCore2, single chip Bluetooth™ system
- On-board flash memory (8Mbits)
- SPI interface can upgrade firmware
- Built-in ROM installed with Widcomm Bluetooth window base protocol stacks
- Park, Sniff, Hold and Sleep low power modes
- Built in a +1.8V regulator.

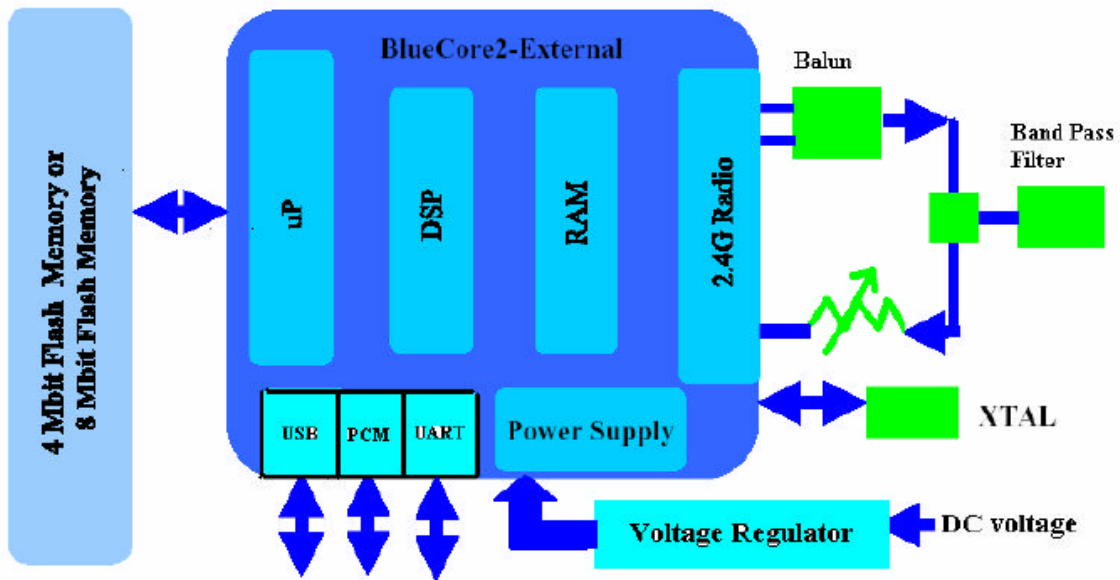
Applications

- Headset, Handset, Hands-Free Car Kit
- Mice, Keyboards and Joysticks
- Digital Cameras and Camcorders
- PDA, Computer & peripheral
- Hand-held devices
- Transportation systems
- Cable replacement
- Other Bluetooth production

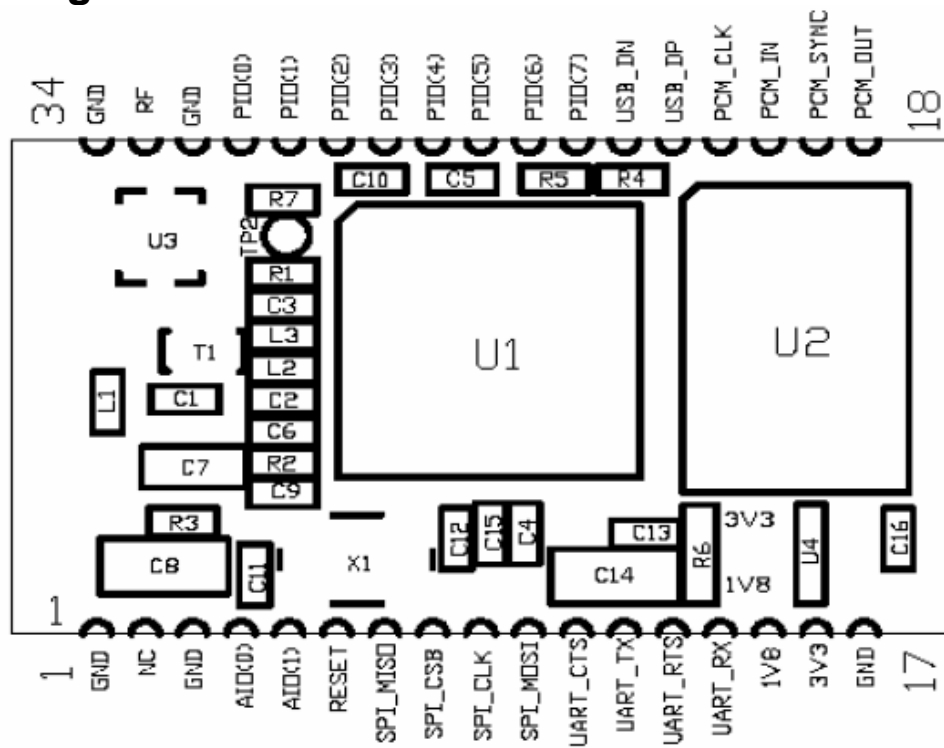
Specification

General	
Data Transmission Rate	723 kbps (asynchronous)
Supply Voltage	DC +3.3V
Power Consumption	100mA max. operational; 10mA max. standby; Active power-saving mode
Link Distance	Better than 10 meters (33 feet) in free space
Certifications	FCC Part 15, UL 1950, ETSI 300 328, ETSI 300 826, EN 60950 (Europe), Radio/Baseband Bluetooth BQB
Operating Temperature	0°C to + 55°C
Radio	
Modulation	Frequency Hopping Spread Spectrum (FHSS) with Gaussian Frequency Shift Keying (GFSK)
Frequency Range	2.40GHz– 2.4835GHz (ISM Band)
RF Channels	79 channels for USA, Japan, and Europe (except France)
RF Output Power	+4 dBm max., Class 2 (upgradeable to 20dBm)
Sensitivity	Better than –80dBm@0.1% BER
Max. Input Level	-20dBm
Antenna interface	50 ohm input and output impedance
Baseband	
Link Mode	ACL , SCO Link support
Network Capabilities	Piconet : point –to- point & point-to-multipoint and Scatternet support.
Security	Initialization: 4-digit PIN code Authentication: Security Mode 2 support Encryption: 128-bit Data Encryption support
Data Packets	DM1/DH1, DM3/DH3, DM5/DH5

Function Diagram



Pin Assignment



No	Pin Name	I/O	Description
1	GND	GND	Ground
2	NC	-	Not connected
3	GND	GND	Ground
4	AIO(0)	A,I/O	Programmable I/O
5	AIO(1)	A,I/O	Programmable I/O
6	RESET	I	High active reset, high level must be maintained 5ms
7	SPI_MISO	O	Serial Peripheral Interface(SPI) data output
8	SPI_CSB	I	Serial Peripheral Interface(SPI) chip select, active low
9	SPI_CLK	I	Serial Peripheral Interface(SPI) clock
10	SPI_MOSI	I	Serial Peripheral Interface(SPI) data input
11	UART_CTS	I	UART clear to send, active low
12	UART_TX	O	UART data output, active high
13	UART_RTS	O	UART require to send, active low
14	UART_RX	I	UART data input, active high
15	1V8	VDD	Voltage output
16	3V3	I	Module supply voltage
17	GND	GND	Ground
18	PCM_OUT	O	Synchronous data output
19	PCM_SYNC	I/O	Synchronous data SYNC
20	PCM_IN	I	Synchronous data input
21	PCM_CLK	I	Synchronous data clock
22	USB_DP	I/O	USB data plus
23	USB_DN	I/O	USB data minus
24	PIO(7)	I/O	Programmable I/O
25	PIO(6)	I/O	Programmable I/O or clock request output to enable external clock for external clock line
26	PIO(5)	I/O	Programmable I/O or chip detaches from from USB when this input is high
27	PIO(4)	I/O	Programmable I/O or input sense when VBUS is high, wake up Bluetooth module
28	PIO (3)	I/O	Programmable I/O or active high wake up PC when in USB mode or external Ram chip select
29	PIO(2)	I/O	Programmable I/O or USB Pull up(1k5 to USB D+_for full speed)
30	PIO(1)	I/O	Programmable I/O
31	PIO(0)	I/O	Programmable I/O
32	GND	GND	Ground
33	RF	O	Antenna interface
34	GND	GND	Ground

Table 4.1: Pin description

List of abbreviations: Analog (A), Input (I), Output (O), Ground (GND), Radio Frequency port (RF).

Notes: Voltage level of input (I), output (O) and input/output (I/O) pins is 3.3 V.