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Device Features

- Bluetooth™ V1.1 Compliant
- 2.7V to 3.3V Operation
- Full Bluetooth™ data rate over UART and USB
- Support Device Firmware Upgrade
- Four low power modes: Park, Sniff, Hold and Deep Sleep
- Piconet and Scatternet Capability
- Support for up to seven slaves
- Antenna Included

General Description

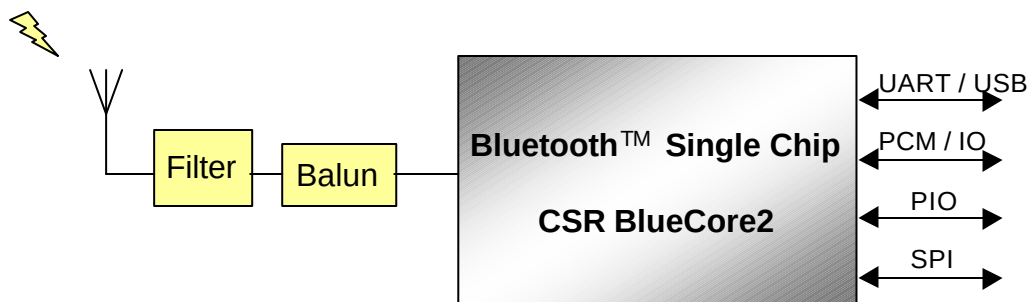
UB1-1112 is a class 2 surface mountable Bluetooth™ Module. It provides a full compliant system for data and voice communications. The physical interfaces to a host (UART and USB) can support full Bluetooth™ data rate of 723.2k/57.6kbps. A 13 bit PCM, 8k sample/sec, synchronous bidirectional audio interface is also available.

Applications

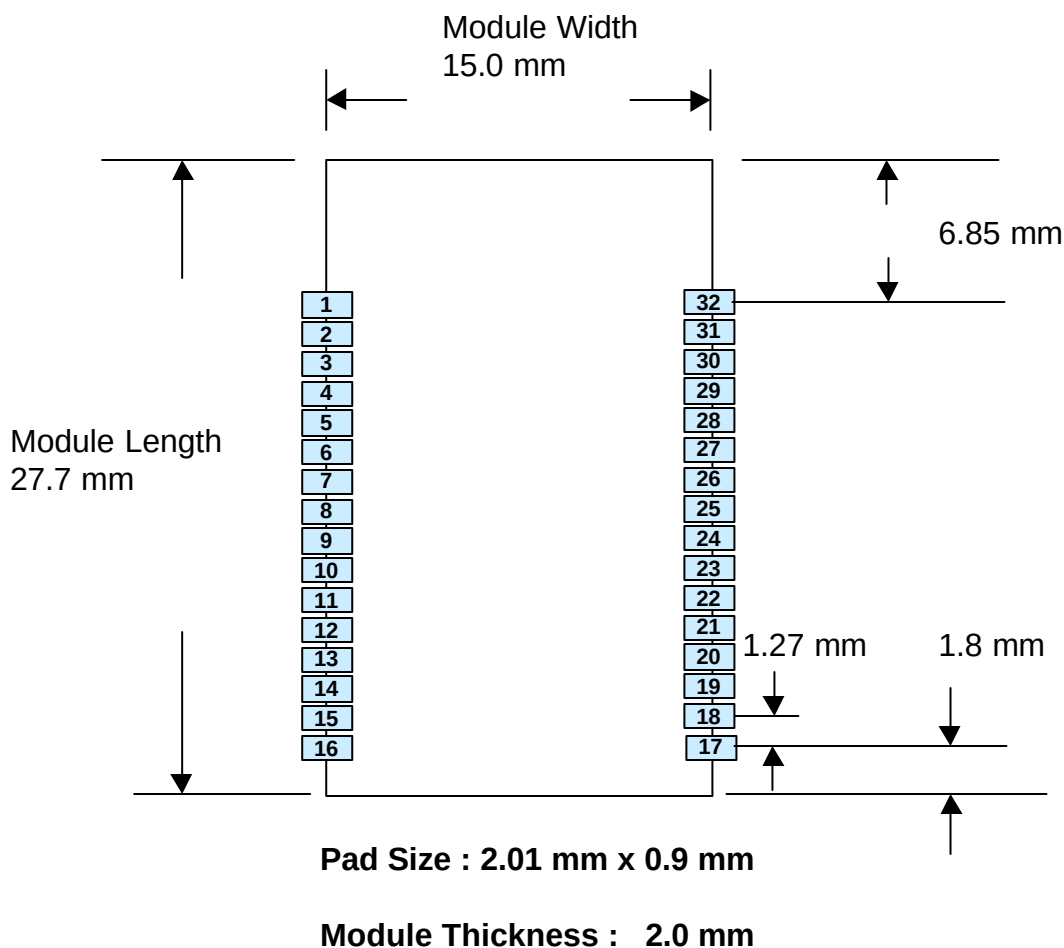
- Laptop and Desktop PCs
- Mobile Phones
- Cordless Headsets
- Personal Digital Assistants (PDAs)
- Domestic and Industrial Appliances
- FAX
- Printers



Block Diagram



Module Footprint





Pin Description

Pin No.	Pin Name	Description
1	GND	Common ground
2	GND	Common ground
3	AIO[0]	Programmable Input / Output line
4	AIO[1]	Programmable Input / Output line
5	RESET	Reset if high
6	SPI_MISO	Synchronous Serial Interface data output
7	SPI_CSB	Chip select for Synchronous Serial Interface
8	SPI_CLK	Synchronous Serial Interface Clock
9	SPI_MOSI	Synchronous Serial Interface data input
10	UART_CTS	UART clear to send
11	UART_TX	UART data output
12	UART_RTS	UART ready to send
13	UART_RX	UART data input
14	+1.8V	DC voltage monitor
15	+3.3V	Power Supply
16	GND	Common ground
17	PCM_OUT	Synchronous data output
18	PCM_SYNC	Synchronous data strobe
19	PCM_IN	Synchronous data input
20	PCM_CLK	Synchronous data clock
21	USB_D+	USB data plus
22	USB_D-	USB data minus
23	PIO[7]/RAM_CSB	Programmable input / Output line
24	PIO[6]/CLK_REQ	PIO line or clock request for external clock line
25	PIO[5]/USB_DETACH	PIO line or chip detaches from USB when this line is high
26	PIO[4]/USB_ON	PIO or USB on(input senses when VBUS is high
27	PIO[3]/USB_WAKE_UP	PIO or Output goes high to wake up PC when in USB mode
28	PIO[2]/USB_PULL_UP	PIO or USB pull-up(via 1.5k ohm resistor to USB_D+
29	PIO[1]/TXEN	TX LED display if high
30	PIO[0]/RXEN	RX LED display if high
31	GND	Common ground
32	GND	Common ground



RF Characteristics

Transmitter	Typ	Bluetooth Specification	Unit
RF Transmit power	+2	-6 to 4	dBm

Receiver	Typ	Bluetooth Specification	Unit
Sensitivity @ 0.1% BER	-80	-70	dBm
Maximum received signal @ 0.1% BER	-5	-20	dBm

Antenna	Typ	Max	Unit
Peak Gain @ 2.45GHz	+0.5	+1	dBi

Power Consumption

Mode	Avg	Peak	Unit
SCO connection HV3 (1s interval Sniff Mode) (Slave)	32	-	mA
SCO connection HV1 (Slave)	61	-	mA
ACL Data transfer 115.2kbps UART (Master)	37	-	mA
ACL Data transfer 720kbps USB (Slave)	70	-	mA
Deep Sleep	35	-	uA

Bluetooth Module Part Number List

Version 6.4 - 2004'4'15	Class 2 Module
P/N #	Description
Bluetooth Module UB1-1111 Part List	
UM-00000-00T0	BT Module, W/O Ant., 半成品 w/o function test (UB1-1111)
UM-02001-0001	BT Module, W/O Ant., USB W/O PS
UM-02002-0001	BT Module, W/O Ant., USB W/ PS
UM-01001-0001	BT Module, W/O Ant., UART (BCSP) 4800
UM-01002-0001	BT Module, W/O Ant., UART (BCSP) 9600
UM-01003-0001	BT Module, W/O Ant., UART (BCSP) 19200
UM-01004-0001	BT Module, W/O Ant., UART (BCSP) 38400
UM-01005-0001	BT Module, W/O Ant., UART (BCSP) 115200
UM-01006-0001	BT Module, W/O Ant., UART (H4) 4800
UM-01007-0001	BT Module, W/O Ant., UART (H4) 9600
UM-01008-0001	BT Module, W/O Ant., UART (H4) 19200
UM-01009-0001	BT Module, W/O Ant., UART (H4) 38400
UM-01010-0001	BT Module, W/O Ant., UART (H4) 115200
UM-01011-0001	BT Module, W/O Ant., UART (H4) 57600
Bluetooth Module UB1-1112 Part List	
UM-10000-00T0	BT Module, W/ Ant., 半成品 w/o function test (UB1-1112)
UM-12001-0001	BT Module, W/ Ant., USB W/O PS (security code)
UM-12002-0001	BT Module, W/ Ant., USB W/ PS
UM-12003-0001	BT Module, W/ Ant., USB W/ PS, 1.8V
UM-12004-0001	BT Module, W/ Ant., USB W/O PS (SST C FMEM) (2004.4.13. - New)
UM-11001-0001	BT Module, W/ Ant., UART (BCSP) 4800
UM-11002-0001	BT Module, W/ Ant., UART (BCSP) 9600
UM-11003-0001	BT Module, W/ Ant., UART (BCSP) 19200
UM-11004-0001	BT Module, W/ Ant., UART (BCSP) 38400
UM-11005-0001	BT Module, W/ Ant., UART (BCSP) 115200
UM-11006-0001	BT Module, W/ Ant., UART (H4) 4800
UM-11007-0001	BT Module, W/ Ant., UART (H4) 9600
UM-11008-0001	BT Module, W/ Ant., UART (H4) 19200
UM-11009-0001	BT Module, W/ Ant., UART (H4) 38400
UM-11010-0001	BT Module, W/ Ant., UART (H4) 115200
4569-0001-00	BT Module, W/O Ant., UART (BCSP) 115200 for 4M Flash (2004.4.13. - New, 2004.4.15 revise)
Bluetooth Dongle Part List	
UD-10000-00T0	BT USB Dongle, W/O housing, 半成品
UD-12001-0001	BT USB Dongle, W/O housing
UD-12002-0001	BT USB Dongle, Blue(661c) housing
UD-12003-0001	BT USB Dongle, Green-gray (5635 cvc) housing