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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

General Description

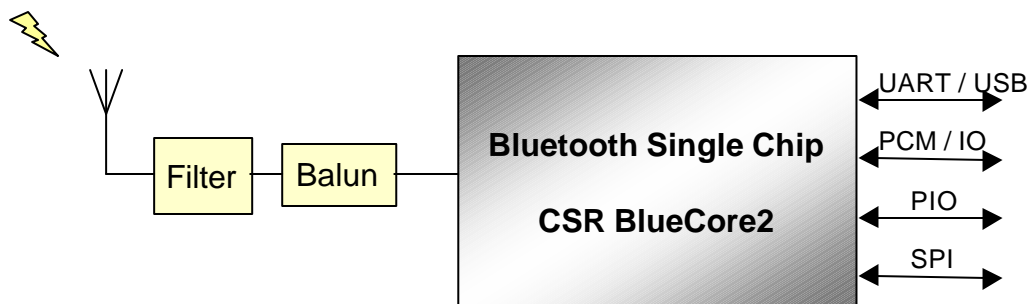
UB1-1111 is a class 2 surface mountable Bluetooth™ Module. It provides a full compliant system for data and voice communications. The physical interfaces to a host(UART and USB) can support full Bluetooth™ data rate of 723.2k/57.6kbps.

A 13 bit PCM, 8k sample/sec, synchronous bidirectional audio interface is also available.

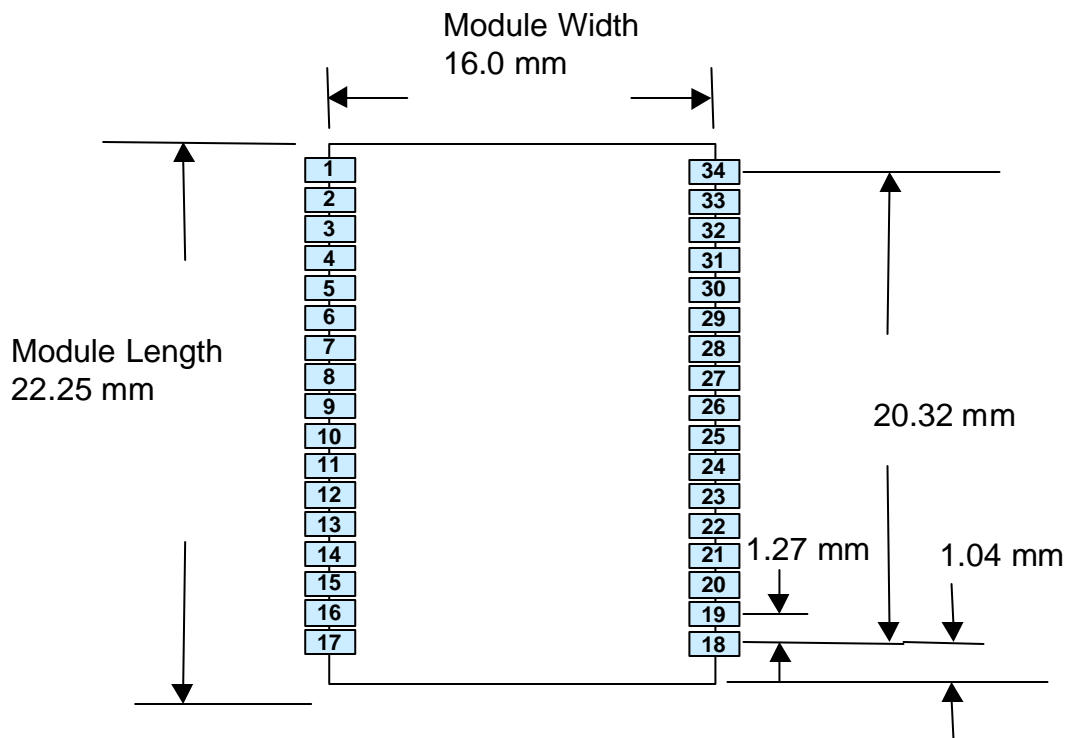
Applications

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

Block Diagram



Module Footprint



Pad Size : 2.01 mm x 0.9 mm

Module Thickness : 2.5 mm

Pin Description

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

RF Characteristics

Transmitter	Typ	Bluetooth Specification	Unit
RF Transmit power	+3	-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

Power Consumption

Mode	Avg	Peak	Unit
SCO connection HV3 (1s interval Sniff Mode) (Slave)	11.2	-	mA
SCO connection HV3 (1s interval Sniff Mode) (Master)	11.2	-	mA
SCO connection HV1 (Slave)	31	-	mA
SCO connection HV1 (Master)	31	-	mA
ACL data transfer 115.2kbps UART (Master)	27	-	mA
ACL data transfer 720kbps USB (Slave)	75.2	-	mA
ACL data connection , Sniff Mode 1s interval, 38.4kbps (UART)	12	-	mA
Deep Sleep	60	-	uA
Peak RF current during TX burst (+4 dBm)	74.8	-	mA
Peak RF current during TX burst (0 dBm)	64.8	-	mA
Peak RF Current during RX burt (-83dBm)	69.2	-	mA