

Functional Description

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MITSUMI

Bluetooth Module “ WML-C07##”

Hardware:Version 1

Ultra-small and thin size achieved through use of high density mounting technology.

1. APPLICATIONS

Notebook PCs, mobile phones, digital cameras, PC peripherals, PDA.

2. DESCRIPTIONS

Wireless communication module conforming to Bluetooth Ver.1.1.

3. FEATURES

- 1) Ultra-small and thin size achieved through use of high density mounting technology.
- 2) High sensitivity.
- 3) UART, USB and PCMIF interfaces enable wide range of applications.
- 4) Conforms to FCC, CE and other countries' EMI standards.
- 5) Supports Bluetooth Class1.

Note) The BLUETOOTH trademarks are owned by Telefonaktiebolaget L M, Ericsson, Sweden.

4. SPECIFICATIONS

I t e m	S p e c i f i c a t i o n s
F r e q u e n c y	2402 to 2480MHz
M o d u l a t i o n	FHSS / GFSK
Channel intervals	1 M H z
Number of channels	7 9 C H
Power supply voltage	3.3V(typ.) ,3.2 to 3.4V
Transmission rate	7 2 1 k b p s
Receive sensitivity	-85dBm typ.
Output level (Class1)	20dBm max.

TM

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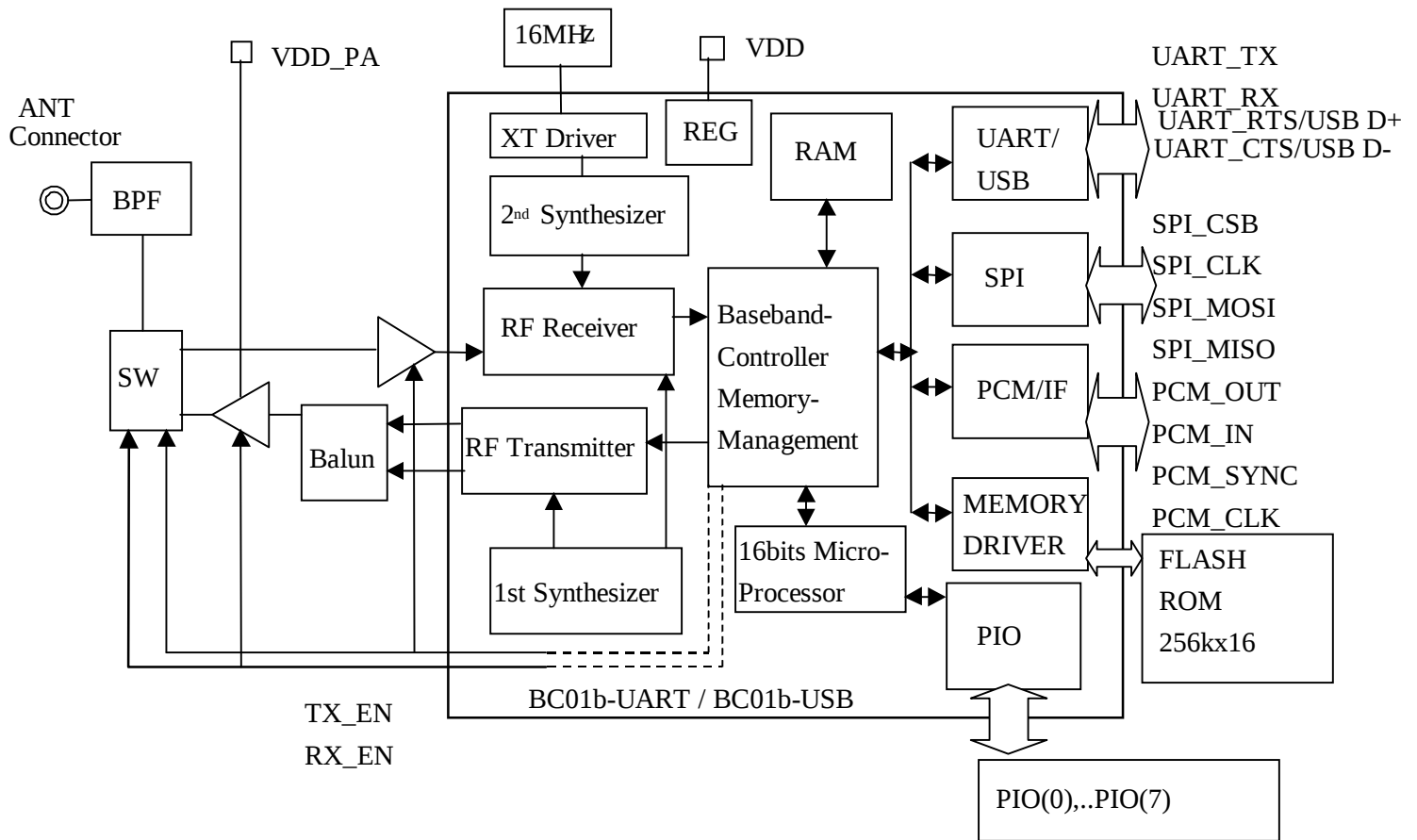
5. TERMINAL DESCRIPTION

No.	Symbol	I/O	Description
1	GND		Ground
2	UART_RX**	I	UART Data Input
3	SPI_MISO	O	Synchronous Serial Interface data output (N.C.*)
4	SPI_CLK**	I	Synchronous Serial Interface clock (N.C.*)
5	SPI_MOS**I	I	Synchronous Serial Interface data input (N.C.*)
6	PIO 4/USB_ON	I/O	Programmable I/O line
7	SPI_CSB**	I	Chip select for Synchronous Serial Interface (N.C.*)
8	PCM_CLK	I/O	Synchronous PCM data clock
9	PIO 5/USB_DETACH	I/O	Programmable I/O line
10	PIO 6	I/O	Programmable I/O line
11	VDD_PA		Supply for Internal Power Amp (3.3V+/-0.1V).
12	VDD		Supply for VDD (3.3V+/-0.1V)
13	UART_CTS/USB_D-	I	UART Clear To Send
14	UART_RTS/USB_D+	O	UART Ready To Send
15	UART_TX	O	UART Data Output
16	PIO 3/USB_WAKE_UP	I/O	Programmable I/O line
17	PIO 2/USB_PULL_UP	I/O	Programmable I/O line
18	PIO 7	I/O	Programmable I/O line
19	PCM_SYNC	I/O	Synchronous data strobe
20	PCM_IN	I	Synchronous PCM data input
21	PCM_OUT	O	Synchronous PCM data output
22	RESET_IN	I	Reset pin (N.C.*)
	ANT	I/O	RF input/output

* N.C.=OPEN

**5V tolerant input terminal.

6. BLOCK DIAGRAM



7. PCM IF

PCM_OUT, PCM_IN, PCM_CLK, PCM_SYNC carry one of bi-directional channel of voice data using 13bits PCM at 8ks/s.

PCM_SYNC operates at a fixed clock frequency of 8kHz.

PCM_CLK operates at a fixed clock frequency of 256kHz.

Bits 1 to 13 of the PCM_OUT data carry the current output sample value.
Bits 14 to 16 carry a three bit signal level value.

Reference PCM audio device is MC145483.

8. OVERALL APPEARANCE

