

Module Features

- Bluetooth system v2.1
- Class 1 Level Output Power Available
- UART Bypass Mode Support
- Scatternet Support
- Support of all Bluetooth packet types
- Support of low power modes: Park, Sniff and Hold
- UART, USB and PCM Interface Available
- Built-in Reference Clock : 26MHz
- RoHS Compliant

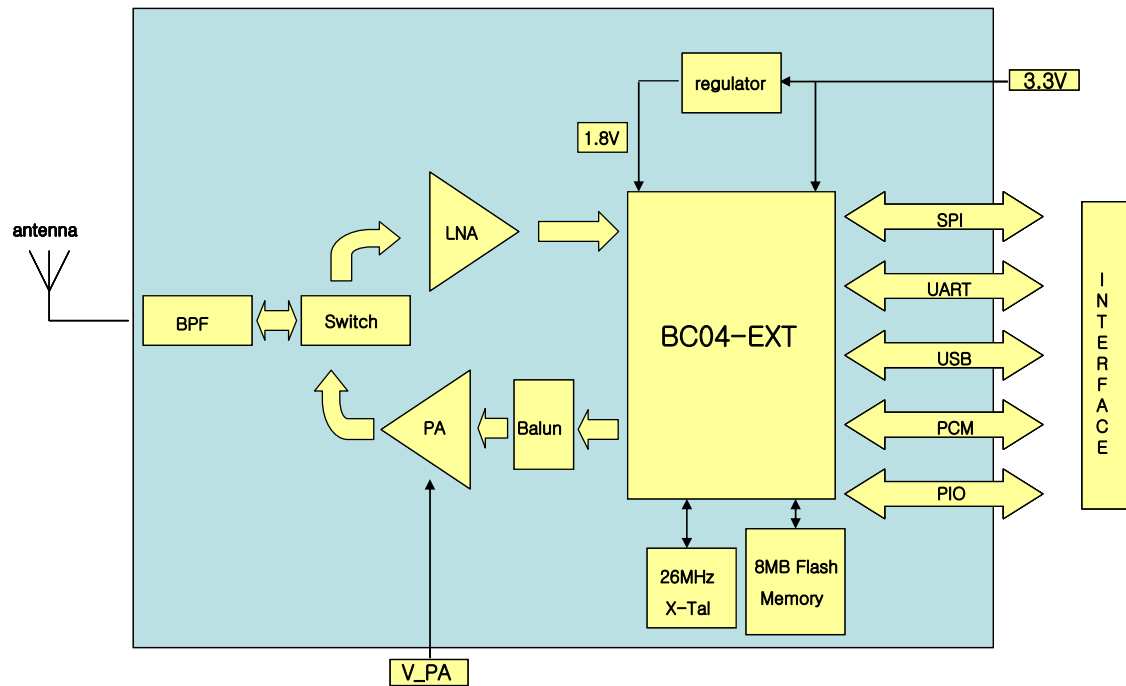
Applications

- Serial Adapter
- Laptop and Desktop PCs
- Access Point
- Domestic and Industrial Application
- Computer Accessories (compact Flash Cards, PCMCIA Cards, SD Cards and USB Dongles)
- Personal Digital Assistants (PDAs)

Features

- Size (27.5 X 15.0 X 2.8mm)
- Class1 Support
- Surface Mountable
- Support PCM interface for SCO
- Not Built-in Antenna (Antenna gain : 0 dBi)

Overview



Electrical Characteristics

Absolute Maximum Ratings			
Parameter	Min	Max	Unit
Storage Temperate	-40	+ 85	°C
Supply Voltage(VCC)	2.7	3.6	V
Supply Voltage(V_PA)	2.7	3.6	V
Other Pin Voltage	VSS-0.4	VCC+ 0.4	V
Recommended Operating Conditions			
Parameter	Min	Max	Unit
Temperature	-20	+ 70	°C
Supply Voltage(VCC)	3.3V		V
Supply Voltage(V_PA)	3.3V		V

RF specification

Transmitter Performance					
Parameter	Condition	Min	Typ	Max	Unit
Output Power	Normal/extreme test	-	-	13	dBm
Power Density	Normal/extreme test	-	-	20	dBm
Power Control	Normal/extreme test				
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
Transceiver Performance					
Parameter	Condition	Min	Typ	Max	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	Condition	Min	Typ	Max	Unit
Sensitivity level	Single slot packets	-	-85	-	dBm
Sensitivity level	Multi slot packets	-	-83	-	dBm
C/I performance	C/I co-channel	-	9	11	dB
	C/I _{1MHz} (adjacent channel)		-2	0	dB
	C/I _{2MHz} (2nd Adjacent channel)		-34	-30	dB
	C/I _{$\geq 3\text{MHz}$} (3 rd adjacent channel)		-43	-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
Maximum Input Level		-20	-5	-	dBm

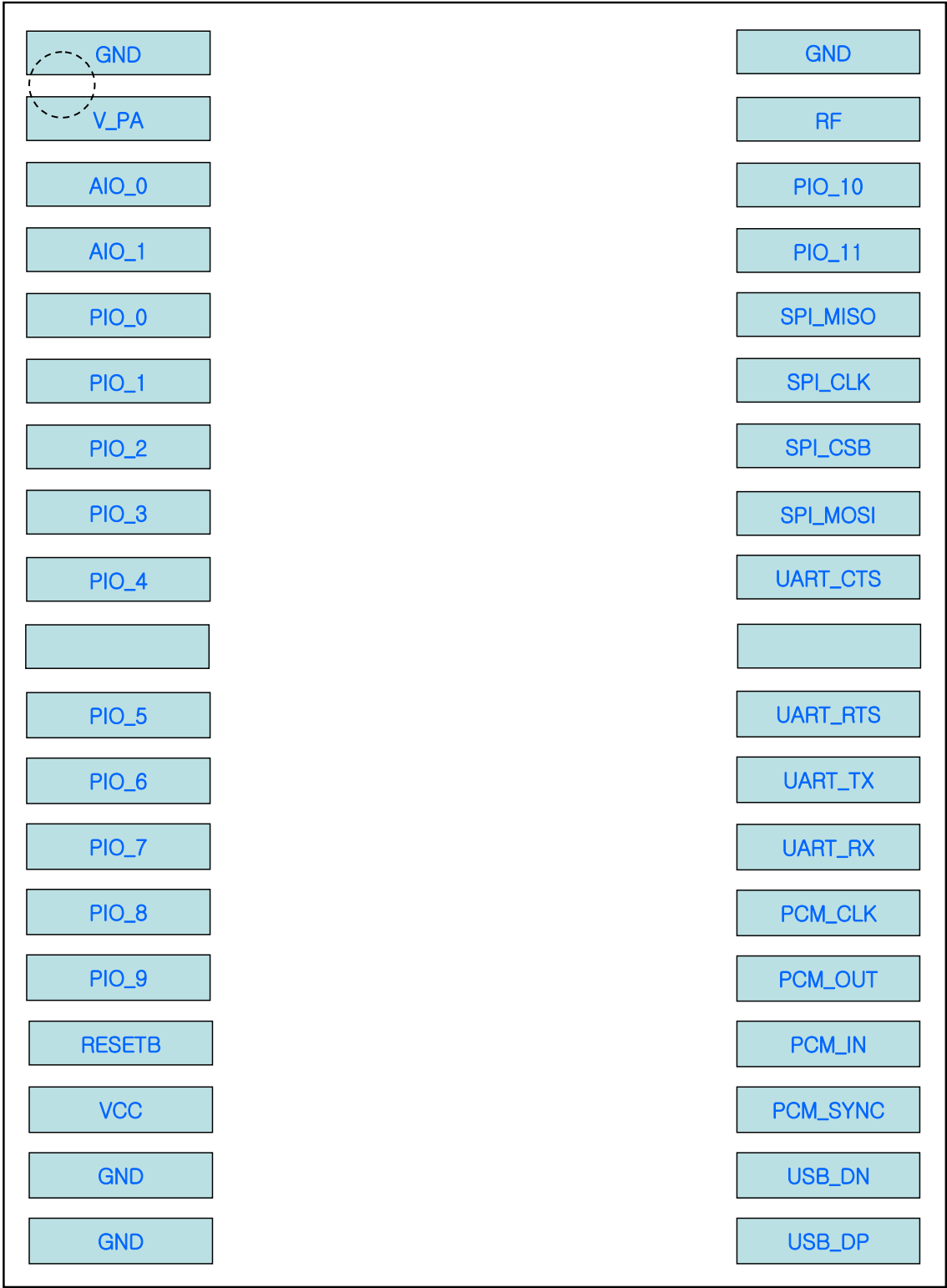
Pin Description

PIO No.	Pin Name	Description	Pad Type
1	GND	Common Ground	Ground
2	V_PA	Power Amp. Power Supply(3.3V)	Power
3	AIO_0	Programmable input/output line	Bi-directional
4	AIO_1	Programmable input/output line	Bi-directional
5	PIO_0	Reserved	
6	PIO_1	Reserved	
7	PIO_2	Programmable input/output line	Bi-directional
8	PIO_3	Programmable input/output line	Bi-directional
9	PIO_4	Programmable input/output line	Bi-direction
10	PIO_5	Programmable input/output line	Bi-direction
11	PIO_6	Programmable input/output line	Bi-direction
12	PIO_7	Programmable input/output line	Bi-direction
13	PIO_8	Programmable input/output line	Bi-direction
14	PIO_9	Programmable input/output line	Bi-direction
15	RESET_B	Reset if low. Input debounced so must be low for>5ms to cause a reset	CMOS Input
16	VCC	Power Supply	Power
17	GND	Common Ground	Ground
18	GND	Common Ground	Ground
19	USB_DP	USB Data Plus with selectable internal 1.5K Ω Pull-up resistor	Bi-directional
20	USB_DN	USB Data minus	Bi-directional
21	PCM_SYNC	Synchronous data sync	Bi-directional
22	PCM_IN	Synchronous data input	CMOS Input
23	PCM_OUT	Synchronous data output	CMOS output
24	PCM_CLK	Synchronous data sync	Bi-directional

25	UART_RX	UART Data Input	CMOS input
26	UART_TX	UART Data Output	Bi-directional
27	UART_RTS	UART request to send to active low	Bi-directional
28	UART_CTS	UART request to clear to active low	CMOS Input
29	SPI_MOSI	SPI data input	CMOS input
30	CPI_CSB	Chip select for SPI, active low	Input
31	SPI_CLK	SPI clock	Input
32	SPI_MISO	SPI data output	CMOS output
33	PIO_11	Programmable input/output line	Bi-directional
34	PIO_10	Programmable input/output line	Bi-directional
35	RF	RF connection to Antenna	Bi-directional
36	GND	Common Ground	Ground

* PIO_0, PIO_1 pins are reserved for internal switch and power amplifier control.

Pin Map (TOP View)



Unit : mm

