SEC-BT

Databook

Confidential / Preliminary Documentation

Revision 1.0

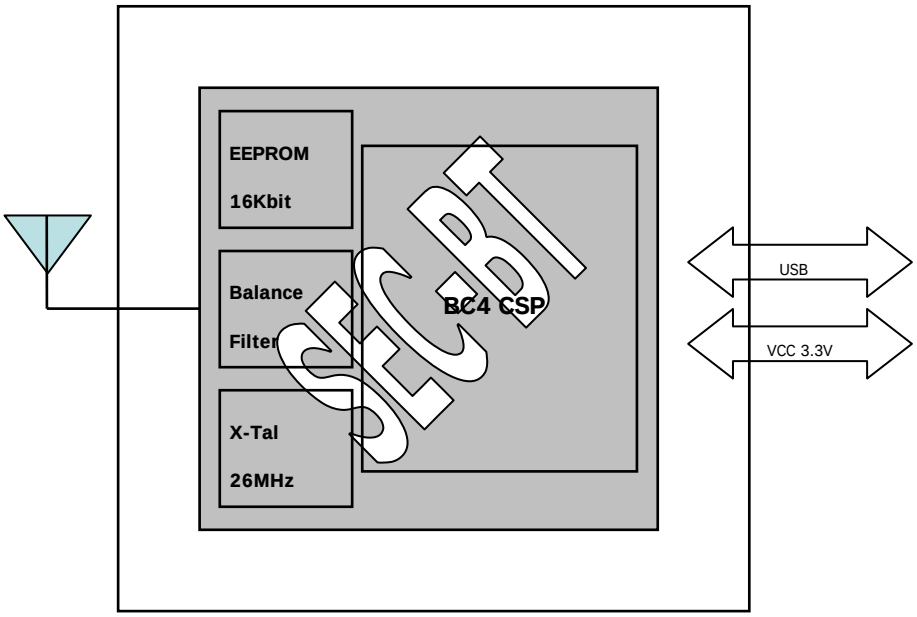
List of Contents

1. General

1.1 overview

This specification covers Bluetooth module (class-2) which complies with Bluetooth specification version 2.0 + EDR and integrates RF & Baseband controller in small package. This Module has deployed CSR's BC04-ROM CSP EDR chipset.

All detailed specification including pinouts and electrical specification may be changed without notice.



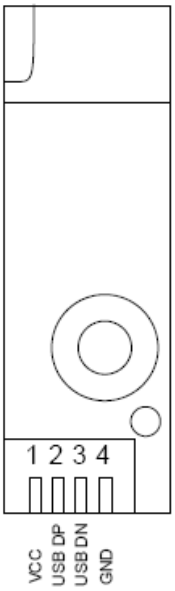
1.2 Features

• Fully Qualified Bluetooth v2.0 + EDR System
• Enhanced Data Rate (EDR) compliant with v2.0.e.2 of specification for both 2Mbps and 3Mbps modulation modes
• Full-speed Bluetooth Operation with Full Piconet Support
• Scatternet Support
• Ultra Low Power Consumption
• Excellent Compatibility with Cellular Telephones
• Support for 802.11 Co-existence
• RoHS Compliant
• Integrated transcoders for A-law, u-law and linear PCM
• Full-speed USB v2.0 interface supports OHCI and UHCI host interface
• Standard HCI (USB) support
• Integrated 4Mbit ROM & 48Kbyte RAM
• Integrated 26MHz Reference Clock (Option)
• Integrated 16Kbit EEPROM (Option)
• Competitive Size (14mm x 43mm)

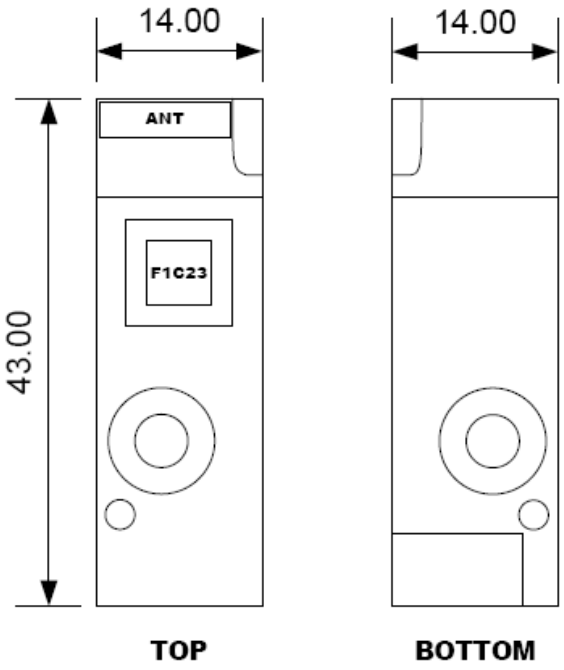
1.3 Application

• Audio Dongle
• USB Dongle

1.4 Pinout Diagram & Outline Size



SEC-BT PinOut Diagram

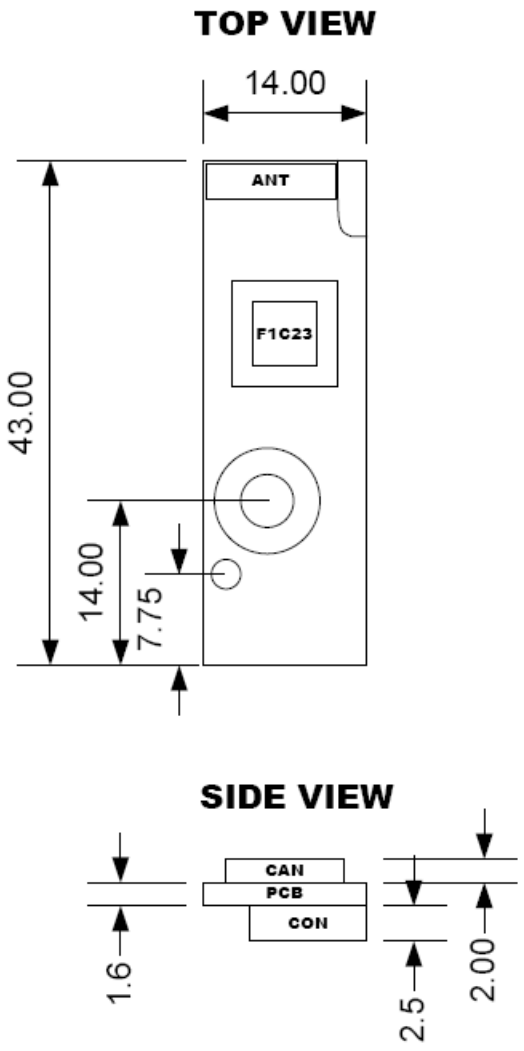


SEC-BT Outline Size

1.5 Device Terminal Functions

PIN Name	PIN No.	Description
VCC	1	Main supply input voltage. Regulated DC Source recommended
USB +	2	USB + with selectable internal 1.5k pull-up resistor
USB -	3	USB -
GND	4	Ground

1.6 Module Dimension



2. Characteristics

2.1 Electrical Characteristics

Absolute Maximum Ratings				
Rating	Minimum	Typical	Maximum	Unit
Operating Temperature Range	-20		60	℃
Supply Voltage : VCC	-0.3	3.3	+0.3	V
Supply Voltage : VDD_CORE	1.7		1.9	V

2.2 RF Characteristics

Transmitter					
Specification	Condition	Minimum	Typical	Maximum	Unit
Output Transmit Power	Normal	-6	0	4	dBm
Transmit Power Density	Normal			4	dBm
Transmit Power Control	Normal	2		8	dBm
Frequency Range	Normal	2400		2483.5	MHz
20dB Bandwidth	Normal		850	1000	KHz
Adjacent Channel Power	±2MHz ±3MHz ±4MHz			-20 -40 -40	dBm
Modulation Characteristics	Δf1avg Δf2max Δf2avg/Δf1avg	140 115		175 80	KHz
Initial Carrier Frequency Tolerance	Normal	-20		-20	KHz
Carrier Frequency Drift	DH1 DH3 DH5	-25 -40 -40		25 40 40	KHz

Receiver					
Specification	Condition	Minimum	Typical	Maximum	Unit
Sensitivity - Single-Slot Packet	BER 0.1%	-70		-	dBm
Sensitivity - Multi-Slot Packet	BER 0.1%	-70		-	dBm
C/I Performance	C/I co-channel C/I F=F_0 +-1MHz C/I F=F_0 +-2MHz C/I F=F_0 +-3MHz			11 0 / 0 -30 / -20 -40 / -40	dB
Blocking Performance	30MHz ~ 2GHz 2GHz ~ 2.4GHz 2.5GHz ~ 3GHz 3GHz ~ 12.75GHz	-10 -27 -27 -10			dBm
Intermodulation Performance	n=5	-39			dBm
Maximum Input Level	Normal	-20			dBm

Antenna	
Description	Value
Frequency (MHz)	2400~2484
Polarization	Linear
Operating Temperature (℃)	-40~+85
Impedance (Ω)	50
Antenna Type	SMD
Weight(g)	0.12
VSWR	< 3 : 1
Efficiency (%)	80.13
Peak Gain Max.(dBi)	4.21
Average Gain (dBi)	-0.93

3. Terminal Description

3.1 USB

This Bluetooth module contains a full speed (12Mbit/s) USB interface that is capable of driving a USB cable directly. No external USB transceiver is required. The device operates as a USB peripheral, responding to requests from a master host controller such as a PC. Both the OHCI and the UHCI standards art supported. The set of USB endpoints implemented can behave as specified in the USB section of the Bluetooth specification v2.0 + EDR or alternatively can appear as a set of endpoints appropriate to USB audio devices such as a set of USB speakers. USB is a master/slave oriented system (in common with other USB peripherals). This Module only supports USB slave operation.

4. Revision History

Revision	Date	Change Descriptions	Issued by
Rev 1.0	2007-01-16	Initial release	

FCC Statements

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operated in conjunction with any other antenna or transmitter.

The final device into which this transmitter module is installed must be labeled with the following statement: "This device contains TX FCC ID: A3LBT." If this transmitter will be configured as a pc peripheral, it will be the OEM's responsibility to obtain authorization as such (either through Certification of Declaration of Conformity) prior to marketing of the device.