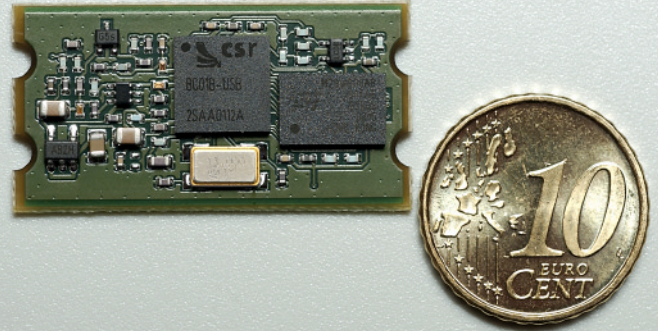


SieMo S50037 Bluetooth Module

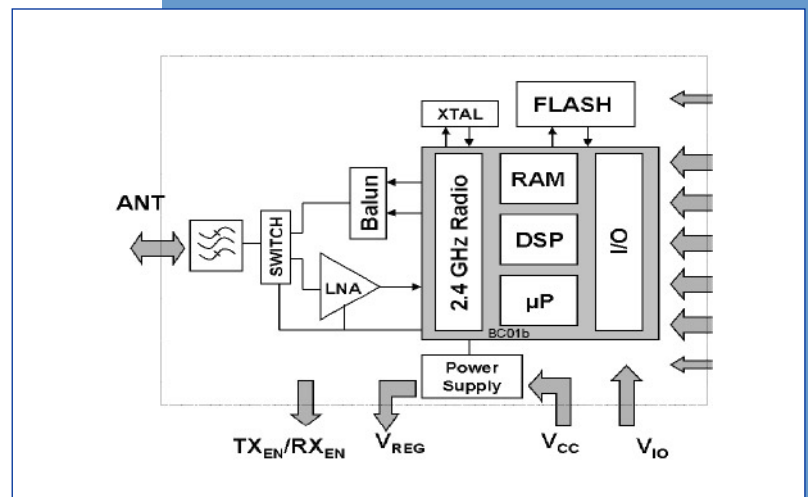


Key features

- Additional development, qualification and integration support for fastest time to market by Siemens
- Compatible footprint with major BT module
- the module can operate as HCI module in a system and can change into a standalone module mode

Coarse module specifications

- Bluetooth qualified
- Bluetooth 1.1 conformity
- input sensitivity -85 dBm
- point-to-multipoint functionality
- master/slave switch
- firmware below HCI embedded
- class 2 Bluetooth device, 2dBm
- 20 dBm prepared
- HCI optionally via UART and USB
- frequency range 2.402 - 2.480 GHz
- temperature range 0-40 centigrades
- regulatory prequalified (FCC and ETSI)
- mechanical outline 32.8 x 16.8 x 2.6 mm³
- power supply 3,25V - 6V.
- GFSK modulation, frequency hopping, 79 channels spaced by 1 MHz
- interface data rate UART to 1.5 Mbps, USB high speed 1.1 (12 Mbps)
- on chip applications realizable
- two independent modes



Electrical Characteristics

Absolute Maximum Ratings

Parameter	Min	Max
Storage Temperature	- 30°C	85°C
Supply Voltage (no damage)	- 7	7V
Digital Inputs	$V_{DD} - 0.4V$	$V_{DD} + 0.4V$

Recommended operating conditions

Parameter	Min	Typ	Max	Unit
Supply Voltage	3.25	-	6	V
Temperature	0	-	40	°C
Supply Current during Data Transfer	30	60	80	mA

Radio Transmitter

Parameter	Min	Typ	Max	Unit
RF transmit power	- 1	2		dBm
RF power control range		30		dB
RF power range control resolution		3		dB
20dB bandwidth for modulated carrier		930		kHz
2nd adjacent channel transmit power		- 47		dBc
3rd adjacent channel transmit power		- 52		dBc

Radio Receiver

Parameter	Min	Typ	Max	Unit
Sensitivity at 0.1% BER		- 85	- 81	dBm
Maximum received signal		- 13		dBm
C/I Co-channel		- 9		dB
Adjacent channel selectivity C/I 1MHz		- 2		dB
2nd adjacent channel selectivity C/I 2MHz		- 34		dB
3rd adjacent channel selectivity C/I >3MHz		- 45		dB
Image rejection C/I		30		dB
Maximum level of intermodulation interferers ($f_1-f_2=5MHz$)		- 30		dB
1dB compression point at 1.9GHz		- 26		dBm

Module Pinning

Module-pinning									
A1	PCM-IN	B1	D+	C1	DETACH	D1	USB-PU	E1	SPI-CSB
A2	PCM-OUT	B2	D-	C2	NC	D2	USB-ON	E2	SPI-CLK
A3	PCM-SYNC	B3	GND	C3	NC	D3	MODE	E3	SPI-MOSI
A4	PCM-CLK	B4	WAKE-UP	C4	VCC-IO	D4	Vreg	E4	SPI-MISO
A5	RXD	B5	TXD	C5	NC	D5	PIO6	E5	TEST-A
A6	RTS	B6	CTS	C6	VCC	D6	PIO7	E6	TEST-B

F1	SCAN-EN	R1	GND	T1	GND	X1	NC
F2	-	R2	GND	T2	ANT	X2	NC
F3	-	R3	Reset#	T3	GND	X3	NC
F4	RX-EN	R4	NC	T4	NC	X4	NC
F5	TX-EN	R5	NC	T5	NC	X5	NC
F6	TX-PWR	R6	NC	T6	NC	X6	NC

