

Bluetooth Module, Parani™ BCD110

Features

- Bluetooth Class 1
- Bluetooth v2.0 + EDR specification
- Transmit Power: +18dBm Typical
- Receive sensitivity: -90dBm (0.1% BER)
- Integrated 8Mbit Flash Memory
- Supports Serial Port Profile (SPP)
- Working distance (In an open field): Nom.200m, up to 1000m
- Supports built-in chip, stub and dipole antennas
- 802.11 co-existence
- Standard HCI over UART or USB
- Field-proven SPP (Serial Port Profile) firmware supporting up to 4 simultaneous multiple connections
- Firmware upgrade via windows-based software (ParaniUpdater)
- Easy to use Windows configuration tool available.
- ROHS compliant

The Parani-BCD110 is a Bluetooth Class1 OEM SMD/ DIP module combining antenna for OEM manufactures who want to implement Bluetooth Class1 functionality with their products cost effectively and also in timely manner.

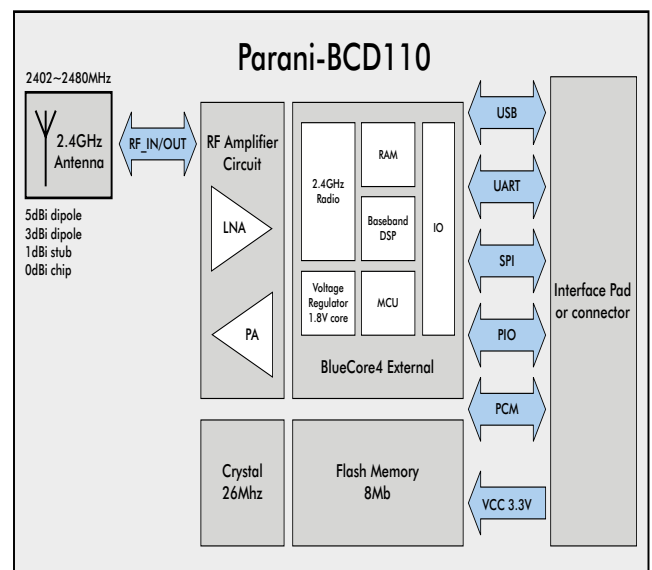
The BCD110 supports Class1 Bluetooth transmission level for longer communication distance typically ranges from 200m up to 1000m at line-up sight. The BCD110 supports UART, USB, I2C, PCM, PIO interfaces for the communication with the OEM products

The BCD110 is provided with Bluetooth v2.0+EDR compatible firmware runs internally for SPP (Serial Port Profile) applications by default. The SPP firmware supports up to 4 simultaneous multiple connections and is designed to work out-of-box for real world SPP applications such as POS (Point-of-sales), industrial automation, remote metering and other various applications. Optionally, the BCD110 can be supplied with only software stack up to HCI level so entire Bluetooth stack runs on the host side for the application such as USB dongles for computers or OEM manufacturers can even develop and embed their own firmware into the BCD110.

Specifications

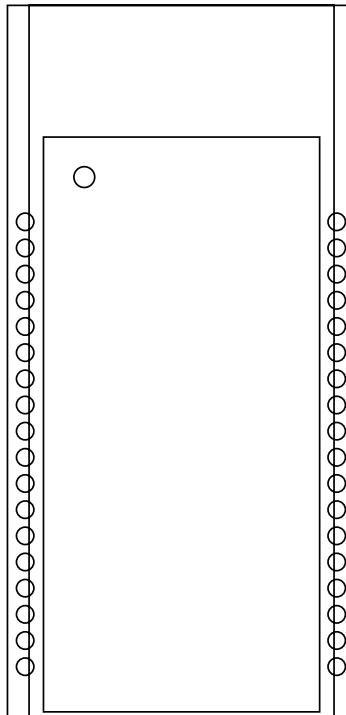
Bluetooth Specifications	Bluetooth v2.0 + EDR
	Class1
	Profile: SPP(Serial Port Profile)
	Working distance: By default antenna is 200m (0.12 mile), Supports up to 1000m (0.62 mile)
Transmit Power	+18dBm Typical
Receive Sensitivity	-90dBm (0.1% BER)
TX Output Spectrum-Frequency range	2401 MHz – 2480 MHz
Interfaces	UART, USB, I2C, PCM, PIO
Serial Interface	- Serial UART speed up to 921.6kbps - CTS/RTS flow control, DTR/DSR for loop-back & full transfer
PIN Interface	- BCD110Sx: 1.27mm SMD Pad 18 x 2 (36pin) - BCD110Dx: 1.27mm Pin Header 18X2 (36pin)
USB Interface	V2.0
Configuration	ParaniWIN, ParaniWizard, Modem AT command set
Firmware Update	ParaniUpdater
Power	- Supply voltage: 3.3V DC - Supply current: nom. 150mA(Operating mode) max. 200mA(Test mode)
Environmental	- Operating temperature: -30°C ~ 80°C - Storage temperature: -40°C ~ 85°C - Humidity: 90% (Non-condensing)
Physical properties	Parani-BCD110 Dimension
	- DIP type 34.6 x 16.8 x 7.5 mm (0.661 in x 1.362 in x 0.295 in) - SMD type 34.6 x 14.8 x 3.0 mm (1.362 in x 0.583 in x 0.118 in)
	Weight
	- Parani-BCD110SC: 2g - Parani-BCD110SU: 2g - Parani-BCD110DC: 3g - Parani-BCD110DU: 3g - Parani-BCD110DS: 4g
Approvals	FCC, CE, IC, KC, TELEC, SIG
Warranty	1-year limited warranty

Device Diagram



Pin Description

	Name	Description
1	GND	GND
2	GND	GND
3	PVCC	PVCC (+3.3V)
4	AIO_0	
5	AIO_1	
6	UART_RTS	UART_RTS
7	UART_RXD	UART_RXD
8	UART_TXD	UART_TXD
9	UART_CTS	UART_CTS
10	USB_DN	USB_DN
11	USB_DP	USB_DP
12	PCM_IN	PCM_IN
13	PCM_SYNC	PCM_SYNC
14	PCM_CLK	PCM_CLK
15	PCM_OUT	PCM_OUT
16	+3V3	+3V3
17	GND	GND
18	RESETB	RESETB



Description	Name	
GND	GND	36
GND	GND	35
GND	GND	34
STATUS_LED1	PIO_11	33
STATUS_LED0	PIO_10	32
	PIO_9	31
	PIO_8	30
UART_DCD	PIO_2	29
UART_DTR	PIO_3	28
F/C_CTRL	PIO_7	27
BT_MODE	PIO_6	26
FACTORY RESET	PIO_5	25
UART_DSR	PIO_4	24
SPI_MOSI	SPI_MOSI	23
SPI_CSB	SPI_CSB	22
SPI_CLK	SPI_CLK	21
SPI_MISO	SPI_MISO	20
GND	GND	19

Applications

- High-speed data transceiver systems for long distance communication
- PCs/Personal Digital Assistants (PDA)
- Bluetooth USB dongle
- Bluetooth serial dongle
- Bluetooth access points
- Industrial automation devices
- Remote metering devices
- POS (Point-of-sales) devices

Ordering Information

Part Number	Description
BCD110SC	Bluetooth embedded OEM module SMD Type, Class 1 w/ chip antenna
BCD110SU	Bluetooth embedded OEM module SMD Type, Class 1 w/ U.FL connector
BCD110DC	Bluetooth embedded OEM module DIP Type, Class 1 w/ chip antenna
BCD110DS	Bluetooth embedded OEM module DIP Type, Class 1 w/ SMA connector
BCD110DU	Bluetooth embedded OEM module DIP Type, Class 1 w/ U.FL connector

Software Stack

BCD110 is provided with Bluetooth v2.0+EDR compatible firmware runs internally for SPP (Serial Port Profile) applications by default. The firmware is designed to work out-of-box for real world SPP applications such as POS (Point-of-sales), industrial automation, remote metering and other various applications. Optionally, the BCD110 can be supplied with only software stack up to HCI level so users can develop and embed their own firmware version into the BCD110 or entire Bluetooth stack runs on the host side for the application such as USB dongle for computers. Regarding these custom firmware options, please contact a Sena representative for more detail.

**For more information,
please visit us at <http://www.sena.com>**

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