

# Bluetooth Module Parani™ BCD210

## Features

- Bluetooth Class 2
- Bluetooth v2.0 + EDR specification
- Low Power consumption: 30mA @3.3VDC
- Transmit Power: +4dBm Typical
- Receive sensitivity: -84dBm (0.1% BER)
- Integrated 8Mbit Flash Memory
- Supports Serial Port Profile (SPP)
- Working distance (In an open field): Nom.50m, up to 300m
- Supports 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

## Specifications

<b>Bluetooth Specifications</b>	Bluetooth v2.0 + EDR
	Class2
	Profile: SPP(Serial Port Profile)
	Working distance: By default antenna is 50m (0.031 mile) supports up to 300m (0.186 mile) at line-of sight
<b>Transmit Power</b>	+4dBm Typical
<b>Receive Sensitivity</b>	-84dBm (0.1% BER)
<b>TX Output Spectrum-Frequency range</b>	2402 MHz – 2480 MHz
<b>Interfaces</b>	UART, USB, I2C, PCM, PIO
<b>Serial Interface</b>	- Serial UART speed up to 921.6kbps - CTS/RTS flow control, DTR/DSR for loop-back & full transfer
<b>PIN Interface</b>	BCD210Sx: 1.27mm SMD Pad 18x2 (36pin) BCD210Dx: 1.27mm Pin Header 18x2 (36pin)
<b>USB Interface</b>	V2.0
<b>Configuration</b>	ParaniWIN, ParaniWizard, Modem AT command set
<b>Firmware Update</b>	ParaniUpdater
<b>Power Consumption</b>	- Nominal: 30mA @3.3VDC - Maximum: 60mA @3.3VDC (100mA @3.3VDC in Test Mode)
<b>Environmental</b>	- Operating temperature: -40°C ~ 85°C - Storage temperature: -40°C ~ 85°C - Humidity: 90% (Non-condensing)
<b>Physical properties</b>	Parani-BCD210 Dimension - DIP type: 16.8 (W) x 28 (L) x 8.0 (H) mm (0.661in x 1.102in x 0.315 in) - SMD type: 14.8 (W) x 28 (L) x 3.0 (H) mm (0.583in x 1.102in x 0.118 in)  Weights - Parani-BCD210SC: 2g - Parani-BCD210SU: 2g - Parani-BCD210DC: 3g - Parani-BCD210DU: 3g - Parani-BCD210DS: 5g
<b>Approvals</b>	FCC, CE, IC, KC, TELEC, SIG
<b>Warranty</b>	1-year limited warranty

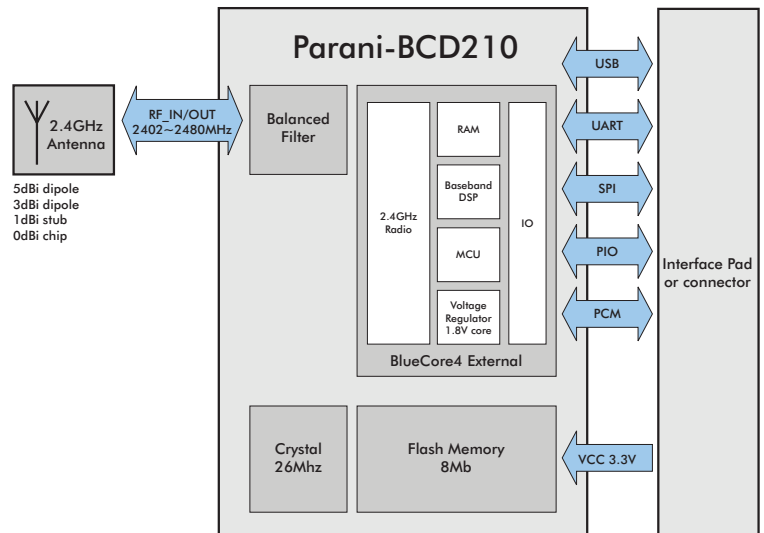
The Parani-BCD210 is a low power embedded Bluetooth Class 2 OEM SMD/DIP module combining antenna for OEM manufactures who want to implement Bluetooth Class 2 functionality with their products cost effectively and also in timely manner.

The BCD210 supports Class 2 Bluetooth transmission level for shorter communication distance up to 300m at line-up sight. The BCD210 supports UART, USB, I2C, PCM, PIO interfaces for the communication with the OEM products

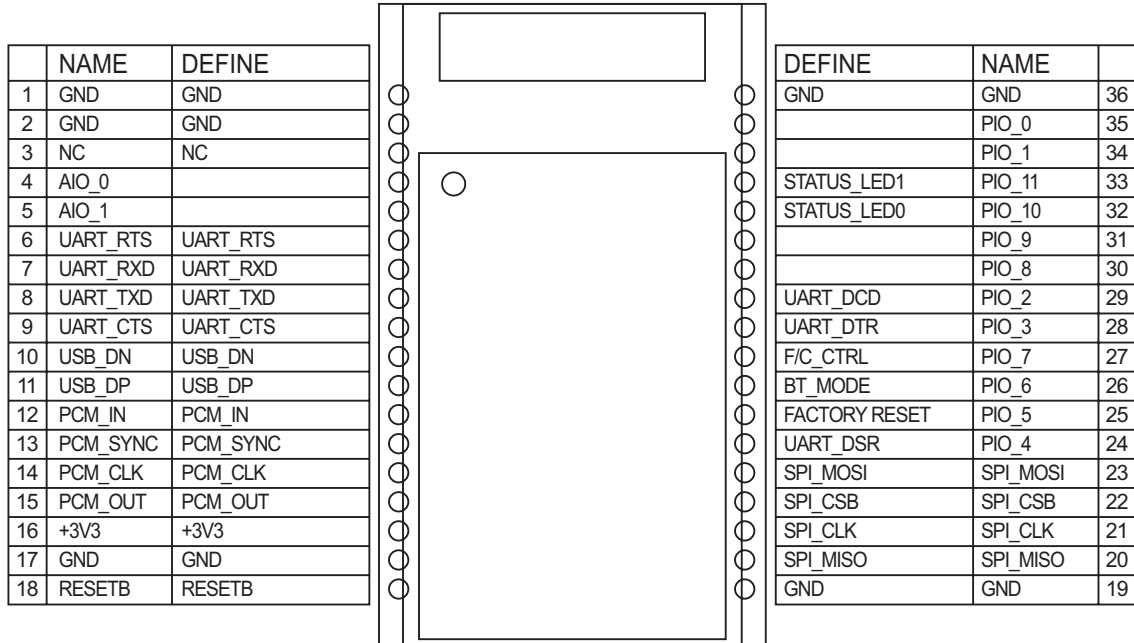
The BCD210 is provided with Bluetooth v2.0+EDR compatible firmware runs internally for SPP (Serial Port Profile) applications by default. The SPP firmware supports up to 4 simultaneous multiple connections and is designed to work out-of-box for real world SPP applications such as POS (Point-of-sales), industrial automation, remote metering and other various applications. Optionally, the BCD210 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 manufactures can even develop and embed their own firmware into the BCD210.

The BCD210 is fully qualified with Bluetooth v2.0+EDR specification so OEM manufacturers can save cost and time for overall OEM product certifications, which makes the BCD210 ideal solution for larger volume and cost sensitive applications.

## Device Diagram



## Pin Description



## Ordering Information

Part Number	Description
BCD210SC-00	Bluetooth embedded OEM module SMD Type, Class 2 with chip antenna
BCD210SU-00	Bluetooth embedded OEM module SMD Type, Class 2 with U.FL connector
BCD210DC-00	Bluetooth embedded OEM module DIP Type, Class 2 with chip antenna
BCD210DS-00	Bluetooth embedded OEM module DIP Type, Class 2 with RP-SMA connector
BCD210DU-00	Bluetooth embedded OEM module DIP Type, Class 2 with U.FL connector
BCD210SK-01	Starter kit for Parani-BCD210
BCD210SC-02	Bluetooth embedded OEM module SMD Type, Class 2 with chip antenna
BCD210SU-02	Bluetooth embedded OEM module SMD Type, Class 2 with U.FL connector
BCD210DC-02	Bluetooth embedded OEM module DIP Type, Class 2 with chip antenna
BCD210DS-02	Bluetooth embedded OEM module DIP Type, Class 2 with RP-SMA connector
BCD210DU-02	Bluetooth embedded OEM module DIP Type, Class 2 with U.FL connector
BCD210SK-03	Starter kit for Parani-BCD210

## Optional Accessories

Part number	Description
SAT-G01R	1 dBi Stub Antenna, RP-SMA Plug, Right-hand Thread
DAT-G01R	3 dBi Dipole Antenna, RP-SMA Plug, Right-hand Thread
DAT5-G01R	5 dBi Dipole Antenna, RP-SMA Plug, Right-hand Thread
SEC-G01R	15cm RPSMA Antenna Extension Cable, Right-Hand Thread
UEC-G01R	12cm U.FL to RPSMA Cable, Right-Hand Thread

## Applications

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

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