Bluetooth Module,

Parani™ BCD100



Features

- Bluetooth Class 1
- Fully qualified with Bluetooth v2.0 + EDR specification
- Transmit Power: +18dBm Typical
- Receive sensitivity: -90dBm (0.1% BER)
- Size: 27.1 x 14.8 x 2.4mm with shield can
- Extended operating temperature range: -20˚C ~ +80˚C
- Integrated 8Mbit Flash Memory
- USB, Dual UART, I2C, PCM, PIO interfaces
- 802.11 co-existence
- Field-proven SPP (Serial Port Profile) firmware supporting up to 4 simultaneous multiple connections
- RoHS Compliant

Specifications

Bluetooth	Fully qualified with Bluetooth v2.0 +EDR specification EDR (Enhanced Data Rate) compliant with v2.0 of specification for both 2Mbps and 3Mbps
Transmit Power	+18dBm Typical (Class1)
Receive Sensitivity	-90dBm (0.1% BER)
TX Output Spectrum-Frequency range	2401 MHz ~ 2480 MHz
UART	Up to 921 kbps
USB	V1.2
Interface	UART, USB, I2C, PCM, PIO
Power	2.7V~3.6V
Operating Temperature	-20˚C ~ +80˚C
Physical Properties	27.1 mm x 14.8 mm x 2.4 mm (1.06 in x 0.58 in x 0.09 in)
Approval	Bluetooth SIG (QDID: B015728)

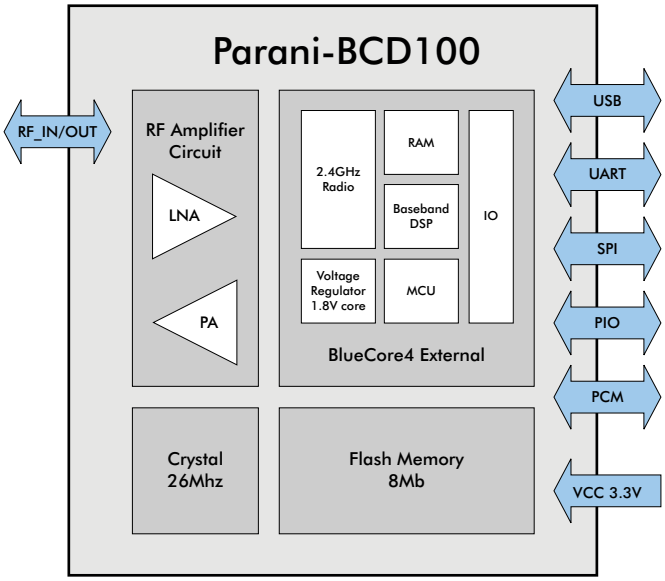
The Parani-BCD100 is a Bluetooth Class 1 OEM module for OEM manufacturers who want to implement Bluetooth Class 1 functionality with their products cost effectively and also in timely manner. Users can build their own antenna circuit around the BCD100 to lower the overall cost while benefit from the BCD100's field-proven standard SPP (Serial Port Profile) firmware provided with no additional cost.

The BCD100 supports Class 1 Bluetooth transmission level for longer communication distance typically ranges from 100 m up to 1 km. The BCD100 supports UART, USB, I2C, PCM, PIO interfaces for the communication with the OEM products.

The BCD100 is provided with Bluetooth v2.0 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 BCD100 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 BCD100.

The BCD100 is fully qualified with Bluetooth v.2.0+EDR specification so OEM manufacturers can save cost and time for overall OEM product certifications, which makes the BCD100 ideal solution for larger volume and cost sensitive applications.

Device Diagram

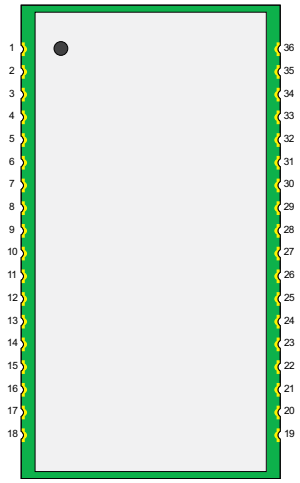


SENA
www.sena.com

Bluetooth Module,

Parani™ BCD100

Pin Description



Function	Pin Name	Pin Number	Description
USB Interface	USB_DP	11	USB data plus
	USB_DN	10	USB data minus
UART Interface	UART_TXD	8	UART data output
	UART_RXD	7	UART data input
	UART_RTS	6	UART request to send active low
	UART_CTS	9	UART clear to send active low
PCM Interface	PCM_OUT	15	Synchronous data output
	PCM_IN	12	Synchronous data input
	PCM_SYNC	13	Synchronous data sync
	PCM_CLK	14	Synchronous data clock
SPI Interface	SPI_MISO	20	SPI data output
	SPI_MOSI	23	SPI data input
	SPI_CSB	22	Chip select for SPI, active low
	SPI_CLK	21	SPI clock
PIO Interface	PIO_2	29	Programmable input/output line
	PIO_3	28	Programmable input/output line
	PIO_4	24	Programmable input/output line
	PIO_5	25	Programmable input/output line
	PIO_6	26	Programmable input/output line
	PIO_7	27	Programmable input/output line
	PIO_8	30	Programmable input/output line
	PIO_9	31	Programmable input/output line
	PIO_10	32	Programmable input/output line
	PIO_11	33	Programmable input/output line
	AIO_0	4	Analogue programmable input/output line
	AIO_1	5	Analogue programmable input/output line
Power	PVCC	3	Power supply for power amplifier, 3.3V
	+3V3	16	Power supply for system, 3.3V
	GND	1	Ground
	GND	2	Ground
	GND	17	Ground
	GND	19	Ground
	GND	34	Ground
	GND	35	Ground
Others	RF_I/O	36	Transmitter output/receiver input
	RESETB	18	Reset, active low, > 5ms to cause a reset

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

Software Stack

BCD100 is provided with Bluetooth v2.0 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 BCD100 can be supplied with only software stack up to HCI level so users can develop and embed their own firmware version into the BCD100 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.

Ordering Information

Part Number	Description
BCD100-01	Bluetooth v2.0+EDR class 1 OEM module, Reel type package, Minimum order quantity 100

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

U.S. / Canada / South America
Tel: 408-448-1997 Fax: 408-907-3738
Sales and Support Toll Free (US/Canada): 8669-US-SENA (866-987-7362)
General Information Toll Free (US/Canada): 8668-US-SENA (866-887-7362)

EU / Africa
Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

Asia / Pacific
Tel: +82-2-571-8283 Fax: +82-2-573-7710

Contact us via E-mail
General Information: info@sena.com
Sales & Distribution: sales@sena.com
Technical Support: support@sena.com

SENA
www.sena.com