

お客様

2017年3月24日

## 製品終息と後継製品のお知らせ

(Parani-ESD100V2、Parani-ESD110V2、Parani-BCD110V3)

株式会社インターソリューションマーケティング  
製品サポート  
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平素大変にお世話になっております。

製造メーカーより連絡が入り、この度RF電源パーツ確保が困難になったため、Parani-ESD100V2/110V2並びにParani-BCD110V3の生産を終了させていただき、そのパーツが新しくなった後継モデルを用意いたします。

製品終息対象品：

- ・ 製品番号：0402023      製品名：Parani-ESD100V2-01
- ・ 製品番号：0402024      製品名：Parani-ESD100V2SK-01
- ・ 製品番号：0402025      製品名：Parani-ESD110V2-01
- ・ 製品番号：0402026      製品名：Parani-ESD110V2SK-01
- ・ 製品番号：0402028A      製品名：Parani-BCD110V3-DU-00

ご注文受付最終日：2017年3月30日（木）

サービス終了予定最終日：2018年9月28日（金）

現行モデルから後継モデルへの変更点は、RF電源パーツのみとなっており、サイズ（L x W x H）、ピンアサイン、その他の仕様に変更はありません。

後継モデルの詳細については、補足資料をご確認ください。

ご質問、ご不明点などございましたら、

弊社 サポート担当

メール：[support@intersolutionmarketing.jp](mailto:support@intersolutionmarketing.jp) または、電話：03-5795-2685 へお問い合わせをいただきますよう、お手数をおかけしますが、どうぞよろしくお願い致します。

尚、お電話の場合すぐに対応できない場合がございます。その場合には折り返しのお電話での対応とさせていただきますこと、ご了承ください。

今後ともお役にたてればと思いますので、どうぞよろしくお願い致します。

補足資料

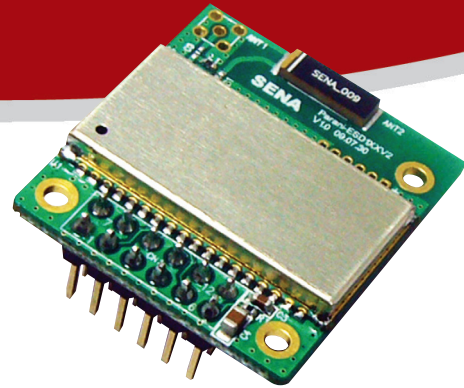
1. 製品終息対象品一覧
2. 新 Parani-ESD100 Product Brief
3. 新 Parani-ESD110 Product Brief
4. 新 Parani-BCD110 Product Brief

補足資料 1

**製品終息対象品一覧** (生産終了品および移行製品)

製品番号	説明	推奨代替製品	注記
ESD100V2-01	OEM用Bluetoothシリアルモジュール Class1, Bluetooth v2.0+EDR内蔵アンテナ	ESD100B-DC	RF電源パーツ以外の仕様変更なし Pin互換あり サイズ変更なし
ESD100V2SK-01	Parani-ESD100V2用スターターキット ESD100V2同梱、EU/US用電源	ESD100B-SK-WW	
ESD110V2-01	OEM用Bluetoothシリアルモジュール Class1, Bluetooth v2.0+EDR外付けアンテナ(アンテナ及びケーブル同梱)	ESD110B-DU+ EEC-G01R+ SAT-G01R	
ESD110V2SK-01	Parani-ESD110V2用スターターキット ESD110V2同梱、EU/US用電源	ESD110B-SK-WW	
BCD110V3-DU-00	Parani-BCD110V3 Bluetooth組み込みOEMモジュール DIP型Class1 U.FLコネクタ	BCD110B-DU-MPF	

# OEM Bluetooth-Serial Module, Parani™ ESD100



## Features

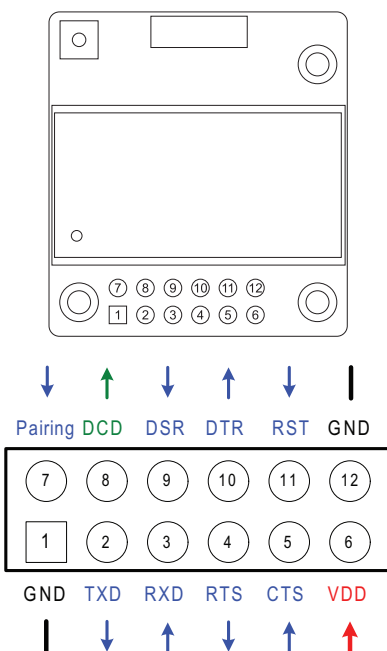
- Output Interface UART, Bluetooth Specification v2.0+EDR
- Transmit Power - Max. 18dBm
- Receiving Sensitivity: -90dBm(0.1%BER)
- Compact size - 27.5 x 30.0 x 14.0 (mm)  
1.08 x 1.18 x 0.55 (in)
- Provides transparent RS232 serial cable replacement.
- Supports up to 4 multiple simultaneous connections.
- Profile: Bluetooth Serial Port Profile.
- Interoperability with PDA, laptops etc.
- on-board chip antenna
- Firmware upgrade via windows-based software (ParaniUpdater)
- Working distance ( In an open field ): Nom. 100 meters
- Easy to use Windows configuration tool available.
- No external drivers required.

The **Parani-ESD100** is a Bluetooth v2.0+EDR Class1 type Embedded Bluetooth serial module for RS232 cable replacement. The Parani-ESD100 is a compact size Bluetooth serial module with built-in chip antenna. It supports 100 meter of wireless transmit distance. The Parani-ESD100 also supports up to 4 multiple simultaneous connections.

Typical application areas of the Parani-ESD100 include:

- RS232 cable replacement
- Wireless Factory monitoring
- Truck/Bus monitoring system
- PLC programming
- Car Diagnostics
- Wireless Printing
- Wireless POS system
- Wireless logistics
- Wireless machine(healthcare/industrial) monitoring

## Pin Assignment



Pin #	Signal	Direction	Description	Signal Level
1	GND	-	Power Ground	Ground
2	TxD	Output	UART Data Output	TTL
3	RxD	Input	UART Data Input	TTL
4	RTS	Output	UART Ready to Send	TTL
5	CTS	Input	UART Clear to Send	TTL
6	VDD	Input	DC Input (3.0~3.3V)	Power
7	Pairing	Input	Pairing Input (Active Low)	TTL
8	DCD	Output	Bluetooth Connect Detect (Active Low)	TTL
9	DSR	Input	Data Set Ready	TTL
10	DTR	Output	Data Terminal Ready	TTL
11	RST	Input	Reset (Active Low)	TTL
12	GND	-	Power Ground	Ground

## Specifications

### Serial Interface

- UART interface, 2.54mm Pin Header 2X6 (12pin)
- Serial UART speed up to 921.6kbps
- CTS/RTS flow control, DTR/DSR for loop-back & full transfer

### Bluetooth

- Bluetooth v2.0 + EDR Class1
- Level - 18 dBm
- Profile: Serial Port Profile
- Working distance: Nominal 100m

### Max. Tx power

- 18 dBm

### Receive Sensitivity

- -90 dBm

### Configuration

- ParaniWIN, ParaniWizard, Modem AT command set

### Firmware upgrade

- by ParaniUpdater

### Power

- Supply voltage: 3.3V DC
- Supply current:10mA – 60mA

### Environmental

- Operating temperature: -30°C to 80°C
- Storage temperature: -40°C to 85°C
- Humidity: 90% Non-condensing

### Physical properties

- Dimension:  
 27.5 mm L (1.08 in )  
 30.0 mm W (1.18 in )  
 14.0 mm H (0.55 in )
- Weight: 6g

### Regulatory Approvals

- FCC, CE, TELEC, KCC, Bluetooth SIG

### SIG QDID

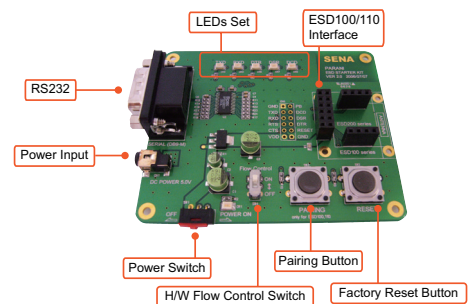
- B015896

### Warranty

- 1-year Limited Warranty

## Parani-ESD100 Starter Kit

Parani-ESD100 Starter Kit includes the development board with the sample circuitry for Parani-ESD100 interface, power, RS232 Interface, Reset, LEDs, Pairing, H/W flow control for user device development.

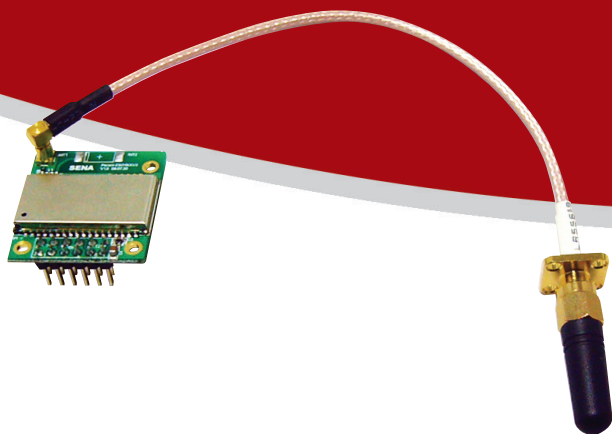


## Ordering Information

Part number	Description/Package Contents
<b>ESD100B-DC</b>	Parani-ESD100 Rev.B OEM Bluetooth-Serial Module-Class 1 Bluetooth v2.0+EDR with built-in chip antenna  <b>Package contents:</b> - Parani-ESD100 Rev.B Module (on-board chip antenna)
<b>ESD100B-SK-WW</b>	Starter Kit for Parani-ESD100 Rev.B, ESD100 Rev.B included.  <b>Package contents:</b> - Parani-ESD100 Rev.B Module (on-board chip antenna) - Development board - Serial data cable - DC Power Adapter - A hardcopy of Quick Start Guide

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

# OEM Bluetooth-Serial Module, Parani™ ESD110



**The Parani-ESD110** is a Bluetooth v2.0+EDR Class1 type Embedded Bluetooth serial module for RS232 cable replacement. The Parani-ESD110 is a compact size Bluetooth serial module. By default, it supports 100 meters of wireless transmit distance. The Parani-ESD110 has an extension option so that users can extend the transmit distance up to 400 meters using 5 dipole antennas. The Parani-ESD110 also supports up to 4 multiple simultaneous connections.

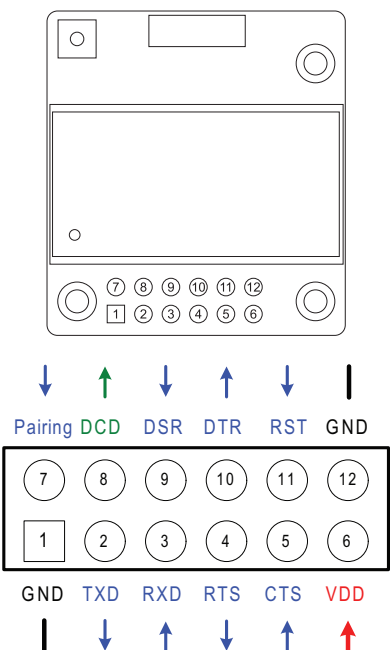
Typical application areas of the Parani-ESD110 include:

- RS232 cable replacement
- Wireless Factory monitoring
- Truck/Bus monitoring system
- PLC programming
- Car Diagnostics
- Wireless Printing
- Wireless POS system
- Wireless logistics
- Wireless machine(healthcare/industrial) monitoring

## Features

- Output Interface UART, Bluetooth Specification v2.0+EDR
- Transmit Power - Max. 18dBm
- Receiving Sensitivity: -90dBm(0.1%BER)
- Compact size - 27.5 x 30.0 x 14.0 (mm)  
1.08 x 1.18 x 0.55 (in)
- Provides transparent RS232 serial cable replacement.
- Supports up to 4 multiple simultaneous connections.
- Profile: Bluetooth Serial Port Profile.
- Interoperability with PDA, laptops etc.
- Firmware upgrade via windows-based software (ParaniUpdater)
- Working distance ( In an open field ):  
Nom. 100 meters, up to 400m using 5 dipole antenna
- Easy to use Windows configuration tool available.
- No external drivers required.

## Pin Assignment



Pin #	Signal	Direction	Description	Signal Level
1	GND	-	Power Ground	Ground
2	TxD	Output	UART Data Output	TTL
3	RxD	Input	UART Data Input	TTL
4	RTS	Output	UART Ready to Send	TTL
5	CTS	Input	UART Clear to Send	TTL
6	VDD	Input	DC Input (3.0~3.3V)	Power
7	Pairing	Input	Pairing Input (Active Low)	TTL
8	DCD	Output	Bluetooth Connect Detect (Active Low)	TTL
9	DSR	Input	Data Set Ready	TTL
10	DTR	Output	Data Terminal Ready	TTL
11	RST	Input	Reset (Active Low)	TTL
12	GND	-	Power Ground	Ground

## Specifications

### Serial Interface

- UART interface, 2.54mm Pin Header 2X6 (12pin)
- Serial UART speed up to 921.6kbps
- CTS/RTS flow control, DTR/DSR for loop-back & full transfer

### Bluetooth

- Bluetooth v2.0 + EDR Class1
- Level - 18 dBm
- Profile: Serial Port Profile
- Working distance:
 

Stub Antenna (+1dBi)	- Stub Antenna (+1dBi)	- 100 meters
Stub Antenna (+1dBi)	- Dipole Antenna (+3dBi)	- 150 meters
Dipole Antenna (+3dBi)	- Dipole Antenna (+3dBi)	- 200 meters
Dipole Antenna (+3dBi)	- Dipole Antenna (+5dBi)	- 300 meters
Dipole Antenna (+3dBi)	- Patch Antenna (+9dBi)	- 500 meters
Dipole Antenna (+5dBi)	- Dipole Antenna (+5dBi)	- 400 meters

**Max. Tx power:** 18 dBm

**Receive Sensitivity:** -90 dBm

**Configuration:** ParaniWIN, ParaniWizard, Modem AT command set

**Firmware upgrade:** by ParaniUpdater

### Power

- Supply voltage: 3.3V DC
- Supply current: 10mA - 60mA

### Environmental

- Operating temperature: -30°C to 80°C
- Storage temperature: -40°C to 85°C
- Humidity: 90% Non-condensing

### Physical properties

- Dimension:
 

27.5 mm L (1.08 in )
30.0 mm W (1.18 in )
14.0 mm H (0.55 in )
- Weight: 6g

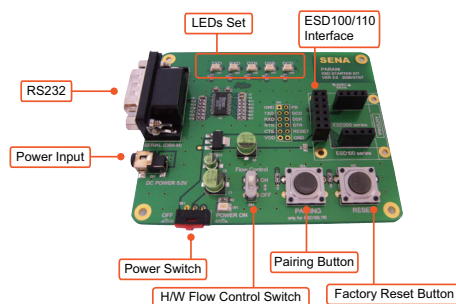
**Regulatory Approvals:** FCC, CE, TELEC, KCC, Bluetooth SIG

**SIG QDID:** B015896

**Warranty:** 1-year Limited Warranty

## Parani-ESD110 Starter Kit

Parani-ESD110 Starter Kit includes the development board with the sample circuitry for Parani-ESD110 interface, power, RS232 Interface, Reset, LEDs, Pairing, H/W flow control for user device development.



## Ordering Information

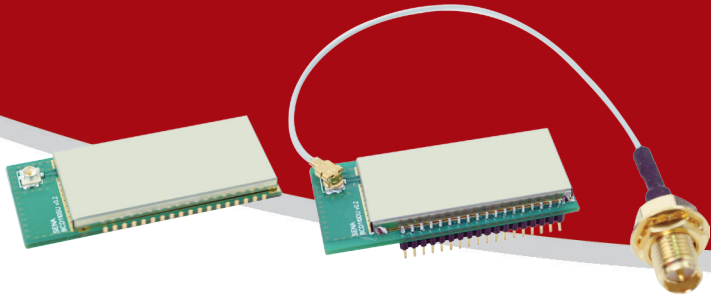
Part number	Description/Package Contents
<b>ESD110B-DU</b>	Parani-ESD110 Rev.B OEM Bluetooth-Serial Module-Class 1 Bluetooth v2.0+EDR with antenna extension option (module only - antenna and cable NOT included)  <b>Package contents:</b> - Parani-ESD110 Rev.B Module Only (antenna and cable NOT included)
<b>ESD110B-SK-WW</b>	Starter Kit for Parani-ESD110 Rev.B, ESD110 Rev.B included.  <b>Package contents:</b> - Parani-ESD110 Rev.B Module - Development board - Serial data cable - DC Power Adapter - A hardcopy of Quick Start Guide

## Optional Accessories

Part number	Description
<b>SAT-G01</b>	1 dBi Stub Antenna - SMA Male-Left-Hand Thread
<b>SAT-G01R</b>	1 dBi Stub Antenna - RP-SMA Plug Right-hand Thread
<b>DAT-G01</b>	3 dBi Dipole Antenna - SMA Male-Left-Hand Thread
<b>DAT-G01R</b>	3 dBi Dipole Antenna - RP-SMA Plug Right-hand Thread
<b>DAT5-G01R</b>	5 dBi Dipole Antenna - RP-SMA Plug Right-hand Thread
<b>EEC-G01</b>	15cm SMA Left-Hand Thread Antenna Extension Cable for ESD110V2/210
<b>EEC-G01R</b>	15cm RP-SMA Right-Hand Thread Antenna Extension Cable for ESD110V2/210

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 please visit us at <http://www.senanetworks.com>

# 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), Sena I/O Profile, SCO Connection
- Working distance (In an open field): Nom.200m, up to 1000m
- Supports built-in chip, stub and dipole antennas
- Standard HCI over UART or USB
- BCD110 firmware supporting up to 7 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
	Class1
	Profile: SPP(Serial Port Profile), Sena I/O Profile
	Working distance: By default antenna is 200m (0.12 mile), Supports up to 1000m (0.62 mile)
<b>Transmit Power</b>	+18dBm Typical
<b>Receive Sensitivity</b>	-90dBm (0.1% BER)
<b>TX Output Spectrum-Frequency range</b>	2402 MHz – 2480 MHz
<b>Interfaces</b>	UART, USB, 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>I/O Interface</b>	5 DIO, 2 AI
<b>PIN Interface</b>	- BCD110Sx: 1.27mm SMD Pad 18 x 2 (36pin) - BCD110Dx: 1.27mm Pin Header 18X2 (36pin)
<b>USB Interface</b>	V2.0
<b>Configuration</b>	ParaniWIN, Modem AT command set
<b>Firmware Update</b>	ParaniUpdater
<b>Power</b>	Nominal : 70mA@3.3VDC Maximum : 150mA@3.3VDC (200mA@3.3VDC in Test Mode)
<b>Environmental</b>	- Operating temperature: -40°C ~ 80°C - Storage temperature: -40°C ~ 85°C - Humidity: 90% (Non-condensing)
<b>Physical properties</b>	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-BCD110B-SC-MPF: 2g - Parani-BCD110B-SU-MPF: 2g - Parani-BCD110B-DC-MPF: 3g - Parani-BCD110B-DU-MPF: 3g - Parani-BCD110B-DS-MPF: 4g
<b>Approvals</b>	FCC, CE, IC, KC, TELEC, SIG
<b>Warranty</b>	1-year limited warranty

The Parani-BCD110 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.

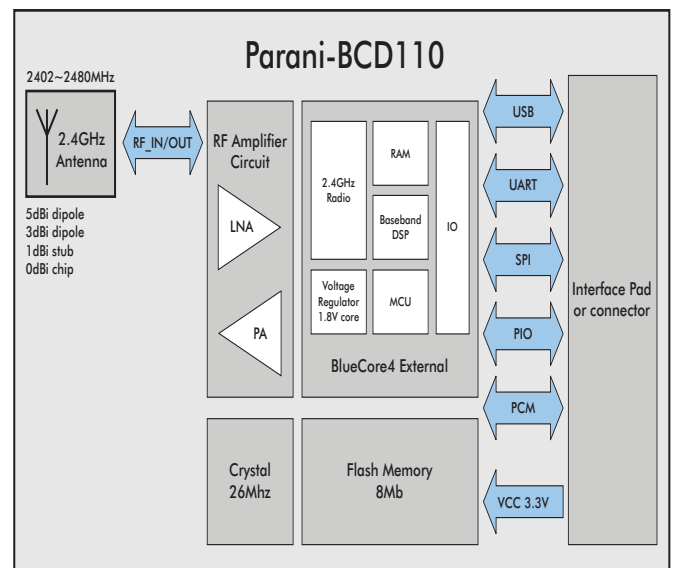
The BCD110 supports Class 1 Bluetooth transmission level for longer communication distance typically ranges from 200 m up to 1 km. The BCD110 supports UART, USB, PCM, PIO interfaces for the communication with the OEM products.

The BCD110 supports Bluetooth v2.0+EDR, SPP (Serial Port Profile), Sena I/O profile, SCO connections, and digital I/O with up to 7 simultaneous multiple connections.

It 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.

The BCD110 is fully qualified with Bluetooth v.2.0+EDR specification, therefore OEM manufacturers can save cost and time for overall OEM product certifications, which makes the BCD110 an ideal solution for larger volume and cost sensitive applications.

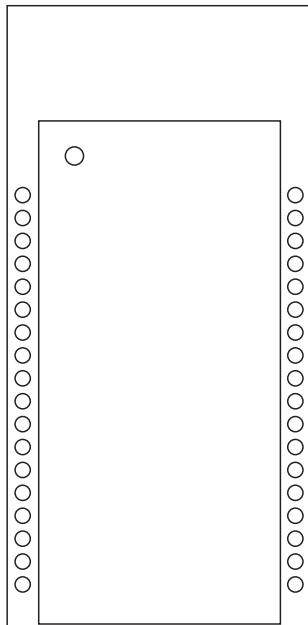
## Device Diagram





Pin Description

No	NAME	DEFINE
1	GND	GND
2	GND	GND
3	PVCC	PVCC (+3.3V)
4	AIO_0	AIO_0
5	AIO_1	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	N/A
11	USB_DP	N/A
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



DEFINE	NAME	No
GND	GND	36
GND	GND	35
GND	GND	34
DIO_4	PIO_11	33
DIO_3	PIO_10	32
DIO_2	PIO_9	31
DIO_1	PIO_8	30
UART_DCD	PIO_2	29
UART_DTR	PIO_3	28
DIO_0	PIO_7	27
BT_MODE	PIO_6	26
FACTORY RESET	PIO_5	25
UART_DSR	PIO_4	24
N/A	SPI_MOSI	23
N/A	SPI_CSB	22
N/A	SPI_CLK	21
N/A	SPI_MISO	20
GND	GND	19

Ordering Information

Part Number	Description
BCD110B-DU-MPF	Bluetooth embedded OEM module DIP Type, Class 1 w/ U.FL connector
BCD110B-DS-MPF	Bluetooth embedded OEM module DIP Type, Class 1 w/ RP-SMA connector
BCD110B-DC-MPF	Bluetooth embedded OEM module DIP Type, Class 1 w/ chip antenna
BCD110B-SU-MPF	Bluetooth embedded OEM module SMD Type, Class 1 w/ U.FL connector
BCD110B-SC-MPF	Bluetooth embedded OEM module SMD Type, Class 1 w/ chip antenna
BCD110B-SK-MPF-VWV	Starter kit for Parani-BCD110 Rev.B
BCD110B-SC-SPP (SPP Only)	Bluetooth embedded OEM module SMD Type, Class 1 w/ chip antenna
BCD110B-SU-SPP (SPP Only)	Bluetooth embedded OEM module SMD Type, Class 1 w/ U.FL connector
BCD110B-DC-SPP (SPP Only)	Bluetooth embedded OEM module DIP Type, Class 1 w/ chip antenna
BCD110B-DS-SPP (SPP Only)	Bluetooth embedded OEM module DIP Type, Class 1 w/ RP-SMA connector
BCD110B-DU-SPP (SPP Only)	Bluetooth embedded OEM module DIP Type, Class 1 w/ U.FL connector
BCD110B-SK-SPP-VWV (SPP Only)	Starter kit for Parani-BCD110

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 long 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

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