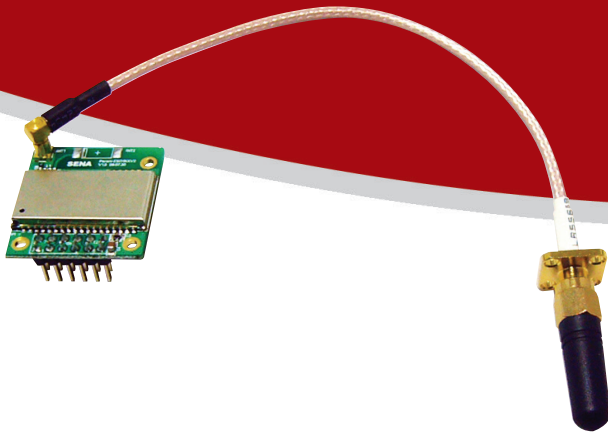


OEM Bluetooth-Serial Module, Parani™ ESD110



Features

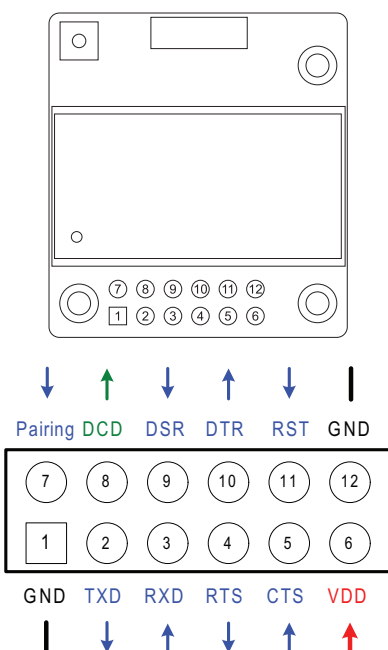
- Output Interface UART, Bluetooth Specification v2.0+EDR
- Transmit Power - Max. 18dBm
- Receiving Sensitivity: -90dBm(0.1%BER)
- Compact size - 27.5 x 30.0 x 14.0 (mm)
1.08 x 1.18 x 0.55 (in)
- Provides transparent RS232 serial cable replacement.
- Supports up to 4 multiple simultaneous connections.
- 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.

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

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

SENA

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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

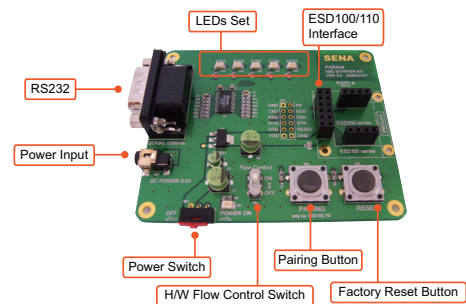
Regulatory Approvals: FCC, CE, TELEC, KCC, Bluetooth SIG

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
ESD110B-DU	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) Package contents: - Parani-ESD110 Rev.B Module Only (antenna and cable NOT included)
ESD110B-SK-WW	Starter Kit for Parani-ESD110 Rev.B, ESD110 Rev.B included. Package contents: - Parani-ESD110 Rev.B Module - Development board - Serial data cable - DC Power Adapter - A hardcopy of Quick Start Guide

Optional Accessories

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

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