Parani™ SD100/200

Features

· Provides transparent RS232 serial cable replacement.
· Supports Bluetooth stack 1.2 - improved AFH(Adaptive Frequency Hopping), Fast connection.
· Transmit Power - SD100 : Max. +18dBm
　　　　　　　　　SD200 : Max. +4dBm
· Receiving Sensitivity - SD100 : -88dBm(0.1%BER)
　　　　　　　　　　　　SD200 : -80dBm(0.1%BER)
· Antenna gain - Stub : +2dBi, Dipole : +3dBi, Patch : +9dBi
· Supports Bluetooth Serial Port Profile.
· Interoperability with PDA, laptops etc.
· Supports firmware upgrade via windows-based software (ParaniUpdater)
· Working distance(In an open field)
  - Parani-SD100 : Class 1, Nom. 100 meters,
　　　　　　　　　 up to 1000m using patch antenna
  - Parani-SD200 : Class 2, Nom. 30 meters,
　　　　　　　　　 up to 300m using patch antenna
· Software-free configuration support using DIP-Switch and pairing button
· Parani-SD200 : Supports battery pack(Two AA batteries)
· No external drivers required.

Parani-SD Series is a Bluetooth serial adapter product line based on Bluetooth technology. Parani-SD Series enables RS232-based serial devices to communicate wirelessly throughout the range of 30m~300m(Parani-SD200-Class 2) or 100m~1000m(Parani-SD100-Class 1).

Users may configure the Parani-SD Series by using combination of DIP-switch and Pairing button, easy-to-use Windows-based utility software or by using standard AT command set.

Using DIP-switch of the Parani-SD Series, user can simply configure baud rate and hardware flow control settings of the Parani-SD Series. Pairing-button enables two Parani-SD Series units to be connected automatically.
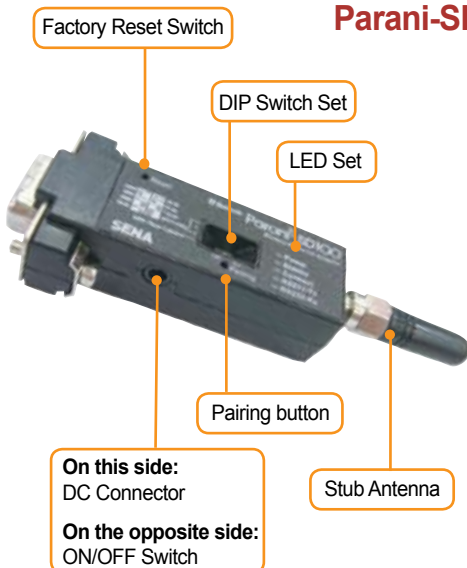
Flexible power supply options allow users to choose which options suits them best, i.e. Power by DC power cable, Power by external DC adapter, Power by USB power cable, Power by pin 9 of DB9 connector. The Parani-SD supports battery pack that can carry two AA batteries. Users can use both general type batteries or rechargeable ones. Battery pack allows users to recharge the batteries.

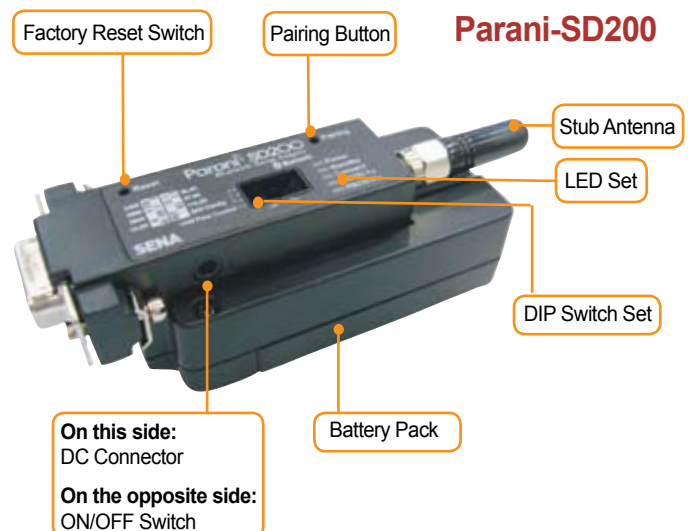Typical application areas of the Parani-SD Series include :
- RS232 cable replacement　　　　　 - Wireless Factory monitoring
- Truck/Bus monitoring system　　　　 - PLC programming
- Car Diagnostics　　　　　　　　　 - Wireless Printing
- Wireless POS system　　　　　　　 - Wireless logistics
- Wireless machine(healthcare/industrial) monitoring

Panel Layout

Parani-SD100

Factory Reset Switch
DIP Switch Set
LED Set
Pairing button
Stub Antenna

On this side:
DC Connector

On the opposite side:
ON/OFF Switch

Parani-SD200

Factory Reset Switch
Pairing Button
Stub Antenna
LED Set
DIP Switch Set
Battery Pack

On this side:
DC Connector

On the opposite side:
ON/OFF Switch

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Specifications

Serial Interface
- RS232, Female DB9, 1200bps ~ 230Kbps
- CTS/RTS flow control : Default
- DTR/DSR for loop-back & full transfer

Bluetooth Interface
- Parani-SD100
  · Bluetooth v1.2
  · Class 1
  · Level - 18 dBm
  · Protocols - RFCOMM, L2CAP, SDP
  · Profiles - General Access Profile, Serial Port Profile
  · Working distance
    Default Antenna - Default Antenna 100 meters
    Default Antenna - Dipole Antenna 150 meters
    Dipole Antenna - Dipole Antenna 200 meters
    Patch Antenna   - Dipole Antenna 400 meters
    Patch Antenna   - Patch Antenna 1,000 meters

- Parani-SD200
  · Bluetooth v1.2
  · Class 2
  · Level - Max. 4 dBm
  · Protocols - RFCOMM, L2CAP, SDP
  · Profiles - General Access Profile, Serial Port Profile
  · Working distance
    Default Antenna - Default Antenna 30 meters
    Default Antenna - Dipole Antenna 50 meters
    Dipole Antenna - Dipole Antenna 80 meters
    Patch Antenna   - Dipole Antenna 150 meters
    Patch Antenna   - Patch Antenna 300 meters

Configuration
- ParaniWin, Modem AT command set

Firmware Update
- ParaniUpdater

Diagnostic LED
- Power
- Standby
- Connect
- RS232-Tx
- RS232-Rx

Power
- 5~12VDC
- Nominal current consumption
  · SD100 : 100mA @ 5.0VDC approximately
  · SD200 : 70mA @ 5.0VDC approximately
- Common Power supply options
  · Power via a standard AC-plug DC-adapter
  · Power via USB power cable
  · Power via DC power cable
  · Power via pin 9 of DB9 connector
  · Battery Pack for SD200 only

Battery Usage Time
- When using battery pack for SD200 :
  Typical 1.5V-AA alkaline batteries(2500mAh)
- Avg. 11hr@9600bps
- Note : Depending on the batteries and its usage environment greatly determines how long the Parani product will last for their application, i.e.battrey storage, battery capacity, battery brand and so on.

Environmental
- Operating temperature : -10°C to 55°C
- Storage temperature : -20°C to 70°C
- Humidity : 90% Non-condensing

Physical properties
- Dimension(L x W x H)
  · SD100 - 70 x 30.8 x 16.2(mm)
  · SD200 - 75.3 x 30.8 x 16.2(mm)
- Weight : SD100 - 22g / SD200 - 20g

MTBF
- Parani-SD100 : 121.74 Years
- Parani-SD200 : 394.4 Years

Certification
- FCC, CE, TELEC

Warranty
- 3-year limited warranty

Ordering Information

SD100   Parani-SD100 Bluetooth-Serial Adapter-Class1-DIP
SD200   Parani-SD200 Bluetooth-Serial Adapter-Class2-DIP

Single Pack SD100-A1, SD200-A1 Includes   ※ Stub antenna NOT included
- Bluetooth-serial adapter : SD100 (for SD100-A1), SD200 (for SD200-A1)

Single Pack SD100-00, SD200-00 Includes
- Bluetooth-serial adapter : SD100 (for SD100-00), SD200 (for SD200-00)
- DPA : Parani-DPA DC power cable for SD series
- UPA : Parani-UPA USB Power Cable
- SAT : Parani-SAT Stub Antenna-SMA Male-Left Handed
- FM9GD : DB9 Female to Male Gender Changer
- CD-ROM

Single Pack SD100-01, SD200-01 Includes
- Single pack SD100-00 (for SD100-01), SD200-00 (for SD200-01)
- OPA : Parani-OPA External Power Adaptor-International - 4 types: EU, America, UK, Australia

10-Unit Bulk Pack SD100-B10, SD200-B10 Includes
- Bluetooth-serial adapter (×10EA) : SD100 (for SD100-B10), SD200 (for SD200-B10)
- SAT (×10EA) : Parani-SAT Stub Antenna-SMA Male-Left Handed
- DPA (×10EA) : Parani-DPA DC power cable for SD series

Optional Accessories
- UPA : Parani-UPA USB Power Cable
- OPA : Parani-OPA External Power Adaptor-International - 4 types: EU, America, UK, Australia
- BPC : Parani-BPC Battery Pack for SD200 only.
- DAT : Parani-DAT Dipole Antenna-SMA Male-Left Handed
- PAT : Parani-PAT Patch Antenna-SMA R/A Female-Right Handed
- RFC : Parani-RFC 1m Antenna Extension Cable for Patch antenna
- SEC : Parani-SEC 15cm Antenna Extension Cable for Stub antenna or Dipole antenna of SD100/200
- FM9GD : DB9 Female to Male Gender Changer
- SLR : SMA-Male left handed to right handed adapter
- CD-ROM

For more information,
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