

# S103 WLAN Compact Serial Module



## Description

This WLAN to RS232 module (hereafter called S103) is designed for embedded into device that uses has limited space. S103 will replace the device's RS232 cable that connects to host PC. Via IP network compatible wireless connection, S103 transfers byte stream between device and host PC. S103 is compliant with 802.11b protocol standard. It can operate at ad-hoc mode or infrastructure mode, and support 64/128-bits WEP security. The design goal for S103 is to provide an OEM embedded device with compact and small size, easy to use and low power consumption.

## Features

- Programmable baud rate (9600, 38400, 57600, 115200 bps)
- Full-duplex (serial data in, and serial data out)
- Hardware flow control / none
- Supports full mobility and seamless roaming from cell to cell
- Firmware upgrade through console port
- Easy set up via console or web configuration
- Two status-pins for showing connection status (connecting, connected, disconnected, command)
- Support Virtual Com driver and device-search utility
- Link to WLAN Access Point (referred as infrastructure mode)
- Link to another WLAN station (referred as "ad hoc" mode)

## Specifications

- **RS232 Features:**
  - Baud Rate Options: 115200, 57600, 38400, 9600 bps
  - Data Length Options: 8 bits
  - Parity options: None
  - Stop Bits Options: 1 bit
  - Flow Control: Hardware or none
  - Serial UART Buffer: 256 bytes input, 256 bytes output
- **WLAN Radio Features:**
  - Protocol Type: 802.11b standard compliant
  - Operating Range:
    - Open Environment: 1000 ft./300m
    - Office Environment: 100-330 ft./30-100m
  - Security:
    - WEP (Wired Equivalent Privacy) 64 and 128 bit encryption

- **Radio Characteristics:**

- Spread Spectrum Technology:
  - DSSS (Direct Sequence Spread Spectrum)
- RF Range: 2.4 ~ 2.4835 GHz
- Data Rate: 11 / 5.5 / 2 / 1 Mbps
- Modulation: DBPSK for 1 Mbps, DQPSK for 2 Mbps, CCK for 5.5 / 11 Mbps
- Operation channels:
  - US - 11, Europe - 13, France - 4, Spain - 2, Japan - 14
- RF Power Output (Typ.): +15 dBm
- Receive Sensitivity (Typ. @BER 10E-5):
  - 83 dBm@11Mbps

- **Power:**

- Power Supply: 5 VDC Regulated
- Current: Tx 500mA (Max.), Rx 210mA, Power Saving Mode 80mA

- **Software:**

- Windows-based Driver with Multi-Link Virtual Com Driver
- PC Utility: User setup and device-search software run on Windows 98 / Me / NT / 2000 / XP

- **Network Protocol:**

- UDP/IP, SNMP, HTTP, ARP, DHCP client

- **Mechanical:**

- Antenna: PCB on board or External
- Dimensions: 60 x 40 x 5.7 mm

- **Environmental:**

- Temperature:
  - Operating: 0 to +55 °C / 32 to 133 °F
  - Storage: -20 to +65 °C / -4 to +150 °F
- Relative Humidity: 95% (non-condensing)

- **EMC Certificate:**

- U.S.A. FCC Part 15, Sections 15.247, 15.205, 15.209
- Europe: ETS 300 328, ETS 300 826, CE Marked

### Notes:

1. Specifications are subject to change without notice.
2. Windows 98 / Me / NT / 2000 / XP are the registered trademark of Microsoft.