



Wireless serial link WL-300

The wireless serial link WL-300 is built using a very robust industrial FHSS radio technology operating in the license-free 2.4GHz ISM band. The link has long range, high sensitivity, low power consumption and high immunity to interference. Multiple serial links can be used simultaneously as well as co-exist with other 2.4GHz transmitters, i.e. WLAN and bluetooth.

The link consists of a USB dongle connected to the PC and a remote RS232 serial unit, or two RS232 units for a true cable replacement solution. The units are rugged and physically well protected in a semi hard rubber moulding, and are shipped as a pair, ready to use.

There are several options to choose from and custom solutions can be provided to fit specific needs.



Radio specifications

Radio technology:	Frequency hopping spread spectrum, FHSS
Frequency band:	2.4GHz (2400-2480 MHz)
Output power:	+17 dBm (50 mW)
Approvals:	Europe (CE), USA (FCC), Canada (CSA)
Usable range outdoor:	up to 300 m with line of sight (see options below).
Usable range indoor:	up to 50 m depending on building materials and wall thickness.
Throughput:	up to 14 kByte/s from PC to remote device. up to 7 kByte/s from remote device to PC.
Latency:	22 ms.
Time to establish connection:	< 1.7 seconds after powered up.

Customization options

- With external antennas the range is extended to 1km line of sight.
- With higher throughput enabled, 17kBytes/s – 34kByte/s, the range cut in half, 150 m line of sight.
- When higher throughput is combined with with external antennas, the range is 300 m line of sight.
- Multi master/slave combinations.
- Star networks.

Note

Range, throughput, latency, and time to establish a connection all depend on the activity in the 2.4GHz band.



USB dongle



Standard specifications

Connector:	USB type A male on 0.3 m or 1.0 m cable.
Supply voltage:	Bus powered from USB.
Supply current:	9-40mA average, depending on data traffic.
Peak supply current:	90mA during transmit.
Serial protocol:	115,200 baud, 8 bits, no parity, 1 stop bit.
Indicators:	3 LEDs (TxD, RxD, Link Connected)
Size:	65 x 34 x 15 mm.
Color:	Black

Customization options

- Hardware handshake using RTS and CTS.
- Baud rates between 1,200 baud and 230,400 baud.

Serial dongle



Standard specifications

Connector:	9-pin D-sub connector DB9M.
Supply voltage:	5-9 V DC on pin 9 in the D-sub connector.
Supply current:	12-40mA average depending on data traffic.
Peak supply current:	90mA during transmit.
Serial protocol:	115,200 baud, 8 bits, no parity, 1 stop bit.
Minimum connections:	4 wires (supply voltage, TxD, RxD, Gnd).
Size:	75 x 34 x 15 mm including D-sub connector.
Color:	Black

Customization options

- RS485 driver instead of RS232 driver.
- Voltage supply on pin 7 instead of pin 9.
- Hardware handshake using RTS and CTS.
- Baud rates between 1,200 baud and 230,400 baud.