

Serial Wireless Radio – 1600 Feet

Part no.: YSC10U



- RS232 Interface
- Standard Baud rates from 600 -115200bps
- Port powered from USB port
- Philips 8-bit microcontroller
- Communication range up to 1600 feet
- Easy setup and use
- Works independent from operating system

A wireless serial RF (Radio Frequency) radio is a good solution if you need to communicate with a RS232 serial device over a long distance. This radio will allow you to communicate serial data over a range of up to 1600 feet. It is a good, simple and reliable low-cost solution without any advanced functions so it is very simple and easy to setup and use.

These radios works as transceivers, meaning each radio can transmit and receive, but not at the same time. They can be setup to communicate in point-to-point or point-to-multipoint networks. Each radio has 12 channels which means you can have up to 12 pairs of radios at the same location communicating at the same time without they interfere with each other. See our setup examples for how the radios can be configured in a network or point-to-point.

The parameters of the radios must be configured over the serial RS232 interface which is a standard DB9 female connector. If your computer does not have a serial COM port, we highly recommend using a good quality USB to RS232 serial converter such as this USB to serial adapter which is fully compatible with these radios.

Power to the serial wireless radios is provided through the included USB cable. In case you don't have a USB port available we also offer a 110VAC/5VDC adapter which can be used for powering the radios if you have a 110VAC outlet available instead. With each serial wireless radio is a USB to DC adapter cable included, which will allow you to connect the 110VAC/5VDC power adapter to the USB connector.

The simplicity and reliability of these serial wireless radios makes them an ideal solution for many applications and environments such as factory automation, building control, CNC machinery and many other applications.

These radios are sold individually. To setup a communication link you will need two radios.

The radios broadcasts in the unlicensed 433Mhz band so no license is required.

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Specifications

SPECIFICATIONS	
Model number	YSC10U
Recommended OS	Windows 8, Windows 7, Windows Vista / XP
Processor	Philips 8-bit microcontroller LPC922F
RF Transceiver	Texas Instruments CC1101
Serial interface	RS232, DB9 female
Baud rates	600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200bp
Buffer	128bytes
RS232 Signals	TX, RX, CTS, RTS, GND
Parity	None, Even, Odd
Stop bits	1
Data bits	8 (6 and 7 bits not supported)
Parameter configuration	Via included configuration software
DCE/DTE control	None
Power on pin 9	Yes, 5VDC
Switch time for TX/RX	10ms
Power consumption	4uA sleep, 35mA active RX, 210mA TX
Antenna	50 ohm, 1/4 wave, SMA Female, external di-pole External antenna available. Mount max 4 feet from adapter housing.
Frequency	429.00 ~ 433.30MHz
Modulation	GFSK (Gaussian Frequency Shift Keying)
RF power	50mW/ 17dBm
Receiving sensitivity	108dBm (@9600bps), -112dBm (@120bps)
Receiving current	less than 20mA
Transmitting current	max 40mA
Number of channels	12
Power	3.3 to 5.5VDC powered by: Option 1: USB cable (included) Option 2: AC/DC adapter (not included)
Indication LEDs	TX, RX
Typ. range 1	max 300m/1000 feet (BER=105@9600bps)
Typ. range 2	max 500m/1600 feet (BER=105@1200bps)
Operating temp.	-35C to 75C (31 to 167 F)
Dimensions	47 x 24 x 6mm (without antenna port)
Certifications	CE, FCC
Warranty	2-year Limited Warranty
ECCN	4A994.a
Schedule B	8471.80.1000
HTS	8517.18.0050

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Connection table

RS232 Modules (DB9 female)		
Pin	Pin name	Description
1	GND	Power ground
2	TXD	Transmit
3	RXD	Receive
4	VCC	-3.3 to 5.5VDC
5	DGND	Signal Ground
6	N/A	Factory test pin

Modules must be supplied with a 5VDC through the included USB cable. Alternatively modules can be powered through the included USB / DC power adapter cable which allows you to use a standard 110VAC/5VDC wall power adapter with a 5.5 x 2.1 x 11.5 mm output jack.

Connection example:



Package content:

- 1pcs serial RF Radio with USB power cable
- 1pcs antenna
- 1pcs USB / DC adapter cable

Please download the full driver and documentation package at:

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