

IR220: RS-232 Serial Port Infrared Adapter



side



Front



Package



side

Description

IR220 is a RS232 RAW IR (IrPHY Only) adapter, it can instantly convert RS232 port to infrared, no need any driver installation, no IrDA protocol software required. It features a RS232 serial cable replacement on PC or embedded system, there are six fixed baud rates to choose when buyer place an order, no software modification required.

Features

- Deriving power from DTR and RTS of standard RS232 interface, user must enable DTR and RTS before using it, or connect DTR/RTS pin to 3.7V~12V external DC-IN directly.
- The default baud rate of IR220 is 9600bps, IRXON can also change the default baud rate to 4800, 19200, 38400, 57600, 115200 bps by modifying IR220 internal hardware and firmware.
- There is a red LED on the top center of the adapter body, the LED indicate the activity of infrared TX signal.
- Using as a IrDA adapter by downloading and installing IrDA driver on PC. (For standard fixed baud rate 9600bps adapter only)

Specification

- Connection: DB9-F RS232 Serial COM Port
- Fixed IR baud rate options: 4800/9600/19200/38400/57600/115200 bps
- Communication Distance: 1 to 100 cm. (15°optical cone angle)
- Size and weight: 2.8"L x 1.63"W x 0.68"H (67 x 46 x 19 mm) , 2.44oz (73g)
- RS232 Cable length: 1.2m
- Power Source: From DTR and RTS of RS232 port, or external 3.7V~12V DC.
- Peak Power Consumption: 0.3W
- Operating Temperature: -10 to 60

Package content

- IR220 RS-232 Serial Port IR Adapter x 1 pcs

RAW IR (Non-IrDA) application

- HyperTerminal setting:

Please set HyperTerminal to baud rate e.g. 9600, N, 8, 1, Flow control: none or Xon/Xoff, enable DTR and RTS.

The default baud rate can be fixed to 4800/9600/19200/38400/57600/115200bps by changing IR220 internal hardware and firmware, when the preset baud rate is not 9600 bps, it can't act as a standard IrDA adapter any more.

- Baud rate software modification:

If you buy a standard IR220 adapter which has a default baud rate of 9600bps, you can also set baud rate to the others by rewriting your application program source code, the following list is program steps.

- 1, Open com port, clear DTR
- 2, Set RTS, and wait at least 7 us
- 3, Send Control Byte to IR220 through TXD to set new baud rate.

Baud Rate Control Byte:

115200 0x00

57600 0x01

38400 0x02

19200 0x03

9600 0x04

- 4, Wait until the stop bit of Control Byte is sent (for 9600 baud rate, it takes about 100 ms)

5. Clear RTS (return to NORMAL operation)

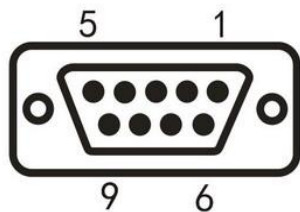
6. Wait at least 50 us, new baud rate takes effect.

IR220 can't remember new baud rate set by this way, it will restore 9600bps when it is power off and restarted.

Click here to download [demo baud rate setting program](#) (Need Visual Basic Runtime Library)

Click here to download demo baud rate setting program [source code](#) (Visual Basic 6.0)

IR220 DB9F Connector Pin Definition



- 2, TXD, Data from IR220 to PC
- 3, RXD, Data from PC to IR220
- 4, DTR, Supply power (or 3.7V~12V DC-IN), select baud rate
- 5, GND, Ground
- 7, RTS, Supply power (or 3.7V~12V DC-IN), select baud rate
- Pin 1,6,8,9, Not Connected