



## RS232 - LAN/WiFi Converter

### User's Manual

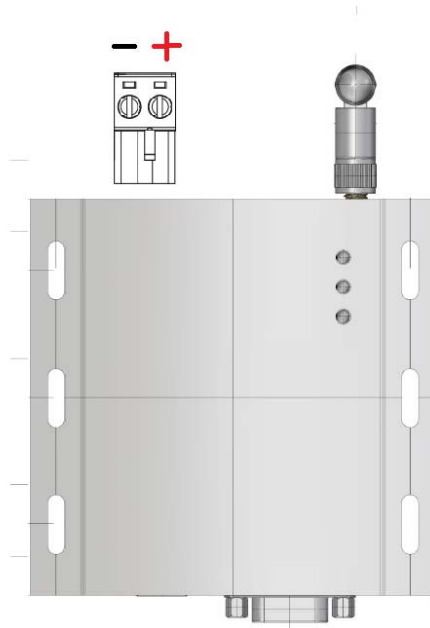
Version 0.0

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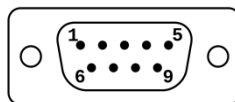
## 1. Installation

Be sure to disconnect the power cord before installing and/or wiring the U-Gate.

Check the power supply polarity. If the power is properly supplied, the "POWER" LED will be on.



### RS232 Link



PIN	FUNCTION	DESCRIPTION
2	RD	Receive Data
3	TD	Trasmit Data
5	GND	Signal Ground

The default communication parameters are:

- 115200 baud
- no parity
- 8 data bits
- 1 stop bit

Only the baud rate can be changed.

## 2. Technical Data

### Dimensions and Specifications

Operating temperature	0 ÷ 55 °C
Supply Voltage	5 ÷ 28 V dc
Current	200 mA @ 12 V dc
Antenna	2.0 dBi 50 Ω
Weigth	200 g
Size	94 x 96 x 30 mm (without antenna)

### 3. Operating Modes

The operating mode determines how the device port will interact with the network. The U-Gate operates as a gateway between a RS232 serial line and a network, either wired (Ethernet) or wireless (WiFi), using TCP/IP protocol.

Regardless of the network interface used (wired or wireless), two operating modes are available:

- **Server Mode:** U-Gate accept a connection from a TCP/IP client
- **Client Mode:** U-Gate connects to a TCP/IP server

### 4. LED Indicators

#### POWER Led (red)

<i>Off</i>	The device is not properly power supplied
<i>On</i>	The device is power supplied and ready to use

#### LINK Led (yellow)

<i>Off</i>	The network interface is not active (Ethernet cable not linked or WiFi network non connected)
<i>Blinkink</i>	The network interface is active but no remote device is connected
<i>On</i>	The device is connected and ready to work

#### DATA Led (green)

<i>Off</i>	No data in transit
<i>On</i>	A data stream is flowing between the network interface and the RS232 port

## 5. Configuration with U-GateConfig software

The U-Gate operating mode and working parameters can be configured using the *U-GateConfig* Win32 application. The U-Gate should be connected to the PC through USB.

Run the *U-GateConfig* application. If the device is connected to a USB port the "Connection" pane will show the basic informations (S/N, F/W version, actual IP address).

In the main window the operating mode and all the configuration parameters can be set. The operating mode and the parameters will be applied only when the "APPLY NEW SETTINGS" button is clicked.

The main window is composed by panes. Every pane shows the actual settings; to change click the "Change" button.

The screenshot displays the U-GateConfig V1.1 application window. The interface is organized into several panes:

- Connection:** Shows the device status as "CONNECTED (SN:66 Ver. 1.0 24/05/2019)" and the link status as "No Link - IP:192.168.0.1".
- U-Gate main configuration:** Contains four buttons: "Ethernet - COM" (with a network icon), "WiFi - COM" (with a Wi-Fi icon and a green border), "CLIENT Mode" (with a server-to-client icon), and "SERVER Mode" (with a server-to-server icon and a green border).
- RS232 Settings:** Shows the Baud Rate set to "115200" with a "Change" button.
- Custom protocol:** Features two radio buttons: "None" (selected) and "Custom protocol 1".
- TCP/IP Settings:** Includes fields for "U-Gate IP assignment" (DHCP), "TCP Port" (5555), "Static IP Address" (192.168.0.1), "Gateway" (192.168.0.1), and "Network mask" (255.255.255.0). A "Change" button is present for the IP settings.
- CLIENT Mode settings:** Shows "Server IP" (0.0.0.0) and "TCP Port" (0), with a "Change" button.
- WiFi Settings:** Shows "Wifi mode" (ACCESS POINT), "SSID" (U-GATE\_25CD73D7), and "Password" (00000000), with a "Change" button.

Additional elements include an "APPLY NEW SETTINGS" button, a "Firmware Update" button, and the "Upix elettronica" logo in the top right corner.

## Main Configuration

In this pane the user can select the network interface (Ethernet or WiFi) and the operating mode (Client or Server).

## RS232 Settings

In this pane the RS232 communication speed (baud rate) can be set.

## TCP/IP Settings

In this pane the TCP/IP parameters (IP address and TCP port) can be set.

If in the "*U-Gate IP Assignment*" field the *static* option is set, then the device *static IP address*, the *Gateway IP* address and the *network mask* must be manually set. If the *DHCP* option is set the device IP address will be assigned by the router that provides the DHCP service.

## CLIENT Mode Settings

This pane is related to the TCP/IP connection parameters needed when U-Gate is used in *Client* mode: the server IP address and TCP port.

## WiFi Mode Settings

In this pane the WiFi connection mode (Access Point or Station) and the parameters (SSID and password) can be set.

When connected through WiFi U-gate can work in two modes:

- *Access Point* mode: U-Gate creates the WiFi network to which the remote device will connect
- *Station* mode: U-Gate connects to an existing WiFi network.

A scan of the existing WiFi networks can be executed by clicking the "*Scan Access Points*".