RS232 / Ethernet converter

1 - <u>Introduction</u>

it is now possible to connect its assemblies on an Ethernet or Internet network. The proposed small interface works thanks to the ELZ-50 module available from Lextronic.

The finality of the assembly being more experimental than functional, the output signals will be accessible via bars to be welded which will make it possible to make wrapping in order to connect it to an existing circuit before a total integration. As stated in the title, the signals will be at the logic level of 5 Volts. This achievement goes hand in hand with the document " **Implementation of the ELZ-50 module** " available in the Course section of the site.

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Â **Here the answering Suma © © © teristics of his features:**

- Communication mode: 10 Base T- Ethernet
- Power supply: 5 Volts DC
- Consumption: 100 ma Max. (without LEDs)
- Protocol: TCP / UDP / IP / ICMP / ARP / DHCP / PPPoE / TELNET / Multicast
- RS232 speed: adjustable from 1200 to 230400 Bds
- Dimensions with case: 90 x 50 x 32 mm

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Â 2 - <u>Diagram and printed circuit</u>

Electronic diagram
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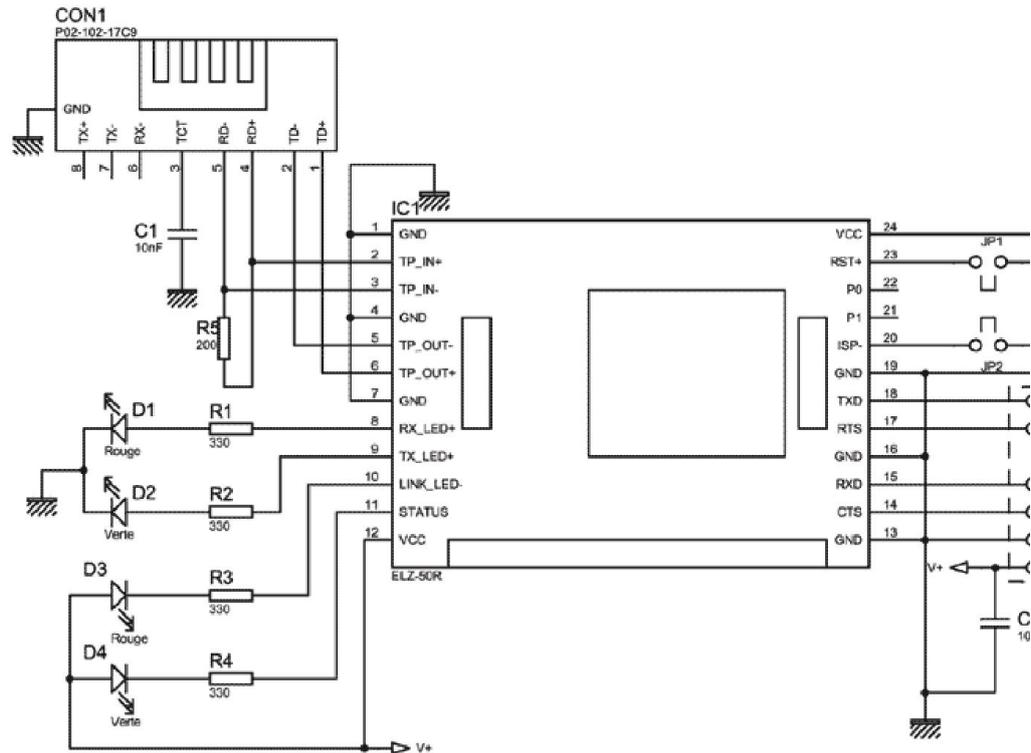
The Ethernet protocols are fully managed by an ELZ-50 module based on the RTL8019AS chip. An external 5 V supply will be required. It will generally be used on the assembly to be tested; Pay attention to the polarity during the wrapping operation!

The Ethernet connector used corresponds to the specifications required by the manufacturer. The functional signals are displayed on 4 LEDs. There are 2 Jumpers: JP1 for module reset and JP2 for Firmware programming (software version). Finally, the V24 standard communications signals are placed on a cable bar, the pins of which are accessible from the outside, which allows connection by wrapping.

The list of components :

R1, R2, R3, R4 : 330 ohms **R5** : 200 ohms **C1** Â: 10Â nF **C2** Â: 100 nF **D1, Â D3Â** : red LED 3.5 mm **D2, Â D4Â** : green LED 3.5 mm	**IC1** Â: ELZ-50 module **CON1** : Ethernet connector P02-102-17C9
	Miscellaneous Â:
	Single straight strip and 2 jumpers Connector for ELZ-50

	module
	Velleman G404 box

The printed circuit and the layout of the components Â
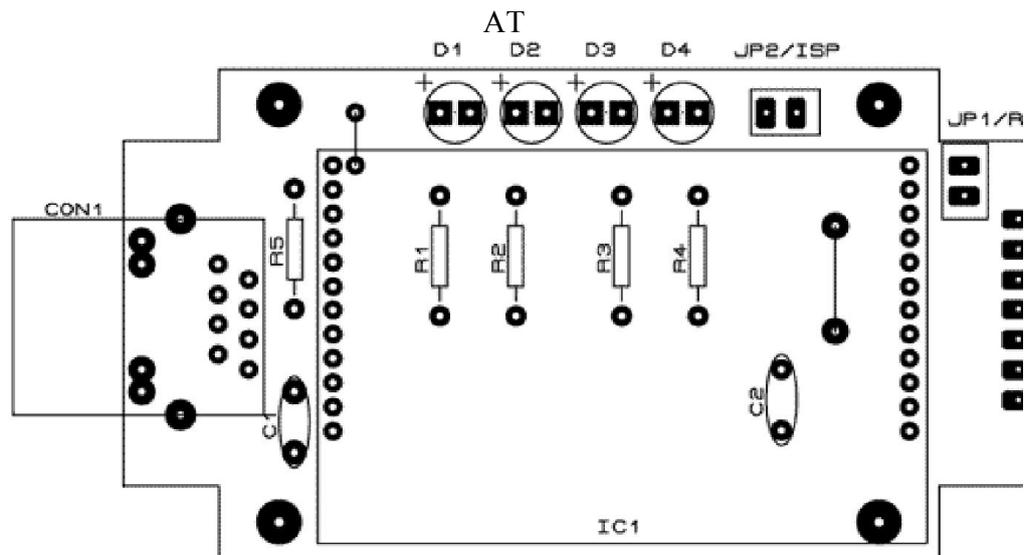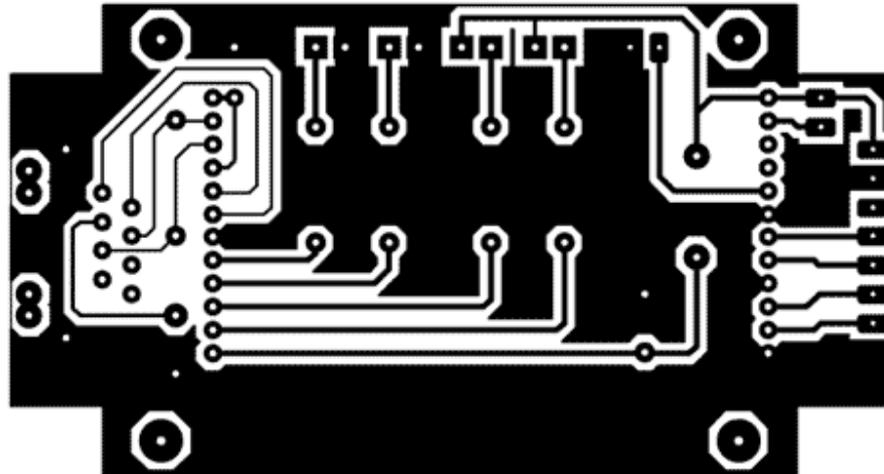
The circuit does not involve any major difficulty, but special care will have to be taken during the drilling operation, in fact the pellets are a little smaller than usual. Before starting the welding, check that the Ethernet connector enters its marks well and check that no residue of track exists all along the place or takes place the cable strip: like this one will be soldered flat, better to avoid short circuits.