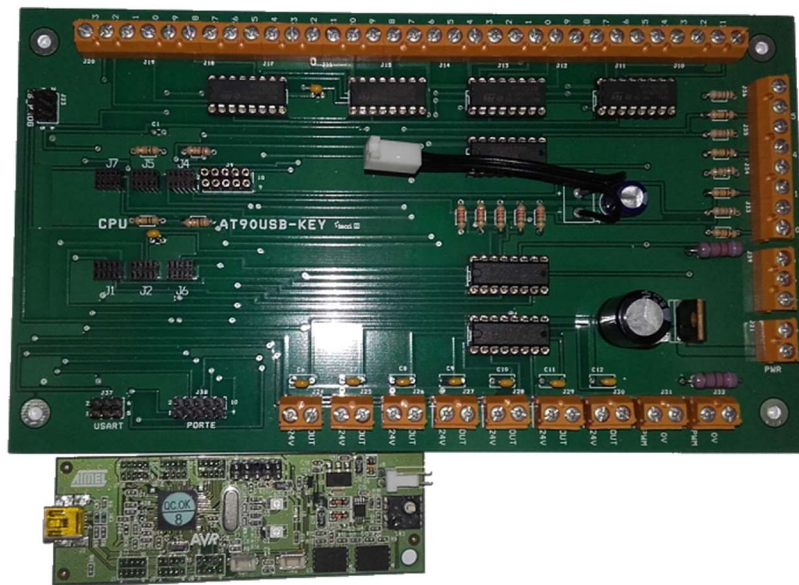
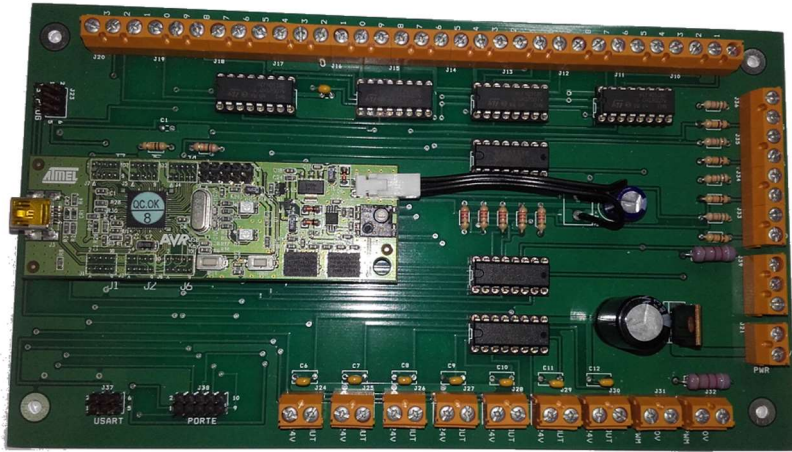


# AT90USBKEY APPLICATION BOARD



- Supply voltage: 15..24V / 12V / 9V
- 33 10-bit unipolar analog inputs 0 ... 10V by default. Modifiable range at 0 ... 1V and 0 ... 3.3V.
- Maximum acquisition speed: 15 kSPS for a single entry
- 4 digital inputs with voltage dividers
- 8 3.3V logic inputs / outputs
- 9 transistor power outputs (ULN2003A)
- 2 PWM outputs
- USB interface
- USART interface

- **AT90USBKEY On Board (AT90USB1287 controller)**
- **Possibility of programming by ISP and JTAG**

The board allows to comfortably use the resources of the Atmel AT90USBKEY kit, and is oriented to the acquisition of analog data. It has a total of 33 unipolar analog inputs of 10 bits, with easily modified measuring range. The default range is from 0 to 10V, but can be varied by modifying the values of the voltage divider formed by R1 and R2 at the output of the multiplexer.

The system can be connected directly to a PC through the USB Device interface of the AT90USBKEY.

The board has other important resources, such as the USART interface present in connector J37, the ISP programming interface in connector J23 and the JTAG interface present in the AT90USBKEY module.

More than a dozen digital inputs / outputs plus 9 outputs for the control of relays and solenoids, increase the options of the entire system in its application possibilities.

By default, the board is designed to work with a supply voltage between 15 and 24V, but it can work with 12V and 9V, for this it is only necessary to replace or completely remove the MC7812 regulator.

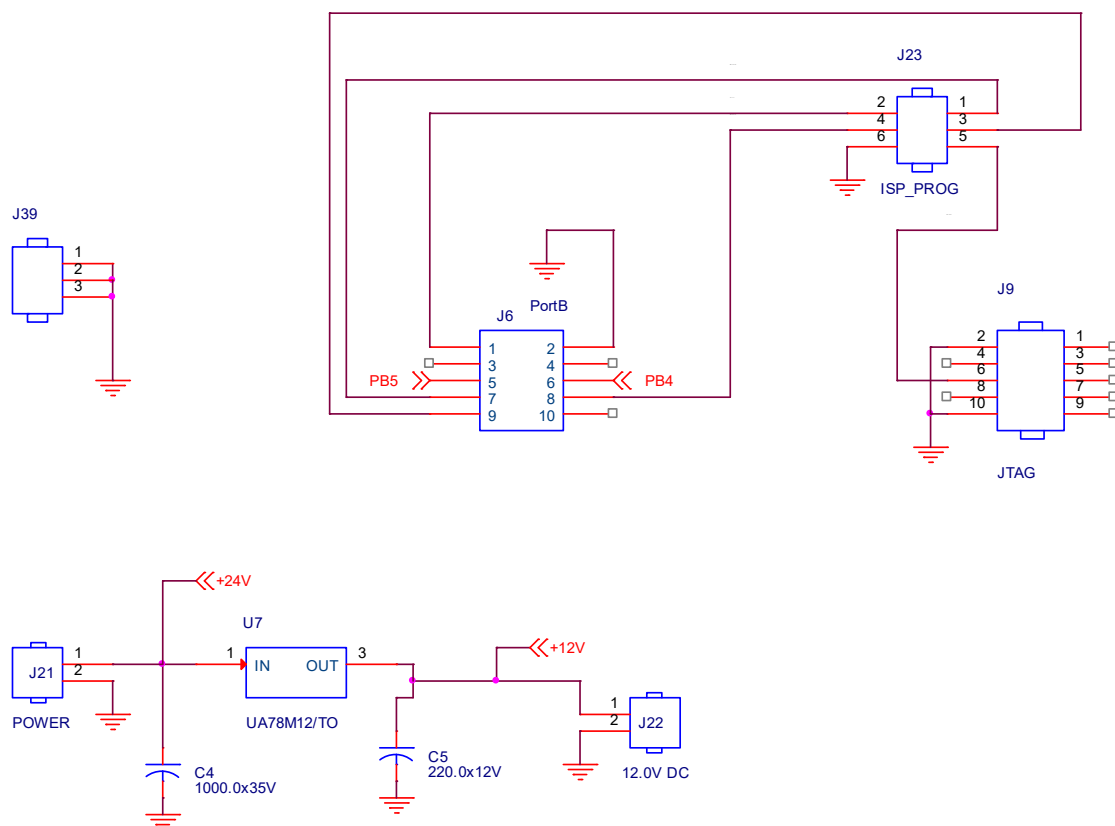


Fig.1. Power input and programming connectors.

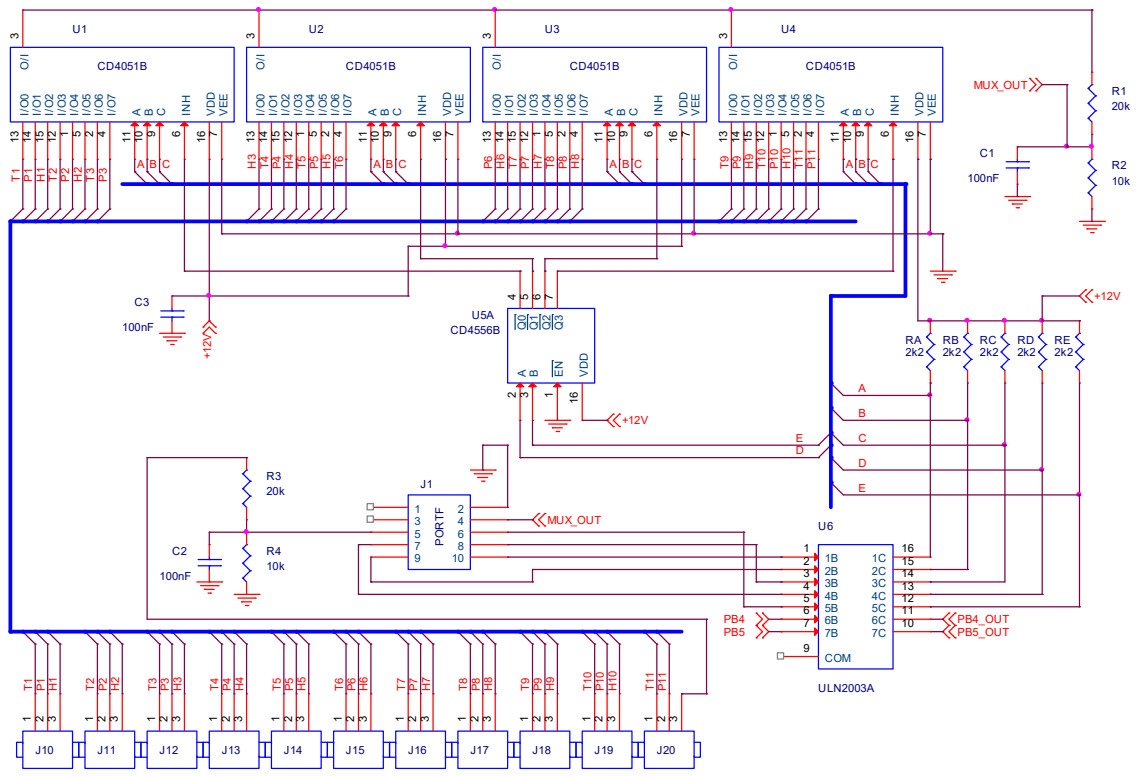


Fig.2. Analog inputs.

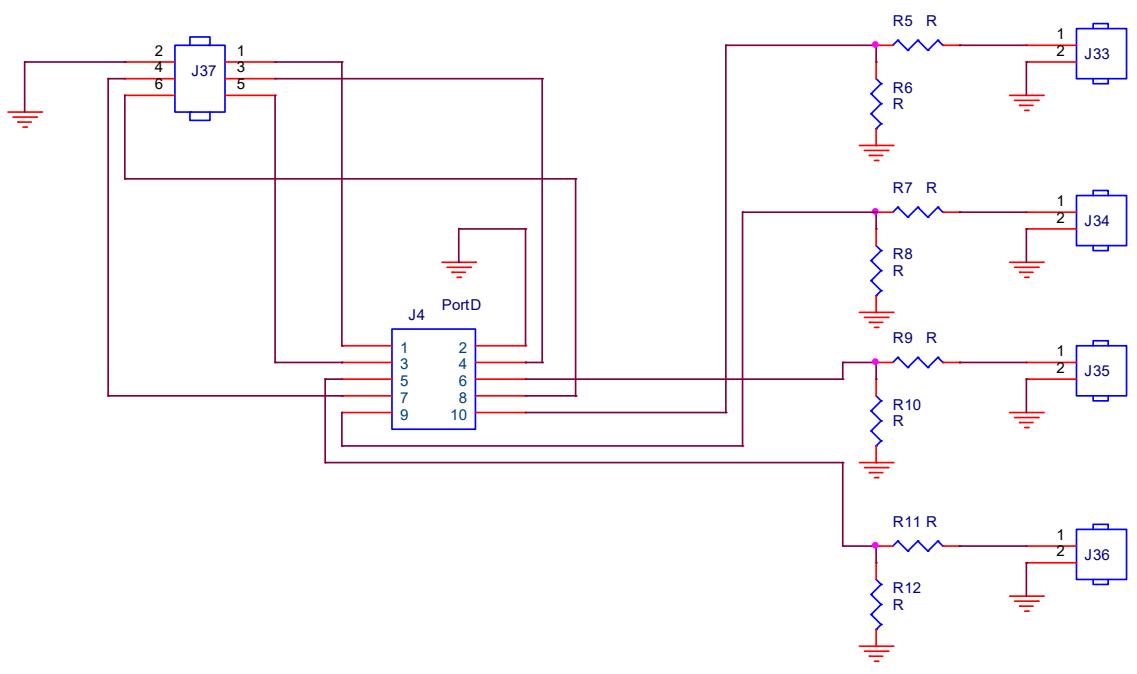


Fig.3. Digital inputs with voltage divider.

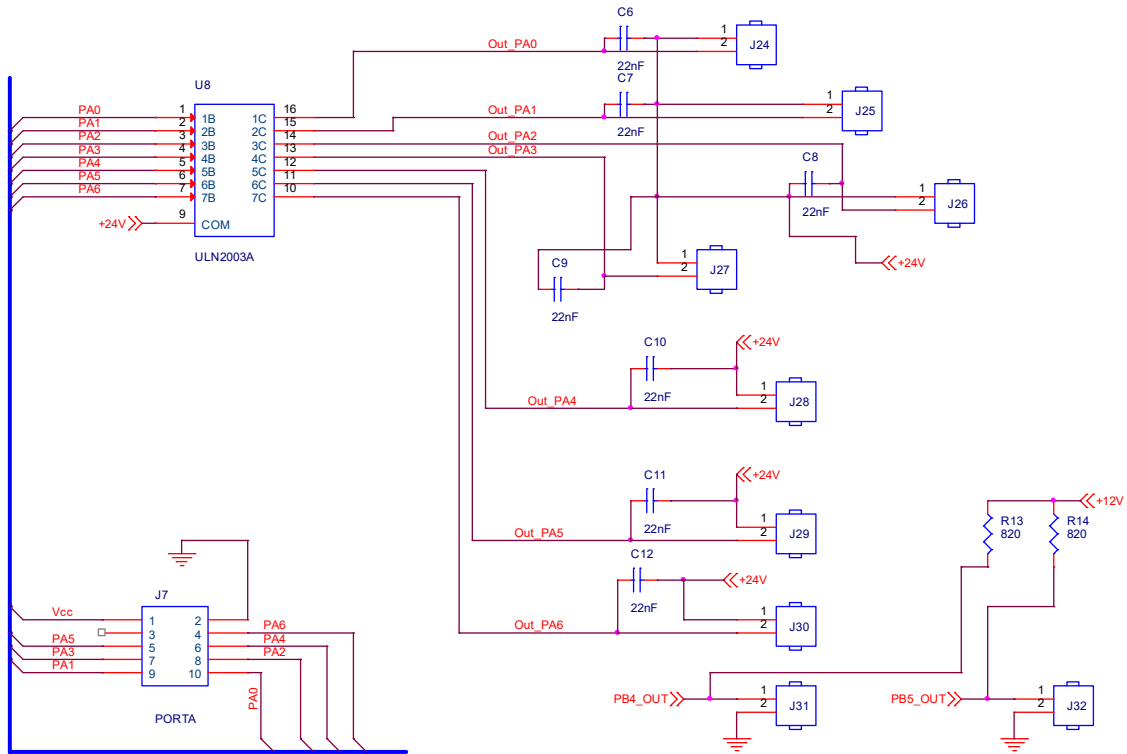


Fig.4. 9. Transistor outputs

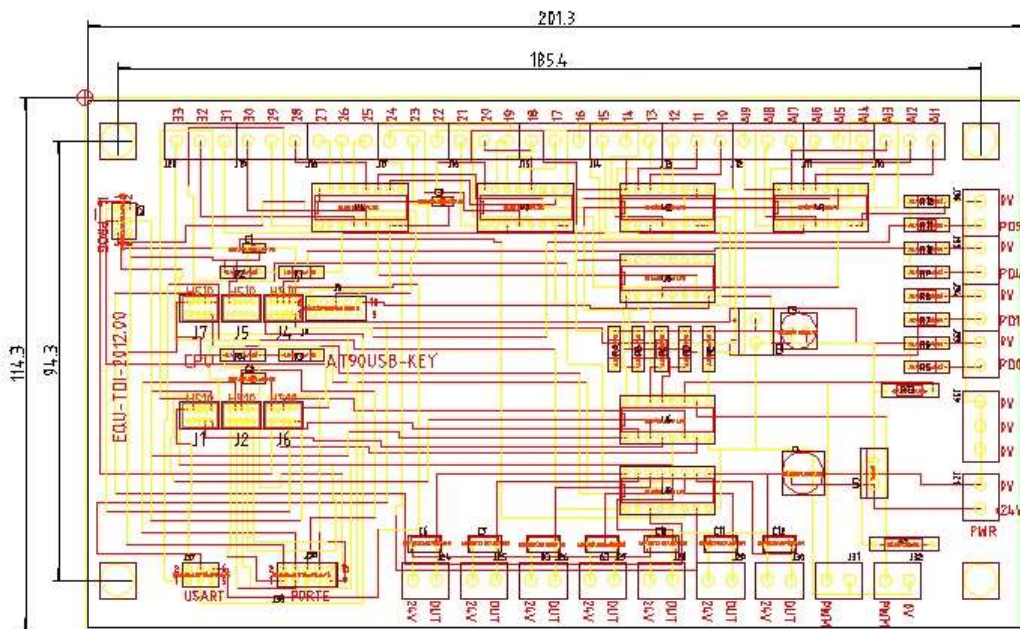


Fig.5. Board outline