

PIC-P8 development board User's manual



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INTRODUCTION:

PIC-P8 board is low cost development board, which allows you to prototype and develop code for all Microchip's PIC microcontrollers with 8 pins.

What you can do with PIC-P8? A lot of stuff let's see what we have:

PIC-P8 have RS232 connector and driver, so you can interface your PIC microcontroller to other embedded boards or PC with RS232. The PIC-P8 RS232 driver is made with tricky schematic to reduce the cost and the negative RS232 level is generated using the opposite RS232 driver negative level, thus to operate the opposite driver should be real RS232 driver i.e. you can connect PIC-P8 to computer or other board with RS232 driver but if you connect two PIC-P8 together they will not talk to each other as none of them is able to produce negative voltage levels.

PIC-P8 also has an external EEPROM memory which could be connected to PIC on the board via two SMD jumpers, as J2 and J3 share same pins as the ceramic resonator if you want to use I2C you must run on internal oscillator.

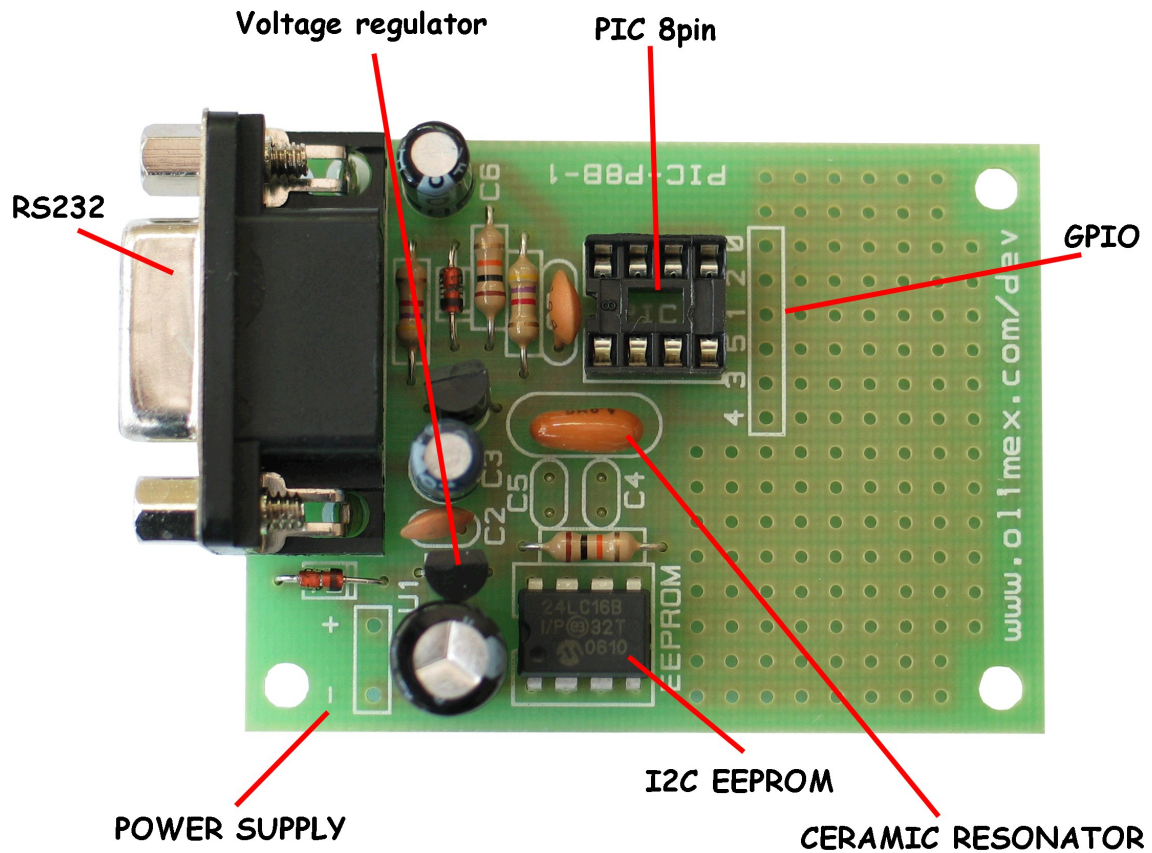
This board is so small that it has no ICSP connector i.e. to program the PIC you should pull it from the socket and use programmer with ZIF socket like PIC-MCP, PIC-MCP-USB, or PIC-PG2, PIC-PG3.

The power supply circuit have voltage regulator and could be powered with +9-25VDC. The polarity is written on the silkscreen. There is protection diode so if you connect the power supply reverse nothing wrong will happen.

The oscillator circuit is made with 4 Mhz ceramic resonator, so you can run your PIC at maximum performance.

GP0-GP5 are available next to prototype area and you can solder additional circuits easy to the microcontroller.

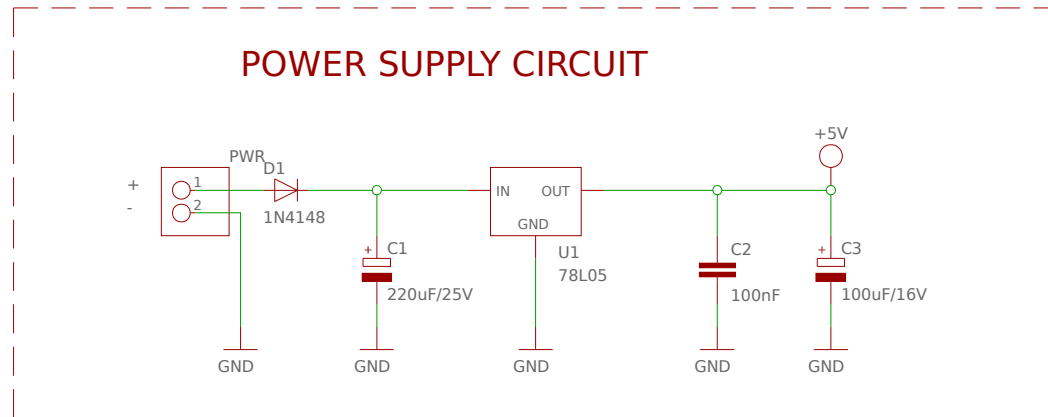
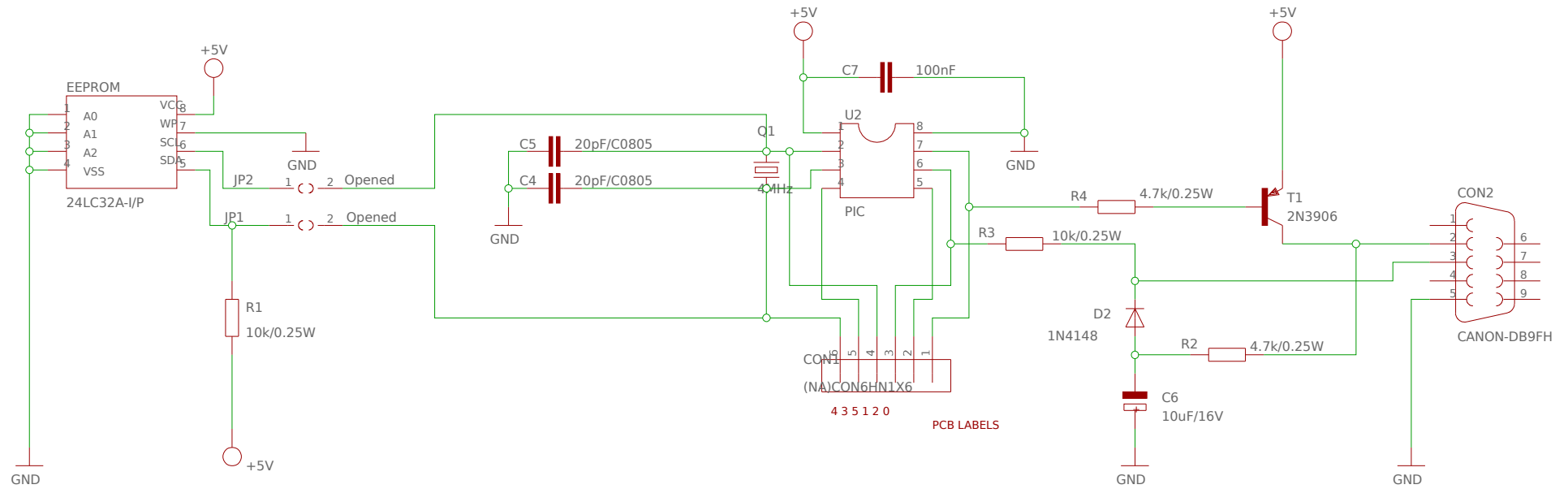
BOARD LAYOUT:



- RS232 interface with level shifter circuit
- GPIO ports available next to prototype area
- DIL8 microcontroller socket
- Ceramic resonator 4 Mhz
- EEPROM I2C memory
- Input protection diode
- Voltage regulator +5V, 100mA
- Gird 100 mils
- GND bus
- Vcc bus
- Three mounting holes 3,3 mm (0,13")
- FR-4, 1.5 mm (0,062"), green soldermask, white silkscreen component print
- Dimensions (58 x 43)mm ~ (2.3 x 1.7)"

HARDWARE SCHEMATIC:

PIC-P8, designed and manufactured by OLIMEX LTD, Plovdiv, Bulgaria



SOFTWARE EXAMPLES:

DEMO1: PIC12F675-I/P ADC read

This demo code shows how to initialize and read the PIC12F675 ADC.

DEMO2: PIC12F675-I/P EEPROM read/write

The example shows how to initialize and read/write EEPROM with bit banging technique without having PIC with special I2C controller.

DEMO3: PIC12F675-I/P RS232 send/receive routines

This demo code shows how to send and receive to RS232 with bit bank technique without having PIC with UART.

ORDER CODES:

PIC-P8 – assembled and tested (no kit, no soldering required)

PIC-P8/PCB – blank PCBs only

How to order?

You can order directly from our web-shop or from any of our distributors. Check our web-site www.olimex.com for more info.

Document revision history:

Document revision A – initial document release, June, 2007

Document revision B – major document overhaul, April, 2016

Notable changes:

- Updated schematics
- Updated disclaimer
- Improved document formatting