PIC-P8 development board
User's manual

Document revision B, April 2016

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:
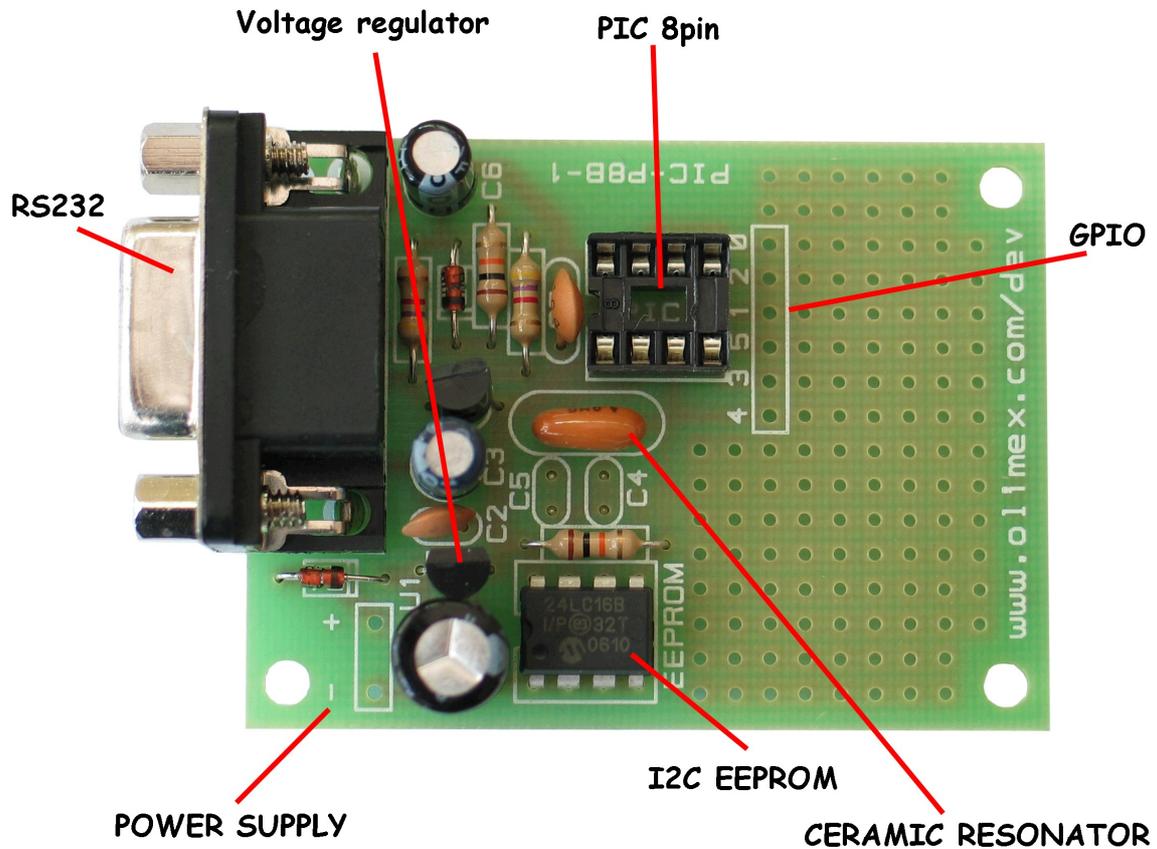
- RS232 interface with level shifter circuit
- GPIO ports available next to prototype area
- DIL8 microcontroller socket
- Ceramic resonator 4 Mhz
- EEPROM I2C memory
- Input protection diode
- Voltage regulator +5V, 100mA
- Gird 100 mils
- GND bus
- Vcc bus
- Three mounting holes 3,3 mm (0,13")
- FR-4, 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
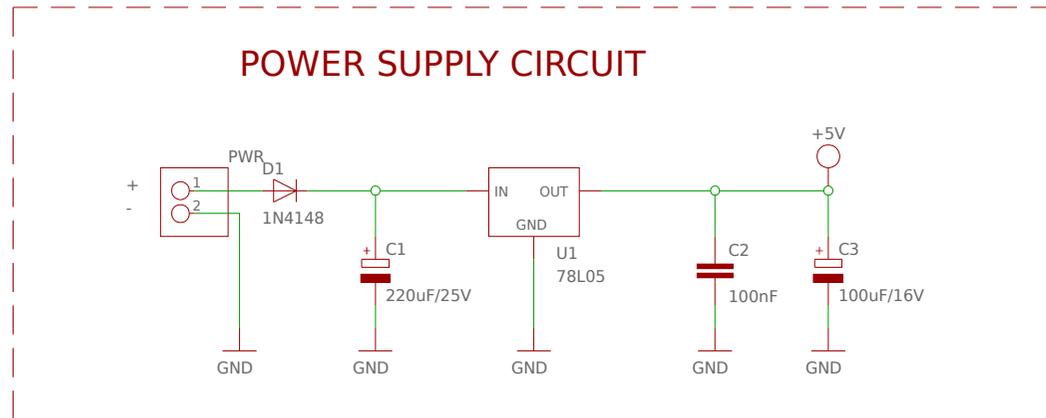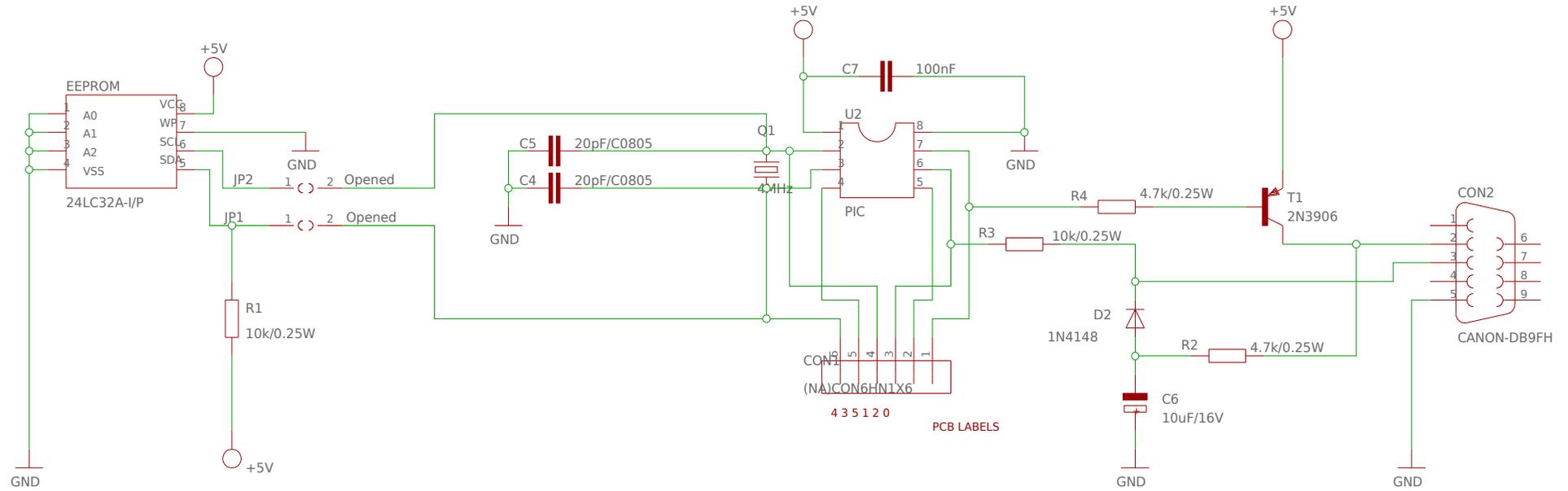
SOFTWARE EXAMPLES:

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 witch 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

For product support, hardware information and error reports mail to: support@olimex.com

All document or hardware feedback is welcome. Note that we are primarily a hardware company and our software support is limited. Please consider reading the paragraph below about the warranty of Olimex products.

All goods are checked before they are sent out. In the unlikely event that goods are faulty, they must be returned, to OLIMEX at the address listed on your order invoice.

OLIMEX will not accept goods that have clearly been used more than the amount needed to evaluate their functionality.

If the goods are found to be in working condition, and the lack of functionality is a result of lack of knowledge on the customers part, no refund will be made, but the goods will be returned to the user at their expense.

All returns must be authorized by an RMA Number. Email support@olimex.com for authorization number before shipping back any merchandise. Please include your name, phone number and order number in your email request.

Returns for any unaffected development board, programmer, tools, and cables permitted within 7 days from the date of receipt of merchandise. After such time, all sales are considered final.

Returns of incorrect ordered items are allowed subject to a 10% restocking fee. What is unaffected? If you hooked it to power, you affected it. To be clear, this includes items that have been soldered to, or have had their firmware changed. Because of the nature of the products we deal with (prototyping electronic tools) we cannot allow returns of items that have been programmed, powered up, or otherwise changed post shipment from our warehouse.

All returns must include all the factory accessories which come with the item. This includes any In-Circuit-Serial-Programming cables, anti-static packing, boxes, etc.

With your return, enclose your PO#. Also include a brief letter of explanation of why the merchandise is being returned and state your request for either a refund or an exchange. Include the authorization number on this letter, and on the outside of the shipping box.

Please note: It is your responsibility to ensure that returned goods reach us. Please use a reliable form of shipping. If we do not receive your package we will not be held liable.

Shipping and handling charges are not refundable. We are not responsible for any shipping charges of merchandise being returned to us or returning working items to you.

The full text might be found at https://www.olimex.com/wiki/GTC#Warranty for future reference.