

PropRPM - Quickstart

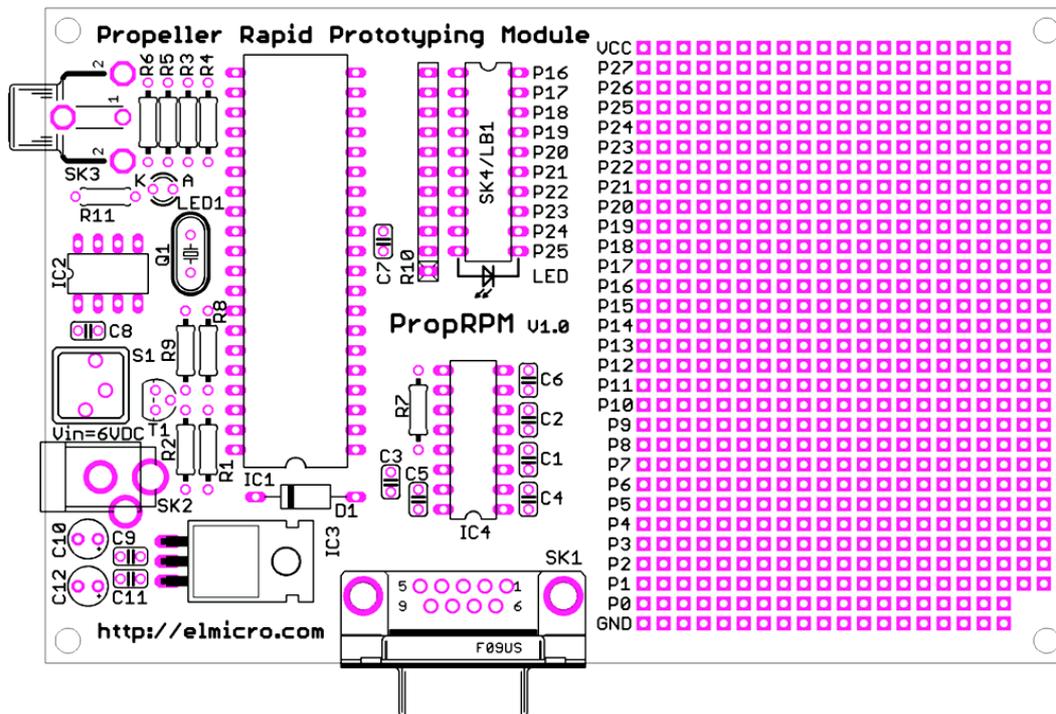
This Quickstart guide provides a brief introduction to installation and operation of the Propeller Rapid Prototyping Module (PropRPM). For further information, please visit our product information web page at:

<http://elmicro.com/en/proprpm.html>

Before you start, please make sure the board has not been damaged during transport and verify the package contents. The box should contain the PropRPM unit, a Quickstart guide (this document), PropRPM schematic diagrams on a separate A4 sheet and a Parallax Software CD-ROM.

Component Location Diagram

The figure below shows the location of all board components:



PC Connection

Before downloading software to the Propeller, you need to connect the PropRPM to your PC serially. For a direct RS232 connection, you should use a straight-through (1:1) serial cable, having a 9-pin Sub-D male plug on one end and female type connector on the other end.

If you prefer to use a USB connection, you will need a USB-to-serial converter such as Parallax #28031 (sold separately). This adaptor can be plugged directly onto the Sub-D connector of the PropRPM. Then, a USB cable can be used to connect it to the PC's USB port. Driver software for this adaptor can be found in the following CD-ROM directory:

`\Software\USB_Drivers_(FTDI_VCP)\`

Power Supply

The supply voltage for the PropRPM should be between 6V and 9V DC. If a stabilized input voltage is used, 5V is sufficient and recommended. The supply voltage connector is SK2, with the inner pin serving as the positive terminal. After reset, the initial current consumption should be less than 50mA.

Software Installation

The integrated programming environment for the Propeller, called the "Propeller Tool", can be found in the following CD-ROM location:

```
\Software\Propeller\
```

To install the software, start the setup program and follow the instructions on screen. When starting the application for the very first time, a message will be displayed which offers to permanently associate the file extensions used by the Propeller Tool (*.spin, *.binary, *.eeprom) with this program.

Demo Program

Now it's time to test if the Propeller hardware can be identified by the Propeller Tool. Press F7 (Identity Hardware) to see if a message like "Propeller chip version 1 found on ComX" appears.

The following demo source is available for download from our product information web page (see above):

```
{ { blink10.spin } }  
  
VAR word n  
  
PUB main  
  outa[25..16] := %11_11111111  
  dira[25..16] := %11_11111111  
  repeat  
    repeat n from 0 to 9  
      onLED(n)  
      delay1  
      offLED(n)  
    repeat n from 9 to 0  
      onLED(n)  
      delay1  
      offLED(n)  
  
PUB onLED(i)  
  outa[25..16] &= !(1 << i)  
  
PUB offLED(i)  
  outa[25..16] |= 1 << i  
  
PUB delay1  
  waitcnt(300_000 + cnt)
```

Load this source file into the editor by clicking on menu item File/Open. Then, press F11 to compile the program and download it to target memory (EEPROM). The program will start automatically: if the LED bar is moving now, you're done! Congratulations and good luck with your Propeller projects!