MuIn - Multi Interface Board 990.005

V1.4

Description

The MuIn is a versatile Multi Interface Board. It is useful in many applications: robotics, automation, control, development, etc.
The board is equipped with a powerful PIC18F2520 running at 40MHz. It comes preloaded with a bootloader*, for serial programming and upgrading, and a firmware* full of features. The MuIn can drive two H-Bridges with two PWM channels and two enable I/O. It can read up to five analogical devices such as temperature sensors, potentiometers, distance sensors, etc; with a 10Bit resolution. With Port B it can drive 4/8 R/C servos or it can read or write 4/8 I/O ports. With the I2C bus you can control almost any I2C devices, sending the commands through the serial connection.
With special commands you can easily read almost all of the Devantech I2C sensor and devices and with the free GUI* (Graphical User Interface) you can program the device ID with a mouse click.
There are several ways to send and receive data to and from the MuIn, thanks to its socket you can use an XBee module to make a ZigBee connection, with an XPort module you canmake an Ethernet connection, you can talk to the MuIn through the Internet or a LAN. With our 990.004 USB to Serial converter, you can easily connect the MuIn to your PC USB port.
Last but not least, the firmware is made to be compatible with the free version of the Microchip C18 compiler and it is Open Source (for non commercial use).

Technical Specifications

- **MCU:** Microchip PIC18F2520
- **5.0V Power:** 250mA
- **3.3V Power** 250mA
- **Servo:** 500 to 2500 us
- **PWM:** 2.44/9.77/39.4KHz selectable
- **Serial Speed:** up to 115.2K selectable
- **Dimensions:** 52 x 68 mm

Features

- Powerful 40MHz PIC18 MCU
- Wireless, Ethernet, USB, TTL data connections (w/optional devices)
- Serial to I2C interface
- Serial to I2C Devantech devices interface
- 3.3V and 5.0V on board low drop out voltage regulators
- High PWM frequency, up to 39.4KHz
- High Serial Speed up to 115.2K
- 3 LED's for: ASSOC, RSSI and MCU status
- On board ICSP connector
- Power and Ground headers
- Power line selectable
- Servo Power Connector
- Open Source Code
- Free Graphical Interface

Preloaded Firmware and GUI

The preloaded software and the free GUI is just for demonstration purposes we do not give any warranty. The firmware is open source you are free to modify it and use for studying, learning and testing the capabilities of the MuIn Board. We will be very happy if anyone will share their software with other Users on our Forum: www.robot-italy.net
For any question or help with the firmware and the GUI, ask to our Forum, we do not provide direct support on software.

*Bootloader

The bootloader has been tested with our 990.004 USB to serial converter. It may not works with other configurations.
The best way to program the board is a good PIC Programmer.

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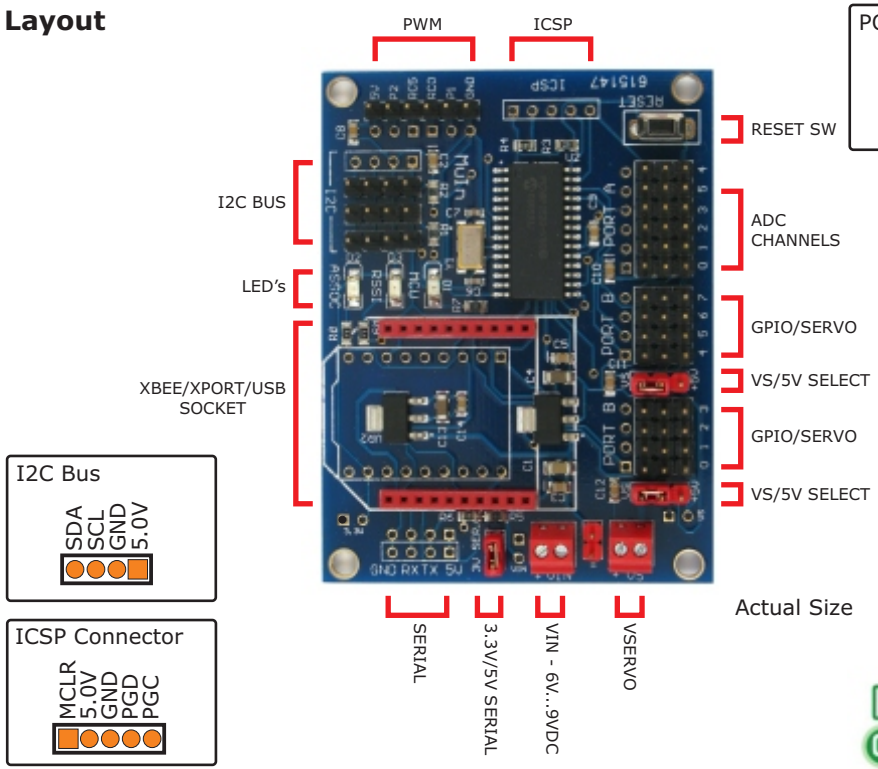
Layout



I2C Bus

ICSP Connector

Actual Size

RoHS Compliant