The BotBoard05 Pro is an entry-level robotics platform suitable for small hobbyist and educational robotics projects. Powered by an 8-bit microcontroller running at 5 MIPS, the system is configured for low-cost programming, plentiful I/O and an easy-to-use on-board motor controller. Code samples are available through the McMaster IEEE Student Branch website.

Programming

The BotBoard05 Pro is equipped with a serial port for easy programming. Using the Bloader bootloader from sparkfun.com and the accompanying PC software, the user can download code using no more than a standard serial cable. In addition, programming and debugging via the Microchip ICD / ICD2 is supported via the ICSP header.

Further Reading

PIC16F877A Data Sheet,
www.microchip.com

Pricing

IEEE members: $35, non-members: $50

Features

- Powered by a Microchip PIC16F877A microcontroller

  - 8 bit data path, 14 bit instruction word

  - 20 MHz clock, 5 MIPS

  - 368 bytes RAM

  - 256 bytes data EEPROM

  - 8192 words program Flash

  - On-chip PWM, serial port, ICSP

  - 8-channel, 10-bit ADC

- I/O

  - 14 dedicated digital (12 with serial port)

  - 8 ADC in / digital I/O (configurable)

- On-board 4-channel motor controller with speed control

- Input voltage: 8-12VDC logic, 3-20VDC motor