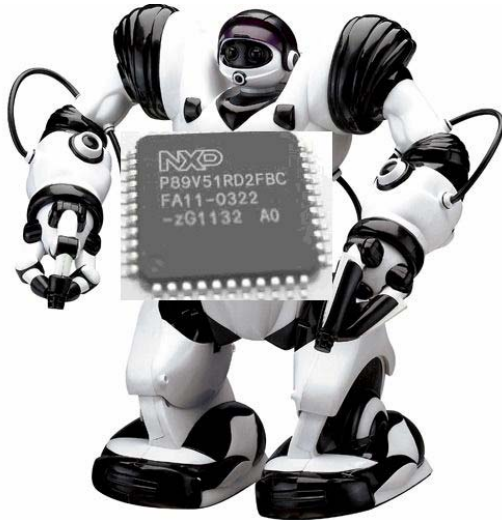


M.A.S.I.M.O Robotic Platform for Learning

An Open Source Platform



As a Universal Robotic Research Platform, M.A.S.I.M.O (eMlabz Artificial Sensory Intelligence in Mobility) provides an excellent environment for experimentation, algorithm development and testing. Its modular architecture allows you to control it using multiple processors such as 8051, AVR, PIC and ARM Cortex M3 etc. Modular sensor pods can be mounted on the platform as dictated by intended applications. The platform can be mounted with camera or sensors.

Microcontroller :

8051 P90V51RD2FBC microcontroller
(PIC version coming soon)

Operation Modes :

- ➔ Standalone
- ➔ PC (or other system) as master and robot as slave
- ➔ Robot as master and other robot/robots as slave

Communication :

- Wired RS232 (serial) communication
- Simplex infrared communication (From infrared remote to robot)
- Bluetooth
- Wireless 802.11 Wifi(optional)
- Zwave (optional)

Dimensions :

- Height: 33 cm
- Weight: 1.85 Kg.

Power :

- Four 1.5V (6.0V) batteries or other DC power supply

Locomotion :

- Seven DC motors

Software Support

- Keil IDE
- Flashmagic

Features

- Development environment: C
- User manual
- Sample programs in C
- Serial downloading and programming
- Pre-assembled
- USB Programmer (ISP)
- Parallel In System Programmer (ISP)



With ISP programming cable



Fitted with 8051 microcontroller



PCB designed for 8051 microcontroller

Some projects ideas for undergraduate students

- 1) Maze solving humanoid robot
- 2) Human imitation robot
- 3) Voice command recognition robot
- 4) Soccer playing robot
- 5) Camera interfaced surveillance robot
- 6) Pick and place robot
- 7) Pick and place with artificial intelligence
- 8) Sumo wresting robot

Developed by:

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