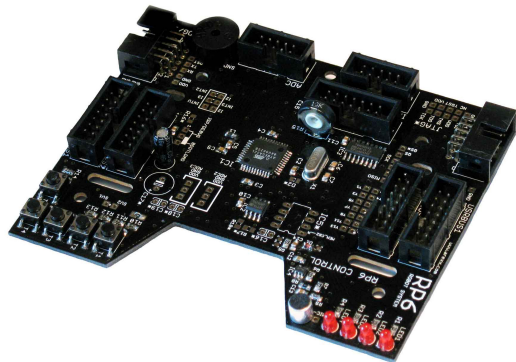


# RP6v2-M32

## RP6v2 Control M32 Module



### Features:

- Powerful Atmel ATMEGA32 8-Bit Microcontroller
  - Speed 16 MIPS
  - Memory: 32KB Flash ROM, 2KB SRAM, 1KB EEPROM
  - Freely programmable in C (by using WinAVR / AVR-GCC)
- External 32KB SPI EEPROM for non-volatile data storage
  - Very fast SPI Interface (8MHz clock frequency)
  - Each memory cell is specified for at least 1,000,000 write/erase cycles.
  - Well suited for data-logging or program storage
- I<sup>2</sup>C-Bus Expansion connectors
  - Can control any I<sup>2</sup>C Bus slaves
  - The module's MEGA32 may be used as master or slave device.
- Microphone sensor
- Piezo beeper
- 4 Status LEDs
- 5 Buttons
- LC-Display Port
- 14 freely available I/O Ports
- Up to 3 external interrupts are available
- USB PC Interface connector available

### Overview:

The RP6 CONTROL M32 expansion module enables you to upgrade your robot with an additional Atmel ATMEGA32 microcontroller. Compared to the controller on the mainboard, this one features twice as high clock frequency. And as a bonus, on the RP6-M32 you have a lot more free processing time, because the Motor Control, ACS, IRCOMM, etc. can be handled by the controller on the mainboard.

The external 32KB SPI EEPROM provides the module with a reliable (1 million cycles) read- and writeable memory, which may be used for data-logging or as program storage for Bytecode Interpreters like the NanoVM for Java. Optionally the board allows you to solder an extra DIP 8 socket to the PCB for a second EEPROM.

The buttons, LEDs, piezoelectric beeper and the optionally available LC-Display give you lots of additional possibilities. They enable you to control the robot, e.g. by programming a small command menu with a few push buttons for selecting special functions—and of course it can be used as a display for measurement values and status messages. The beeper may generate a range of sounds and for instance play a greeting melody at program's start or an alarm sound at low battery level.



