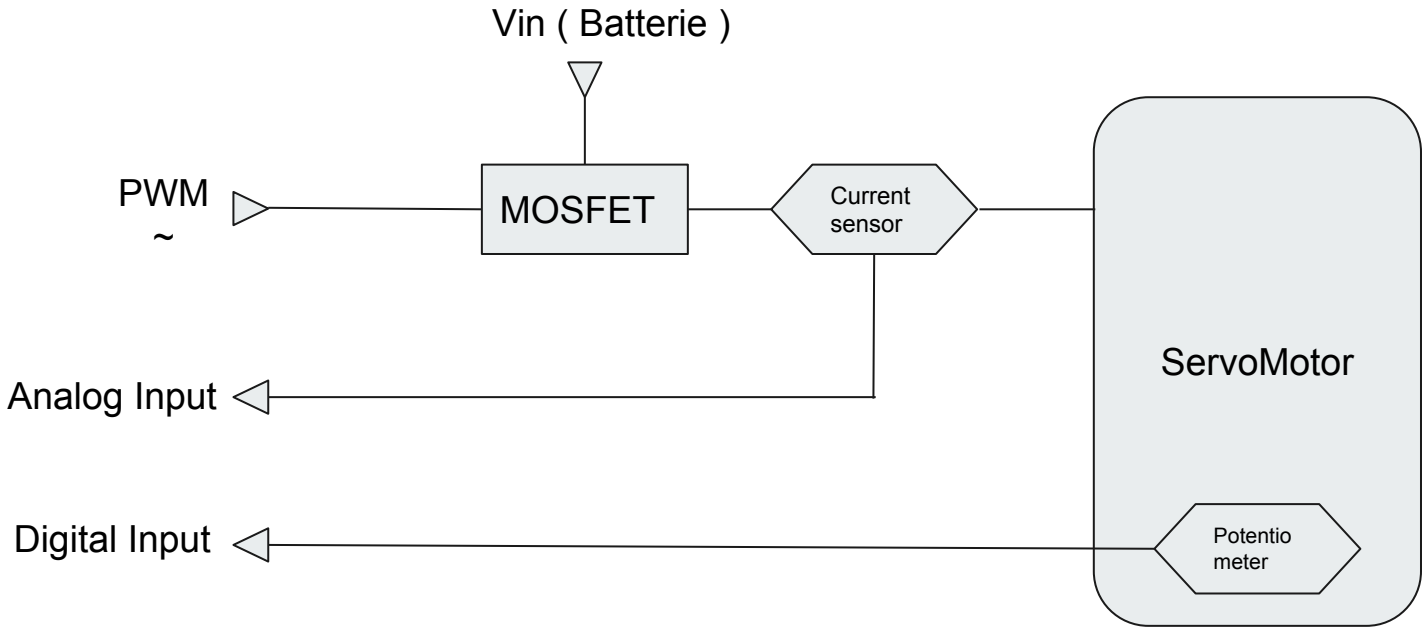
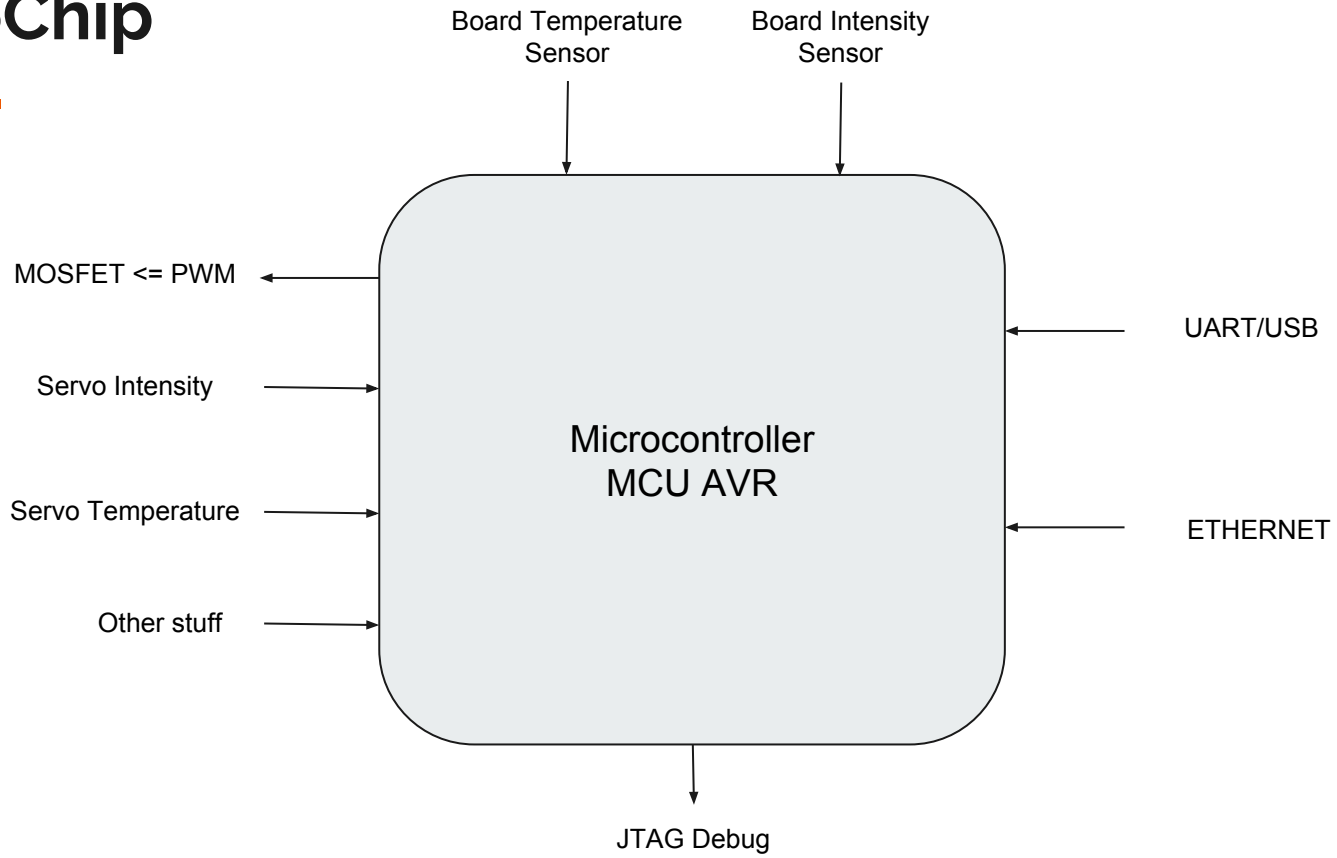
InMoov Neural Backbone Architecture

Drive servos



MicroChip


Board Temperature Sensor
Board Intensity Sensor
MOSFET <= PWM
Servo Intensity
Servo Temperature
Other stuff
Microcontroller MCU AVR
UART/USB
ETHERNET
JTAG Debug

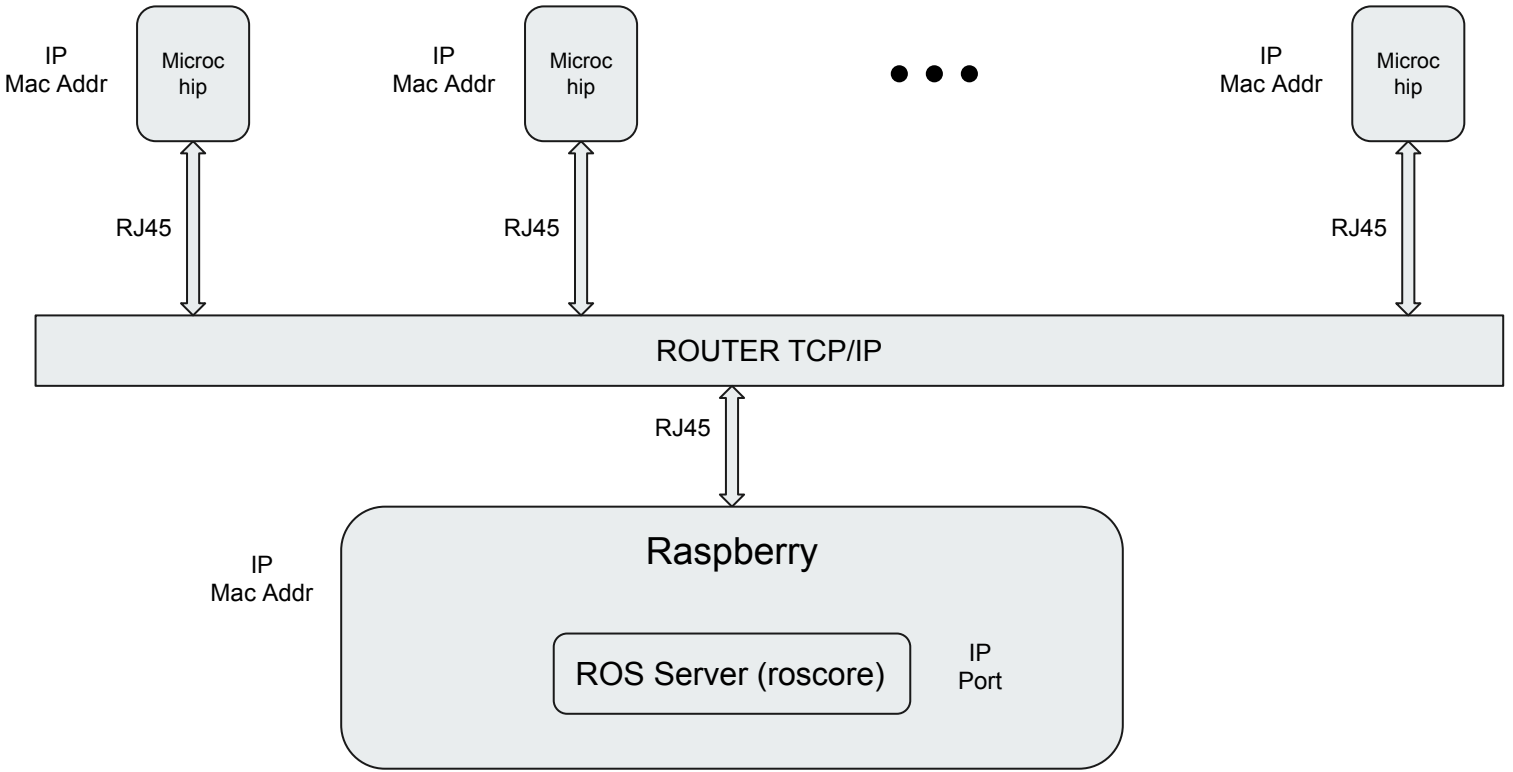
MicroChip Requirements

- Ethernet & UART plug
- JTAG Debug pins
- Multiple I/O
- 8-bits
- AVR
- More than 64Kb for Flash Memory
- More than 4Kb for SRAM

- Include arduino, ethernet and ROSSERIAL lib

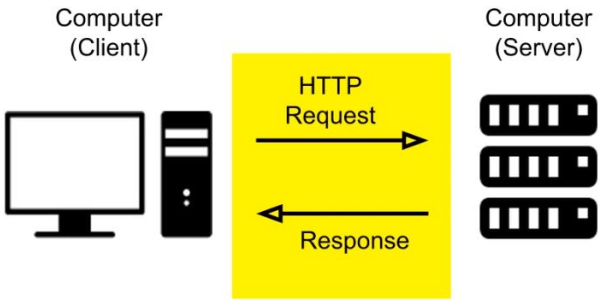
Maybe ATMega 1280 or 2560 (used for Arduino Mega)

Robot's Middleware Architecture



From Http requests to Ros Services (1)

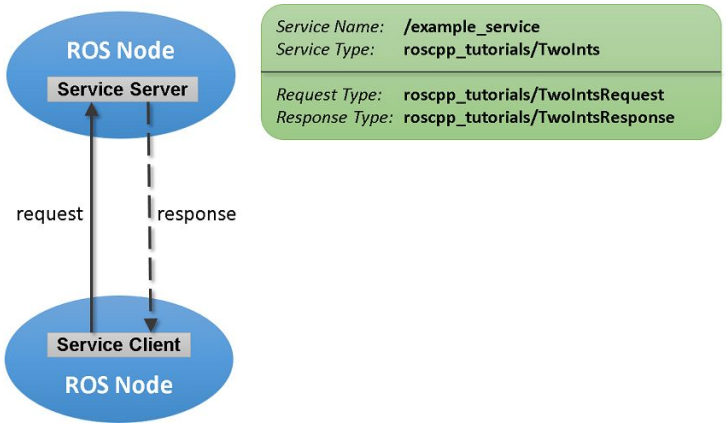
We could add web server in our MicroChip



Then send Http request from client and the server will compute the message

From Http requests to Ros Services (2)

But we are going to use Ros Services and replace Http into topics



From Http requests to Ros Services (3)

To go further, we will use Ros Actions for complex movements
Actions are using asynchronous services & multi-threading operations