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Self-Balancing Motorized Skateboard

Features

Motor

Power: 350W

Voltage: 24V required

Current 20A continuous current

IMU 6DOF

6Degrees of Freedom

Gyroscope/Accelerometer

10-bit resolution

resolution increases with g

range

voltage 2.0 to 3.6V

Micro-Processor

32-bit Arm processor

Arduino Compatible

I2C capability

15 PWM pins

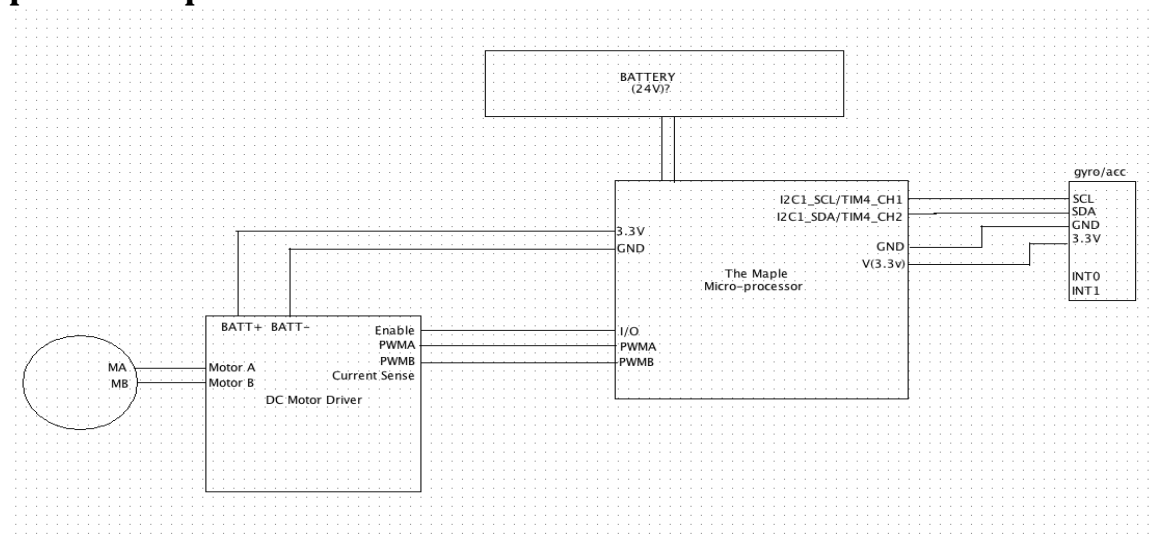
Applications

Easy Transportation from point A to point B

General Description

The self-balancing skateboard provides an alternate easy way of transportation. An Arm microprocessor running a PID loop will receive position from IMU accelerometer/gyroscope and balance the board. PWM signals will be generated from PID output.

The board will move forward or backward depending on user movement. If user leans forward the board will go forward, if user moves backward then board will go backward



System Block Diagram