

**Team 12**  
**THE TWO WHEEL  
DEAL**

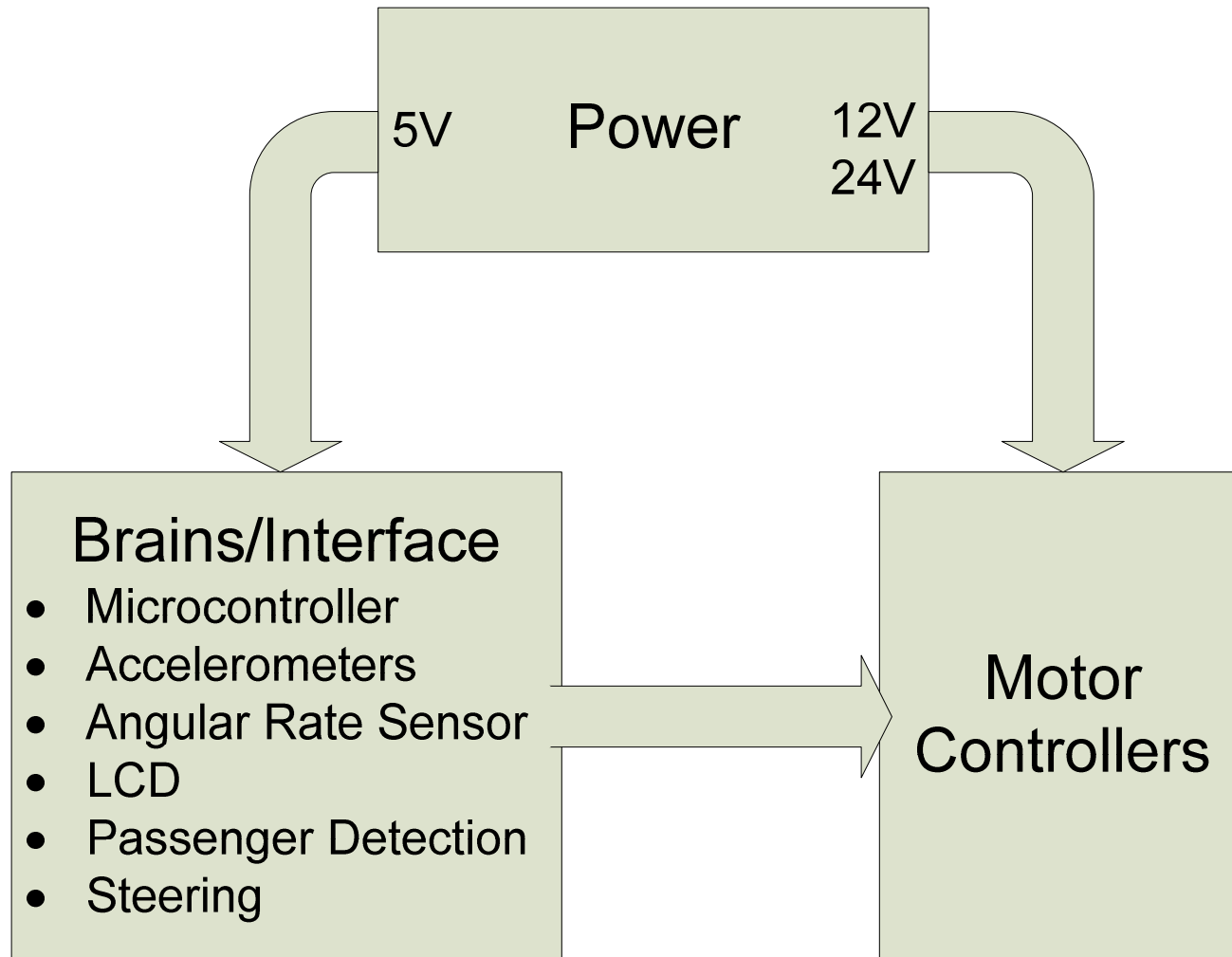
*Theory of Operation*

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# Theory of Operation

- Overview
- Power Supply
- Microcontroller and Sensors
- Motor Controller

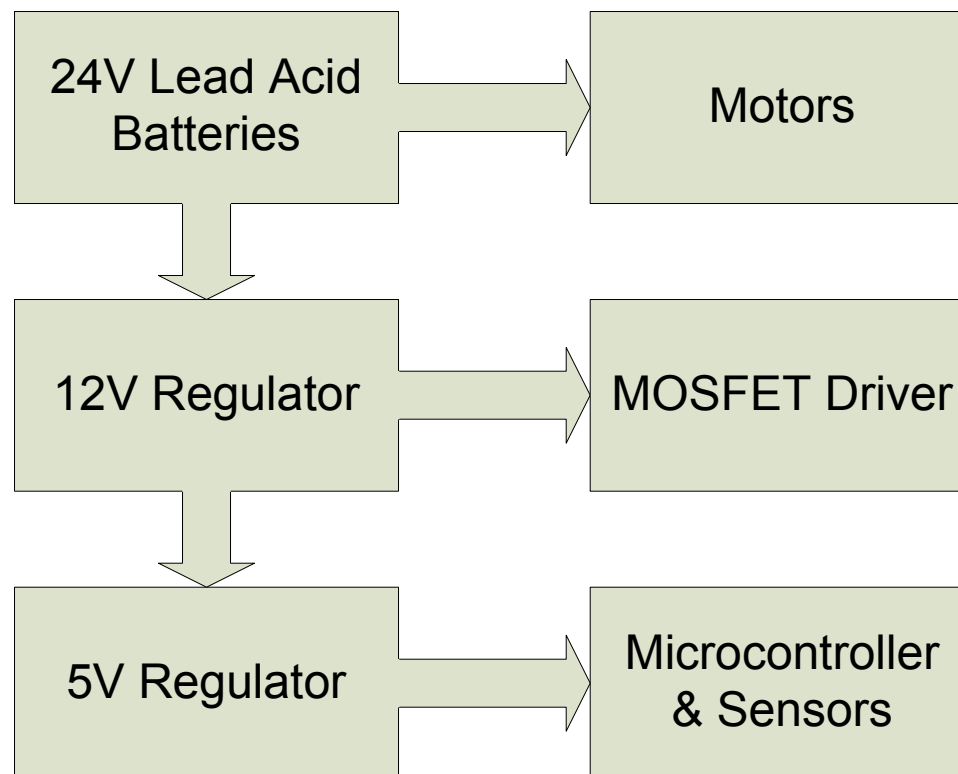
# Circuit Overview



# Power Supply

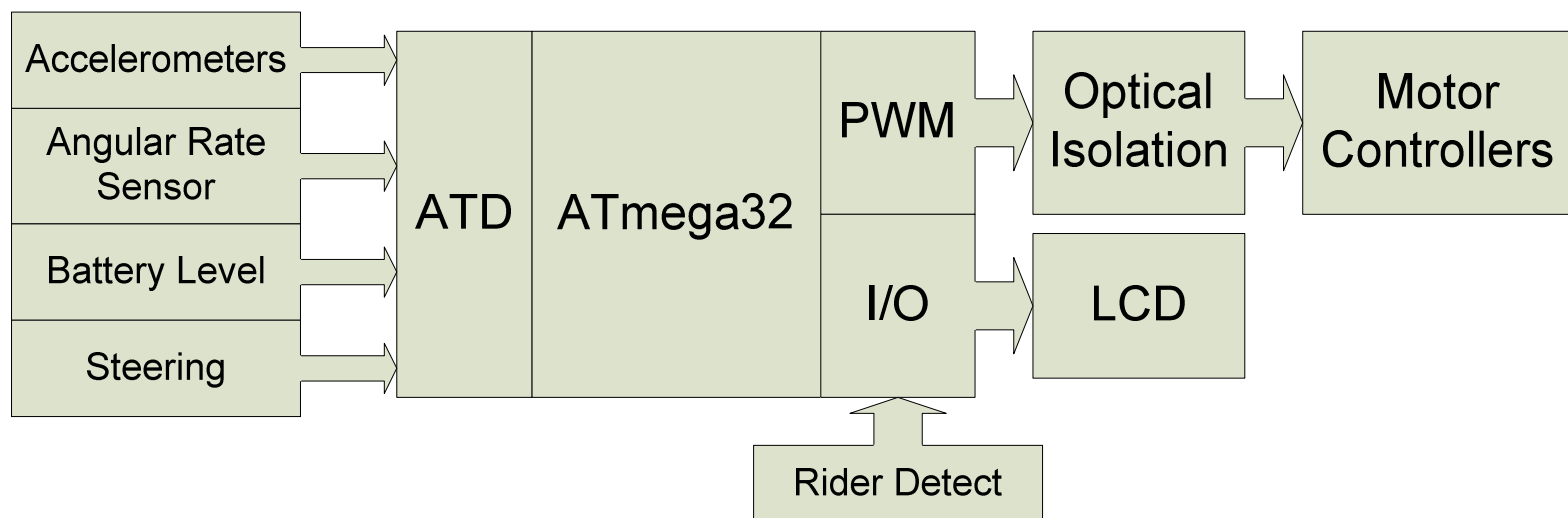


- High current for the motors
- Stable 5V for the Sensors and Microcontroller



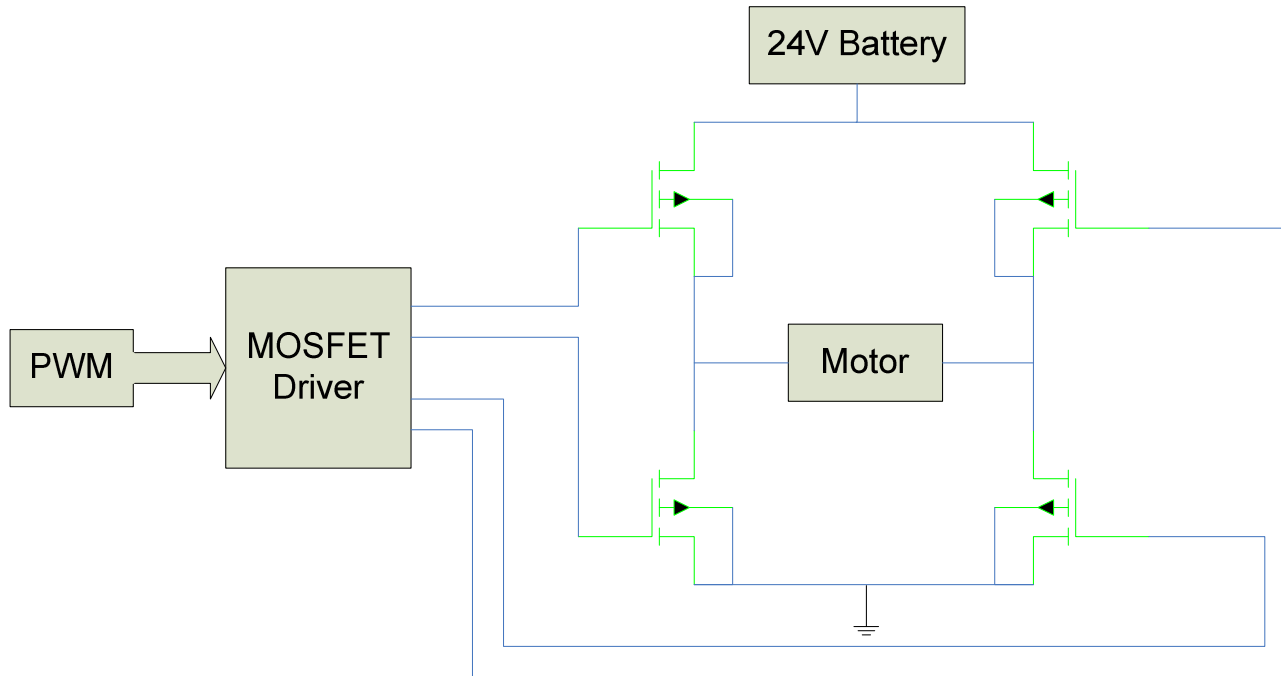
# Microcontroller & Sensors

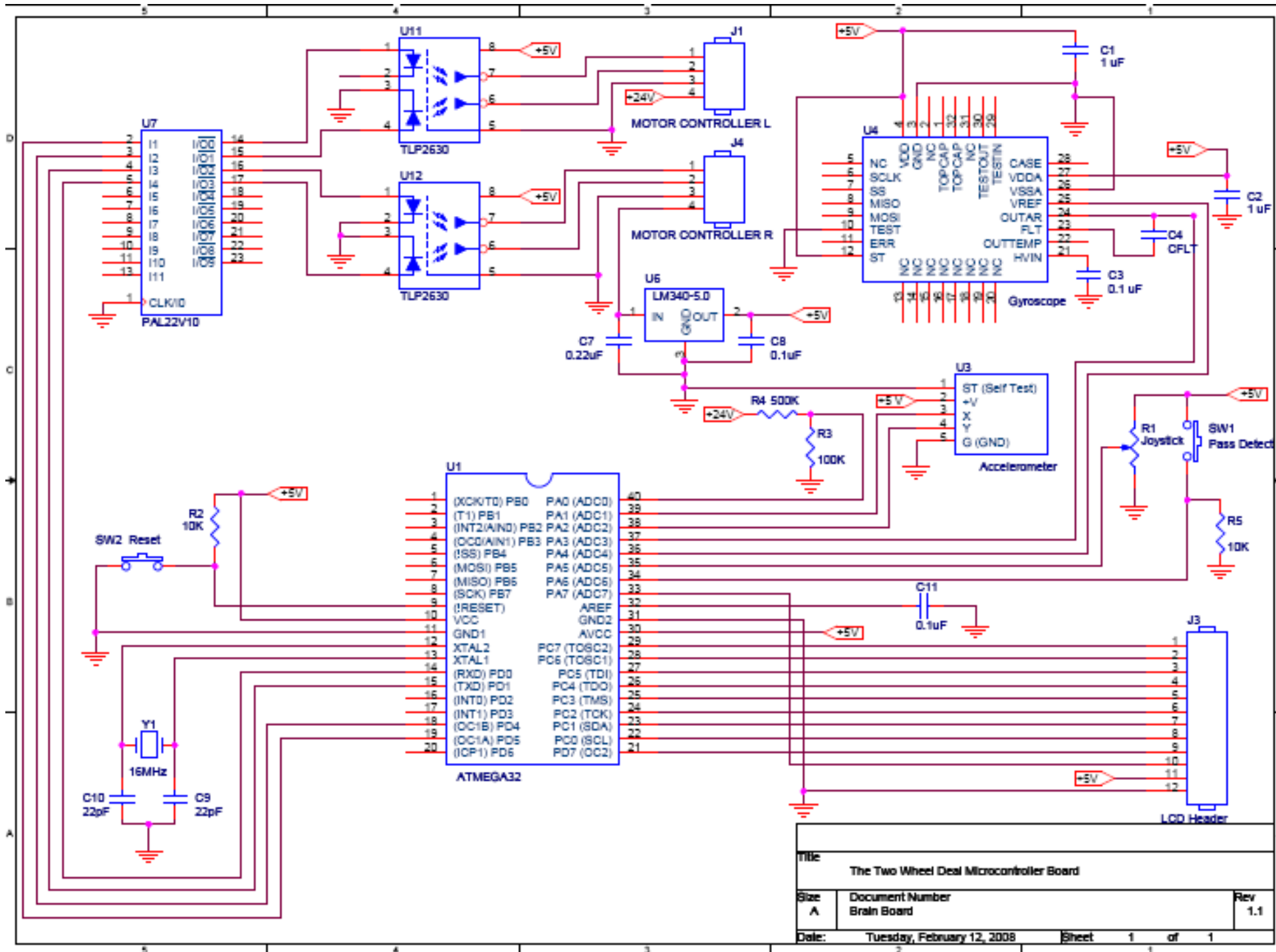
- 16MHz, Single Chip
- ATD for Sensors
- Isolated PWM for Motor Controllers
- Parallel Interface to LCD



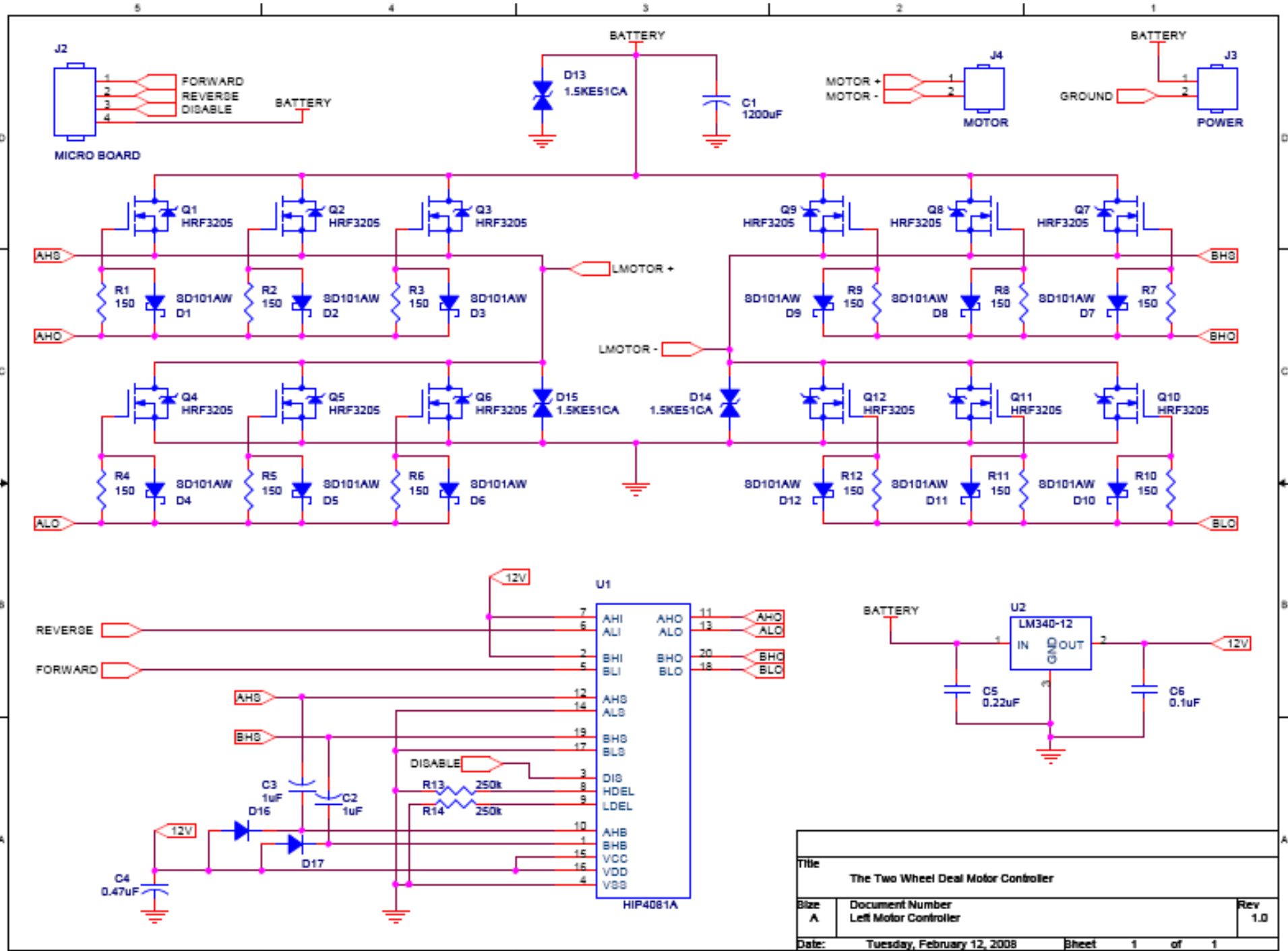
# Motor Controller

- H-Bridge FET Driver
- 3 MOSFETs per leg
- Shoot-through Prevention





Title		
The Two Wheel Deal Microcontroller Board		
Size	Document Number	Rev
A	Brain Board	1.1
Date:	Tuesday, February 12, 2008	Sheet 1 of 1



Title		
The Two Wheel Deal Motor Controller		
Size	Document Number	Rev
A	Left Motor Controller	1.0
Date:	Tuesday, February 12, 2008	Sheet 1 of 1



Questions?