



Electronics Team

Design Challenge 2 Specification

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Revision A

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Table of Contents

Overview	1
Special System Considerations	1
Electrical	1
Electrical Specifications	1
Mechanical	2
Board Size, Clearances, and Edge Features	2
Mounting Features	2
Communications	2
Communications Protocol	2
Packet IDs & Definitions	2
Budget	2
Timeline	2
Electronics Deadlines	2
Firmware Deadlines	3

Overview

The motor unit is a device on the CAN bus that controls the motor that it is connected to. There will be 7-8 on the arm and 4 on the chasis, resulting in 11-12 unique address. The addresses can be selected on the board through a 4 switch dip switch. The board will be able to report telemetry such as encoder data and limit switch triggers. This board will support limit switch saftey in which when a limit switch is pressed, it will no longer drive the motor in a certain direction. This board will also support two driving modes, a pwm value or a postion to put the arm.

Special System Considerations

None

Electrical

Electrical Specifications

	Min	Typical	Max	Units
Input Voltage		5	5.5	V
Output Voltage		24		V
MCU Voltage		5	5.5	V
Expected Current				A
Power Consumed				W

Mechanical

Board Size, Clearances, and Edge Features

	Min	Max	Units
Width	3000	3000	mil

Length	2000	2000	mil
Vertical Clearance			mil
Edge Clearance			mil

Mounting Features

- Four screw holes in the corners per slite documentation

Communications

Communications Protocol: CAN

Timeline

Electronics Deadlines

Task	Deadline
Block Diagram	N/A
Rough Schematic	
Draft Schematic	4/18/2020
Schematic Review	4/18/2020
Rough Board Layup	
Draft Board Layup	4/22/2020
Board Review	4/22/2020
Final BOM	4/22/2020
Final GERBERS	
Board Ordered	N/A