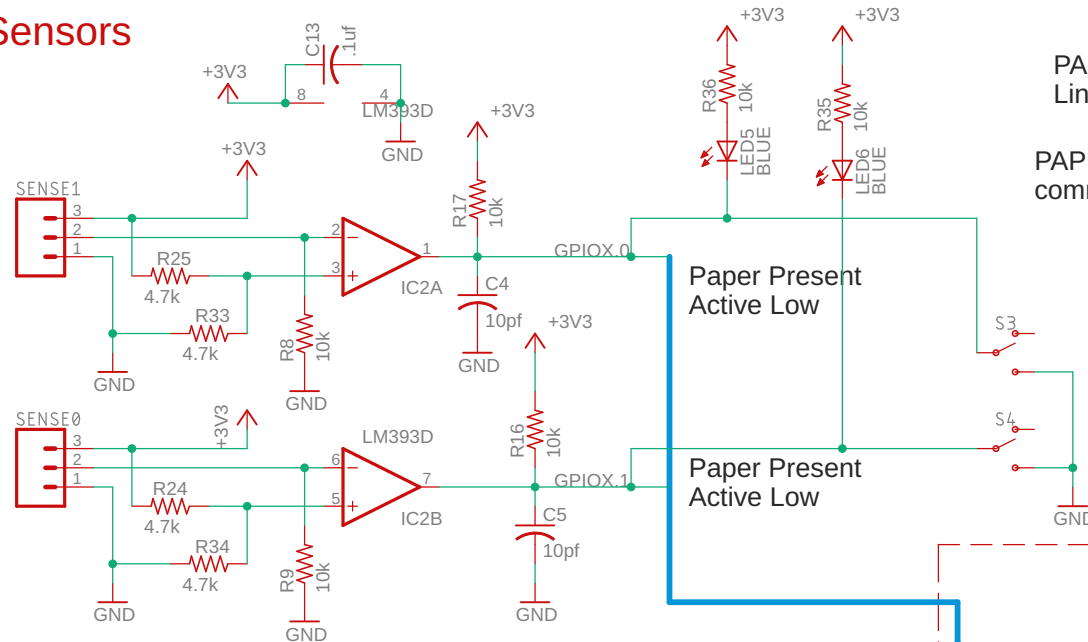


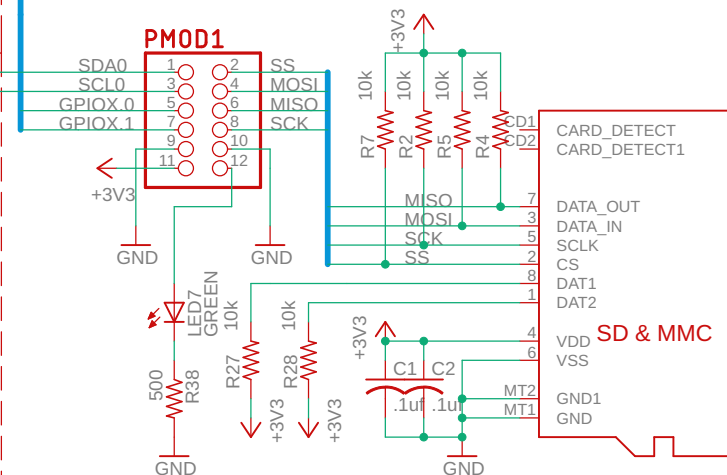
Paper Sensors



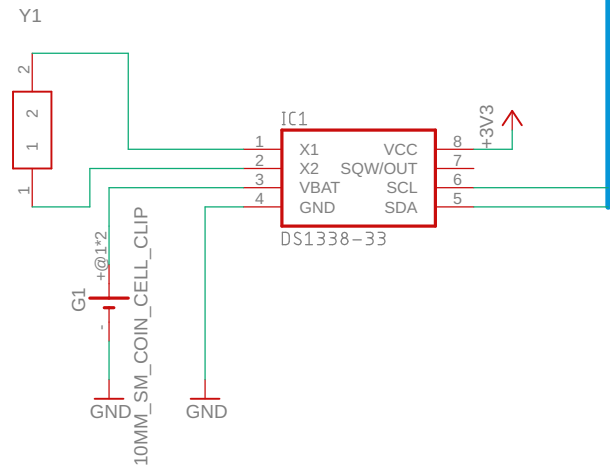
PAPER_IN connects to Sparkfun RedBot Sensor - Line Follower PN: SEN-11769

PAPER_OUT connects to optical endstop switch common to 3D printers. Amazon ASIN B077X8XL56

MicroSD Card

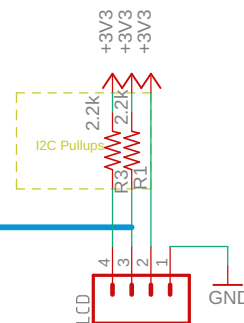


Realtime Clock



DS1338 is a 3.3v part compatible with DS1307

LCD



Connects to Sparkfun LCD-14073 via I2C

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[illegible]

Unbuffered 3.3v to Arduino Pins

SCAN_DOUT/3.8F

SCAN_DIN/3.8F

1

2

3

4

SCANNER

2A Peak (Short duration!)
45V Max
PWM: 0-100kHz

MOTOR1 - Feed In
MOTOR2 - Feed Out

LED:
P3: GPIO, high = ON
P4: +3.3V to LED

Power

500mA MAX

Fixed 1V8 use R11=0R, R10=NP

GND

+1.8V

C11 10uf

C10 1uf

470R R10

220R R11

U2

OUT

OUT

IN

+3V3

500mA MAX

Fixed 5v use R30=0R, R29=NP

GND

+5V

C8 10uf

C3 1uf

470R R29

1.5k R30

U3

OUT

OUT

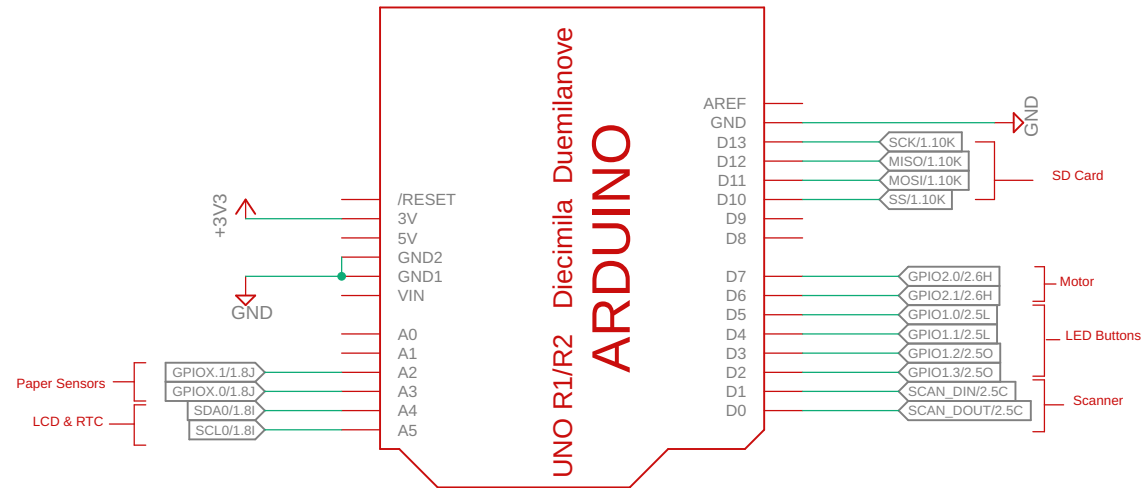
IN

+12V

+12V

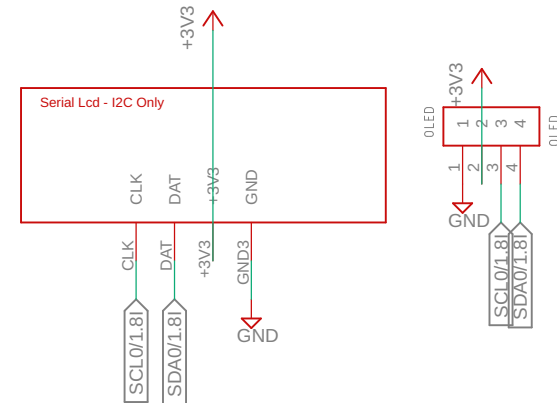
GND

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Revision History

1. 5/31 R1 - Initial Release
2. 6/9 R2
 - * Clearer Soldermask labels for connectors
 - * Fixed mirrored PMOD connectors
 - * Changed LED resistor value from 1k to 68R
 - * Added additional footprint for RTC crystal to accomodate SMD options.
 - * Fixed battery clip so battery can be inserted correctly. Previously was backward.
 - * Changed from 1.5V LR44 to 3V CR927
 - * Added optional resistor divider to accomodate factory paper-out sensor.
 - * Added Galois logo
3. 7/24 - SD Card reliability
 - * Added additional pullups to unused SD card lines
4. 9/3 - Update for TA1 teams
 - * Include physical cast / spoil LED buttons
 - * Include slide switch for manual paper sensors trigger with LED indicators
 - * Dedicated 5v rail for barcode scanner
 - * Add LED indicators for motor direction
 - * Replace 10k pots for analog level adjustment with fixed resistor divider.
 - * Dedicated connector for on-board LCD with optional OLED display connector
 - * Changed power input to use barrel jack instead of JST-PH
 - * Add correct orientation indicator LEDs to PMOD connectors.
 - * Make orientation for both PMOD connectors the same



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