

This is the Revision A version of the [IRSense2 RoboBrick](#). The status of this project is [work in progress](#).

IRSense2 Robobrick (Revision A)

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1. Introduction

The IRSense2 RoboBrick provides the ability to seek towards an IR beacon. In addition, it can be used to do simple IR proximity detection.

2. Programming

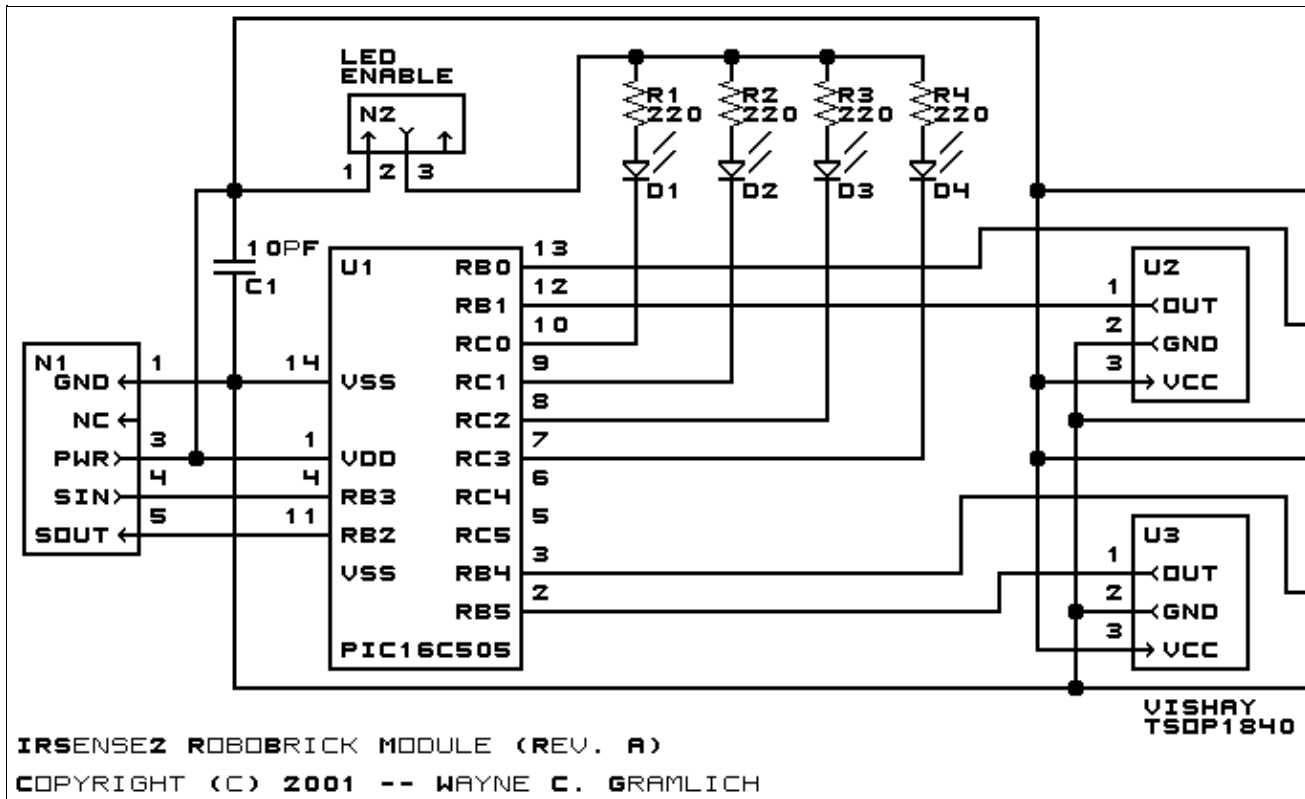
There is no programming specification yet.

3. Hardware

The hardware consists of a circuit schematic and a printed circuit board.

3.1 Circuit Schematic

The schematic for the IRSense2 RoboBrick is shown below:



The parts list kept in a separate file -- [irsense2.ptl](#).

3.2 Printed Circuit Board

The printed circuit board files are listed below:

[irsense2_back.png](#)

The solder side layer.

[irsense2_front.png](#)

The component side layer.

[irsense2_artwork.png](#)

The artwork layer.

[irsense2.gbl](#)

The RS-274X "Gerber" back (solder side) layer.

[irsense2.gtl](#)

The RS-274X "Gerber" top (component side) layer.

[irsense2.gal](#)

The RS-274X "Gerber" artwork layer.

[irsense2.drl](#)

The "Excellon" NC drill file.

[irsense2.tol](#)

The "Excellon" tool rack file.

4. Software

There is no software available yet.

5. Issues

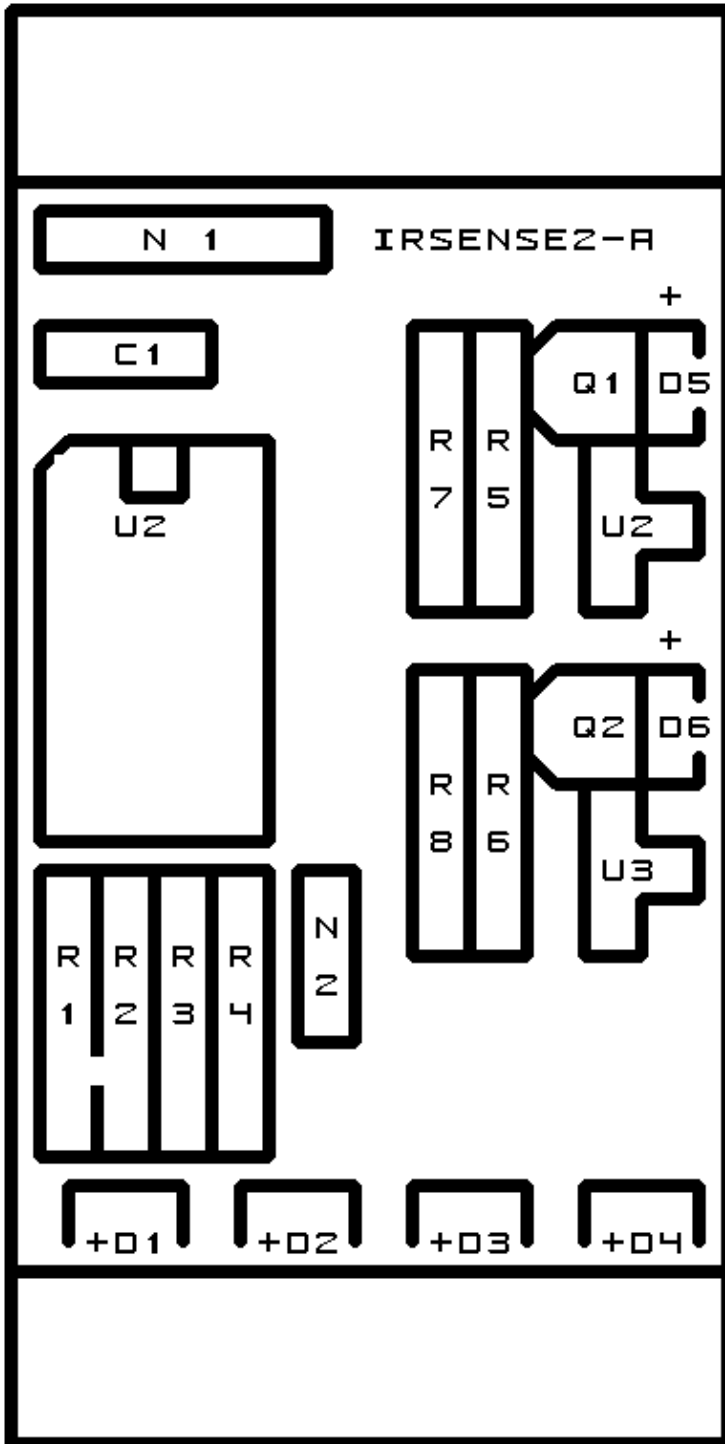
Any fabrication issues are listed here.

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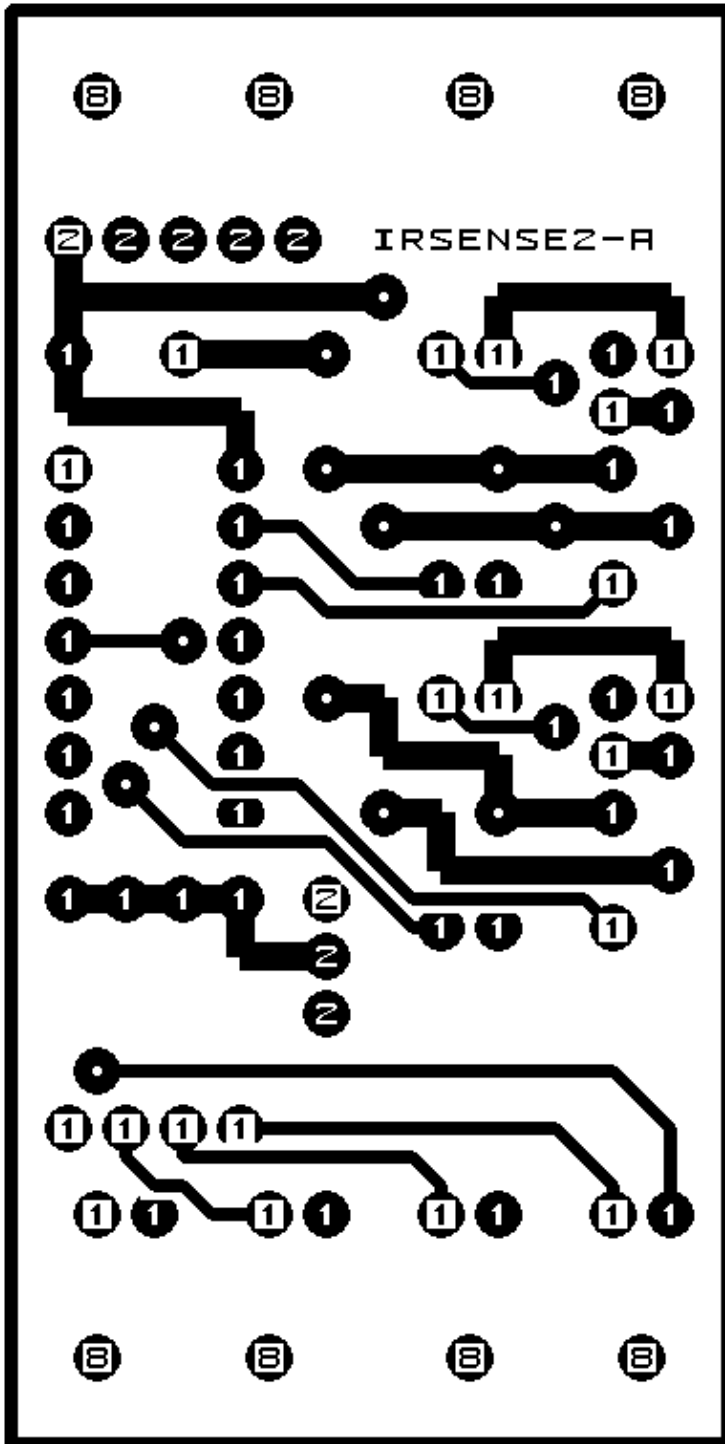
A. Appendix A: Parts List

```
# Parts list for IRSense2 RoboBrick (Rev. A)
#
C1: Capacitor10pF - 10 pF Ceramic Capacitor [Jameco: 15333]
D1-4: LEDGreen - Small Green LED [Jameco: 34606]
D5-6: IR_LED - IR LED [Jameco: 133946]
N1: Header1x5.RBSlave - 1x5 Male Header [5/40 Jameco: 160881]
N2: Header1x3.IRSense2 - 1x3 Male Header [3/40 Jameco: 160881]
Q1-2: PN2222.CBE - NPN Transistor [Jameco: 28628]
R1-6: Resistor220 - 220 Ohm 1/4 Watt Resistor [Jameco: 30470]
R7-8: Resistor1K - 1K Ohm 1/4 watt resistor [Jameco: 29663]
U1: PIC16C505.IRSense2 - Microchip PIC16C505 [Digikey: PIC16C505-04/P-ND]
U2-3: TSOP1840 - Vishay TSOP1840 40kHz IR Receiver [Newark: 95B4869]
```

B. Appendix B: Artwork Layer



C. Appendix C: Back (Solder Side) Layer



D. Appendix D: Front (Component Side) Layer

