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Lab 6 Report

Objectives

The objective of this lab is to learn how to use EAGLE to design a PCB layout for an embedded system. For this lab, we must familiarize ourselves on how to use EAGLE to design an embedded system that implements an analog signal generator using switches, potentiometers, Digital to Analog Converters, Operational amplifiers, and a 3.7V battery. We must also include a logic analyzer ports, testing pins, and LEDs for debugging purposes.

Hardware Design

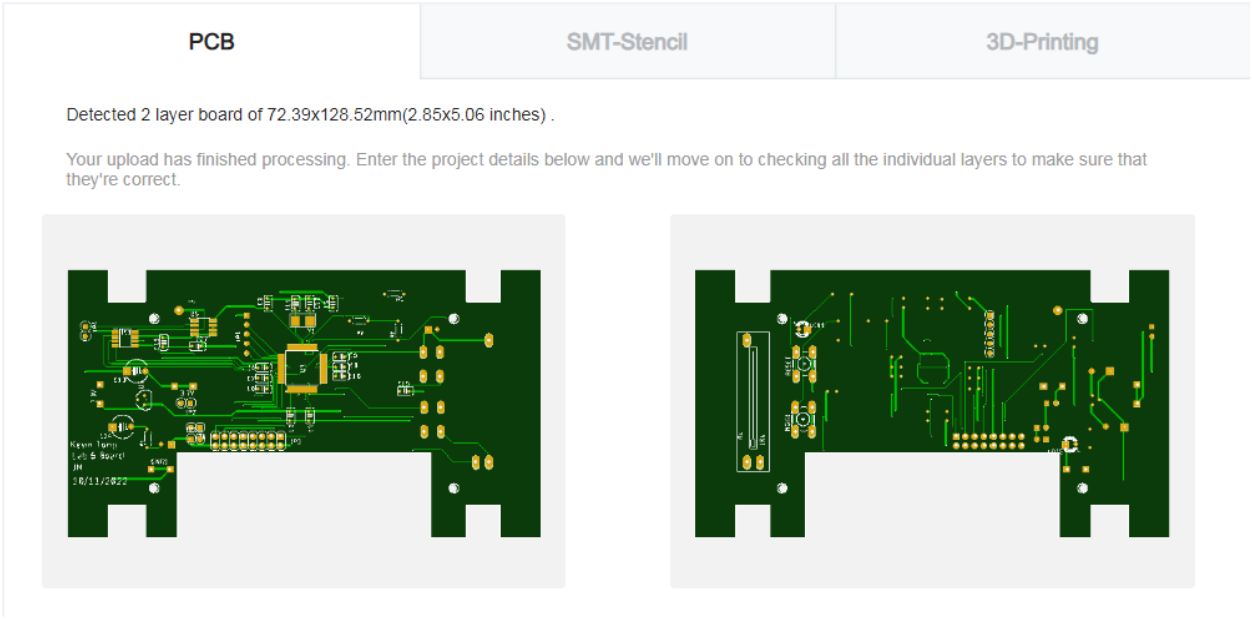
Final .sch file

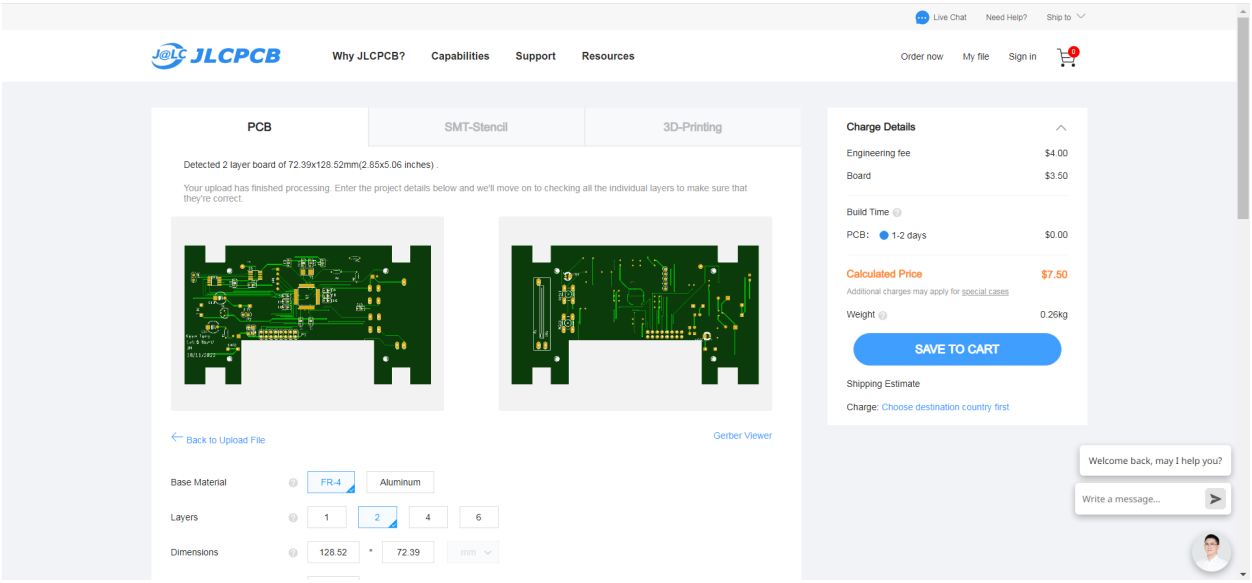
On github: https://github.com/EE445L-FALL-2022/lab-6-ktong314/tree/main/hw

Final .brd file

On github: https://github.com/EE445L-FALL-2022/lab-6-ktong314/tree/main/hw

Screenshot of the JLC Order Screen





Measurement Data

Bill of Materials

Seperate Upload:

On github: https://github.com/EE445L-FALL-2022/lab-6-ktong314#5-report

Total cost of the system: $48.22

Total Estimated Current: 51.265 mA

Analysis and Discussion

1. Estimate how long the system would run on the 2600mAh battery

2600 mAh / 13.625 mA = 50.717 hours