EE/CprE/SE 492 STATUS REPORT 03
Feb 27th 2025
Group number: 25-34
Project title: Laser Scan Readings for Propeller Measurement
Client &/Advisor: Linden Propeller (Gary Linden) / Dr. Mani Mina

Team Members/Role

Name:	**Role:**
Alan Whitehead	Testing
Elias Colsch	Client interaction
Denny Dang	Individual Component Design

Past Week Accomplishments

Name	**Past Contributions**
Alan Whitehead	I looked into system integration for the KEYENCE systems to work seamlessly with Linden's systems. I also ensured the software protocols were compatible and would troubleshoot any issues.
Elias Colsch	Continued to set up meetings with Gary and Mani. We will also begin work on system integration between the KEYENCE system and TruProp once we get the sensors.
Denny Dang	I contacted Kyle again regarding another meeting with our team and our client for a final lookover of products. Had a phone meeting with Kyle for a pre-brief a few days before the whole meeting. Started designs on the implementation of the KEYENCE laser with Gary's setup.

Weekly Summary:

We emailed both Mr. Downey and Mr. Linden to confirm that the system we were planning on purchasing would be within Mr. Linden's specifications and would be within budget.

We got confirmation from Mr. Downey that he had started negotiations with his manager and should be able to get a value of around $3000 for the system. Mr. Linden raised some concerns about the stop-and-start of the scan for the laser system, which we addressed by referring to the demonstration we witnessed last semester. It was determined that the laser would be unable to scan until the start of the propeller. We also received CAD files for Mr. Linden's current setup and the KEYENCE system. This allowed us to start work on the mounting bracket, and with Mr. Linden's current setup, we can look into what kind of connection we will have to make between the KEYENCE system and his system. We also need to obtain additional CAD files from Gary because the ones he's already sent are incomplete. We would be able to design various mounting brackets, but for an effective and ideal product, we also need to know what the laser is being mounted on.

Figure 1: Mr. Linden's current connector, a USB4 from US Digital. Showing port plugins

Figure 2: Mr. Linden's current connector, a USB4 from US Digital. Showing manually wired plugins

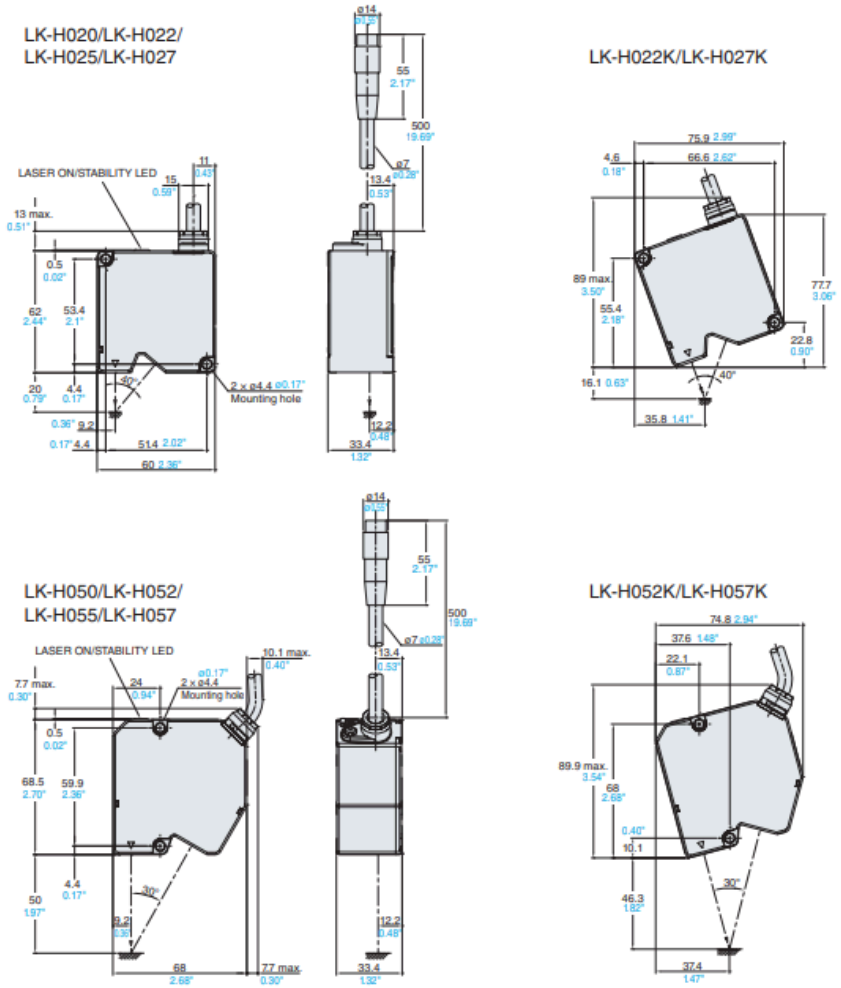

Figure 3: Physical dimensions of a couple of example lasers that are being considered for purchase

Name	Individual Contributions	Hours this week	HOURS Cumulative
Alan Whitehead	This week, I continued to work on verifying that the protocols will work with the TruProp software.	5	15
Elias Colsch	I emailed Kyle and Gary to determine if the system meets all requirements from both sides. I also provided input on the mounting bracket.	6	17
Denny Dang	Retrieved CAD files from both Kyle and Gary on the KEYENCE laser and mounting arm setup. Started ideas on the most ideal mounting bracket.	6	17

Plans for the upcoming week

Name	Future Contributions
Alan Whitehead	I will continue working on system integration while we wait for our final KEYENCE sensor to arrive. I will be working with Denny Dang who is taking the lead on our CAD section of the project. I will help him make the supporting bracket for the sensor in the system.
Elias Colsch	WIll continue to work on system integration and communicating with Mr. Downey and Mr. Linden. I will also provide input on the mounting bracket.
Denny Dang	Will need to contact Gary again regarding additional CAD files. Will start drafting designs on ideas I made from the previous week.