CE PROJECT PORTFOLIO

—

Roody Pointjour

Computer Engineer

LinkedIn: linked.com/roody-pointjour
Email: roody.jerry@yahoo.com

RJP

Long Range AES 256 Encryption(Doodle)
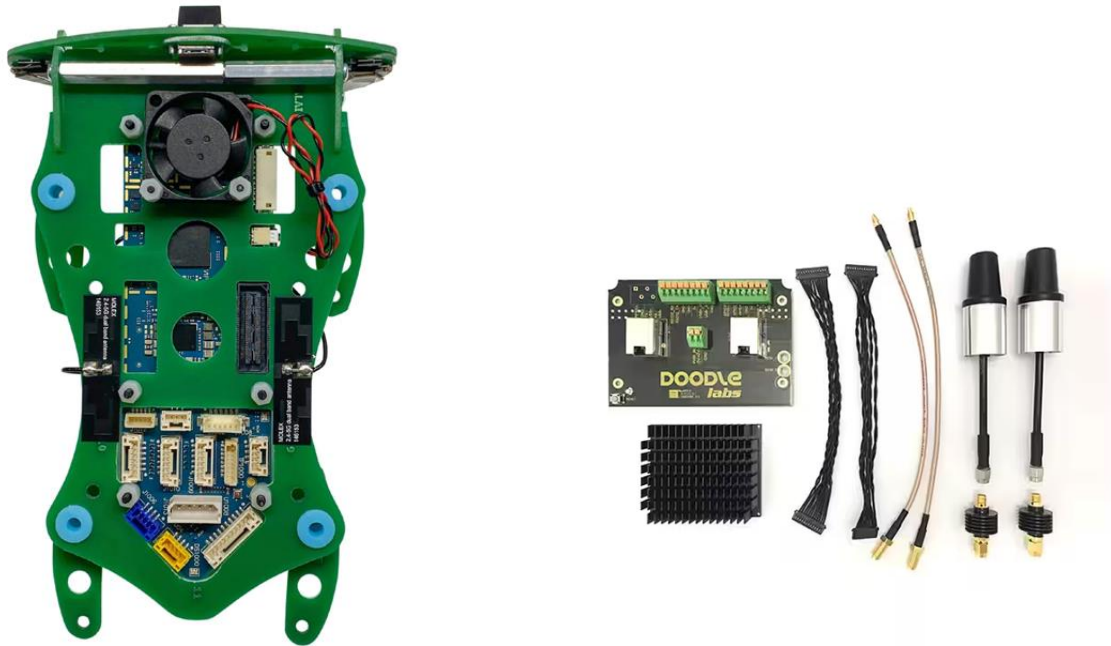
Overview

The goal of this project aimed to establish wireless communication capable of connecting to a ground station (Host PC) while under an encrypted mesh network. I successfully established this wireless network by interfacing the VOXL drone with the Doodle Labs Smart Radio network.
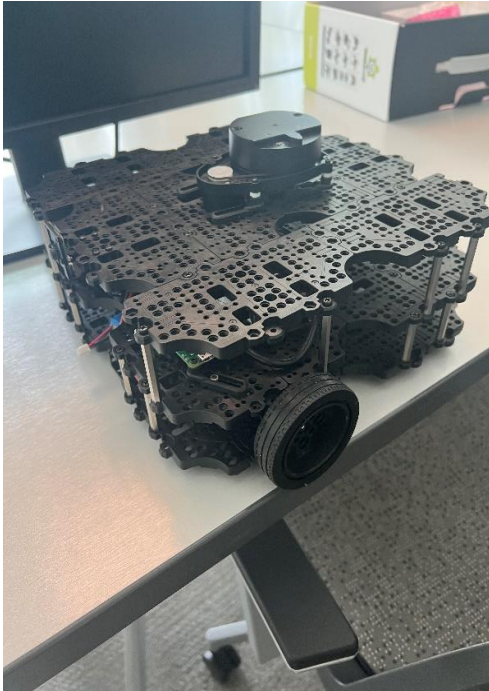
Hardware

ModalAI VOXL Flight Controller & Flight Deck
Doodle Labs Smart Radio Embedded Development Kit
Host PC, Raspberry Pi

Software

VOXL Shell
Doodle Labs Mesh Rider Operating System
QGroundControl

TurtleBot3(Waffle Pi)

Overview

The goal of this project aimed to design and build a robot capable of autonomously following the dynamics of a leader. I worked together alongside my team to program the robot to follow a human. Basically, the follower in the leader-follower system, could track the trajectory of the leader without any collisions.

Hardware

Remote Controller(Bluetooth, BLE)
360 Degree Laser Distance Sensor(for SLAM & Navigation)
Sensors: Gyro, Accelerometer, IR Sensor, Motion Sensor, Distance Sensor

Software

ROS – Robot Operating System
SLAM – Used for mapping