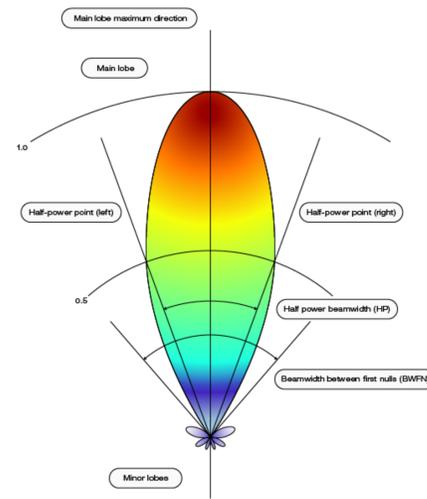
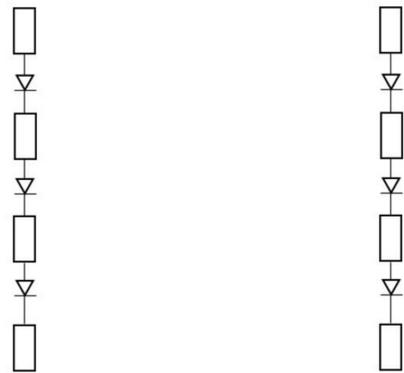


Reconfigurable Antenna

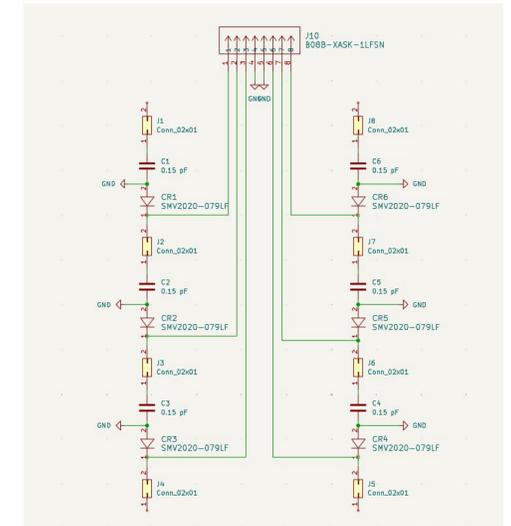
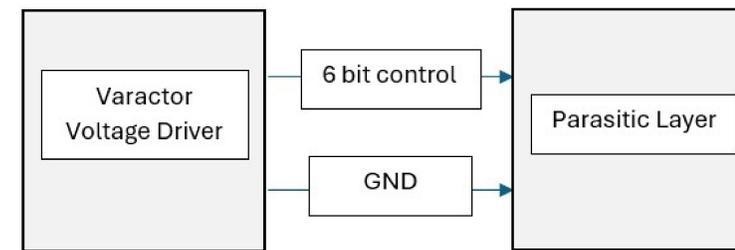
Project

- Antennas with high directivity can produce a stronger signal with less power
- Antennas with high directivity need to be steered
- Antennas usually cannot be physically rotated



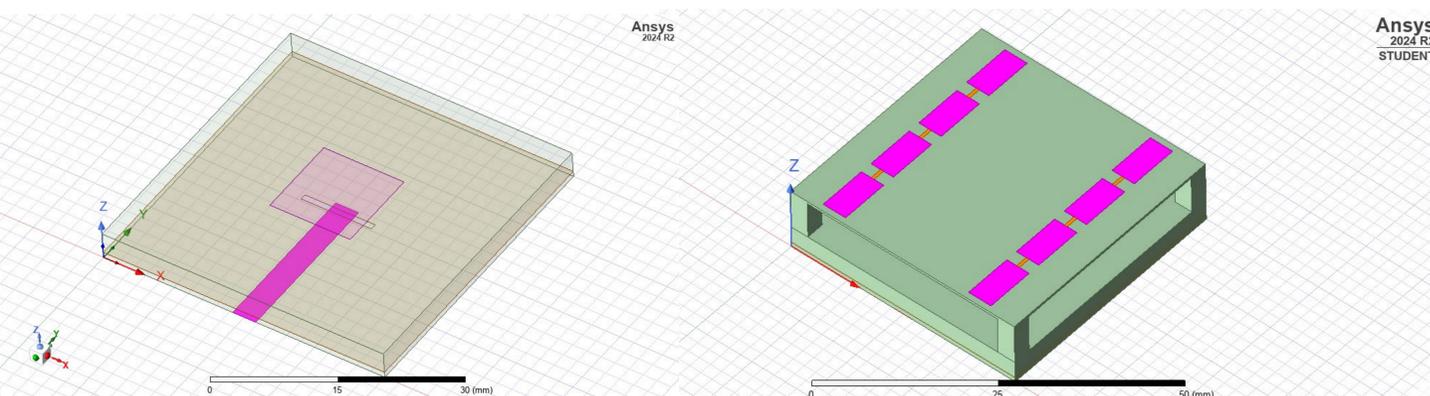
System

- A microstrip patch antenna connects to a RF transmitter/receiver
- An 8 port ribbon cable delivers DC voltages to control the angle



Methods

- The antenna was designed and simulated in Ansys HFSS
- The PCB design files were created using KiCAD
- The parasitic layer sits above the antenna and tilts the signal



Conclusion

- Simulated beam steering was possible but weaker than what was desired
- If given more time, I could try making a design that could steer a sharper angle

