

## **ABSTRACT**

*Nowadays, people in this world already knew that the technology is growing rapidly, which led to the need for sophisticated technology increases. Taking pictures of the air in the form of video is becoming very famous lately. Using unmanned aircraft, or drones as a medium. The benefits of shooting in real-time (FPV) such as aerial mapping, aerial shooting, even for a search and rescue mission to make the manufacturer of long-range video transceiver vying to create a sophisticated and economical tool. However, many challenges on the technology's long-range FPV cause performance image capture and video to be not optimal, because the long-distance communication that led to the ability of a tool that was not optimal.*

*In this study, a portable parabolic antenna designed for 5.8 GHz frequency where the microstrip antenna as a feed. The circular polarization using perturbation technique or truncated edge. The substrate material used for this microstrip is FR-4 epoxy that has a dielectric constant of 4.4 at a frequency of 5.8 GHz. These antennas will be simulated using software. Parabolic reflector designed to be folded for easy and comfortable to carry.*

*The results of this final project resulted in antenna parabola that can be folded and with ease. The antenna also produces almost perfect antenna parameters such as return loss -26,68dB, bandwidth 162MHz, impedance 47.93 $\Omega$ , and axial ratio of 6.48dB. The axial ratio of this antenna produces an elliptical antenna polarization. This parabolic antenna produces a directional radiation pattern with an antenna gain of 13.35dBi.*

**Keywords:** *parabolic antennas, microstrip, first person view, drones, unmanned aerial vehicle*