## ABSTRACT

UAV (unmaned aerial vehicle) is a flying machine that serves for the remote control by the pilot and control himself. Method of image capture using the vehicle UAV is being widely used in research and telecommunications in the world because it has many benefits. The benefits of such a vehicle UAV aerial shooting and monitoring at a site. To perform monitoring using UAVs require clearance vehicle that is far enough away to get maximum results. But the problems that often occur transceiver can not work optimally for a considerable distance.

There for in this final project designed a microstrip antenna on the side of the ground segment using the T-junction. T-junction power divider is a technique that can support impedance matching in transmission lines, especially for microstrip antenna array. The technique used is the proximity portion coupled with the height of the upper and lower layers are made equal. Then, the materials used are Epoxy FR-4 substrate with a dielectric kosntanta 4.4 at a frequency of 5.8 GHz.

From the simulation results and measurements obtained with the microstrip patch antenna has an polaradiasi unidirectional square, circular polarization and works at a frequency of 5.8 GHz, with VSWR $\leq 2$, impedance of 50 Ω, the value of 8459 dB gain. This is in accordance with the specifications of the desired antenna.



Keywords: microstrip antenna, unmaned aerial vehicle, first person view, power devide