ABSTRACT

The development of increasingly advanced technology in this era makes things easy and efficient, just like the rapid development of telecommunications. Especially in monitoring in the military world using UAVs today. UAVs are very diverse in types, especially in quadcopter UAVs. In making a quadcopter to be controlled, an antenna is needed. In making the previous quadcopter using cavity type antennas namely cloverleaf and monopole have larger antenna dimensions. To perform this function, a wireless transmission channel is needed which connects the quadcopter to the ground station.

This research design and realize a 2 × 2 planar microstrip antenna arrangement using a rectangular patch that aims to facilitate control that is sufficient to meet the specifications of the previous antenna. Using microstrip feed line rationing techniques and t-junction methods to match impedance between antennas.

Result of this realization of the antenna using FR-4 produce omnidirectional radiation patterns, linear polarization, and the gain value 8.9 dBi, working on the ISM frequency band 2.45 GHz with antenna impedance 56.86 Ω.

Keywords: *Antenna, microstrip, plannar array. quadcopter.*