

ABSTRACT

Emergence of technology by wireless transmission gives easy for user to mobile freely everywhere. Antenna that has high gain (directivity) is one of vital component that plays important role in wireless communication. Biquad antenna is antenna that has square shape which arranged two pair. Pola radiation that earned by biquad antenna is bidirectional. The using of reflector in biquad antenna has function to enlarge gain value so the radiation patern become unidirectional.

Antenna that realized in this final task is a microstrip antenna with groundplane as a reflector. The specification of antenna accupation frequency is 2,4 GHz-2,484 GHz for WLAN at access point. The process of execution start by collecting theory, and then determining specification and dimension of antenna. Firstly, the antenna's modeling be simulated use CST Microwave Studio 2010. The final step is antenna realization.

From the mearurement's result were obtained in accordance with the specifications of antenna with ≤ 1.5 VSWR at frequency range 2.4-2.484GHz. The measurement's result of reflector antenna were obtained 12.611 dBi gain and 145 MHz bandwidth with unidirectional radiation pattern. For nonreflector antenna were obtained 8,318 dBi and 147 MHz bandwidth with bidirectional radiation pattern.

Keyword : *W-LAN, biquad antenna, microstrip antenna, unidirectional*