ABSTRACT

The development of wireless communication technology nowadays has increasedrapidly and has vastly varied . This situation certainly leads into various form of new technology standards which increase its sophistication. One of those wireless communication standards is WIMAX (Worldwide Interoperability for Microwave Access). To support these technologies, we can't eliminate its detrimental form of a device called an antenna. Antenna is defined as atransformer that is passed on guided wave transmission line into the free space wave and inreverse.Antenna as an electromagnetic energy transmitter and receiver,has a very important role in wireless communications.

Antenna with dimensions small, easy to manufacture with low price with good enough performance is needed to support the Wimax technology. In this final project designed microstrip antenna biquad with FR4 material (evoksi). Biquad microstrip antenna is designed to work at frequencies corresponding to the 2.3 -2.4 GHz at Wimax frequency.

From the process simulation and measurement result obtained VSWR $\leq$ 2, the gain obtained $\geq$ 10 dB. This antenna has b i-directional radiation pattern, and bandwidth that is equal to $\geq$ 100 MHz. thus the improvement of antenna that had a low gain previously be a better. Therefore six arrays biquad microstrip antenna can be realized for mobile Wimax applications at frequency 2.3 – 2.4 GHz.

Keywords: Biquad Microstip Antenna, VSWR , Mobile WiMAX