ABSTRACT

Users antenna at a frequency of 2.4 GHz growing much better for academics, industry organized also for business purposes. The use of standard 802.lla or 802.1lb designed for use in the room , with the position of the transmitter which can be very far away from the user . Therefore we need a antenna that can receive the 2.4 GHz frequency that will work in any position and has reach further than the antenna on the market .

At the final project will be designed by the method of array antenna using rectangular patch and a patch of ground shaped rectangular patch numbering 4 in 1 module . Stage of the process begins with mathematical calculations , then simulated with the help of CST Microwave Studio software , then printed antenna prototype and measured .

Prototype array of microstrip antenna generates antenna characteristics which have 5,996 dBi gain , bandwidth of 84 MHz , with VSWR ≤ 1.5 which works on the frequency of 2.4 GHz, and get omnidirectional radiation pattern, so it can receive signals from any position, but with different power levels.

Key words: : ***array, patch, prototype, dan gain 5,996 dBi***