

## ***ABSTRACT***

The increasing demand of faster data transfers in communication encouraged the emergence of new technology and standards. One of them is a technology MIMO. The challenge of the use of mimo to terminal users is how to design multiple antenna that between on its antennae having value mutual coupling small but does not make dimensions antennae too large.

This finished project discussed design antennae mikrostrip 4x4 mimo to frequency lte in 2,3-2,39 ghz. Techniques used to making antennae it is a technique interdigital-line. Where this technique of 3 the resonators that laid between two patches adjacent. Technique interdigital-line it served to reduce the effects mutual coupling in arrangement of aerials. Mutual coupling is a an effect that causes a decline in the quality of parameter antennae because of electromagnetic interference from two antennas or more space is too adjacent.

The results of design obtained bandwidth 90 mhz, the gain  $\geq 3$  dbi, and mutual coupling  $\leq -20$ db. Simulation uses software cst studio a suite of 2014. An antenna that realized have dimension 155 mm x 146 mm, can work at the frequency of 2,1-2,5 ghz. Fourth antennae having vswr  $\leq 2$  and mutual coupling  $\leq 20$  db. With the interdigital line, antennae could be reduced from a distance between patches 8 cm to distance 4 cm.

***Keyword: Antenna, MIMO, Rectangular patch***