

## ABSTRACT

Currently, the telecommunication market needs aim to the distribution of information in large capacity which requires broadband networks with reliable system performance. Therefore, an antenna which has the ability for the whole various needs of these different communications is needed.

Microstrip antenna is a type of antenna in the form of a thin board and able to work at high frequencies. One of the weaknesses of this antenna is narrow scope bandwidth. There are many ways have been made to overcome this problem, such as by using parasitic elements, adding the thickness of substrate, decreasing the dielectric constant, or by modifying the patch such as U-shaped antenna, V-shaped, S-shaped, or E-shaped antenna.

E-shaped antenna is a rectangular microstrip antenna which is modifying the shape of radiator patch for widening the bandwidth. Prototype that has been made in accordance with the design and simulation and the result is to have successfully designed and implemented antenna wideband modified form letter E and works in the range frequency of 1.77GHz- 2.44 with  $VSWR \leq 1.8$ . Other specification for the antenna radiation pattern is desired unidirectional and gain of 8.65 dBi can be achieved.

***Key Word: Wideband, Rectangular Microstrip Antennas, E-Shaped***