

ABSTRACT

Antena is a part of radio communication system. Its function is for converting guided wave on a transmission line to a free-space wave. Besides, it also can match between the line intrinsic impedance and propagation intrinsic impedance. Antenna, which is one of the most important part of radio communication system, has developed a lot, from quality and form.

This final project will design a parabolic hexagonal binomial vertical antenna with high frequency and wide bandwidth. The operation frequency is 2000 ± 500 MHz by using binomial matching and unidirectional radiation pattern. To get unidirectional radiation pattern, it needs a reflector to reflect the electromagnetic wave transmitted by hexagonal binomial antenna. The polarization for the antenna we will design is linear-vertical, $VSWR \leq 1.5$, and $gain \geq 8$ dBi.