A compact size low profile microstrip-fed crossed monopole antenna for ultra wideband communication is presented. The impedance bandwidth of a microstrip crossed monopole antenna has increased with a suitable dimension of ground plane and rectangular patch. The aim of this paper is to improved bandwidth and return loss of a Crossed Monopole Microstrip patch antenna and study the effect of antenna and ground dimension length (L), width (W) and substrate parameters relative dielectric constant, substrate thickness on radiation parameters of bandwidth. Low dielectric constant substrates are generally preferred for maximum radiation. The crossed monopole shows the return loss of -10dB over ultra wideband frequency range (3.3 – 13.6 GHz) while maintain the stability in radiation pattern. The simulation software (CST) obtains the effect of the parameter on the performance of the antenna.


**Index Terms**

- Computer Science
- Wireless

**Keywords**

- Wideband Antenna
- Microstrip Feed
- Monopole Antenna
- Return Loss