

## Novel Microstrip MIMO Antenna for 3G/4G Applications

**Authors :** Sandro Samir Nasief, Hussein Hamed Ghouz, Mohamed Fathy

**Abstract :** A compact ultra-wide band micro-strip MIMO antenna is introduced. The antenna consists of two elements each of size 24X24 mm<sup>2</sup> (square millimetre) while the total MIMO size is 58X24 mm<sup>2</sup> after the spacing between MIMO elements and adding a decouple circuit. The first one covers from 3.29 to 6.9 GHZ using digital ground and the second antenna covers from 8.76 to 13.27 GHZ using defective ground. This type of antenna is used for 3G and 4G applications. The introduction for the antenna structure and the parametric study (reflection coefficients, gain, coupling and decoupling) will be introduced.

**Keywords :** micro-strip antenna, MIMO, digital ground, defective ground, decouple circuit, bandwidth

**Conference Title :** ICGHOST 2020 : International Conference on Ghost Conference

**Conference Location :** ghost city, Other

**Conference Dates :** December 12-13, 2020