

# Abstract

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## **Novel Compact UWB MIMO patch antenna for 3G/4G Wireless Communication Applications**

In this paper, two proposed compact UWB Microstrip patch antenna configurations have been analyzed, investigated and optimized using the Zeeland-simulator. The presented UWB antennas resonate at two contiguous ultra widebands: UWB1=5.5 GHz from 6.16 to 11.7 GHz &#97 &#110 &#100 UWB2=5.3 GHz from 10.91 to 16.18 GHz with overlapped band about 800 MHz from 10.85 to 11.7 GHz. These antennas have been simulated together on one FR-4 substrate to operate as an UWB MIMO antenna. The coupling between the antenna ports has been evaluated &#97 &#110 &#100 optimized as function of the antenna separation. It has been varied from -14 dB to - 30 dB within the two operating bands.