

ABSTRACT

This project delves into the design and simulation of a dual-band 2x2 dual-array antenna targeting 6G communication systems. The antenna leverages a cost-effective FR4 substrate for practical implementation. CST software serves as the design and performance evaluation platform. The design focuses on achieving two distinct resonant frequencies within the 6G spectrum to accommodate the varied demands of future wireless technologies. Key parameters like S parameter, VSWR, Phase, Efficiency are meticulously analysed using comprehensive CST simulations. The results are presented in detail, including relevant plots and discussions on potential trade-offs and considerations for real-world fabrication. This work serves as a valuable resource for researchers and engineers interested in designing high-performance dual-band antenna arrays for 6G applications using FR4 substrates and CST software.

Keywords: Dual-Band Antenna, 2x2 Array, FR4 Substrate, CST Simulation, S parameter, VSWR, Phase, Efficiency.