

# **DESIGN OF 2 BY 2 PLANAR ARRAY ANTENNA USING APERTURE COUPLER TECHNIQUE**

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## ABSTRACT

This thesis presents a design of 2 by 2 planar array microstrip antenna with an aperture coupler technique. The purpose of using non-contacting feed to the antenna is to reduce the unwanted signal from the feedline. Signal from feedline has to be terminated as it can interfere with the signals radiated from the patch. The antenna is basically consists of two layer of substrates which called superstrate and substrate. Patches are printed on top of the superstrate while the feedline is located on the bottom of the substrate. The antenna is designed at 5.8 GHz of frequency. The parameters in concern are the response of return loss ( $S_{11}$ ) and the radiation pattern. The design is first being simulated in CST Microwave Studio and then fabricated onto FR-4 to see the actual antenna's performance. The antenna's parameters was measured using vector network analyzer (VNA).

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