

## RELIABILITY

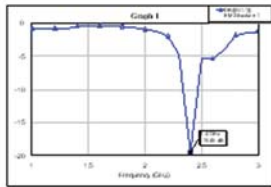
- ~ Low profile structure
- ~ Very inexpensive
- ~ Aesthetic value
- ~ Extremely low cost

## APPLICATIONS

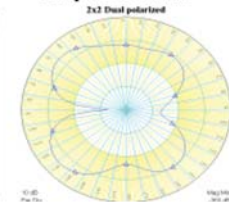
- ~ Easy to integrated with wireless LAN system or point to multi point application.
- ~ Able to divert polarization by means of connecting electrically controlled 45°/-45° phase shifter.

## MICROSTRIP ANTENNA DESIGNS

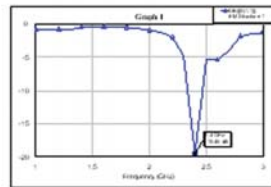
(iii) Return Loss for 2x2 Dual polarized antenna



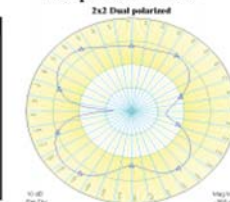
(iv) Radiation pattern for 2x2 Dual polarized antenna



(iii) Return Loss for 2x2 Dual polarized antenna

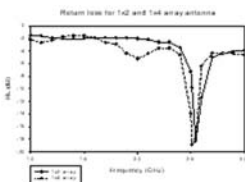


(iv) Radiation pattern for 2x2 Dual polarized antenna

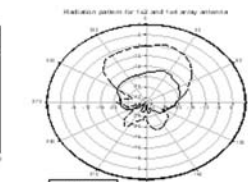


## MEASUREMENTS

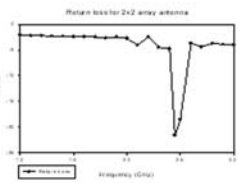
(v) Return Loss for 1x2 and 1x4 Dual polarized antennas



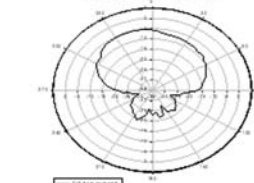
(vi) Radiation pattern for 1x2 and 1x4 Dual polarized antennas



(vii) Return Loss for 2x2 Dual polarized antenna



(viii) Radiation pattern for 2x2 Dual polarized antenna



## THE PRODUCT



-1x2 array antenna



-1x4 array antenna



-2x2 array antenna



-WLAN application

## INVENTIVENESS

Three designs using array concepts, which is from type of inset-fed microstrip patch antenna located at 45° and -45° are implemented on a similar, low-profile, light-weight, and robust structures. The designs of array antenna are operated at freq 2.4GHz with return loss  $\leq -10$ dB.

## NOVELTY & INVENTION

- ~ Dual polarized with single layer
- ~ Array pattern located at 45° and -45° polarization

## Researchers Info

MOHAMAD ZAINOL ABIDIN AB AZIZ

Tel : +6(06)-555 2140  
 Fax : +6(06)-555 2112  
 E-mail : mohamadzainol@utem.edu.my