

# On the MIMO Capacity of Planar, Log.-Per. Four-Arm Antennas

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In order to satisfy the increasing demand for high data rates and large bandwidths in mobile communications, multiple-input multiple-output (MIMO) antenna systems incorporating frequency-independent antenna elements at both sides of the communication link could be used. Provided they adhere to specific geometrical forms, planar, logarithmically-periodic four-arm antennas may be designed with almost arbitrary linear polarization purity so that they may be used as twobranch polarization diverse air interfaces. Compared to array antenna elements that exploit spatial diversity concepts, the use of broadband polarization diverse antenna structures may result in extremely compact antenna arrangements offering high transmission capacities.