Abstracts

Analog vector modulation-based widely tunable frequency photonic beamformer for phased-array antennas

N.A. Riza. "Analog vector modulation-based widely tunable frequency photonic beamformer for phased-array antennas." 1997 Transactions on Microwave Theory and Techniques 45.8 (Aug. 1997, Part II [T-MTT]): 1508-1512.

A compact free-space/solid optics photonic controller for phased-array antennas/transducers is introduced which uses the principle of in-phase (I) and quadrature (Q) vector modulation via two-dimensional (2-D) spatial light modulators (SLMs). The SLMs are used as distributed optical-gain control devices to implement the vector modulation operation required to generate the desired RF signals with the correct phase and amplitude values.

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