

(54) Title of the invention : NEXT-GENERATION COMPACT 5G ANTENNA ARRAY WITH THERMAL CONDUCTIVE SHEET FOR MASSIVE MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) SYSTEMS

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(57) Abstract :
 NEXT-GENERATION COMPACT 5G ANTENNA ARRAY WITH THERMAL CONDUCTIVE SHEET FOR MASSIVE MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) SYSTEMS ABSTRACT The next-generation compact 5G antenna array, featuring a thermal conductive sheet for Massive Multiple-Input Multiple-Output (MIMO) systems, introduces a transformative solution to the challenges of contemporary wireless communication. With a meticulously arranged plurality of antenna elements, the array achieves efficient wireless communication while balancing compactness and coverage. The integration of a thermal conductive sheet serves a dual role by enhancing heat dissipation and actively contributing to thermal management, ensuring optimal performance and reliability over extended operational periods. Each antenna element incorporates a multi-element structure optimized for 5G communication, enabling high-speed data transfer and low-latency communication. The array's dynamic beamforming capabilities, adaptability to diverse 5G frequency bands, and modular design for ease of maintenance collectively position it at the forefront of advancements in wireless communication technology, promising improved reliability, longevity, and energy efficiency in 5G networks.

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