

Title (en)
ANTENNA ARRAY

Title (de)
GRUPPENANTENNE

Title (fr)
RÉSEAU D'ANTENNES

Publication
EP 4175066 A1 20230503 (EN)

Application
EP 21206066 A 20211102

Priority
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Abstract (en)
An antenna array (10) is described. The antenna array (10) comprises a printed circuit board (12), at least one reception antenna (14), at least one transmission antenna (16), a reception feeding network (38) associated with the at least one reception antenna (14), and a transmission feeding network (36) associated with the at least one transmission antenna (16). The printed circuit board (12) comprises a first RF layer and a second RF layer, wherein the first RF layer and the second RF layer are arranged on opposite sides of the printed circuit board (12) and/or wherein the first RF layer (18) and the second RF layer (22) form different layers of the printed circuit board (12). The first RF layer comprises the at least one transmission antenna (16) and the transmission feeding network (36). The second RF layer comprises the at least one reception antenna (14) and the reception feeding network (38). At least one waveguide element is provided in the printed circuit board, wherein the at least one waveguide element extends through the printed circuit board. The at least one waveguide element is configured to conduct electromagnetic waves at least between the first RF layer and the second RF layer. The at least one waveguide element is coupled with the at least one transmission antenna (16), such that the at least one transmission antenna (16) can radiate through the at least one waveguide element, and/or the at least one waveguide element is coupled with the at least one reception antenna (14), such that the at least one reception antenna (14) can be fed through the at least one waveguide element.

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Citation (search report)
• [X] US 2021126353 A1 20210429 - LEE HONG SEOK [KR], et al
• [X] CN 111786133 A 20201016 - CHENGDU T RAY TECH CO LTD
• [X] US 2020067201 A1 20200227 - ROGERS JOHN E [US]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
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