

Title (en)  
RADAR SYSTEM COMPRISING AN ANTENNA ARRANGEMENT FOR TRANSMITTING AND RECEIVING ELECTROMAGNETIC RADIATION

Title (de)  
RADARSYSTEM, UMFASSEND EINE ANTENNENANORDNUNG ZUM SENDEN UND EMPFANGEN ELEKTROMAGNETISCHER STRAHLUNG

Title (fr)  
SYSTÈME DE RADAR, COMPORTANT UN ENSEMBLE D'ANTENNES POUR ÉMETTRE ET RECEVOIR UN RAYONNEMENT ÉLECTROMAGNÉTIQUE

Publication  
**EP 3423863 A1 20190109 (DE)**

Application  
**EP 16820305 A 20161229**

Priority  
• DE 102016203160 A 20160229  
• EP 2016082808 W 20161229

Abstract (en)  
[origin: WO2017148561A1] The invention relates to a radar system comprising an antenna arrangement (1) which is intended to transmit and receive electromagnetic radiation, wherein N first antennas (4) are provided for transmission and M second antennas (5) are provided for reception and objects in the capture range of the antennas (4, 5) are detected according to the MIMO principle using the N first transmitting antennas (4) and using the M second receiving antennas (5). Provision is also made for the N first transmitting antennas (4) to emit transmission signals which are orthogonal to one another in a transmitting cycle, for N-n of the N first transmitting antennas (10, 11) to be arranged horizontally beside one another and for at least n of the N first transmitting antennas (12, 13) to be arranged in a vertically offset manner with an offset which is the same in each case with respect to the N-n transmitting antennas (10, 11) which are arranged horizontally beside one another, and for M-m of the M second receiving antennas (14, 15, 16, 17) to be arranged horizontally beside one another and for at least m of the M second receiving antennas (19, 20, 21) to be arranged in a vertically offset manner with respect to the M-m receiving antennas (14, 15, 16, 17) which are arranged horizontally beside one another.

IPC 8 full level  
**G01S 13/42** (2006.01); **G01S 13/931** (2020.01); **H01Q 1/32** (2006.01); **H01Q 21/06** (2006.01)

CPC (source: EP KR US)  
**G01S 7/032** (2013.01 - US); **G01S 13/42** (2013.01 - EP KR US); **G01S 13/931** (2013.01 - EP KR US); **H01Q 1/3233** (2013.01 - EP KR US); **H01Q 21/065** (2013.01 - EP KR US)

Citation (search report)  
See references of WO 2017148561A1

Cited by  
CN113258266A

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)  
BA ME

DOCDB simple family (publication)  
**DE 102016203160 A1 20170831**; CN 108780147 A 20181109; CN 108780147 B 20230512; EP 3423863 A1 20190109; JP 2019512081 A 20190509; JP 6770079 B2 20201014; KR 20180116325 A 20181024; MX 2018010155 A 20181109; US 10823819 B2 20201103; US 2019011532 A1 20190110; WO 2017148561 A1 20170908

DOCDB simple family (application)  
**DE 102016203160 A 20160229**; CN 201680082841 A 20161229; EP 16820305 A 20161229; EP 2016082808 W 20161229; JP 2018540123 A 20161229; KR 20187026804 A 20161229; MX 2018010155 A 20161229; US 201616080504 A 20161229