

Title (en)
Multi-standard antenna module

Title (de)
Multistandard-Antennenmodul

Title (fr)
Module d'antennes multistandard

Publication
EP 2317603 A1 20110504 (DE)

Application
EP 09013631 A 20091029

Priority
EP 09013631 A 20091029

Abstract (en)
The module has a multi-antenna arrangement provided with a global positioning system antenna (24), a cellular antenna (26) and two vehicle-to-vehicle (V2V)- and/or infrastructure-to-vehicle (I2V) antennas (28, 30). A signal processing unit (34) is attached to one of the antennas in the arrangement. The V2V and/or I2V antennas are spatially arranged at a distance from each other for utilization of antenna diversity. The arrangement is designed for multiple input multiple output (MIMO) communication connections.

Abstract (de)
Ein Multistandard-Antennenmodul für Verkehrstelematiksysteme umfasst wenigstens eine GPS-Antenne, wenigstens eine Zellularantenne und eine wenigstens zwei V2V- oder I2V-Antennen umfassende Mehrantennenanordnung sowie vorzugsweise eine den Antennen zugeordnete Signalverarbeitungseinheit. Dabei sind die V2V- bzw. I2V-Antennen der Mehrantennenanordnung zur Nutzung einer Antennen-Diversität räumlich entsprechend voneinander beabstandet.

IPC 8 full level
H01Q 1/32 (2006.01); **H01Q 21/28** (2006.01); **H01Q 21/29** (2006.01); **H01Q 21/30** (2006.01)

CPC (source: EP)
H01Q 1/3208 (2013.01); **H01Q 1/3275** (2013.01); **H01Q 21/28** (2013.01); **H01Q 21/29** (2013.01); **H01Q 21/30** (2013.01)

Citation (search report)

- [X] EP 1843429 A1 20071010 - PLASTAL SPA [IT]
- [X] JP 2001284930 A 20011012 - COMM RES LAB, et al
- [X] WO 2009063537 A1 20090522 - FUJITSU LTD [JP], et al
- [X] WO 2005004280 A1 20050113 - KATHREIN WERKE KG [DE], et al
- [X] US 2009153418 A1 20090618 - PARK SUNG JUN [KR]
- [A] EP 1744470 A1 20070117 - DELPHI TECH INC [US]

Cited by
CN104935412A; CN104466432A; EP3011637A4; WO2017076750A1; EP3531503A1; WO2015038706A1; DE102017126383A1; WO2019092255A1; DE202024100598U1

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2317603 A1 20110504

DOCDB simple family (application)
EP 09013631 A 20091029