

Title (en)

Antenna module, in particular as a central transmission and/or receiver module for a vehicle, with several antennas

Title (de)

Antennenmodul, insbesondere als zentrales Sende- und/oder Empfangsmodul für ein Fahrzeug, mit mehreren Antennen

Title (fr)

Module d'antenne, en particulier en tant que module d'émission et/ou de réception pour un véhicule doté de plusieurs antennes

Publication

**EP 1863119 A1 20071205 (DE)**

Application

**EP 07010730 A 20070530**

Priority

DE 102006025176 A 20060530

Abstract (en)

The aerial module has an upper and a lower part (1) with multiple aerials (13). The aerials are separated through an area of a carriage body of a vehicle. The upper and the lower part are mechanically connected with one another, by the area of the carriage body. The upper and lower parts, arranged at the inner and outer sides of the carriage body, overlap one another. A fixing means guide through small break-through of few millimeters through the carriage body in the area of the overlapping.

Abstract (de)

Die Erfindung betrifft ein Antennenmodul, insbesondere als zentrales Sende- und/oder Empfangsmodul für ein Fahrzeug, mit mehreren Antennen 8, 13, welches einen oberen und unteren Teil 1, 3 mit jeweils mehreren Antennen 13, 8 aufweist, welche durch einen Bereich der Karosserie 5 eines Fahrzeugs getrennt sind und der obere und der untere Teil 1, 3 mechanisch durch den Bereich der Karosserie hindurch miteinander verbunden sind.

IPC 8 full level

**H01Q 1/08** (2006.01); **H01Q 1/12** (2006.01); **H01Q 1/32** (2006.01); **H01Q 1/42** (2006.01); **H01Q 21/28** (2006.01); **H01Q 23/00** (2006.01)

CPC (source: EP US)

**H01Q 1/088** (2013.01 - EP US); **H01Q 1/1214** (2013.01 - EP US); **H01Q 1/3208** (2013.01 - US); **H01Q 1/3275** (2013.01 - EP US);  
**H01Q 1/3291** (2013.01 - US); **H01Q 1/42** (2013.01 - EP US); **H01Q 21/28** (2013.01 - EP US); **H01Q 23/00** (2013.01 - EP US)

Citation (search report)

- [Y] EP 1087464 A2 20010328 - VOLVO PERSONVAGNAR AB [SE]
- [Y] DE 29500961 U1 19950614 - HIRSCHMANN RICHARD GMBH CO [DE]
- [A] DE 10025931 A1 20010830 - FUBA AUTOMOTIVE GMBH [DE]
- [A] WO 9966595 A1 19991223 - HARADA IND EUROP LIMITED [GB], et al
- [A] GB 2298998 A 19960918 - ROVER GROUP [GB]
- [A] DE 19923661 A1 20001123 - NOKIA MOBILE PHONES LTD [FI]

Cited by

JP2015516786A; DE102013224514A1; DE102011016294A1; CN106104912A; CN107492707A; AU2013203990B2; EP2592687A1;  
CN103123999A; DE102011016294B4; EP2479839A1; FR3050076A1; GB2543169A; GB2543169B; DE102019213208B3; US9362610B2;  
US10398203B2; US9178266B2; US9966659B2; US11083265B2; WO2013123180A1; WO2013171240A1; US8992238B2; US9692194B2;  
US9611975B2; US10072788B2; US10544895B2; US10418696B2; WO2021043494A1; WO2015078848A1; US10044418B2; US10307313B2;  
US10741903B1; US10786055B2; US11490700B2; WO2012136306A1; US9270018B2; US10398207B2; US10912360B2; US9944217B2;  
USD835499S; USD868569S; USD905544S; US11066004B2; WO2017211534A1; WO2019049739A1; WO2020193081A1

Designated contracting state (EPC)

DE FR GB

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1863119 A1 20071205; EP 1863119 B1 20110126**; DE 102006025176 A1 20071206; DE 102006025176 B4 20160525;  
DE 102006025176 C5 20230223; DE 502007006348 D1 20110310; DE 502007006354 D1 20110310; EP 1903632 A1 20080326;  
EP 1903632 B1 20110126; FR 2901920 A1 20071207; FR 2901920 B1 20100924; US 2007279304 A1 20071206; US 2013076577 A1 20130328;  
US 8319693 B2 20121127; US 8614645 B2 20131224

DOCDB simple family (application)

**EP 07010730 A 20070530**; DE 102006025176 A 20060530; DE 502007006348 T 20070530; DE 502007006354 T 20070530;  
EP 07010729 A 20070530; FR 0703827 A 20070530; US 201213683358 A 20121121; US 75405507 A 20070525