

Title (en)

WIDE-ANGLE SCANNING DUAL-POLARIZED DIPOLE ANTENNA

Title (de)

DOPPELPOLARISIERTE DIPOLANTENNE MIT WEITWINKELABTASTUNG

Title (fr)

ANTENNE DIPÔLE À DOUBLE POLARISATION À BALAYAGE GRAND ANGLE

Publication

**EP 3819984 A4 20220420 (EN)**

Application

**EP 20806225 A 20200514**

Priority

- CN 2020090163 W 20200514
- CN 201910403512 A 20190515

Abstract (en)

[origin: EP3819984A1] The present invention discloses a wide-angle scanning dual-polarization dipole antenna, and belongs to the technical field of antennas, including first metal arms, an antenna support column, second metal arms and feed baluns. The first metal arms are located at the top of the antenna and used to improve impedance fluctuation of the antenna during large-angle scanning. The feed baluns are located at the bottom of the antenna and used to convert an unbalanced feed input by a coaxial wire into a balanced feed. The present invention greatly improves impedance matching during the large-angle scanning of the antenna and effectively improves wide-angle scanning performance of the antenna. Meanwhile, the antenna has good cross polarization performance. Finally, since both the metal dipole arms and the top metal arms adopt a longitudinal blade-shaped bending structure respectively, and the cross sectional area is extremely small, snow and rain are not prone to accumulate, thereby greatly reducing the influence of accumulated snow and rain on performance and service life of the antenna. The antenna is well applicable to severe weather conditions such as heavy rainfall, heavy snowfall and the like.

IPC 8 full level

**H01Q 21/26** (2006.01)

CPC (source: CN EP)

**H01Q 1/1207** (2013.01 - CN); **H01Q 1/36** (2013.01 - CN); **H01Q 1/48** (2013.01 - CN); **H01Q 1/50** (2013.01 - CN); **H01Q 21/26** (2013.01 - EP)

Citation (search report)

- [Y] CN 103682631 A 20140326 - ZHANGJIAGANG BONDED AREA GUOXIN COMM CO LTD
- [Y] US 2011057848 A1 20110310 - BAUCOM CHARLIE E [US], et al
- [Y] US 2007200783 A1 20070830 - LENART GREGOR [SE], et al
- [A] US 2019027815 A1 20190124 - BLACKADDER HUGH ADAM STUART [CA], et al
- See also references of WO 2020228759A1

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)

**EP 3819984 A1 20210512; EP 3819984 A4 20220420; EP 3819984 B1 20240501; EP 3819984 C0 20240501**; CN 110176666 A 20190827; CN 110176666 B 20200925; JP 2021524699 A 20210913; JP 7025596 B2 20220224; WO 2020228759 A1 20201119

DOCDB simple family (application)

**EP 20806225 A 20200514**; CN 201910403512 A 20190515; CN 2020090163 W 20200514; JP 2021500399 A 20200514