

Title (en)

ACTIVE ANTENNA ARCHITECTURE WITH RECONFIGURABLE HYBRID BEAM FORMATION

Title (de)

AUFBAU EINER AKTIVEN HYBRIDEN REKONFIGURIERBAREN STRAHLBILDUNGSANTENNE

Title (fr)

ARCHITECTURE D'ANTENNE ACTIVE A FORMATION DE FAISCEAUX HYBRIDE RECONFIGURABLE

Publication

EP 3176875 B1 20180613 (FR)

Application

EP 16199488 A 20161118

Priority

FR 1502522 A 20151204

Abstract (en)

[origin: US2017162943A1] An antenna architecture comprises a hybrid beamformer comprising on the one hand, N_y stacked quasi-optical beamformers, each quasi-optical beamformer comprising a parallel-plate waveguide furnished with a linear radiating aperture and integrating a lens and internal horns furnished with beam access ports, each quasi-optical beamformer forming beams in two, transmission and reception, frequency bands, in a first direction in space, and on the other hand, at least one electronic beamformer comprising a combining device linked to N_x phase and amplitude control chains, each phase and amplitude control chain being connected to a respective beam access port of each quasi-optical beamformer, the electronic beamformer forming beams in a second direction in space, orthogonal to the first direction.

IPC 8 full level

H01Q 1/28 (2006.01); **H01Q 1/42** (2006.01); **H01Q 15/00** (2006.01); **H01Q 15/02** (2006.01); **H01Q 19/13** (2006.01); **H01Q 21/00** (2006.01); **H01Q 25/00** (2006.01)

CPC (source: EP US)

H01Q 1/288 (2013.01 - US); **H01Q 1/42** (2013.01 - US); **H01Q 1/422** (2013.01 - EP US); **H01Q 15/0026** (2013.01 - EP US); **H01Q 15/0033** (2013.01 - US); **H01Q 15/02** (2013.01 - US); **H01Q 19/138** (2013.01 - EP US); **H01Q 21/0031** (2013.01 - EP US); **H01Q 25/008** (2013.01 - EP US)

Cited by

EP3758146A1; FR3098024A1; US11670840B2

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

DOCDB simple family (publication)

EP 3176875 A1 20170607; **EP 3176875 B1 20180613**; ES 2681675 T3 20180914; FR 3044832 A1 20170609; FR 3044832 B1 20180105; US 10236589 B2 20190319; US 2017162943 A1 20170608

DOCDB simple family (application)

EP 16199488 A 20161118; ES 16199488 T 20161118; FR 1502522 A 20151204; US 201615355968 A 20161118