

Title (en)
CO-PRIME OPTICAL TRANSCEIVER ARRAY

Title (de)
ANORDNUNG AUS OPTISCHEM CO-PRIME-SENDEEMPFÄNGER

Title (fr)
RÉSEAU D'ÉMETTEURS-RÉCEPTEURS OPTIQUES CO-PRIMES

Publication
EP 3593408 A4 20201223 (EN)

Application
EP 18764449 A 20180309

Priority
• US 201762469106 P 20170309
• US 2018021882 W 20180309

Abstract (en)
[origin: CN110383580A] A co-prime transceiver attains higher fill factor, improved side-lobe rejection, and higher lateral resolution per given number of pixels. The co-prime transceiver includes in part, a transmitter array having a multitude of transmitting elements and a receiver array having a multitude of receiving elements. The distance between each pair of adjacent transmitting elements is a first integer multiple of the whole or fraction of the wavelength of the optical. The distance between each pair of adjacent receiving elements is a second integer multiple of the whole or fraction of the wavelength of the optical signal. The first and second integers are co-prime numbers with respect to one another. The transceiver is fully realizable in a standard planar photonics platform in which the spacing between the elements provides sufficient room for optical routing to inner elements.

IPC 8 full level
H01Q 3/26 (2006.01); **G01S 7/481** (2006.01); **G01S 17/89** (2020.01); **H01Q 21/22** (2006.01)

CPC (source: EP US)
G01S 7/4811 (2013.01 - EP US); **G01S 7/4815** (2013.01 - EP); **G01S 7/4817** (2013.01 - EP); **G01S 17/89** (2013.01 - EP US)

Citation (search report)
• [XY] US 2006034609 A1 20060216 - MORRIS TERREL L [US], et al
• [Y] EP 3094987 A1 20161123 - MITSUBISHI ELECTRIC CORP [JP]
• [A] US 7539418 B1 20090526 - KRISHNAMOORTHY ASHOK V [US], et al
• [A] US 6424442 B1 20020723 - GFELLER FRITZ [CH], et al
• [A] US 2015357710 A1 20151210 - LI ZHENGYI [JP]
• See references of WO 2018165633A1

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)
CN 110383580 A 20191025; CN 110383580 B 20210903; EP 3593408 A1 20200115; EP 3593408 A4 20201223

DOCDB simple family (application)
CN 201880016993 A 20180309; EP 18764449 A 20180309