

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)  
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