

Title (en)
OPTOELECTRONIC COMPUTING SYSTEMS

Title (de)
OPTOELEKTRONISCHE RECHNERSYSTEME

Title (fr)
SYSTÈMES INFORMATIQUES OPTOÉLECTRONIQUES

Publication
EP 3942482 A1 20220126 (EN)

Application
EP 20774205 A 20200319

Priority
• US 201962820562 P 20190319
• US 201916703278 A 20191204
• US 2020023674 W 20200319

Abstract (en)
[origin: WO2020191217A1] An optoelectronic computing system includes a first semiconductor die having a photonic integrated circuit (PIC) and a second semiconductor die having an electronic integrated circuit (EIC). The PIC includes optical waveguides, in which input values are encoded on respective optical signals carried by the optical waveguides. The PIC includes an optical copying distribution network having optical splitters. The PIC includes an array of optoelectronic circuitry sections, each receiving an optical wave from one of the output ports of the optical copying distribution network, and each optoelectronic circuitry section includes: at least one photodetector detecting at least one optical wave from the optoelectronic operation. The EIC includes electrical input ports receiving respective electrical values. The first semiconductor die and the second semiconductor die are electrically coupled in a controlled collapsed chip connection, with the electrical output port of the PIC connected to one of the electrical input ports of the EIC.

IPC 8 full level
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