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### (54) ASIC PACKAGE WITH PHOTONICS AND VERTICAL POWER DELIVERY

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#### (57)ABSTRACT

The technology relates to an integrated circuit (IC) package. The IC package may include a substrate. An IC die may be mounted to the substrate. One or more photonic modules may be attached to the substrate and one or more serializer/ deserializer (SerDes) interfaces may connect the IC die to the one or more photonic modules. The IC die may be an application specific integrated circuit (ASIC) die and the one or more photonic modules may include a photonic integrated circuit (PIC) and fiber array. The one or more photonic modules may be mounted to one or more additional substrates which may be attached to the substrate via one or more sockets.

