Written by Marco Attard 10 November 2016

An analyst report on the Barron's tech trading blog claims Intel might have chipmaking "game changer"-- miniaturised on-die silicon photonics technology allowing for the faster transmission of data between chip components.



As the Susquehanna Financial Group analyst Christopher Rolland puts it, such technology can "mitigate Moore's Law," the semiconductor design rule the likes of Intel have been grinding against in recent years. He also describes the "chips with frickin' lasers" as "nothing short of miraculous" and "a potential game changer for Intel and the semiconductor industry."

Photonics already has some use in the industry, specifically in networking components connecting servers and datacentres. However, it appears Chipzilla has managed to shrink the technology into a silicon chip acting as "a super high-speed optical interconnect" between a Xeon server CPU and an Altera FPGA, a first from the company. Being chip-scale, the technology can possibly allow the creation of a "macro-chip," essentially a multi-chip module packing disaggregated components (such as GPUs, CPUs, FPGAs, and ASICs) all connected together via photonic interconnects.

However one has to keep in mind the Intel demo is very much a proof-of-concept, even if Rolland says it is set to reach commercialisation in as little as 3 to 5 years. It should first hit the enterprise industry, before making it to consumer products.

Go Intel's "Miraculous," "Mind-Blowing" New Chips, Per Susquehanna (Barron's)