

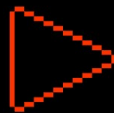
INTERCONNECT PASSAGE



Passage is a wafer-scale, programmable photonic interconnect that enables arrays of heterogeneous chips to communicate with unprecedented bandwidth and energy efficiency.

Many types of chips can be integrated on top of Passage including CPUs, memory, and special-purpose accelerators.

Transistors and photonics integrated side-by-side provide a simple, yet powerful interface that facilitates dynamic reconfiguration of the communications topology. 40 passage lanes fit in the space of a single optical fiber—enabling high speed, energy efficient communication between nodes while reducing packaging complexity and cost.



Interested in partnering with us?

CONTACT US

PERFORMANCE

40X

Dramatic interconnect density improvement. 40 waveguides in the space of one optical fiber.

100+_{TBPS}

Input/output bandwidth escaping each chip.

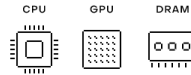
100X

More bandwidth than existing chip-to-chip interconnect solutions.

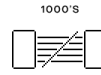
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Maximum chip-to-chip communication latency of 2ns.

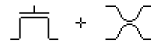
FEATURES



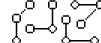
Wafer-scale processing with heterogeneous tiles of CPUs, GPUs, FPGAs, DRAM, and ASICs.



Wide and parallel. Efficient and fast. Thousands of comms lanes to and from each die.

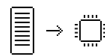


Transistors and photonics integrated side-by-side. Transistors orchestrate configuration of the optical network, reducing complexity and pin count.

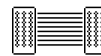


Dynamically reconfigurable topology. Change network configurations in microseconds.

ECONOMICS



Functionality of a rack on a single chip.



A rack worth of expensive, high-speed interconnect cables all on a single chip.

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Fiber-to-chip attach is expensive. Optical interconnect between chips is built into the platform. No fiber-attach required.

5X

Higher communications energy efficiency. No need to drive electrical signals across a PCB to a pluggable photonics transceiver module.

+ APPLICATIONS

+ BENEFITS



A GIANT LEAP

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