

Integration of 420 Optical Elements for a Multiterabit/s Network-on-Chip

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2016 Micro-Optics Conference  
Berkeley, CA

We demonstrate a fully-integrated photonic network-on-chip (NoC) circuit with 8 8-wavelength division multiplexing (WDM) transceivers on silicon. The total transmission capacity is up to 2.56 Tbps ( $8 \times 8 \times 40$  Gbps) for intra- and inter-chip interconnections.