Highly Integrated Silicon Photonics Switches

Highly-integrated large-scale optical path switches are crucial for energy-efficient flexible networking, such as the Dynamic Optical Path Network. We have developed various optical path switches, including an 8 x 8 and 32 x 32 blade switch, based on CMOS-compatible silicon photonics.

- **Polarization-insensitive broadband 8 x 8 strictly-non-blocking blade switch**

- **32 x 32 strictly-non-blocking blade switch**

- **Hybrid integration technology of InP-based optical-gain chip**

Now operating in the demonstration section

Related technical presentation: Tu3F.5

Switching speed acceleration: W4E.3
On-chip polarization diversity: W4E.5

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Switching operation with optical amplification (OFC 2016 Th1C.1)

10-dB net gain achieved

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Full path characterization (OECC 2016 PDP)