Firefly DirectConnect Options for the ODSA Proof of Concept

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ODSA Project Workshop
March 28, 2019
DIRECT CONNECT

FireFly™ Optical 56G PAM4 (OFC 200G Demo)

**Performance.** Direct connect to the silicon package chip package for increased channel performance at 112 Gb/s per lane.

**Density:** 4x smaller than QSFP. 11.5 mm wide, can fit 4 across the edge of a 50mm package.

**Flexibility:** Both Optics and High Speed Copper Flyover Cable modules plug into the same slot.
Performance

High-speed signals connect directly to the silicon package

Eliminates signal distortion through the BGA region

Low Speed Signals (power) on the main PCB
FireFly™ Optical 56G PAM4

Power Efficiency
Enables 56G PAM4 at minimal pJ/bit
3x more power efficient than QSFP28
Interchangeable Copper and Optical Modules
THANK YOU

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Firefly™ Size Comparison with QSFP and QSFP-DD

• Mid-board Optics dramatically improve board density.
• Firefly is one of the smallest OBO modules.
Xilinx VCU118

- Ultra scale+ FPGA
- FireFly™ Footprint
- Flyover QSFP
- Regular QSFP cages

An application showing Copper Flyover cables with same mid-board connector.