

Firefly DirectConnect Options for the ODSA Proof of Concept

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ODSA Project Workshop

March 28, 2019

Consume. Collaborate. Contribute.



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

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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.





FIREFLY DIRECT CONNECT

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 DIRECT CONNECT 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

Copper Flyover Cables

