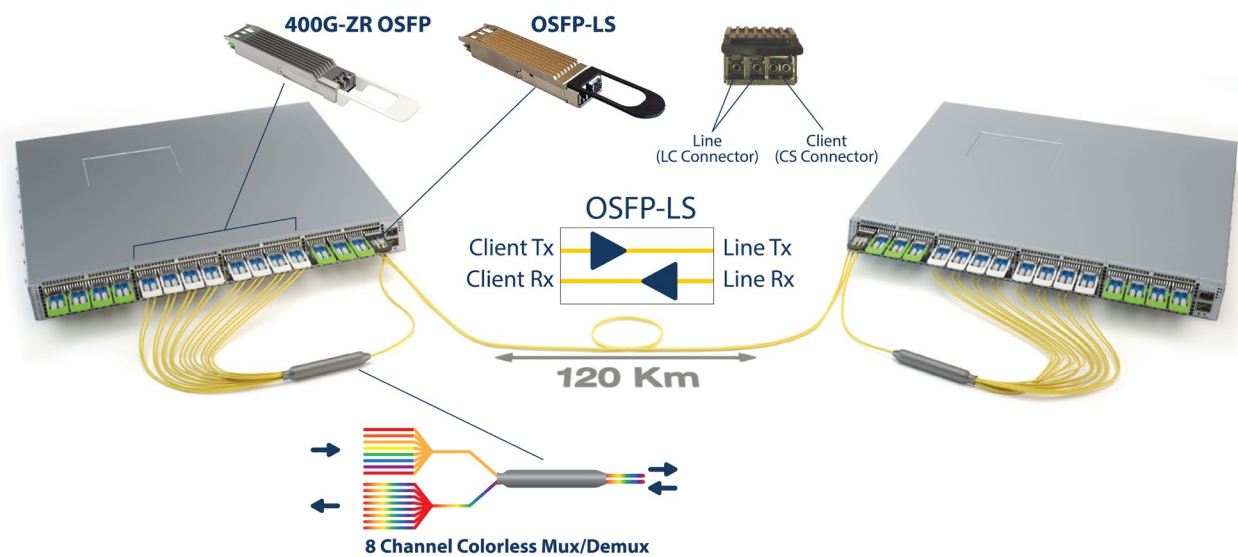# Data Center Interconnect - Simplified
Simple, Cost Effective, Open and Pluggable DCI

Data Center Interconnect using 400G-ZR optical modules and the OSFP-LS

Arista dramatically simplifies Data Center Interconnect (DCI) using 400G-ZR optics and the OSFP-Line System (OSFP-LS).

The Arista OSFP-LS collapses a traditional DCI line system into an OSFP module, completely eliminating the cost and complexity of an external line system.

Arista's EOS software provides consistent monitoring and control of both the 400G-ZR and OSFP-LS.
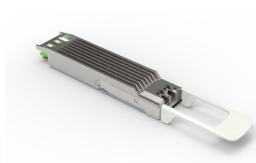
Delivers 3.2T of DCI traffic directly from a switch or router over a single fiber pair with a reach of 120km.

The OSFP-LS brings new capabilities to co-location operators, edge compute and metro DCI applications. By combining a cloud-grade line system with plug-and-play simplicity, the OSFP-LS frees data center operators from capacity, cost, space and power constraints.
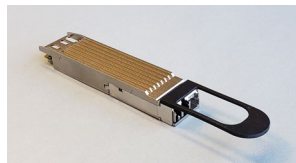
Integrating DWDM for the Cloud Age

As data continues to move to the cloud, the need to interconnect geographically dispersed data centers with increased bandwidth has grown. Until now this required costly, dedicated transponder based optical transport systems. With the introduction of Arista's OSFP-LS and 400G-ZR DWDM transceivers, the challenge of deploying and expanding DCI networks can be simplified in three easy steps:

1. Eliminate transponders with 400G-ZR optical modules

    400G-ZR Modules integrate fully tunable, standards based, coherent DWDM optics directly into the switch or router, eliminating the need for external transponders.

2. Eliminate external optical line systems with the Arista OSFP-LS

    The Arista OSFP-LS collapses a traditional DCI line system into a simple MSA compliant OSFP module. The OSFP-LS is the world's first fully autonomous optical line system in an OSFP package, which can plug into any Arista OSFP port. The OSFP-LS automatically configures for any link-length from 1km to 120km, with no user input required, dramatically simplifying deployment.

3. Eliminate external mux and demux systems with colorless, passive, 8 channel fiber splitters

    For DCI links that require up to 3.2T of bandwidth, a passive and colorless fiber splitter multiplexes upto 8 400G-ZR modules, replacing external multiplexer systems saving space and operational complexity.

400G-ZR OSFP Transceiver

OSFP-LS Module

8 Channel Fiber Splitter

OSFP Line System and 400G ZR Summary:

400G-ZR optical transceivers eliminate DWDM transponders with a pluggable module integrated directly into the switch. 400G-ZR optical modules require optical amplification to achieve link distances of 40km - 120km, traditionally provided by external line-systems. The OSFP-LS provides optical amplification in a pluggable OSFP form-factor, freeing up valuable rack space and power. The colorless fiber splitter enables plug-and-play operation, unlike traditional WDM multiplexers which restrict each port to a specific wavelength. Connect any port of the fiber splitter to any 400G-ZR module, and select the DWDM channel through EOS software. Arista EOS provides open and consistent monitoring and control of both the 400G ZR and OSFP-LS through programmatic interfaces.

The Arista OSFP-LS and 400G-ZR transceivers collapse legacy DWDM systems into switches or routers, saving cost, space and power. The plug and play operational model eliminates complexity.

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