

FSP 3000 open optical line system and Coherent 100ZR pluggable transceiver for OIF interoperability demonstrations at ECOC 2024

At ECOC 2024, Adtran is participating in demonstrations at the OIF booth, showcasing the interoperability of 400Gbit/s OpenZR+ and 100Gbit/s 100ZR transceivers over a disaggregated Adtran FSP 3000 open optical line system. The demos also feature the Adtran Coherent 100ZR QSFP28 pluggable device.

The **Adtran FSP 3000** open optical line system (OLS) configuration showcased in this demonstration belongs to the FSP 3000 family of open and scalable optical networking solutions. With a compact, modular architecture, a wide range of component options, and integrated monitoring and diagnostic functions, the FSP 3000 enables customized configurations that offer high-performance transport and a high level of automation and operational simplicity. Moreover, with open and standardized APIs, the FSP 3000 easily integrates into software-controlled networks.

The OLS configuration featured in this demonstration has been designed for high-performance transport of coherent 100ZR and 400G OpenZR+ interfaces over a 300km link with three spans and SMF-28 fibers. As illustrated in Figure 1, the configuration consists of:

- Two terminal nodes with high-resolution flexgrid ROADMs and pre- and booster optical amplification in a 2RU chassis
- Two bidirectional in-line amplifiers (ILAs) in a 1RU chassis

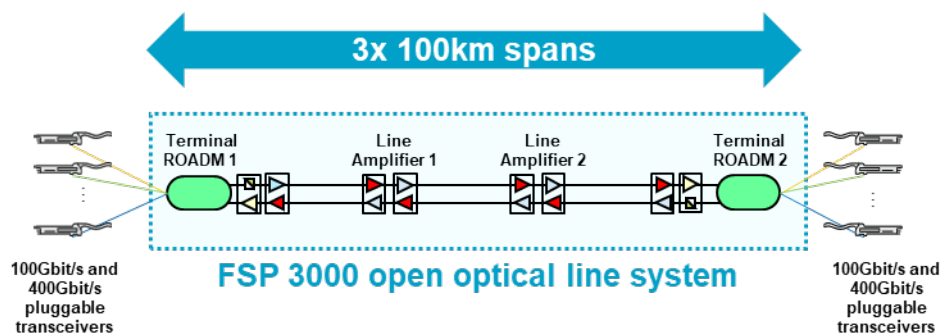


Figure 1. Multi-span Adtran FSP 3000 OLS configuration for OIF demonstrations at ECOC 2024

FSP 3000 terminal node

Equipped with a 12-degree WSS ROADM (RD-12RS) and two EDFA (AM-S23L) for pre- and booster amplification, OSC and optional XFP-based OTDR



FSP 3000 terminal node in a 2RU chassis

FSP 3000 ILA node

Equipped with two EDFA (AM-S23L) for bidirectional in-line amplification, OSC and optional XFP-based OTDR



FSP 3000 ILA node in a 1RU chassis

Figure 2. FSP 3000 terminal and ILA nodes for OIF demonstrations at ECOC 2024

The key FSP 3000 components used in this demo are:

- **RD-12RS:** A reconfigurable optical add-drop multiplexer (ROADM) that supports up to 13 degrees and provides 12 client ports for add/drop services in a dual-slot card
- **AM-S23L:** An EDFA-type optical amplifier with auto-span equalization, optional XFP-based OTDR monitoring and optical supervisory channel (OSC) in a single-slot card. The AM-S23L EDFA can work as pre-amplifier, booster and in-line amplifier, and is used in both the optical terminals and the ILA nodes.

The demonstrations at the OIF booth also showcase the **Adtran Coherent 100ZR**. This coherent 100ZR QSFP28 pluggable device is a finalist in Light Reading's Leading Light Awards 2024, nominated for Most Innovative Optical Networking product. Co-developed with Coherent Corp, it delivers cost-effective, low-power 100Gbit/s transport (GbE and OTU4) over distances spanning up to 120km without amplification and up to 300km with optical amplification. The Coherent 100ZR QSFP28 module is host-agnostic and compatible with standard QSFP28 ports, supporting both SFF and CMIS management interface options. Offered in C- and I-temp variations, the Coherent 100ZR meets a broad range of deployment options, including outdoor deployments, such as street cabinets. This demo showcases the C-temp variation.

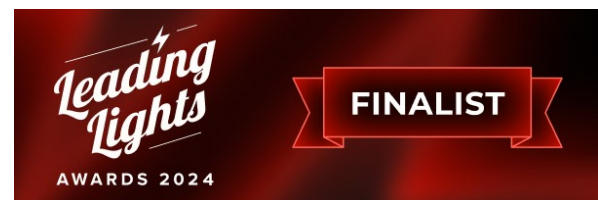
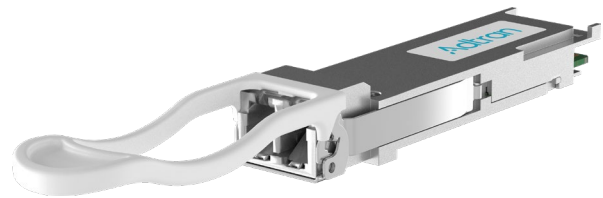


Figure 3. Adtran Coherent 100ZR QSFP28

About Adtran

Adtran has the industry's most comprehensive fiber networking toolbox that empowers operators to build a converged infrastructure from metro core to customer premises. The company's solutions serve a wide range of networking applications including residential, business, wholesale and mobile. In 2022, Adtran merged with ADVA. Learn more at [adtran.com](https://www.adtran.com).