

Test and validate your active optical cables (AOC)

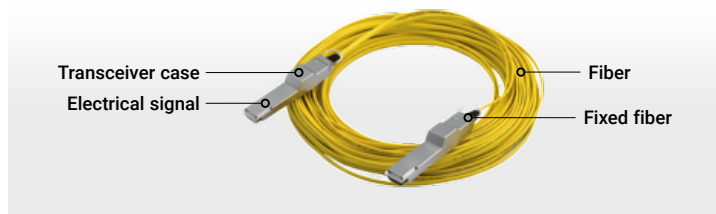
For optimal data center network performance

EXFO

Active optical cables (AOCs) are the dominant cabling technology used for high-speed links within the server racks—and given their many potential advantages, AOCs are being widely deployed in high-performance computing and data center applications.

What's an AOC?

Active optical cables (AOCs) are an alternative to optical transceivers. Optical transceivers have a detachable optical connector to disconnect the fiber from the transceiver. In contrast, AOCs have a fixed fiber connection inside the transceiver—permanently attaching the fibers to the optics. Their main application is intended for short-reach connections between 5–100 meters.



Key applications—Intra data center

Web scale	Enterprise data centers
Financial institutions	Small data centers
Broadcast companies	

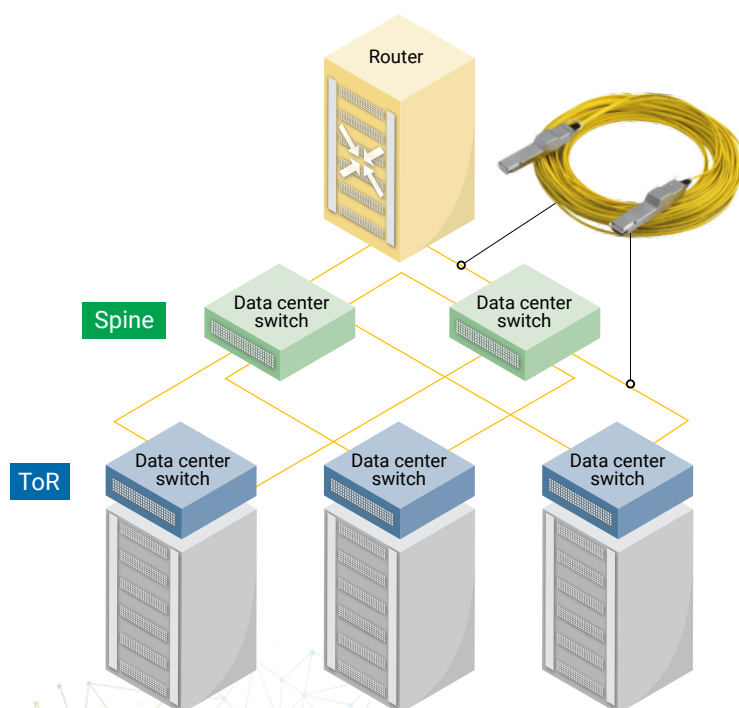
Key benefits

- ✓ No optical connector contamination
- ✓ Low power consumption
- ✓ More flexibility than copper
- ✓ No transceiver mismatch
- ✓ Low cost

Industry in transformation

With ever-increasing bandwidth-hungry applications flooding data centers, it is becoming even more apparent for the need to shift to fiber, in at least in some parts of the data center, to provide enhanced levels of performance. AOC assemblies were developed to replace copper technology and can provide a cost-effective means to connect top-of-rack (TOR) switches to spine aggregation switches for speeds all the way up to 100G.

Without the right testing measures in place, validating AOC can become a huge challenge for data center managers.



Test scenarios

1 Before deployment: same platform

Prior to deployment, users can test the cables to make sure they are functioning correctly.

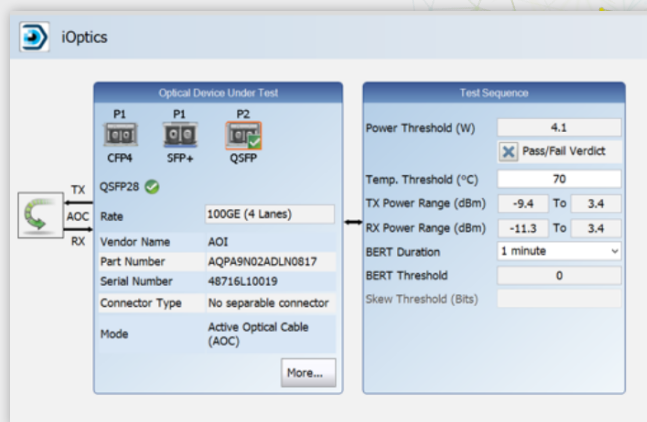


2 After deployment: different locations

Once in service, users can test the cable at two different connections, at each end of the cable.



iOptics



The iOptics intelligent pluggable optics test application offers a **complete, powerful and easy-to-use tool for validating any type of 10M to 400G interface**. It is a first-alert test that can be used in the field or lab environment to efficiently evaluate the proper operation of an optical device using minimal user configuration.

Automated testing sequence

- Test and measure power consumption and optical power levels
- Validate communication channel
- Determine AOC temperature
- Stress test

Test kit bundles

1



- FTB-1 Pro high-power dual-carrier platform
- 2 x FTBx-88260NGE, 1G-100G (incl. 25G) multiservice test solution—**offering the flexibility to test two AOC's simultaneously**
- **Test up to 4 transceivers sequentially** and optimize transceiver validation
- Includes open transceiver system (OTS) to support multiple transceiver types

2



- 2 x FTB-1 Pro dual-carrier platform
- 1 x FTBx-88260NGE, 1G-100G (incl. 25G) multiservice test solution on each FTB-1 Pro test platform
- Includes OTS to support multiple transceiver types

For more information, contact isales@exfo.com