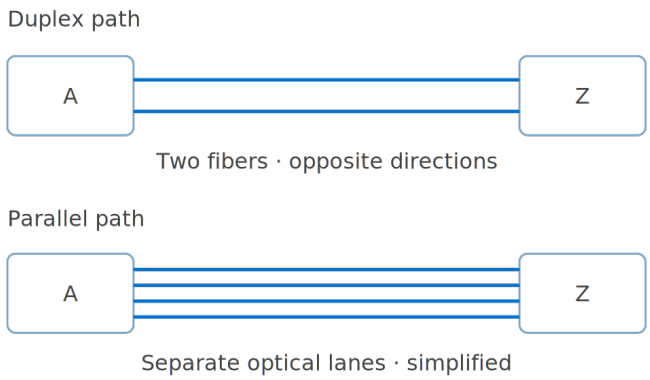
Choose the optical interface.

Start with the path between the ports. Then resolve the module and host requirements.

Editorial revision 2026-11-01. Planning guidance; not a released model specification, warranty, compatibility certification or installation approval.



Start at both ends

Record the intended protocol, port mode and available fiber at A and Z. An aggregate data rate alone does not specify the electrical lanes, optical arrangement or supported host configuration.

Read the optical standard separately

For example, 400G FR4 combines four optical wavelengths on each direction of a duplex single-mode path. Its optical specification does not assign the package, power envelope or host qualification of a particular WBN model.

Resolve the actual model

Check the released model against the full channel: fiber type, connector, distance, loss and operating conditions. Confirm the electrical interface and FEC at both hosts. An unknown requirement stays open; a familiar suffix is not evidence that two implementations are interchangeable.

In practice / Worked example

400G over an existing duplex path

Assume two usable single-mode fibers over a 900 m route. A 400G-FR4 interface is a candidate: its four wavelengths share one transmit fiber and one receive fiber.

Requirement	Initial finding	Still required
Two-fiber path	Duplex arrangement fits	Connector and polish at both ends
900 m route	Within the MSA’s 2 m–2 km range	Channel loss and dispersion
400GbE ports	Target aggregate rate matches	Electrical application, FEC and host support

This narrows the optical family; it does not qualify a module. Record the exact model and document revision at A and Z. Distance and available fibers here are illustrative inputs, not a WBN reach guarantee.

Source: 100G Lambda MSA · 400G-FR4 ↗ Rev 2.0 · 18 September 2018 · §§1.1–1.8, Table 2-2

Before you specify

• A/Z host and port mode

• Optical interface and fiber path

• Released model limits and document revision

Sources & scope

General engineering guidance. External examples describe their own products and do not establish WBN availability or qualification.

• 400G-FR4 technical specification ↗ 100G Lambda MSA · Rev 2.0 · 18 Sep 2018 — https://100glambda.com/specifications/send/2-specifications/7-400g-fr4-technical-spec-d2p0

• LinkX 100G-PAM4 product line overview ↗ NVIDIA · Online reference · accessed 1 Nov 2026 — https://docs.nvidia.com/networking/display/400g100gpam4ovdev/LinkX-100G-PAM4-Product-Line-Overview