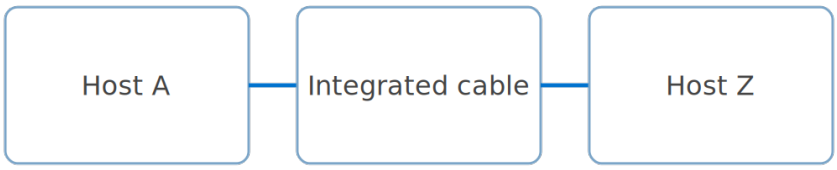
# DAC, ACC, AEC, or AOC?

Choose with both hosts and the installed route in view.

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




Keep the complete connection in view

## Read the construction

DAC provides a passive copper path. Active copper adds signal processing whose exact architecture must be checked. AEC generally denotes retimed copper; AOC integrates optical conversion and fiber into one assembly. Terminology alone is not a complete circuit specification.

## Compare the required connection

Keep A/Z interfaces, protocol, lane grouping and topology fixed while comparing alternatives. Then check each released model's supported length, power, mechanical and host requirements.

## Evaluate the route

Record the required installed length, connector access, bend constraints and breakout dimensions. Avoid assigning universal reach or power advantages to an entire category. The useful comparison is between documented products that can serve the same connection.

In practice / Worked example

## A four-meter route changes the candidates.

Consider an 800G straight OSFP connection over a measured four-meter route. NVIDIA’s documented LinkX 100G-PAM4 series provides a product-specific comparison.

| Construction in this series | Published lengths | Signal treatment |
|---|---|---|
| DAC | Up to 3 m | Passive copper |
| LACC | 3, 4 and 5 m | Linear amplifier ICs; not a DSP |

The four-meter route exceeds this series’ DAC range and fits a listed LACC length. That narrows candidates; it does not qualify a SKU for either endpoint. Check host support, electrical requirements and physical routing. These limits belong to the cited series, not all DACs, ACCs, AECs or WBN products.

Source: NVIDIA · LinkX 100G-PAM4 overview ↗ Online reference checked 1 November 2026 · DAC and LACC sections

## Before you specify

• Exact A/Z interface and protocol

• Supported length and host requirements

• Installed routing and dimensions

## Sources & scope

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

• Layer 1 data center reference ↗ NVIDIA · Online reference · accessed 1 Nov 2026 — https://docs.nvidia.com/networking-ethernet-software/knowledge-base/Setup-and-Getting-Started/layer-1-Data-Center-Cheat-Sheet/

• 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