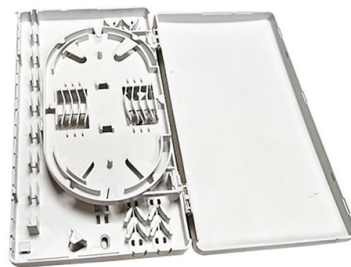


# Why does AI need an optical module



## Overview

Optical modules convert electrical signals into light to move data quickly and reliably in AI systems, enabling fast and smooth data processing. Understanding their role is key to building efficient, scalable AI systems. 8Tbps of switching. High-quality optical modules play a crucial role in this process, providing stable high-bandwidth and low-latency links for training and inference tasks, and effectively reducing data transmission error rates in large-scale clusters. There was a time when optics was considered as the basis for a potential computing technology<sup>2</sup>, but it became difficult for optical. As networks scale rapidly, the role of optical modules and DAC/AOC cables in enabling data transmission has become increasingly critical, with their quality a vital factor for performance, reliability, and cost efficiency. This article explores why high-quality optics are essential in AI networks.



## Article Content

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## A role for optics in AI hardware

therefore, also consider optics? Structures that direct light — whether they be an optical fibre for use in telecommunications or a waveguide patterned onto a photonic chip — can be acked with...

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