

Why are AOC optical modules cheap



Overview

AOC sits between DAC and full transceiver solutions: more expensive than DAC for short links, but cheaper than two modules once you account for fiber and handling for medium runs. These relative deltas are well documented in cabling guides and vendor price tables. DAC (Direct Attach Copper): a fixed copper twinax cable with transceiver ends—cheap, very low latency and power, limited reach (typically up to ~5 m for 100G passive DACs). AOC (Active Optical Cable): an optical cable with embedded transceivers at the ends—greater reach (meters to tens of meters). When connecting network devices over short to medium distances, you face a fundamental choice: Direct Attach Copper cables (DAC), Active Optical Cables (AOC), or separate Optical Transceivers with fiber patch cables. The SFP family has evolved to include higher-speed variants such as SFP+, QSFP, and QSFP28, each supporting. OEM-branded modules are widely used, but they often come with a premium price. Today, high-quality compatible (third-party) optical modules offer: Not all compatible modules are equal. What are they?

A twinax copper cable with. Basic electronic chips in a module, such as DSPs and drivers for the transmitter, and TIAs for the receiver, are essential for 400G, 800G, or silicon/non-silicon modules.



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