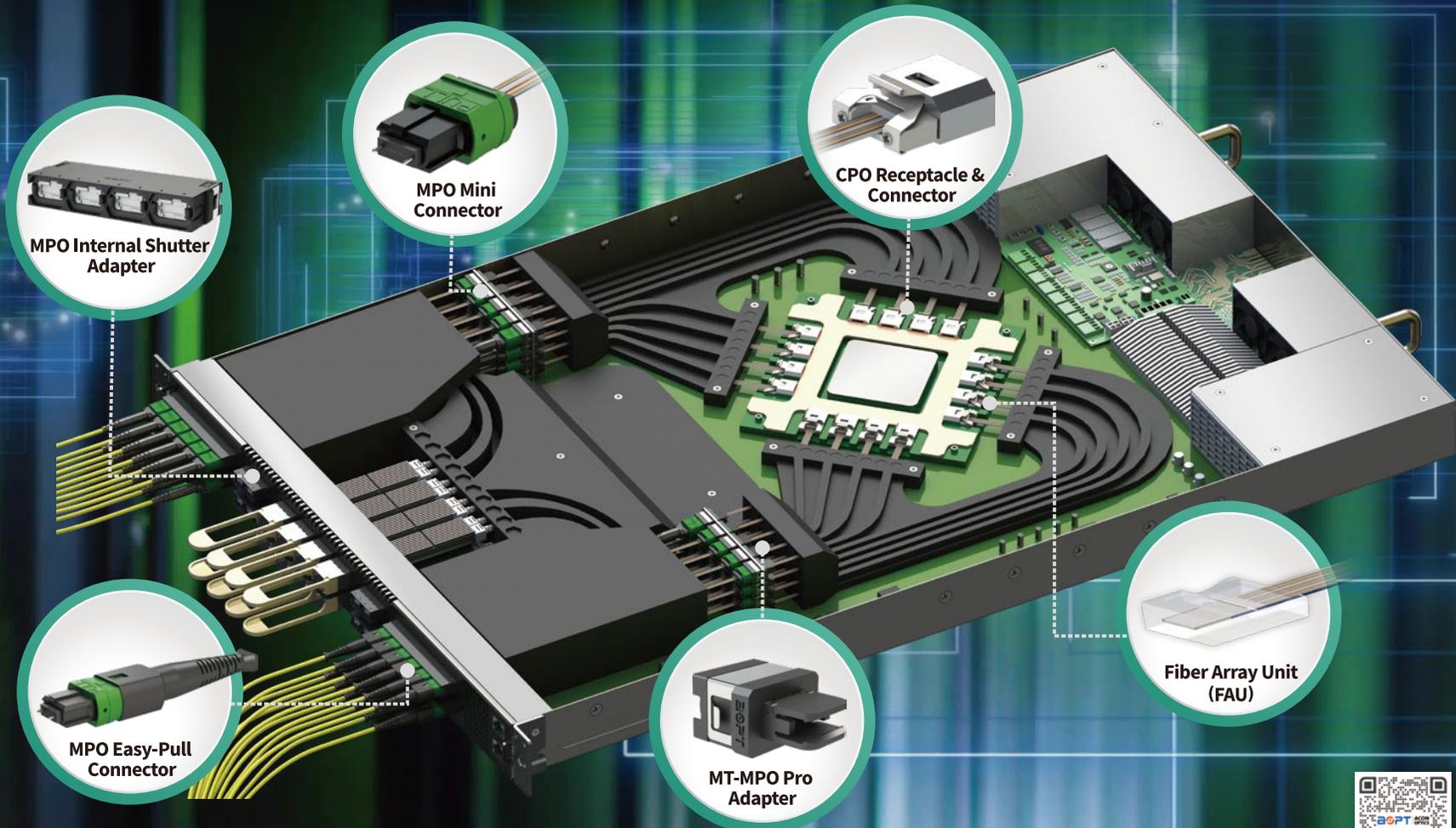


CPO Connectivity Solutions

Precision Optical Connectivity for AI-Scale CPO Architectures

ACON OPTICS delivers comprehensive CPO connectivity solutions designed to enable high-density, high-bandwidth optical integration for next-generation AI data center infrastructures. From chip-level Grating and Edge Coupling interfaces to high-density Fiber Array Units and precision FA-MT interconnects, our platform ensures sub-micron alignment accuracy, low-loss optical performance, and scalable system integration across advanced CPO architectures.



CPO GC Solution

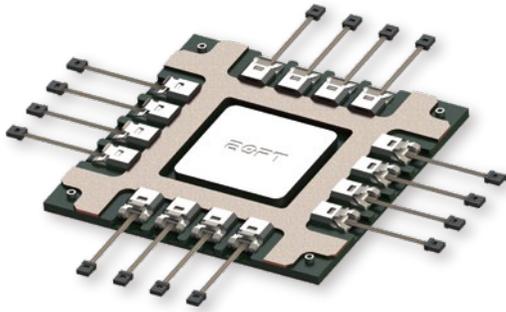
ACON OPTICS delivers high-density Grating Coupling (GC) solutions with micron-level precision, enabling reliable and scalable optical connectivity for next-generation AI infrastructure. Designed for high-bandwidth CPO systems, our GC solutions feature optimized optical paths and modular architectures for precise fiber-to-chip alignment.

Features:

- Micron-level alignment precision
- Detachable modular design
- Optimized grating optical interface
- Stable coupling performance
- AI-scale reliability

Key Specifications

- Fiber count: 40+
- FAU core pitch accuracy: $\leq 0.5 \mu\text{m}$
- CPO receptacle critical accuracy : $\leq 0.5 \mu\text{m}$
- Guide hole accuracy: $\leq 0.5 \mu\text{m}$
- SM fiber OD & concentricity: $\leq 0.1 \mu\text{m}$



CPO EC Solution

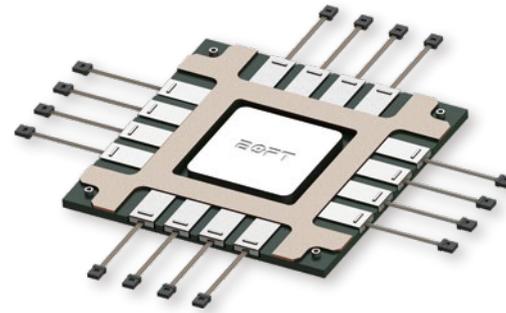
ACON OPTICS delivers high-precision Edge Coupling (EC) solutions designed for high-density CPO architectures. Featuring micron-level alignment and low-loss optical interfaces, our detachable modular design ensures reliable and scalable connectivity for AI-scale systems.

Features:

- Micron-level precision
- Detachable modular design
- Optimized optical paths
- Advanced tolerance control
- AI-scale reliability

Key Specifications

- Fiber count: 40+
- FAU v-groove accuracy: $\leq 0.5 \mu\text{m}$
- CPO receptacle critical accuracy : $\leq 0.5 \mu\text{m}$
- Guide hole accuracy: $\leq 0.5 \mu\text{m}$
- SM fiber OD & concentricity: $\leq 0.1 \mu\text{m}$



Fiber Array Unit (FAU)

ACON OPTICS delivers high-density Fiber Array Units (FAU) engineered for advanced CPO architectures. Featuring sub-micron pitch accuracy and automated fiber alignment, our FAU solutions enable low-loss coupling and ultra-compact integration for AI-scale optical interconnect systems.

PMF+SMF FA



1D Fiber Array Unit (FAU)



2D Fiber Array Unit (FAU)

Features:

- 1D & 2D high-density fiber arrays
- Sub-micron pitch accuracy
- Automated PM fiber alignment
- Minimal insertion loss

1D Fiber Array Unit (FAU) Specifications

Parameter	Specification
Fiber Count	100+
Material	BF33 / JGS2
Core Pitch	127 μm or 250 μm
Core Pitch Tolerance	$\pm 0.5 \mu\text{m}$
Polish Angle	0° or 8°
Thickness	1–5 mm

2D Fiber Array Unit (FAU) Specifications:

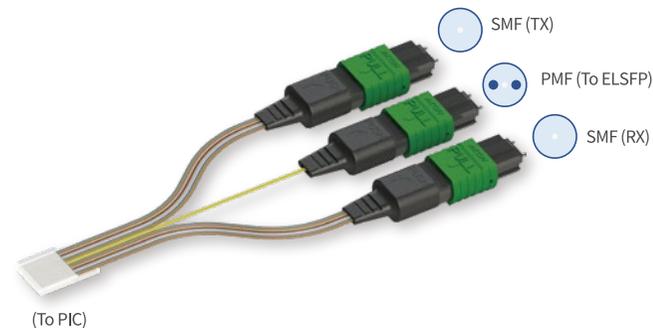
Parameter	Specification
Fiber Count	2000+
Material	BF33 / JGS2
Core Pitch	127 μm 165 μm or 250 μm
Core Pitch Tolerance	$\pm 0.5 \mu\text{m}$
Fiber Hole Angle	0° – 15°
Fiber Hole Angle Tolerance	$\pm 0.2^\circ$
Thickness	1 – 5 mm
Fiber Hole Diameter	80 μm or 125 μm
Fiber Hole Diameter Tolerance	$\pm 0.5 \mu\text{m}$

FA-MT Jumper

ACON OPTICS delivers high-precision FA-MT jumpers engineered to connect chip-level fiber arrays with system-level optical interfaces. Featuring sub-micron alignment accuracy and low-loss optical performance, enabling reliable, high-bandwidth signal transmission across advanced CPO and AI-scale data center architectures.

Features:

- Fiber count: 40+
- Low-loss MPO interface ($\leq 0.35 \text{ db}$)
- Sub-micron alignment accuracy
- SMF / PMF compatibility
- Robust pluggable design
- Simplified maintenance



(To PIC)