INDUSTRY OVERVIEW

The information contained in this section, unless otherwise indicated, has been derived from various official government publications and other publications and the market research report prepared by Frost & Sullivan which we commissioned (the "F&S Report"). We engaged Frost & Sullivan for preparing the F&S Report in respect of the [REDACTED]. We have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading in any material respect or that any fact has been omitted that would render such information false or misleading in any material respect. We have not, nor have any of us, the Joint Sponsors, the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], any of the [REDACTED], any of their respective directors and advisors, or any other persons or parties involved in the [REDACTED], independently verified the information in the various official government publications nor give any representation as to the accuracy or completeness of such information. As of the Latest Practicable Date, our Directors confirm that, after taking reasonable care, there has been no material adverse change in the market information presented in this section.

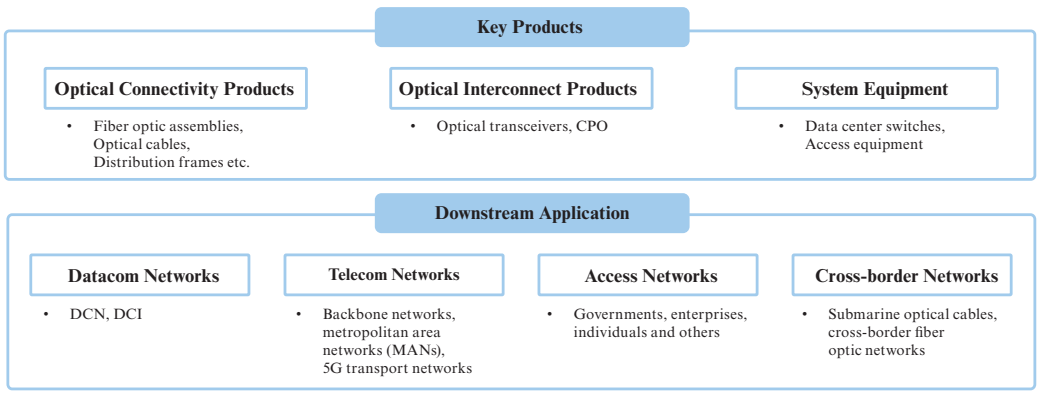
OPTICAL COMMUNICATION SERVES AS A CRITICAL INFRASTRUCTURE BACKBONE IN THE AI ERA

Optical communication refers to the transmission of information using light waves as carrier signals, primarily through optical fibers as the transmission medium to enable communication between users. Against the backdrop of explosive global growth in the AI industry, optical communication has become the dominant mode of information transmission worldwide, underpinning modern digital infrastructure and enabling high-speed, high-capacity data exchange across a wide range of application scenarios.

At the product system level, the optical communication industry has developed a well-established three-tier architecture. Core products can be broadly categorized into three segments: optical connectivity, optical interconnect and system equipment. Among these, optical connectivity products form the foundational physical layer, including fiber optic assemblies, optical cables and distribution frames, and are responsible for establishing and maintaining physical transmission links. Optical interconnect products serve as the core functional units of the system and are represented by optical transceivers and CPO, enabling high-speed optoelectronic signal conversion and low-latency interconnection. System equipment provides overall network support, including data center switches and access equipment etc., integrating components across the value chain to form a complete communication system.

From an application perspective, optical communication serves four downstream scenarios: datacommunications networks, telecommunications networks, access networks and cross-border networks. Among these, datacommunications networks represent the primary application area driving growth in the optical communication industry.

Key Product and Downstream Applications of Optical Communication Industry

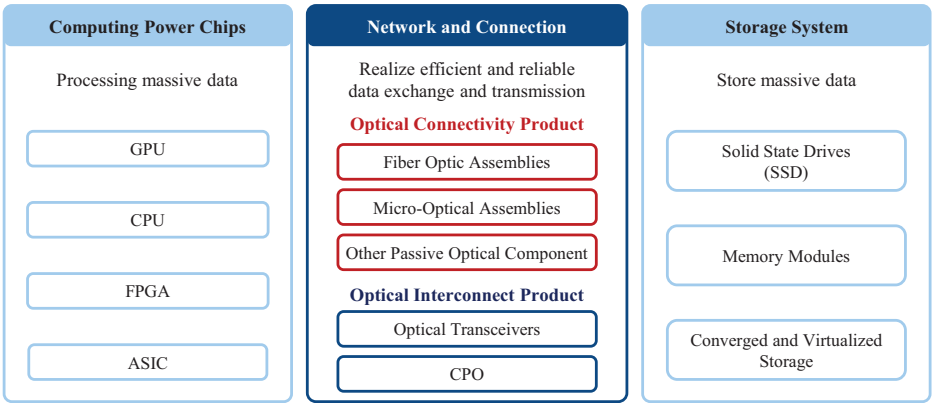


Source: Frost & Sullivan

The global AI industry is experiencing unprecedented growth, driving AI infrastructure investments into a multi-trillion-RMB capital expenditure cycle. Fuelled by the widespread adoption of large language models and multimodal applications, demand for computing power is expanding exponentially. Global AI technology giants and cloud service providers continue to increase their investments in foundational infrastructure such as data centers, high-speed interconnects and computing networks, resulting in a significant year-on-year expansion in investment scale. Global AI infrastructure investment increased from RMB218.0 billion in 2021 to RMB2,392.9 billion in 2025, representing a CAGR of 82.0%. This growth momentum is expected to persist, driven by the structural shift of computing demand toward inference workloads and the continued expansion of cloud-based AI services. By 2030, the investment amount is projected to further increase to RMB6,526.5 billion.

As AI models continue to advance in cognitive capabilities, AI agents increasingly improve their autonomous execution functions, and intelligent robots progress toward broader deployment, the coordinated evolution of these three domains is placing higher demands on computing infrastructure in terms of scale and density. Optical communication technologies, particularly high-density optical connectivity, provide critical support for ultra-large-scale computing resource scheduling, high-speed data transmission, and the deployment of next-generation digital services.

AI Computing Power Infrastructure



Source: Frost & Sullivan

ANALYSIS OF GLOBAL OPTICAL CONNECTIVITY INDUSTRY

Overview of Optical Connectivity Industry

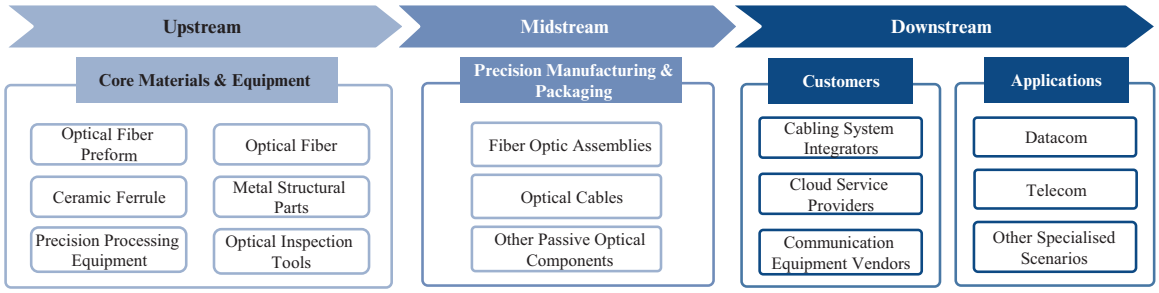
The optical connectivity industry is a core foundational segment of optical communication systems, focusing on hardware and ancillary components used for optical signal transmission, distribution and interconnection. It provides critical support for the construction and operation of high-speed communication networks in key application areas such as data communication and telecommunications. Based on product types, the industry can be classified into three major categories, which together form an integrated optical connectivity hardware system supporting the expansion and upgrade of global communication networks.

- Fiber optic assemblies, as a core interconnect medium between equipment, enable fast and precise connections between devices and between devices and distribution frames, and are widely used in scenarios such as high-speed interconnect in data centers, patching in telecom equipment rooms, 5G base stations and FTTx access, serving as a key component for ensuring low-latency, high-bandwidth transmission.
- Optical cables serve as the core physical medium for long-distance optical transmission, including outdoor backbone optical cables and FTTx drop cables, primarily supporting the deployment of backbone networks, metropolitan area networks and access networks.

- Other products consist of complementary passive components and distribution management components, responsible for optical signal regulation and link operation and maintenance. Passive components include adapters, PLC optical splitters, field termination devices etc.; distribution management components cover optical distribution frames, fiber distribution boxes, splicing components and intelligent cabling systems.

Within the optical connectivity industry value chain, the upstream segment serves as the technological foundation of industry development. It primarily includes core raw materials such as optical fiber preforms, optical fibers, ceramic ferrules and metal structural components, as well as supporting equipment including precision machining tools and optical inspection systems. The midstream segment represents the core manufacturing stage of optical connectivity products. At this stage, enterprises integrate upstream raw materials through precision assembly and large-scale manufacturing processes to produce key products such as fiber optic assemblies, various types of optical cables, passive optical components and distribution management components. The downstream segment consists of two tiers: direct customers and end-use applications. Direct customers mainly include cabling system integrators, IDC service providers and communication equipment vendors, which are responsible for bulk procurement and solution integration. End-use applications cover major fields such as data communication and telecommunications, as well as specialised application scenarios including electric power, transportation and healthcare.

Value Chain of Optical Connectivity Industry



Source: Frost & Sullivan

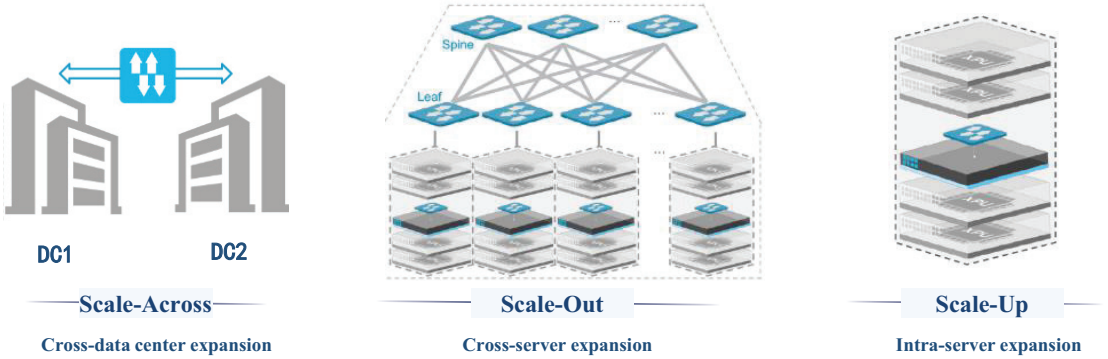
In computing power centers, optical connectivity and optical interconnect are closely integrated, supporting the expansion of AI computing power across three dimensions: Scale-out, Scale-up and Scale-across.

- **Scale-across** focuses on wide-area collaboration across geographically distributed data centers, supporting large-scale computing resource sharing and providing computing network infrastructure for global data flows.

- **Scale-out** focuses on physical interconnections across servers and nodes, integrating tens to hundreds of servers into a large-scale computing pool via high-speed optical links. This directly addresses the scalability requirements of AI training clusters and forms the foundational layer of supercomputing centers.

- **Scale-up** concentrates on chip-level and board-level interconnect within servers. By leveraging technologies such as CPO, scale-up architectures overcome performance bottlenecks within an individual rack, significantly reducing inter-chip latency and power consumption, while maximising computing power density.

Three Paths for Optical Connectivity and Optical Interconnect to Boost AI Computing Power



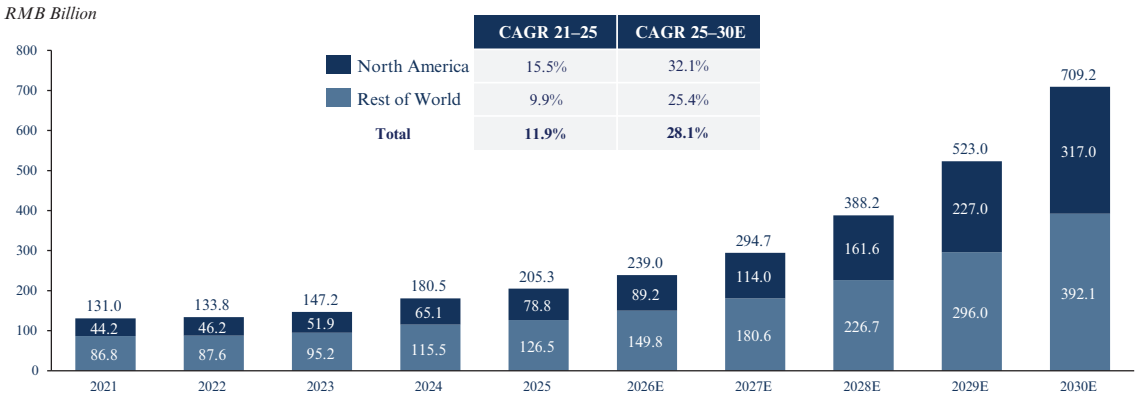
Source: Frost & Sullivan

Market Size of Global Optical Connectivity Industry

The global optical connectivity industry has demonstrated strong growth momentum in recent years. In terms of end user spend, the total market size was RMB131.0 billion in 2021, rising to RMB205.3 billion in 2025, representing a CAGR of 11.9% from 2021 to 2025. Looking ahead, the market is expected to continue its expansion, reaching RMB709.2 billion by 2030, with a CAGR of 28.1% from 2025 to 2030.

The North American market is the largest regional market for optical connectivity globally, primarily driven by the rapid build-out of AI computing clusters and strong demand for high-density, low-latency optical connectivity hardware from hyperscale data centers, which has supported robust market expansion in recent years. In 2025, the North American market size reached RMB78.8 billion, representing a CAGR of 15.5% from 2021 to 2025. Going forward, as the demand for optical connectivity in AI data centers continues to be released, the North American market is expected to maintain strong growth resilience, with market size projected to increase to RMB317.0 billion by 2030, representing a CAGR of 32.1% from 2025 to 2030.

Market Size of Optical Connectivity (in Terms of End User Spend), Global and North American, 2021–2030E



Source: Expert Interviews, Frost & Sullivan

INDUSTRY OVERVIEW

Overview of Global Fiber Optic Assembly Industry

Fiber optic assemblies are high-precision optical interconnection components manufactured through precision termination and polishing processes, using fiber optic connectors at both ends of an optical cable. They are primarily used for optical signal interconnection between devices and between devices and distribution frames, serving as a key foundational component for flexible deployment and stable transmission in optical communication networks.

Based on interface types and application scenarios, the industry typically classifies these assemblies into two major categories: conventional fiber optic assemblies and high-density fiber optic assemblies.

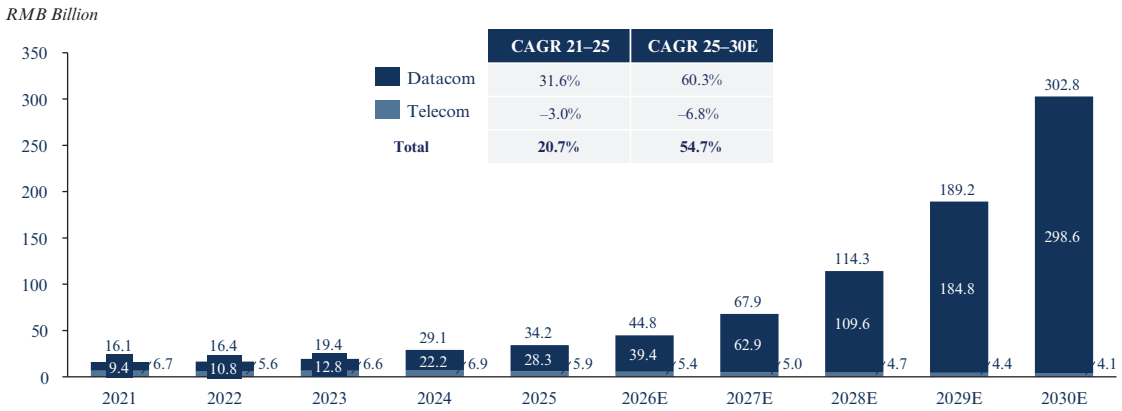
- Conventional fiber optic assemblies typically adopt simplex or duplex optic connectors, most commonly LC, SC and other interfaces, and offers advantages such as flexible deployment, broad compatibility and moderate cost. They are widely used in traditional optical communication scenarios including telecom equipment rooms, base stations, FTTx deployment and enterprise networks.
- High-density fiber optic assemblies are characterised by multi-fiber optic assemblies including MTP®/MPO and next-gen VSFF assemblies (e.g. MMC), which support multi-channel parallel optical transmission within a single interface. These products feature high integration density, compact form factors, and large transmission capacity, making them well suited for high-density cabling requirements in data centers and for high-speed interconnect applications in AI computing clusters. As such, high-density fiber optic assemblies represent a key upgrade direction in the optical connectivity sector.

Market Size of Global Fiber Optic Assembly Industry

In 2025, based on end-user spend, the global market size for fiber optic assemblies reached RMB34.2 billion. Within this market, datacom fiber optic assemblies served as the core growth engine, achieving a CAGR of 31.6% from 2021 to 2025, significantly outpacing the overall industry growth rate. This strong performance was primarily driven by the surge in global demand for AI computing power and the continued upgrade of high-density interconnect architectures in data centers. The increasing requirements of large-scale model training and inference clusters for high-bandwidth and low-latency transmission have accelerated the evolution of internal data center cabling towards higher speed and higher density, resulting in rapid volume growth for high-density fiber optic assemblies represented by MTP®/MPO and MMC.

Looking ahead, as the large-scale commercial adoption of CPO further stimulates demand for high-value and high-density fiber optic assemblies, growth momentum in the datacom segment is expected to accelerate. From 2025 to 2030, the CAGR for the datacom fiber optic assembly market is projected to increase to 60.3%, with the market size reaching RMB298.6 billion by 2030.

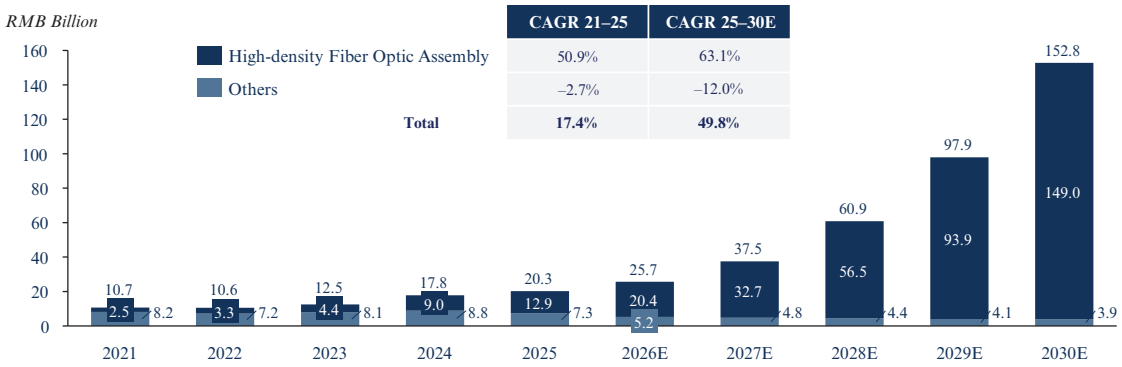
Market Size of Fiber Optic Assembly (in Terms of End User Spend, by Application), Global, 2021–2030E



Source: Expert Interviews, Frost & Sullivan

From a product type perspective, driven by the rapid growth in demand from the data communication market, the high-density fiber optic assembly market has grown significantly in recent years. Measured by revenue generated by product and solution providers, the market size reached RMB12.9 billion in 2025, representing a CAGR of 50.9% from 2021 to 2025, and has become the primary growth engine of the fiber optic assembly sector. This rapid growth is primarily attributable to strong demand for high-density and high-speed interconnect solutions from AI computing clusters and hyperscale data centers, as well as the proliferation of 800G/1.6T optical transceivers. These trends, together with the heightened requirement for rack space efficiency, have accelerated the replacement of traditional single-fiber connectors with multi-fiber, highly integrated high-density solutions. In parallel, ongoing efforts by data center operators to optimize energy consumption and improve operational efficiency have further accelerated the penetration of high-density products. Looking ahead, the high-density fiber optic assemblies market expansion is expected to continue. The market size is projected to rise to RMB149.0 billion by 2030, representing a CAGR of 63.1% from 2025 to 2030.

Market Size of Fiber Optic Assembly (in Terms of Revenue, by Product), Global, 2021–2030E

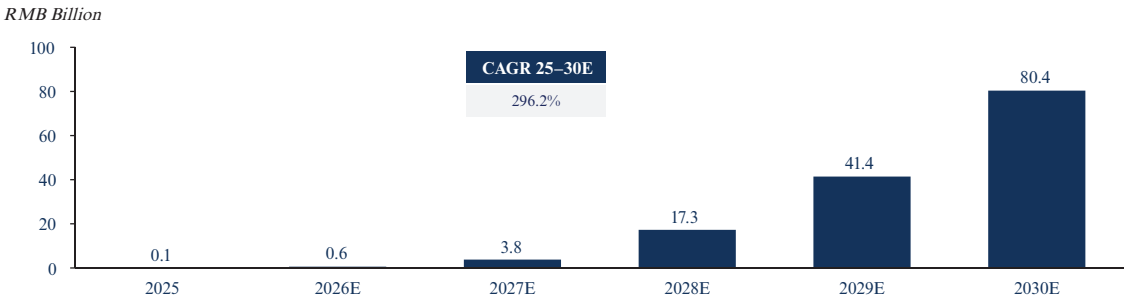


Source: Expert Interviews, Frost & Sullivan

The large-scale commercial adoption of CPO continues to drive demand expansion and upgrades to product structure in the fiber optic assembly market. The large-scale cross-rack and cross-node networking expansion of AI computing clusters, combined with the significant increase in port densities brought by CPO, is fuelling rapid growth in demand for high-density, multi-channel, low-loss external interconnect fiber optic assemblies. Benefiting from the accelerating

commercialisation of CPO, the CPO fiber optic assembly market is poised for explosive growth. In terms of revenue of product and solution providers, the market size is projected to rise rapidly from RMB0.1 billion in 2025 to RMB80.4 billion by 2030, representing a CAGR of 296.2% from 2025 to 2030, establishing itself as a key growth engine of the optical connectivity market.

Market Size of CPO Fiber Optic Assembly (in Terms of Revenue), Global, 2025–2030E



Note: CPO fiber optic assembly refers to high-performance fiber optic connection components applied in external interconnect scenarios of CPO architecture switches, enabling external optical path connection and signal transmission between CPO switches, servers and other network equipment.

Source: Expert Interviews, Frost & Sullivan

Drivers and Development Trends of Global Optical Connectivity Market

The continued deepening of digital infrastructure is driving sustained and rigid demand growth. Large-scale construction and ongoing upgrades of global data centers, telecommunications operator networks, and broadband access networks provide stable demand support for basic optical connectivity products such as fiber optic assemblies and optical cables. For new infrastructure deployment, high-performance optical connectivity components are indispensable for physical-layer signal transmission. As network coverage continues to expand and link deployment density increases, basic optical connectivity products function as the "vascular system" of communication networks, underpinning long-term, rigid market demand and enabling the industry to maintain as a steady development trajectory.

The rapid iteration of high-speed communication technologies is driving the industry toward multi-fiber, high-density solutions. Products such as fiber optic assemblies and optical cables are undergoing continuous upgrades in transmission loss, bandwidth capacity and anti-interference performance, while also evolving towards higher density, smaller form factors and lower loss. Technological advancements not only enhance product value-added but also raise the overall technical standards of the industry, accelerating the phase-out of low-end capacity and promoting a structural shift toward multi-fiber, high-density solutions.

CPO technology represents a major innovation direction in optical interconnect. The rapid evolution of CPO-based interconnect architectures is driving optical connectivity to migrate from traditional pluggable forms to chip-level and near-package high-density interconnect solutions, profoundly reshaping the industry's product structure and technology roadmap. To address the increasing requirements for high-bandwidth, low-power consumption, high integration in computing interconnect, products such as fiber optic assemblies and board-level optical interconnect components are advancing towards lower loss, miniaturisation and array-based designs. As a result, demand for next-generation components, including high-precision optical connectors and high-density optical fiber arrays is increasing rapidly.

The continuous optimisation of the market supply system is supporting the efficient development of the industry. As downstream application scenarios such as AI computing clusters accelerate deployment, higher requirements are being placed on the delivery efficiency and supply stability of optical connectivity products, driving the industry's supply system to evolve towards globalisation and coordination. The growing adoption of high-density optical connectivity components and customised solutions has enhanced collaboration across the industrial chain. Meanwhile, the widespread use of intelligent manufacturing equipment, the ongoing optimization of global production capacity layouts and the gradual maturation of rapid-response supply mechanisms are improving the industry's overall supply capabilities and supply chain resilience. As a result, the optical connectivity market is increasingly moving towards greater scale, efficiency and global concentration.

Competitive Landscape of the Global Optical Connectivity Industry

The major participants in the global optical connectivity product and solution industry are manufacturers primarily based in China. Industry competition has shifted towards competition based on comprehensive capabilities, encompassing R&D of high-speed and high-density products, mass production capabilities, and global delivery and service capabilities. Looking ahead, leading manufacturers with technological barriers, scale advantages and high-quality customer resources are expected to further expand their market shares, driving a continued increase in industry concentration.

The optical connectivity industry is competitive and relatively fragmented, with the top five manufacturing solution providers collectively accounting for 33.9% of the market, in terms of fiber optic assembly revenue. In 2025, measured by revenue from fiber optic assemblies, our Group ranked first globally, achieving revenue of RMB2.0 billion, representing a market share of 9.7%. From 2023 to 2025, our Group recorded a revenue CAGR of 115.3%, which is the highest among the global top five optical connectivity product and solution providers.

Ranking of Optical Connectivity Product and Solution Providers (by fiber optic assembly revenue), Global, 2025

Rank	Company Name	Revenue *(RMB Billion)*	Market Share	Fiber Optic Assemblies Revenue CAGR 23–25
1	**Our Group**	**2.0**	**9.7%**	**115.3%**
2	Company A	1.5	7.2%	81.1%
3	Company B	1.3	6.7%	38.0%
4	Company C	1.1	5.5%	33.9%
5	Company D	1.0	4.8%	25.1%

Source: Company Reports, Frost & Sullivan

- Founded in 2011 and headquartered in Shenzhen, China, Company A is a company listed on the Beijing Stock Exchange. The company specializes in the R&D, manufacturing and sales of passive optical components in the optical communications sector.
- Founded in 1992 and headquartered in Hong Kong, Company B is a listed company on the Stock Exchange of Hong Kong. Its business covers copper and fiber optic cable assemblies, digital cables and servers.
- Founded in 2000 and headquartered in Shenzhen, China, Company C is a listed company on the Shenzhen Stock Exchange. Its products include optical communication components and integrated functional modules.
- Founded in 2003 and headquartered in Zhejiang, China, Company D is a listed company on the Shenzhen Stock Exchange. Its core products include optoelectronic chips, optoelectronic modules, fiber optic connectors and high-speed copper cables.

In 2025, by high-density fiber optic assembly revenue, our Group ranked first globally with a revenue of RMB1.6 billion, representing a market share of 12.6%.

Ranking of Optical Connectivity Product and Solution Provider (by high-density fiber optic assembly revenue), Global, 2025

Rank	Company Name	Revenue *(RMB Billion)*	Market Share
1	**Our Group**	**1.6**	**12.6%**
2	Company A	1.1	8.5%
3	Company B	0.9	6.8%
4	Company C	0.8	6.5%
5	Company D	0.5	4.2%

Source: Company Reports, Frost & Sullivan

Entry Barriers to the Global Optical Connectivity Industry

Customer Base

Optical connectivity products directly affect signal transmission stability and are critical components in downstream applications. Accordingly, customers impose stringent requirements on suppliers in terms of product quality, delivery capability and long-term reliability. Once qualified, customers typically maintain long-term partnerships. Supplier certification processes are often lengthy and costly, while customer requirements remain highly differentiated. As a result, new entrants generally face significant challenges in obtaining customer certifications and meeting customer requirements, resulting in significant customer entry barriers.

Technology

The manufacturing of optical connectivity products involves the integration of multiple disciplines, and is subject to precision requirements. It relies on advanced equipment and the long-term accumulation of manufacturing know-how. Leading enterprises have standardised manufacturing processes and maintained stable product performance through automated systems. New entrants generally face significant challenges in conducting R&D, making substantial equipment investment and meeting market quality standards within a short period, resulting in high technology barriers to entry.

Talent

The production of optical connectivity products depends on interdisciplinary professionals with expertise in optics, precision machinery, materials science and other related fields, as well as skilled and experienced technical engineers and production workers. Through years of operational experience, leading enterprises have established professional teams with extensive experience in R&D, large-scale manufacturing and global operations. New entrants generally face significant difficulties in attracting, training and assembling talent teams with comparable professional capabilities and industry experience within a short period of time, resulting in substantial talent barriers to entry.

Operational Management

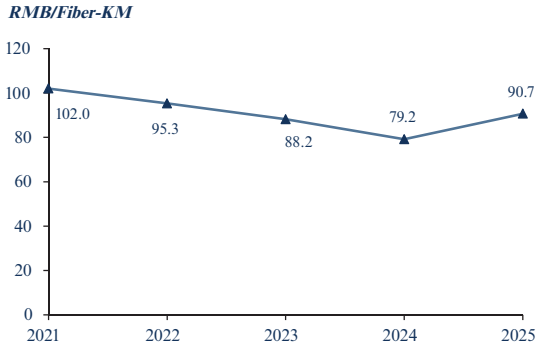
Large-scale operational management of optical connectivity products places high demands on process refinement, digitalisation and coordination capabilities. Leading enterprises have established mature operational management systems and integrated digital systems such as MES and ERP to support large-scale production, ensuring stable product quality, high yields and operational consistency. Enterprises with insufficient operational management experience and system capabilities often struggle to match the efficiency, quality consistency and cost control achieved by industry leaders, resulting in significant operational management barriers to entry.

Cost Analysis of the Global Optical Connectivity Industry

From 2021 to 2025, there were significant price disparities between optical fiber of different technical specifications, while the global average prices of optical fiber exhibited a trend of initial decline followed by recovery. Affected by industry capacity expansion and intensified market competition, the average price of optical fiber slightly declined to RMB88.2 per fiber-kilometer in 2023 and further declined to RMB79.2 per fiber-kilometer in 2024. Driven by surging demand fueled by AI computing power, the average price of optical fiber rebounded to RMB90.7 per fiber-kilometer in 2025. In the first quarter of 2026, overall industry supply remained relatively tight due to the expansion of computing power infrastructure, leading to an upward trend of the average optical fiber price.

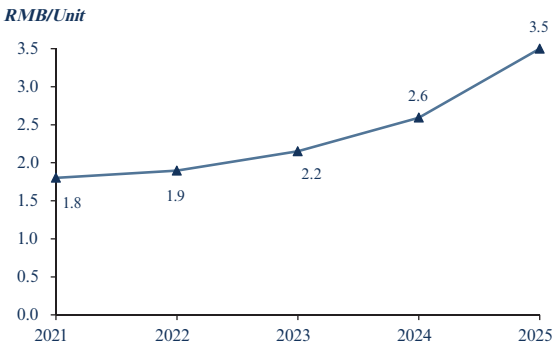
From 2021 to 2025, there are significant price disparities between ferrules for fiber optic assemblies with different product types, while the global average prices of ferrules exhibited a trend of steady growth. Prices increased moderately from 2021 to 2023, reaching RMB2.6 per unit in 2024 and continuing to grow. Driven by AI computing power demand and supply constraints, ferrule prices further increased to RMB3.5 per unit in 2025. In the first quarter of 2026, structural shortages persisted for high-end ferrules, leading ferrule prices to continue their upward trend.

Average Price of Optical Fiber, Global, 2021–2025



Source: Frost & Sullivan

Average Price of Fiber Optic Assemblies Ferrule, Global, 2021–2025



Source: Frost & Sullivan

OVERVIEW AND MARKET SIZE OF CPO FIBER ARRAY UNITS AND FIBER SHUFFLE

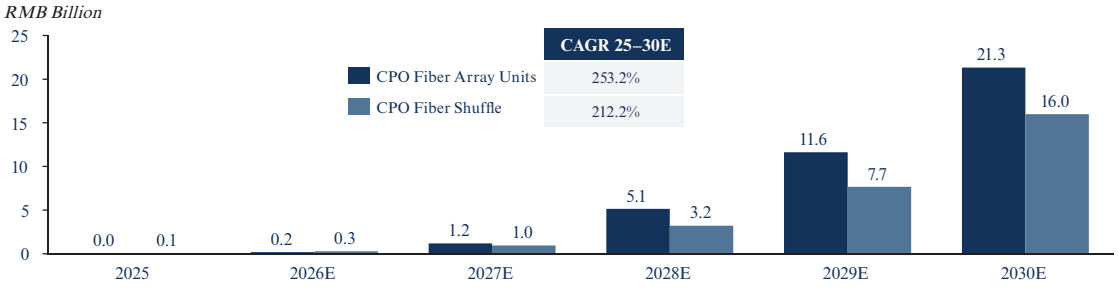
Clear roadmaps from global AI infrastructure providers are accelerating the large-scale commercial deployment of CPO technology. The market size for CPO optical engines is expected to experience rapid growth, reaching RMB204.2 billion by 2030, representing a CAGR of 218.7% from 2025 to 2030.

As CPO architectures emphasise high density, miniaturisation and maintainable interface design, more stringent requirements are imposed on supporting passive interconnect optical components, including high-precision optical fiber array units (FAUs), fiber shuffles, and ultra-compact high-density pluggable connectors. In CPO systems, silicon photonics engines must

be coupled with FAUs to enable optical input/output, which in turn requires highly precise optical alignment between the photonic integrated circuit (PIC) and the FAUs. This alignment process becomes increasingly challenging as channel counts increase and chip sizes expand. CPO solutions also require the use of fiber shuffles to manage fiber bundles and enable efficient signal distribution and routing. The adoption of fiber shuffles, which function as flexible optical backplanes, for the connection between optical engines to the front panels can effectively address manufacturing reliability issues arising from inconsistent fiber lengths due to varying distances between optical engines and front-panel interfaces. These passive components require micron-level fabrication precision, low insertion loss, array uniformity and mass manufacturing capability in order to support chip-level and board-level optical interconnects and enable the large-scale deployment of future 1.6T-and-above optical interconnect architectures. As CPO technology continues to mature and adoption accelerates, the market demand for CPO-related passive interconnect optical components is expected to grow significantly.

The market size for CPO FAUs is projected to reach RMB21.3 billion by 2030, representing a CAGR of 253.2% from 2025 to 2030. In addition, the CPO fiber shuffle market is expected to reach RMB16.0 billion by 2030, with a CAGR of 212.2% over the same period.

Market Size of CPO Fiber Array Units and Fiber Shuffle (in Terms of Revenue), Global, 2025–2030E



Source: Frost & Sullivan

SOURCE OF INFORMATION AND RESEARCH METHODOLOGY

We engaged Frost & Sullivan for preparing an independent industry report in respect of the global optical connectivity and fiber optic assembly market. The information from Frost & Sullivan disclosed in this document is extracted from the Frost & Sullivan Report, a report commissioned by us for a fee of RMB500,000, and is disclosed with the consent of Frost & Sullivan. The Frost & Sullivan Report has been prepared by Frost & Sullivan independently without any influence from us or other interested parties. Frost & Sullivan is an independent global consulting firm founded in 1961 in New York. Its services include, among others, industry consulting, market strategic consulting and corporate training. Frost & Sullivan conducted (i) primary research, which involved discussing the status of the industry with certain leading industry participants, and interviews with industry experts on a best-effort basis to collect information in aiding in-depth analysis; and (ii) secondary research, which involved reviewing government statistics, industry association publication, company reports, independent research reports and data based on its own research database.