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Global AI Trend Tracker – CIOE 2026 takeaways

EQUITY: TECHNOLOGY

400G chips, SiPh / TFLN / Coherent Lite, NPO/CPO/OCS

Quick Note

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We attended the 27th China International Optoelectronic Exposition (CIOE 2026) in Shenzhen during 9-10 September, when we attended tech forums and met dozens of companies in the optical communication supply chain, including optical transceivers, components, electronic/optical chips, fiber, material and equipment. Here are our key observations and takeaways: 1) **1.6T transceiver** is already the mainstream product and **may have an extended lifecycle**, as **400G per lane poses significant challenges from both the optical and electronic side.** 2) High-end component and material shortages continue to create **supply bottlenecks, including 3nm DSP, 200G EML, 200G PD, 4-Inch / 6-Inch InP substrate, and 1.6T network switch**, while also creating ample room for domestic suppliers to gain shares in the global market. 3) **NPO caught the spotlight** in the expo, and while there are multiple potential solutions, we think only first-movers which work closely with large global AI customers could benefit in the initial commercialization stage. We think there are **multiple technology upgrade roadmaps in scale-up, scale-out, scale-across, and the recently discussed scale-in network**, which lead to higher technology barriers and more challenging environment for the supply chain.

We walked away from the conference with more confidence about the demand outlook in the AIDC optical network, and we believe the leading market players which could stay ahead of the technology curve in this ever-changing market should benefit from this upcycle. We like the **high-end optical transceiver / NPO solution provider Zhongji InnoLight (300308 CH / 3308 HK, Buy) and Accelink (002281 CH, Buy), NPO / CPO component maker TFC (300394 CH, Buy), high-end AIDC fiber and fiber connector maker YOFC (6869 HK, Buy) and Shenzhen T&S (300570 CH, Buy)**.

What's in the spotlight: 1.6T transceiver is the main growth pillar, 2.4T / 3.2T transceivers still need to tackle multiple technology challenges; NPO comes to center stage but architecture remains fragmented

1.6T transceiver is already the mainstream product in the scale-out network, and multiple vendors showcased their 1.6T transceiver products in the expo. Due to better automation technology, the 1.6T transceiver assembly efficiency could be improved, in our view, leading to faster capacity expansion for the transceiver companies. However, we believe component shortages remain the key bottleneck, and the incumbent 1.6T transceiver makers i.e., **InnoLight should be able to maintain its leading positions**, owing to effective supply chain management.

We think 1.6T cycle may stay for longer, as next-gen transceivers, i.e., 2.4T / 3.2T, still faces technology challenges in the 400G per lane era. Rather than following the traditional Silicon photonics roadmap, it may require new materials, i.e., TFLN or modulation technology, i.e., Coherent Lite. We note that some suppliers have already made progress in these areas, such as **TFLN modulators from Murata (6981 JP, Buy, covered by Manabu Akizuki) and Liobate (unlisted)**.

NPO caught the spotlight in the conference, and we noted multiple suppliers showcasing their NPO solutions in the expo, including **Hisilicon (unlisted; 3.2T VCSEL-based CPO, 7.2T CPO with internal light source), CIG (603083 CH / 6166 HK, Not rated; 6.4T Siph-based CPO with external light source), Accelink (002281 CH, Buy; 6.4T NPO for scale-up network)**. We think there are no industry-wide standards for the NPO market yet, and we think early movers could enjoy higher value contents and margins by providing customized solutions, if they can secure orders from large global AI customers.

What are the key bottlenecks: 100mW+ CW laser / 200G EML / PD still need to



See Appendix A-1 for analyst certification, important disclosures and the status of non-US analysts.

improve yield rate; and high-end DSP / TIA / PCB / multicore fibers still in shortage

70mW CW laser and 100G EML / PD chips are already in mass production, leading to robust shipment growth in 800G transceiver products. However, 100mW+ CW laser and 200G EML / PD chipmakers still need to improve yield rates, in order to close the demand-supply gap for 1.6T transceiver and NPO products. We note that high-end (3nm) DSP, PCB (with mSAP technology) and multi-core fibers (as well as the high precision ferrules) are potentially the new choking points, apart from optical chips in the supply chain. On the risk side, this may lead to lower-than-expected shipments of high-end products (i.e., 1.6T transceivers); on the bright side, high-end chip / component shortages may lead to better opportunities for domestic players to gain shares in the global market.

What's the next focus: domestic substitution in materials, lasers, and equipment segment; OCS and CPO penetration; scale-in networks?

We think China's optical communication companies play significant roles in the global AIDC supply chain. While some companies i.e., InnoLight, Eoptolink, and TFC have already taken leading positions in the transceiver / component sectors, there is still ample room to grow in the upstream materials, laser, and equipment market. Based on our observations from the CIOE conference, we note that some Chinese players have made solid progress in multiple segments from the CIOE conference, such as: 1) **the InP and SiGe substrate materials, from Yunnan Gemanium (002428 CH, Not rated)**; 2) the high-end EML / CW laser and PD chips, from **Source Photonics (unlisted), Everbright Photonics (688048 CH, Not rated), Shijia Photons (688313 CH, Not rated), Etern-laser (unlisted), SiFotonics (unlisted)**; 3) multi-core and hollow-core fibers from **YOFC, Hengtong (600487 CH, Not rated), China ZTT (600522 CH, Not rated)**; 5) optical transceiver automation / coupling / testing equipment from **Luxshare (002475 CH, Buy, covered by Anne Lee), Bozhon Precision (688097 CH, Not rated), Semight Instruments (688808 CH, Not rated) and Microview (unlisted)**.

OCS was another hot topic at the CIOE 2026, as it has the potential to be widely adopted in various network segments, rather than being limited to Google's scale-out network. According to Cigna AI's presentation, OCS market revenue will cross USD2bn this year and exceed USD8bn by 2030E. The scale-up OCS (tied up with GPU) may exceed the OCS application in scale-out network by 2030E, according to Cigna AI. In this conference, we noted multiple solutions for OCS, such as the **liquid crystal OCS from Coherent (COHR US, Not rated), MEMS (Micro-Electro-Mechanical Systems) based OCS from Accelink, the SiPh-based OCS from Taclink (688205 CH, Not rated)**. We believe that the OCS architecture is still fragmented, and that the entire supply chain needs to make more efforts for OCS commercialization.

NVIDIA (NVDA US, Not rated) recently discussed the scale-in network architecture, as the fifth pillar for NVIDIA's AI networking (*link*), which sparked a lot of discussion at the CIOE 2026. According to NVIDIA, the scale-in network is powered by *NVIDIA BlueField-4* and connected over *NVIDIA Spectrum-X Ethernet* . As scale-in network accelerates the access, security, data movement, and infrastructure operations surrounding AI compute, it might become a new demand driver for AI networking in the future, when AI factories become widely adopted in the enterprise environment.