



System Architecture Panel and Optical Components Market Update

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Agenda

- Optical Components Market Update
 - History
 - 2024 review
 - Market forecasts for AI Networks and Coherent transceivers
- Panel introduction

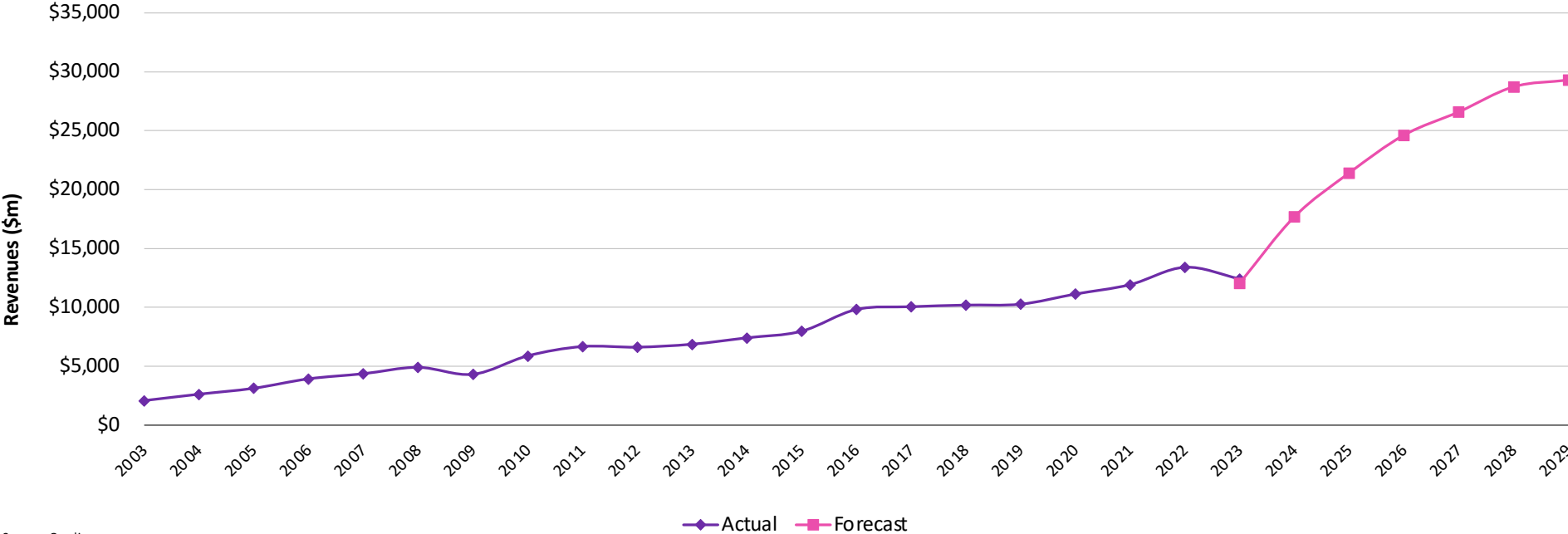


Optical Components Market Update

Optical Components Market History and Forecast

GROWTH RATE IS ACCELERATING DUE TO AI NETWORKS

Optical Components Merchant Market



Source: Omdia

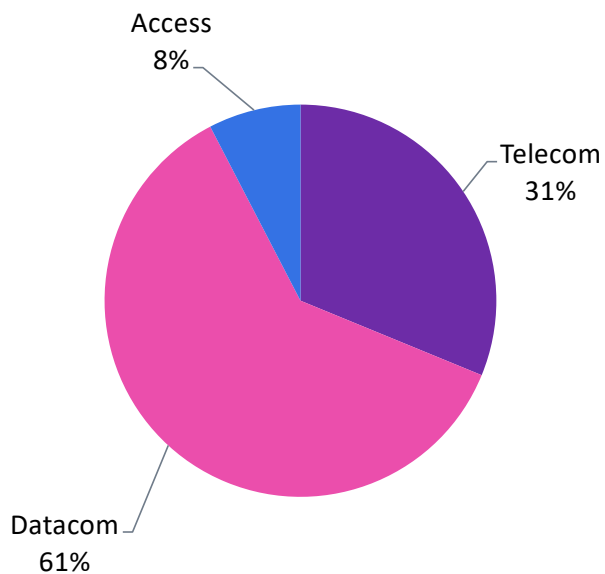
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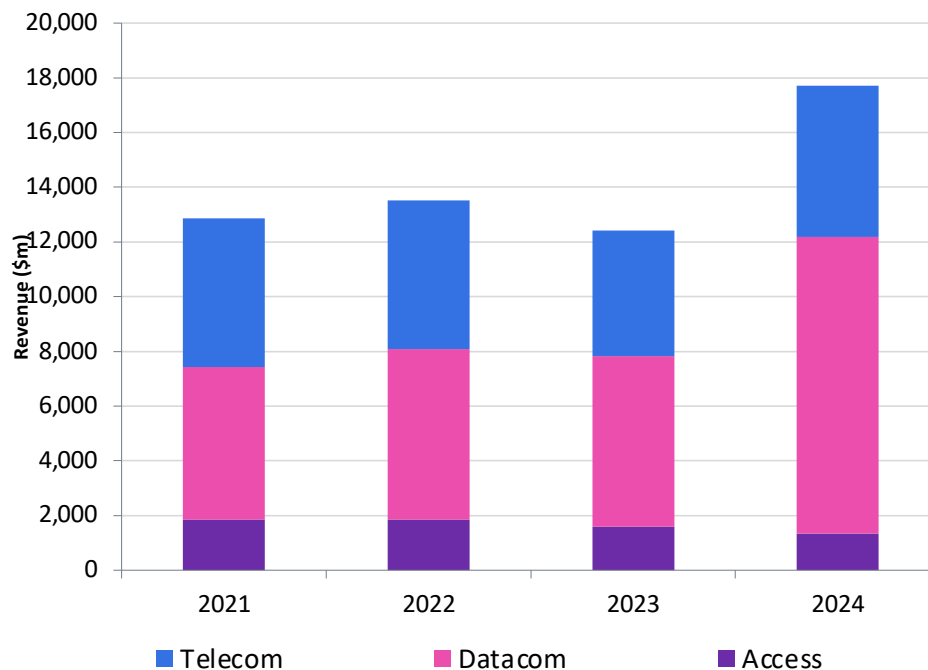
4Q24 Global Optical Components Market

43% GROWTH RATE FROM 2023 TO 2024

1Q24–4Q24: \$17.7bn OC market



Market share dashboard (by application)



Source: Omdia

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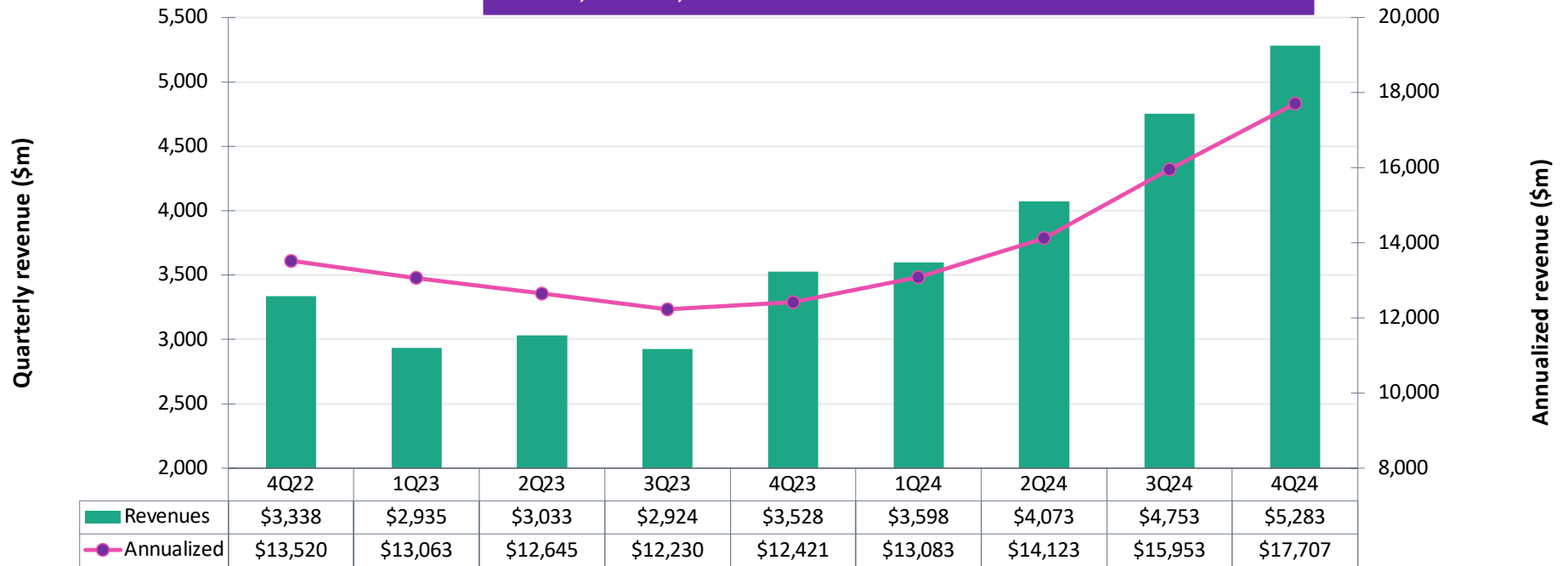
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4Q24 Global Optical Components Market

DOUBLE DIGIT QOQ GROWTH RATE FROM 2Q24 TO 4Q24 - 13.2%, 16.7%, 11.1% AND EXPECTED TO CONTINUE IN 2025

4Q22 to 4Q24 total revenue



Source: Omdia

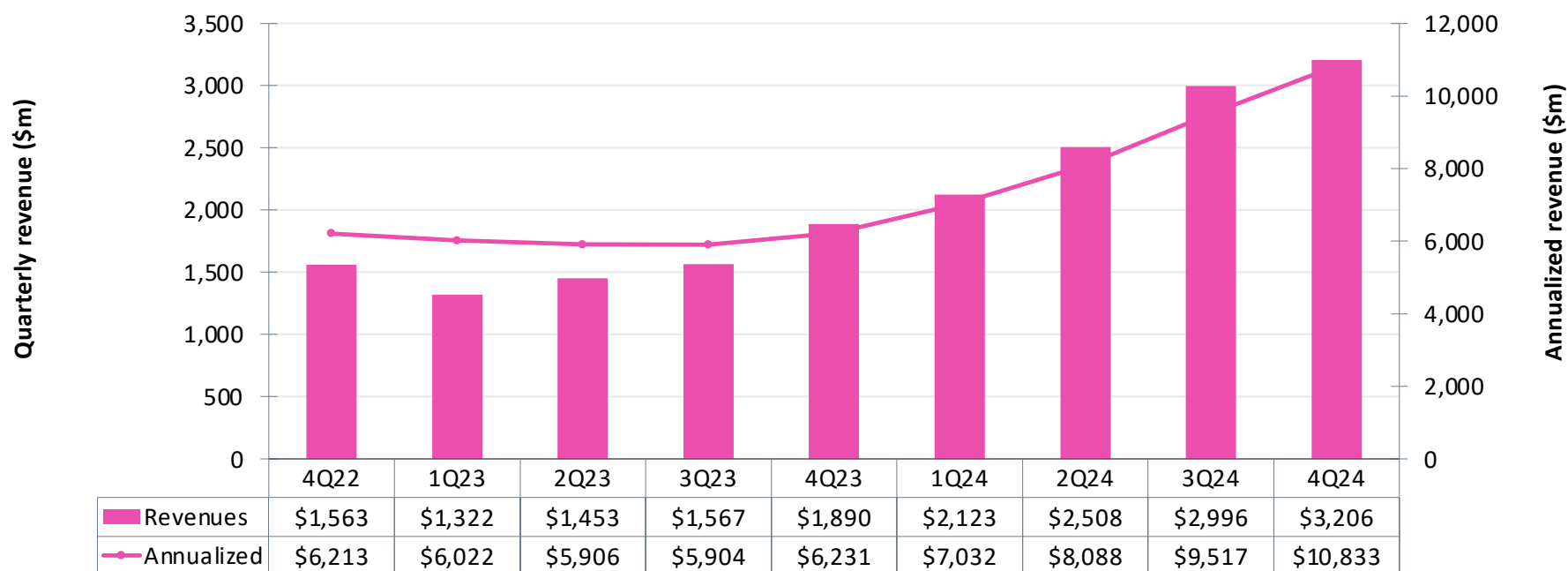
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4Q24 Global Optical Components Market - Datacom

UNPRECEDENTED QOQ GROWTH RATE FOR SEVEN STRAIGHT QUARTERS FOR DATACOM SECTOR

Datacom



Source: Omdia

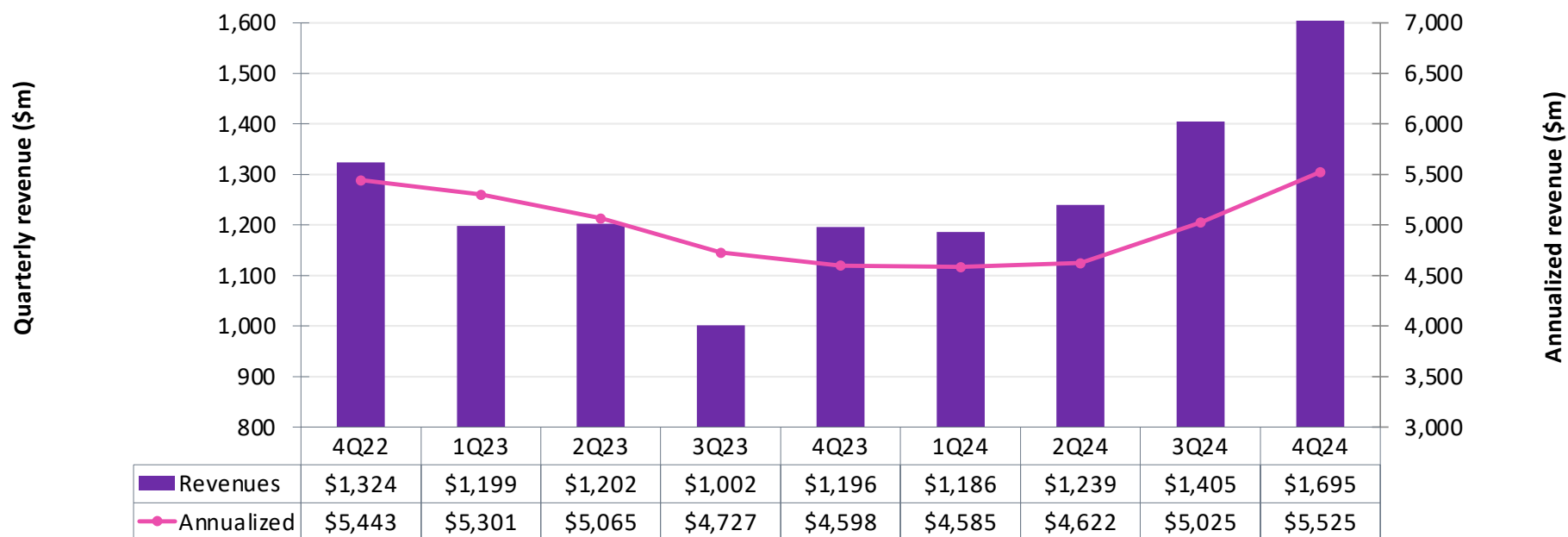
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4Q24 Global Optical Components Market – Telecom

TELECOM SECTOR REBOUNDED STARTING 2Q24 AND ACCELERATED GROWTH IN 3Q AND 4Q

Telecom



Source: Omdia

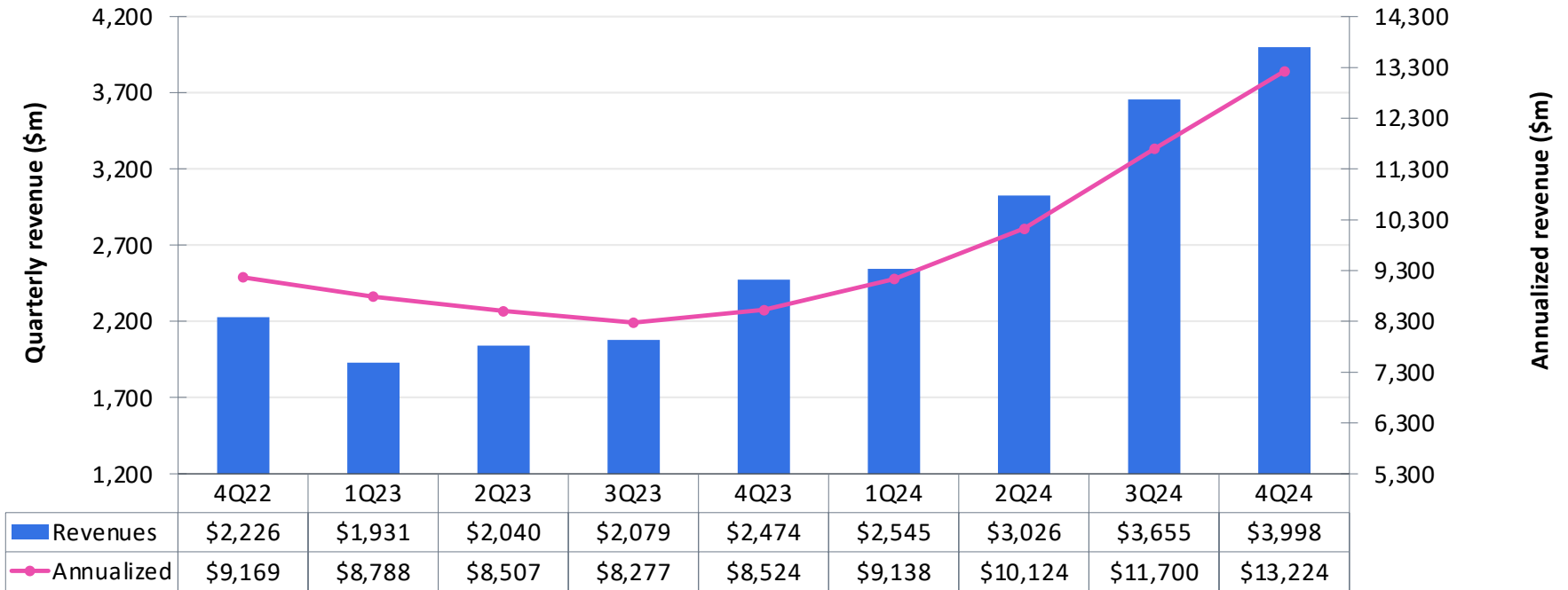
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4Q24 Global Optical Components Market – Transceivers

TRANSCIVERS MARKET DRIVES THE GROWTH IN GLOBAL OC

Transceivers



Source: Omdia

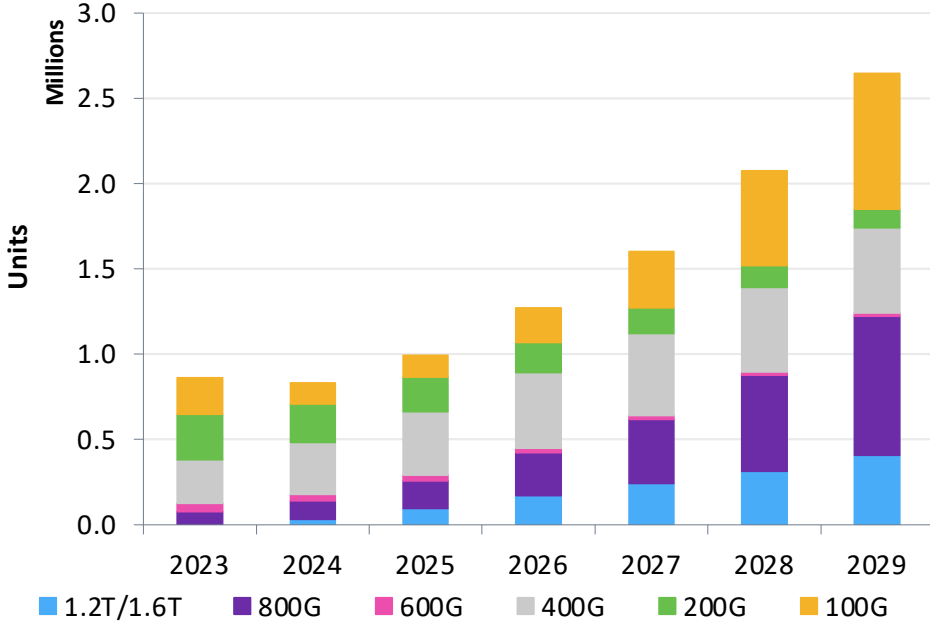
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Global Coherent Optics Forecast

- Six-year (2023 to 2029) CAGR of 15% (49% for 800G)
- 200G and 600G solutions are sunsetting
- 100G will see a resurgence in the Access network to replace legacy 10G connections
- 400G solutions still growing
 - Embedded fading in the western world in favor of 800G and above embedded solutions
 - ZR and ZR+ continue to grow for DCI applications
- 800G will be driven by two submarkets
 - High-performance embedded started in 2020
 - ZR and ZR+ pluggables starting in 2025 for DCI applications
 - Two form factors – QSFP-DD and CFP2
- 1.2T/1.6T solutions
 - High-performance embedded 1.2T solutions started shipping in 2023 in modest volumes and momentum is clearly building
 - 1.6T trials on carrier networks are continuing in 2025 for high ROADM pass-through, subsea backhaul and trans-Atlantic transmission. Early deployments are now starting.

TAM volume for DWDM coherent transceiver devices



Source: Omdia

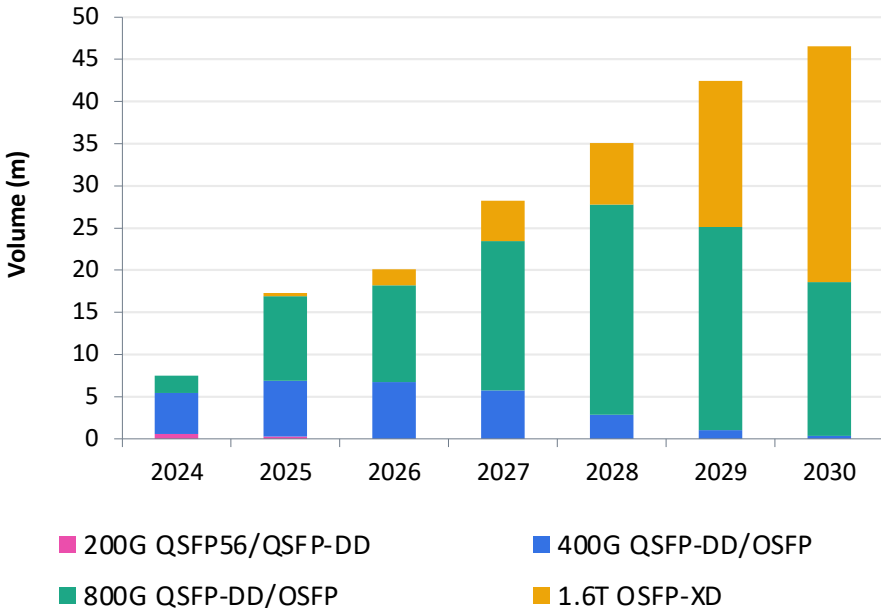
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Global AI Networks (both SU and SO) Optical Modules Forecast

- Six-year CAGR (2024 to 2030) of 36% (44% for 800G)
- Cloud SP’s AI scale up and scale out networks are rapidly changing
 - Server ports, while mainly still copper currently and for the next few years, will eventually transition to optics via pluggable modules, AOCs and in some cases co-packaged optics (CPO). This connection started to transition from 100G and 200G to 400G and 800G in late 2023.
 - The first switch connection out from the server (ToR to leaf or MoR to aggregation) already primarily uses optics for its uplinks – either AOCs or optical modules. This connection is rapidly transitioning to 800G.
 - Omdia expects to see some deployment of 1.6T devices in 2025 and 2026 with acceleration of adoption starting in 2027.

Total optical modules in SU and SO AI Networks by data rate



Source: Omdia

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Highlights from OFC

Some OFC Highlights

- The entire optical networking ecosystem is being driven by cloud SPs and their AI networks
- LPO/LRO transceivers are sampling and being qualified at customers
- Co-packaged optics applications are real but will remain a custom solution
- Optical Circuit Switch (OCS) inside the data center is an emergent segment
- The ~20km campus interconnect may be becoming an application space for Coherent Lite – probably starting at 1.6T
- 800G ZR/ZR+ volume applications emerging and 1.6T ZR/ZR+ trials taking place
- Network operators are installing new fiber in many regions



System Architecture Panel

Panel

- [Dave Ofelt](#), Juniper Networks
- [Mark Nowell](#), Cisco
- [Edo Poleg](#), Huawei Technologies Co., Ltd

Appendix



Appendix

Further reading

[4Q24 and 2024 OC Market Share](#) (April 2025)

[Connections Forecast in AI Networks](#) (March 2025)

[Trends to Watch – Datacom](#) (January 2025)

[Total OC](#) (December 2024)

[Fiber-optic Cable Upgrade](#) (November 2024)

[100G+ Coherent Database 2Q24](#)(October 2024)

[High-Speed OC Forecast 2023-29](#) (November 2024)

[Datacom Forecast](#) (September 2024)

[Optical Components Market Share 2Q24](#) (September 2024)

[Cloud SP Data Center Network Optical Components Forecast 2023–29](#) (August 2024)

[OC Market Share Cloud SP Data Centers – 2019–23](#) (July 2024)

[Connections Forecast for Backend AI Networks](#) (May 2024)

[Market Landscape: Connections in AI Networks Inside Data Centers](#) (May 2024)

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