Polariton Technologies Drives Industry Engagement with a Tier 1 Transceiver Company for Next-Generation AI-powered Data Center Connectivity

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Polariton Technologies is a manufacturer of high-performance photonic integrated circuits (PICs) that enable ultra-high bandwidth and low power consumption using proprietary plasmonics-enhanced silicon photonics for AI hardware connectivity solutions. Current applications include communications, computing, test and measurement, space, and quantum technology markets.

As the demand for high-speed, energy-efficient connectivity continues to grow, Polariton's innovative electro-optic modulators and photonic integrated circuits are attracting attention from top-tier industry players worldwide.

This industry engagement with a Tier 1 transceiver company aims to provide proprietary plasmonic optical engines for next-generation AI optical transceivers. Each Polariton optical engine features a plasmonic PIC based on highly scalable silicon photonics. The integration of plasmonics with silicon photonics significantly boosts its performance, enabling industry-leading 400G/lane. Future optical engine products have the potential to address 800G/lane, a capability not available today.

"This is a validation that our technology will enable our customers to position themselves for next-generation AI data center networking. We see a clear demand from the industry for solutions that deliver higher speeds, lower power consumption, and scalability," said Claudia Hoessbacher, CEO of Polariton Technologies. "We are now positioning ourselves to implement volume scaling of our optical engines."

About Polariton Technologies

Polariton's technology platform is based on plasmonics-enhanced silicon photonics, which extends the capabilities of standard silicon photonics. The company offers a portfolio of high-performance modulators, including Mach-Zehnder, IQ, and ring-resonator designs. The ring-resonator modulators, in particular, are optimized for 400G and 800G per lane IM/DD applications, while all devices deliver high-speed electro-optic modulation across both C and O bands. This approach provides a scalable foundation for future wavelength expansion and next-generation data center connectivity.

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