PICadvanced

Photonic Integrated Circuits For Access Systems in Telecom

The Challenge - Broadband Bandwidth Bottleneck

Global data traffic is growing at over 40% per year, driven by 5.3bn internet users operating a steadily increasing range of data-hungry devices and applications. Network operators are struggling to meet the demand for more bandwidth, resulting in speed throttling and connection drop-outs. Developments to deliver higher transfer rates currently focus on discrete optical components, which have reached their limits in terms of scalability, performance, footprint, power consumption, reliability and cost.

The Solution - PIC-FAST

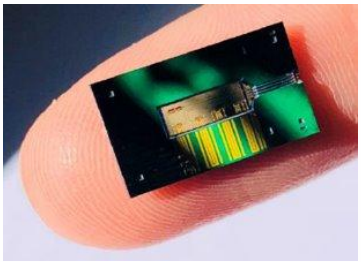
PICadvanced has developed the first fully integrated Photonic Integrated Circuit (PIC) for next-generation transceivers in passive optical networks, combining ca. 30 optical components into a single chip. Its first application will be in 10Gbps NG-PON2 transceivers in the SFP form factor, a solution urgently required by the sector to upgrade existing networks without massive investments in infrastructure. PICadvanced's transceivers will be 5x smaller than current solutions, reducing power consumption by ca. 20% and costs by at least 40%. Most importantly, PIC-FAST will unlock a technology roadmap to cost-effective high-bandwidth follow-on standards (25Gbps, 50Gbps).

The Funding

The Neon Innovation team worked extensively with PICadvanced to secure a €2.4m grant from Horizon Europe's EIC Accelerator programme to support the rapid roll-out of this novel chip. Crucial to this success was intensive pitch practice, enabling the PICadvanced team to successfully navigate a challenging review panel.

The Impact

The project will enable PICadvanced to roll out a powerful 'transceiver on a stick' solution ahead of the competition with a potential to generate cumulative revenues of €725m by the end of the decade. This EIC grant, secured by Neon, unlocks the scale-up funding needed to accelerate the final steps to market and make this ambitious vision a reality.



24 months

€2.4M Grant

PICadvanced (PT)

neon innovation