OneChip Raises $19.5 Million

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OneChip Photonics

OneChip Photonics, an Ottawa-based maker of optical transceivers for access networks and other mass-market broadband applications, has raised $19.5 million in new VC funding. Backers include BDC Venture Capital, DCM, GrowthWorks Canadian Fund and Morgenthaler Ventures.

PRESS RELEASE

OneChip Photonics today announced that it has secured $19.5 million in venture capital financing from leading Canadian and U.S. investors, including BDC Venture Capital, DCM, GrowthWorks Canadian Fund and Morgenthaler Ventures. This funding will enable the company to expand its operations globally and deliver the only fully integrated Fiber-to-the-Home (FTTH) transceiver technology on the market, which will provide higher performance than competing solutions at significantly lower cost.

"OneChip is well positioned to help system providers and carriers deploy FTTH more cost-effectively than ever before – and meet consumer and business demand for high-bandwidth voice, data and video services," said Jim Hjartarson, CEO of OneChip Photonics. "OneChip is one of only a few companies with new core intellectual property and advanced technology in the optical transceiver business that can sustain a competitive advantage over other optical component providers, which rely on conventional technology and assembly processes."

OneChip Value Proposition

OneChip Photonics develops and manufactures low-cost, high-performance optical transceivers – based on monolithic Photonic Integrated Circuits (PICs) in Indium Phosphide (InP) – for access networks and other mass-market broadband applications. OneChip's breakthrough approach and technology will remove the cost and performance barriers that have been impeding the ubiquitous deployment of Fiber-to-the-Home and enable new business and consumer broadband applications. Currently, the company is developing these low-cost, high-performance transceivers for Optical Network Terminals (ONTs) and Optical Line Terminals (OLTs) in Ethernet PON (EPON) and Gigabit PON (GPON) networks.

"Carriers and system providers recognize that an approach, which would eliminate assembly from multiple parts, is needed to lower the cost and improve the performance of transceivers and ONTs in optical access networks," said Dr. Lynn Hutcheson, vice president of communication components at Ovum, a global analyst & consulting firm with major offices in Boston and London. "OneChip's fully integrated technology can help unleash the potential of FTTH and other mass-market optical communications applications."

OneChip Market Opportunity

There is tremendous potential for FTTH to become widespread in access networks in the next three years, according to Ovum. It forecasts that the number of FTTx subscribers – including Fiber-to-the-Home (FTTH) subscribers and Fiber-to-the-Building (FTTB) subscribers – will increase from about 48 million by the end of 2009 to more than 100 million by the end of 2012. Today, FTTx broadband users comprise about 8 percent of all broadband users, according to Ovum, and it expects that FTTx broadband users will comprise about 16 percent of all broadband users by 2012. OneChip believes that its breakthrough approach and technology will strengthen the business case for broader deployment of FTTH worldwide. It also believes that this approach and technology will enable OneChip to claim a significant share of the FTTx optical transceiver market – one that Ovum estimates will grow from $387 million by the end of 2009 to $594 million by the end of 2013.

OneChip Competitive Differentiators

Most current FTTH transceiver providers base their transceivers on either Discrete Optics or Planar Lightwave Circuit (PLC) designs. These designs offer low levels of integration and require assembly from multiple parts. There is little technical differentiation among them. Rather, vendors must compete on the basis of who can assemble the parts in a slightly cheaper fashion. And there is little opportunity to further reduce such costs.

OneChip Photonics is taking a new approach with its breakthrough PIC technology. OneChip is monolithically integrating all the functions required for an optical transceiver onto a single, Indium Phosphide (InP)-based chip. All active and passive components of the chip – including the Distributed-Feedback (DFB) laser, Optically Pre-Amplified Detector (OPAD), Wavelength Splitter (WS), Spot-Size Converter (SSC), and various elements of passive waveguide circuitry – are, uniquely, integrated in one epitaxial growth step, without re-growth or post-growth modification of the epitaxial material.

With respect to transmit performance, OneChip's single-frequency DFB lasers will offer a superior performance – much more suitable for longer-reach and higher bit-rate applications – than competing Fabry-Perot (FP) lasers. With respect to receive performance, OneChip's Optically Pre-Amplified Detector (OPAD) design is a higher gain-bandwidth solution than competing Avalanche Photodiode (APD) solutions. It also is a lower-cost solution, as it does not require a high-voltage power source.

OneChip's breakthrough monolithic Photonic Integrated Circuits have the smallest footprint on the market, the optical parts are aligned for life, and the parts are highly robust (resistant to vibration and other outside elements). Further, OneChip's PICs are designed for automated mounting on a silicon optical bench, without requiring active alignment, using industry-standard, automated assembly processes – resulting in high yields of good devices.

Utilizing automated production processes, OneChip can maintain the highest production scalability (easily ramping up and down) in the industry and respond rapidly to customer needs. Standard production processes also mean reliable supplies to customers, at the lowest prices on the market.

OneChip also recognizes that optical communications are becoming economically and technologically mandatory in areas outside of traditional telecommunications. OneChip is poised to introduce photonics integration into other high-volume business and consumer markets, where its breakthrough PIC technology can reduce costs and improve performance.

About OneChip Photonics

OneChip Photonics is a privately held company, headquartered in Ottawa, Canada, that develops and manufactures low-cost, high-performance optical transceivers – based on monolithic Photonic Integrated Circuits (PICs) in Indium Phosphide (InP) – for access networks and other mass-market broadband applications. OneChip's breakthrough approach and technology will remove the cost and performance barriers that have been impeding the ubiquitous deployment of Fiber-to-the-Home (FTTH) and enable new business and consumer broadband applications. For more information, please contact OneChip at 613-226-6117 or info@onechipphotonics.com, or visit our Web site at www.onechipphotonics.com.