

OneChip Interview: The time of All-Optical Integration is coming

09/18/2010 | Ms. Ray Tang, Executive Chief Editor of China CFOL (China FiberOptics Online)

Sept. 18, 2010 – At CIOE last year, OneChip Photonics first proposed and articulated a photonic integrated circuit (PIC)-based low-cost, high-performance passive optical network (PON) transceiver, which caused a great sensation in the industry.

About the photonic integrated circuit (PIC) technology, there are three different views on the market. First, the urgency. The photonic integrated circuit (PIC) technology is a technical trend and revolutionary breakthrough in the optical communications industry. With fiber to the home (FTTH) development in high-speed broadband networks, the demand from operators and equipment vendors for PIC-based products is increasingly urgent. Second, the suspicion. PIC technology has been proposed for years, but there have been challenges with yields, though Infinera is using a similar technology. This causes market concern. Third, the dread. Incumbent optical module manufacturers will feel the impact of the advantages of PIC technology on cost and performance.

This year, during the 12th CIOE, OneChip showcased a downstream broadcast video and an upstream personal video, with PON ONU and OLT equipment, powered by OneChip's low-cost, high-performance photonic integrated circuit (PIC)-based PON transceivers. This is an exciting experience, watching the revolutionary technology, and it also provides a chance for us to learn about the progress that OneChip has been making with its products.

Customer demand blooming

OneChip integrates all the active and passive optical functions required for an optical transceiver onto a single, Indium Phosphide (InP)-based chip. This enables significant improvements over current transceiver designs in cost, quality, reliability and performance. OneChip's PIC-based transceivers can be assembled, tested and manufactured using industry-standard, automated processes, which enable the company to rapidly respond to customers' needs.

Although OneChip's products are coming later than expected, the customer demand for these PIC-based products has not diminished. Yit Lee, OneChip's Asia Pacific general manager and vice president of business development, told us that customers are even more anxious than OneChip itself to get the company's commercial products. Now, it is certain that the product's performance can be obtained and that it is very stable. Through continued improvement, OneChip is striving for continually better performance.

Andy Weirich, OneChip's vice president of product line management, said that both cost and performance have been bottlenecks impeding the widespread deployment of FTTH. During communication with its clients in the past months, OneChip customers continually have been asking for lower cost transceivers. OneChip's revolutionary technology is poised to remove these cost and performance obstacles and, therefore, dramatically reduce the cost of optical systems. At the same time, OneChip's large-scale, automated production process will become the best choice for FTTH module manufacturing.

Currently, OneChip is fine tuning its PIC-based PON transceivers and will have samples available in the market soon. OneChip expects these transceivers to be commercially available early next year.

Shenzhen Regional Office to better serve customers in China

Announced on Sept. 1, OneChip established a Regional Office in Shenzhen to better serve customers in China. Featuring an on-site lab, the new facility will enable OneChip to offer testing, debugging, and demonstrations for addressing the immediate technical needs of regional customers. This reflects the company's commitment to provide customers with turnkey solutions and timely feedback.

Meanwhile, OneChip has established partnerships with ACE Broadband Technology Chengdu Co. Ltd. and Shenzhen Milli-tech Electronics Ltd. The two companies are OneChip's distributor and manufacturer's representative, respectively.

About OneChip

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 PIC-based Passive Optical Network (PON) transceivers will help system providers and carriers deploy Fiber-to-the-x (FTTx) more cost effectively than ever before and meet consumer and business demand for high-bandwidth voice, data and video services.