



AEAPONYX Offers High-Performance Tunable Lasers

November 30th, 2022 (Montreal, Quebec, Canada) AEAPONYX Inc., a privately held developer of Photonic Integrated Circuits (PIC) for telecom, datacom, and life science markets is expanding its product portfolio to include high-performance tunable lasers for Dense Wavelength Division Multiplexing (DWDM) Passive Optical Networks (PON), Tunable Transceivers (NG-PON2, G.9804.1), and Coherent Transceivers.

“AEAPONYX undertook an extremely challenging project for the telecom space in developing our NG-PON2 optical sub assembly and transceivers. In conjunction with that project, we developed a T-DBR EML laser with semiconductor optical amplifier that is burst-mode transmission capable supporting 10G NRZ and soon, 25G NRZ and 50G PAM4,” explained Philippe Babin, the Chief Executive Officer of AEAPONYX.

A key subcomponent

“High performance tunable lasers are not readily available on the market and are the key subcomponent in products that find or will find applications in growing markets. It was a multiyear project to develop our lasers and we are making them available to industry partners as we want to push product development and innovation for next generation sensor markets and in our traditional telecom and datacom markets,” added Mr. Babin.

“Our hybrid integration and photonic wire bonding capabilities allow us to sell the lasers fully integrated onto our Silicon Nitride (SiN) platform for telecom, datacom, automotive, life science, and quantum markets or we can sell as bare dies to select customers” explained Mr Babin.

“AEAPONYX’s tunable lasers and wavelength multiplexing can be used to expand network capacity while re-using existing fiber infrastructure. Our lasers have already found applications in NG-PON2 ONUs and well positioned for C-PON Transceivers. Fast tuning time, extended reach, high output power, integrated shutter, and low spectral excursion are some of the performance benefits achieved by our technology,” explained Mr. Babin. “In addition to the performance benefits we have the ability to manufacture and test our laser in high volume which allows us to keep our per unit costs low and scale for high volume markets,” concluded Mr. Babin.



About AEAPONYX, Inc.

Founded in 2012 and financed with 22M in venture capital money AEAPONYX has built a team of photonics experts and Research and Development professionals in Montreal, Quebec, Canada. Having spent a decade in research and development, AEAPONYX is now generating revenues and selling a Photonic Integrated Circuit (PIC) platform combining the benefits of Silicon Nitride (SiN) and Micro-Electro-Mechanical-Systems (MEMS). The AEAPONYX PIC platform finds applications in telecom, datacom, life science, automotive, and quantum markets.

AEAPONYX offers tunable optical filtering/switching (TOF/S) platform combining the low-loss of silicon nitride (SiN) waveguides with an innovative, proprietary design for thermo-optically tuned wavelength selectivity.

AEAPONYX also offers a Resource Optical Configuration System (R.O.C.S.™ 2) combining optical sensing and switching in an innovative and user-friendly platform for Artificial Intelligence (AI) and High-Performance Computing (HPC) data centers to ensure quality of service where reliable high-speed communication directly to the servers is essential.

Working with leading-edge component suppliers, AEAPONYX leverages expertise in hybrid integration and photonic wire bonding to bring to market products on a SiN platform with lasers with higher power output, bursting capabilities, ultra-low noise level, or a specific wavelength range. AEAPONYX believes that its photonic wire bonding capability is the technology to solve the industry's hybrid integration puzzle.

Expertise in active or passive alignment of components has always been the traditional approach. AEAPONYX's photonic wire bonding is the future. Building complex products, like next-generation sensors or quantum sensors, requires expertise in PIC design and manufacturing, electronic design, opto-electronic packaging, design for testing and for manufacturing.

This is AEAPONYX's expertise.

For more information about AEAPONYX's tunable lasers, Silicon Nitride Platform, or products for life sciences, telecom, or datacom please visit www.aeponyx.com. or send an email to Sales@AEAPONYX.com



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