

## Press Information

Berlin, May 13<sup>th</sup>, 2020

# VPIphotonics and Keysight Technologies partner to deliver new Electrical–Optical–Electrical System Design Workflow

Internet traffic handled by datacenters is growing rapidly, fueling the need for deployment of new and improved communication equipment that relies heavily on optical interconnects. Optical interconnects are composed of optoelectronic devices that combine functionality in both electrical and optical domains. To address the growing need for optical interconnect design and optimization, VPIphotonics announces a new simulation workflow capability that seamlessly connects [VPI Design Suite](#) with [PathWave Advanced Design System \(ADS\)](#) from [Keysight Technologies](#), enabling designers to predict the signal integrity of electrical–optical–electrical data links.

VPI Design Suite offers a new interface that can be used within PathWave ADS to simulate and optimize design parameters both in electrical and optical domains, eliminating key barriers to developing high performance hardware products. Utilizing dynamic communication and seamless data transfer between the design tools, the solution can predict the data link performance and be used to understand how electrical design choices will interplay with optical design choices to deliver a reliable system design.

“Engineers have a wide variety of constraints when developing optical interconnect solutions for intra and inter datacenter applications,” stated André Richter, General Manager of VPIphotonics. “With this new seamless design flow linking PathWave ADS and VPI Design Suite simulations to cover the signal path from transmitter electronics through optical fiber connections to receiver electronics, we are confident that jointly we can deliver a powerful and unique solution.”

The defining technology advancement in this new solution is the electro-optical workflow which can quickly process a very large number of bits for accurate performance prediction. As a result of this rapid simulation, system architects can investigate link performance with electrical transmitter and receiver equalization accounting for the accumulated impact of laser and modulation characteristics as well as

modal and chromatic fiber dispersion and nonlinearity. The impact of the optical system on the entire link can be explored with various laser and modulator designs and advanced modulation schemes using key photonic enabling technologies.

“We’re excited to partner with VPIphotonics to provide an industry-leading solution to the market. It seamlessly combines both of our companies’ simulation domain expertise to provide a powerful and comprehensive solution to a real customer challenge,” said Tom Lillig, General Manager of the PathWave Software and Solution team at Keysight Technologies.

The new solution will be highlighted in a presentation by our team at the [PIC International Online Summit](#) on May 19<sup>th</sup>, 2020 and demonstrated during Keysight’s upcoming virtual seminar on the same day: [Registration Page for Virtual Optical Networking Innovations - Part 1](#).

## About VPIphotonics

VPIphotonics sets the industry standard for end-to-end photonic design automation comprising design, analysis and optimization of components, systems and networks. We provide professional simulation software addressing demands in optoelectronics, integrated photonics and fiber optics, optical transmission links and networks. Our team of experts delivers training courses on modeling techniques and advanced software capabilities. Our award-winning off-the-shelf and customized solutions are used extensively in cutting-edge research and development, and by product design and marketing teams at hundreds of corporations worldwide. Over 160 academic institutions joined our University Program enabling students, educators, and researchers an easy access to VPIphotonics’ latest modeling and design innovations.

More information is available at [www.vpiphotonics.com](http://www.vpiphotonics.com).