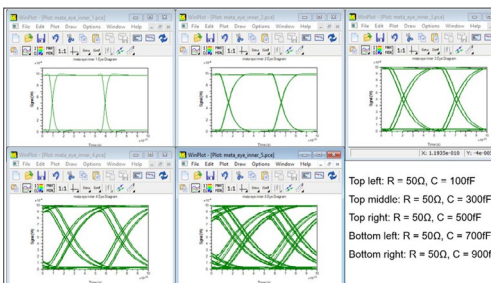
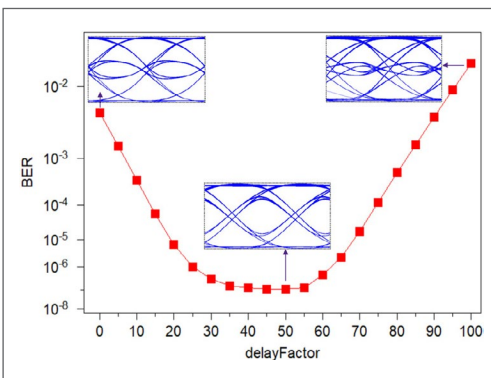
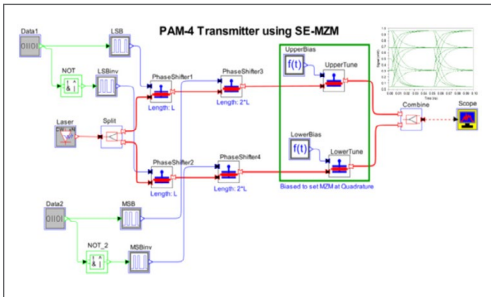


# What's New in the PIC Design Suite Version 2020.03



Synopsys is driving the advancement of photonic integrated circuit technologies with its PIC Design Suite, which includes the OptSim Circuit and OptoDesigner tools.

## OptSim Circuit

- An enhanced bidirectional multiport model in OptSim Circuit for characterizing passive photonic devices in terms of an S-matrix (scattering matrix) to support both non-uniform frequency and wavelength data.
- Improved simulation of compact models produced by the Custom PDK Utility. These models now include options for wavelength grouping data for more accurate phase estimation when using a coarse parametric grid.
- Four new application notes of interest to the PICs for the data center interconnect market:
  - PAM-4 Transmitter using segmented-electrode Mach-Zehnder modulator (SE-MZM)
  - Impact of inter-segment distance deviations in SE-MZM PAM-2 transmitters
  - Impact of segmented electrode time-delay variations in SE-MZM PAM-2 transmitters
  - Impact of capacitive charge and response time of segmented electrodes in PAM-2 SE-MZM transmitters

## OptoDesigner

- Improved interface with OptSim Circuit enabling hierarchical layout designs using a freeform script structure.
- Added the ability to export OptoDesigner files to the DXF file format, allowing PIC designs to be easily transferred to CAD programs such as SOLIDWORKS and AutoCAD.
- Support for import and export of hdf5 data files to facilitate the storage and use of large, structured data sets.
- Dynamic code snippets that enable PDKs to always provide up-to-date die templates and examples, irrespective of tool version.

For more information, please contact Synopsys' Photonic Solutions at (626) 795-9101, visit [synopsys.com/photonic-solutions/pic-design-suite.html](http://synopsys.com/photonic-solutions/pic-design-suite.html) or send an e-mail to [photonics@synopsys.com](mailto:photonics@synopsys.com).