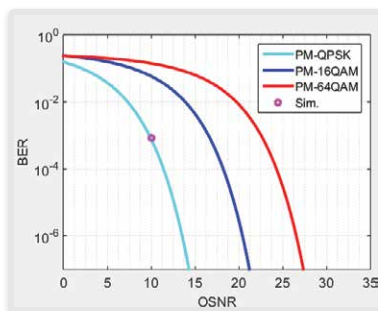
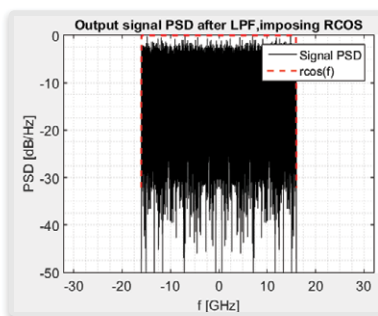
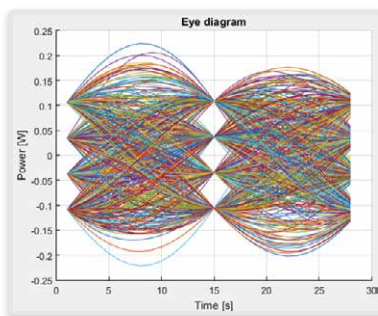
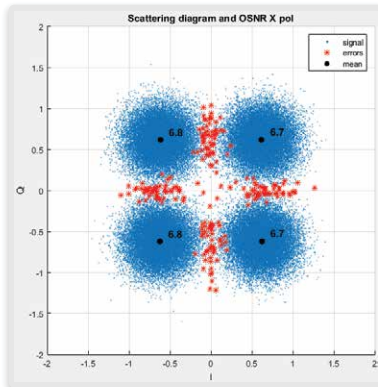


OptSim Digital Signal Processing Library



Enhanced Flexibility

OptSim™ is RSoft's award-winning software tool for the design and simulation of optical communication systems at the signal propagation level. OptSim™ offers designers of coherent and IM/DD systems with advanced multi-level modulation formats flexibility to use either the presupplied receiver models with the built-in digital signal processing (DSP) library, or to create a modular layout using a MATLAB-based library of DSP algorithms. Users can pick and choose from the supplied algorithms, make changes, or incorporate their own algorithms to evaluate system performance.

Library of DSP Algorithms

With an ever-increasing demand for spectrally efficient, high bit-rate data transmission systems, long-haul and data center link designers evaluate a number of multilevel modulation schemes. Both the transmitters and the receivers deploy inline and offline DSP for encoding and retrieving data.

The OptSim library of DSP algorithms currently has the following algorithms and is subject to periodic updates in response to evolving data formats and associated DSP:

- ▶ PRBS, encoders for m-PAM, PM-QPSK, PM-16QAM, PM-64QAM
- ▶ Low pass filter, Nyquist filter, pre-emphasis filter
- ▶ DAC and ADC
- ▶ Dispersion compensation
- ▶ Frequency mismatch estimation
- ▶ Equalizers, data synchronizer
- ▶ Threshold, decision and BER counting algorithms

Application Notes

OptSim™ comes with a large number of pre-supplied application notes. Each application note has associated design files, an explanation of the design, parameters, tradeoffs and results to help expedite prototyping and shorten time to market.

For more information, please contact Synopsys' Optical Solutions Group at (626) 795-9101, visit <http://optics.synopsys.com/rsoft/>, or send an e-mail to rsoft_sales@synopsys.com.