



RFOptic Newsletter - December 2017

2017 has been a great year for RFOptic and on behalf of the whole team, we would like to thank our customers, distributors and partners who contributed to our success. Some of the highlights: we have launched several new products, including controllable RFoF OEM cards. In July, the U.S. Naval Research Laboratory testing of RFOptic's Programmable RFoF solutions successfully. Furthermore, a worldwide leader in the telecommunications industry was impressed by our new programmable product line. We also celebrated our 500th deployment of Programmable RF Over Fiber Link. As it looks now, 2018 will be an even better year!

New! Gain Link Calculator

The screenshot shows a web-based calculator interface. On the left, under the heading "INPUT", there are two columns: "Link" and "Signal". The "Link" column includes: "LNA ON/OFF" (On), "Link Type" (6 GHz), "Tx Att" (0 dB), "Rx Att" (0 dB), "Fiber Loss" (0.25 dB/km), and "Fixed Optical Loss" (0.5 dB). The "Signal" column includes: "Pin" (0 dBm), "BW" (100 Hz), and "SNR" (10 dB). On the right, under the heading "Parameter Results", there is a table with the following data:

Parameter	Results
Max out:	-36.16 (dBm)
P1dBc out:	3.00 (dBm)
Link Gain:	40.00 (dB)
Max Fiber length:	210.31 (Km)
Max Fiber loss (RF):	105.16 (dB)
Max Fiber loss (Opt):	52.58 (dB)
P1dBc in:	-31.00 (dBm)

RFOptic has launched a helpful online tool to calculate the link gain and the optical predicted parameters for its RFoF programmable product line. The calculator is designed for the programmable RFoF family - 2.5GHz, 3GHz, 4GHz and 6 GHz. The RFOptic Calculator is designed for the users of

programmable RFoF family solutions in order to determine how the embedded LNA and attenuator should be set up to meet their required RFoF link budget.

The tool is user-friendly and straightforward and enables the user to design his deployment. All that is needed, is to insert parameters such as signal features, optical features and the RFoF features. The results reflect the predicted fiber length, S21 link gain, the minimum detectable signal (MDS) and P1dBc based on user setup for embedded LNA and attenuators. It's a great resource for link design using RFOptic's products.

For more information, click [here](#)

New! Bidirectional RFoF Picosecond



Precise synchronization of clocks is a crucial element in public safety communication systems and private networks. That's why our RF over Fiber (RFoF) bidirectional links are compliant with timing standards of fractions of picoseconds between the uplink and the downlink by unique technology that was developed by RFOptic. The RFoF links may carry common reference frequency signals such as 1, 10 and 100 MHz. The

bidirectional RFoF Picosecond is especially suited for radio telescope applications since it reduces the delay between the uplink and downlink of telescopes that look on the same object. The system was sold to the radio telescope center in Onsala which cooperates with MIT in the US. Our bidirectional RFoF picosecond enabled the operation of the links between 2 twin radio telescopes. Other astronomy institutes that want more information, are invited to contact us to learn more details.

To read more, click [here](#)

New! Doppler module for Optical Delay Line



RFOptic added a new module for the Optical Delay Line for Doppler shifting. It is aimed at integrators who are interested in the range simulation as well as the speed of the target. The module measures the shift of the frequency due to the Doppler shifting which simulates the velocity of the target. The module is another addition of us at RFOptic to

provide the best customized solutions to its customers with optimal cost performances.

We suggest solutions for Optical Delay Line from DC to 40GHz up to 500 usec delay line and up to 10 different delay lines which creates 1024 different delays. All is done with the user-friendly graphical interface and a quick delivery time that is one of the best in the industry.

For more information please contact [RFOptic](#)

