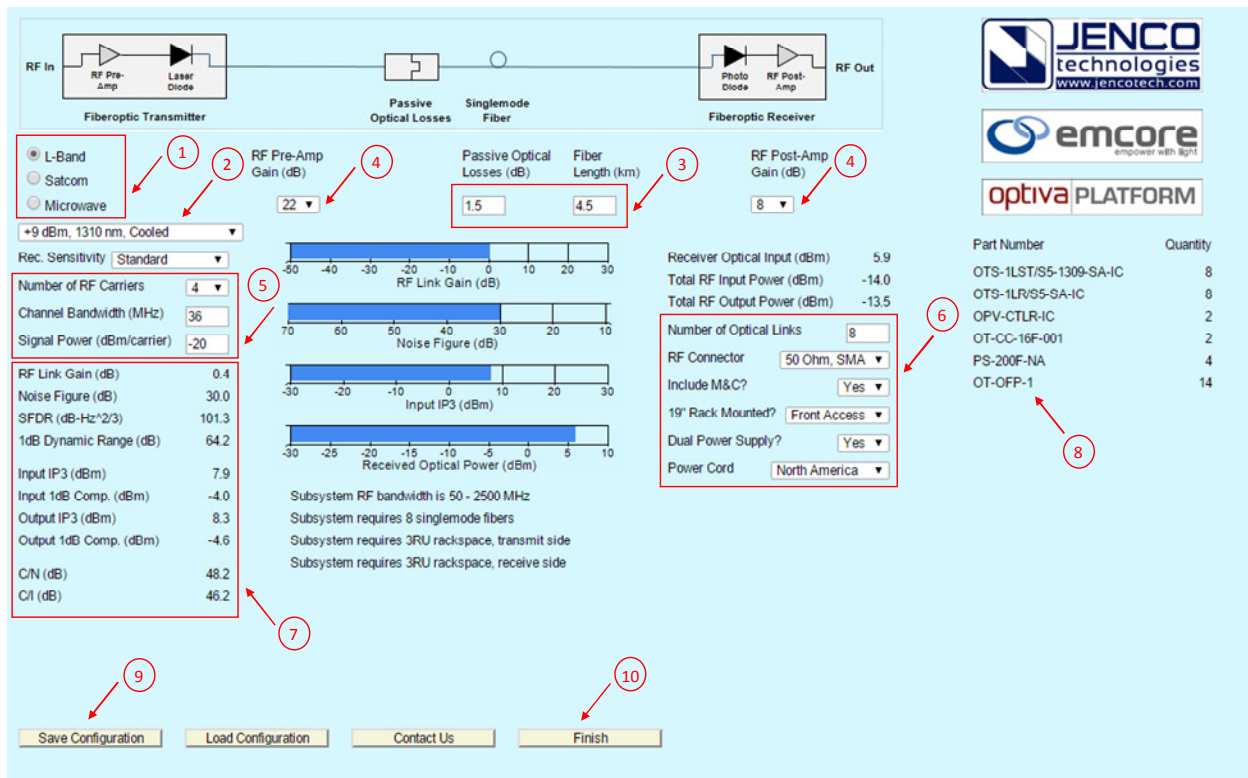


RF-Over-Fiber Design Tool Quick Start Guide

The RF-Over-Fiber Design Tool may be accessed via the button at the top of the Jenco Technologies website, www.jencotech.com. A user account is required to access the RF-Over-Fiber Design Tool. After logging in (or creating a new account), the window shown below is presented.

1. Choose the RF frequency band to be modelled. Satcom bands are specific uplink and downlink satcom frequency bands. Microwave links are wideband links extended to from 18 GHz to 40 GHz.
2. Choose a specific transmitter. There are a variety of L-Band transmitters, identified by optical output power, cooled/uncooled laser, wavelength, etc.. Satcom and Microwave selections are per specific RF frequency ranges.
3. Set the fiberoptic link constraints – passive losses (e.g., patch panels) and fiber length.
4. Adjust fiberoptic transmitter and receiver RF gains.
5. Set input RF signal characteristics (number of carriers, power level, transmission bandwidth).
6. Select equipment parameters. These affect primarily the part number configuration strings.
7. For the particular settings selected, estimated RF performance is computed.
8. Parts list is generated.
9. All settings may be saved for retrieval at some later time.
10. Logout



The screenshot shows the RF-Over-Fiber Design Tool interface. At the top, a block diagram illustrates the system: RF In → RF Pre-Amp → Laser Diode → Passive Optical Losses → Singlemode Fiber → Photo Diode → RF Post-Amp → RF Out. The interface is divided into several sections:

- Transmitter Section:** Includes radio buttons for L-Band (selected), Satcom, and Microwave. A dropdown menu shows '+9 dBm, 1310 nm, Cooled'. A 'Rec. Sensitivity' dropdown is set to 'Standard'.
- RF Pre-Amp Gain (dB):** A numeric input field set to 22.
- Passive Optical Losses (dB):** A numeric input field set to 1.5.
- Fiber Length (km):** A numeric input field set to 4.5.
- RF Post-Amp Gain (dB):** A numeric input field set to 8.
- RF Signal Characteristics:** Includes 'Number of RF Carriers' (4), 'Channel Bandwidth (MHz)' (36), and 'Signal Power (dBm/carrier)' (-20).
- Performance Metrics:** A list of calculated values: RF Link Gain (0.4 dB), Noise Figure (30.0 dB), SFDR (101.3 dB-Hz^{2/3}), 1dB Dynamic Range (64.2 dB), Input IP3 (7.9 dBm), Input 1dB Comp. (-4.0 dBm), Output IP3 (8.3 dBm), Output 1dB Comp. (-4.6 dBm), C/N (48.2 dB), and C/I (46.2 dB).
- Equipment Parameters:** Includes 'Number of Optical Links' (8), 'RF Connector' (50 Ohm, SMA), 'Include M&C?' (Yes), '19" Rack Mounted?' (Front Access), 'Dual Power Supply?' (Yes), and 'Power Cord' (North America).
- Parts List:** A table with columns for Part Number and Quantity.

Part Number	Quantity
OTS-1LST/S5-1309-SA-IC	8
OTS-1LR/S5-SA-IC	8
OPV-CTLR-IC	2
OT-CC-16F-001	2
PS-200F-NA	4
OT-0FF-1	14
- Bottom Navigation:** Includes buttons for 'Save Configuration', 'Load Configuration', 'Contact Us', and 'Finish'.

Numbered callouts (1-10) point to specific elements in the interface corresponding to the steps in the guide.

Reference the RF-Over-Fiber Design Tool User Manual for a more detailed description.