RF Optic
Optical RF Solutions

RF over Fiber With Removable Panel

Key features:
Best Cost Performance
Frequency Range: 0.05-2500MHz | 0.05-3000MHz, | 0.05-6000MHz
Excellent Gain flatness
Compact enclosure
Accommodates 4 or 8 RFoF Tx or Rx units
Easy maintenance and replacement
Double Power Supplies
More than 25 Km fiber distance

RFOptic's analog RFoF compact modules convert RF signals to optical signals and back. The Tx unit using an optical transmitter converts RF to Optical signal, and the Rx unit converts Optical to RF signal. The two units are connected by the customer's fiber.

RFOptic's RF over Fiber modules (RFoF) are suitable for telecommunication and radar applications. Satellite, point-to-point antennas can be connected from several meters to many kilometers away from the control room. Base stations can be connected by fiber to remote sector antennas. Broadcasters can easily distribute their full RF streams over fibers to remote locations, therefore eliminating the need for complex equipment to be installed in remote and hard to reach locations.

A series of removable panel 1U or 2U enclosures provides, more flexibility and freedom in system architecture. Customers can use the RFoF standalone units that are housed in a 1U removable panel enclosure as standalone units or inside the enclosure. It can house up to 4 or 8 RFoF Tx and/or Rx units with remote management.

RF Optic
Optical RF Solutions

RF over Fiber With Removable Panel

Specifications of RFoF 3.0GHz programmable in 1U removable panel (Example)			
Electrical	**Unit**	**typical (without LNA)**	**typical (with LNA)**
Frequency Range	MHz	0.5-3000	0.5-3000
Adjustable Link Gain (nominal value) [1]	dB	>5	>34
Attenuator 31 dB (Tx, Rx) [2]	dB	0.5	0.5
Gain Flatness	dB	±2	±2
Input P1 dB [3]	dBm	0	-30
Noise Figure [3]	dB	28	7
SFDR [3]	dB/Hz2/3	104	100
Gain Flatness any 36 MHz	dB	±0.25	±0.25
Uncorrected gain variation over Temperature	dB	±3.5	±3.5
Corrected gain variation over temperature [4]	dB	±1	±1
Corrected gain tracking between RFoF links [5]	dB	±0.5	±0.5
Maximum Input No damage	dBm	20	20
Spurious	dBm	-100	-100
VSWR Input/Output	dB	1.7:1	1.7:1
Input/Output Impedance [6]	Ohm	50	50
Optical and Electrical			
Current consumption of Tx unit	mA	390	390
Current consumption of Rx unit	mA	225	225
Laser diode wavelength	um	1.31 or 1.55	1.31 or 1.55
Optical Power in the fiber	mw	2.5 ±0.5	2.5 ±0.5
LED status indicators (Tx/Rx)	-	RGB	RGB
Mechanical and Environmental Parameters			
Operating temperature	°C	-20 to 70	-20 to 70
Storage temperature	°C	-40 to 85	-40 to 85
EMC and Safety [7]	-	CE & FCC	CE and FCC

(1) LNA 'ON' or 'Off' is selected by RFOptic manufacturing , or by using the RFoF User Software.
(2) 'No Attenuation' is the default for Tx and Rx units. Attenuation values can be selected by the User Software.
(3) Noise Figure, Input P1 dB, Input IP3 and SFDR measured at 1.5 GHz, can be selected by 'LNA Off/ON' and Tx Attenuator.
(4) Using internal temperature compensation algorithm selected by the User Software.
(5) Using the Tx and/or Rx Attenuators.
(6) 75 Ohm is optional with similar VSWR, by using SMA/BNC adaptor.
(7) Safety EN60950-1:2006(2nd)+A11:2009+A1:2010+A12:2011+A2:2013; EMC: ETSI EN 300 386 v1.6.1(2012-04) and FCC CFR-47 part 15 Subpart B.

Ordering Information:

- **RFoF 1U Removable** - RFoF 19" 1U Removable module, with 2 power supplies and HUB, capable of holding 4 Tx or Rx units.
- **RFoF 2U Removable** - RFoF 19" 2U Removable module, with 2 power supplies and 2 HUB, capable of holding 8 Tx or Rx units.