# RFoF-RX (30MHz & 5KHz~12GHz)

## Wideband RF over Fiber Receiver Module

### PRODUCT DESCRIPTION

The RFoF series delivers high-performance, cost-effective solutions for Wideband RF signal transmission over fiber. Designed to meet the demands of diverse application scenarios, these modules enable low-loss, high-linearity analog transport across extended distances.Leveraging expertise in microwave photonics, the company is committed to close collaboration with telecom operators, system integrators, and solution partners to jointly develop advanced RFoF products and customized solutions for evolving industry needs.


RFoF RX is a Wideband RF fiber optic receiver module with a maximum cutoff frequency of 12GHz. The product adopts a high linearity PIN light receiving tube. Due to avoiding the limitations of coaxial cables, the transmission quality and reliability of signals have been greatly improved. It can be widely used in satellite communication, Beidou/GPS signal transmission, remote antennas, and long-distance analog fiber optic communication.

### PRODUCT FEATURES

- High optical sensitivity with low noise figure
- Wide dynamic range with superior linearity
- Compact form factor and ultra-low power consumption
- Frequency support up to 12 GHz (optional 20 GHz extended version)
- Competitive cost-performance ratio

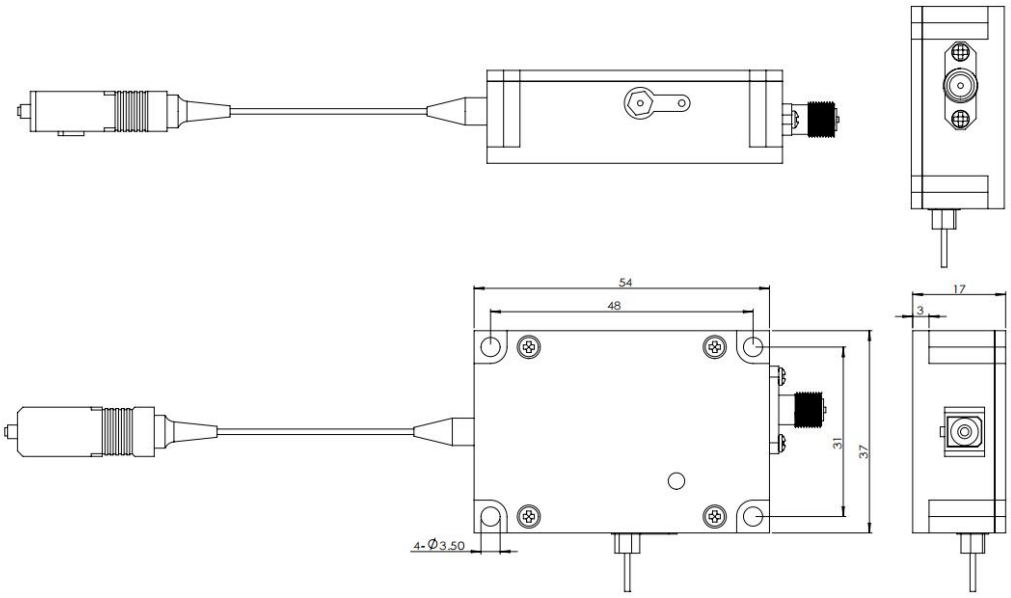
### MAIN APPLICATION

- Secure RF communication links
- GNSS (Beidou/GPS) signal distribution
- Microwave photonics and analog optical links
- Wideband RF signal interception and monitoring systems

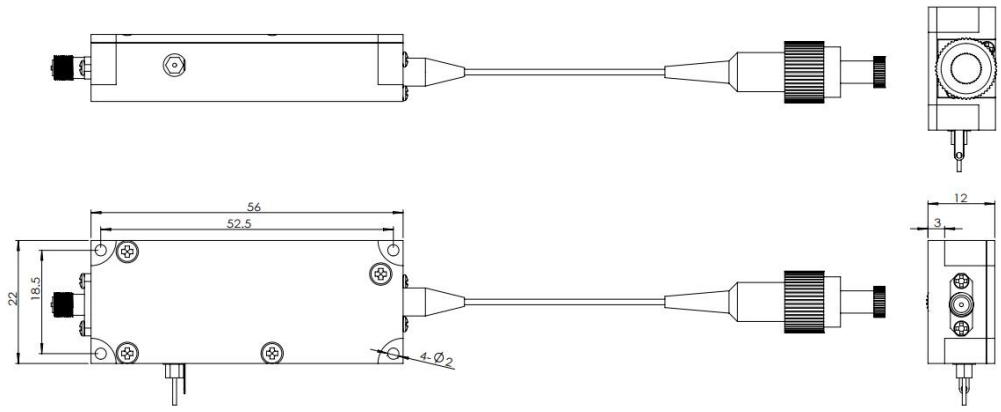
# TECHNICAL INDEX

| Performance | | | Index | | | Supplement |
|---|---|---|---|---|---|---|
| | | | Min. | Typ. | Max. | |
| Optical Feature | Receiving wavelength range | (nm) | 1270 | | 1610 | |
| | Receive specific wavelengths | (nm) | | xxxx | | Built-in CWDM |
| | Input optical power range (Analog link input range, typical) | (dBm) | -10 | | +3 | Analog Signal |
| | Responsiveness | (A/W) | 0.85 | | | |
| | Light Reflection Loss | (dB) | 55 | | | APC |
| | Fiber Connector | | LC/APC，FC/APC，SC/APC | | | Optional |
| RF Feature | -3dB Minimum Cutoff Frequency | (MHz) | 30 | | | General |
| | | (KHz) | | 5 | | Customized |
| | -3dB Maximum Cut-Off Frequency | (GHz) | | 1.0 | | RX01 |
| | | | | 3.0 | | RX03 |
| | | | | 6.0 | | RX06 |
| | | | | 10.0 | | RX10 |
| | | | | 12.0 | | RX12 |
| | In-Band Flatness(FL) | (dB) | | ±0.5 | ±0.75 | RX01 |
| | | | | ±1.0 | ±1.5 | RX03 |
| | | | | ±1.5 | ±2.2 | RX06 |
| | | | | ±2.2 | ±2.8 | RX10~12 |
| | RF Return Loss | (dB) | | -16 | -12 | RX01 |
| | | | | -12 | -10 | RX03 |
| | | | | -10 | -7 | RX06 |
| | | | | -10 | -5 | RX10~12 |
| | SFDR | | | 110@6GH | | |
| | RF Output Power (TX) | (dBm) | | 5 | | |
| | RF Working Impedance | (Ω) | | 50 | | |
| | RF Connector | | SMA-F | | | |
| General Feature | Supply Voltage (DC) | (V) | | +12 | | |
| | Working Current | (mA) | | 200 | | |
| | Operation Temperature | (℃) | -20 | | +75 | |
| | Storage Temperature | (℃) | -40 | | +85 | |
| | Relative Humidity | (%) | 5 | | 95 | |
| | Dimensions（WxDxH) | (mm) | 37x54x17 | | | Type-A |
| | | | 22x56x12 | | | Type-B |

## DIMENSION




Type-A




Type-B

## MODEL EXPLANATION

RFoF - RX □□ / □ -□□□□ - □□ - □

| Product Series | Product Type | | Maximum Frequency | | Minimum Frequency | | Receiving Wavelength | | Fiber Connector | | Module Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RF Fiber Optic Link Products | RX | Optical Receiver | 01 | 1GHz | G | 30MHz | 1216 | 1270~1610nm | LA | LC/APC | A | Type-A |
| | TX | Optical Transmitter | 03 | 3GHz | M | 1MHz | XXXX | CWDM | SA | SC/APC | B | Type-B |
| | TR | Integrated Receiver and Transmitter | 06 | 6GHz | L6 | 6GHz 30KHz | | | FA | FC/APC | | |
| | RT | Optical Amplifier and Wavelength Conversion | 10 | 10GHz | | | | | | | | |
| | | | 12 | 12GHz | L1 | 1GHz 5KHz | | | | | | |