

# fRCVR



## Forward-Path Receiver

The Optilab fRCVR forward-path high performance receiver is a highly linear optical to electrical converter for use in HFC, RFoG, PON, and deep fiber applications. The fRCVR uses a high gain, low distortion receiver module and low noise RF circuit to deliver 50 dB of CNR, while maintaining optimal CSO and CTB distortion specifications. It features Automatic Gain Control (AGC) for automatic adjustment of the optical input level, and Manual Gain Control (MGC) for optimal RF gain level control. It supports up to 75 NTSC analog channels, and because it is designed to be digitally ready, it can be loaded with 60 additional QAM modulated digital channels. The fRCVR model provides a standard RF output level of 40 dBmV or an optional higher RF output level or 52 dBmV. Contact Optilab for more information.

### Features

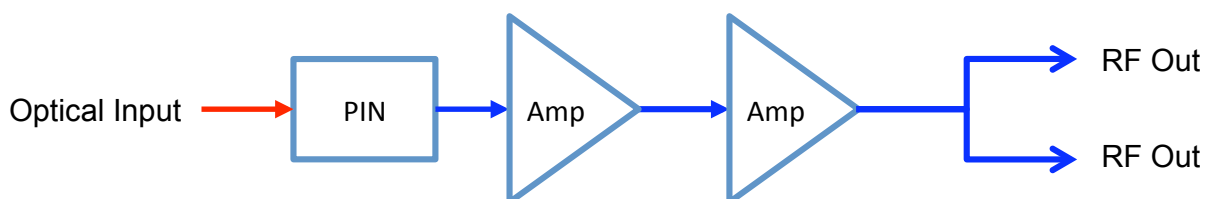
- Highly linear hybrid O/E converter module
- Automatic Gain Control (AGC)
- Manual Gain Control (MGC)
- LED front panel display and status indicators
- 45-870 MHz modulation bandwidth
- Built in RF test port (-12 dB)
- 3 year warranty standard

### Applications

- HFC
- RFoG
- PON
- Deep Fiber Applications
- For RUS/USDA projects



### Functional Diagram



# Forward-Path Receiver | fRCVR

## OPTIONS

### fRCVR-x-y

- x S, standard;  
H, high power
- y Outputs: 1 or 2

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## PHONE

Contact Optilab at:

**1-888-553-3888 (toll-free)**  
**1-602-343-1496 (direct, int'l)**

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Optical Specifications	
Receiver Wavelength Range	1200 nm to 1600 nm
Input Optical Power Level	+3 dBm to -5 dBm
RF Output Power Level	40 dBmV typ. on standard version 52 dBmV typ. on high power version
Number of Outputs	1 Standard, 2 Output (optional)
Optical Return Loss	50 dB min.
Carrier to Noise Ration (CNR)	52 dBc min. @ 0 dBm
Composite Second Order (CSO) Distortion	-65 dBc max. @ 0 dBm
Composite Triple Beat (CTB) Distortion	-58 dBc max. @ 0 dBm
Output Attenuation Range	0 dB to 20 dB (manual adjustment)
Frequency Range	45 MHz to 870 MHz
Flatness in Frequency Range	±0.5 dB
Output Impedance	75 Ω
Output RF Return Loss	16 dB min.
Mechanical Specifications	
Operation Temperature Range	-20°C to +50°C
Storage Temperature Range	-40°C to +70°C
Power Supply	80 – 240 V, 43 – 63 Hz AC
Power Consumption	50 W max.
Housing Dimensions	1RU 19"(W) x 14"(D) x 1.75"(H)
Control / Monitoring	Housing Temperature
Display	RF Output Power Level
Optical Connectors	SC/APC or Customer Specified