

# RFA Raman Fiber Amplifier

## CWDM/DWDM System



### Specification

The RFA amplifier card is developed for dense wavelength division multiplexing optical communication systems, and is used in conjunction with EDFA amplification. Based on the stimulated Raman scattering (SRS) effect of fiber, it effectively overcomes the effects of nonlinear effects such as 4-wave mixing and improves the optical signal-to-noise ratio (OSNR) of the system and greatly extends the transmission distance.

### Functions and features

- Supports C-band DWDM system optical amplification.
- Supports a maximum saturated output power of -5dBm and a minimum input power of -38dBm.
- Low noise figure, high gain and low power consumption.
- Supports SNMP-based unified network management platform, network management mode CLI, Web, NetRiver (graphical interface).
- Monitorable: Pump drive current, pump output power, pump switch, pump temperature, input optical power, output optical power, module temperature.

## Parameters

System Parameter	Technical Index	
Wavelength range	1528nm~1565nm	
Input power range	Minimum: -38dBm	
Output power range	-28dBm~-5dBm	
Maximum gain	10dB	
Noise figure	3dB	
Gain flatness	3dB	
Output isolation	40dB	
Input/output return loss	55dB	
Output pump leakage	-30dBm	
Polarization dependent gain	0.5dB	
Polarization mode dispersion	0.5ps	
Network management mode	CLI, NetRiver, WEB.	
Product dimension	177 (W)*20(H)*225(D)(mm).	
Environmental requirements	Working temperature	-10°C ~ 70°C
	Storage temperature	-40°C ~ 80°C
	Relative humidity	5% ~ 95% no condensation
Safety and EMC	Compliance with FCC, UL, CE, TUV, CSA standards.	
Power consumption	<30W.	

## Networking Applications

The products optical amplifier equipment is widely used in data room interconnection, metropolitan area network, access network and other networks. The device is connected in series on the service line to efficiently re-amplify, re-time and re-shape the signal, completely transparent to the service, and supports multiple rates from 100Mbps to 100Gbps.

### Application 1: Multichannel Amplification

Multichannel amplification is an optical amplifier device (EDFA) connected in series in service line, which can amplify multiple wavelength optical signals in a single core optical fiber uniformly.

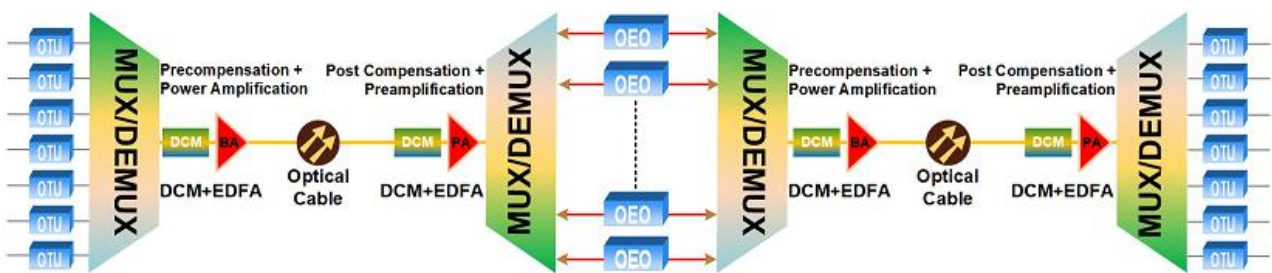


Figure 1: Multichannel Amplification Application

### Application 2: Single Channel Amplification

Single channel amplification (SCA) is a relay amplifier (OEO) connected in series in the link, which is widely used to amplify single channel optical signals in optical fiber networks.

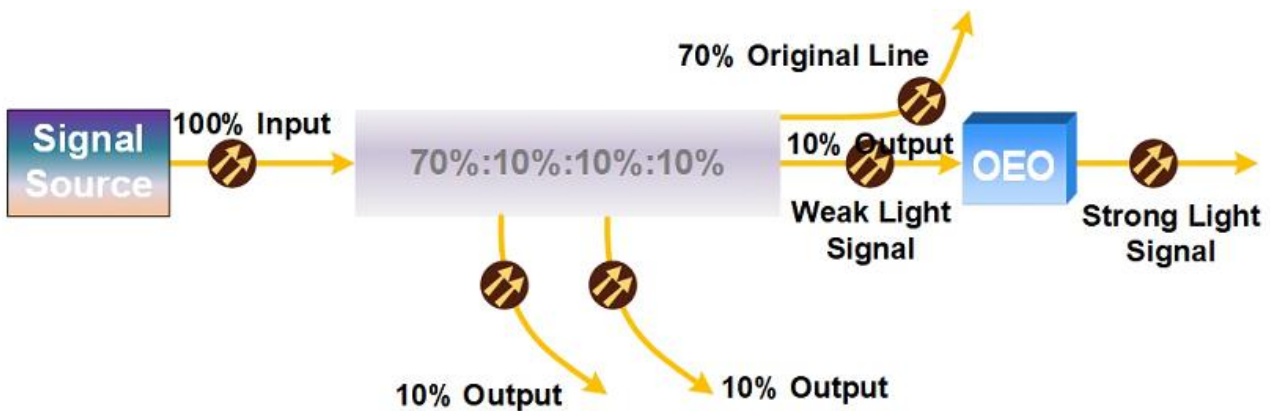


Figure 2: OEO Amplification Application