RFA RAMAN Optical Pre-Amplifier

Avara RAMAN based Optical Pre-Amplifiers provide an efficient, cost-effective and reliable way to deliver long-haul PDH, SDH and Giga bit Ethernet transmission solutions

The Avara RAMAN optical pre-amplifier product is rack mountable unit with an integrated RAMAN reverse pump module for use in long haul optical transmission applications. These pre-amplifiers are designed for PDH, SDH, SONET and optical Ethernet transmission applications and has been developed to integrate with optical telecommunication equipment manufactured by any vendor.

This product is compliant to ETSI and Telcordia standards.

Applications

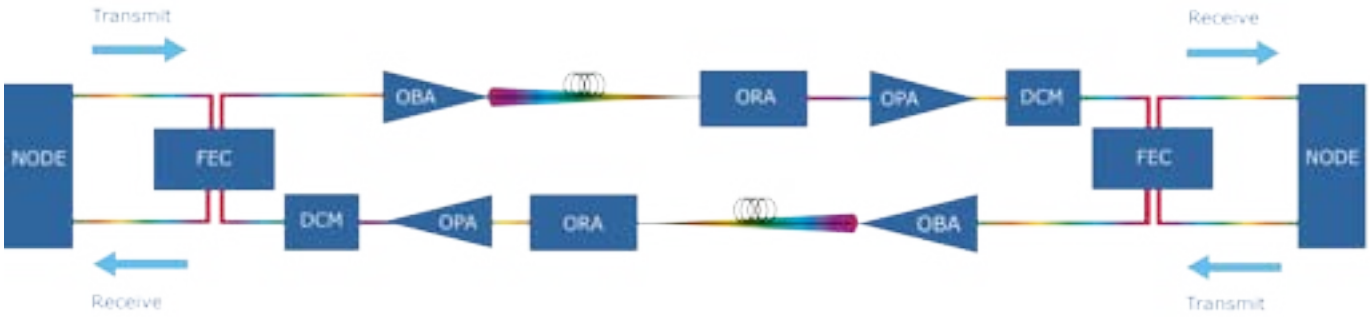
The Avara optical amplifiers can be used in applications to extend the range of equipment operating at 1550nm (C-band). Assuming a fibre loss of 0.22 dB/km, the booster in conjunction with the EDFA preamp can extend the range of a typical transmission system by up to 350km.

Technical Highlights

- Wide operating temperature range
- 19 inch rack mounting for easy installation
- 2 Rack Units height
- -40 to -57 VDC power supply
- Dry contact alarm outputs
- FC, SC & E2000 connector options available
- High reliability
- Low noise figure
- Excellent gain flatness
- AGC control
- Class 1M compliant
- Low power consumption

Components for Long Haul Optical Fibre Link

Avara has a full range of optical modules, as per the diagram below, to meet various link budgets and performance targets including dispersion compensation.



FEC - Forward Error Correction Module
OBA - Optical Booster Amplifier
ORA - Optical RAMAN Amplifier
OPA - Optical Pre-Amplifier
DCM - Dispersion Compensation Module

Full individual brochures available for above products.

D10011105 Revision: 6

Technical Specifications

Model Order Code	P21017.40				**Power**	
Mechanical					Power Supply	-40 to -57 VDC
Height	90mm				Power Consumption	60W
Depth	280mm				**Environmental**	
Width	440mm				Operating Temp.	-5°C to +50°C
	measurements inclusive of mounting ears				Relative Humidity	5 - 90% (Non-condensing)
Parameter	Unit	Min	Typ	Max	**Standards**	EN60950 Safety
Operating Wavelength	nm	1528		1565		41003 Laser Safety
RAMAN Gain	dB	10	15	22		EN60825-1 Class 1
Gain Flatness	dB			1		ETS 300 019 -1-1 Operational
Pump Power	mW	500		1200		ETS 300 019 -1-2 Storage
Polarisation Dependent Gain	dB	Max 0.3				ETS 300 019 -1-3 Transport
						EN55022 Class A Emissions
Equivalent Noise Figure	dB	Max 0				EN55024 Immunity
						Generic Immunity

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