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RAYCORE

Q3-S320 V1.3E

Specification of 1550nm Erbium-Doped
Fiber Amplifier (EDFA) 8, 16, 32 ports
Fiber Port in Front Panel, Power Supply
in Rear Panel

Part Number: AFAM-xx1x-1xxxx-xx

AFAM (1RU) series is a high power multi-ports optical amplifier with gain spectrum band within 1540~1563nm. It is mainly designed for the application of CATV or 1~8 continuous banding channel (ITU wavelength). It offers a flexible and low-cost solution for CATV large area coverage of metropolises and medium-sized cities.

AFAM optical amplifier adopts the world's top class pump laser and active optical fiber. Perfect APC, ACC and ATC control, excellent design in the ventilation and heat-dissipation ensure the long life and high reliable work of pump laser.

AFAM has extremely low noise figure, the entire unit adopts twin-stage amplification, and the pre-amplifier adopts low noise EDFA, output cascade adopts high power EYDFA. When input optical power $P_{in}=0dBm$, the noise figure of unit is: Type $\leq 4.5dB$, Max $\leq 5.0dB$ unlike other kind of product which need high optical power input to maintain lower noise figure.

AFAM LCD at the front panel offers the work index of all equipment and warning alarms. The laser will switch off automatically if optical power is missing, which offers security protection for the laser. RS232 and RJ45 offer serial commutation and SNMP network management port. All the optical port of optical amplifier can be installed in the front panel or back panel.

AFAM optional two-way optical input (built-in 2x1 optical switch), can be used for self-healing ring network or redundant backup network.

AFAM with carrier-class reliability and network security management, high quality, high reliability and excellent cost performance and is ideal for system integrators and system operator.

AFAM 19" 1RU rack, the total maximum output power of 40dBm (10000mW), optional output port up to 32 optional ports.



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Features

- Total output power optional 500~10000mW(27~40dBm)
- 19" 1RU rack, optional output port up to 32 optional port.
- Built-in low noise pre-amplifier, not necessary EDFA cascade, extremely lower the CNR, MER degradation of the system
- Low noise figure (Type $\leq 4.5\text{dB}$, Max $\leq 5.0\text{dB}$)
- Perfect RS232, SNMP
- Telecom level safety reliability and network management.
- Simplified machine-room links, improve the system reliability.
- Simple and reliable in construction/maintenance
- Optional dual optical input, built-in 2 × 1 optical switch
- Dual power supply optional, 1+1 backup
- Can reduce the 98% device space usage
- Can reduce the 85% device purchase cost
- Can reduce 95% power consumption
- The best cost performance in industry.

Application

- AM CATV
- Digital CATV
- DBS & MMDS
- FTTx PON

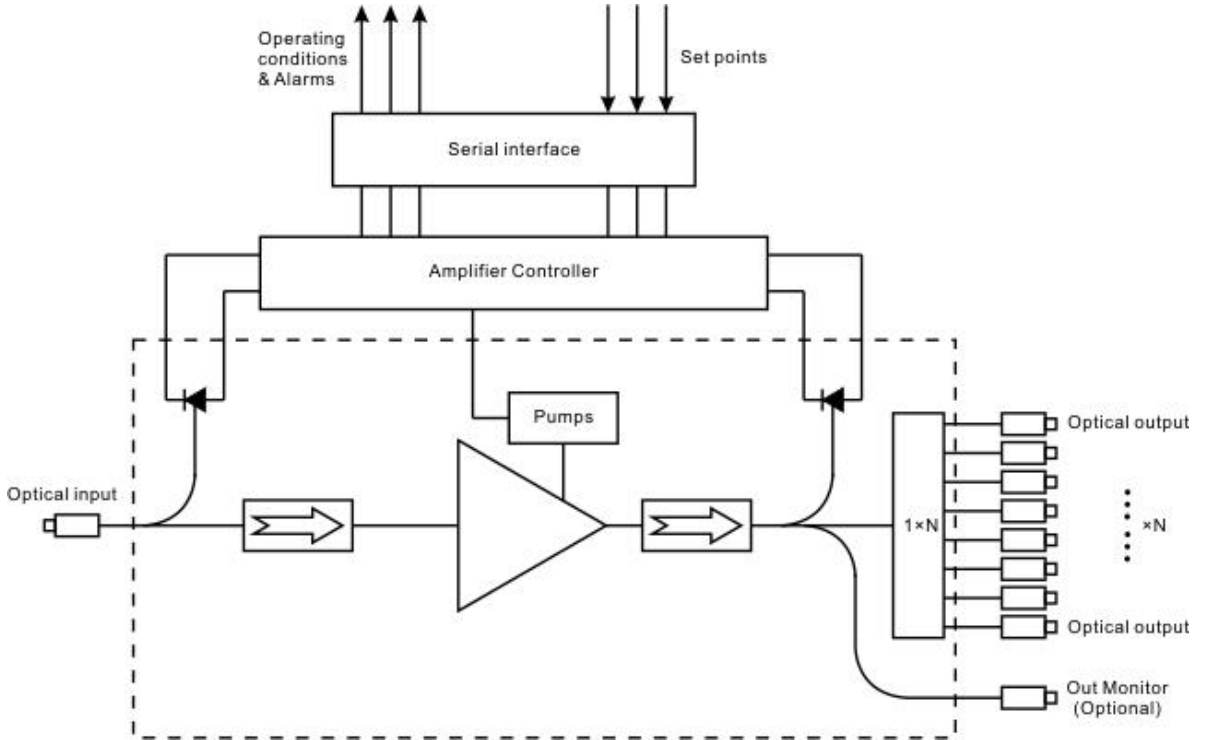
RAYCORE

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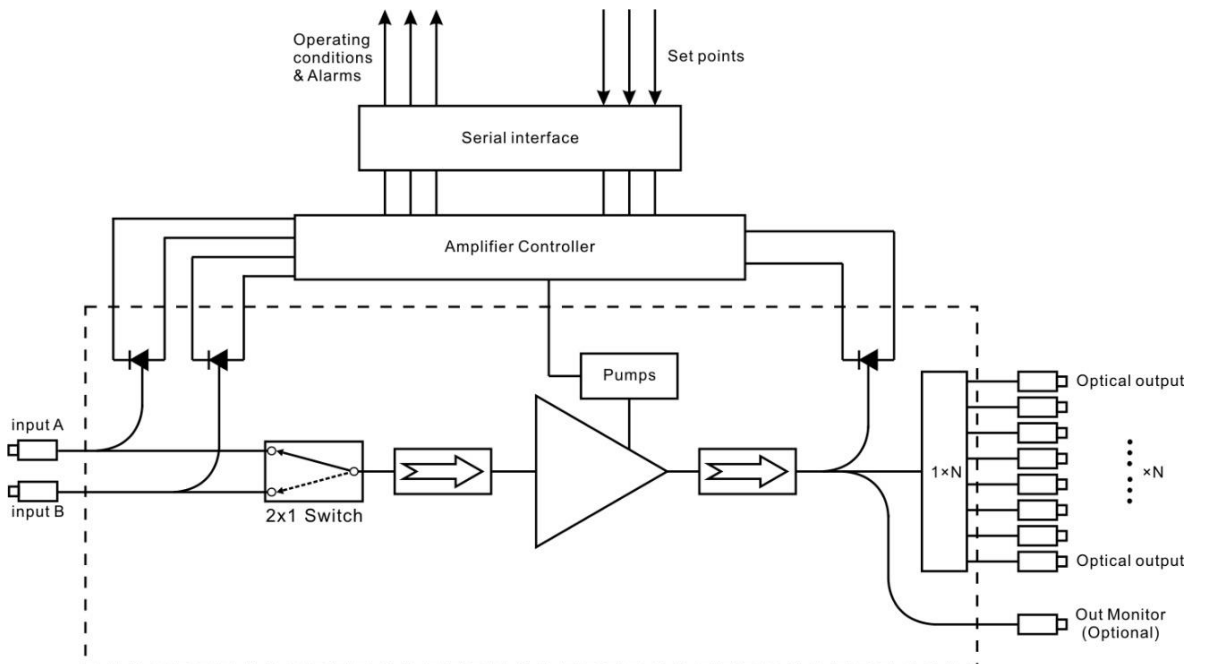


Block Diagrams

AFAM-Ax1x-1xxxx-xx (conventional)



AFAM-Bx1x-1xxxx-xx (Built-in Optical Switch)



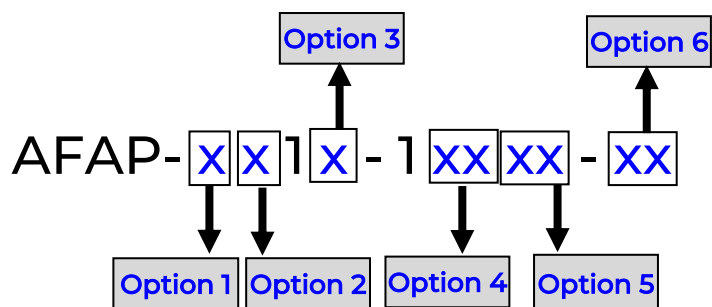
Specifications

Performance		Index			Supplement	
		Min.	Typ.	Max.		
Optical feature	Operating wavelength range	(nm)	1540		1563	
	Input power	(dBm)	-10		+10	*Typical: 0 ~ +10dBm for output power
	Total output power ¹⁾	(dBm)			40	(Optional)
	Number of output ports	(pcs)			32	(Optional)
	Each output power	(dBm)	15		22	(Optional)
	Difference of output power	(dB)	-0.5		+0.5	
	Output optical power monitoring	(dB)		-20		(Optional)
	Output power adjustable range	(dBm)	-6		0	
	Noise figure (Pin=0dBm)	(dB)		4.5	5.0	AFAM-Ax1x-1xxxx-xx
				5.0	6.0	AFAM-Bx1x-1xxxx-xx
	Switch time	(ms)			8.0	AFAM-Bx1x-1xxxx-xx
	Polarization dependence loss	(dB)			0.3	
	Polarization dependence gain	(dB)			0.4	
	Polarization mode dispersion	(ps)			0.3	
	Input/output isolation	(dB)	30			
	Pump power leakage	(dBm)			-30	
	Echo loss	(dB)	55			APC
Optical Connector		SC/APC or LC/APC			(Optional)	
General feature	Network management interface		RJ45			SNMP
	Series interface		RS232			
	Power supply	(V)	90		265	220VAC (Optional)
			30		72	-48VDC (Optional)
	Power consume	(W)			50	
	Operating temp.	(°C)	-5		50	
	Storage temp.	(°C)	-40		80	
	Operating relative humidity	(%)	5		95	
Size (W)×(D)×(H)	(inch)	19×14.3×1.75			1RU (19")	



Ordering Information

Part Number	Description
AFAP -xx1x-1xxxx-xx	1550nm Erbium-Doped Fiber Amplifier (EDFA) 8, 16, 32 ports Fiber Port in Front Panel, Power Supply in Rear Panel



Option 1: Input Ports

Option Code	Option Descriptions
A	1 Port (without optical Switch)
B	2 Ports (with optical Switch)

Option 2: Optical Output Power Monitoring Port

Option Code	Option Descriptions
A	without Optical Power Monitoring Port
B	with Optical Power Monitoring Port

Option 3: Optical Connector

Option Code	Option Descriptions
S	SC/APC
L	LC/APC



Option 4, 5: Optical Power & Number of Output Ports

Part Number	Total Output Power	Number of Output Ports	Output Power (dBm) / Per Port
AFAM-xx1x-1 16 08 -xx	27dBm (500mW)	8	16
AFAM-xx1x-1 17 08 -xx	28dBm (630mW)	8	17
AFAM-xx1x-1 18 08 -xx	29dBm (800mW)	8	18
AFAM-xx1x-1 15 16 -xx		16	15
AFAM-xx1x-1 19 08 -xx	30dBm (1000mW)	8	19
AFAM-xx1x-1 16 16 -xx		16	16
AFAM-xx1x-1 20 08 -xx	31dBm (1260mW)	8	20
AFAM-xx1x-1 17 16 -xx		16	17
AFAM-xx1x-1 21 08 -xx	32dBm (1600mW)	8	21
AFAM-xx1x-1 18 16 -xx		16	18
AFAM-xx1x-1 19 16 -xx	33dBm (2000mW)	16	19
AFAM-xx1x-1 15 32 -xx		32	15
AFAM-xx1x-1 20 16 -xx	34dBm (2500mW)	16	20
AFAM-xx1x-1 16 32 -xx		32	16
AFAM-xx1x-1 21 16 -xx	35dBm (3200mW)	16	21
AFAM-xx1x-1 17 32 -xx		32	17
AFAM-xx1x-1 22 16 -xx	36dBm (4000mW)	16	22
AFAM-xx1x-1 18 32 -xx		32	18
AFAM-xx1x-1 19 32 -xx	37dBm (5000mW)	32	19

Option 5: Power Supply

Option Code	Option Descriptions
00	Only 1 AC Power
02	Only 1 DC Power
08	AC Power + AC Power
09	DC Power + DC Power
10	AC Power + DC Power

