

# Technical Specification

## 1550nm CATV Erbium Doped Fiber Amplifier



JP0116EA



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## 1.0 Product description

JP08XXEA(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. It offers a flexible and low-cost solution for CATV large area coverage of metropolises and medium-sized cities.

JP08XXEA 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.

JP0420EA 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: Typ  $\leq 4.5dB$ , Max  $\leq 5.0dB$  Unlike other kind of product which need high optical power input to maintain lower noise figure.

JP08XXEA 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.

JP08XXEA optional two-way optical input (built-in 2x1 optical switch), can be used for self-healing ring network or redundant backup network.

JP08XXEA 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.

## 2.0 Product feature

- Total output power optional 500~10000mW(27~40dBm)
- 19" 1RU rack, optional output port up to 64 optional port.
- Built-in low noise pre-amplifier, not necessary EDFA cascade, extremely lower the CNR, MER degradation of the system

- Low noise figure ( Typ  $\leq 4.5\text{dB}$ , 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  $2 \times 1$  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.

## 3.0 Main application

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

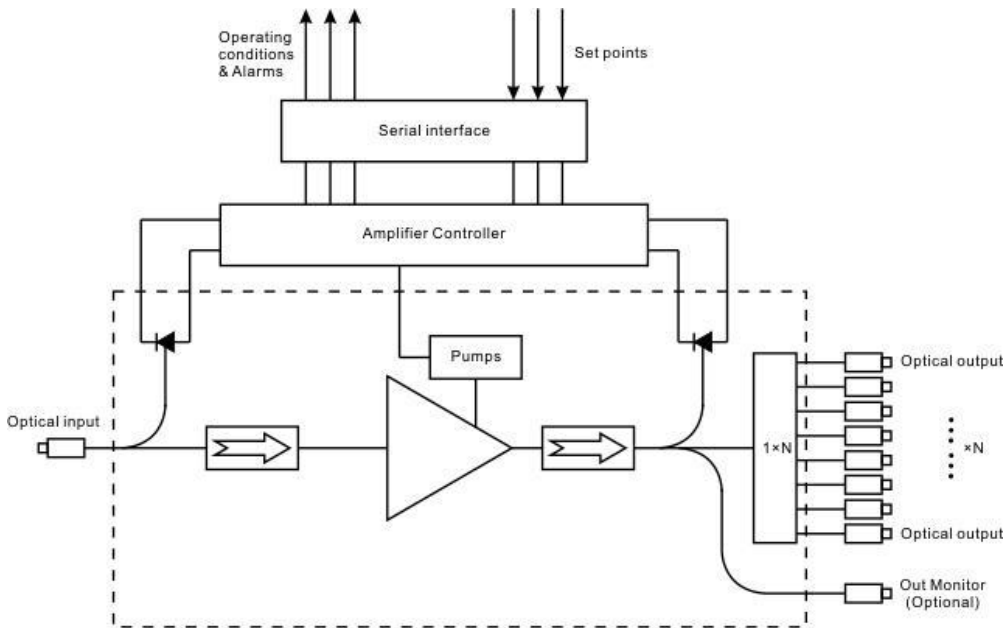
## 4.0 Technique index

Performance		Index			Supplement	
		Min.	Typ.	Max.		
Optical feature	Operating wavelength range	(nm)	1535		1565	CATV
	Input power	(dBm)	-10		+10	
	Total output power <sup>1)</sup>	(dBm)				
	Number of output ports	(pcs)		1		1/2/4/8/16/32
	Each output power	(dBm)	0	16	26	13 ~ 24dbm
	Difference of output power	(dB)	-0.5		+0.5	
	Output power adjustable range	(dBm)	-6		0	
	Noise figure (Pin=0dBm)	(dB)		4.5	5.0	
				5.0	6.0	
	Switch time	(ms)			8.0	
	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
General feature	Network management interface		RJ45			SNMP
	Power supply	(V)	90		265	220VAC
			30		72	-48VDC
	Power consume	(W)			50	
	Operating temp.	(°C)	-5		65	
	Storage temp.	(°C)	-40		80	
	Operating relative humidity	(%)	5		95	
Size (W)x(D)x(H)	(")	19×14.3×1.75			1RU (19")	

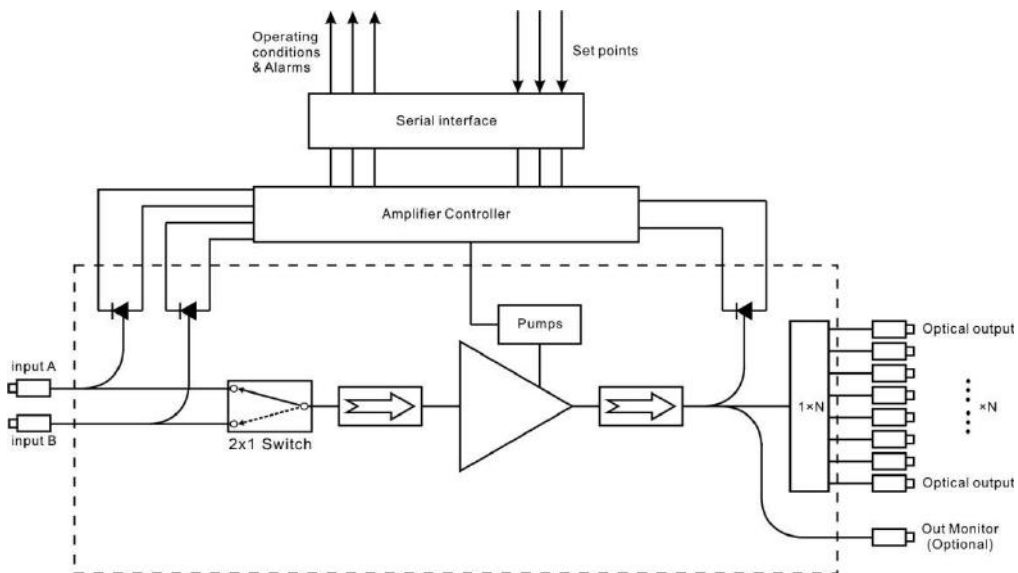
Remark: Output power can be customized by user.

## 5.0 Optic/electrical schema

### 5.1 JP0800EA (conventional)



### 5.2 JP0800EA (Built-in Optical Switch)



## 6.0 Product series

Model/(dBm)	1port	2 ports	4 ports	8 ports	16ports	32 ports	64 ports
1550nm CATV EDFA/Amplifier	1X13	2X13	4X13	8X13	16X13	32X13	64X13
	1X14	2X14	4X13	8X14	16X14	32X14	64X14
	1X15	2X15	4X15	8X15	16X15	32X15	64X15
	1X16	2X16	4X16	8X16	16X16	32X16	64X16
	1X17	2X17	4X17	8X17	16X17	32X17	64X17
	1X18	2X18	4X18	8X18	16X18	32X18	64X18
	1X19	2X19	4X19	8X19	16X19	32X19	64X19
	1X20	2X20	4X20	8X20	16X20	32X20	64X20
	1X21	2X21	4X21	8X21	16X21	32X21	/
	1X22	2X22	4X22	8X22	16X22	/	/
	1X23	2X23	4X23	8X23	16X23	/	/
	1X24	/	/	/	/	/	/
	1X25	/	/	/	/	/	/
	1X26	/	/	/	/	/	/