

FWAP-1550H-16xN Series, 16 ports PON & CATV WDM EDFA



1. Product Description

FWAP-1550H series erbium and ytterbium co-doped high-power fiber amplifier is the latest optical transmission system equipment, realizing to combine optical signal OLT XPON/XG(S)-PON and 1550nm CAT, and amplify the CATV signal as well. The optical input number: 1 port of CATV or 2 redundant CATV inputs + 16 ports PON input ports. 16 ports outputs of 1550nm+1490nm/1310nm & 1270/1577nm combine output, of which the total output power range of 1550nm is 27 ~ 40dBm. Multiple output power can be matched according to user demand.

Fullwell's high-power WDM EDFA is well compatible with the OLT/ONU of HUAWEI, ZTE, FiberHome, etc and no data is lost, which owns high cost performance. It is mainly used for XPON / XG(S)-PON structure fiber to home(FTTH) and fiber to the building(FTTB).

This series product adopts Lumentum, II-VI etc multimode high power pump laser as pump source and American OFS closed beam splitter as double-cladding synthesizer. Built-in optical power output stabilization circuit and laser thermoelectric cooler temperature stabilization control circuit ensure the best performance of the EDFA and the long-term stable operation of the laser. The microprocessor software monitors the working status of the laser, and the working parameters are displayed on the digital panel (LCD). Once the laser's working parameters deviate from the allowable range set by the software, the micro-processing will automatically turn off the laser power, and the red light flashes to alert.

2. Product feature

- ◆ Top quality: Adopt multi-mode high-power pump laser and the power is optimized through software, which makes the system achieving excellent CNR.
- ◆ Reliability: Adopt 19" 2U standard chassis, built-in high performance modular switching power supply, can work in AC90 ~ 265V city network voltage. DC 48V hot-swappable power supply option is available as well. Dual hot and reserved power supply with Chassis automatic heat dissipation control.
- ◆ Intuitive: The built-in microprocessor monitors the working status of the pump laser, and the working parameters are displayed on LCD.
- ◆ Network management Interface: Web transponder is line with the national standard and compatible with the SCTE HMS standard, achieving WEB monitoring function. The red warning symbol is displayed on the web page, which is convenient for troubleshooting.
- ◆ Adjustable output optical power: Advanced design enables a large adjustable range of output power, and

power can be lowered by 0 ~ -3dBm.

- ◆ Plug-in WDM modular: Integrated FWDM module, CATV, GPON, EPON, XG(S)-PON (customized). One fiber with multi-waves is convenient to use.
- ◆ Built-in optical switch option: There are automatic (prefer) or manual (force) switch mode when CATV signal has main path A and redundant path B optical switch input (OPT SWTTCH). Automatic mode uses the main path A by default, it switches to redundant path B if A input power fails.

3. Technical Parameters

Items		Unit	Performance Index
Optical Operating Wavelength		nm	1535~1565
Input Optical Power Range		dBm	-10~+10
Noise Ratio		dB	≤5.0 (0 dBm,@1550nm)
Gain Flatness		dB	< ±0.3
Optical Power Output Stability		dB	< ±0.5
Polarization Sensitivity		dB	<0.2
Polarization Mode Dispersion		Ps	<0.5
Input End Pump Leakage Power		dB	≤-30
Output End Pump Leakage Power		dB	≤-30
Optical Input, Output Return Loss		dB	>45 (APC Stepped Face)
Pump Operating Number		PCs	2~4
Rated Output Power		dBm	27~40
Linker(IN)		-	SC/APC or LC/APC
Linker(OUT)		-	SC/APC or LC/APC
Power Supply/Consumption		V/W	AC90~265 or DC-48/20
Operating/Storage Temperature		°C	-20~65/-30~70
Operating/Storage Humidity		%	5~90
Case Size		mm	530×486×88 (2U)
Network Management Connector		/	RJ45(following national network management standard, supports WEB)
PON Optical Path with WDM	PON Wavelength	mm	1310/1490
	XG(S)- PON Wavelength		1310/1490 & 1270/1577 (customized)
	PON Linker	/	SC/UPC or LC/UPC
	Uplink optical ports	pcs	16
	Output ports	Pcs	16
	PON Insertion Loss	dB	<1.2
	1550 Port Insertion Loss	dB	<0.7
	Optical isolation	dB	40
Optical Switch	Insertion Loss	dB	<1
	Harass	dB	<-60 (isolation between A and B)
	Switch Time	ms	<10
	Switched Power Threshold Range	dBm	-5~10

4. Product model series

Model Number	Total Output Power dBm(mW)	Output No.	Each Output Power (dBm)
FWAP-1550H-16x14	28dBm(640mW)	16	14
FWAP-1550H-32x10		32	10
FWAP-1550H-16x15	29dBm(800mW)	16	15
FWAP-1550H-32x11		32	11
FWAP-1550H-16x16	30dBm(1000mW)	16	16
FWAP-1550H-32x12		32	12
FWAP-1550H-16x17	31dBm(1300mW)	16	17
FWAP-1550H-32x13		32	13
FWAP-1550H-16x18	32dBm(1600mW)	16	18
FWAP-1550H-32x14		32	14
FWAP-1550H-16x19	33dBm(2000mW)	16	19
FWAP-1550H-32x15		32	15
FWAP-1550H-16x20	34dBm(2500mW)	16	20
FWAP-1550H-32x16		32	16
FWAP-1550H-16x21	35dBm(3000mW)	16	21
FWAP-1550H-32x17		32	17
FWAP-1550H-16x22	36dBm(4000mW)	16	22
FWAP-1550H-32x18		32	18
FWAP-1550H-16x23	37dBm(5000mW)	16	23
FWAP-1550H-32x19		32	19

