

## FWAP-XGS Series, XG(S)-PON + CATV Integrated Optical



### 1. Product Description

"Quality Broadband" has become the consensus of the development of the global broadband industry. Meeting the needs of users for 10G bandwidth has become a challenge for operators. To meet the challenges faced by operators, Huawei's next-generation large-capacity distributed intelligent OLT platform MA5800 provides a single service board that supports XGS-PON, XG-PON, and GPON mixed access application scenarios.

Fullwell is a certified solution partner of Huawei. In order to cater to the integration of triply play network and move towards 10G bandwidth, Fullwell has developed the product of XG (S) -PON + CATV EDFA high power EDFA. Which its CATV signals and XGS-PON, XG-PON and GPON signals can be accessed on one fiber at the same time, helping operators to create all-optical, automated and intelligent FTTH integrated access network, continuously improve user experience, enable quality broadband, help operators CATV and home broadband become possible, while reducing the cost of operator investment.

FWAP-XGS series is the latest optical transmission system equipment of XG (S) -PON + CATV FTTH / FTTP triple play network integration, and it is the function of combining OLT XG (S) -PON broadband signal and CATV 1550nm optical signal after amplification. Input ports: 1 CATV + 32/64 XGS-PON / XG-PON and GPON, combined 32/64 outputs: 1310 / 1490nm & 1270 / 1577nm + 1550nm, of which the total output power range of 1550nm is 27 ~ 45dBm. Multiply output ports can be customized. Compatible with XG (S) -PON / ONU, such as Huawei, ZTE, and Fiberhome, without losing of data, and has a high cost performance.

### 2. Product feature

- ◆ Top quality: Adopt JDSU/Lumincs/ II VII multi-mode high-power pump laser and the power is optimized through software, which makes the system achieving excellent CNR AND minimizing the NF of EDFA.
- ◆ Reliability: It adopts a 19 " 3U telecommunication style small chassis, the depth of which is the same as that of Huawei's frame-type OLT, which is convenient for storage in the telecommunications room cabinet. It has a built-in high-performance plug-in DC 48V / AC220V dual switching power supply with Chassis automatic heat dissipation control.
- ◆ Intuitive: Multi-mode pump laser is the most expensive component in the device. 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.

- ◆ Customizable 2X1 optical switch: built-in optical path selector, 2 optical inputs, can be set to manual or automatic mode for the selection of main and redundant path.
- ◆ Integrated WDM of XGS-PON, XG-PON and GPON, optical port: XGS-PON, XG-PON and GPON input: SC / UPC, 1 port of 1550nm CATV optical input port: SC / APC, XG (S) -PON + CATV 1550nm EDFA output optical port: SC / APC.

### 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	2~5	
Rated Output Power	dBm	27~45	
Linker(IN)	-	SC/APC	
Linker(OUT)	-	SC/APC	
Power Supply/Consumption	V/W	DC-48/20,AC165~265/20	
Operating/Storage Temperature	°C	-20~65/-30~70	
Operating/Storage Humidity	%	5~90	
Case Size	mm	530×486×88 (3U)	
Network Management Connector	/	RJ45(following national network management standard, supports WEB)	
	XG(S)- PON Wavelength	nm	1310/1490 & 1270/1577
	XG(S)- PON Linker	/	SC/UPC
	Uplink optical ports	pcs	32
	Output ports	Pcs	32
	XG(S)- PON Insertion Loss	dB	<1.2
	1550 Port Insertion Loss	dB	<0.7
	Optical isolation between CATV&OLT	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-XGS-16x14	28dBm(640mW)	16	14
FWAP-XGS-32x10		32	10
FWAP-XGS-16x15	29dBm(800mW)	16	15
FWAP-XGS-32x11		32	11
FWAP-XGS-16x16	30dBm(1000mW)	16	16
FWAP-XGS-32x12		32	12
FWAP-XGS-16x17	31dBm(1300mW)	16	17
FWAP-XGS-32x13		32	13
FWAP-XGS-16x18	32dBm(1600mW)	16	18
FWAP-XGS-32x14		32	14
FWAP-XGS-16x19	33dBm(2000mW)	16	19
FWAP-XGS-32x15		32	15
FWAP-XGS-16x20	34dBm(2500mW)	16	20
FWAP-XGS-32x16		32	16
FWAP-XGS-16x21	35dBm(3000mW)	16	21
FWAP-XGS-32x17		32	17
FWAP-XGS-16x22	36dBm(4000mW)	16	22
FWAP-XGS-32x18		32	18
FWAP-XGS-16x23	37dBm(5000mW)	16	23
FWAP-XGS-32x19		32	19
FWAP-XGS-32x20	38dBm(6000mW)	32	20
FWAP-XGS-64x16		64	16
FWAP-XGS-32x21	39dBm(8000mW)	32	21
FWAP-XGS-64x17		64	17
FWAP-XGS-32x22	40dBm(10000mW)	32	22
FWAP-XGS-64x18		64	18
FWAP-XGS-32x23	41dBm(13000mW)	32	23
FWAP-XGS-64x19		64	19

