Module Plug-in type FWAP-XGS Series XGS-PON & CATV WDM EDFA combiner

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 ports XGS-PON / XG-PON and GPON, combined 32 ports 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 **LUMENTUM,** 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.

◆ It adopts a 19 ″ 2U telecommunication style small chassis, WDM EDFA **chassis depth is 26cm only,** the same depth 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 dual switching power supply with Chassis

automatic heat dissipation control.

◆ Plug-in EDFA module: the pluggable module integrates the laser controlling circuit, the optical path for amplification, and the XGS-PON WDM wavelength division multiplexer, which is easy for maintenance, network upgrading and troubleshooting.

◆ 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		℃	-20～65/-30～70
Operating/Storage Humidity		%	5～90
Case Size		mm	**530×260×88 (2U)**
Network Management Connector		/	RJ45(following national network management standard, supports WEB)
XGS-PON Optical Path with WDM	XGS- PON Wavelength	nm	1310/1490 & 1270/1577
	XGS- PON Linker	/	SC/UPC
	Uplink optical ports	ports	32
	Output ports	ports	32
	XGS- 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	Output No.	Each Output Power（dBm）
FWAPS-XGS-32x10	32	10
FWAPS-XGS-32x11	32	11
FWAPS-XGS-32x12	32	12
FWAPS-XGS-32x13	32	13
FWAPS-XGS-32x14	32	14
FWAPS-XGS-32x15	32	15
FWAPS-XGS-32x16	32	16
FWAPS-XGS-32x17	32	17
FWAPS-XGS-32x18	32	18
FWAPS-XGS-32x19	32	19
FWAPS-XGS-32x20	32	20
FWAPS-XGS-32x21	32	21
FWAPS-XGS-32x22	32	22
FWAPS-XGS-32x23	32	23

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