FTTX High Performance Optical Amplifier

AT5200

EDFA Series

- Video-Overlay for FTTx Applications
- Up to 128 Output Ports
- Optional Optical Switch
- Low noise, High Performance
- Intuitive Front Panel LCD Display
- Adjustable Output
- Universal Management with Craft Interface
- SNMP Management

AT5200 2RU Erbium-Doped Fiber Amplifier (EDFA) offers a flexible and scalable optical amplification for high quality video transmission in CATV networks. Together with ACT AT5000 series 1550nm transmitter, the AT5200 EDFA provides an ideal video overlay solution in high density FTTX networks to bring the video services to business and home premises.

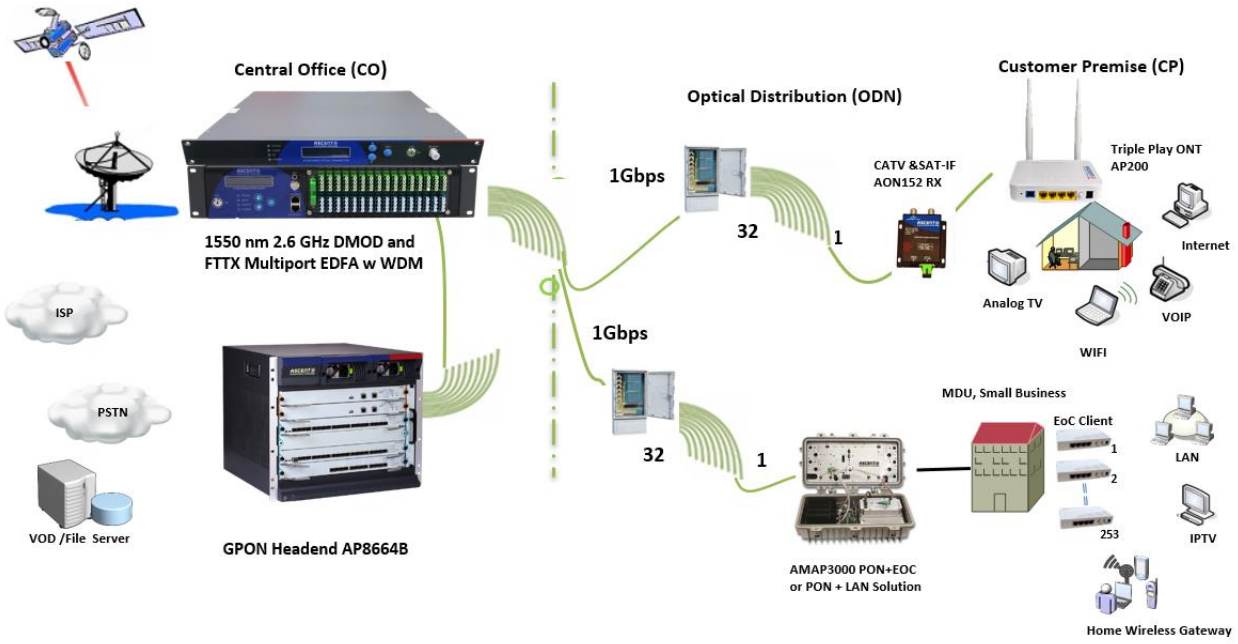
AT5200 EDFA series simplifies the application by offering low noise, high output power, and intuitive front panel LCD display to make operator's life easier. The optical amplifier is packaged in a self-contained 19" sub-rack of 1 or 2 RU with redundant universal mains power supply and SNMP management.

The optical output power level can be ordered from 13 dBm to 26dBm with variable output features available. Multiport EDFAs accommodates up to 16 output ports in 1RU setting and 64 output ports in 2RU setting. Combined with our AT5000 1550nm direct or externally modulated laser transmitter, MSOs can quickly deploy and activate advanced multi-media services in long distance video transmission and high subscriber count FTTH networks.

Key Features

- Low noise, high performance with JDSU & IPG pump laser
- FTTP high power multi-ports optical amplifier with gain spectrum band within 1540 to 1563nm
- Built-in WDM to connect PON OLT Uplink and Combined PON + CATV output
- Up to 128 uplink optical ports (OLT 1310/1490nm)
- Up to 128 combined output ports (1550nm CATV + 1310/1490nm data stream)
- Suitable for analog and digital CATV systems, DOCSIS, FTTH and more applications
- Suitable for 1550 nm DWDM applications for multiple wavelengths on single fibre
- Nominal output powers from 13dBm to 26dBm per port
- Adjustable output power
- Laser cooling: Thermoelectric Cooler (TEC)
- Extend analog and digital CATV to suit long distance feeders or larger FTTH distribution systems
- Local or remote monitoring and configuration
- SNMP/HTTP monitoring, management and control

Application Diagram



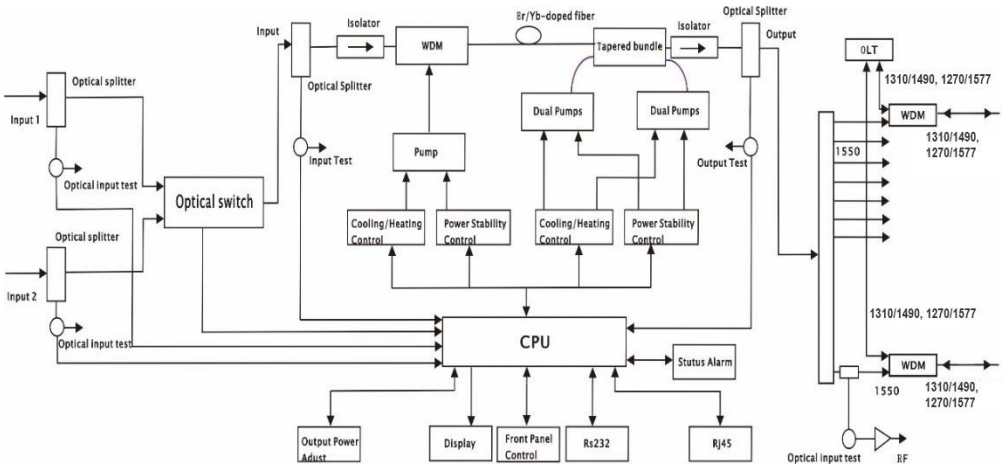
Specifications

AT5200 EDFA Erbium-Doped Fiber Amplifier - 19" 1 or 2RU

Parameter	Unit	Min.	Typ.	Max.	Note
Optical Index					
CATV Operating Wavelength	nm	1545		1565	
GPON Pass Wavelength	nm		1310/1490		CWDM
XGPON Pass Wavelength	nm		1270/1577		CWDM
OTDR Pass Wavelength	nm		1625 to 1650		CWDM
Optical Input Range	dBm	-8		+10	
Output Power	dBm			41	1 dBm interval
Output Adjustment Range	dB	-4		0	Adjustable, each step 0.1 dB
Output ATT	dB		-6		Output ATT at one time And recover
Output Ports Uniformity	dB			0.7	
Output Power Stability	dB			0.3	
Max No. of OLT PON Ports 2RU				32	SC/APC
				64	LC/APC
Max No. of COM Ports 2RU				32	SC/APC
				64	LC/APC
CATV Pass Loss	dB			0.8	
OLT Pass Loss	dB			0.8	
Isolation between CATV and OLT	dB	40			
Switching Time of Optical Switch	ms			8.0	Optional
Insertion Loss of Optical Switch	dB			0.8	GPON
	dB			1.1	XGPON
	dB			1.4	OTDR
Noise Figure	dB			6.0	Pin: 0 dBm
PDL	dB			0.3	
PDG	dB			0.4	
PMD	ps			0.3	
Remnant Pump Power	dBm			-30	
Optical Return Loss	dB	45			
Fiber Connector		SC/APC			FC/APC
					LC/APC
General Characteristics					
RF Test	dBμV	78		82	Optional
Network Management Interface		SNMP, WEB supported			
Power Supply	V	90		265	AC
		-72		-36	DC
Power Consumption	W			100	Dual PS, 1+1 standby, 40dBm
Operating Temperature	°C	-5		+65	
Storage Temperature	°C	-40		+85	

Operating Relative Humidity	%	5	95
Dimensions (D×W×H)	mm	370 × 483 × 88	
Weight	kg	7.5	

Block Diagram



Dual Inputs Model

Ordering Information

AT 5200 Series FTTX Multiport Optical EDFA Ordering Information

AT-	5X-	EDFA-	XX-	XX-	X-	XX-	XX	X	-X

	EDFA Type
50	Multiport
52	Multiport + WDM

	Combined Output Ports
08	8 Optical Outputs
16	16 Optical Outputs
32	32 Optical Outputs
64	64 Optical Outputs

	Optical Connector* (Common & PON)
SC	SC/APC & SC/PC
LC	LC/APC & LC/PC

	Power Supply
2	Dual PS for multiple output version

	Output Power (after WDM)
18	18 dBm
19	19 dBm
20	20 dBm
21	21 dBm

	PON Variant
-	GPON (1310/1490 nm)
X	GPON or XGS PON
G	GPON and XGPON
T	GPON and XGS PON and OTDR

	Power Supply
AC	90 to 265 VAC Australia Plug
DC	30 to 72 VDC
A3	90 to 265 VAC with Continental EU Plug
A4	90 to 265 VAC with North America Plug

	Optical Switch or Receiver
-	No Optical Switch or RX
S	Built-in Optical Switch
R	Built-in Optical RX
O	Built-in Optical Switch & RX

* The CATV input optical connector is SC/APC. Contact ACT Sales Representative for other configs.

* The maximum output power per port is 26 dBm.

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