

Integrated 48/96CH DWDM EDFA fiber Amplifier Module



In order to meet the cost-effective needs of the market, FIBERWDM has developed an integrated DWDM EDFA fiber amplifier device. Its main function is to compensate the power of the signal optical in the transmission line, and it can amplify the optical signals of up to 40/48 channels with 100 GHz' s interval) or 80/96 channels with 50 GHz' s interval) at C band at the same time. It has characters of flat gain, locked gain, low noise index, etc. It' s an indispensable and important component for DWDM system, future high speed system and all-optical network long-distance transmission.



Pic.1 EDFA Front

Front panel description:

- IN: EDFA input optical port
- OUT: Output optical port of EDFA
- RJ45: Ethernet RJ45 interface
- RS232: Serial port interface



Pic.2 EDFA Back

Back panel description:

- DC 7~30V: DC power interface (select either V+ or V- among the two)
- OFF ON: Switch button

Features

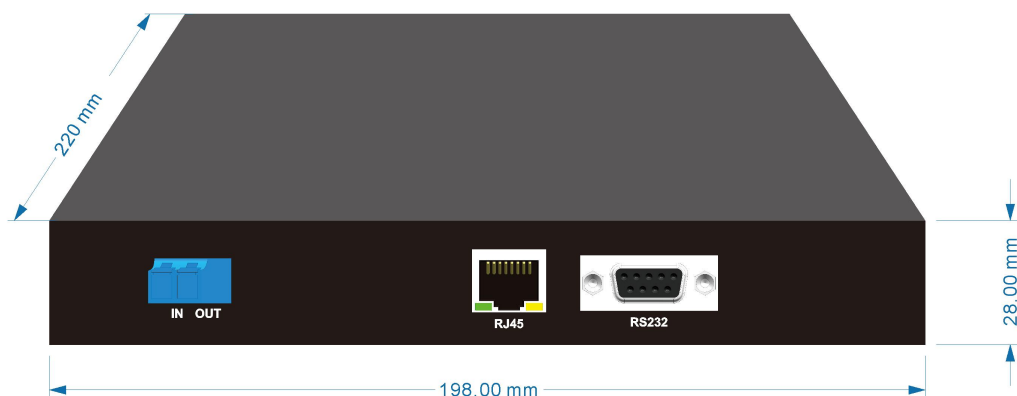
- ◆ Low noise figure: typical 5.0dB
- ◆ High flatness: typical 1dB
- ◆ Cover whole C-Band: carrier 40/80ch or 48/96ch
- ◆ Redundancy hot swap power module: 7-30VDC can plug Mix
- ◆ The optical power value and set the working mode: AGC or APC Mode.
- ◆ Perfect Network Interface: standard RJ45 and RS232 industrial standard interface.
- ◆ Provide upper computer software, query and set up optical amplifier equipment, use Ethernet network or serial port access.

Product Specifications

System Parameters	Technical Specifications
Wavelength Range	Extension type: 1528nm~1568nm Applicable to 48 wavelength(100GHz) or 96 wavelength(50GHz) DWDM system
Input Power Range	Power Amplification (BA): -15dBm~+5dBm

		Line Amplification (LA): -35dBm~-7dBm Pre-Amplification (PA): -35dBm~-7dBm
Gain Range		10dB~30dB
Noise Figure		4.5dB~6dB
Gain Flatness		1.0dB
Input/Output Isolation		30dB
Input/Output Return Loss		45dB
Output Pump Leakage		-30dBm
Polarization-Dependent Loss		0.5dB
Polarization Mode Dispersion		0.5ps
Management Functions		Display the optical power value and set the working mode:AGC or APC Mode.
Management Methods		Host computer software
Interface		Web: RJ45 and RS232 Optical: LC/UPC or others
Dimensions		220*198*26 (mm)
Environmental Requirements	Operating Temperature	-10℃ ~ 50℃
	Storage Temperature	-40℃ ~ 80℃
	Relative Humidity	5% ~ 95% (non-condensing)
Safety and EMC Compliance		Complies with FCC, UL, CE, TUV, CSA standards
Power Consumption		<30W

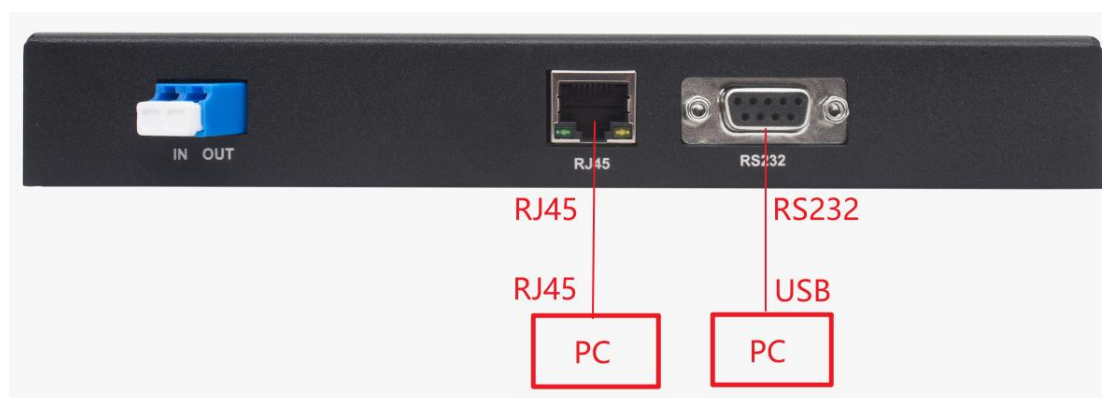
Dimensions



Order Information

Part No.	Specifications
EDFA-BA-G1520-MT	DWDM EDFA Amplifier, 1528nm~1568nm BA G15/20 Gain 15dB +-3dB Adjustable, Max output 20dB, LC/UPC, Dual Power: DC7~30V, 220*198*26 (mm) Metal Module
EDFA-LA-G2520-MT	DWDM EDFA Amplifier, 1528nm~1568nm LA G25/20 Gain 25dB +-3dB Adjustable, Max output 20dB, LC/UPC, Dual Power: DC7~30V, 220*198*26 (mm) Metal Module
EDFA-PA-G2520-MT	DWDM EDFA Amplifier, 1528nm~1568nm PA G25/20 Gain 25dB +-3dB Adjustable, Max output 20dB, LC/UPC, Dual Power: DC7~30V, 220*198*26 (mm) Metal Module
EDFA-BP20-MT	DWDM EDFA Amplifier, 1528nm~1568nm, 2ch BA+PA, BA G15/20dB, Gain 20dB, Max output 20dB, PA G25/20dB, Gain 25dB, Max output 20dB, LC/UPC, Dual Power: DC7~30V, 220*198*26 (mm) Metal Module
EDFA-LL20-MT	DWDM EDFA Amplifier, 1528nm~1568nm, 2ch LA+LA G25/20dB, Gain 25dB, Max output 20dB, LC/UPC, Dual Power: DC7~30V, 220*198*26 (mm) Metal Module

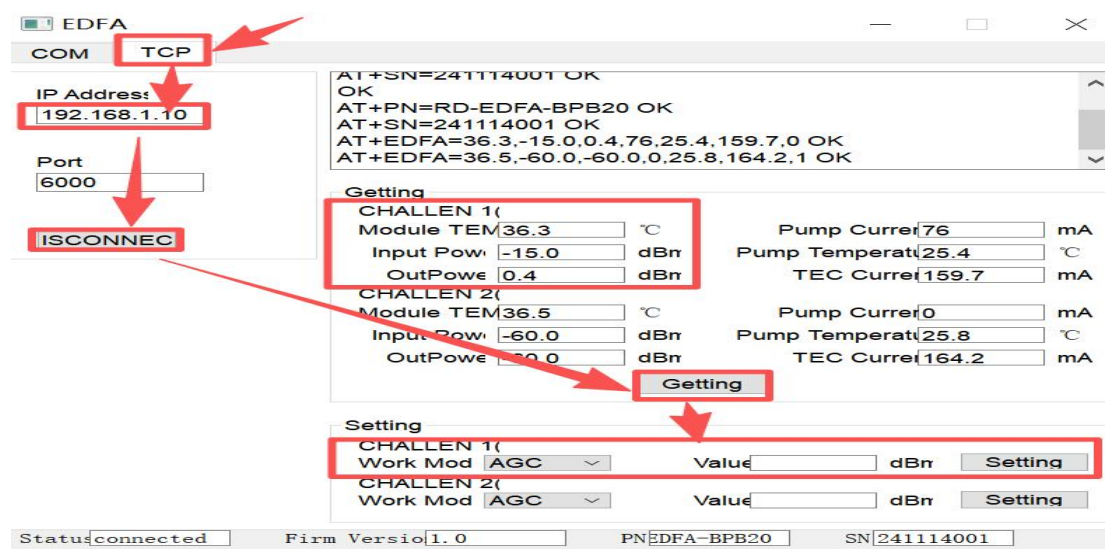
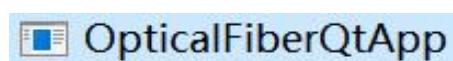
Network Administrator Connection Instructions



It can be physically connected in two ways: Ethernet or RS232 serial port connection.

- Ethernet connection: This device and the personal computer must be connected via a network cable. Enter the factory default IP "192.168.1.10" in the browser address bar. The operation steps are as follows:

Double-click to open the special EDFA software (the USB drive has been provided).



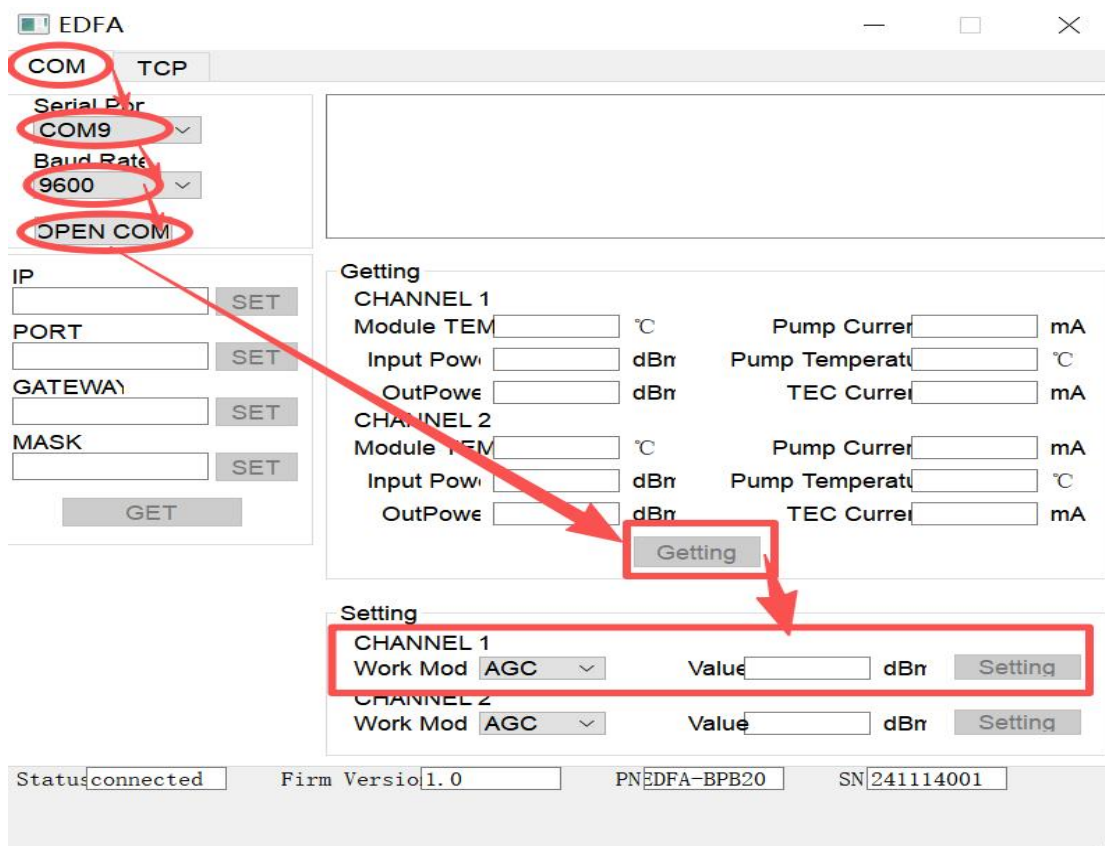
1) Click on TCP → Enter IP address → ISCONNECT → Getting → You can obtain the optical power of channel 1. (The above picture shows the amplification equipment for channel 1).

Note: Port 6000 is default and not in use.

2) If you need to make any modifications, select AGC or APC in the Word Mode, enter the preset parameters in the Value field, and then click "Setting" to confirm.

- a. AGC fixed gain, such as a specification of gain 15 and maximum output 20. The adjustable range of AGC is 15 ± 3 dB, which is between 12 and 18 dB. At the "Value" position, write 15 as the gain value.
- b. The fixed output of APC is 5 to 20 dBm. The adjustable range of APC is 5 to 20 dBm. The output power of 15 digits is written at the "Value" position.
- RS232 connection: Connect this device to the personal computer via the serial port. The operation steps are as follows;

1) Double-click to open the dedicated software for EDFA



- 2) Click on COM → Select port number → Baud rate 9600 → OPEN COM → "Getting" can obtain the optical power of channel 1. (The above picture shows the 1st channel amplification device).
- 3) If you need to make any modifications, select AGC or APC in the Word Mode, enter the preset parameters in the Value field, and then click "Setting" to confirm.

The function is the same as that of TCP. You can choose the network management connection method according to your needs.

4) When connecting via RJ232, you can modify the device's IP address, port number, gateway and subnet mask. After modification, when accessing via TCP, you need to use the corresponding IP address and port number.

EDFA

COM TCP

Serial Port
COM9

Baud Rate
9600

OPEN COM

IP
SET

PORT
SET

GATEWAY
SET

MASK
SET

GET

Getting

CHANNEL 1

Module TEM °C Pump Current mA

Input Power dBm Pump Temperature °C

Output Power dBm TEC Current mA

CHANNEL 2

Module TEM °C Pump Current mA

Input Power dBm Pump Temperature °C

Output Power dBm TEC Current mA

Getting

Setting

CHANNEL 1

Work Mod AGC Value dBm Setting

CHANNEL 2

Work Mod AGC Value dBm Setting

Status: disconnected Firm Version: 1.0 PN SN