

SUN-EYDFA Series

1550nm Erbium-Ytterbium-Doped Fiber Amplifier

User's Manual



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I. Features

- (1) Single/dual input for choice, built in optical switch for dual input, the switching power can be set by the button in the front panel or by web snmp.
- (2) Output adjustable by buttons in the front panel or web snmp, the range is +0.5dBm~-4.0dBm
- (3) Max multi 32 ports, with built in 1310/1490/1550WDM,max total output 37 dBm
- (4) Standard RJ 45 port for remote control, we can provide output contract and web manager for choice, and also plug-in snmp hardware can be reserved for update.
- (5) With laser key to turn on/off the laser.
- (6) With RF test function.
- (7) Adopts JDSU or Oclaro Pump laser
- (8) Led displays the working condition of the machine
- (9)Dual power hot plug power supply for choice, 90V \sim 250V AC or -48V DC

II. Installation

Before installation

1. Please check if there is damage in outside of the machine

2. Please check the spare parts is complete or not, if not complete, please contact the seller.

Installation

- 1. Please keep at least 1.75inches (4.5cm) space for cooling if the machine installed with other machines.
- Please check the power supply socket and the grounding of the power supply, the grounding impedance should ≤4Ω, 220V power supply should be with three cables and the grounding cable should be in the middle, Unfitted grounding will damage the device or influence the signal quality.
- 3. Please make sure the power supply switch to off in the rear panel
- 4. Please confirm the fiber port is clean before connection the fiber.

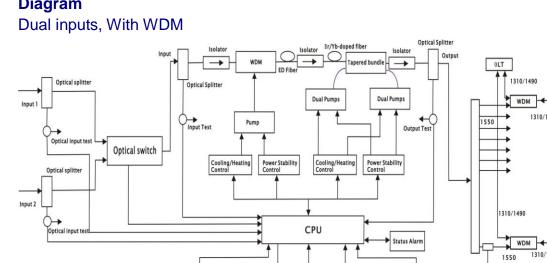


III. Set and Operation

Main Parameters

Items	Parameter									
Output (dBm)	31	32	33	34	35	36	37	38	39	40
Output (mW)	1250	1600	2000	2500	3200	4000	5000	6400	8000	10000
Input(dBm)	-8~+10									
Range of output adjustment (dBm)	Up 0.5、 down 4.0									
Wavelength (nm)	1530~1565									
Output stability(dB)	<±0.3									
Optical Return Loss	≥45									
(dB)										
Fiber Connector	FC/APC、SC/APC									
Noise Figure (dB)	<6.0 (input 0dBm)									
Web port	RJ45 (SNMP)									
Power Consumption (W)	≤80									
Voltage (V)	220VAC (90~265)、-48DCV									
Working Temp (℃)		-0~55								
size (mm)					(L)×486((L)×486(
NW (Kg)						(1U)) (2U)				

Diagram



Output Power Adust

Front Panel Control

Rs232

Display

1310/1490

Optical input test

Rj45

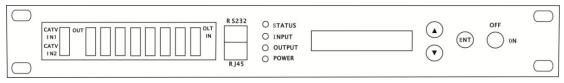
WDM -

1310/1490/1550

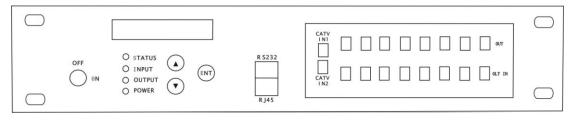
-1310/1490/1550



Front Panel



4 Ports、8 Ports、16Ports or With WDM



8 Ports、16Ports、32 Ports or With WDM

3.3.1 LED display

Displays the working parameter of the machine

3.3.2 STATUS Indication light

Green: Normal Condition

Red: No input or abnormal condition

3.3.3 INPUT Indication Light

Green: Normal

3.3.4 OUTPUT Indication Light

Green: Normal

3.3.5 Power Indication Light

Green: Power Connected

3.3.6 RS232

Network management for local computers

3.3.7 RJ45

SNMP, for remote computer network management

3.3.8 Key

ON: Turn on the laser



OFF: Turn off the laser

Rear Panel





2U RACK

- 3.4.1 Power Switch (220V)
 - ON: Turn on the power

OFF: Turn off the power

3.4.2 Power Socket

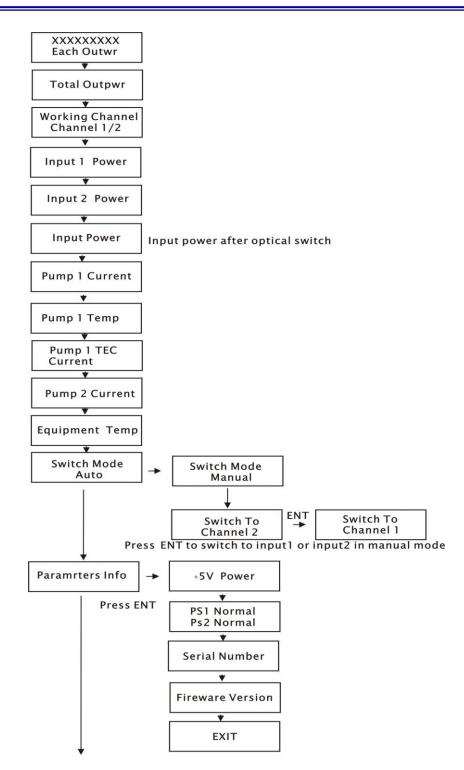
AC220V or DC-48V

Panel Operation

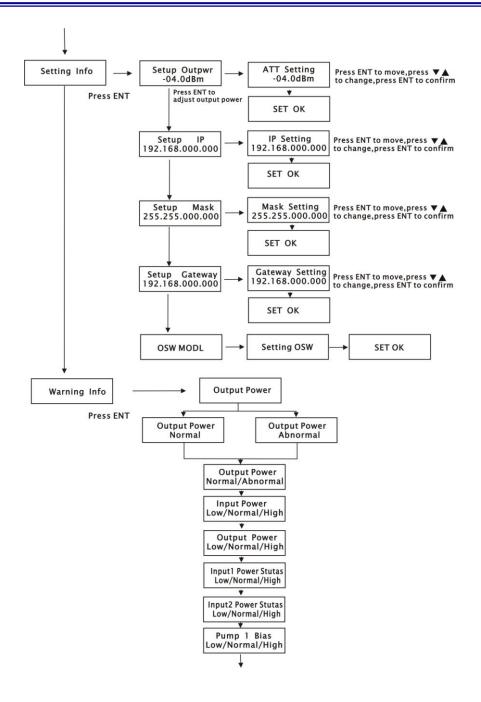
Please Press \blacktriangle for forward, press \blacktriangledown to return.

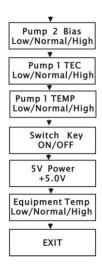
3.5.1 Dual inputs







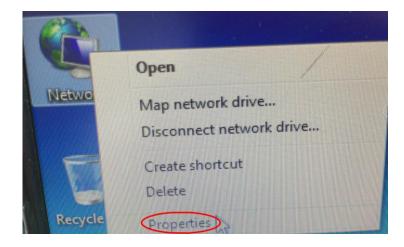




IV. Web server

The user can use web browser to check the working condition and basic parameters of the amplifier, it supports IE, Chrome, Firefox ,opera and other main web browser. The following example are based on Opera browser.

 Pls find the IP add in the machine, normally it is 192.168.1.XXX, set the IP add of the PC in the same range as following steps:





Control Panel 🕨	Network and Internet > Network and Sharing Center - 47 Search Control Panel
Control Panel Home	View your basic network information and set up connections
Change adapter settings Change advanced sharing settings	ADMIN-PC Network 2 Internet (This computer) View your active networks Connect or disconnect
	Network 2 Work network Access type: Internet Connections: Local Area Connection
	Set up a new connection or network Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
	Connect to a network Connect or reconnect to a wireless, wired, dial-up, or VPN network connection. Choose homegroup and sharing options
	Choose nomegroup and sharing options Access files and printers located on other network computers, or change sharing settings. Troubleshoot problems
See also HomeGroup	Diagnose and repair network problems, or get troubleshooting information.

General						
Connecti	ion ———					-
IPv4	Connectivity:				Internet	
IPv6 (Connectivity:		No	Interne	et access	
Media	a State:				Enabled	
Durat	ion:				00:20:39	
Speed	d:			10	0.0 Mbps	
De	etails					
Activity						-
		Sent —	.	— F	Received	
Bytes		4,344,304		100	,897,055	
Pro	perties	Disable	Diagno	se		
					Close	

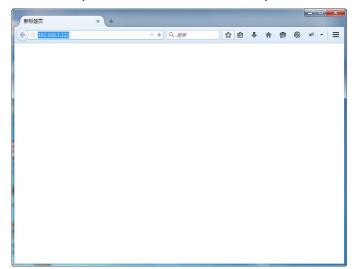


Local Area Connection Properties	×
Networking	
Connect using:	
Atheros AR8151 PCI-E Gigabit Ethernet Controller (NDIS	5 E
<u>C</u> onfigure.	
This connection uses the following items:	
 Client for Microsoft Networks QoS Packet Scheduler File and Printer Sharing for Microsoft Networks Internet Protocol Version 6 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv4) 	
Install Uninstall Properties	
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	:
ОК Са	ncel



	automatically if your network supports ed to ask your network administrator
Obtain an IP address automa	atically
Ose the following IP address	:
IP address:	192.168.0.5
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.0.1
Obtain DNS server address a	automatically
Ose the following DNS server	r addresses:
Preferred DNS server:	192.168.0.1
Alternate DNS server:	
🔲 Validate settings upon exit	Advanced

2 .Open web browser, input the IP add, For example: 192.168.0.22





Then login version

Vindows Security	The server 192.168.0.22 at Embedded WEB Manager requires a username	
The server 192.16 and password.	8.0.22 at Embedded WEB Mana	ger requires a username
sent in an insecu		
connection).		
	User name	
	Tustiona	
	Remember my credentials	
El state	C	OK Cancel

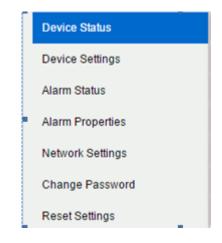
User Name: admin Password: 123456

3. The working condition version:



Image: Status Device Status Device Status Atam Status Atam Status Atam Properties Network Settings Change Password Reset Settings Device Sutting Device Status Device Status	C Image: Device Status Device Status
Device Status Device Status Device Status Alam Status Alam Properties Network Settings Change Password Reset Settings D C Power +5V D C Power +5V Power Supply 1 Normal Power Supply 2 Normal 1 1-1-2 48m 0.0 dBm Channel 1 2 3.9 dBm 0.0 dBm Channel 1 2	Device Status Device Status Device Status Device Status Alarm Status Alarm Froperties Network Stettings Change Password Reset Stettings DC Power Supply 1 Power Supply 2 Normat
Index Ingut Power Threshold Description 1 -1.2 dBm 0.0 dBm Channel 1 2 3.9 dBm 0.0 dBm Channel 2	Power Supply 1 Normal Power Supply 2 Normal
2 3.9 dBm 0.0 dBm Channel 2	Index Input Power Threshold Description
	2 3.9 dBm 0.0 dBm Channel 2
Pump BIAS TEMP TEC	Pump BIAS TEMP TEC
1 567 mA 25.1 °C 0.01 A	
2 4160 mA 0.0 °C 0.00 A	2 4160 mA 0.0 °C 0.00 A

4.4 Items guide on the left, click to enter:





0 菜单		-		×
🤮 Embedded WEB Manage 🔀 🕂				-
< > C IIII (192.168.1.122			\odot	ABP
	Summa Agent WEB Manager Device Settings Image: Ima			
	Copyright © 2015, All rights reserved.			

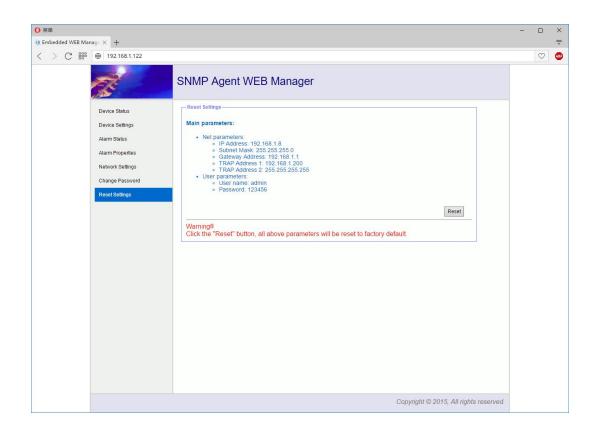
bedded WEB Manag > C 闘 ∉					-	
> C 🎟 🕯	€ 192.168.1.122					
						\odot
	1		NEB Manager			
	Device Status					
	Device Settings	Index	Parameter Name	Alarm Status		
	Alarm Status	1	Output optical power	Nominal		
	Alarm Properties	2	Input optical power	Nominal		
		3	Power Supply 1	Nominal		
	Network Settings	4	Power Supply 2	Nominal		
	Change Password	5	Internal Temp	Nominal		
	Reset Settings	6	Pump1 BIAS	Nominal		
	reserverings	7	Pump2 BIAS	Nominal		
		8	Pump1 TEC	Nominal		
		9	Pump1 Temp	Nominal		
		10	DC +5V	Nominal		
		11	Channel 1	DiscreteMajor		
		12	Channel 2	Nominal		
		13	Channel 1 input	LO		
		14	Channel 2 input	Nominal		



菜单 Embedded WEB Mar	nage × +								-		1
C #	192.168.1.122									\heartsuit	
		SNMP	Agent WEB Mar	nager							
	Device Status	Alarm Prop	perties								
	Device Settings	Index	Parameter Name	ніні ні	LO	LOLO Dea	adband Action	1			
	Alarm Status	1	Output optical power (dBm)	27.0 26.0	11.0	2 10.0	0.5 Set				
	Alarm Properties	2	Input optical power (dBm)	10.0 2 8.0	-3.0	-10.0	0.2 Set				
	Network Settings	3	Internal Temp (`C)	✓ 85 ✓ 70	5		2 Set				
	Change Password	4	Pump1 BIAS (mA)	900 🗹 800	2 100	80	20 Set				
	Reset Settings	5	Pump2 BIAS (mA)	☑ 15000 ☑ 10000	100	80	20 Set				
		6	Pump1 TEC (A)	2.00 2.50	-1.50	-2.00	0.10 Set				
		7	Pump1 Temp ('C)	35.0 30.0	20.0	2 15.0	1.0 Set				
		8	DC +5V (V)	6.5 6.0	☑ 4.0 🖸	3.5	0.2 Set				
		9	Channel 1 input (dBm)	☑ 10.0 ☑ 7.5	3.5	-10.0	0.2 Set				
		10	Channel 2 input (dBm)	✓ 10.0 ✓ 7.5	3.5	-10.0	0.2 Set				
		Index	Para	ameter Name		Control	Action	1			
		1	Po	wer Supply 1		EnableMajor	 ✓ Set 				
		2	Por	wer Supply 2		EnableMajor	∽ Set				
		3		Channel 1		EnableMajor	∽ Set				
		4		Channel 2		EnableMajor	 ✓ Set 				
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< > C Ⅲ ⊕ 192.168.1.122			\odot	A
	SNMP Agent WEB Manager			
	Copyright © 2015, All rights reserved.			



V. Notes

- The main component of the amplifier laser is sensitive to the static electricity, so please keep the amplifier away from the static electricity. Furthermore, please keep it away from caustic things. Please keep the amplifier in temperature between -25℃and 65℃.
- 2. Please make sure the power is earthed.
- 3. Please don't now attempt to look into the optical connectors when power applied, eye damage may result.
- Please don't block up the heating dispersion hole and keep the machine aired.
- 5. Please don't unfold the machine or remove any parts of the machine.
- 6. Please don't insert the patch cord when the power is on
- 7. Please don't test the EDFA more than 5 times.

VI. Solution to some ordinary problem

- 1. Power supply light STATUS: green
 - LED light LASER: red
 - VFD display: NO LASER INPUT

Reason: No 1550nm optical input

- Solution: Input 1550nm optical signal
- 2. In LED n it displays the right optical power, but not enough by test meter
 - Reason: 1. the optical meter is not very correct
 - 2. the input optical power is out of the requested value($-3 \sim 10$ dB)
 - 3. too big loss in the test pigtail
 - 4. There is dust in the connectors

Solution:

Use absolute alcohol to wash the all the connects and the test point of



optical meter

Note:

- 1. Don't use Chinese optical meter to test EDFA.
- 2. Don't test EDFA with pigtail again and again, it will hurt the

fiber connector and make the factual power become smaller.

VII. Warranty Term

SUN-EYDFA Series optical amplifiers are covered by **TWO YEAR LIMITED WARRANTY**, which starts from the initial date of your purchase. We provide its customer whole-life technical supports. If warranty is expired, repair service only charges parts (if required). In the event that a unit must be returned for service, before returning the unit, please be advised that:

- 1. Warranty mark pasted on the housing of unit must be in good conditions.
- 2. A clear and readable material describes model number, serial number and troubles should be offered.
- 3. Please pack the unit in its original container. If the original container is no longer available, please pack the unit in at least 3 inches of shock absorbing material.

NOTE: we **do not** assume responsibility for damage caused by improper packing of returned unit(s).

The following situation is not covered by warranty:

- 1. The unit fails to perform because of operators' faults.
- 2. Warranty mark is modified, damaged and/or removed.
- 3. Damage caused by Force Majeure.
- 4. The unit has been unauthorized alteration and/or repaired.
- 5. Other troubles caused by operators' faults.

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