

EDFA network management software and debugging tutorial



2019
Model

1

I. Debugging
of EDFA serial
port.

2

Network
management
debugging of
high-power
optical fiber
amplifier.

3

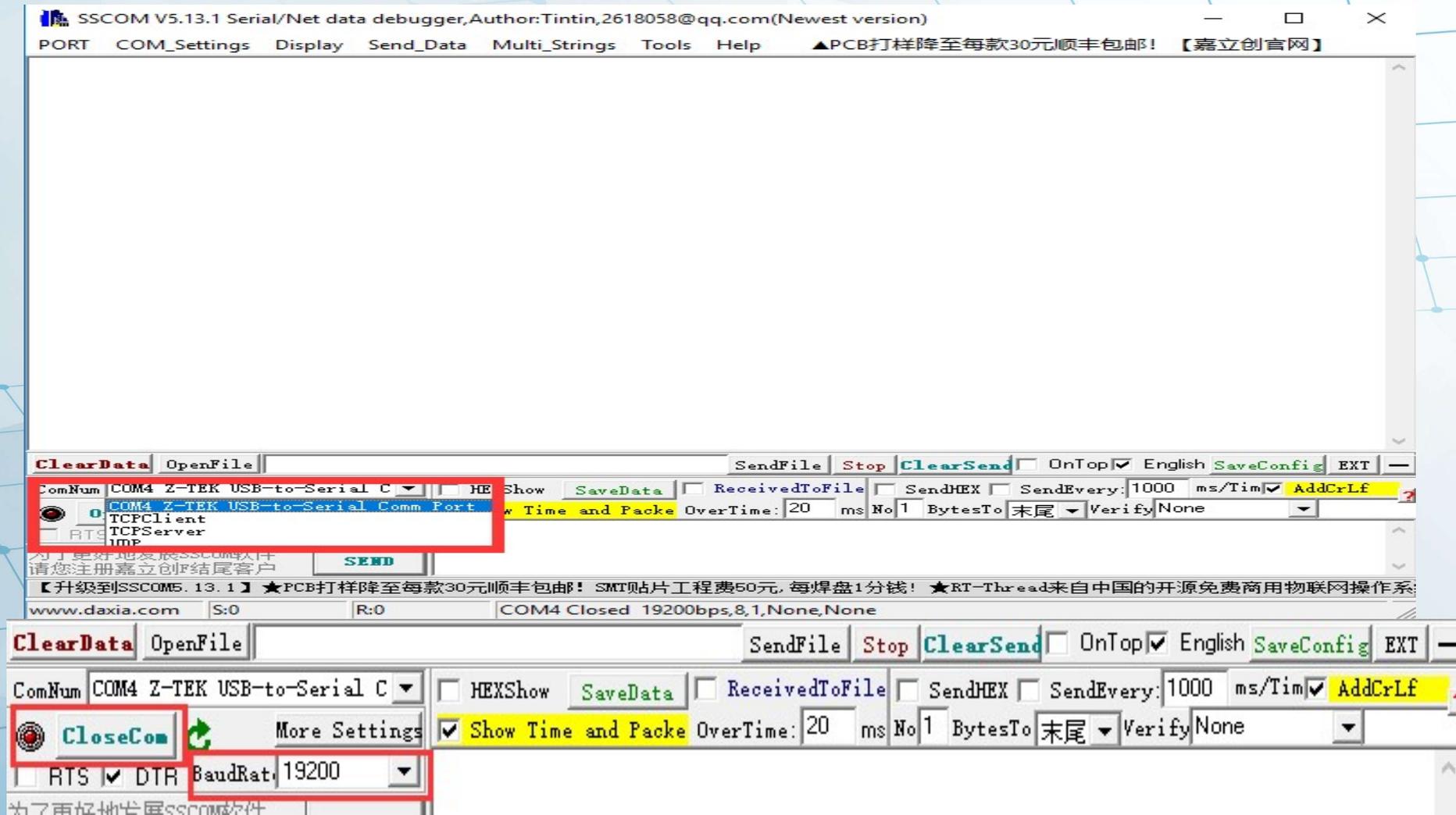
HFC network
management
platform.

01 Debugging of EDFA serial port

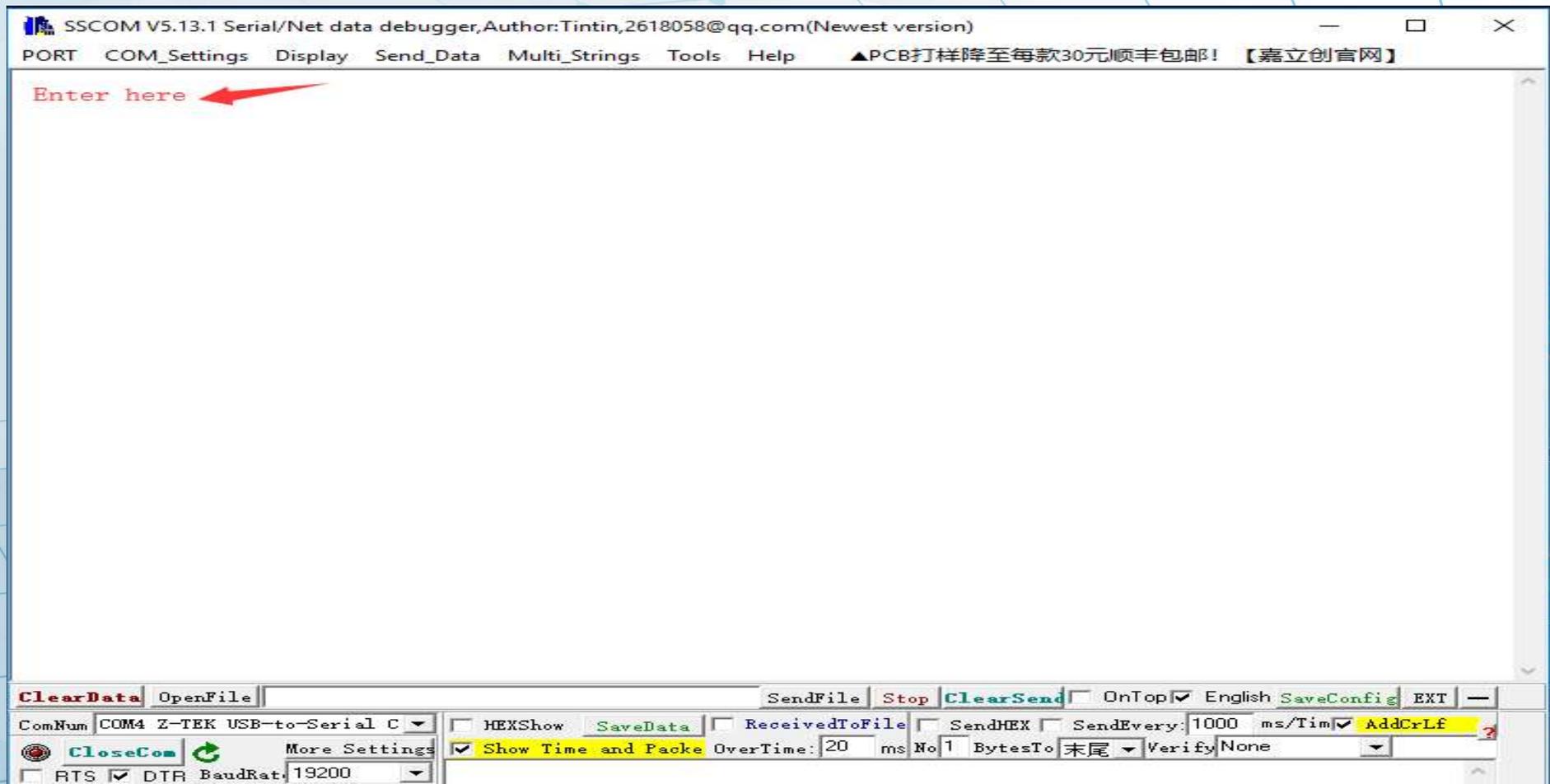
1.As shown in the figure, use rs232-9 pin serial port line to connect EDFA with the computer.



2.As shown in the figure, open EDFA, open computer client SSCOM software, select ComNum, click OpenCom and select Baud rate:19200.



3. Enter in the space



4. The company name and product model can be modified according to the following instructions:

Instruction	Instruction character	Function
Name	N: (27character)	Set Factory name
Model	T: (27character)	Set model
Serial no.	S: (11 number)	Set Serial number
Mac address	M: XX-XX-XX-XX-XX-XX	Set mac address
Version number	V: X.XX	Set version number
pump quantity	PM: X (X, 0-2; 1-1; 3-3)	set pump quantity
Working time	W: XXX (XXX is number)	Working time limit
Remove time limit	CLEAR	Remove time limit
Read parameter	READ	Read set parameter
detector	G:	Set output detection

Command:

```
Command: N:          SW-Technology Enter
```

```
Factory name:      SW-Technology
```

```
Command: T:  SEYA1550-32*19dBm-FWDM-OS Enter
```

```
model:  SEYA1550-32*19dBm-FWDM-OS
```

```
Command: |
```

In the following options, the parameters that customers are allowed to modify are:

1> Name | N:(27character) | Set Factory name |

2> Model | T:(27character) | Set model |

Please note: other parameters are not allowed to change, otherwise the consequence is at your own risk.

02 Network management debugging of high-power optical fiber amplifier

1. Connect the RJ45 network pipeline to the computer, as shown in the figure



2. Set the IP address of the computer: 192.168.0.2 Subnet mask: 255.255.255.0

Internet 协议版本 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

Obtain an IP address automatically

Use the following IP address:

IP address: 192 . 168 . 0 . 2

Subnet mask: 255 . 255 . 255 . 0

Default gateway: . . .

Obtain DNS server address automatically

Use the following DNS server addresses:

Preferred DNS server: . . .

Alternate DNS server: . . .

Validate settings upon exit

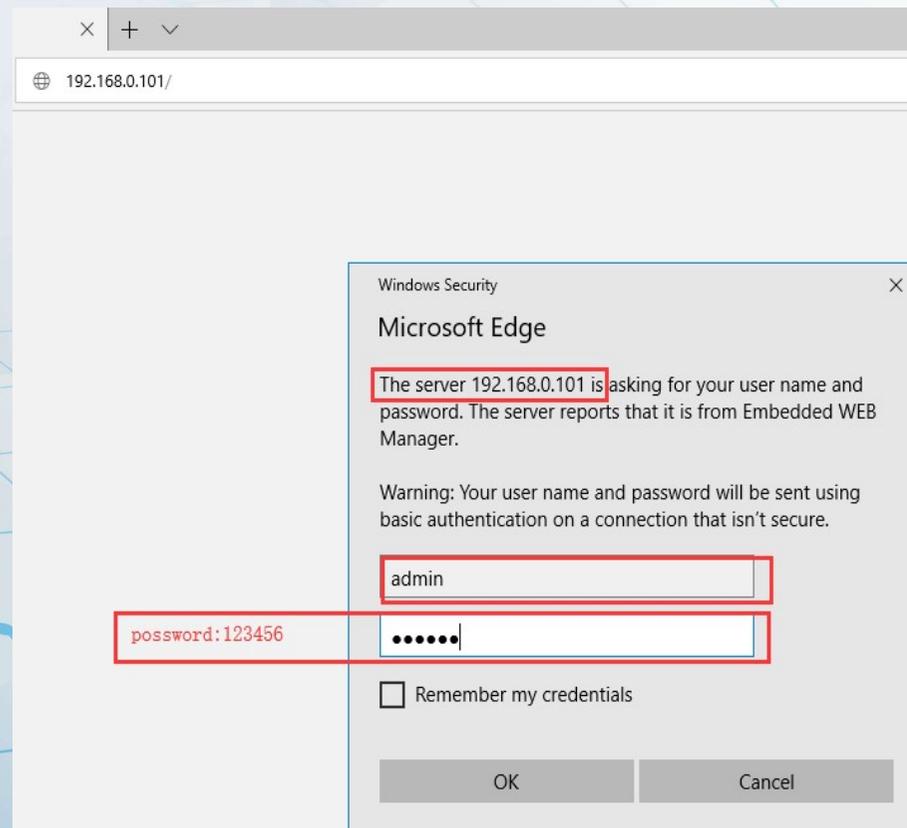
Advanced...

OK Cancel

3. Use Internet explorer to log in EDFA network management:

1> open Internet explorer and type 192.168.0.101

2> enter user name: admin



3> in the device working status bar:

- A. The working voltage output by the power supply of the equipment can be observed, so as to know whether the power supply works normally.
- B. It can be observed whether the input and output optical power of EDFA is normal.
- C. The working current of the pump can be observed to know whether the working current of the pump is normal.
- D. Machine model, machine serial number and machine operating temperature can be observed.



SNMP Agent WEB Manager

Device Status

Device Settings

Alarm Status

Alarm Properties

Network Settings

Change Password

Reset Settings

Device Status

Device Model **SEYA1550-32*19dBm-FW**

Serial Number **JD519012803**

Unit Temperature **27** °C

Input Power **9.2** dBm

Output Power **19.5** dBm

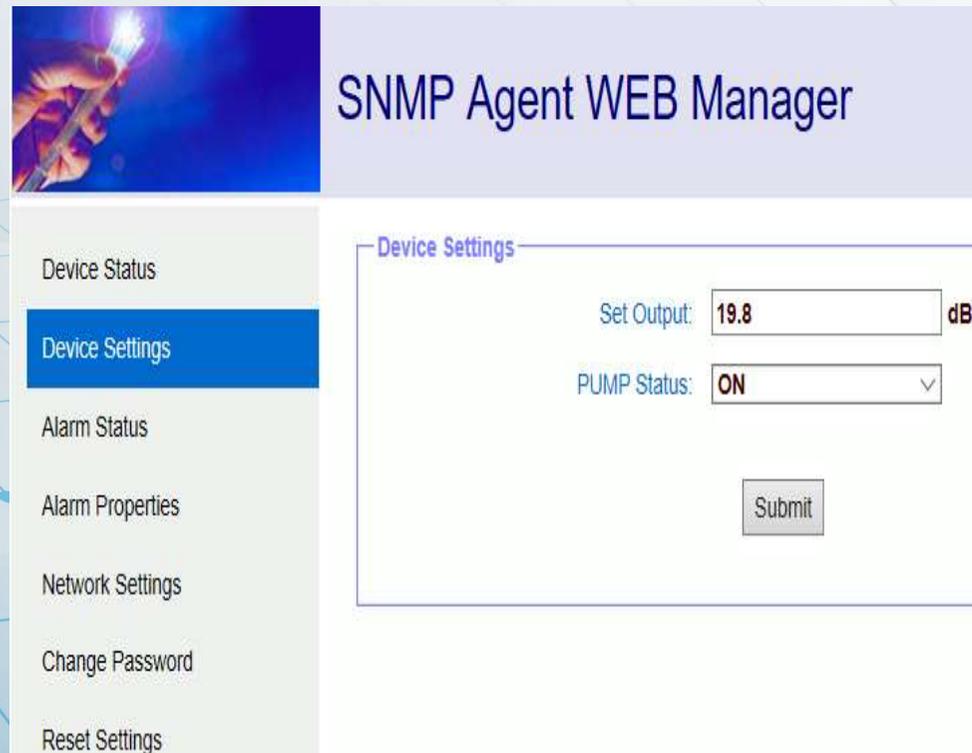
DC Power +5V **4.8** V

DC Power -5V **-4.7** V

Pump	BIAS	TEMP	TEC
1	574 mA	24.5 °C	0.57 A
2	8150 mA	25.0 °C	1.00 A
3			

4> in the device **Settings bar**, has two functions:

- A. Adjust the optical power output of EDFA, input the output value to be changed in the setting output, and click the submit button.
- B. Remotely open or close the EDFA output optical power, select ON or OFF, and click the submit button.



The image shows a screenshot of the SNMP Agent WEB Manager interface. The title bar reads "SNMP Agent WEB Manager". On the left, there is a navigation menu with the following items: Device Status, Device Settings (highlighted in blue), Alarm Status, Alarm Properties, Network Settings, Change Password, and Reset Settings. The main content area is titled "Device Settings" and contains two input fields: "Set Output: 19.8 dB" and "PUMP Status: ON". Below these fields is a "Submit" button.

5> alarm status and alarm setting status:

Please check the alarm setting state. The setting range may not be enough in the alarm setting state. You can change the alarm setting state to adjust the alarm state.



The image shows a screenshot of the SNMP Agent WEB Manager interface. On the left is a navigation menu with the following items: Device Status, Device Settings, Alarm Status (highlighted in blue), Alarm Properties, Network Settings, Change Password, and Reset Settings. The main content area is titled "Alarm Status" and contains a table with 11 rows. The table has three columns: Index, Parameter Name, and Alarm Status. The second row, corresponding to Index 2 and Parameter Name "Input optical power", is highlighted with a red border and a yellow background, indicating an "HI" alarm status. All other rows show a "Nominal" alarm status.

Index	Parameter Name	Alarm Status
1	Output optical power	Nominal
2	Input optical power	HI
3	Box Temp	Nominal
4	Pump1 BIAS	Nominal
5	Pump2 BIAS	Nominal
6	Pump1 TEC	Nominal
7	Pump2 TEC	Nominal
8	Pump1 Temp	Nominal
9	Pump2 Temp	Nominal
10	DC +5V	Nominal
11	DC -5V	Nominal



SNMP Agent WEB Manager

Device Status

Device Settings

Alarm Status

Alarm Properties

Network Settings

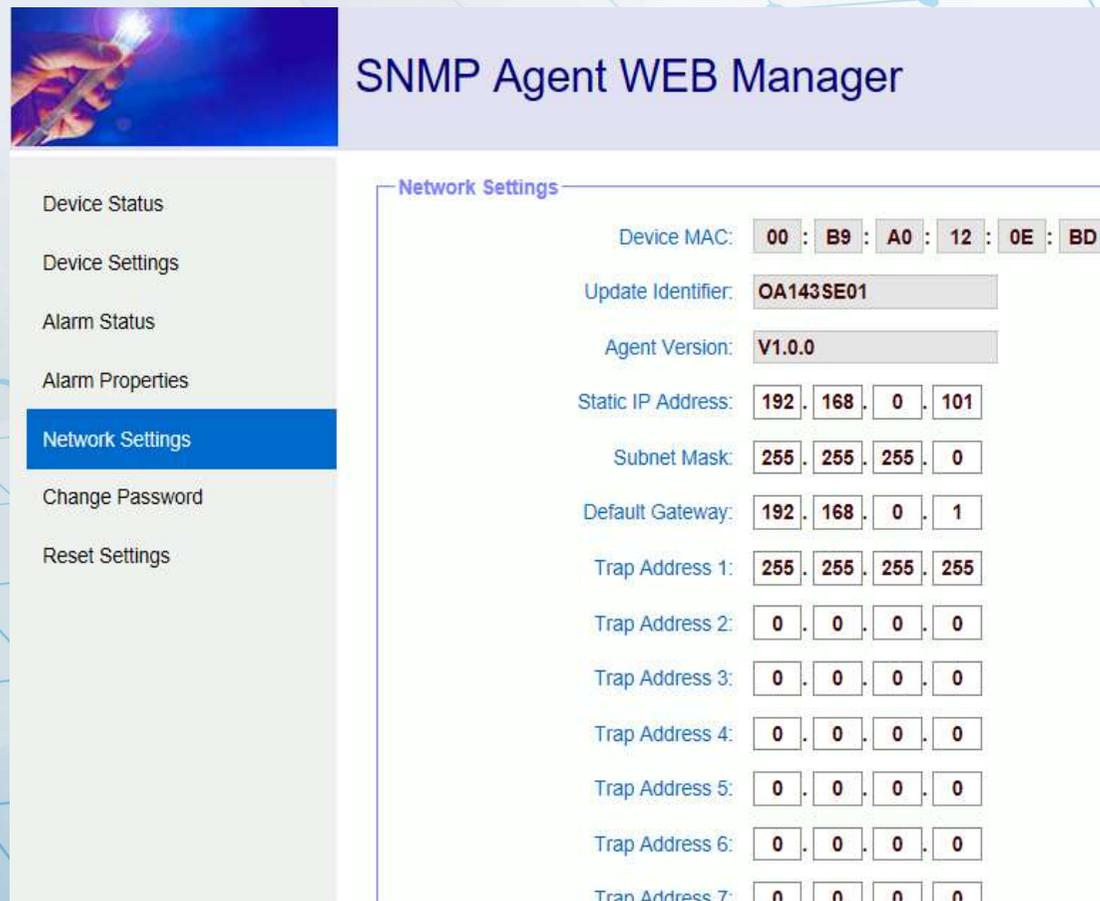
Change Password

Reset Settings

Alarm Properties

Index	Parameter Name	HIHI	HI	LO	LOLO	Deadband	Action
1	Output optical power (dBm)	<input checked="" type="checkbox"/> 27.0	<input checked="" type="checkbox"/> 26.0	<input checked="" type="checkbox"/> 11.0	<input checked="" type="checkbox"/> 10.0	1.0	Set
2	Input optical power (dBm)	<input checked="" type="checkbox"/> 10.0	<input checked="" type="checkbox"/> 8.0	<input checked="" type="checkbox"/> -5.0	<input checked="" type="checkbox"/> -10.0	1.0	Set
3	Box Temp (°C)	<input checked="" type="checkbox"/> 85	<input checked="" type="checkbox"/> 70	<input checked="" type="checkbox"/> 0	<input checked="" type="checkbox"/> -5	2	Set
4	Pump1 BIAS (mA)	<input checked="" type="checkbox"/> 1200	<input checked="" type="checkbox"/> 1000	<input checked="" type="checkbox"/> 100	<input checked="" type="checkbox"/> 80	10	Set
5	Pump2 BIAS (mA)	<input checked="" type="checkbox"/> 13000	<input checked="" type="checkbox"/> 11000	<input checked="" type="checkbox"/> 100	<input checked="" type="checkbox"/> 80	10	Set
6	Pump1 TEC (A)	<input checked="" type="checkbox"/> 2.00	<input checked="" type="checkbox"/> 1.50	<input checked="" type="checkbox"/> -1.50	<input checked="" type="checkbox"/> -2.00	0.10	Set
7	Pump2 TEC (A)	<input checked="" type="checkbox"/> 2.00	<input checked="" type="checkbox"/> 1.50	<input checked="" type="checkbox"/> -1.50	<input checked="" type="checkbox"/> -2.00	0.10	Set
8	Pump1 Temp (°C)	<input checked="" type="checkbox"/> 35.0	<input checked="" type="checkbox"/> 30.0	<input checked="" type="checkbox"/> 20.0	<input checked="" type="checkbox"/> 15.0	1.0	Set
9	Pump2 Temp (°C)	<input checked="" type="checkbox"/> 35.0	<input checked="" type="checkbox"/> 30.0	<input checked="" type="checkbox"/> 20.0	<input checked="" type="checkbox"/> 15.0	1.0	Set
10	DC +5V (V)	<input checked="" type="checkbox"/> 6.5	<input checked="" type="checkbox"/> 6.0	<input checked="" type="checkbox"/> 4.0	<input checked="" type="checkbox"/> 3.5	0.2	Set
11	DC -5V (V)	<input checked="" type="checkbox"/> -3.5	<input checked="" type="checkbox"/> -4.0	<input checked="" type="checkbox"/> -6.0	<input checked="" type="checkbox"/> -6.5	0.2	Set

6> network Settings: you can change the EDFA IP address, gateway, subnet mask, etc



The image shows a screenshot of the SNMP Agent WEB Manager interface. The title bar reads "SNMP Agent WEB Manager". On the left is a navigation menu with the following items: Device Status, Device Settings, Alarm Status, Alarm Properties, Network Settings (highlighted in blue), Change Password, and Reset Settings. The main content area is titled "Network Settings" and contains the following configuration fields:

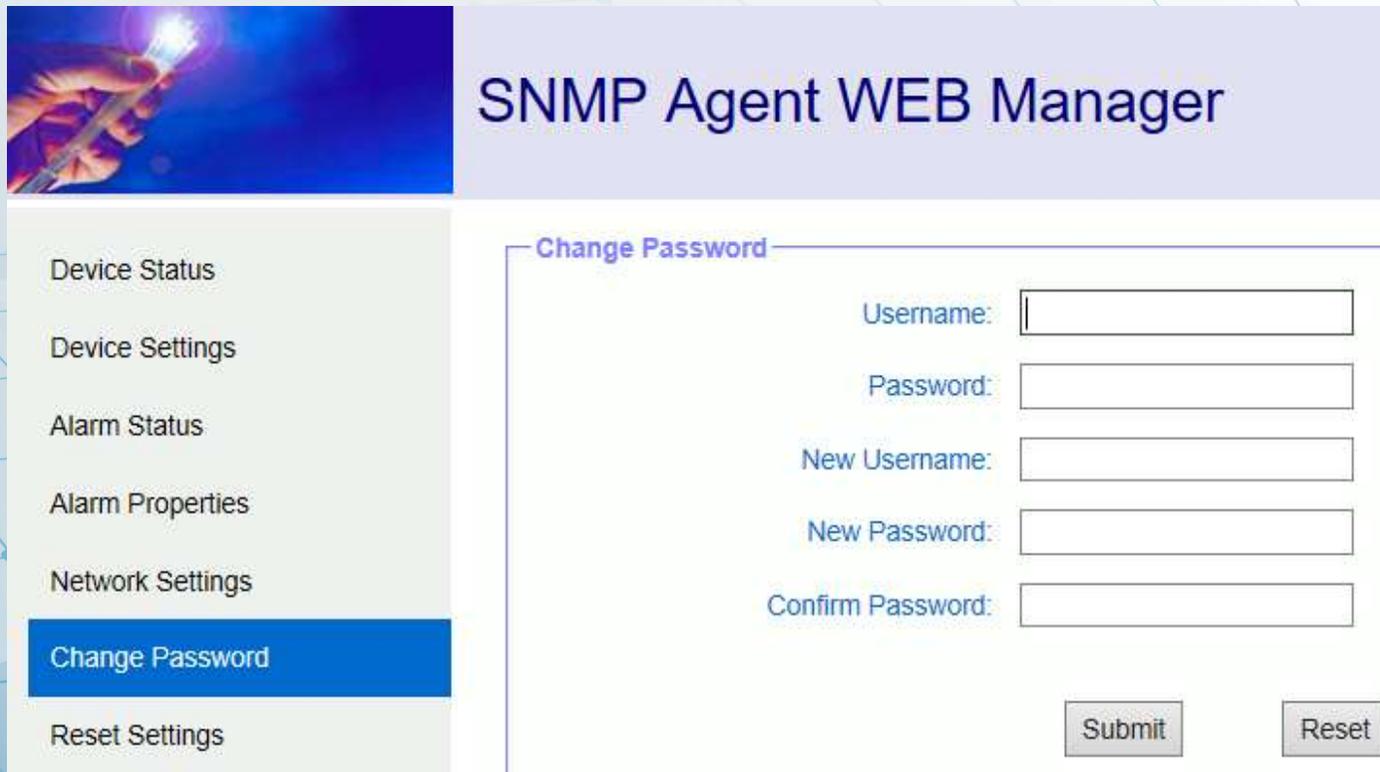
Device MAC:	00	:	B9	:	A0	:	12	:	0E	:	BD
Update Identifier:	OA143SE01										
Agent Version:	V1.0.0										
Static IP Address:	192	.	168	.	0	.	101				
Subnet Mask:	255	.	255	.	255	.	0				
Default Gateway:	192	.	168	.	0	.	1				
Trap Address 1:	255	.	255	.	255	.	255				
Trap Address 2:	0	.	0	.	0	.	0				
Trap Address 3:	0	.	0	.	0	.	0				
Trap Address 4:	0	.	0	.	0	.	0				
Trap Address 5:	0	.	0	.	0	.	0				
Trap Address 6:	0	.	0	.	0	.	0				
Trap Address 7:	0	.	0	.	0	.	0				

7> change login name and password:

If you forget your login and password, use super login and password:

Super login user name: super

Super login password: super



The image shows a screenshot of the SNMP Agent WEB Manager interface. On the left is a navigation menu with the following items: Device Status, Device Settings, Alarm Status, Alarm Properties, Network Settings, Change Password (highlighted in blue), and Reset Settings. The main content area is titled "Change Password" and contains five input fields: Username, Password, New Username, New Password, and Confirm Password. At the bottom right of the form are two buttons: Submit and Reset. The top left of the interface features a small image of a hand holding a glowing fiber optic cable.

SNMP Agent WEB Manager

Change Password

Username:

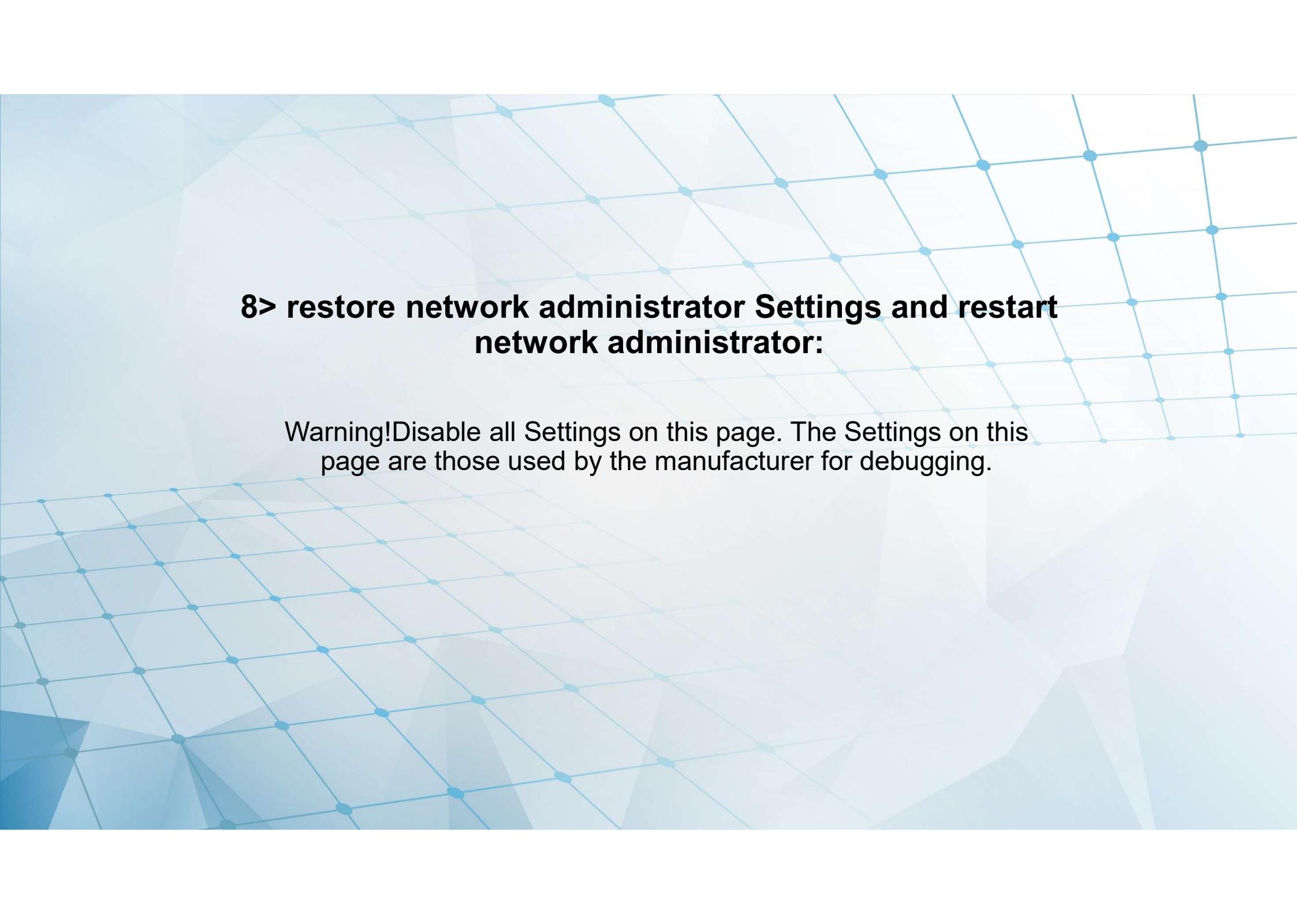
Password:

New Username:

New Password:

Confirm Password:

Submit Reset

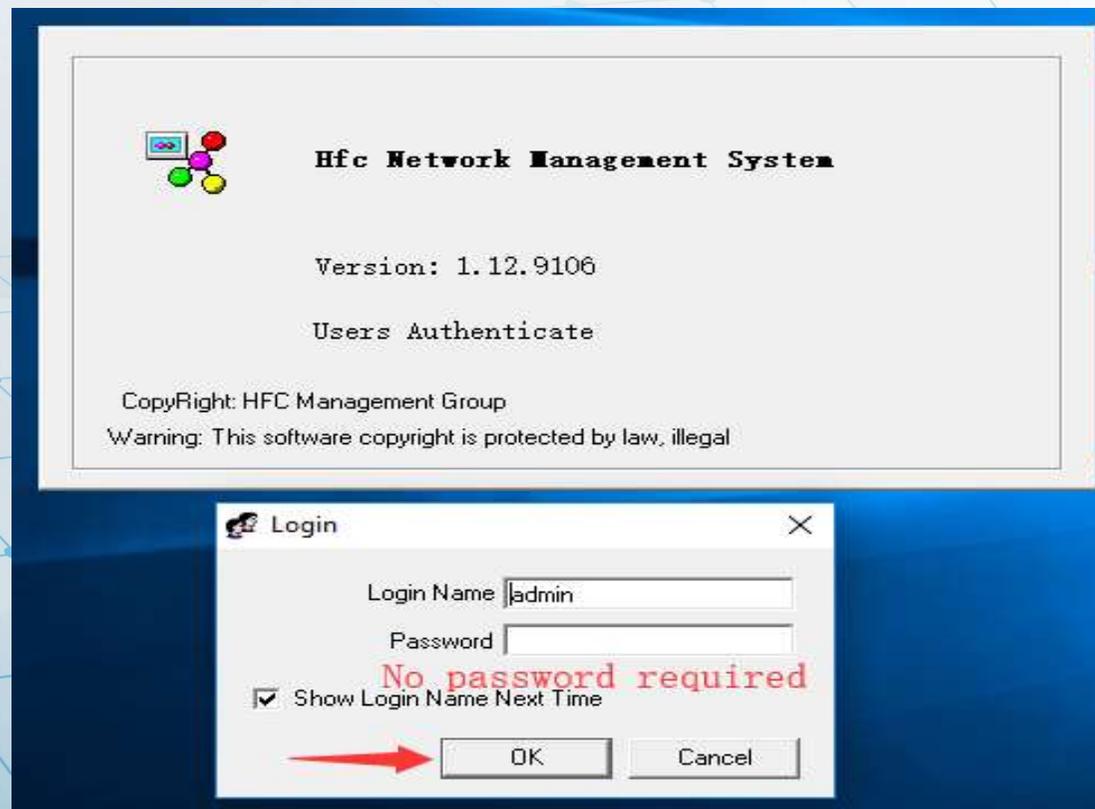


8> restore network administrator Settings and restart network administrator:

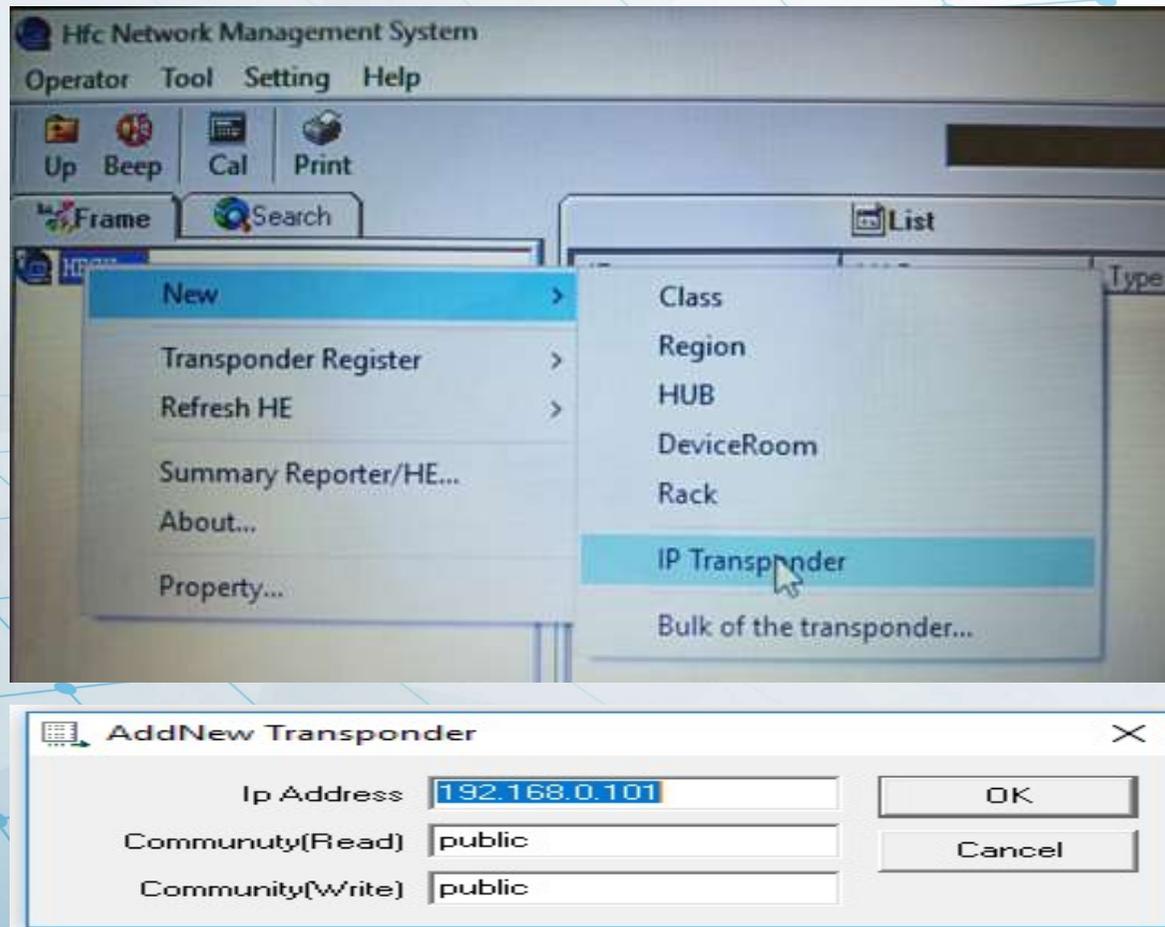
Warning! Disable all Settings on this page. The Settings on this page are those used by the manufacturer for debugging.

03 HFC network management platform

1. Double-click Manager3 to open the integrated large-scale network management platform, and click OK to log in.



2. Right-click and select New-- IP Transponder, AddNew Transponder, Enter EDFA's default IP address and default Community. Click OK



3. Double-click hf-oa to open the network management of EDFA

- 1.> can observe the working voltage output by the power supply of the equipment, so as to know whether the power supply works normally.
2. > can observe whether the input and output light power of EDFA is normal.
3. > can observe the working current of the pump and know whether the working current of the pump is normal.
- 4.> can observe machine model, machine serial number, machine operating temperature and so on.

The screenshot shows the Hfc Network Management System interface. The main window displays a list of HFCNms devices, with '[00B9A0120EBD] HFC-OA' selected. A red arrow points to this entry with the text 'double-click'. Below the main window, the 'Transponder Property-[OA] \\HFCNms\192.168.0.101:161' dialog is open, showing various monitoring data for the selected device.

DeviceTable

DeviceTable	ModelNo	SerialNo	IntTemp(C)	DeviceFW
Channel1	SEYA1550-32*19dBm-FWDM-OS	JD519012803	33	V1.0.0

oaPumpTable

oaPumpTable	PumpBIAS (mA)	PumpTEC (A)	PumpTemp (C)
Channel1	591	0.57	24.6
Channel2	8610	1.00	25.0

DC Power

DC Power	Voltage(V)	Name
Channel1	4.6	DC +5V
Channel2	-4.7	DC -5V

Property List:

- Description: SEYA1550-32*19dBm-FWDM-OS
- Administrator: sysContact
- NE Name: HFC-OA
- Location: sysLocation
- Device detail: HFC-OA
- Cover Status: Intact
- Internal Temp(C): 33
- OutputPower(dBm): 19.6
- InputPower(dBm): 9.3
- OnOffControl: ON
- PowerSet(dBm): 19.8

Buttons: DisablePolling, OK, Cancel, Minor Alarm

4. EDFA output light power adjustment and remote open and close function of EDFA:

1> Double-click "--OnOFFControl" to enter the light power output of EDFA, input the output value to be changed in the setting output, and click "submit".

Administrator	sysContact
NE Name	HFC-OA
Location	sysLocation
Device detail	HFC-OA
Cover Status	Intact
Internal Temp(C)	33
OutputPower(dBm)	19.8
InputPower(dBm)	9.3
OnOffControl	ON
PowerSet(dBm)	19.8

double-click

The image shows a network management interface. On the left is a table of device parameters. On the right is a 'Setting' dialog box for the 'PowerSet(dBm)' parameter. A red arrow points to the 'PowerSet(dBm)' field in the table, and the dialog box shows the value 19.8 being entered. The dialog box also has buttons for 'Get', 'OK', 'Cancel', and 'Apply'.

Administrator	sysContact
NE Name	HFC-OA
Location	sysLocation
Device detail	HFC-OA
Cover Status	Intact
Internal Temp(C)	33
OutputPower(dBm)	19.8
InputPower(dBm)	9.3
OnOffControl	ON
PowerSet(dBm)	19.8

double-click

[192.168.0.101:161]-Setting

PowerSet(dBm) ✓

19.8

19.8

Get

OK

Cancel

Apply

2>remote open or close EDFA output light power, select ON or OFF, click the submit button.

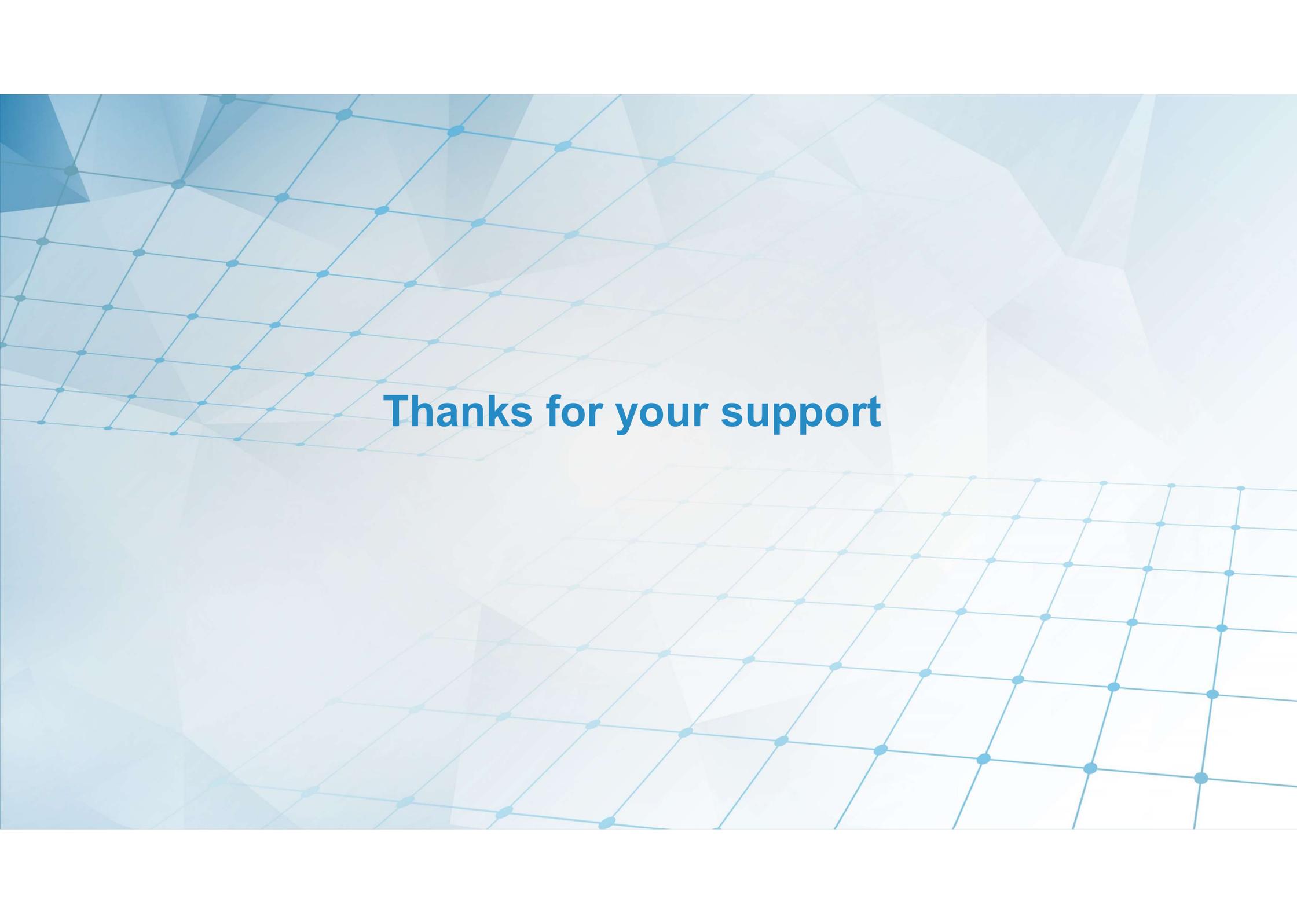
The image shows a network management interface with a table of device details and a configuration dialog box.

Administrator	sysLocation
NE Name	HFC-0A
Location	sysLocation
Device detail	HFC-0A
Cover Status	Intact
Internal Temp(C)	33
OutputPower(dBm)	19.8
InputPower(dBm)	9.3
OnOffControl	ON
PowerSet(dBm)	19.8

The configuration dialog box, titled "[192.168.0.101:161]-Setting", contains the following elements:

- A label "OnOffControl" with a green checkmark icon.
- A radio button labeled "ON" which is selected.
- A radio button labeled "OFF" which is unselected.
- Buttons: "Get", "OK", "Cancel", and "Apply".

A red arrow points from the "ON" value in the table to the "ON" radio button in the dialog. The text "double click" is written in red over the "OutputPower(dBm)" and "InputPower(dBm)" rows.



Thanks for your support