FIBER OPTIC SWITCH – MINI
OSW2X1-MINI

Technique Parameter

Type		Ordinary type	Enhanced type	
Item	**Unit**	**Technique parameter**		**Remark**
Wavelength	nm	1200 – 1600	1200 – 1600	
Insertion loss	dB	≤1.5	≤1.5	Testing at 1310nm, 1490nm, 1550nm
Switching time	ms	≤ 5	≤ 5	
Return loss	dB	≥ 55	≥ 55	
Max input optical power	mW	500	500	
Input optical power operating range	dBm	-10dBm - +24dBm	-10dBm - +24dBm	
Switching life		≥10 million times	≥10 million times	
SNMP module		Support IPV6/HFC network management/IE browser		SNMP module Optional
Optical connector type		FC/APC or SC/APC	FC/APC or SC/APC	
Supply voltage	V	AC160V - 250V OR -48V （50 Hz）	AC160V - 250V OR -48V （50 Hz）	
Consumption	W	≤ 2	≤ 2	
Operating temperature	℃	-5 - +55	-5 - +55	
Max relative humidity for working	%	Max 95% No condensation	Max 95% No condensation	
Storage Temperature	℃	-30 - +70	-30 - +70	
Max relative humidity for storage	%	Max 95% No condensation	Max 95% No condensation	
Mini Dimension	mm	235(W)×160(D)×30 (H)	235(W)×160(D)×30 (H)	

FIBER OPTIC SWITCH – MINI front front panel description

1) Power indicator: when the power inside is working, the light is on.
2) A way output status indicator: When switch is at A, the light is on.
3) B way output status indicator: When switch is at B, the light is on.
4) Warning indicator: When warn, red light is on, and detail please refer to menu.
5) Exit or cancel key of the display setup menu.
6) Up or increment key of the display setup menu.
7）Down or decrement key of the display setup menu.
8）Enter key of the display setup menu.
9）160×32 dot matrix LCD monitor: Used for displaying all parameters.
10）LAN interface: correspond to IEEE802.3 10Base-T interface, used for network management.
11）A way optical signal input.
12）B way optical signal input.
13）Optical signal output: There is an invisible laser beam from the port when normal working, so should not face to body or eye to avoid accidental harm.
14) Power input.
15) RS232 interface: Used for configuring the network management parameters.
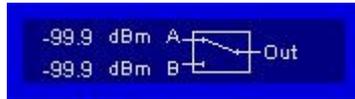
Displayed Parameter description

1) When power on:

Shows product's Loge, model and time.

2) After entering the system

Input optical power and output channel at present.

3) Press "Enter" key into the menu index

1. Parameter menu; 2. Set parameters; 3.Alarm menu

4) Sub-menu of parameter

Press "Enter" key into the menu

Content	Meaning
	Current input optical power of A way
	Current input optical power of B way
	Working wavelength at present
	Working mode of switcher at present
	Switch threshold of automatic switching mode at present
	Working input channel at present
	*Input RF signal voltage of A way

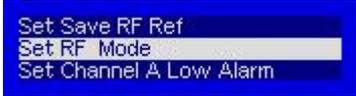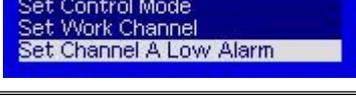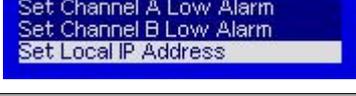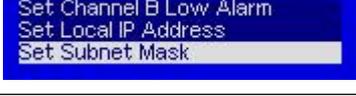|	
Current Channel: B Channel A RF: 0.00 V Channel B RF: 0.00 V	*Input RF signal voltage of B way
Switch Threshold: 8.0 dBm Current Channel: A S/N: 1234567890	Serial-number
Current Channel: A S/N: 1234567890 Box Temperature: 31.2 °C	Box temperature at present
S/N: 061103123 Box Temperature: 25.25 °C IP Address: 192.168.0.97	IP address
Box Temperature: 25.25 °C IP Address: 192.168.0.97 Subnet Mask: 255.255.255.0	Subnet Mask
IP Address: 192.168.0.97 Subnet Mask: 255.255.255.0 Net Gateway: 192.168.0.1	Gateway
Subnet Mask: 255.255.255.0 Net Gateway: 192.168.0.1 Mac: 00-80-95-34-35-55	MAC address
Net Gateway: 192.168.0.1 Mac: 00-b9-88-12-34-56 Software Version: 1.00	Software system version

5) Setting menu

> 1. Disp Parameters
> 2. Set Parameters
> 3. Alarm Status

Press "Enter" key into the menu

Content	Meaning
Set Optical Power Unit Set Work Wavelength Set Buzzer Alarm	Optical power unit in the switch display menu
Set Optical Power Unit Set Work Wavelength Set Buzzer Alarm	Set work wavelength, for correcting input power detection
Set Optical Power Unit Set Work Wavelength Set Buzzer Alarm	Open or close the buzzer alarm
Set Work Wavelength Set Buzzer Alarm Set Control Mode	Set equipment's switching mode. Press "Enter", and then set the switching mode.

Set Buzzer Alarm Set Control Mode **Set Work Channel**	Set working channel (this menu appear only with manual switching mode). Press "ENTER", can switch manually between A and B
Set Buzzer Alarm Set Control Mode **Set Switch Threshold**	Set switch threshold of automatic switching (this menu appear only with automatic switching mode). When input power of A way is less than this value, it will be automatically switched to B way. When input power of A way is more than this value, it will be automatically switched to A way
Set Save RF Ref Set RF Mode Set Channel A Low Alarm	*Keep the current RF Voltage of A and B ways as RF detection reference Voltage.
Set Save RF Ref **Set RF Mode** Set Channel A Low Alarm	*Set RF operating menu, press enter key, select "ON" or "OFF" to open or close the RF automatic switch function.
Set Control Mode Set Work Channel **Set Channel A Low Alarm**	Set Channel A input optical power low alarm threshold
Set Work Channel Set Channel A Low Alarm **Set Channel B Low Alarm**	Set Channel B input optical power low alarm threshold
Set Channel A Low Alarm Set Channel B Low Alarm **Set Local IP Address**	Set IP address
Set Channel B Low Alarm Set Local IP Address **Set Subnet Mask**	Set subset mask
Set Local IP Address Set Subnet Mask **Set Gateway**	Set gateway
Set Subnet Mask Set Gateway **Restore Factory Config**	Restore factory config

6) Warning menu

1. Disp Parameters
2. Set Parameters
3. **Alarm Status**

Press "ENTER" into the menu to check the alarm

information.

Note：

1）：The menu with * is only for enhanced switch；

7. Quickly set use instructions of enhanced optical switch RF automatic switching
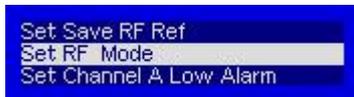
Optical signal and RF signal normally input:

Select highlighted menu, press enter into the setup menu.

↓

Select highlighted menu, press enter, and choose the "AUTO" mode.

↓

Select highlighted menu, press enter, set switch threshold of optical signal.

↓
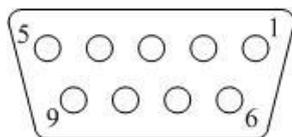

Select highlighted menu, press enter, choose "ON", open the RF detection function.

↓

Select highlighted menu, press enter, keep the current RF value of A and B ways.

8. Network management description

8.1 Interface description

1) RS232 communication interface

Adopt DB9 standard connector, the pin definitions as follow:

1：No Connect

2：TX

3：RX

4：No Connect

5：GND

6：No Connect

7：No Connect

8：No Connect

9：No Connect

The serial communication uses the standard NRZ form, 1 starts bit, 8 data bits, 1 stop bit and the baud rate is 38400.

2) LAN communication interface

Adopt RJ45 standard connector, the pin definitions as follow:

1：TX+

2：TX-

3：RX+

4：No Connect

5：No Connect

6：RX-

7：No Connect

8：No Connect

A: Green light: when the light is flickering, LAN port is sending the data.

B: Yellow light: when the light is on, the network connect is normal.

9. The management and application of network interface

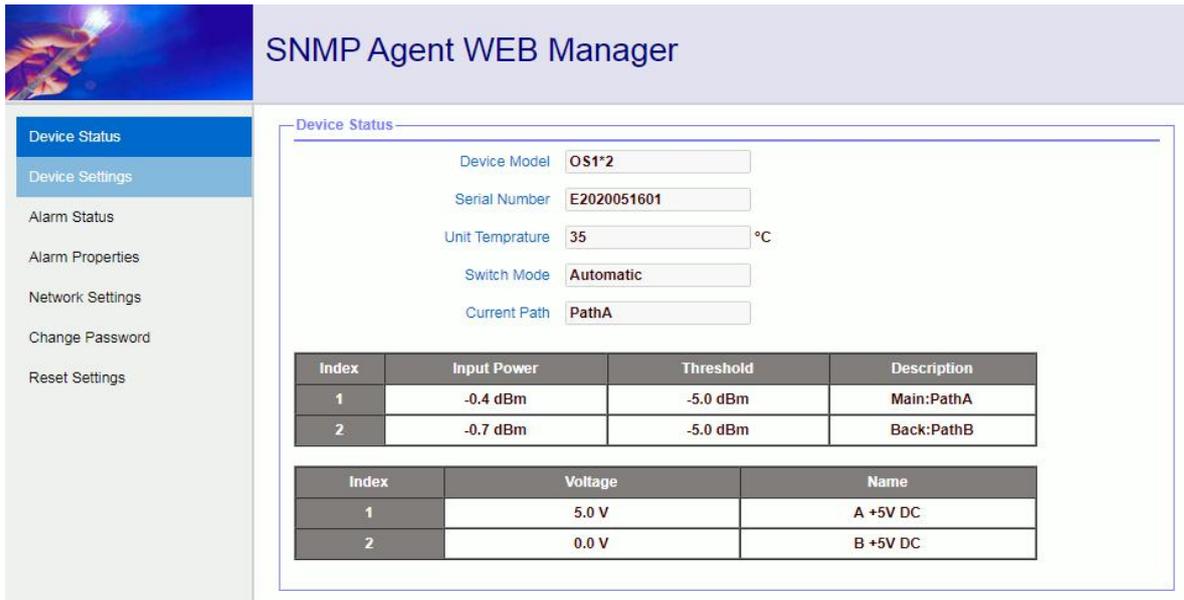## 9.1 Network management platform browser login-2 methods

9.1-1 Direct connection PC

Set up PC IP same with transponder telemetry. The IP for transponder telemetry is 192.168.0.101, the PC can be set 192.168.0.1.

1. Open the Google Chrome browser and input 192.168.0.101

2. Login it.　　User name: admin　　password: 123456　　(Another way: User name : super　　password: super)

Device Status:

Device Settings:

Alarm Status:

SNMP Agent WEB Manager

Device Status
Device Settings
Alarm Status
Alarm Properties
Network Settings
Change Password
Reset Settings

Alarm Status

Index	Parameter Name	Alarm Status
1	Box Temp	Nominal
2	unit both input state	Nominal
3	InputA power	Nominal
4	InputB power	Nominal
5	InputA state	Nominal
6	InputB state	Nominal
7	InputA RF state	Nominal
8	InputB RF state	Nominal
9	A +5V DC	Nominal
10	B +5V DC	LOLO

Alarm Properties:

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	Box Temp (`C)	☑ 85	☑ 70	☑ 0	☑ -5	2	Set
2	InputA power (dBm)	☑ 22.0	☑ 18.0	☑ -6.0	☑ -15.0	2.0	Set
3	InputB power (dBm)	☑ 22.0	☑ 18.0	☑ -6.0	☑ -15.0	2.0	Set
4	A +5V DC (V)	☑ 6.5	☑ 6.0	☑ 4.0	☑ 3.5	0.2	Set
5	B +5V DC (V)	☑ 6.5	☑ 6.0	☑ 4.0	☑ 3.5	0.2	Set

Index	Parameter Name	Control	Action
1	unit both input state	EnableMajor ⌄	Set
2	InputA state	EnableMajor ⌄	Set
3	InputB state	EnableMajor ⌄	Set
4	InputA RF state	EnableMajor ⌄	Set
5	InputB RF state	EnableMajor ⌄	Set

Network Settings:

SNMP Agent WEB Manager

Network Settings

Device MAC:	00 : B9 : A0 : 23 : 07 : 0E
Update Identifier:	OSW143SE01
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
Trap Address 8:	0 . 0 . 0 . 0
Read Community:	public
Write Community:	public
Trap Community:	public

SNMP Agent WEB Manager

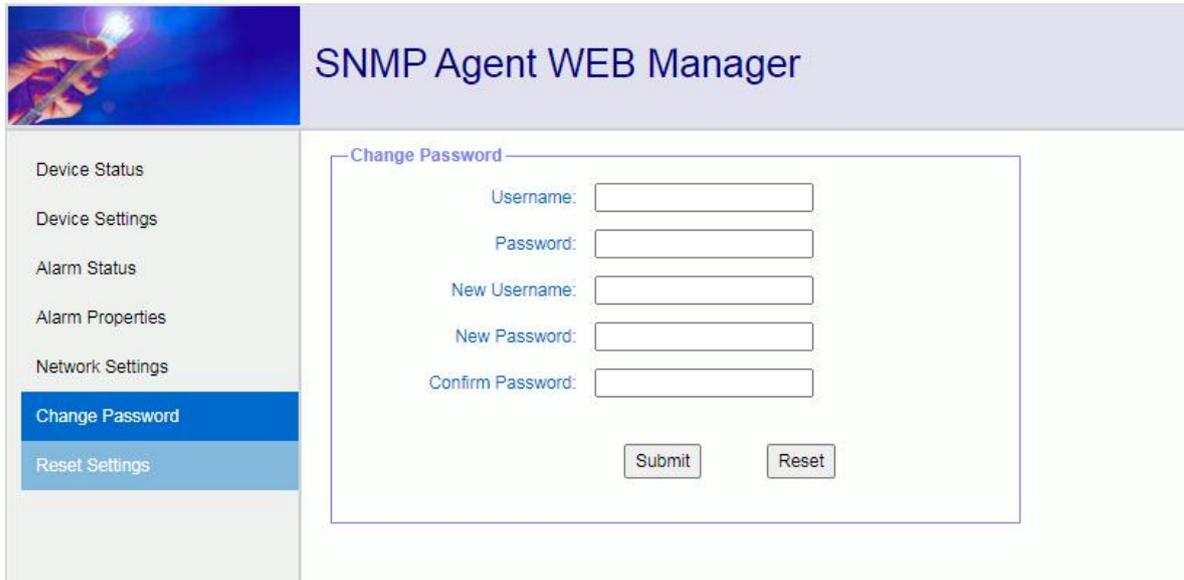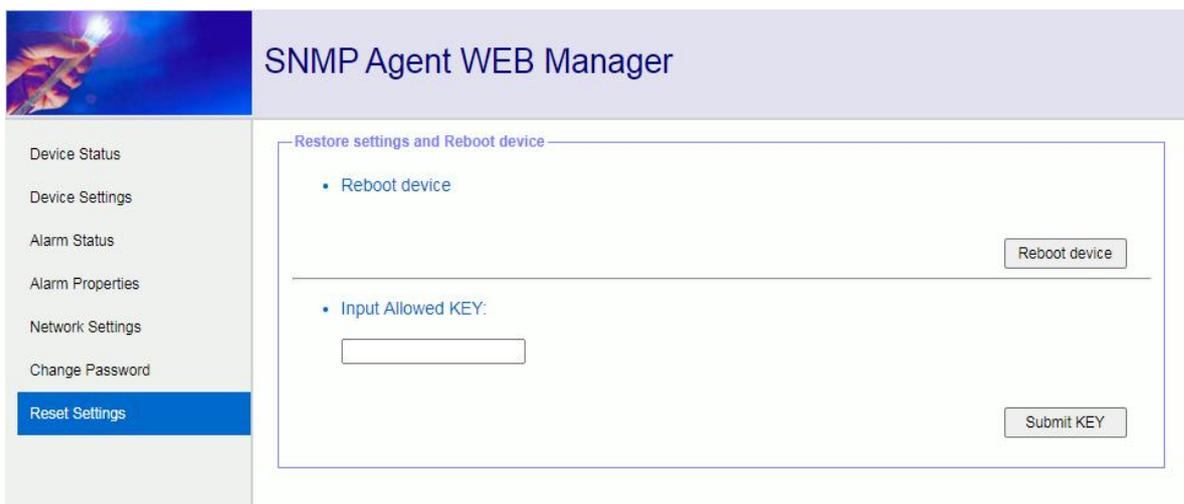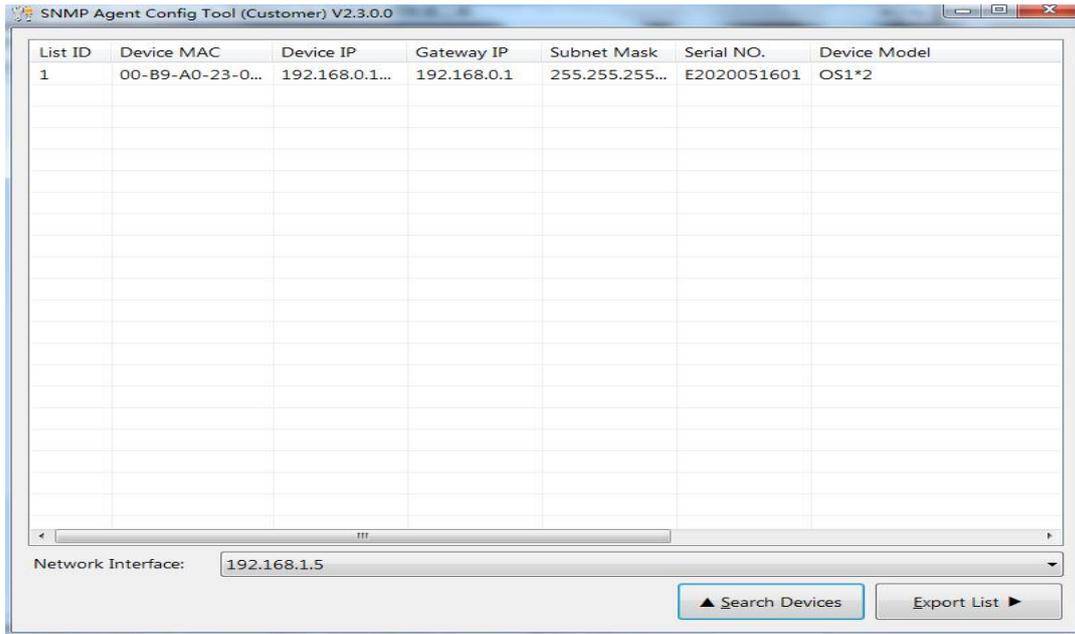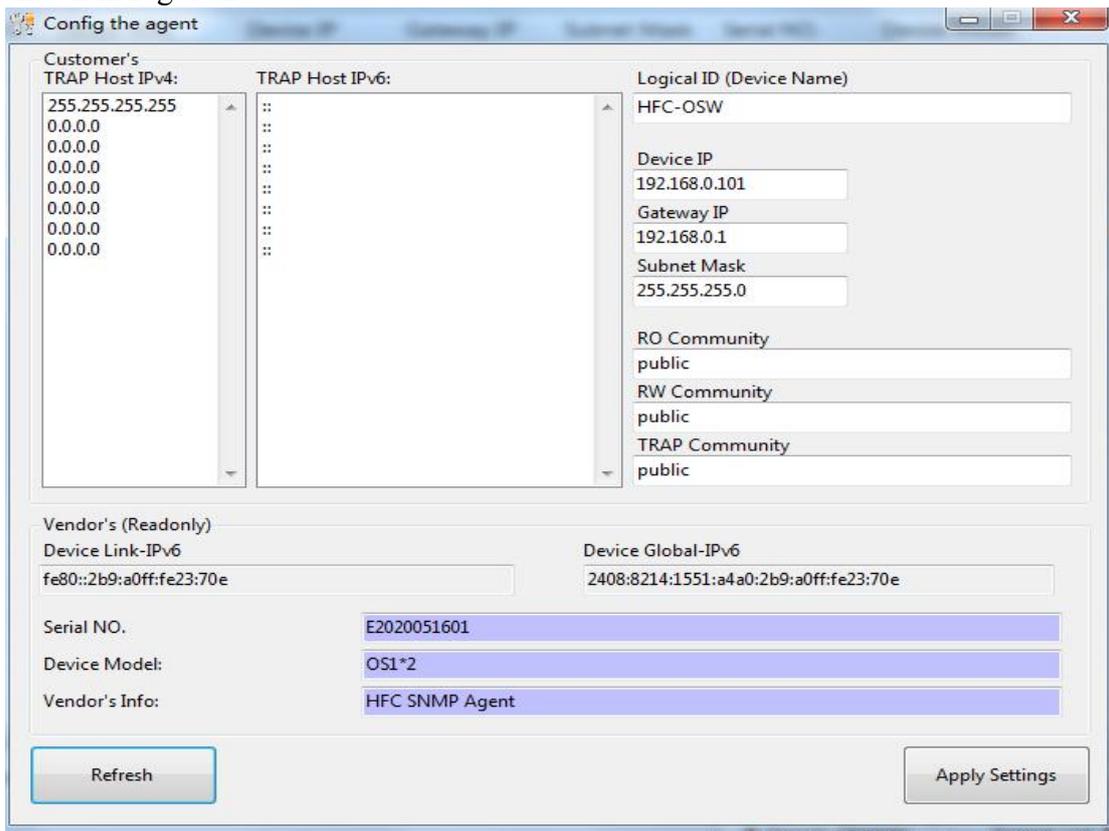|	
Default Gateway:	192 . 168 . 0 . 1
Trap Address 1:	255 . 255 . 255 . 255
Trap Address 2:	0 . 0 . 0 . 0
Trap Address 3:	0 . 0 . 0 . 0
Trap Address 4:	0 . 0 . 0 . 0
Trap Address 5:	0 . 0 . 0 . 0
Trap Address 6:	0 . 0 . 0 . 0
Trap Address 7:	0 . 0 . 0 . 0
Trap Address 8:	0 . 0 . 0 . 0
Read Community:	public
Write Community:	public
Trap Community:	public
SNMP Version:	V1 ▼
	V1
	V2C

Save

Change Password:

Reset Settings:

9.1-2 IPv6 test:

Connect the optical switch and computer to the same switchboard (or connect the optical switch is connected directly to the computer for testing.
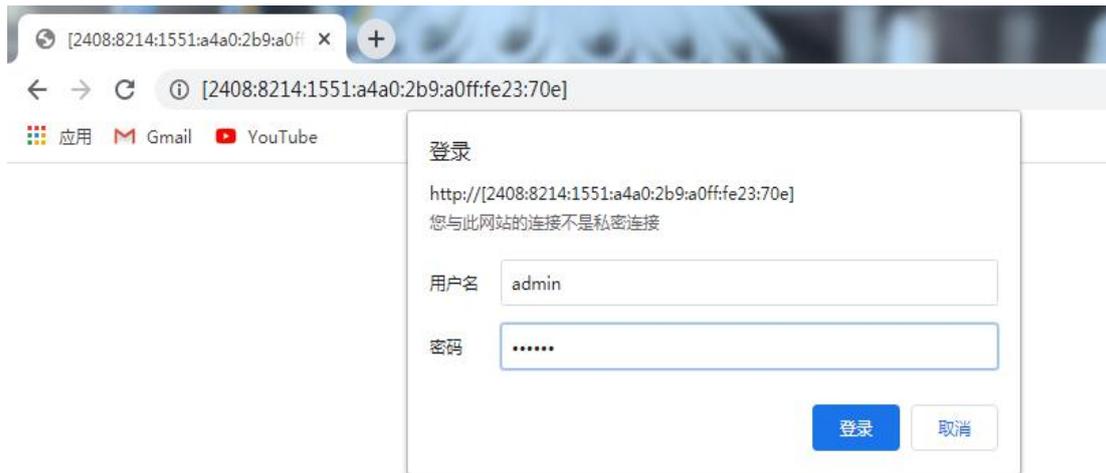
1. Open the tool: SNMP agent config tool (customer) v2.3.0.0, click search devices, such as As shown in Figure 1:
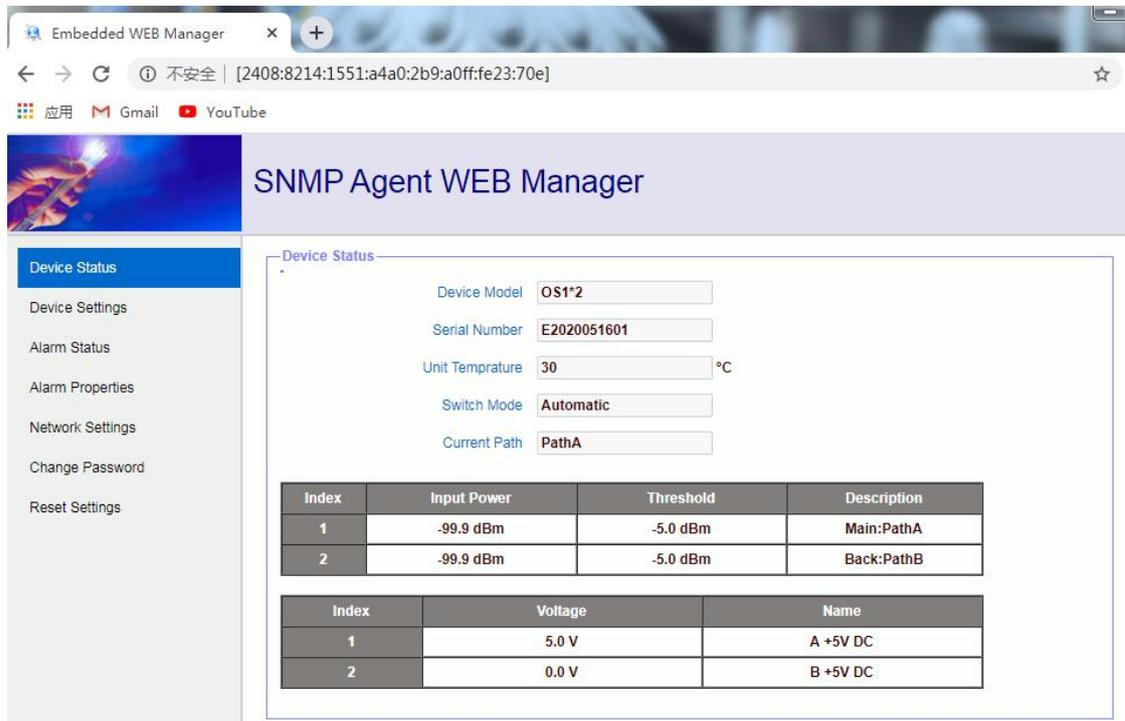
2.Click list ID to enter Config the agent and copy the contents of device global-ipv6 are shown in Figure 2:

3. Open Google Chrome browser and Copy content in device global-ipv6 column to search Engine and add http: / [], as shown in Figure 3:

4. Enter the user name (admin) and password (123456) to enter the SNMP agent web manager, as shown in Figure 4:

5. SNMP agent web manager can also be accessed through all IPV6 enabled network terminals such as mobile phones, provided that the device must be connected to IPV6 network, and the network supports remote terminal access.

10. Service

1. We promise: Guarantee for twelve months (start from the leave factory date showed on the serial number), fix all the life. Equipment at fault is resulted from the users' improperly operation and unavoidable environment reasons, our company will fix, but collect suitable material cost.

2. If the equipment fails, immediately contact local distributor or our company

customer service centre.

3. The site maintenance of the fault equipment must be operated by special technician, to avoid worse damage.

4. **Special notice:** if the user has fixed the equipment, our company will stop the service of free fix. But we will fix it, and collect suitable fix and material cost.

Special notice:

1) In the process of clean the fiber optic active connector, you should avoid direct shining at eye, which will cause permanence burn!!!!

2) Use proper energy to install the fiber optic active connector, or the ceramic tape in the adaptor will lead to break. Once the ceramic tape is broken, the output optical power will decrease rapidly. And turn the fiber optic active connector slightly, the output optical power changes obviously.

3) Please operate the optical fiber under the condition of close the optical source. Or the high output power will lead to burn the joint of the output optical fiber, which will reduce the output power.