

Optical Transmission Network System

User Manual



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Chapter 1 System outline

1.1 Outline

Based on WEB management allows network managers to use the browser to quickly and easily configure, control and monitor the network on any node in the network. Through the WEB network management system can be very easy to manage and maintain the system. The Web system has the functions of user login rights management, refresh device view, system management, module list, alarm management, SNMP configuration, system management, user management and log management and so on.

1.2 System advantage

System automatically recognizes the type of inserted card , can insert different types of cards; it can view the detailed information of each card and monitor and manage the card.
System can be restored single card factory settings through the WEB , system can be upgraded.

3. When viewing alarm information, the different levels are displayed in different colors. You can query the alarm information by selecting the date /time condition or the slot condition.

4 Alarms that have not been deleted or have not been acknowledged will be NEW blinking fonts in the alarm area of the function operating area - the alarm level of the current alarm

Note: This document uses the 2U system as an example. The 1U / 5U system settings are the same as the 2U system settings. Only the main interface displays different settings.

1.3 Main engine and Network connection

Use network cable to connect the network port of the host with the ETH1 or ETH2 port of the network management card. If there is a green light blinking on the ETH1 or ETH2 port, you can log in to the NMS to view the device information.

1		
	0 AC10-256V	
°×	577 CH	
2		
PAR C	0	

Figure 1 Main engine and Network connection



1.4 Host view each device information

host only needs to connect to the ETH1 (ETH2) port of one device. The ETH 2 (ETH 1) port is connected to the ETH 1 (ETH 2) port of another device, and then connect downwards. On this host computer, use IE to input Each device IP to view, you can view the host through the console to manage each device connected through the ETH port

Chapter 2 WEB Login

2.1 Safety Login

Run the browser and enter the address of the device to be monitored in the address bar of the browser: <u>http://192.168.1.100</u> (initial IP address), a login prompt will pop up asking for the user name and password (Figure 2).

Note: Recommended browser selection 8.0 and above versions of IE browser or Google Chrome, recommended the best resolution of 1920 * 1800.

Username: webadmin

Password: admin

nttp://192.1	168.1.112
our conne	ection to this site is not private
Username	webadmin
Password	*****

Figure 2 Login page

User name: webadmin Password: admin





Enter the correct user name and password: 1 Click OK to enter the Web page; 2 Click Cancel to eject an unauthorized page; 3 Check "Remember my password", log in to determine the page, the next time you log in, click OK You can enter the WEB.

2.2 Refresh device view

System's device view display area has a refresh function.

1 manual refresh:

Click Refresh Now, and the device view display area will be manually refreshed (Figure 3). 2 automatic refresh:

Fill in the interface need to automatically refresh the time interval can be (Figure 3 shows):

Example 1: Set the refresh interval to 15 seconds

(1) timer refresh settings bar enter 15

(2) Click Apply

Note 1: The time range is set to 0-999 seconds;

Note 2: The system is factory set to 20 seconds.

Example 2: Setting does not automatically refresh

(1) Timer refresh settings field enter 0

(2) click the application, the system will not automatically refresh;

Example 3: The original page does not automatically refresh, set the refresh time of 12 seconds

(1) Timer refresh setting input 12

(2) click the application manually refresh the device view once, the device automatically refresh time will change to 12 seconds



Figure 3 Timing refresh



Chapter 3 Alarm management

3.1 Current Alarm

【Alarm management】: current alarm (figure 4)

3.1.1 Using current alarm information

(1) Click the location bar seventh slot, the function operation area will display the basic information page of 7-slot card

(2) Click Clear or Confirm in the operation column , we will disappear

(3) If the alarm is back to normal after it is generated, it will be cleared

(4) Clear and confirm the alarm, the alarm is transferred to the historical alarm

			Current aları	m info								
location 🛆	cation Alarm info Alarm status Coccurrence time Confirm Alarm Level Alarm Reason Operate											
Slot #8 Fiber port 8	optical module inserted	Unclean&UnAck	2000-01-01 00:28:01			waring		Clean	Confirm	Expiration date:		
Slot #8 Fiber port 8	optical module removed	Unclean&UnAck	2000-01-01 00:27:54			major		Clean	Confirm	Select slot: All		
Slot #4 Fiber port 8	optical module inserted	Unclean&UnAck	2000-01-01 00:27:35			waring		Clean	Confirm	Inquiry Reset		
Slot #4 Fiber port 8	optical module removed	Unclean&UnAck	2000-01-01 00:27:28			major		Clean	Confirm	Delete the alarms		
Records:4 1 Pa	ages GO-> Page 1	Ľ								that meet the conditions		
										Delete all alarms		
										Confirm alarms that meet the conditions		
										Confirm all alarms		

Figure 4 current alarm

Example 4: Clear or confirm the alert message on or after May 6, 2013

- (1) The selection start time is May 6, 2013
- (2) Directly clear or confirm the conditions to meet the alarm
- (3) Current alarms on or after May 6, 2013 will be cleared or confirmed

Example 5: Clear or confirm the first slot alarm information

(1) Select the slot number as the first slot in the query conditions at the bottom right of the function operation area

- (2) Directly clear or confirm the conditions to meet the alarm
- (3) The current alarm information of slot 1 will be cleared or confirmed

Example 6: Clear or confirm all the current alarm information

(1) Click to clear all alarms or confirm all alarms. All current alarms are cleared or confirmed





3.1.2 check current alarm information

Example 7: Query the alarm information from January 25, 2013 to December 23, 2013

- (1) Click the start date column, pop-up time selection table (Figure 5)
- (2) Click to select the year as 2013, month as January, and date as 25
- (3) Click the deadline bar, pop-up time selection table (Figure 5)
- (4) Click to select the year as 2013, the month as December and the date as 23
- (5) point inquiries, can check all the warning information between the start and end date;

Example 8: Query the alarm information after January 1, 2013

- (1) Click the start date column, pop-up time selection table (Figure 5)
- (2) Click to select the year as 2013, month as January, and date as January
- (3) Click Query to view the current alarm information after January 1, 2013

Example 9: Query information between September 15, 2013

- (1) Click on the deadline bar, pop-up time selection table (Figure 5)
- (2) Click to select the year as 2013, the month as September and the date as 15
- (3) point inquiry, you can view all the current alarm information after September 15, 2013;
- Example 10: Querying the current alarm information of slot 1 card
- (1) Select the slot number for the first slot (Figure 6)
- (2) Inquire, show the alarm information related to slot 1 of the current alarm
- (3) If the alarm is returned to normal after it is generated, it will be cleared;

							Inq Star	uiry rt da	con ite:	nditi	ons	:	
nqu Star	uiry t da	cor te:	nditi	ons	:		Exp	irati	on	date	:		
4 4	N	ov	20	17)	•	-	(N	lov	20	17	Ì	•
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4	29	30	31	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11
12	13	14	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30	1	2	26	27	28	29	30	1	2
3	4	5	б	7	8	9	3	4	5	б	7	8	9
Ð	C	Clear	То	day	0	К	Ð	(Clear	To	day	0	к

Figure 5 start date and deadline date choose



Inquiry con Start date:	ditions:	
		1
Expiration of	late:	
	N.5	1
Select slot:	All	•
Inquiry	All	
	Rack	_
Operate:	Slot 1	
	Slot 2	
Delete the	Slot 3	
that me condi	Slot 4	
	Slot 5	
Delete al	Slot 6	
Confirm al	Slot 7	
meet the c	Slot 8	
Confirm a	Slot 9	
	Slot 10	
	Slot 11	
	Slot 12	
	Slot 13	
	Slot 14	
	Slot 15	
	Slot 16	

11

Figure 6 slot check condition

3.2 History alarm

【alarm management】: History alarm page (Figure 7)

3.2.1 Using history alarm information

(1) Click the location bar seventh slot, the function operation area will display the basic information page of 7-slot card

			History a	larm info					
Location 🛆	Alarm info 🛆	Alarm status	Occurrence time 🛆 🤝	Delete time	Confirm time	Alarm level	Alarm reason	Delete	Inquery condition: Start date:
Slot #8 Fiber port 8	optical module inserted	cleaned & Ack	2000-01-01 00:28:01	2000-01-01 00:35:58	2000-01-01 00:36:02	waring		*	Expiration date:
Slot #8 Fiber port 8	optical module removed	cleaned & Ack	2000-01-01 00:27:54	2000-01-01 00:35:58	2000-01-01 00:36:02	major		8	Select slot: All
Slot #4 Fiber port 8	optical module inserted	cleaned & Ack	2000-01-01 00:27:35	2000-01-01 00:35:58	2000-01-01 00:36:02	waring		8	inquiry Res
Slot #4 Fiber port 8	optical module removed	cleaned & Ack	2000-01-01 00:27:28	2000-01-01 00:35:58	2000-01-01 00:36:02	major		*	Delete the alarms
Records:4 1 P	ages GO-> Page :	1					1		that meet the conditions
									Delete all alarms

(2) Click S, can select the history alarm information;



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Example 11: Delete the history alarm information before 0:00 on April 2, 2013

(1) select the deadline for the 2013, April, 2 days

- (2) Delete the alarm meeting the conditions directly
- (3) The history alarm information before 0:00 on April 2, 2013 will be deleted;

Example 12: Delete the second slot of the history alarm information

- (1) Select the slot number as the second slot
- (2) Delete the alarm meeting the conditions directly
- (3) The history alarm information of slot 2 will be deleted.

Example 13: Delete all history alarm information

- (1) Click to delete all the alarms
- (2) All history alarm information will be deleted;

3.2.2 check history alarm

Check the history alarm process with the current alarm information Note 1: When clearing / confirming / deleting alarms according to the conditions, after selecting the conditions, directly click Clear / Confirm / Delete, do not click Query, otherwise the entire current / historical alarm information will be operated; Note 2: The current alarm and history alarm can save a total of 300 messages. If the alarm number exceeds 300, the oldest one is automatically cleared. If the new alarm is generated, the oldest one of the current alarms is cleared. If the current alarm is generated, Moving to a history alarm clears the oldest of the history alarms.

Chapter 4 Running

4.1 Equipment General view

Interface Area Description:

WEB page is divided into three areas (Figure 9): the left side of the public menu, the upper right side of the device view display area, the lower right side of the device information display area.

Chassis slot information is as follows:

1U chassis

SLOT	SLOT	SLOT #1	SLOT #2
#7	SLOT	SLOT #3	SLOT #4



2U chassis

	SLOT	SLOT #1	SLOT #2
SLOT	#9	SLOT #3	SLOT #4
#11	SLOT	SLOT #5	SLOT #6
	#10	SLOT #7	SLOT #8

NOTE: The NMC card can be inserted into slot 1 only. The leftmost slot is for fan boards. Two adjacent slots are for power supply. Other cards can be inserted into service cards. (Figure 9)



🗅 web Network Manageme 🗙 🔽						÷(0 =
← → C ① 192.168.1.112/in	dex.html					\$
Running	Current location : Run	ning status > Equipment General vie	w Auto-re	fresh the remaining t	ime : 37S 60 S Refresh im	mediately
Equipment General view						
Single Card List	Equipment view					
Alarm Management						
Current Alarm		RX1 RX2 RX2 RX3 RST ETH1		PWR 011		
History Alarm	-			IN4RX4		
Alarm Policy Settings	O ACS	10-260V O		PWR	T1 R1 0212 T2 R2 03 I3 T3 R3 04 I4 T4 R4	0.0
Network Management	• × 🚥			1146.44		_
IP Address Configuration		017		00000		000
SNMP Configuration		INIRX1		IN1RX1	- 63 63 - 65	ो सिन्हरने
Safety Management	G ACI	PWR 0111 T1 R1 0212	T2 R2 O3 I3 T3 R3 O4 I4 T4 R4	PWR 0111	1 R1 02 I2 T2 R2 03 I3 T3 R3 04 I4 T4 R4	i herreri
Equipment Maintenance						
Equipment Maintenance						
	Equipment info					
System Information			Γ	Power 1 attribute	AC open output 11.863(V)	
Remote Upgrade	Equipment model	AR-CD4500	1	Power 2 attribute	AC off output 0(V)	
Running Log	Serial number	A20171030017	1	irmware version	2.0.4	
	Hardware version	v1.0	1	System time	2000Year01Mon01Day	
	Equipment id				0:38:54	

Figure 9 2U chassis main page

1. the public menu: Including the operational status, alarm management, network management, security management, equipment maintenance and other functional



modules;

Note: the following instructions related to the public menu options are enclosed in **()**; 2.equipment view display area: display insert card type, module type, port and indicator status;

3.Device information display area: You can view the device model, serial number, power type, running time, network management version and other information; can write information to identify the device;

4.Unit disk: Click the unit disk name (the upper left corner of each card black white logo) to pop up the unit disk information read and set the page;

System interface refresh:

The system's device view display area has a refresh function.

1 manual refresh:

Click Refresh Now, and the device view display area will be manually refreshed (Figure 10).

2 automatic refresh:

Fill in the interface need to automatically refresh the time interval can be (Figure 10):

Example 14: Set refresh interval is 15 seconds

(1) timer refresh settings bar enter 15

(2) Click Apply

Description 1: The time range is set to 0-999 seconds;

Note 2: The system is factory set to 20 seconds.

Example 15: Settings do not refresh automatically

(1) Timer refresh settings field enter 0

(2) click the application, the system will not automatically refresh;

Example 16: When the original page does not refresh automatically, set the refresh time

to 12 seconds

(1) Timing refresh setting input 30

(2) Click the application manually refresh the device view once, the device automatically refresh time will change to 30 seconds;



Figure 10 Timing refresh



4.2 Single card list

As shown in Figure 11, click [List] in the menu bar on the left to enter the following interface. All the card information of the card is displayed: slot number, model number, status, version number and so on.

Click the right side of the details, you can pop-up single card details.

Cu	current location . Running status > single Calu List										
E	Equipment frame										
		SLOT #10(APU-	SLOT #1(NCP)	SLOT #2							
	SLOT	П)	SLOT #3	SLOT #4							
	#11(FAN-II)		SLOT #5	SLOT #6							
		SLUT #9(APU-II)	SLOT #7	SLOT #8							

Single	Single Card List													
Slot number	Slot status	Single card model	Serial number	Hardware version	Software version	Manufacture date	Detailed information							
slot #1	<mark>Online</mark>	NCP	C13110043	1.1.0.2	4.1.3	2017-2-10	Click View							
slot #2	Online	OTDX		v1.1	2.0.8	2017-2-10	Click View							
slot #3	Offline						Click View							
slot #4	Online	OTDX		v1.1	2.0.8	2017-2-10	Click View							
slot #5	Offline						Click View							
slot #6	Online	MDU	MDU01711060113	v1.0	2.0.5	2017-2-10	Click View							

Figure 11 single card list



Chapter 5 Network Management

5.1 **IP address configuration**

IP address setting		
IP address	192.168.1.112	
Subnet mask	255.255.255.0	[
Gateway	192.168.1.1	[
MAC address	3a:1f:34:08:55:83	

Figure 12 IP address configuration

Click the [IP address configuration] in the main interface menu bar, enter the IP address setting interface as shown in Figure 12. The default IP address of the device is 192.168.1.100, and the user can modify it according to actual needs, Click "Save Settings" after the modification is completed.

5.1 SNMP configuration

Configure the SNMP read and write, can read and write information. [SNMP configuration]: SNMP community name configuration page (shown in Figure 13), after the modification is complete, click "Save Configuration" button



Curr	ent loc	ation: Network Man	agment > SNMP Configura	tion
Glo	obal Co	nfiguration		
	SNMP	status	Enable	
	SNMP	Reading	public	
	SRMP Comm	writing unity	private	
SN	MP Tra	p configuration		
				Save Configuration
Serial No.	Target host name	IP address	UDP communication	n port Status Modify Delete
1	Host 238	192.168.1.238	9162	Enable Edit

Figure 13 SNMP group name configuration

Chapter 6 Safety Management

Security management includes view, add, modify user account information: such as modifying the administrator password, add / delete ordinary users, change the password and so on. (Figure 14)

User lis	t					
Serial No.	User name	User level	Creation time	Contact	Modify password	Delete
1	webadmin	Administrators	2017 2-10		Edit	Delete
2	guest	Normal user	2017 2-10		Edit	Delete

Figure 14 User information

Chapter 7 Equipment Maintenance

7.1 Restore factory settings

Click [Restore Factory Settings] in the main interface menu bar [Equipment Maintenance] to enter the factory reset interface as shown in Figure 15. The list shows each board by



slot, click "Restore Factory Settings" on the right side of the table, You can restore the card to the factory setting

Device Identifier					Langu	age Selection English •
Device Identifier .				Current User: admin	User Level: admin	
SYSTEM CONFIGURATION	RESTORE FACTORY SETTINGS	REBOOT	NCP UPGRADE	SINGLE CARD UPGRADE	REGULAR REFRESH	
		Please select the	e single card which need	to retore factory settings		
		Single card	#2			
		Single card	#4			
		Single card	#6			
		Single card	#7			
		Single card	#8			
		NMU Restore fact	tory IP			
	Select all	Select non	e Invert Sele	ction Restore factory set	tings	

Figure 15 Restore factory settings

7.2 Remote Upgrade

Click [Remote Upgrade] in the menu bar of [Equipment Maintenance] on the main interface to enter the remote upgrade interface as shown in Figure 16. The list shows the status, model and software version of each card by slot. Click the right Box, select the need to upgrade the board, and then click "click Add Trap Address", and finally click "click upgrade" to the selected card for remote upgrade.

Device Identifier :				Current User: admin	Lang User Level: admin	uage Selection English •
SYSTEM CONFIGURATION	RESTORE FACTORY SETTINGS	REBOOT	NCP UPGRADE	UNIT CARD UPGRADE	REGULAR REFRESH	
			Upgrade the unit card fir	mware		
		Select all	Select none	Invert Selection		
	Please select the unit card which	h need to upgrade:				
	Unit card #2					
	Unit card #4					
	Unit card #6					
	Unit card #7					
	Unit card #8					
	🔲 Fan					
	Select the upgrading files:		Choose File	lo file chosen	upgrade	

Figure 16 Remote upgrade

7.3 Running log

Click [Running log] in the menu bar of [Equipment Maintenance] on the main interface to enter the remote upgrade interface as shown in Figure 17.The table lists the daily operations on the equipment: operation object, operation content, operation time, method and so on. Users can check one by one as needed and delete operation log



Current Location:Equipment	Maintenance > Rur	nning log						
	Operation Log list							
	Operation object	Operation content	Action	Operation time	Operation method	Operate		
	Recorders:0			0				
			Delete all op	peration logs				

Figure 17 Running log

Chapter 8 Common card configuration

8.1 **OTU/OEO**

Click on the card model identification in the main interface device view (as shown in the red circle in Figure 18) to enter the card information viewing interface (Figure 19).

IN1RX1		
PWR	01 I1 T1 R1 02 I2 T2 R2 03 I3 T3 R3 04 I4 T4 R4	

Figure 18 choose card

PWR	OUTIN			RX3 OUT4 IN4 TX4 RX4		
Information	OT	DX DDM	DDM alarm			Close
Unit name				User data		
CH1(Port1)				CH2(Port2)		
CH3(Port3)				CH4(Port4)		
Unit model				Unit sn		
Hardware ver	rsion	v1.1		Firmware version	2.0.8	
Creation date	e	2016-5-10		Last modified date	0Hour/44Min/13Sec	
		Edit			Setting	

Figure 19 card basic information

Continue to click OTU Information to view the port module wavelength, transmission distance, rate type, receive / transmit status, and self / non-self (Figure 20).



	IN1RX1								
Infor	mation		DDM DDM a	llarm					Close
				OTE	X				
Fiber	Dis(KM)	WI(nm)	Cur Speed	Recv	Send	Loopback	Recv alarm	Alarm	Edit
1	80	C32 1551.72	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
2	40	1570	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
3	40	1550	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
4	40	1550	ETHERNET	Nor	Enable •	Not Ip 🔹	DDM	Optical module	Setting
5	80	C38 1546.91	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
6	80	C31 1552.52	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
7	80	C33 1550.92	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
8	80	C28 1554.94	ETHERNET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
				Refre	əsh				

Figure 20 module port information

Users can modify the module rate type according to the actual application: Select the desired rate in the pull-down menu, and then click "Settings" on the right (Figure 21).

otdx PWR <mark>—</mark> II	IN1RX1			TX3 RX3	OUT4 IN4				
Inform	mation	OTEX	DDM DDM al	arm					Close
1				OTD	X				
Fiber	Dis(KM)	WI(nm)	Cur Speed	Recv	Send	Loopback	Recv alarm	Alarm from	Edit
1	40	1552.00	ETHERNET •	Nor	Enable •	Not Ip •	DDM	Optical module	Setting
2	40	1570	ETHERNET •	Nor	Enable •	Not Ip •	DDM	Optical module	Setting
3	40	1550	SDH/SONET	Nor	Enable •	Not Ip 🔻	DDM	Optical module	Setting
4	40	1550	ETHERNET	Nor	Enable •	Not Ip 🔹	DDM	Optical module	Setting
5	80	C38 1546.91	10CbE+FEC 8G&10GEC	Nor	Enable •	Not Ip •	DDM	Optical module	Setting
6	80	C31 1552.52	10GFC+FEC	Nor	Enable •	Not Ip •	DDM	Optical module	Setting
7	80	C33 1550.92	1Gbps~10.3Gbps	Nor	Enable •	Not Ip •	DDM	Optical module	Setting
8	80	C28 1554.94	ETHERNET •	Nor	Enable •	Not Ip •	DDM	Optical module	Setting
				Refre	sh				

Figure 21 modify rate



Click "DDM Information" to view the real-time DDM information of each port module: send and receive optical power, temperature, voltage and bias current. To monitor the working status of the optical module in real time (Figure 22).

	X1 OUT IN1 TX1 RX1 OUT 2 IN2 TX2 44 OUT IN1 TX1 RX1 OUT 2 IN2 TX2	RX2 OUT3 INS TX3 RX3 OUT4 IN4			
ormati	ion OTDX DDM	DDM alarm			C
		FiberDDM			
Fiber	Received optical power(dBm)	Send optical power(dBm)	Temperature°C	Volt(v)	Bias current(mA)
1	-70	0	34	2.9	53
2	-40	-2	42.4	3.2	29
3	-40	0.5	23.3	3.1	46
4	-40	0	24.3	3.1	49
5	-40	1.3	23.3	3	64
6	-40	1.3	43.7	3.2	29
7	-40	1.3	33.8	3.1	29
8	-70	0.8	34.3	3.1	53

Figure 22 check DDM information

Click "DDM Alarm threshold" to view the real-time DDM alarm threshold of each port module

nation	OTDX	DDM	DDM-alar	m)						
			DI	DM alarm						
Fiber	Receive powe	d optical r(dBm)	Send powe	optical r(dBm)	Tempe	rature°C	Vol	lt(v)	B curre	ias nt(mA)
Fiber	Min power	Max power	Min power	Max power	Min	Max	Min	Max	Min	Max
1	-26	-1	-2	5	<mark>-</mark> 5	75	3	4	20	130
2	- <mark>2</mark> 7	1	-9	4	-10	85	3	4	10	65
3	-19	1	-3	3	-5	75	3	4	10	130
4	-19	1	-3	3	-5	75	3	4	10	130
5	-28	-5	-3	6	-10	85	3	4	0	125
6	-24	-6	-1	6	-5	90	3	4	0	100
7	-24	-6	-1	6	-5	90	3	4	0	100
8	-24	-7	-5	5	-5	95	3	4	5	120

Figure 23 check DDM alarm threshold



8.2 **OLPA**

Click on the main board device view card type identification (blue circle in Figure 24 below), you can enter the card information view interface (Figure 25).



Auto Force ri/Sec RX1 Mode ACK RX2 PWR TX Pri/Sec	Local RX TX	Primary TX1 RX1	Secondary TX2 RX2		
Essential O	LP				Clo
Unit name				User data	
Unit location				On equipment	
User property				Opened business	
Unit model				Unit sn	
Hardware version	v1.0			Firmware version	2.0.2
Creation date	2017-6-9			Last modified date	0Hour/0Min/54Sec
	Edit]			Setting

Figure 24 choose card

Figure 25 card basic information

Continue to click "OLP Information" to check the port received optical power, current working mode, working route, working wavelength, switching time, threshold value, etc. (Figure 26). Users can set the parameters according to the actual line. After setting, click on the right side of the "Settings" button, pop-up settings can be successful).

Auto Force ri/Sec RX1 Mode ACK RX2 PWR X	Local Primary	Secondary			
Essential (D)					Clos
TX(IN)Port(dBm)	-60.0		Automatic return time(min)	1 (1~9999)	Setting
R1 main path port(dBm)	-60.0		Main path switching threshold(dBm)	-25 (-60~0)	Setting
R2 backup port(dBm)	-60.0		Back switching threshold(dBm)	-25 (-60~0)	Setting
Current working model	Automatic return	• Setting	R1 main path alarm threshold(dBm)	-22 (-60~40)	Setting
Current selection path	Main T	Setting	R2 back alarm threshold(dBm)	-22 (-60~40)	Setting
Current operating wavelength	C band •	Setting	TX(IN)Port alarm threshold(dBm)	-20 (-60~40)	Setting
Note: the switching auto return mode	power only works in	the auto mode, a	and the automatic resh	eturn time only tak	es effect in the

Figure 26 module configuration window



8.3 **EDFA**

Click on the card model identification (see Figure 27, blue circle below) in the main interface device view to enter the card information view interface (Figure 28).



Figure 27 choose card

IN OUT ALM PWR Console	EDFA IN OUT		
Essential ED	DFA		Clo
Unit name		User data	
Unit location		On equipment	
User property		Opened business	
Unit model		Unit sn	
Hardware version	v1.1	Firmware version	2.0.9
Creation date	2017-3-23	Last modified date	0Hour/1Min/26Sec
	Edit		Setting

Figure 28 card basic information

Continue to click "EDFA Information" to view the EDFA module information in the unit tray (mainly including the module's current input / output optical power, etc., Figure 29).

IN OUT ALM PWR Console	EDFA IN OUT		
Essential	FA.		Clos
Pump 1 state	Off	Pumping temperature(°C)	25.0
Pump 2 statestate	Off	Pump cooling current(mA)	-200
Work mode	AGC	Pump 2 operating current(mA)	
Module input optical power(dBm)	-55.0	Pump 2 output power(dBm)	
Module output optical power(dBm)	-55.0	Pump 2 Temperature(°C)	
Module temperature(°C)	25.0	Pumping 2 refrigeration current(mA)	
Gain(dB)	25.0	Module minimum input optical power(dBm)	-25
Pump operating current(mA)	0	Module minimum output optical power(dBm)	-8
Pump output power(mW)	-700	Module minimum temperature(°C)	0
		Module maximum temperature(°C)	65

Figure 29 EDFA module information

Click DVOA Information to view the DVOA module information (mainly including the current input / output optical power of the module and the current attenuation optical power of the module, etc.) in the unit tray (see Figure 30). Because the optical attenuator is added to the input port of the EDFA module, the input value of the EDFA module is controlled by adjusting the attenuation value of the attenuator (changing the output value of the EDOA module by adjusting the attenuation value of the DVOA to change the input value of the EDFA module DVOA output and EDFA input is docking)), users use, according to the actual line of the parameters set (after setting, click the right side of the "Settings" button, the pop-up settings can be successful).