



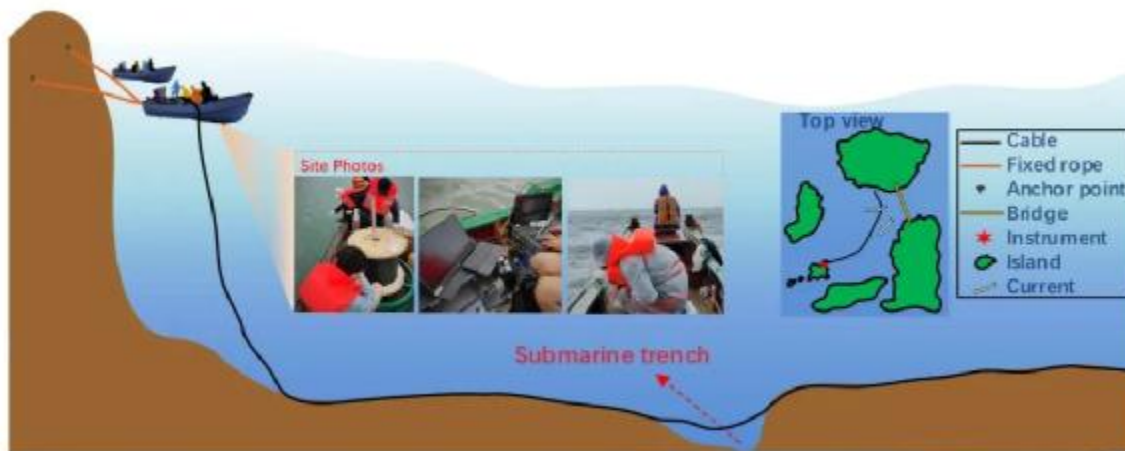
# 3C-OSP2800

OLP/OTDR/OPM FOR ONLINE FIBER MONITOR SYSTEM

20240328-1188

## OLM Optical Cable Monitoring System

The optical cable monitoring system combines optical cable monitoring, alarm, fault analysis, location, fault management, line maintenance and line management to ensure the safe and efficient operation of optical cable network. It can carry out 24 hours all-weather automatic monitoring and automatic fiber switching protection, timely and accurate report of sudden optical cable failure, effectively shorten the fault duration, timely detection of hidden, but will cause communication blocking potential failures and accurate early warning to achieve active maintenance.



### Product characteristics

**High integration**

Business card precision design, small size, high density.

**Strong versatility**

Support dozens of boards, compatible with optical transmission, optical protection, optical cable monitoring system applications.

**Diver diversification**

Can provide 3C-OSP2800I /II/IV 1 U、2U、4U different product form, suitable for different application combination.

**Upgrade flexibility**

It adopts plug and play design, easy to use, easy to upgrade, and short cycle of new function board.

## Product Description

### □ 3C-OSP2800I 1U platform

Provision 4+1 single board slot 4 business card, 1 management card.  
Support dozens of business cards, such as

OSW card, OTDR card.

Dual power hot plug, -48 V/220V optional.

Support serial port, WEB、SNMP、TELNET、SSH management.



**3C-OSP2800I 1U**

### □ 3C-OSP2800II 2U platform

Provision 8+2 single board slot 8 business card, management card 1+1 Protection.

Support dozens of business cards, such as OSW card, OTDR card

Dual power hot plug, -48 V/220V optional.

Support serial port, WEB、SNMP、TELNET、SSH management.



**3C-OSP2800II 2U**

### □ 3C-OSP2800IV 4U platform

Provision 16+2 single board slot 16 business card, management card 1+1 Protection.

Support dozens of business cards, such as OSW card, OTDR card.





Dual power hot plug, -48 V/220V optional.


Support serial port, WEB、SNMP、



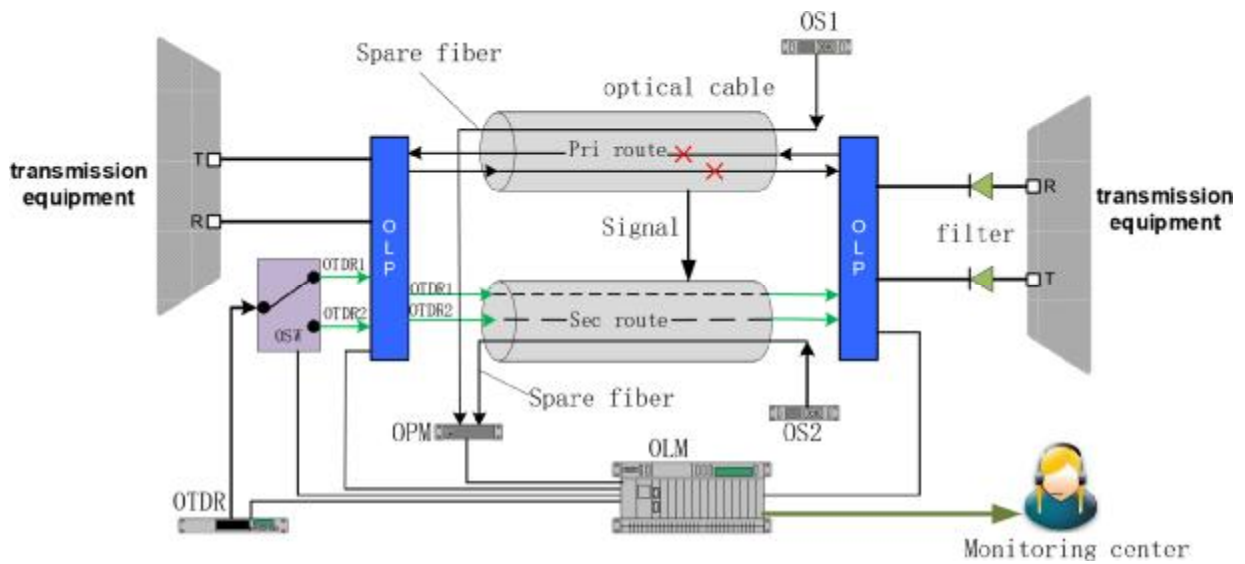
**3C-OSP2800IV 4U**

## Main business card parameters

	<b>NMS</b>	display screen keying interface	HD Dual Color LCD Display Flexible and concise six key RJ45、 Micro-USB
	<b>OTDR</b>	Central wavelength Event blind zone Decay blind area Minimum sampling spacing dynamic range Maximum number of samples	Support 100/1000Mbps SFP 1550nm $\pm$ 20nm/1625 $\pm$ 20nm selectable <2m <12m 0.125m 36/38/40dB selectable 32K
	<b>OSW</b>	operating wavelength insertion loss repetitiveness return loss switching period Connector form	1260~ 1650nm . Typ: = 0.8 dB, Max: <1.2 dB $\leq \pm 0.02$ dB >50dB <10ms Adjacent sequential switching LC/PC
	<b>OPM</b>	number of channels Calibration wavelength power bracket accuracy	2/4/8/12/16 Optional 1310nm / 1550 nm -70 ~ +3 dBm (off-line ) -50~+23dBm(on line ) $\pm 5\%$
	<b>OS</b>	number of channels wavelength Short-term output stability Long-term stability Optical output mode Connector form Projected wavelength	2/4/8/12/16 selectable 1550 nm $\pm 0.03$ dB/15min $\pm 0.1$ dB/8h (20C) continuous output LC/PC 1625nm

	<b>WDM</b>	Reflection wavelength	1310/1490/1550nm
		Projection bandwidth insertion loss	$\leq 1.0\text{dB}$
		Reflective bandwidth insertion loss	$\leq 0.80\text{dB}$
		Projection bandwidth isolation	$\geq 30\text{dB}$
		Reflection bandwidth isolation	$\geq 15\text{dB}$

### schematic diagram



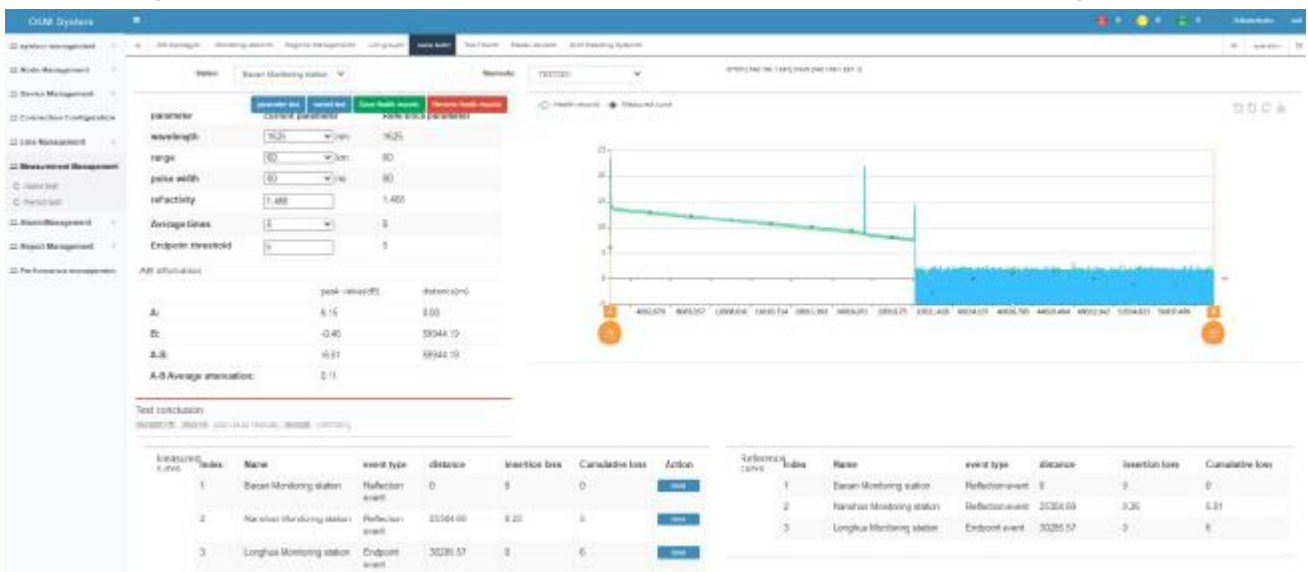
## OLM Network Management System

With the software function of monitoring system, it provides powerful real-time, online and automatic monitoring function of OTDR optical fiber, GIS map auxiliary resource management function, provides multiple alarm reporting mode, provides an effective means of monitoring and maintenance of optical cable network for relevant departments, and assists managers to master the quality of optical cable network. Greatly improve operation and maintenance performance and communication quality.



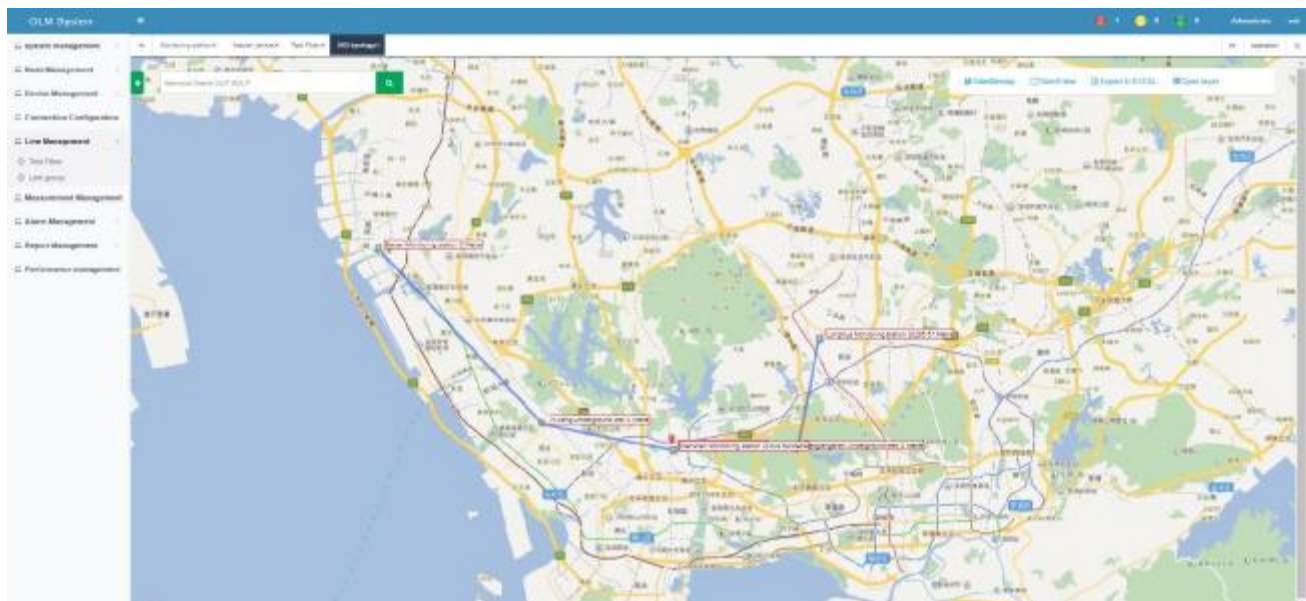
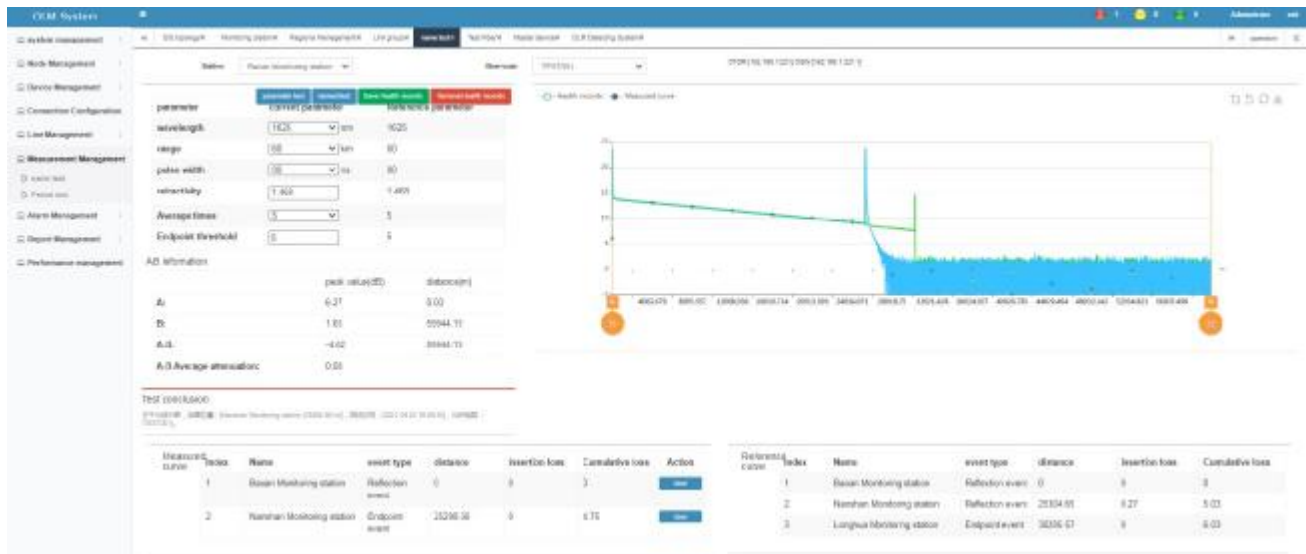
## Characteristics of Network Management System

1. Test management: can provide roll call test, cycle test, alarm test and other monitoring modes

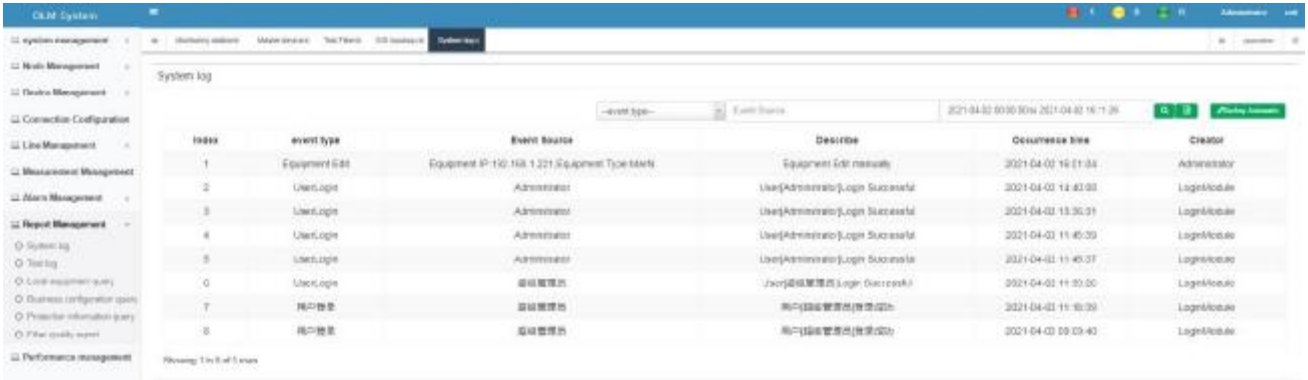




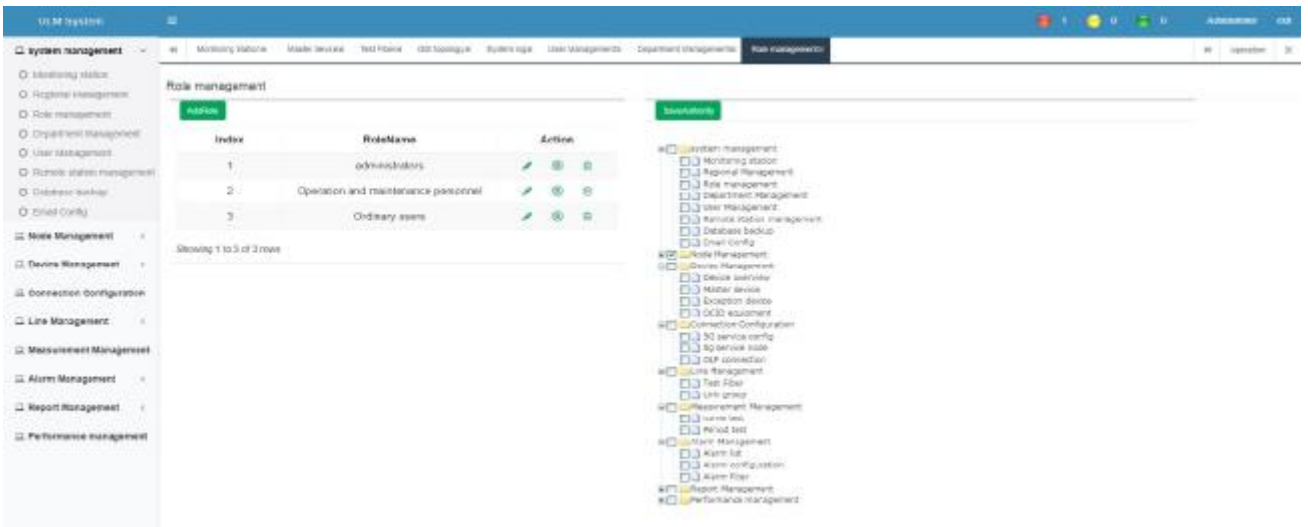
2. Fault location: according to the node distance and cable winding length of optical cable routing, the most direct and specific information of fault repair is provided.



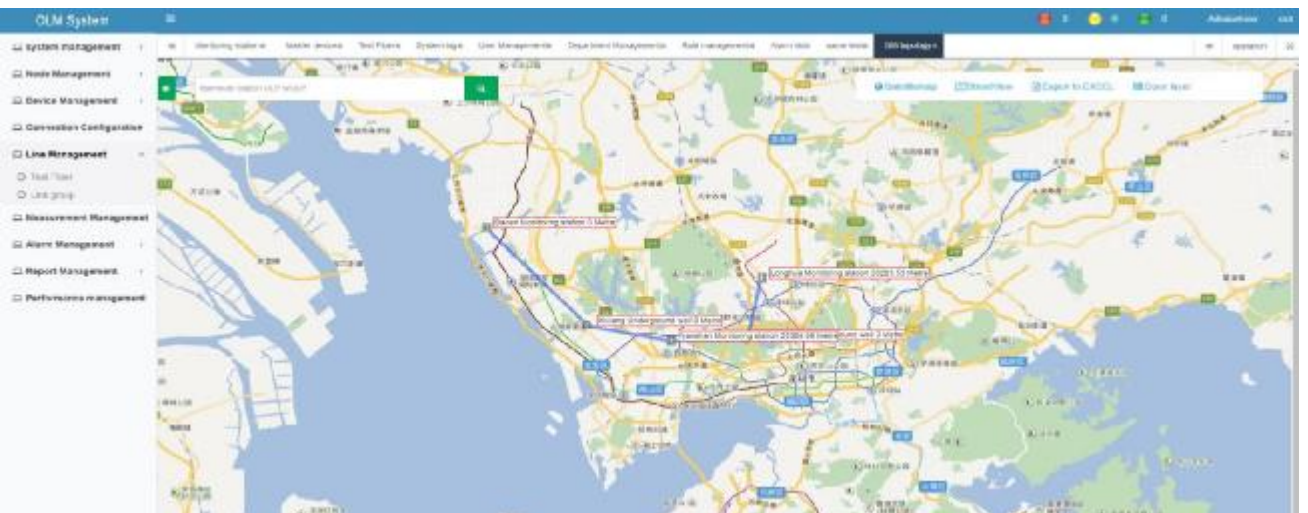
3. Decision support information: provide core line deterioration analysis, time deterioration analysis, fault type and cause statistics and other decision support functions.



4. User level management: multiple access systems, different levels of user roles access different functional modules.



5. Graphical management: using the GIS platform system to realize the visual management of optical cable, pipeline, ground well, machine building and other resources.



6. Historical data query: with complete historical data, convenient and fast query.



OLM System

Monitoring system

Test log

Index	Test time	Test Mode	Test conclusion	Cumulative loss	Average attenuation	Action
1	2021-04-02 15:15:37	normal test	测试通过 (测试时间: [2021-04-02 15:15:37], 测试模式: [TEST01])	0.03	0.2	look review
2	2021-04-02 15:15:09	parameter test	三平参数测试通过 (测试时间: [2021-04-02 15:15:09], 测试模式: [TEST03])	0.02	0.2	
3	2021-04-02 15:00:35	normal test	三平参数测试通过 (测试时间: [2021-04-02 15:00:35], 测试模式: [TEST03])	4.75	3.19	look review
4	2021-04-02 15:05:27	parameter test	三平参数测试通过 (测试时间: [2021-04-02 15:05:27], 测试模式: [TEST03])	0.03	0.2	
5	2021-04-02 15:06:48	parameter test	三平参数测试通过 (测试时间: [2021-04-02 15:06:48], 测试模式: [TEST03])	4.75	3.19	
6	2021-04-02 15:03:08	normal test	测试通过 (测试时间: [2021-04-02 15:03:08], 测试模式: [TEST01])	6	0.2	look review
7	2021-04-02 15:02:24	parameter test	三平参数测试通过 (测试时间: [2021-04-02 15:02:24], 测试模式: [TEST03])	6	0.2	
8	2021-04-02 15:01:43	parameter test	三平参数测试通过 (测试时间: [2021-04-02 15:01:43], 测试模式: [TEST03])	4.74	3.19	
9	2021-04-02 11:20:10	normal test	三平参数测试通过 (测试时间: [2021-04-02 11:20:10], 测试模式: [TEST03])	4.74	3.19	look review
10	2021-04-02 11:12:10	parameter test	三平参数测试通过 (测试时间: [2021-04-02 11:12:10], 测试模式: [TEST03])	0.06	0.2	
11	2021-04-02 09:19:36	normal test	测试通过 (测试时间: [2021-04-02 09:19:36], 测试模式: [TEST01])	5.57	0.2	look review
12	2021-04-02 09:16:02	normal test	测试通过 (测试时间: [2021-04-02 09:16:02], 测试模式: [TEST01])	5.57	0.2	look review
13	2021-04-02 09:12:58	parameter test	三平参数测试通过 (测试时间: [2021-04-02 09:12:58], 测试模式: [TEST03])	0.09	0.2	
14	2021-04-02 09:12:33	parameter test	三平参数测试通过 (测试时间: [2021-04-02 09:12:33], 测试模式: [TEST03])	0.07	0.2	

7. Timely fault alarm: through SMS and field sound and light and other alarm methods the first time to notify the maintenance personnel.

OLM System

Monitoring system

Basin Monitoring station

parameter

level: 125 cm

range: 0-90 cm

pulse width: 0-90 ms

stability: 1.40%

Average times: 5

Endpoint threshold: 5

AD information

	pack offset	distances
A:	0.21	0.00
B:	1.81	0044.71
A.B:	-4.02	0044.71

A.B Average attenuation: 0.06

TEST CONCLUSION

测试通过 (测试时间: [2021-04-02 15:00:35], 测试模式: [TEST03])

Measuring curve	Index	Name	event type	distance	insertion loss	Cumulative loss	Action
	1	Basin Monitoring station	Reflection event	0	0	0	look
	2	Basin Monitoring station	Endpoint event	3236.36	0	4.75	look

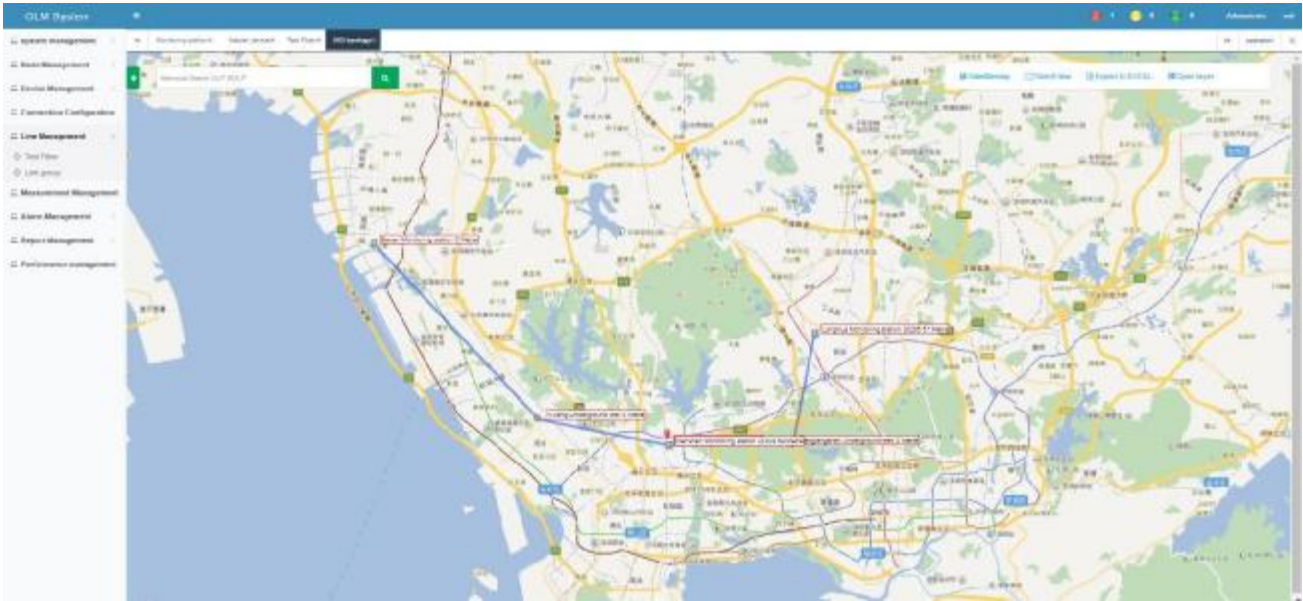
Reference case	Index	Name	event type	distance	insertion loss	Cumulative loss
	1	Basin Monitoring station	Reflection event	0	0	0
	2	Basin Monitoring station	Reflection event	2534.91	0.27	5.03
	3	Langhua Monitoring station	Endpoint event	3036.17	0	6.03

OLM System

Monitoring system

Alarm configuration

Index	alarm SerialNo	Alarm Reason	Note	Alarm level
1	001	Sub_Board_Lost	Sub Board Lost	●●●●●●
2	002	MainEquipment_Lost	MainEquipment Lost	●●●●●●
3	003	Main_optical_interruption	Interruption of main optical cable	●●●●●●
4	004	Main_optical_Exception	Main optical Exception	●●●●●●
5	005	OPM_Loss_system	OPM Error	●●●●●●
6	006	OPM_No_light	OPM Error	●●●●●●
7	007	OLP_Exception	OLP Exception	●●●●●●
8	008	ILVA_A_Overheat_alarm	Overheat Error	●●●●●●
9	009	EDFA_Burn_Error	EDFA Burn Error	●●●●●●
10	010	Sub_Board_reset_frequently	Sub Board reset frequently	●●●●●●
11	011	Shock_Alarm	Shock Alarm	●●●●●●
12	012	Temperature_Alarm	Temperature Alarm	●●●●●●
13	013	MainEquipment_Temperature_overheat	MainEquipment Temperature overheat	●●●●●●
14	014	MainEquipment_Power_Error	MainEquipment Power Error	●●●●●●
15	015	MainEquipment_Fan_Error	MainEquipment Fan Error	●●●●●●



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