RTU-5000 OTDR Monitoring Unit

Front Panel

Back Panel

Main Features

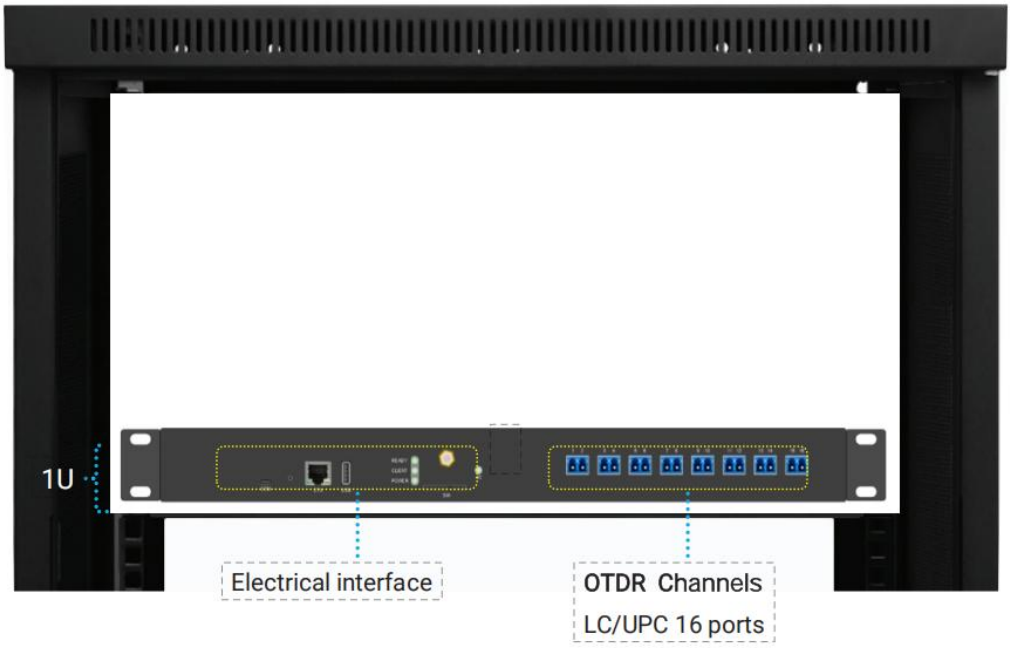
- Support customized multi-channel monitoring(1 to 16)
- Combine OTDR unit (45dB Max) and optical switch
- Complete and compact (1U)
- Dark fiber and in service fiber mointoring
- Support PC, mobile app, and cloud platform operation management
- Provide standard RJ-45 Ethernet and 4G dual network
- Continuous OTDR monitoring and real-time fault alarm
- Assist users in establishing a comprehensive topology diagram of optical cable resources for easy management

Applications

- Integrated into optical communication equipment, such as DWDM system equipment, OTN equipment and etc.
- Can be applied in fields such as optical transmission networks, data clouds, access networks, and CATV network.
- Anticipate service disruptions by detecting fiber degradation before it affects service.
- Reduce MTTR by locating fiber optic faults in minutes

Description

As a component of Grandway's remote fiber optic testing and monitoring solution, RTU-5000 is a standard 1U height testing unit that can be remotely controlled through Grandway's central fiber monitoring system platform. It is a modular device, which enables high flexibility and scalability. By utilizing OTDR modules and optical switches, centralized identification and monitoring of multiple optical fibers can be achieved. Up to 16 fiber optic cables can be monitored simultaneously.

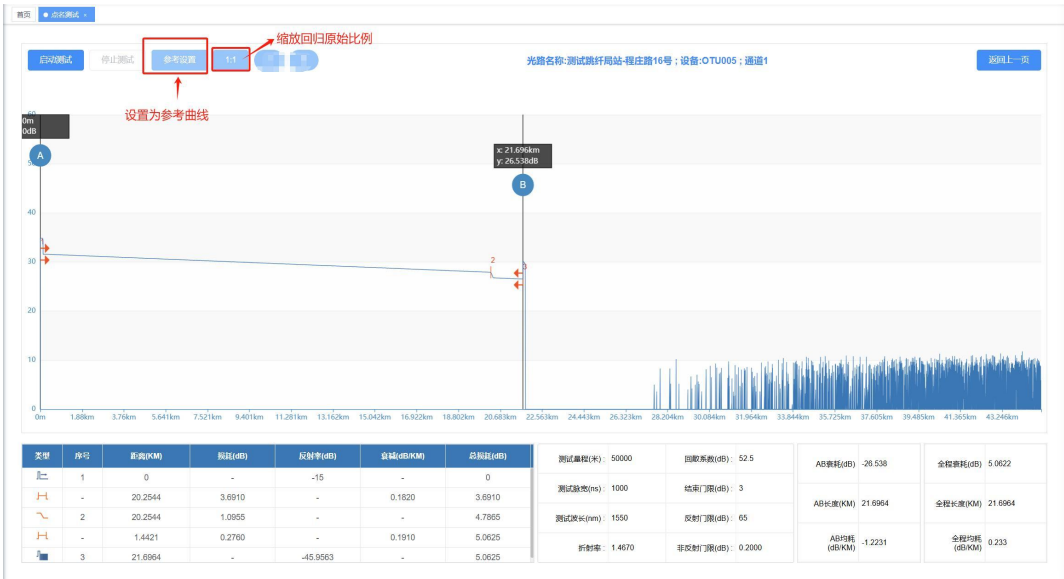


OTDR Graph and Georeferencing

Central Monitoring Platform

- Generate maps, geographic files and link alarms.
- Visual management of resources (Cable, RTU equipment, computer rooms, ODF, manhole, cabinet, etc.)
- Interact with the generated map.
- View and track information from the map.
- Access to the tool screen to consult network details.

OTDR Graph and Georeferencing



OTDR Graph Measurement

- Support roll call test and periodic test for different channel fibers
- Support custom alarm threshold
- Analysis and Warning of Fiber Optic Quality Degradation
- Support remote control testing on mobile phones

Specifications

Base Unit		
Optical port number	1~16	
Network Interfaces	ETH 10/100Mbps+LTE-Cat.1	
Optical port	LC/UPC or LC/APC	
Height	1U	
Width	Standard 19 inch rack	
Dimension	438mm×300mm×45mm(L×W×H)	
Working temperature	-10~+60℃(14℉~140℉)	
Storage temperature	-40~+85℃(-40℉~185℉)	
Relative humidity	0% to 95%（non-condensing）	
Power supply	AC 110-240V, ≤0.5A, 50-60Hz and DC 48V dual power supply (primary and backup)	
OTDR Unit		
Monitoring wavelength	1310nm/1550nm	1625nm/1650nm
Filter support	Not support	Support
Pulse width	3ns,5ns,10ns,25ns,50ns,100ns,250ns,500ns,1us,2.5us,5us,10us,20us	
Dynamic range	32dB~45dB(customizable)	

Event deadzone	0.8m
Attenuation deadzone	3.5m
Sampling resolution	0.05~4m
Distance resolution	0.01m
Test range	0.25~250km
Sampling points	Max 256,000
Distance accuracy	±(0.75+3×10^{-5}×Test distance+Sampling resolution)m
Linearity	±0.03dB/dB
Optical Switch Unit	
Output port number	1~16
Working wavelength range	1200nm~1650nm
Switching time	≤25ms
Working life	≥1 million(10^6)
Isolation	≥60dB
Optical interface	LC/UPC or LC/APC
OPM Unit	
OPM Monitoring optical port (optional)	1~16 (optional)
Wavelength range	700~1700nm
Test range	-65~+5dBm
Resolution	0.01dB
WDM Unit	
Wavelength	1310nm/1550nm&1625nm/1650nm
Insertion loss	<1dB
Return loss	≥50dB
Isolation	≥40dB
Directivity	≥50dB

Note: If a 1U product includes a WDM, optical switch and OPM, the current product can only achieve 4 optical channels.