Ascentac
Remote Fiber Test System
Ascentac OCAMS2000

Pinpointing the fault location on GIS-map within 90 seconds & Managing all your network in the most efficient way

Ascentac OCAMS2000 Series is an intelligent and integrated system which automatically and continuously monitors optical fibers 24 hours a day without interrupting transmission. It also provides comprehensive test and analysis of optical fibers, precise fault location based on GIS map interface, practical cable management and kinds of instant alarm notification.

Ascentac OCAMS2000 Series with modularized design solves the concerns about the increasing bandwidth on demand afterwards. The scalable design features reduction in the investment of equipment cost and easy upgrade for the extension of network scale.

Ascentac OCAMS2000 Series enables users to integrate all network operations and maintenance activities to achieve the highest levels of QoS and control conditions of optical fiber networks.
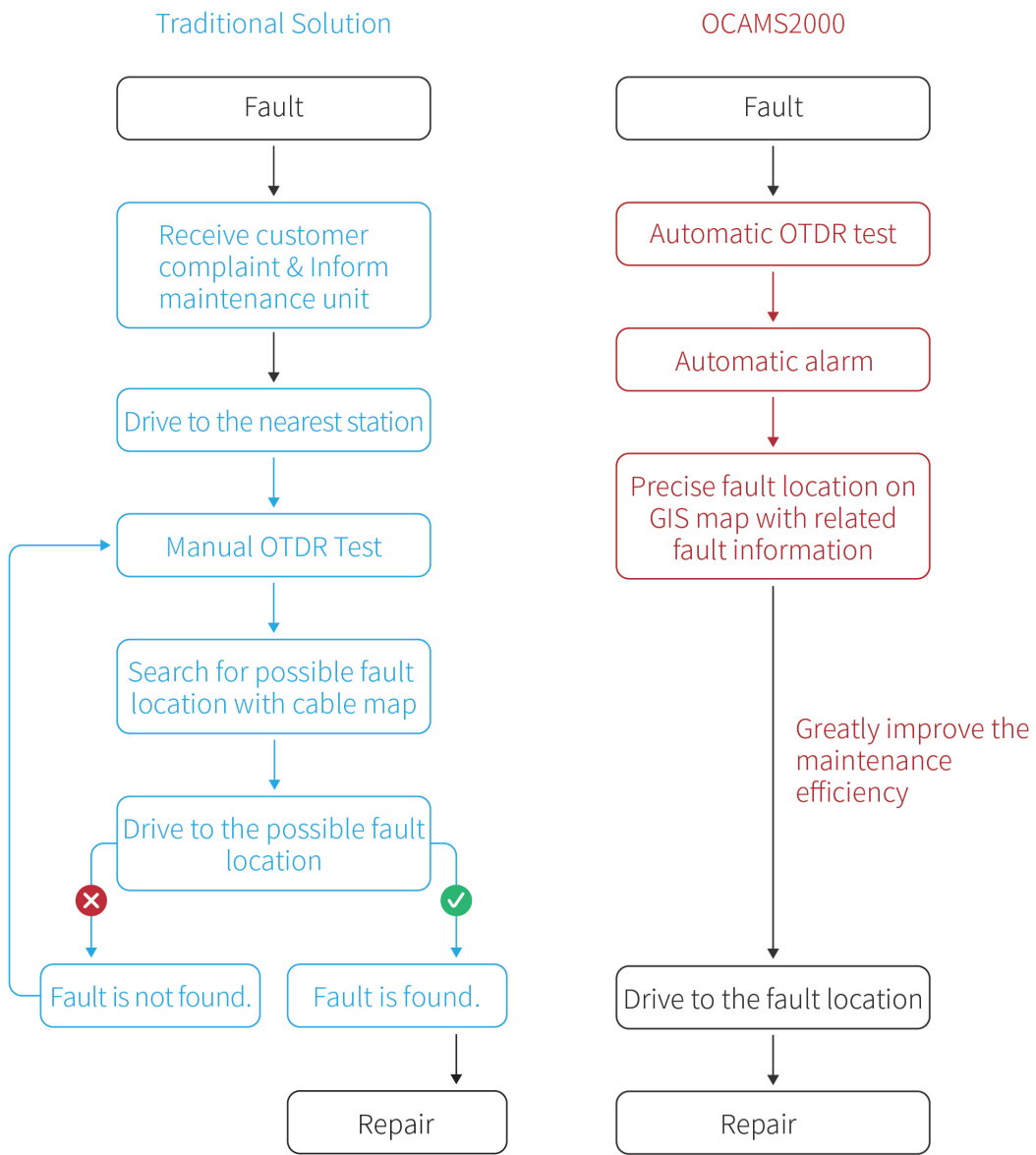
Benefits

- 24/7 detection, location and tracking for real-time fiber-optic status
- Accurate fault location on GIS map & detailed information
- Proactively instant alarm notification via APP, e-mail or SMS
- Comprehensive performance report and trends analysis
- Highly customized web interface
- Practical data management
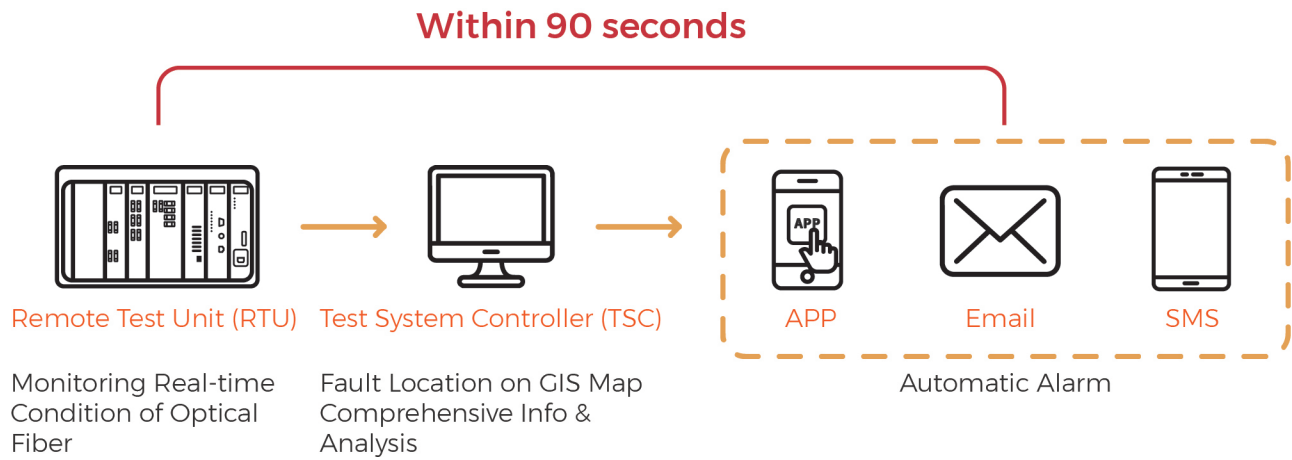- Flexible & scalable modular design for easy maintenance and upgrade

Application

- FTTH (Fiber To The Home)
- CATV network
- Railway fiber-optic backbone
- High-speed railway optical fiber transmission backbone
- Highway traffic system engineering
- Slope safety monitoring

Product Advantage

Traditional Solution

Fault
↓
Receive customer complaint & Inform maintenance unit
↓
Drive to the nearest station
↓
Manual OTDR Test
↓
Search for possible fault location with cable map
↓
Drive to the possible fault location
- ❌ Fault is not found.
- ✅ Fault is found.
↓
Repair

OCAMS2000

Fault
↓
Automatic OTDR test
↓
Automatic alarm
↓
Precise fault location on GIS map with related fault information
↓
Greatly improve the maintenance efficiency
↓
Drive to the fault location
↓
Repair

Item \ Method	Traditional Solution (Manual Test)	OCAMS2000 Series (Automatic Test)
Construction Cost	Middle 👍	Higher
Expansion Cost	High	Low 👍
Labor Cost	High	Low 👍
Operation Cost	High	Low 👍
Operation Range	Single & small area	All areas can be integrated 👍
Reaction Capability	Slow	Fast 👍
Statistical Analysis Capability	Not Available	Available 👍

Reaction in the Shortest Time

Within 90 seconds

Remote Test Unit (RTU)   **Test System Controller (TSC)**   APP   Email   SMS

Monitoring Real-time Condition of Optical Fiber

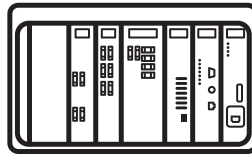Fault Location on GIS Map Comprehensive Info & Analysis

Automatic Alarm

Physical Facilities

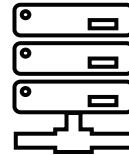Ascentac OCAMS2000 Series consists of Test System Controller (TSC), Remote Test Unit (RTU) and Work Station (WS).

Test System Controller

- Installed in the system controlling center
- Manage all RTUs

Remote Test Unit

- Installed in equipment rooms to monitor fibers
- RTU can operate independently without connecting to TSC

Work Station

- Installed in maintenance unit
- Access system data and information through connecting to TSC Server by IP network

Testing Structure

Ascentac OCAMS2000 Series offers four testing structure, including Off-Line Cycling, In-Line Cycling, Off-Line Real-Time and In-Line Real-Time. The off-line structure uses the dark/spare fiber for monitoring while the in-line structure uses the active fiber for monitoring. For cycling monitoring, users can decide how often the system executes the monitoring. For real-time monitoring, it can shorten the reaction time of detecting faults because of added Power Monitoring Unit (PMU) which constantly monitors whether the optical power value is under the threshold users set up. The above mentioned structures will not influence communication of transmission system. They have been verified by many application cases.

Off-Line Cycling ---- In-Line Cycling ---- Off-Line Real Time ---- In-Line Real Time
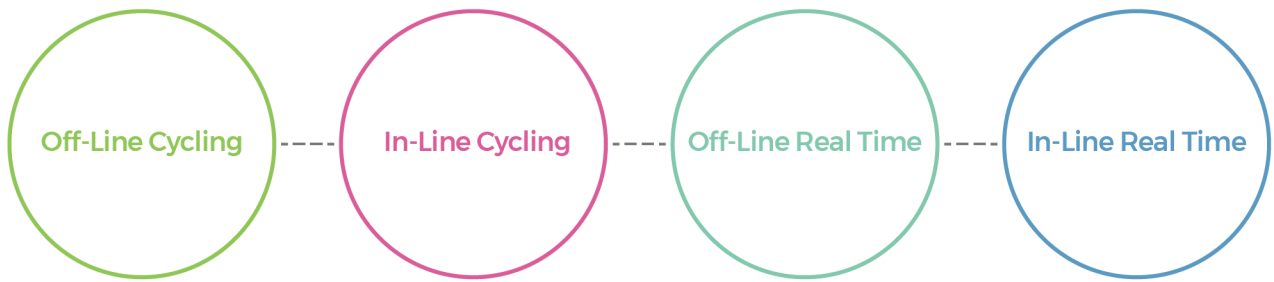
Accurate Fault Location on GIS Map & Detailed Information

Ascentac OCAMS2000 Series accurately pinpoints the fault location on GIS map and generate alarm details via TSC (Test System Controller). Users can read all related information on Ascentac OCAMS TSC Web.
In general, the actual length of the optical cable is longer than the geographical distance. There are reserved length of optical cable for further uses. Ascentac initiates the function of averaging the actual length of the optical cable to increase the accuracy.

Type:
Equipment:
Machine room:
Longitude:
Latitude:
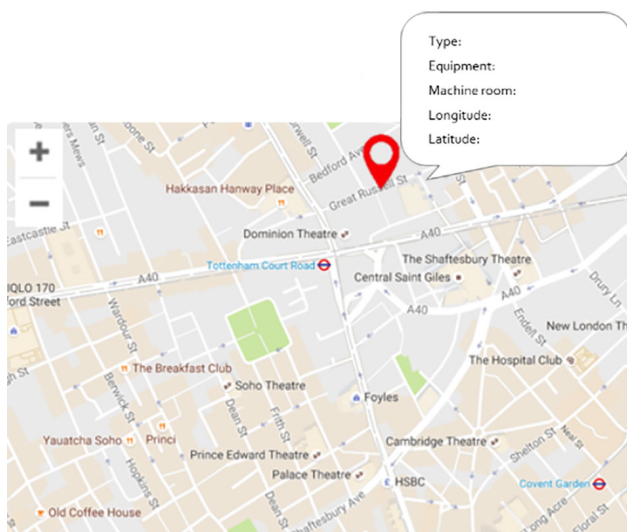
Alarm Detail

Details

Alarm Category :
Alarm Type :
Alarm level :
MTU :
Channel Number :
Monitored fiber route name :
Optical cable segment :
Name of Optical Cable :
Optical Core Number :
Trace Distance Information
Monitored Fiber Route Total Distance(Reference Trace) :
Distance of alarm point :
Left machine room :
Right machine room :
GIS Distance Information
Alarm longitude and latitude(degrees) :
Left geographic node :
Right geographic node :
Left machine room :
Right machine room :
Time of Launch :
Time of Confirmation :
Confirm by :

Comprehensive Performance Report & Trends Analysis

Ascentac OCAMS TSC Web is useful for data collection and management. All data like history of fault, fiber degradation or alarm report will be stored and be the sources of database. Users can refer to these data to make right decisions in advance for preventive maintenance and trends analysis of optical cable. Data can be transferred to statistical analysis, including Alarm Statistic Analysis, Trace Deterioration Analysis, Power Deterioration Analysis, Equipment Usage and Route Usage. All analysis can also be exported to file (Excel).
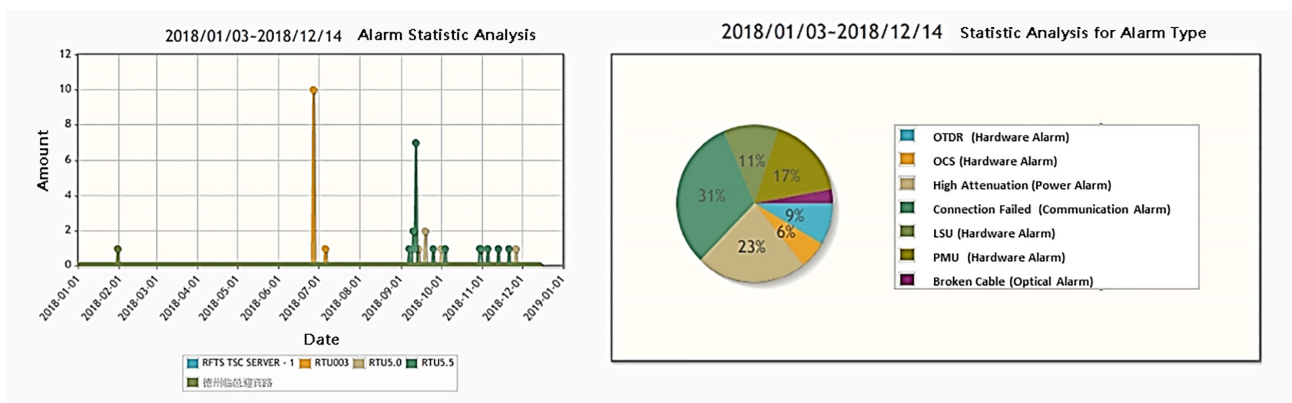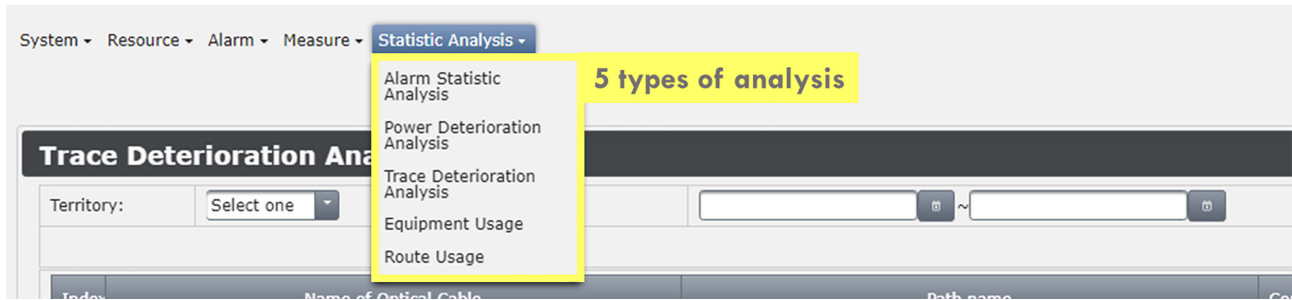
Flexible & Scalable Modular Design for Easy Maintenance and Upgrade

Ascentac OCAMS2000 Series can be easily upgraded and maintained owing to its modular design when customers would like to extend the scale of their network because of the increase of bandwidth demands. One RTU can accommodate 116 fibers. It is also extendable to 600 fibers.
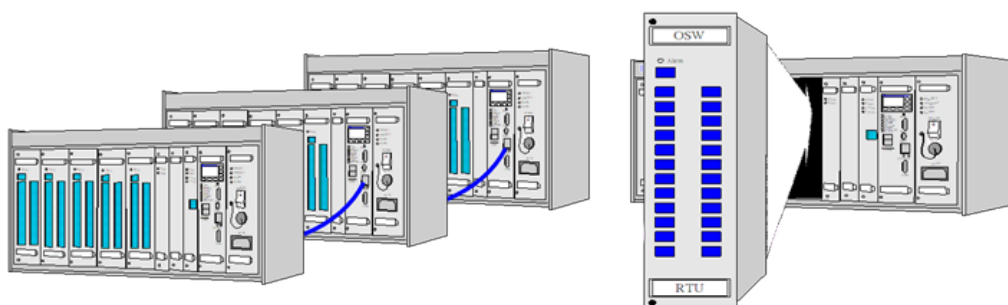
Practical Data Management

Ascentac OCAMS2000 Series can generate an all-inclusive view of the fiber-optic network with graphs and GIS map. Users are allowed to establish details of cable information such as geographic nodes & paths and landmarks which correspond to their fiber-optic network.
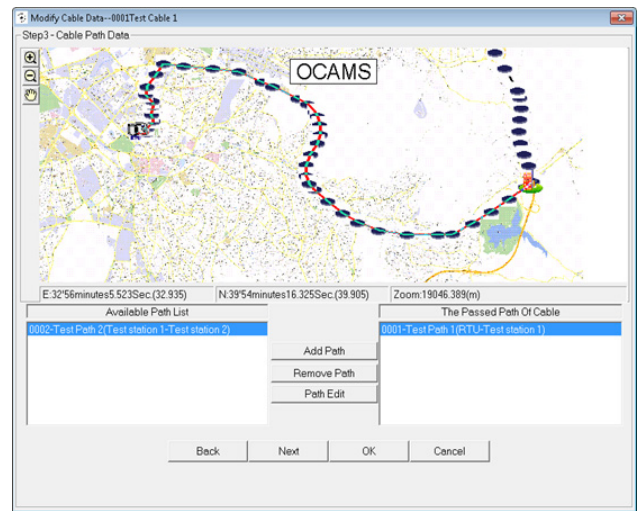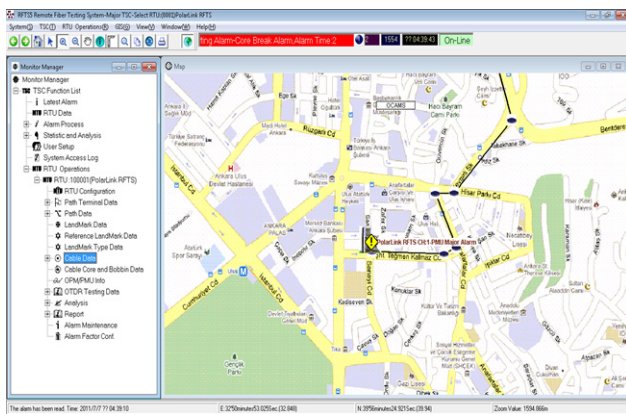
Database Backups

The Redundant Server, which has a database and platform similar to the Main Server, will be installed together with the Main Server via the LAN connection. The database in the Local Redundant Server will be configured as the backup server. In addition, the Remote Redundant Server will be configured via a WAN connection. Using a high speed connection is necessary for the Remote Redundant Server. Ascentac OCAMS2000 Series eliminates the possibility of data loss and allows fast restoration without requiring any significant changes to your private network configuration in case of an emergency.

Distributor：