ONMSi: Optical Network Monitoring System

Fiber network visibility that scales for both PON and point-to-point networks

- Drastically reduce network downtime
- Improve network reliability and SLA management
- Reduce fiber optic maintenance costs
- Expand visibility out to your customers (PON)

JDSU

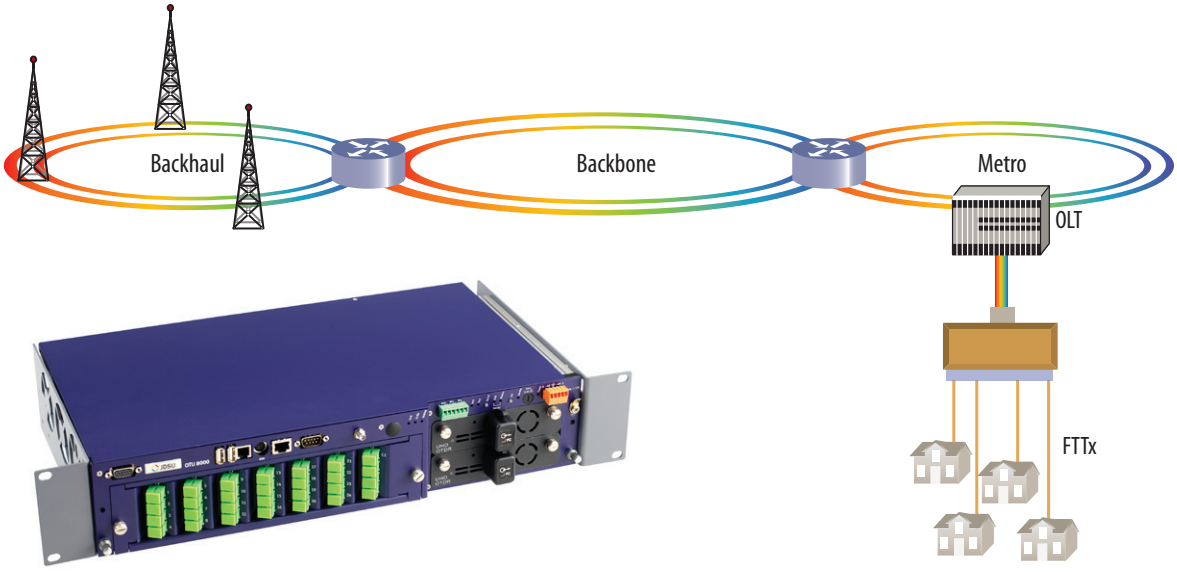
The ONMSi Remote Fiber Test System

Key Benefits

- Saves OpEx, reducing mean-time-to-repair and network downtime by at least 30%
- Anticipates service disruptions before service is affected
- Simplifies SLA management
- Protects fiber assets with long-term performance monitoring
- Improves troubleshooting and demarcation between providers
- Detects fiber tapping, protecting valuable information from intrusion

Key Features

- Supports P2P (metro/core/access) and P2MP (PON) to the optical network terminal (ONT)
- Compact and reliable optical test unit (OTU) design
- Domain architecture enables maximum organizational flexibility
- Integrates geographical maps of the fiber network with OTDR trace cursor tracking
- Secures multiuser environments compatible with LDAP
- Supports web services (XML) and SNMP for easy integration with open-source software (OSS) and geographical information systems (GIS)
- High-availability solution with automatic failover between two servers
- Multiple dashboards showing current performance and diagnostics data



ONMSi offers a comprehensive fiber monitoring solution: it supports metro, core, acces and PON networks

The ONMSi Remote Fiber Test System

The explosion of voice, video, and data anywhere and anytime means that network service providers need constant availability and performance from their fiber optic network. The ability to provide quad/triple play and passive optical network (PON) architectures with optical splitters has made fiber monitoring an even bigger challenge.

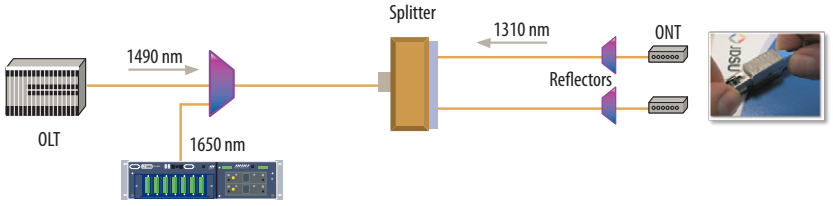
The JDSU ONMSi is an optical network monitoring system that expands network visibility right from the core across the PON and into the premise—improving operational support and quality-of-service (QoS) for any type of network.

ONMSi is a remote fiber test system that scans the fiber network 24/7 and automatically detects and locates faults without having to dispatch technicians in the field. Based on industry-leading JDSU optical technologies, an OTU integrating an optical time domain reflectometer (OTDR) and an optical switch constantly compares data to a baseline and sends alarms if any fiber degradation occurs.

Flexible to Meet Your Needs

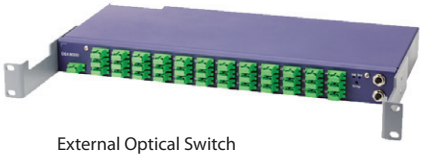
Scalable for PON

Using the same software and hardware, ONMSi is perfectly adapted for P2P or P2MP networks. The system can be easily configured by the user for a long-distance metro/core test or for a short-distance PON, extending the fiber visibility of the network operations center (NOC) up to the FTTH subscriber.



Distance from CO (m)	Level (dB)	Deviation (dB)	Reference Peak Detail	Reference Peak Type	Attached Home Termination	Attached Home ID (Name)	Description
3,072.65	17.87	-1.32		Home	Connected	3 (Home_demo3)	
3,072.93	17.03	0.01		Home	Terminated	6 (Home_demo6)	
3,074.82	19.16	-0.09		Home	Connected	1 (Home_demo1)	
3,123.17	19.09	-0.22		Home	Connected	2 (Home_demo2)	

ONMSi keeps the peak subscriber correspondence



External Optical Switch

ONMSi fits your application needs

Whatever fiber monitoring application (for example, fast fault location, accurate location of small fiber changes, quick set up) you are targeting, ONMSi fits your needs. For example, fiber-test setup can be done with one click by a non-OTDR-expert for a standard configuration, or a fiber optic master can address advanced applications with the multiple possibilities offered by ONMSi for test configurations.

OTU-8000

The OTU-8000 — compact and reliable

The ONMSi OTU-8000 is a compact, 2U-high, rack-mounted unit housing both the OTDR and optical switch modules. A single OTU-8000 can house up to two OTDRs and up to 48 optical switch ports. Capacities of more than 1000 switching ports are achieved by adding multiple external switch units (1U high, 36 ports each).

Installed in un-manned sites, the OTU-8000 uses dual power supply feeds and solid-state memory (no magnetic hard disk) for unprecedented reliability.

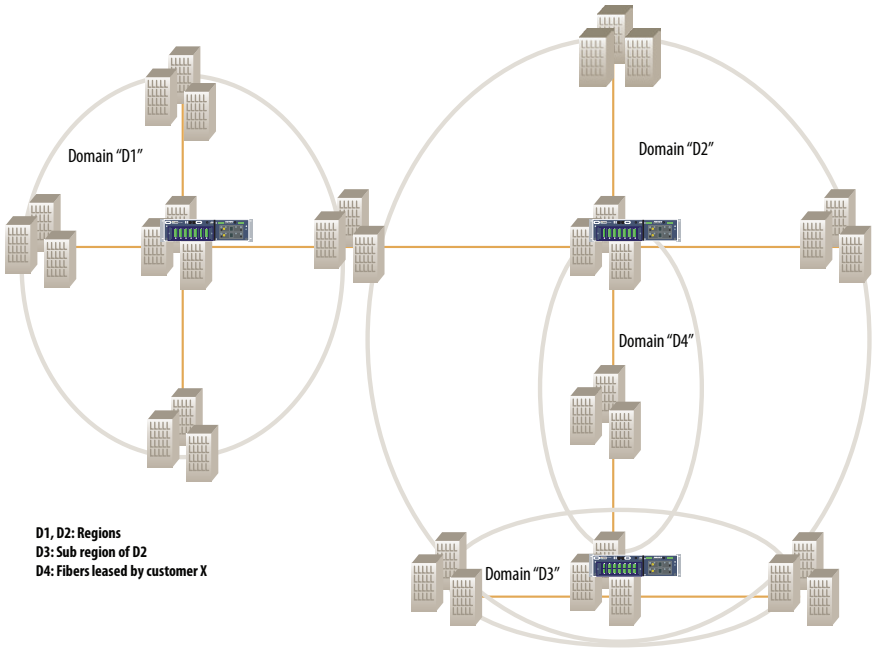
Scalable system from one up to hundreds of OTUs

ONMSi can scale easily and help lower total cost of ownership. Starting with one OTU-8000, the system can scale as the network expands. ONMSi systems with more than one hundred OTUs can monitor very large national and international backbone networks.

Flexible to Meet Your Needs

Flexible domain architecture

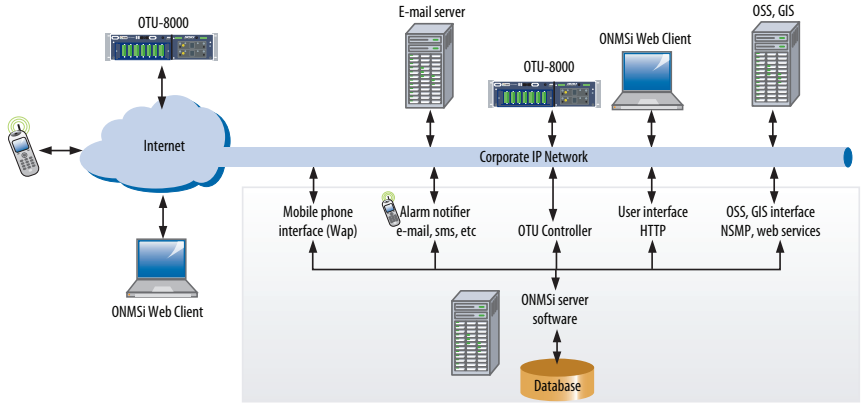
To address different organizations, the ONMSi data model is based on domains. The user can create a collection of ONMSi objects such as OTU, P2P network, PON, fiber link, fiber section and subdomains. The same object can belong to more than one domain. User permissions can be created per domain. For example, a top-down regional organization may use regional domains whereas a dark-fiber provider may use customer or link domains. Large field-service maintenance teams can create privileges so that users can access all the OTUs existing in a network.



Easy integration with legacy systems

With complex IT environments, integrating a test system is often a key success factor for a project. ONMSi can be provided with two different interfaces: SNMP and web services (XML over HTTP). This flexibility ensures integration with OSS, GIS, and other IT back-office systems.

ONMSi alarm management is also compliant with OSS-J initiatives and ITU-X733.



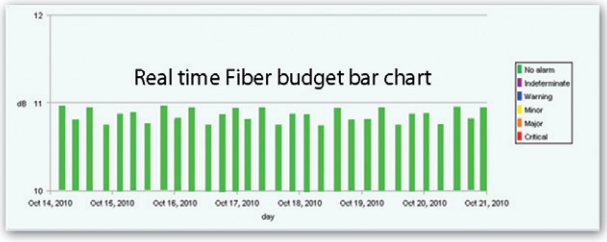
Features

Secured multi-user environments compatible with LDAP

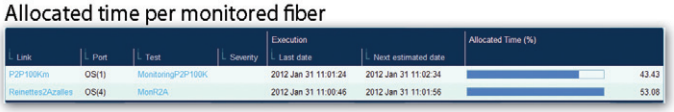
Lightweight directory access protocol (LDAP) simplifies directory management by providing users and applications in an enterprise with a single, well-defined, standard interface to a single, extensible directory service. ONMSi integration with LDAP avoids time-consuming data entry and ensures that the current security policy is respected.

Instant view of system health and fiber performance

ONMSi provides multiple dashboards, giving the user immediate data on the short- and long-term performance of both the system and the network. By integrating a real-time health checkup, ONMSi can alert the user to system errors and performance degradation before a fault occurs.

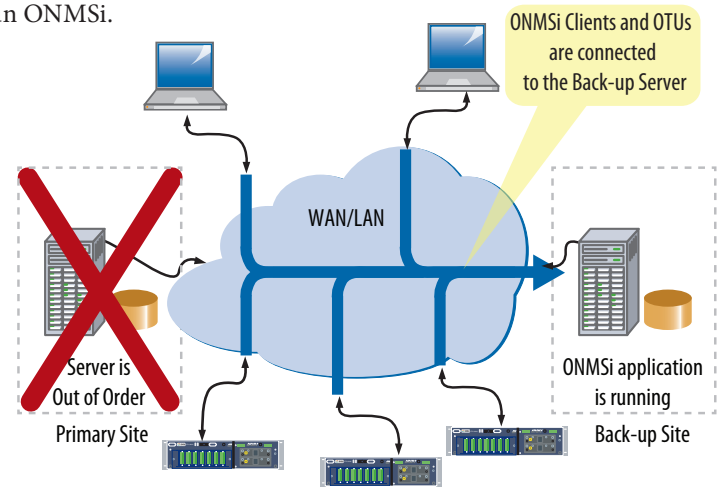


Allocated time per monitored fiber



High availability with automatic failover

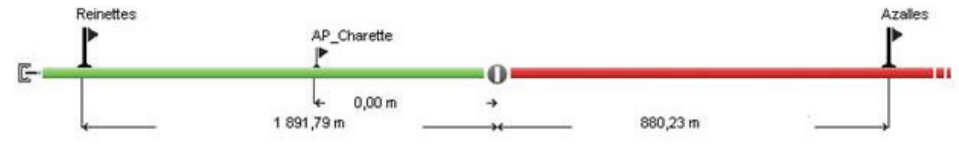
ONMSi can be provided with two servers for almost 100% availability. The database is duplicated between the two servers but only one server is active at any one time. The server in standby mode constantly monitors the active server, and if a no-response situation occurs, it will switch to become the active server and run ONMSi.



Features

Detailed fault localization

When a fiber fault is detected, ONMSi provides the OTDR distance and useful information such as distances from the nearest landmarks. With this information, the dispatch team knows immediately where they need to go, saving valuable time.



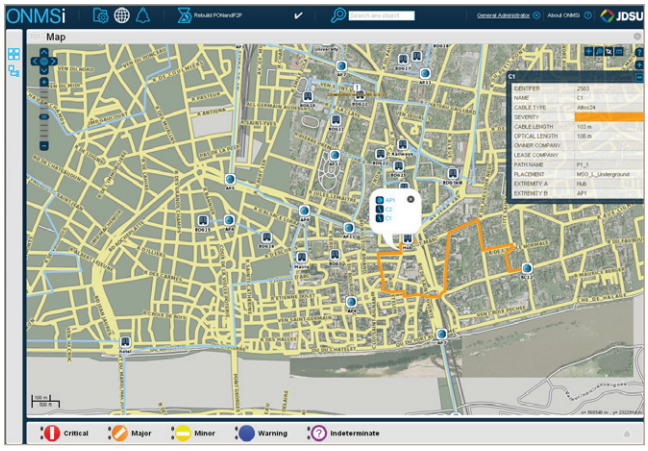
Integrated geographical map

The ONMSi user interface displays both alarm data and fault locations simultaneously, avoiding the need to switch applications. The embedded map provides all the relevant alarm data including fiber-fault location and cable routing.

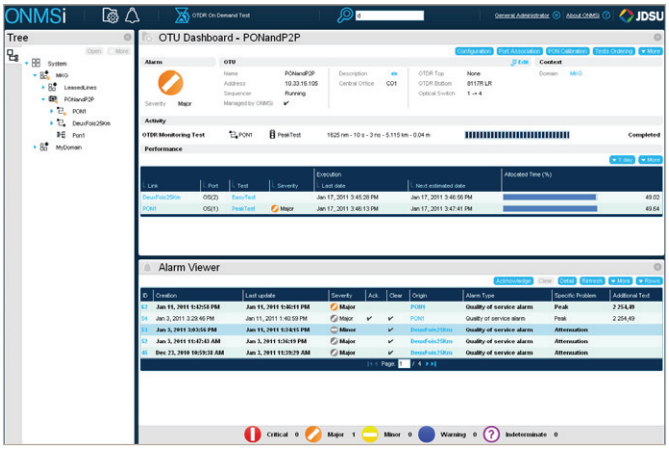
Comprehensive alarm management

ONMSi integrates a powerful alarm management module compliant with OSS-J initiatives and ITU-X733. This ensures easy integration with an OSS or a trouble-ticket system. The learning phase of users at the NOC is reduced by using the same alarm mechanisms that they use in other network management systems.

In addition, ONMSi can notify remote users by SMS or e-mail when an alarm occurs. These notifications can be filtered by a calendar integrated with a user's preferred agenda.



ONMSi geographical map



ONMSi alarm management

The PLUS Services Portfolio

PLUS Services Portfolio

Consulting application engineering

JDSU works closely with customers from the start to identify needs and recommend the best system to meet business requirements. Working together, we carefully evaluate all the relevant details such as network topology, dark or active fiber, growth projections, and communication protocols.

An experienced team for installing , deploying, and commissioning

A JDSU project manager manages each project through to acceptance with the help of a team of experienced JDSU engineers, product managers, and system specialists.

Staff user-adoption training

A wide range of training options are available to ensure that engineering staff and field-maintenance teams are able to maximize the advantages of the ONMSi, increasing staff efficiency.

Support services

Customized gold, silver, and bronze support contracts complement the power of the ONMSi with the following benefits:

- Minimizes system downtime through proactive system check-ups and guaranteed turn-around times.
- Improves system functionality and keeps systems current with scheduled software enhancements.
- Protects investments with continuous system maintenance and updates.
- Avoids unexpected expenses with on-site calibrations , express-loaner options, and optional on-site repair.

Based on more than 20 years of RFTS experience

JDSU is proud to have the world's largest installed base of clients using a remote fiber-test system to guarantee their network performance 24/7. By keeping compatibility between different generations of software and hardware as much as possible, we have speeded return-on-investment and extended system lifetimes.

JDSU

Test & Measurement Regional Sales

NORTH AMERICA
TOLL FREE: 1 866 228 3762
FAX: +1 301 353 9216

LATIN AMERICA
TEL: +1 954 688 5660
FAX: +1 954 345 4668

ASIA PACIFIC
TEL: +852 2892 0990
FAX: +852 2892 0770

EMEA
TEL: +49 7121 86 2222
FAX: +49 7121 86 1222

www.jdsu.com/test

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