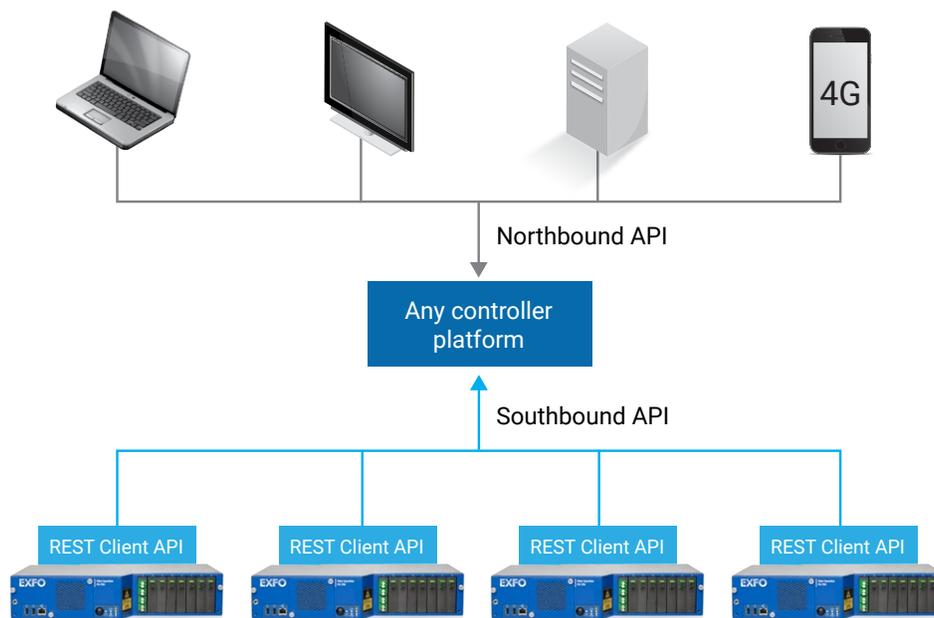


FG-750 Client API

SDN-READY INTELLIGENT OTDR

- Fiber monitoring device ready to be integrated with Open API technology.



KEY FEATURES

- Complete REST API to most of configuration and reporting functions
- OTDR-based ad-hoc and monitoring functions
- Encrypted (https://) communication
- Ability to configure and extract cable template reports
- Ability to build your own job management app
- Integrates easily with third-party SDN controllers, and GIS and OSS solutions

BENEFITS

- Create fiber quality assurance
- Build your services provisioning
- Get equipped with fault analysis and troubleshooting

COMPATIBLE PLATFORM



Fiber Guardian
remote OTDR unit

CREATE A FIBER GUARDIAN UNIT IN YOUR SOFTWARE

Fiber Guardian (FG-750) is a rack-mounted, remote OTDR that performs fault detection and analysis. It offers local storage and the ability to provide critical information for optical fiber trend reports.

Fiber Guardian is a multiport OTDR unit with the capability to first record a reference condition on each connected fiber, then execute further tests with OTDR technology to detect and precisely locate any deviation from the reference. Testing can be programmed to execute on demand, continuously, or on a programmed schedule from any integrated system via the unit's available and open REST API platform (Client API).

You can easily query optical test inventory based on a known IP or machine name. For instance, if your network management system (NMS) detects a device outage or a network communication issue, you can query the FG Client to determine if the root cause is related to the fiber and thereby reduce mean time to understand (MTTU). This creates workflows between transport and test equipment.

ADD OPTICAL ROUTES AND RELATED TEST SET-UPS/PROGRAMS

FG-750 Client API provides most of the FG stand-alone product features and functions over an API to enhance customer independence from vendors.

Multiple functions are available for REST API calls:

- Set optical route names for each port (no need for fiber detection sequence)
- Create a test set-up, i.e., trigger a reference to be taken
- Get reference traces as a binary dataset
- Subscribe to a fault result on a message queue
- Run a test on a specific optical route either ad hoc or on same baseline as the test set-up

ELIMINATE NEED FOR ELEMENT MONITORING SYSTEM WITH INTEGRATED NMS

Integrate FG-750 Client API into your system and you can eliminate the need for a fiber element monitoring system (EMS). You will be also able to bundle remote equipment control/management into a smaller number of software instances.

Reduce capital expenditures and maintenance fees with an open API solution for your GIS, NMS, OSS or SDN controller.

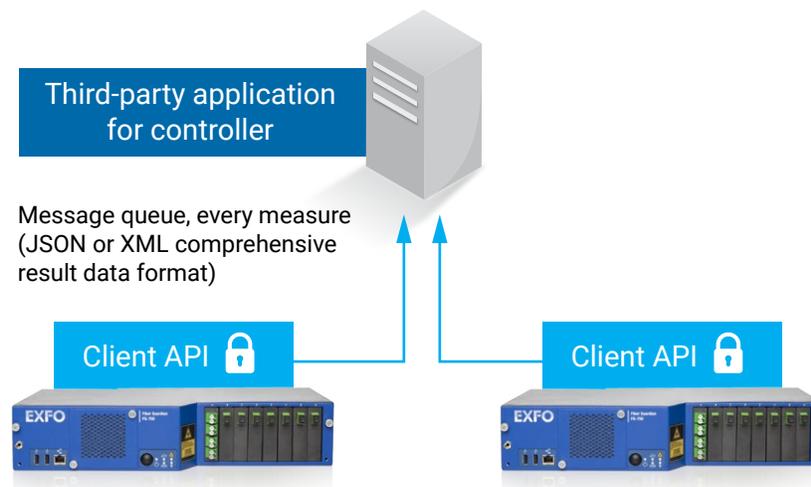


Figure 1. Open API solution for your NMS or controller.

SECURE API

FG-750 Client API can be integrated into your development software to test optical routes via web API calls. It uses encrypted communication (https) to guarantee network security.

This is crucial for applications such as data centers, the military, utilities, communication service providers, where keeping confidential and secure data is mandatory.



Figure 2. Encrypted communication (https) to guarantee network security.

CREATE TREND REPORTS AND ADD VALUE TO YOUR MOBILE TOOLS

As part of the available RESTful web services, FG-750 Client API creates a single-fiber or multi-fiber test set-up called Cable Template. This is especially useful for testing many fibers that are all part of a same cable or the attenuation trends of a single fiber. The cable template test always takes measurements the exact same way: 1) the same set of OTDR test parameters (pulse width, span start/end, measurement time, wavelength) AND 2) the same splice locations along the cable. Each span's start/end is set at the same position for each fiber in the cable template.

You can retrieve every splice/section loss over time in CSV format, then by using your own report tool (or EXFO's Cable Template Reporter tool), provide the insight necessary to optimize fiber network performance, make proactive planning decisions, recognize trends, and identify potential problems before they impact business-critical services.

In addition, FG-750 Client API allows integration of test functions into operator mobile tools that interact with various systems.

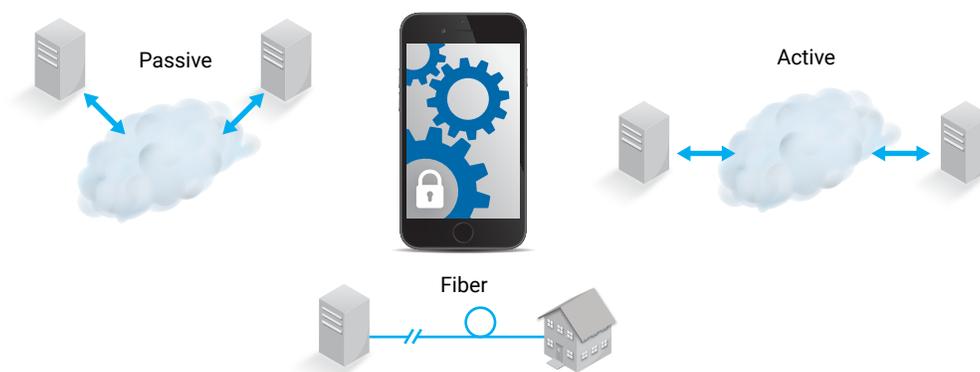


Figure 3. Integrate test functions into operator mobile tools that interact with various systems.

SCALABLE AND BEYOND

The FG-750 Client API is a truly scalable solution that can be physically expanded from 1 probe port to up to 96 ports in very dense rack space.

In addition, you can add functions through the EXFO web user interface with the following options:

- EXFO stand-alone operation software
- Fiber Test InSight fault mapping tool
- NQMSfiber centralized management software
- EXFO Xtract for fiber analytics

All specifications valid at 23° C ± 2° C, unless otherwise specified.

| OTDR TEST MODULE FOR FG-750 | | | | | | |
|---|--|--------------|--|--------------|--|-----------------------|
| Models ^a | OTM-740-DMET | OTM-750-DCOR | OTM-740-AMET | OTM-740-ACOR | OTM-740-CDxx | OTM-700-NODE |
| Central wavelength(s) (nm) ^b | 1550 ± 20 | 1550 ± 20 | 1625 ± 10 | 1650 ± 5 | xx: 03 – 1310 xx: 10 – 1490 xx: 11 – 1510 xx: 13 – 1550 xx: 16 – 1610 All ± 3 | 1625 ± 3/ 1650 ± 4 |
| Acquisition mode | OTDR | OTDR | OTDR | OTDR | OTDR | OTDR or iOLM |
| Internally filtered (live port) | – | – | Y | Y | Y | Y |
| Internal filter width (nm) | | | ± 15 | ± 7 | ± 6.5 | 1620 to 1670 |
| Event dead zone (m) ^{b, c} | | | 0.8 | | | 0.5 |
| Attenuation dead zone (m) ^{b, c} | | | 3.5 | | | 2 |
| Sampling points (pts) | | | 256 000 | | | |
| Sampling resolution (m) | | | 0.04 to 10 | | | |
| Pulse width (ns) ^d | | | 3 to 20 000 | | | |
| Distance range (km) | | | 1 to 320 | | | |
| Display resolution (dB) | | | 0.001 – Attenuation/loss 0.01 – Reflectance | | | |
| Reflectance/ORL accuracy (dB) ^b | | | ± 2 | | | |
| Linearity (dB/dB) ^b | | | 0.03 | | | |
| Dynamic range (dB) ^{b, e} | 42 | 46 | 42 | 43 | 41 40 at 1610 | 35/33 |
| Distance accuracy (m) ^f | ±(0.75 + 0.0025% x distance + sampling resolution) | | | | | |
| Minimum attenuation when measured with HRD (dB) ^{b, g} | | | | | | 10 |
| Maximum attenuation for HRD detection (5 km/20 km ranges) (dB) ^{b, g, j} | | | | | | 32/30.5 |
| Maximum measurable attenuation with HRD (dB) ^{b, g} | | | | | | 35 |
| Attenuation measurement uncertainty (dB) ^{b, h} | | | | | | 0.6 |
| Attenuation measurement repeatability (dB) | | | | | | 0.1 |
| Attenuation measurement display resolution (dB) | | | | | | 0.01 |
| Minimum optical separation for HRD (m) ^{b, i} | | | | | | 0.5 |

a. All modules are LinkAware™-ready; only OTM-700-Node works as an iOLM (Intelligent Optical Link Mapper) product. OTDR mode is the classical way of acquiring, presenting and filing test results.

b. Typical.

c. For reflectance below –55 dB, using the smallest pulse width available. Attenuation dead zone for reflectance below –45 dB is 3 m for OMT-700-NODE and 4.5 m for all other OTM models.

d. 3 ns available on OTM-700-NODE module, otherwise minimum pulse width is 5 ns.

e. Dynamic range at 20 μs pulse width, with a three-minute averaging at SNR = 1.

f. Does not include uncertainty due to fiber index or cable characteristics (e.g., helix).

g. From OTDR port.

h. For attenuation levels between 15 and 30 dB with EXFO-qualified HRD filters.

i. For two HRDs connected to the same splitter or at similar attenuation points.

j. Guaranteed specification for maximum measurable attenuation for new HRD placement/detection is 30.4 dB for a 5 km (or less) range from the OTDR.

ORDERING INFORMATION

FG-750ST-XX-XX-XX-XX-XX-XX-XX

Model

- FG-750ST-NODE-iOLM
- FG-750ST-DMET
- FG-750ST-DCOR
- FG-750ST-AMET
- FG-750ST-ACOR
- FG-750ST-CD03
- FG-750ST-CD10
- FG-750ST-CD11
- FG-750ST-CD13
- FG-750ST-CD16

Port option

- 01 = 1 port
- 04 = 4 ports
- 08 = 8 ports
- 12 = 12 ports
- 24 = 24 ports
- 32 = 32 ports

Software option

CLT = Client API for integrated solution to third-party or SDN

Option

- RK19-2U = 2U rack-mount kit 19-inch
- RK23-2U = 2U rack-mount kit 23-inch
- RKET-2U = 2U rack-mount kit ETSI size

Power

- AC = 100-240 VAC power supply
- DC = -48 VDC power supply

Communication interface

- 00 = Without modem
- XG1 = Internal 3G broadband interface for US and Canada
- XG2 = Internal 3G broadband interface for all other countries

Connectors

- 58 = FC-APC
- 88 = SC-APC

Example: FG-750ST-DMET-04-58-XG2-DC-RK19-2U-CLT

FG-750EX-XX-XX-XX-XX-XX-XX-XX

OTDR option

- NODE-iOLM
- DMET
- DCOR
- AMET
- ACOR
- CD03
- CD10
- CD11
- CD13
- CD16

Kit connectors

- 88 = SC-APC mounted kit
- 92F = LC-APC mounted kit
- 104 = MTP-APC mounted kit

Cassette port

For SC-APC Kit

- SC08 = 8 ports
- SC17 = 17 ports
- SC20 = 20 ports
- SC26 = 26 ports
- SC32 = 32 ports

For LC-APC Kit

- LC08 = 8 ports
- LC16 = 16 ports
- LC24 = 24 ports

- LC32 = 32 ports
- LC48 = 48 ports
- LC64 = 64 ports

For MTP-APC Kit

- MTP12 = 12 ports
- MTP24 = 24 ports
- MTP48 = 48 ports
- MTP72 = 72 ports
- MTP96 = 96 ports

Software option

CLT = Client API for integrated solution to third-party or SDN

Option

- RK19-2U = 2U rack-mount kit 19-inch
- RK23-2U = 2U rack-mount kit 23-inch
- RKET-2U = 2U rack-mount kit ETSI size

Power

- AC = 100 to 240 VAC power supply
- DC = -48 VDC power supply

Communication interface

- 00 = Without modem
- XG1 = Internal 3G broadband interface for US and Canada
- XG2 = Internal 3G broadband interface for all other countries

Example: FG-750EX-AMET-88-SC17-XG2-DC-RK19-2U-CLT

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