



Access Network Visibility

GPON Tracer™

Compact Network Diagnostics in Your Hand



Built for field engineers and customer support

Speeds up on-site troubleshooting

Rich variety of real-time indications

Simple, user-friendly, touch-screen interface

Full visibility into your network's blind spot

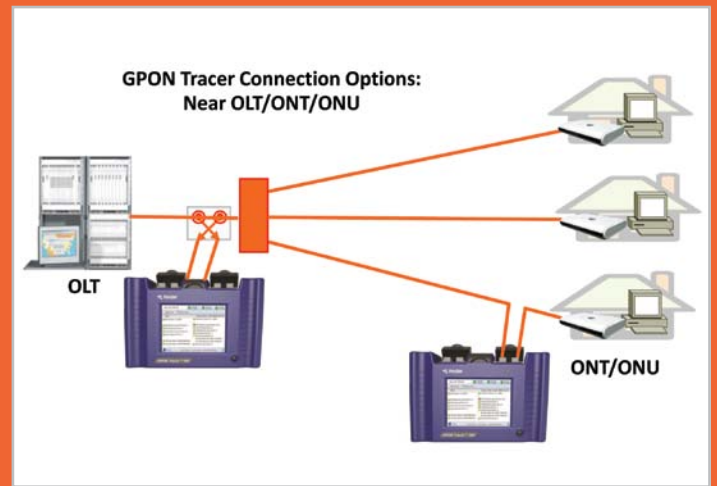
Quick Network and Service Troubleshooting

How quickly can you diagnose issues in your optical access network? Whether you are a telecom operator or a GPON equipment manufacturer, your technical support teams are challenged with resolving service complaints and identifying the sources of issues.

GPON Tracer is the ideal tool for both telecom operators' field engineers and customer support teams of OLT and ONT/ONU manufacturers. Featuring a compact handheld device with a user-friendly touch screen interface, the GPON Tracer provides a rich variety of real-time indications in simple graphical and textual formats, giving accurate indications of network and service issues and their root causes. Moreover, GPON Tracer reduces repair charges by preventing unnecessary replacements of properly working equipment.

Flexible Connectivity

Troubleshooting of network issues in the field requires easy access to the network elements and communication lines. The GPON Tracer has the flexibility to be connected anywhere within your GPON access network, either in parallel or serial. Whether it is at the customer site near the ONT/ONU or at the central office site near the OLT, the GPON Tracer supports easy connectivity to enable quick capture and analysis of data and traffic.



Informative Indications

By capturing and analyzing traffic in real time, the GPON Tracer displays a summary of measured parameters, graphs and diagnostics that quickly identify network issues and point-out their root cause. These powerful yet simple indications include downstream and upstream data rates, optical power levels of the OLT and every ONT/ONU, link and transmission errors and ONT/ONU testing results. Severe network issues such as PON congestion and rogue ONU are clearly indicated in real time, facilitating rapid repair and service recovery. GPON Tracer's ONU Test function can clearly isolate a faulty ONU/ONT, thus preventing unnecessary equipment replacements.

ONU Test
↑ 1310 nm

Record

- ✔ ONU Ranging Test – Pass
- ✔ Upstream from default Alloc-ID – Pass
- ✔ Upstream from non-default Alloc-ID – Pass
- ✖ Upstream from unassigned timeslots – Suspected Rogue ONU

- ✖ ONU S/N ZNTS1A2B3C4D – Test Failed

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Near OLT (Serial)
↓ 1490 nm
4.5 dBm
↓ 1550 nm
18.5 dBm
↑ 1310 nm
-10.5 dBm

Record

OLT

- ✔ DS Power: 4.5 dBm
- ✔ DS Physical Layer Errors: 0
- ✔ DS Protocol Errors: 0
- ✔ US Physical Layer Errors: 0
- ✔ US Protocol Errors: 0
- ✔ DS Data Rate: 1002 [Mb/Sec]
- ✔ US Data Rate: 597 [Mb/Sec]

Identified 21 Active ONUs

- ✔ ONU-ID(5) S/N TRPN 1A2B3C4D
- ✖ ONU-ID(8) S/N TRPN 1A2B3C5E
Deactivated 3 times, Inactive
- ✔ ONU-ID(12) S/N TRPN 1A2B3C5A
- ✔ ONU-ID(15) S/N TRPN 1A2B3D12
- ✔ ONU-ID(22) S/N TRPN 1A2B3CDE
- ✔ ONU-ID(25) S/N TRPN 1A367908
- ! ONU-ID(27) S/N TRPN 2B3B1AAE
Deactivated 2 times, Active
- ✖ ONU-ID(28) S/N TRPN 1A2B3D56
Deactivated 1 time, Inactive

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Near OLT (Serial)
↓ 1490 nm
4.5 dBm
↓ 1550 nm
18.5 dBm
↑ 1310 nm
-10.5 dBm

Record

Data Rate – OLT vs ONU[3] Graphs

OLT DS Data Rate [MB/Sec]

OLT US Data Rate [MB/Sec]

ONU DS Data Rate [MB/Sec]

ONU US Data Rate [MB/Sec]

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Near OLT (Serial)
↓ 1490 nm
4.5 dBm
↓ 1550 nm
18.5 dBm
↑ 1310 nm
-10.5 dBm

Record

US Burst Analysis

OLT Expected

ONU Actual TX

Frame #17
S/N TRPN 1ABC3456
ONU-ID15

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Built for Mobility

Inspection of optical networks out in the field means travelling and working in various conditions and challenging environments, while carrying your equipment with you. The GPON Tracer is designed to give your technical workforce the convenience of mobility with a set of features and complementary accessories that ensure smooth experience and extend the unit's lifetime.

Comfort Ergonomic Design

To deliver the performance and durability required for a mobile troubleshooting device, the GPON Tracer includes a ruggedized envelope bezel and protective cover lids for the device connectors.

The GPON Tracer is compact and lightweight. Its built-in Rechargeable battery enables up to four hours of operation in typical usage scenarios.

One-hand grip for both left-handed and right-handed users is made easy with two hand straps anchored to the device corners, along with curved, grooved surface on the unit's side edges.

"Where did I put my stylus"? The designated stylus placeholder ensures easy access to your stylus whenever you need to use it.

Need your hands free during work? Two folding legs provide a convenient angled position when placing the unit on any flat surface.



Utility Bag and Accessories

Every GPON Tracer is supplied with a protective carrying bag and a set of connectivity accessories, including a pair of optical fiber jumpers, USB and Ethernet cables and a battery charger – ready for quick on-site connection, file transfers and unit charging. The bag includes hand and shoulder straps, external buckles and an inner divider that protect the equipment from being damaged or lost while on-the-go.



IPTV Service Analysis

GPON Tracer provides performance indicators for IPTV services that are running on top of the GPON network. It analyzes the IPTV channels on the network and presents a variety of service quality metrics for each of the channels in both tabular and graphical formats.



Touch Screen Interface

Operating the GPON Tracer is made easy and intuitive with a quality touch screen display and a dedicated stylus.



Data Report and Export

GPON Tracer can be connected to a laptop or a desktop PC for transferring files, displaying the measurements and graphs, and exporting them to PDF and HTML format reports.

GPON Tracer also enables escalation of complex issues to operators' lab experts or equipment manufacturers' support. By recording the GPON and upper layers protocol data, the files can be exported to TraceSpan GPON Xpert multi-layer analyzer for deep protocol analysis.

Specifications

Physical Dimensions	Height: 167 mm (6.5 in) Width: 256 mm (10 in) Depth: 54 mm (2.1 in) Weight: 1.5 kg (3.3 lb), including batteries
Maximum Power Consumption	20 Watts
Battery Backup Time	4 hours of operation in typical usage scenarios
Data Storage Capacity	Up to 8 GB per recording Up to 7 recording files
EMC	FCC 47CFR Part 15, Subpart B, Class A EN 61326-1, Class A
Safety	IEC 61010-1, EN 61010-1
Shock and Vibration	ETSI EN 300 019-2-7