SPEC SHEET

AXS-130 compact OTDR

OPTIMIZED FOR FTTx FIBER DEPLOYMENTS AND TROUBLESHOOTING, SUITABLE FOR METRO

- The AXS-130 delivers EXFO's renowned performance, reliability and durability in a compact OTDR form factor.

COMPATIBLE WITH eXchange

Swap-Out connector

ISE NETWORK INNOVATORS' AWARDS GOLD

FTTH iOLM READY

KEY FEATURES

- Live and dark fiber capability
- Rugged and ultra-portable, featuring a 4-inch high-visibility outdoor touchscreen
- Swap-Out connector, replaceable whenever necessary for optimal performance over time without undue service cost and downtime
- All-day battery
- Dynamic range up to 42/40/39 dB
- Triple wavelengths: 1310 nm, 1550 nm, 1650 nm
- Short dead zones: 0.5/2.5 m event dead zone (EDZ) / attenuation dead zone (ADZ), PON dead zone 30 m
- Default Optical Link Mapper (OLM) simplifying OTDR trace interpretation
- iOLM-ready for FTTH: iOLM acquisitions optimized for FTTH engineers
- Automated macrobend detection
- Onboard PDF reporting
- In-line power checker and source
- Integrated visual fault locator (VFL)

APPLICATIONS

- FTTx/PON testing through splitters (up to 1×128)
- FTTx/MDU service activation: GPON, EPON, XGS-PON, 10GE EPON
- Live fiber troubleshooting
- Access network testing (P2P)
- Metro links testing (P2P)
- Passive optical LAN (POL)

RELATED PRODUCTS AND ACCESSORIES

Connector Checker™ FIP-200

Soft pulse suppressor bag SPSB

Swap-Out Connector APC

Swap-Out Connector UPC

EXFO

THE ESSENTIAL CAPABILITIES OF A STATE-OF-THE-ART OTDR

TESTING MADE SIMPLE

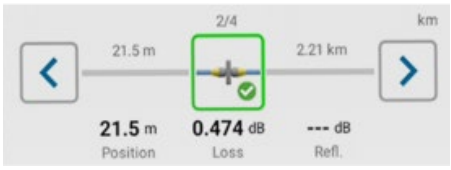
Unnecessary complexity eliminated so any technician can easily perform tests without having to dig through layers of menus or options.

HELPING YOU FLATTEN THE LEARNING CURVE

Optical Link Mapper (OLM)

Interprets OTDR traces automatically and provides an icon-based view of the elements on the link.

- Synced with events and placed on the same screen below OTDR trace to better understand events.
- Automatic analysis of multiple wavelengths with a consolidated link view display on a single screen.
- Display of end-to-end link length, loss and ORL according to the pass/fail settings.
- Automatic parameter settings and clear go/no-go results.
- Prompt guidance on what and where the network issues are.



OLM provides:

MULTIPLE WAVELENGTHS ACQUISITIONS

CLEAR CONSOLIDATED LINK DISPLAY

FITS YOUR PROCESSES

.SOR

FTTH-iOLM FOR EVERY PART OF THE PON NETWORK (OPTIONAL)

Bring the power of EXFO's patented iOLM technology to your FTTH workflows, turning complex OTDR testing into clear, first-time-right results. FTTH-iOLM is an automated multipulse acquisition for live fiber to ensure a clear diagnostic of all elements along the link under test.

In addition to the OLM capabilities, the FTTH-iOLM adds:

INTELLIGENT ALGORITHMS

ADAPT TEST SETTINGS

DYNAMIC MULTIPULSE ACQUISITION

OPTIMIZED DISPLAY

See key test results summarized on a single screen, including test parameters, the OTDR trace, a linear view of all events and a link map.

Portrait view

Indication and navigation over Job test IDs.

OTDR trace overview.

Linear view of all events with faulty events in red that allows zooming on specific events.

OTDR setup (selection of range, pulse and duration). Auto Mode is also available.

On/Off/Standby button, with integrated LED to indicate battery status.

Summary of global optical link parameters (length, loss and ORL).

Optical Link Mapper (OLM) or FTTH-iOLM view to interpret the OTDR traces and identify element types.

Averaged OTDR measurement.

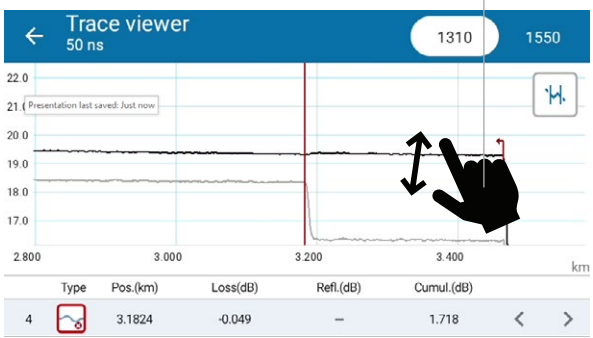
Start/Stop real-time OTDR measurement.

Landscape view

Landscape view available at the click of a button. Investigate the trace efficiently!

Manual measurements with two markers.

Zoom freely on the overall trace or on specific elements.



AXS-130: THE COMPACT YET MIGHTY OTDR WITH ALL ESSENTIAL FUNCTIONS TO MAKE FRONTLINE TECHNICIANS MORE EFFICIENT.

The AXS-130 compact OTDR offers a suite of diagnostic and troubleshooting tools for those instances when you need more than link verification or when KPIs do not meet expectations. These tools allow technicians to better understand the link and identify weak points or impairments.

Basic OTDR functions

PON Optimized Mode

This mode allows the user to enter the splitters on the optical link. The analysis automatically associates the correct splitter to the appropriate event on the trace. The Auto Mode is also optimized for PON links.

Auto Mode

Manually set acquisition parameters, such as range or duration, or enable the Auto Mode to select EXFO recommended parameters for the selected pulse width, based on the length and overall loss of the fiber cabling.

Real-Time Mode: allows continuous testing and refreshing

Continuous monitoring

Real-Time Mode enables the continuous observation of optical fibers, allowing for the immediate detection of any changes or faults. This is especially beneficial for maintenance and troubleshooting.

Dynamic event capture

Captures dynamic events such as fiber bends, splices, and connector changes as they happen. This allows for real-time observation of how these events impact the signal without interrupting the measurement process.

Quick issue identification

For long fiber spans, Real-Time Mode facilitates the rapid identification of issues by displaying the trace as it updates. Technicians can halt the test as soon as anomalies are detected.

Live feedback

During installation or repairs, Real-Time Mode provides instant feedback, enabling technicians to make on-the-spot adjustments to parameters.

Included with FTTH-iOLM option:

FTTH Full Link Mode (ONT -> OLT): Complete link analysis through splitter(s)

FTTH full link mapping leverages EXFO's Link Aware technology to accurately characterize and troubleshoot PON links with up to two splitters. This advanced acquisition mode uses our most powerful multipulse techniques to precisely analyze the fiber before and after each splitter, ensuring reliable diagnostics across the entire link.

PON Last Mile Mode (ONT -> Splitter or Splitter -> ONT): Fast troubleshooting and continuity checks

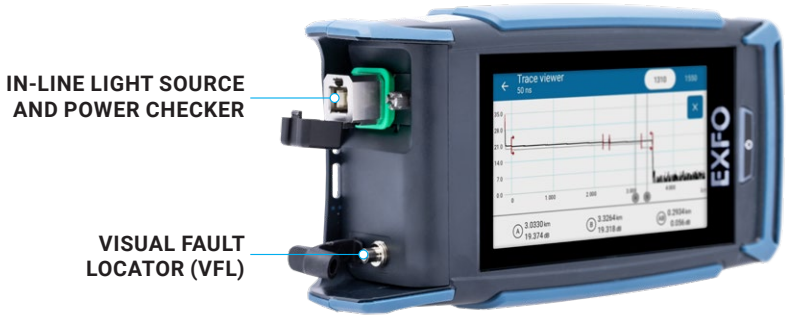
Tailored to last-mile certification, Optimode tests all connections between customer premises and the splitter (including continuity at the splitter but excluding elements beyond it). When testing from the splitter toward the ONT, it detects and confirms that the ONT is properly connected. Accelerate fiber rollouts, simplify activation procedures, and improve robustness of repairs for better QoS and MTTR.

SFP Safe Mode

Ideal for P2P troubleshooting when an SFP might be connected on the far end. When technicians are dispatched, they are still unaware of what is wrong and may accidentally damage a transceiver with an uncontrolled pulse width. EXFO's patented solution prevents this risk and guarantees no damages to the SFP while troubleshooting.

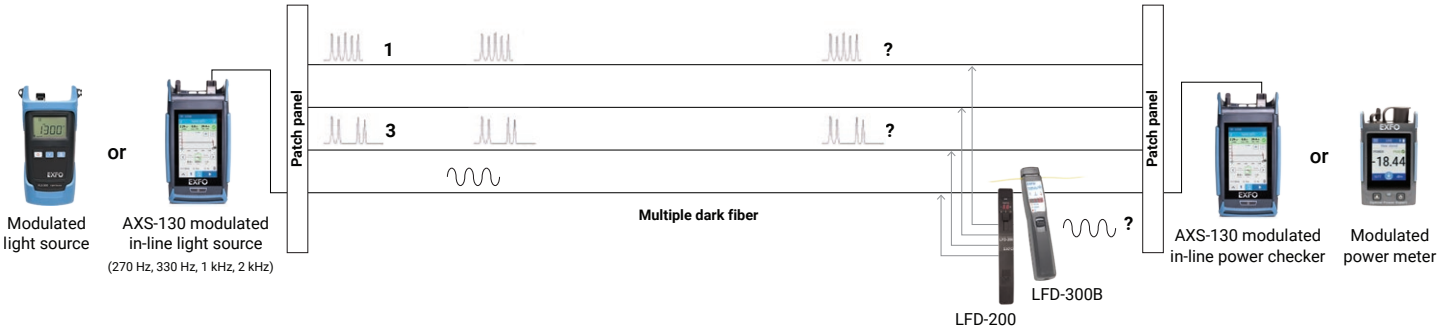
TESTING ESSENTIALS INTEGRATED

The AXS-130 comes with key accessories needed when working in the field with an OTDR. It integrates essential optical test tools, equipping technicians with everything they need on the job. Included:



FIBER TRACING — TONE DETECTION

The AXS can be used as a light source and emit a tone that can be detected by a live fiber detector (LFD), a power meter or by another AXS unit to trace/identify a specific fiber. The AXS-130 can detect 5 different tones CW, 270 Hz, 330 Hz, 1 kHz and 2 kHz.



TAKING ON YOUR CAPEX AND OPEX CHALLENGES

Large instrument fleets come with hidden or unplanned costs of ownership, including:

- Technician training and support
- Maintenance costs and logistics
  - Entry connector replacement in factory
  - Extra calibration after connector replacement
  - Planned and unplanned downtime
  - Complexity of maintenance management

Did you know?

More than 90% of OTDR units sent back to the manufacturer for periodic calibration have severely damaged connectors needing replacement.

Connector health is critical to ensuring optimal performance and accurate results for optical test instruments. Optical connectors experience wear and tear in the field and degrade over time until replacement is necessary.

AXS-130 OTDR TACKLES THE ROOT CAUSES OF THESE ISSUES, SINCE IT'S DESIGNED TO ELIMINATE HIDDEN COSTS OF OWNERSHIP

Keep your calibration plan on track

The calibration date remains valid, even after swapping the connector. No need to calibrate your unit sooner than planned.

Field-replaceable all-day battery

> 10 hours of autonomy (Bellcore)

Patented, field-replaceable Swap-Out connector

Self-diagnose health of unit connector. Swap it for a brand new one on the go when needed—no factory servicing costs and no downtime.

EXFO's proven robustness

Rugged and ready: the world's leading manufacturer of OTDRs delivers renowned robustness for field use.

Built-in intelligence

No learning curve and no need for remote expert assistance. Let the equipment handle it.

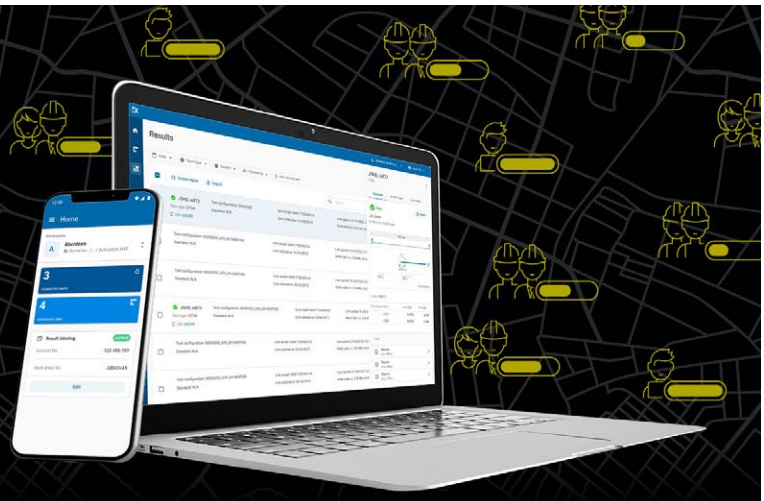
DESIGNED FOR EFFICIENCY

EXFO's extensive experience in optical field testing is embedded in AXS-130. It leverages this built-in expertise to diagnose fiber link quality reliably and quickly. All this, plus its ergonomic, robust design makes AXS-130 a perfect fit for today's field technician.

1. OTDR port
   In-line light source
   In-line power checker
   Swap-Out connector
2. Visual fault locator (VFL)
3. USB-C charge port
4. Power on/off
5. 4-inch touchscreen

EXchange

SHARE TEST RESULTS. BOOST COMPLIANCE. UNLOCK INSIGHTS.



Cloud-hosted solution for sharing test results and ensuring compliance.

Paired with EXFO's leading test instruments, EXFO Exchange drives an entire ecosystem, while integrating seamlessly with existing operation processes.

KEY BENEFITS

- **Automate test results management**
- **Boost compliance and efficiency**
- **Improve collaboration and visibility**
- **Access comprehensive reporting**
- **Unlock insights to see what matters**

SIMPLE SETUP IN THREE STEPS

1

Create your free EXFO Exchange account

Begin your journey by creating an EXFO Exchange account. Setting up your account is quick and easy.

Create an account

2

Install the mobile app

Download the EXFO Exchange app to allow test data from compatible EXFO devices to be uploaded securely to the cloud (free of charge).

GET IT ON Google Play | Download on the App Store

For MaxTester and FTB users, install the native app.

Access the Native app

3

Save time and boost efficiency

Once your account created—and the mobile app installed and paired with compatible EXFO devices—all test results will be sent to the cloud. On the web app, you will see field test results from all invited testers.

Get **started >**

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SPECIFICATIONS[a]

TECHNICAL SPECIFICATIONS	
Wavelength (nm)[b]	1310 ± 20/1550 ± 20/1650 ± 15
Live wavelength (nm)	1650, Isolation: 50 dB from 1265 nm to 1617 nm
Dynamic range (dB)[c]	42/40/39
Event dead zone (m)[d]	0.5
Attenuation dead zone (m)[d]	2.5
Distance range (km)	0.65 to 200
PON dead zone (m)[e]	30
Pulse width (ns)	3 to 20 000
Linearity (dB/dB)	±0.03
Loss resolution (dB)	0.001
Sampling resolution (m)	0.04 to 5
Sampling points	Up to 256 000
Distance uncertainty (m)[f]	±(0.75 + 0.0025% × distance + sampling resolution)
Reflectance accuracy (dB)[b]	±2

GENERAL SPECIFICATIONS		
Size (H × W × D)		171 mm × 93 mm × 48 mm (6 3/4 in × 3 11/16 in × 1 7/8 in)
Weight (with battery)		0.5 kg (1.1 lb)
Display		4 in (101.6 mm) touchscreen, 800 × 480 TFT, portrait and landscape view
Interfaces		One USB-C port
Storage		10 000 OTDR traces, typical
Connectivity		Bluetooth®, Wi-Fi and USB-C
Results format		PDF report on the unit .sor trace as per Telcordia (Bellcore), .trcx
Battery		Rechargeable lithium-polymer battery, USB-C charging port connector
Battery autonomy		>10 hours of operation as per Telcordia (Bellcore) TR-NWT-001138
Temperature	Operating Storage	−10 °C to 45 °C (14 °F to 113 °F) −40 °C to 70 °C (−40 °F to 158 °F)[g]
Relative humidity		< 93 % non-condensing
Data management		FastReporter, EXFO Exchange
Adapters		Multiple changeable adapters to fit any optical connectors: SC, FC, LC, and more
Warranty (year)		1

IN-LINE POWER CHECKER[b, h]	
Power range (dBm)	−60 to 23
Power uncertainty (dB)[i, j]	±0.5
Calibrated wavelengths (nm)	1310, 1490, 1550, 1625, 1650
Selectable wavelengths (nm)	1310, 1490, 1550, 1577, 1625, 1650
Tone detection	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, 1 kHz + Blink, 2 kHz + Blink

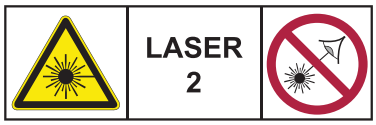
IN-LINE SOURCE	
Output power (dBm)[k]	−3
Modulation	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, 1 kHz + Blink, 2 kHz + Blink

a. All specifications valid at 23 °C ± 2 °C with an FC/APC connector, unless otherwise specified.
b. Typical.
c. Typical dynamic range with longest pulse and three-minute averaging at SNR = 1.
d. Typical, for reflectance from −55 dB, using a 3-ns pulse.
e. Non-reflective FUT, non-reflective splitter, 13-dB loss, 100-ns pulse, typical value.
f. Does not include uncertainty due to fiber index.
g. −20 °C to 60 °C (−4 °F to 140 °F) with the battery pack. To preserve optimal battery performance, do not expose to high storage temperatures for extended periods of time.
h. Specifications valid when OTDR not in operation or in idle mode.
i. At calibrated wavelengths.
j. Requires a good entry connector's health.
k. Typical output power is given at 1550 nm.

IN-LINE PON POWER METER WITH OPM2 IN OPTION [a, b]	
Power range (dBm)	–60 to 23
PON power meter (nm)	Two channels: 1490/1550 and 1490/1577
Power uncertainty (dB) [c, d]	±0.5
Calibrated wavelengths (nm)	1310, 1490, 1550, 1625, 1650
Selectable wavelengths (nm)	1310, 1490, 1550, 1577, 1625, 1650, 1490/1550, 1490/1577

VISUAL FAULT LOCATOR (VFL)
Laser, 650 nm ± 10 nm
CW/Modulate 1 Hz
Typical P_{out} in 62.5/125 µm: > 0 dBm (1 mW)
Laser safety: Class 2

LASER SAFETY (complies with FDA 1040.10 and IEC 60825-1:2014-05)



YOUR AXS-130 STARTER KIT

ACCESSORIES (optional)	
GP-10-061	Small size soft carrying case
GP-10-071	Medium size soft carrying case
GP-1008	VFL adapter (2.5 mm to 1.25 mm)
GP-2269	USB-A to USB-C cable (for data transfer to PC)
GP-2311	SC/APC Swap-Out™ optical connector
GP-2312	SC/UPC Swap-Out™ optical connector
GP-3150	Rechargeable battery
GP-3172	3-in-1 accessory combining kickstand, hand strap and VFL holder (compatible with FLS-140)

GP-10-061 GP-10-071 GP-1008 GP-2269 GP-2311 GP-2312 GP-3150 GP-3172

a. Typical.
b. Specifications valid when OTDR not in operation or in idle mode.
c. At calibrated wavelengths.
d. Requires a good entry connector's health.

ORDERING INFORMATION

AXS-130-XX-XX-XX-XX

Optical configuration
SM1 = 1310/1550 nm
SM7 = 1650 nm only
SM8 = 1310/1550/1650 nm on single port

OPM option
00 = Without OPM2 option
OPM2 = In-line PON power meter mode (dual band) [a]

Connector
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC
EI connectors = See section below

Wi-Fi and Bluetooth
00 = With Wi-Fi and Bluetooth
NRF = Without Wi-Fi and Bluetooth components

Example: AXS-130-SM7-OPM2-NRF-EA-EUI-91

a. Available with SM7 and SM8 models.

EI CONNECTORS

To maximize the performance of your OTDR, EXFO recommends using APC connectors on singlemode port. These connectors generate lower reflectance, which is a critical parameter that affects performance, particularly in dead zones. APC connectors provide better performance than UPC connectors, thereby improving testing efficiency.

Note: UPC connectors are also available. Simply replace EA-XX by EI-XX in the ordering part number. Additional connector available: EI-EUI-90 (UPC/ST).

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EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to www.EXFO.com/contact.

  Printed in Canada 25/12