AXS-120 mini-OTDR

POINT-TO-POINT (P2P) LINKS, ACCESS AND FTTx NETWORK INSTALLATION AND TROUBLESHOOTING

■ The AXS-120 brings EXFO's renowned OTDR performance, reliability and durability to the field in a compact form factor.

COMPATIBLE WITH

EXchange

3-year warranty

Swap-Out connector

KEY FEATURES

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 autonomy

Dynamic range up to 34/32 dB

Dual wavelengths: 1310 nm, 1550 nm

Short dead zones: 0.8/3.5 m event dead zone (EDZ) / attenuation dead zone (ADZ), PON dead zone 35 m

Onboard link map simplifying OTDR trace interpretation

Automated macrobend detection

Onboard PDF reporting

3-year warranty

In-line power checker and source

Integrated visual fault locator (VFL)

APPLICATIONS

FTTx network installation and troubleshooting

Access-network testing (P2P)

Passive optical LAN (POL)

Cable television (CATV), hybrid fiber-coaxial (HFC) network testing

FTTA, distributed antenna systems (DAS) installation

FTTx/PON testing through splitters (up to 1×32) (coming soon)

RELATED PRODUCTS AND ACCESSORIES

FIP-200

Soft pulse suppressor bag

Swap-Out Connector APC

Swap-Out Connector UPC

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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 ACCELERATE 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.
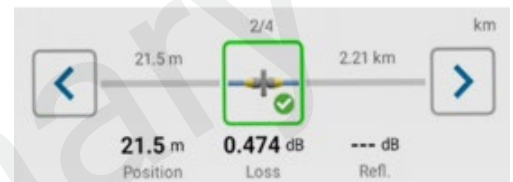
MULTIPLE WAVELENGTHS

CLEAR CONSOLIDATED LINK DISPLAY

.SOR

FITS YOUR PROCESSES

TESTING ESSENTIALS INTEGRATED

The AXS-120 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 field job.

Included:

- In-line light source
- In-line power checker
- Visual fault locator (VFL)

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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) to interpret the OTDR traces and identify element types.

Averaged OTDR measurement.

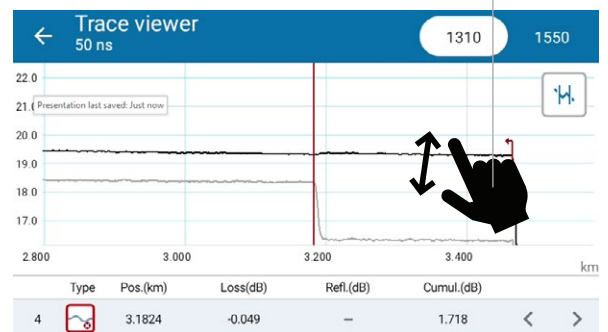Start/Stop real-time OTDR measurement.

Landscape view

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

Zoom freely on the overall trace or on specific elements.

Manual measurements with two markers.

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AXS-120: THE MINI YET MIGHTY OTDR WITH ALL ESSENTIAL FUNCTIONS TO MAKE FRONTLINE TECHNICIANS MORE EFFICIENT.

The AXS-120 mini-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.

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.

Flash-Advisor Mode: the core of the intelligent OTDR (coming soon)

Lightning-fast link verification

Flash Advisor displays the link's KPIs (link length, loss, and ORL) in under 3 seconds on the same screen as the trace and the link view. This single-ended verification test is ideal for instant length checks, sanity checks or mass volume control on high-fiber-count cables prior to or after installations and repairs.

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

It 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.
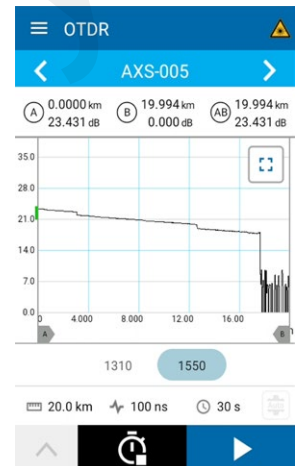
FIBER TRACING — TONE DETECTION

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 a fiber /identify a specific fiber. The AXS-120 can detect 5 different tones CW, 270 Hz, 330 Hz, 1 KHz and 2 kHZ.
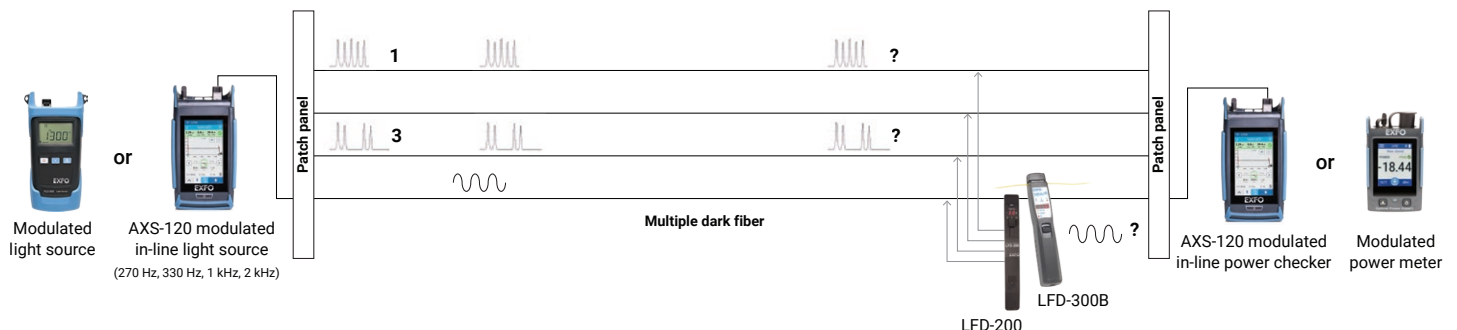
TAKING ON YOUR CAPEX AND OPEX CHALLENGES

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

- Technician training and support
- Maintenance costs and logistics
  - Periodic calibration
  - Entry connector replacement in factory
  - 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-120 OTDR TACKLES THE ROOT CAUSES OF THESE ISSUES, SINCE IT'S DESIGNED TO ELIMINATE HIDDEN COSTS OF OWNERSHIP

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.

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.

Built-in intelligence

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

3-year warranty

Designed for long-term accuracy.

Field-replaceable battery with all-day autonomy

> 10 hours of autonomy (Bellcore)

EXFO's proven robustness

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

DESIGNED FOR EFFICIENCY

EXFO's extensive experience in field testing instruments is embedded in AXS-120. It leverages this built-in expertise to diagnose the quality of your fiber reliably and quickly. All this, plus its ergonomic, robust design makes AXS-120 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)
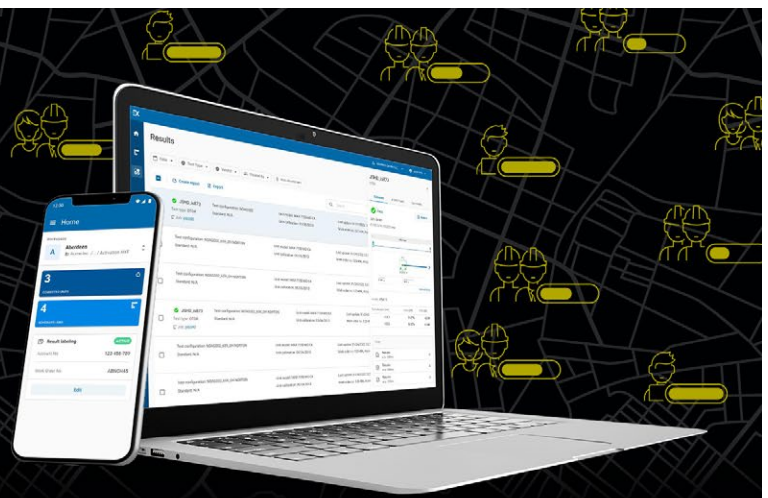3. USB C charge port
4. Power on/off
5. 4-inch touchscreen

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

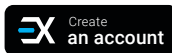**Access comprehensive reporting**

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.

EX 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.

EX 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.

EX

Get **started >**

EXFO
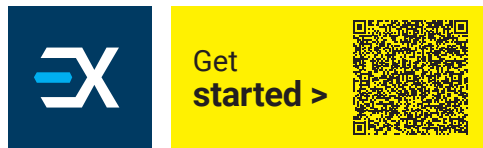
SPECIFICATIONS[a]

TECHNICAL SPECIFICATIONS	
Wavelength (nm)[b]	1310 ± 30/1550 ± 30
Dynamic range (dB)[c]	34/32
Event dead zone (m)[d]	0.8
Attenuation dead zone (m)[d]	3.5
Distance range (km)	0.65 to 200
PON dead zone (m)[e]	35
Pulse width (ns)	3 to 20 000
Linearity (dB/dB)	±0.05
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	8 GB internal memory (10 000 OTDR traces, typical)
Connectivity	Bluetooth®, WiFi and USB-C
Results format	PDF report on the unit .sor trace as per Telcordia (Bellcore), .trcx
Battery	Rechargeable lithium-polymer battery, USB type-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 3, EXFO Exchange
Adapters	Multiple changeable adapters to fit any optical connectors: SC, FC, LC, and more

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)	1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1577, 1590, 1610, 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]	−7
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.

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VISUAL FAULT LOCATOR (VFL)

Laser, 650 nm ± 10 nm
CW/Modulate 1 Hz
Typical P_{out} in 62.5/125 µm: > −1.5 dBm (0.7 mW)
Laser safety: Class 2

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

With VFL:

LASER 2

Without VFL:

⚠ ATTENTION
⚠ CAUTION
LASER 1

YOUR AXS-120 STARTER KIT

GP-3151
AXS OTDR soft pouch

GP-3199
USB-C AC adapter
(for Europe and North America
as well as Argentina, Australia, China,
India, Japan, New-Zealand, and UK)

GP-3157
Wrist strap

GP-2307
USB-C to USB-C cable

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

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ORDERING INFORMATION

AXS-120-XX-XX-XX

Optical configuration
SM1= OTDR, 1310/1550 nm

WiFi and Bluetooth
00 = With WiFi and Bluetooth
NRF = Without WiFi and Bluetooth components

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
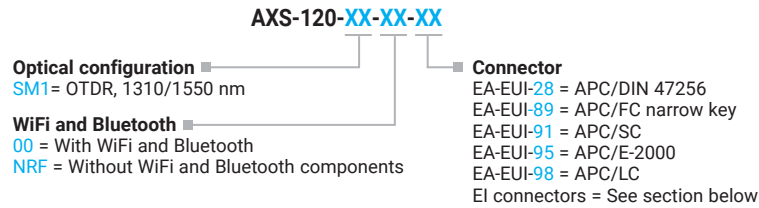
Example: AXS-120-SM1-EA-EUI-91

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).

MHz MEGA HERTZ

Provided by: Mega Hertz | 800-883-8839 | info@go2mhz.com | www.go2mhz.com

https://www.go2mhz.com/product/mini-otdr/

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