

EX10 – Multigigabit residential and business services tester

FOR VALIDATING ETHERNET, Wi-Fi 7, GPON AND XGS-PON

- The EX10 helps onsite technicians easily validate bandwidth speeds up to full line rate 10 Gigabit Ethernet (including GPON, XGS-PON) and test residential Wi-Fi 7 to monitor residential quality of experience (QoE).

COMPATIBLE WITH
EXchange



Wi-Fi testing

KEY FEATURES AND BENEFITS

Multigigabit validation including 1, 2.5, 5 and 10 Gigabit interfaces powered by Speedtest® by Ookla®

Latency, download and upload throughput performance metrics with adjustable pass/fail thresholds based on subscribers' purchased plans

Supports GPON, XGS-PON with PON ID, ONU ID, central office transmit optical level (TOL) and optical distribution network (ODN) loss

SFP/SFP+ interface for Speedtest over fiber

Smart loopback (EX10-PRO and EX10-PRO-7 only)

Wi-Fi 7 testing (2.4 GHz, 5 GHz and 6 GHz bands)

Wireless interface (Wi-Fi) supporting Speedtest and channel map

Carrier-grade hardware for repeatable and reliable testing

Operated via smart device over Bluetooth®

Cloud-upload results via EXFO Exchange

Efficient job closeout with best-in-class birth certificate generation (reports in JSON, XML, PDF or CSV formats can be sent by email, SMS or other applications directly to subscriber or stored in the cloud for future reference)

Supports VLAN, Static IP and DHCP (with or without Option 60)

Ping and LLDP tools

APPLICATIONS

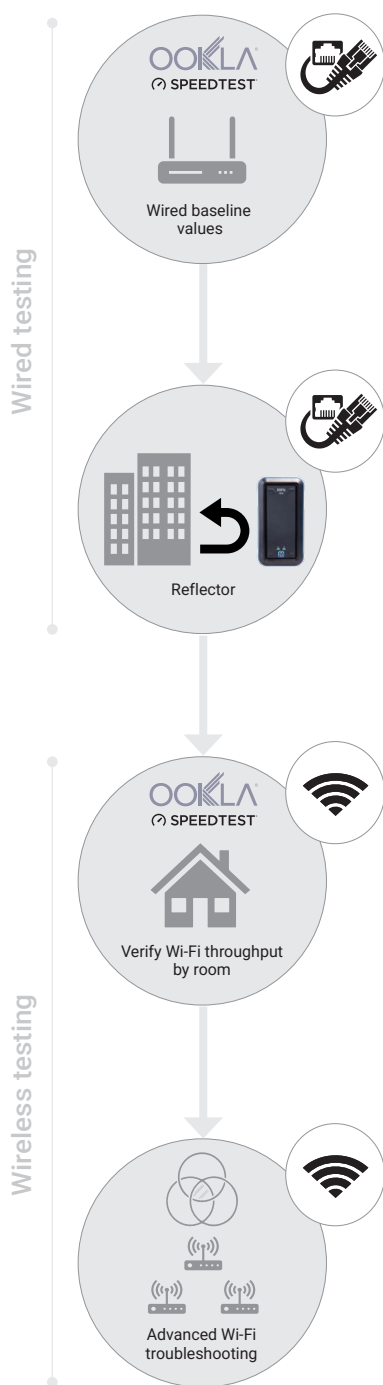
Broadband validation

Wi-Fi optimization

QoE: Validate core services

BROADBAND ACCESS: VALIDATE, TROUBLESHOOT AND OPTIMIZE

The EX10 provides both wireline and wireless testing capability, providing comprehensive insights that field technicians can use to remedy any situation. Operators can prove they deliver both promised throughput and unparalleled quality of experience at the customer premises.



Wired

The EX10 is the first device to include all cutting-edge multigigabit interfaces in a simple yet unique tester that anyone with a smart device can use. It has the capability of turning up 1, 2.5, 5 or even 10 Gigabit Ethernet interfaces for validating broadband access.

Smart loopback

With the EX10-PRO and EX10-PRO-7, you can now use the unit as a reflector, up to layer 4. Use the EX10 with an Ethernet or multiservice FTBx tester module^a or any unit transmitting at the other end to validate throughput in your network.

Wi-Fi validation

The EX10 can validate Wi-Fi 4, 5, 6, 6E and cutting-edge Wi-Fi 7 delivery from room to room. The device uses Speedtest by Ookla to determine whether a room can support video streaming of HD, 4K and even upcoming 8K resolution. All rooms can be validated for proper delivery of over-the-top (OTT) video streaming services.

Advanced Wi-Fi troubleshooting

The EX10 also utilizes advanced troubleshooting techniques, including a room-by-room view of Wi-Fi channel metrics. It is capable of retrieving the received signal strength indicator (RSSI) and the channel utilization data from access points, when available, enabling technicians to accurately diagnose Wi-Fi issues. Technicians can also use the dedicated Wi-Fi test application to capture snapshots of critical information such as RSSI, channel utilization and BSSID—and tagging each room where these snapshots are taken.

All snapshots are integrated into a single report, offering technicians valuable insights for resolving Wi-Fi issues, such as moving (or repositioning) the router, changing channels or using extenders.



a. EXFO modules include FTBx-8870/8880/88260.

XGS-PON ONT LINK VALIDATION^a

The EX10's XGS-PON ONT link validation is ideal for many different XGS-PON testing scenarios. It can be used for FTTH deployments, troubleshooting, validation and performance metrics.

For deployment purposes, the EX10 can be used to get the OLT TX optical power and the ONT RX optical power. From there it can derive the optical domain network loss (ODN LOSS) which is the signal attenuation between OLT and the ONU.

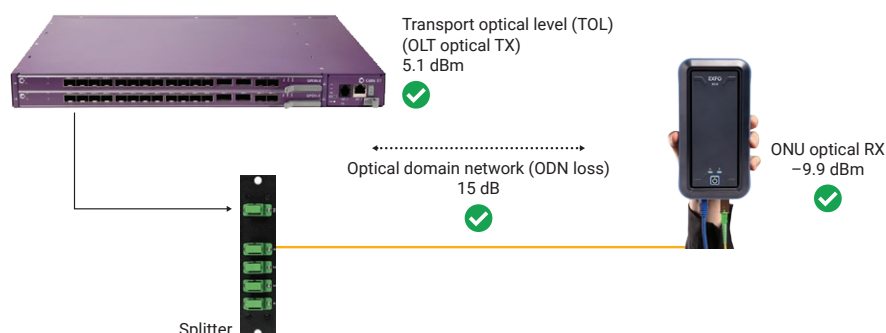


Figure 1. Optical power readings

For troubleshooting, the EX10 can derive the PON ID which helps the technician to understand why an ONT is not synching up with the OLT, typically when the PON ID is incorrect the fiber has been attached to an incorrect port.

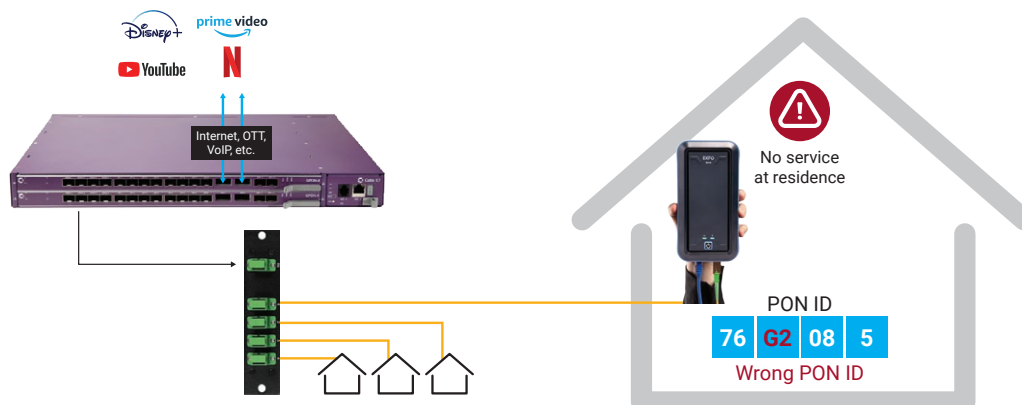


Figure 2. PON ID validation

For complete end-to-end performance metrics, the EX10 can be used to test the broadband speed being delivered by emulating the ONT and not requiring a router. All bandwidth measurements are powered by the industry-leading Speedtest by Ookla algorithm.

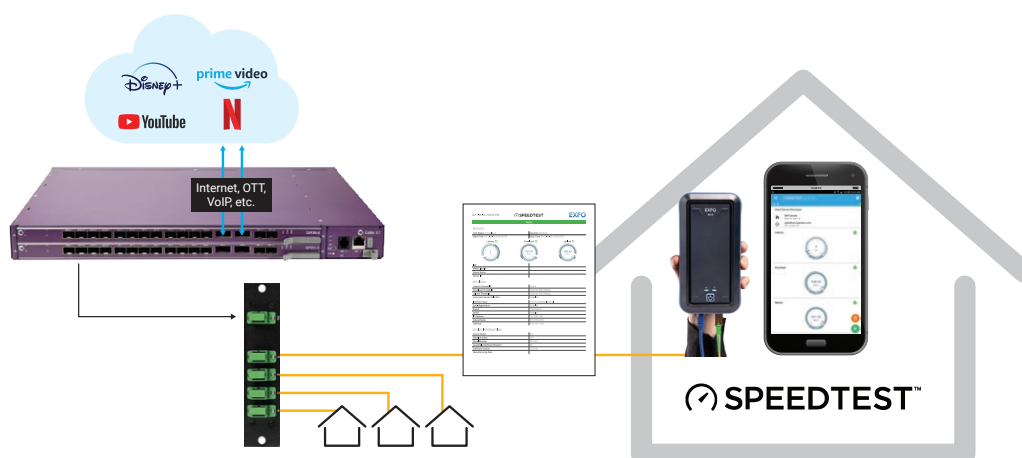


Figure 3. Speedtest over XGS-PON

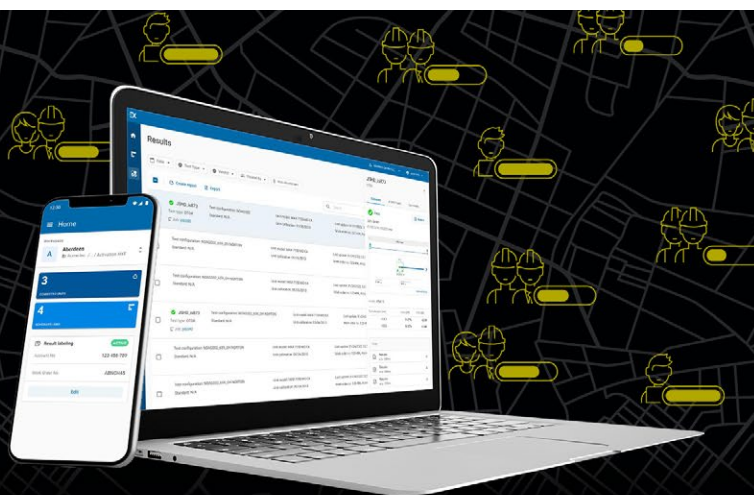
a. Requires EXFO-managed SFP XGS-PON ONT transceiver.



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



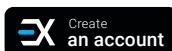
Unlock insights to see what matters

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.



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).



For MaxTester and FTB users, install 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 >



SPECIFICATIONS

TECHNICAL SPECIFICATIONS

CAPABILITIES

Speedtest by Ookla ^a	• Latency • Download speed • Upload speed • Server information • Client WAN IP • Multi TCP connection • Automatic/manual server selection with search engine • Pass/fail verdict based on thresholds • Configurable job information • JSON/XML/PDF/CSV automatically generated reports
Wi-Fi test	• Support of Wi-Fi 5, 6 and 6E (802.11ax/ac/a/b/g/n) • Support of 2.4 GHz, 5 GHz and 6 GHz frequency bands • Visualization of Wi-Fi channel map analysis • Channel map filtering based on signal level: excellent, good, fair, weak • Information per access point: BSSID, manufacturer, channel number, frequency, channel utilization and RSSI • Graphical selection of access points for clarity and in-depth troubleshooting
Smart loopback	• Up to layer-4 loopback • Support of 1G and 10G electrical and optical interfaces • Receive and transmit frame counts

GENERAL SPECIFICATIONS

PLATFORM AND USABILITY

Electrical RJ45 test port	100/1000/2500/5000/10000 Mbit/s
Optical SFP test port	1GE SFP, SFP GPON ONT (2.4 Gbit/s download and 1.2 Gbit/s upload) and 10GE SFP+, SFP+ XGS-PON ONT (10 Gbit/s download and 10 Gbit/s upload)
USB port	USB 3.0 type-C port
Bluetooth	Bluetooth v5.0
Wi-Fi	Wi-Fi 7 (2.4 GHz, 5 GHz and 6 GHz)

BATTERY AND POWER

Type	Rechargeable Li-ion smart battery
Autonomy	One full day of customer visits (i.e., average of 10 residential broadband customer visits)
Charging time	3.5 h using supplied wall charger
AC/DC adapter/charger	Input: 100–240 VAC; 50/60 Hz; 1.0 A max, output: 5 V, 9 V, 12 V, 15 V; 3.0 A and 20 V; 2.25 A

PHYSICAL AND ENVIRONMENTAL INFORMATION

Size (H × W × D)	105 mm × 200 mm × 60 mm (4 1/16 in × 7 13/16 in × 2 3/8 in)
Weight	0.8 kg (1.75 lb)
Temperature (operating)	0 °C to 40 °C (32 °F to 104 °F)
Temperature (storage) ^c	–10 °C to 40 °C (14 °F to 104 °F)
Relative humidity range	≤ 93 %, non-condensing

SMART DEVICE REQUIREMENTS

Smart device supported	Android OS and iOS-based devices
OS version	Android 7.0 Nougat and higher, iOS 13 and higher
Bluetooth support	Bluetooth low energy technology (version 4.0 and higher)

MISCELLANEOUS

PPPoE ^b	Ability to enter a user name and password, PPPoE connection status, and always on or on-demand connection mode, PAP and CHAP support
VLAN	Ability to enter a VLAN ID, priority and type

a. GPON download and upload speeds limited to 1 Gbit/s.

b. Upload speed is limited and not yet up to 10 Gbit/s.

c. With battery (short term < 1 month).

ORDERING INFORMATION

Model  **EX10**
EX10 = Ethernet testing capability
Speedtest by Ookla over electrical/optical
Ethernet (up to 10G) and Wi-Fi (up to 6E)
Also includes PON ONT link validation ^a

Model  **EX10-PRO**
EX10-PRO = Ethernet testing capability
Speedtest by Ookla over electrical/optical
Ethernet (up to 10G) and Wi-Fi (up to 6E)
Also includes PON ONT link validation ^a
Smart loopback capabilities

Model  **EX10-7**
EX10-7 = Ethernet testing capability
Speedtest by Ookla over electrical/optical
Ethernet (up to 10G) and Wi-Fi (up to 7)
Also includes PON ONT link validation ^a

Model  **EX10-PRO-7**
EX10-PRO-7 = Ethernet testing capability
Speedtest by Ookla over electrical/optical
Ethernet (up to 10G) and Wi-Fi (up to 7)
Also includes PON ONT link validation ^a
Smart loopback capabilities

a. Requires EXFO-managed SFP/SFP+ PON ONT transceiver.

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