SPEC SHEET

EX10 – Multigigabit residential and business services tester

FOR VALIDATING ETHERNET, WiFi, 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 WiFi 6E to monitor residential quality of experience (QoE).

COMPATIBLE WITH EXchange

WiFi testing

KEY FEATURES AND BENEFITS

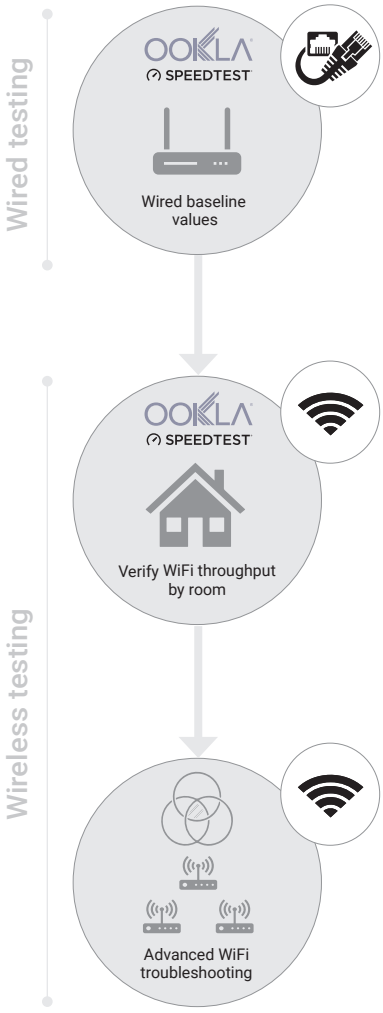
- Multigigabit validation including 1, 2.5, 5 and 10 Gigabit interfaces powered by Speedtest® by Ookla®
- Latency, download and upload throughput performance metrics with adjustable pass/fail thresholds based on subscribers' purchased plans
- Supports GPON, XGS-PON with PON ID, ONU ID, central office transmit optical level (TOL) and optical distribution network (ODN) loss
- SFP/SFP+ interface for Speedtest over fiber
- WiFi 6E testing (2.4 GHz, 5 GHz and 6 GHz bands)
- Wireless interface (WiFi) 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
- WiFi 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.

WiFi validation

The EX10 can validate WiFi 4, 5, 6 and cutting-edge WiFi 6E 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 WiFi troubleshooting

The EX10 also utilizes advanced troubleshooting techniques, including a room-by-room view of WiFi 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 WiFi issues. Technicians can also use the dedicated WiFi 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 WiFi issues, such as moving (or repositioning) the router, changing channels or using extenders.

THE RIGHT FEATURES FOR THE RIGHT APPLICATION

Residential

Validate customer service-level agreements (SLA) and prove that service delivery is as promised. From 1G to 10G, the EX10 delivers reliable and repeatable metrics along with the birth certificate to share with the subscriber.

GPON/XGS-PON

Guarantee speeds up to 1G on your GPON link and up to 10G on your XGS-PON link while also ensuring connection to the right OLT. With PON ID, ONU ID and TOL and ODN loss, the EX10 is loaded with all the right tools for successful service activation on the first try, without even entering customer premises.

WiFi

Ensure full and seamless user-experience to subscribers by leveraging the EX10's WiFi capabilities. Guarantee 8K video streaming—for each room in the dwelling—while working at home. The EX10 supports the latest WiFi 6E technology, making it now possible to validate WiFi speeds greater than 1G, everywhere on customer premises.

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.

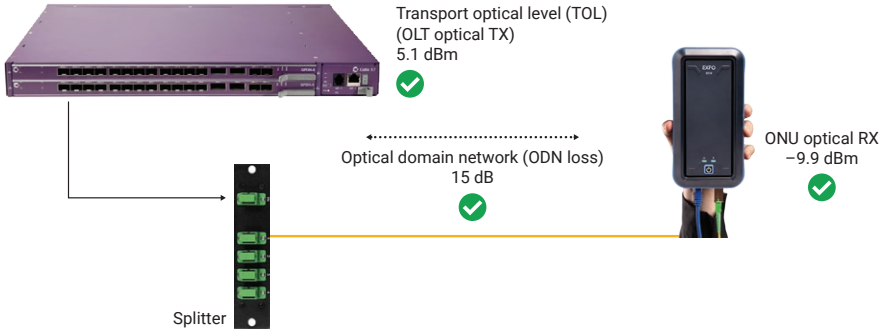


Figure 1. Optical power readings

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.

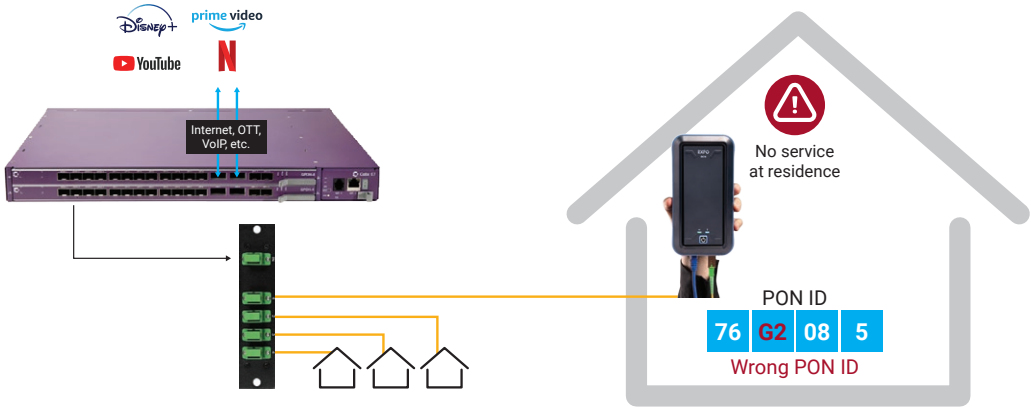


Figure 2. PON ID validation

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.

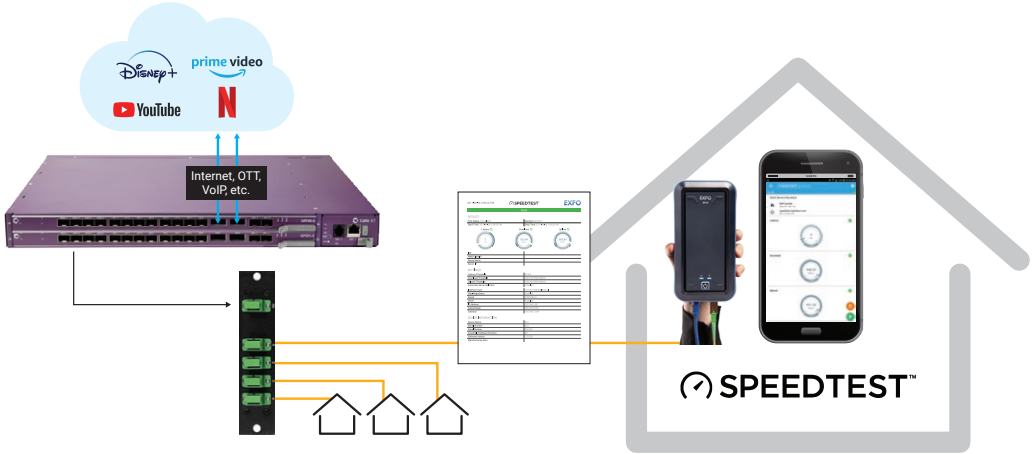
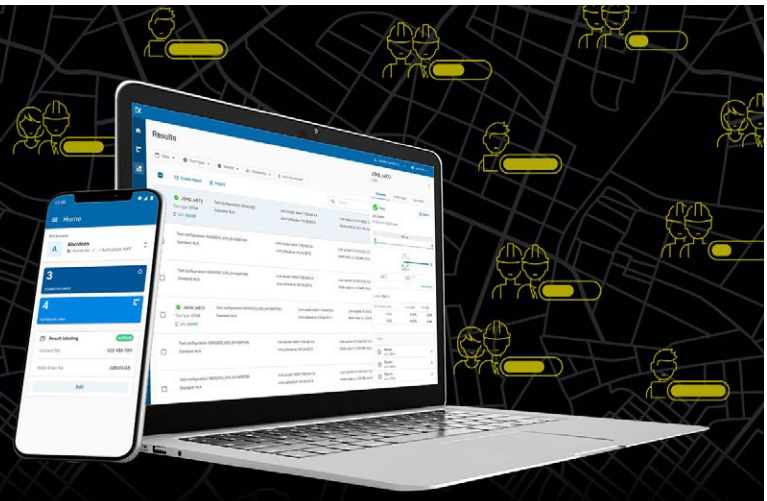


Figure 3. Speedtest over XGS-PON

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

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 >**

EXFO

SPECIFICATIONS

GENERAL SPECIFICATIONS

Size (H x W x D)		105 mm x 200 mm x 60 mm (4 1/16 in x 7 13/16 in x 2 3/8 in)
Weight		0.8 kg (1.75 lb)
Temperature	Operating Storage with battery (short term < 1 month)	0 °C to 40 °C (32 °F to 104 °F) –10 °C to 40 °C (14 °F to 104 °F)
Relative humidity range		≤ 93 %, non-condensing

INTERFACES

Electrical RJ45 test port	100/1000/2500/5000/10000 Mbit/s
Optical SFP test port	1GE SFP, SFP GPON ONT (upcoming release) (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
WiFi	WiFi 6E (2.4 GHz, 5 GHz and 6 GHz)

BATTERY/POWER SUPPLY

Type	Rechargeable Li-ion smart battery
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

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)

SPEED TEST 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

WiFi TESTING CAPABILITIES

WiFi test	• Support of WiFi 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 WiFi 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

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.

ORDERING INFORMATION

EX10

Model
EX10 = Ethernet testing capability Speedtest by Ookla over
electrical/optical Ethernet (up to 10G) and WiFi (up to 6E)
Also includes PON ONT link validation [b]
No Smart-Loopback capabilities

EX10-PRO [a]

Model
EX10-PRO = Ethernet testing capability Speedtest by Ookla over
electrical/optical Ethernet (up to 10G) and WiFi (up to 6E)
Also includes PON ONT link validation [b]
Smart-Loopback capabilities (future : please contact your sales representative)

a. EX10-PRO is needed for future Smart-Loopback capabilities.

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

EXFO headquarters **T** +1 418 683-0211 **Toll-free** +1 800 663-3936 (USA and Canada)

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

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