

# Intelligent Fiber Inspection and Certification Test Set

THE ESSENTIAL TESTING TOOL KIT FOR FTTx SERVICE ACTIVATION AND CERTIFICATION



ConnectoMax

EXpert IP  
TEST TOOLS

EXpert VoIP  
TEST TOOLS

EXpert IPTV  
TEST TOOLS

A versatile combination: fiber inspection probe with analysis software, optical power meter and a complete IP test suite—all housed on the FTB-1 platform. Discover the perfect field-testing solution for fast, clear physical-layer status during service activation, as well as on-the-go IP triple-play certification.

## KEY FEATURES

Fiber inspection with automated connector endface analysis

FTTx service activation and troubleshooting (physical and IP layers)

Triple-play service certification, outside and inside the premises

Power measurement for multiple applications (LAN/WAN, telcos, CATV/MSOs, DWDM testing)

### Standard kit includes

Single magnification Fiber Inspection Probe (FIP-400)

FTB-1 Platform with:

- > Integrated optical power meter
- > Integrated VFL
- > Large 178 mm (7") touchscreen color display (800 x 480; TFT)
- > 8 GB built-in memory (stores over 4000 inspection results)

Empty backplane module

(expandable test capabilities with optional optical or Ethernet test modules)

### Enhance your test set with optional:

ConnectoMax Analysis Software (IEC/IPC-compliant network acceptance)

EXpert Test Tools software bundles for IP-based service testing

High-power optical power meter for CATV and CWDM testing

Dual-magnification fiber inspection probe

Basic or deluxe cleaning accessories

FTB-1 utility glove with shoulder strap

SPEC SHEET

EXFO

## PHYSICAL-LAYER TESTING

Use the Intelligent Fiber Inspection and Certification Test Set to perform the most common tasks during FTTH network service activation.

### The essential first step of fiber testing: connector endface inspection and analysis

- › Clear pass/fail analysis based on IEC/IPC standards
- › Data storage
- › Full reporting capabilities for future referencing
- › Connector cleaning

### FTTH service activation and troubleshooting

- › 1490 nm downstream power measurement
- › VFL for fiber identification and troubleshooting of fiber breaks or macrobends



#### 1 Optical power measurement

- > Allows measurement storage and reporting
- > 7 standard calibrated wavelengths, including 1490 nm for FTTH downstream testing
- > 20 CWDM wavelengths +
- > In-gas +

#### 2 Visual fault locator

- > Troubleshooting inside and outside the home
- > Troubleshooting at the drop terminal

#### 3 Connect<sup>or</sup>Max

- > Connector inspection with FIP-400
- > Automated, IEC/IPC-compliant analysis +
- > Reporting

#### 4 FIP-400 Inspection Probe

- > Single magnification included
- > Dual magnification +

#### 5 FTB-1 utility glove

#### 6 Cleaning kit options

- > **Basic** includes swabs, cleaning pen and pocket QbE +
- > **Deluxe** includes cleaning pen, pocket QbE and cleaners 1.25 and 2.5 mm connectors +

#### Note

+ = optional

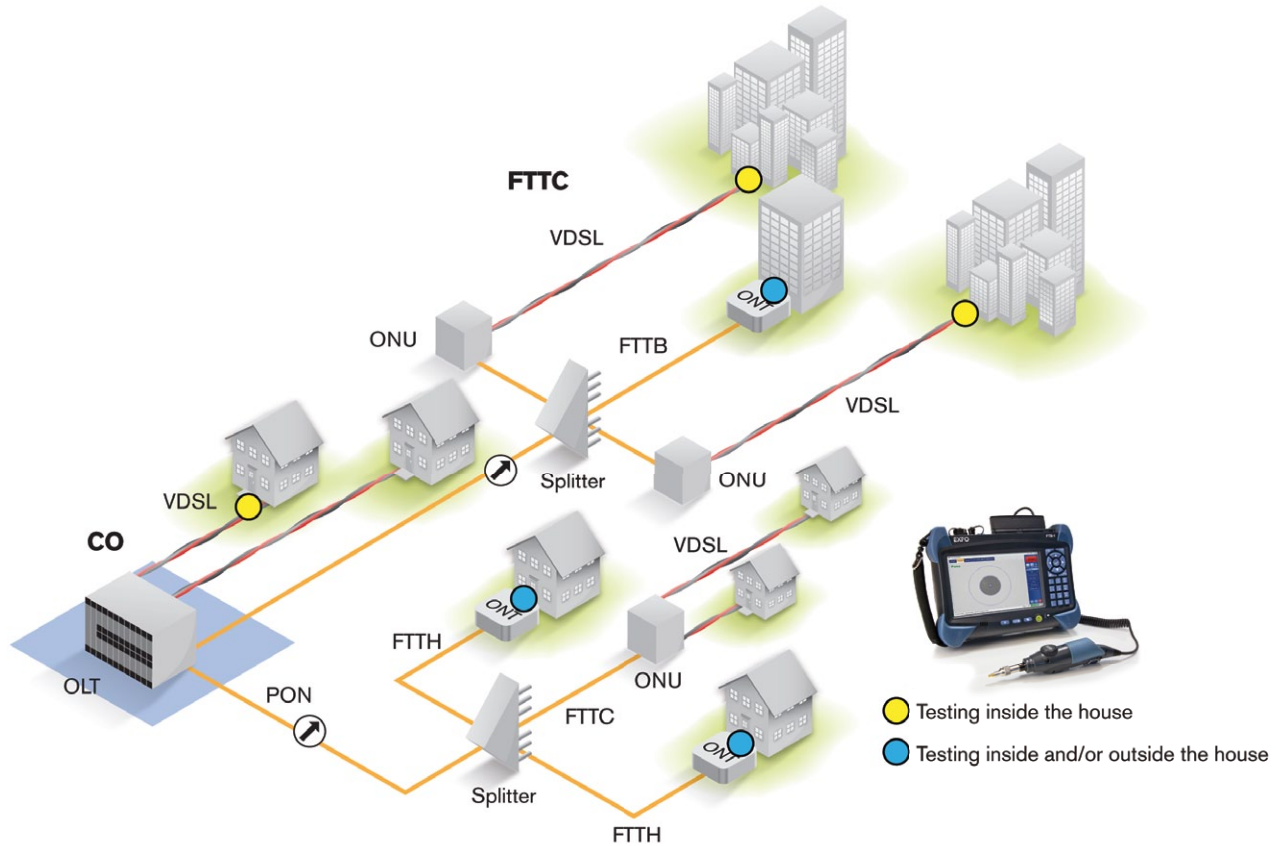


Basic

Deluxe

## CERTIFYING FTTx NETWORKS WITH EXPERT TEST TOOLS

- › In-home triple-play testing for FTTC and FTTH deployments
- › ONT testing for FTTB and FTTH deployments



### EXpert TEST TOOLS

#### EXpert VoIP TEST TOOLS

EXpert VoIP generates a voice-over-IP call directly from the test platform to validate performance during service turn-up and troubleshooting.

- Supports a wide range of signaling protocols, including SIP, SCCP, H.248/Megaco and H.323
- Supports MOS and R-factor quality metrics
- Simplifies testing with configurable pass/fail thresholds and RTP metrics

#### EXpert IP TEST TOOLS

EXpert IP integrates six commonly used datacom test tools into one platform-based application to ensure that field technicians are prepared for a wide range of testing needs.

- Rapidly performs debugging sequences with VLAN scan and LAN discovery
- Validates end-to-end ping and traceroute
- Verifies FTP performance and HTTP availability

#### EXpert IPTV TEST TOOLS

This powerful IPTV quality assessment solution enables set-top-box emulation and passive monitoring of IPTV streams, allowing quick and easy pass/fail verification of IPTV installations.

- Real-time video preview
- Analyzes up to 10 video streams
- Comprehensive QoS and QoE metrics including MOS score

## MULTILAYER FTTH SERVICE ACTIVATION AND CERTIFICATION

### Physical installation (drop cable and ONT installation)

- › Certify drop and ONT connections with ConnectorMax
- › Measure downstream power from the OLT at 1490 nm
- › Drop fiber identification and troubleshooting using the VFL

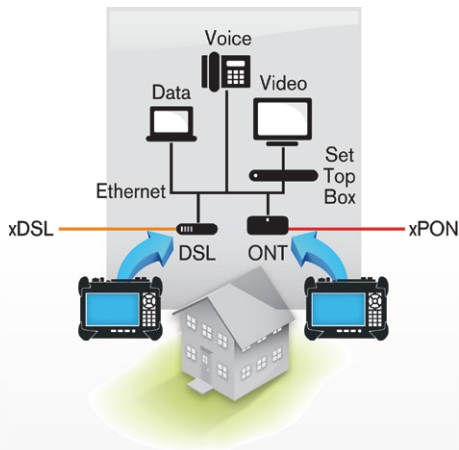


### Service certification inside the home

- › IP testing
- › VoIP testing
- › IPTV testing



## IP SERVICE TESTING



### EXpert IP TEST TOOLS

- > Connectivity test
- > Throughput measurement
- > Response time, downtime, download and upload times

### EXpert VoIP TEST TOOLS

- > Live calls
- > Measure VoIP metrics: MOS, RTP, latency

### EXpert IPTV TEST TOOLS

- > Emulate set-top box
- > View video streams
- > Measure video and audio metrics

## TESTING THE LEGACY FIBER NETWORK

A single test set to inspect fiber endfaces, as well as measure IL and optical power:

- › Quickly easily inspects both the bulkhead and patchcord sides of fiber interconnects
- › Measures optical power and attenuation (with EXFO optical light source)
- › Combines with an EXFO light source to detect modulation frequency and identify individual fibers
- › Integrated power meter for all singlemode and multimode applications, such as LAN, telecom, CATV and DWDM testing





## GENERAL SPECIFICATIONS

Even if the Intelligent Fiber Inspection and Certification Test Set can be ordered as a unique product, it represents a combination of existing and distinct EXFO test solutions. The general and technical specifications will vary depending on the product selected as part of the kit, and are the same as each of the different components taken separately.

For more details on general or technical specifications, we invite you to view the related product specification sheets available on [www.EXFO.com](http://www.EXFO.com).

- › FTB-1 Platform
- › FIP-400 Fiber Inspection Probe
- › ConnectorMax Analysis Software
- › EXpert Test Tools

### ORDERING INFORMATION

#### TK-1-FIP-400-XX-XX-XX-XX-XX-XX-XX-XX-XX-XX

#### Model

#### Display

- S1 = TFT active screen
- S2 = Outdoor-enhanced screen

#### Memory

- 8G = 8 GB internal memory (flash)<sup>b</sup>
- XMEM = 16 GB internal memory (flash)

#### Battery

- 00 = Standard rechargeable lithium-ion battery<sup>b</sup>
- EXT = Extended-life rechargeable lithium-ion battery

#### Wi-Fi/Bluetooth hardware option

- 00 = Without RF components
- RF = With RF capability (Wi-Fi and Bluetooth)

#### Software option

- 00 = Without any software option
- FPSA = ConnectorMax analysis
- FPSAMF = ConnectorMax kit: Single-fiber analysis and reporting: multiple-fiber connectors wizard and reporting
- EXpert VoIP = RTP base call testing software application including packet loss analysis, jitter measurement and complete voice quality metrics
- EXpert IP = IP/Ethernet test tool suite, Includes: FTP performance, HTTP availability, VLAN scan, LAN discovery, ping, traceroute, IP/Ethernet port statistics. Single license for the FTB-1 platform
- EXpert IPTV = IPTV test tool suite
- EXpert TPP = Triple-play bundle for voice, video and data testing on the FTB-1 platform. Includes: EXpert IP Test Tools, EXpert IPTV Test Tools, EXpert VoIP Test Tools and EXpert SIP
- SIP = SIP call signaling support for EXpert VoIP<sup>a</sup>
- SCCP = SCCP call signaling support for EXpert VoIP<sup>a</sup>
- H.323 = H.323 call signaling support for EXpert VoIP<sup>a</sup>
- H.248 = H.248/Megaco call signaling support for EXpert VoIP<sup>a</sup>

#### FTB-1 utility glove option

- 00 = Without FTB-1 utility glove
- G1 = FTB-1 utility glove

#### Cleaning kit option

- 00 = Without cleaning supplies
- Basic = Basic cleaning supplies
- Deluxe = Deluxe cleaning supplies

#### Probe

- FP4S = Inspection probe (400x)<sup>b</sup>
- FP4D = Inspection probe (200x/400x)

#### Connector adapter

- FOA-12 = Biconic
- FOA-14 = NEC D4: PC, SPC, UPC
- FOA-16 = SMA/905, SMA/906
- FOA-22 = FC/PC, FC/SPC, FC/UPC, FC/APC
- FOA-28 = DIN 47256, DIN 47256/APC
- FOA-32 = ST: ST/PC, ST/SPC, ST/UPC
- FOA-54 = SC: SC/PC, SC/SPC, SC/UPC, SC/APC
- FOA-78 = Radial EC
- FOA-96B = E-2000 E-2000/APC
- FOA-98 = LC
- FOA-99 = MU
- WC2 = FOA-FC-ST-SC-LC

#### Power meter

- VPM2X = VFL platform; PM; GeX detector<sup>b</sup>
- VPM3 = VFL; power meter; InGaAs detector; CWDM
- VPM2X-CWDM = VFL platform; PM; GeX detector; CWDM wavelengths calibrated (from 1270 nm to 1610 nm)
- VPM3-CWDM = VFL; power meter; InGaAs detector; CWDM wavelengths calibrated (from 1270 nm to 1610 nm)

Example: TK-1-FIP-400-S1-XMEM-EXT-RF-EXpert VoIP-VPM2X-FOA-98-FP4S-Deluxe-G1

#### Notes

- a. Available if EXpert VoIP is selected.
- b. Standard.

EXFO Headquarters > Tel.: +1 418 683-0211 | Toll-free: +1 800 663-3936 (USA and Canada) | Fax: +1 418 683-2170 | [info@EXFO.com](mailto:info@EXFO.com) | [www.EXFO.com](http://www.EXFO.com)

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

EXFO is certified ISO 9001 and attests to the quality of these products. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit [www.EXFO.com/recycle](http://www.EXFO.com/recycle). **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.**

For the most recent version of this spec sheet, please go to the EXFO website at [www.EXFO.com/specs](http://www.EXFO.com/specs).

In case of discrepancy, the Web version takes precedence over any printed literature.