FIELD-TESTING ESSENTIALS: SMART PORTABLE SOLUTIONS

Optical Fiber Network

Copper Access and DSL Networks

IP Services

Ethernet/DSn Networks

EXFO

YOUR LEADING PARTNER IN ASSESSING WIRELESS AND WIRELINE NETWORKS

No.1
worldwide in portable optical testing

No.2
worldwide in wireless protocol analyzers and network simulators

26
consecutive years of market-share gains

Table of Contents

Fiber Inspection

Fiber Connector Inspection Solutions

FIP-400 Fiber Inspection Probe*

The FIP-400 is a highly versatile probe that detects dirty/damaged connectors with unparalleled precision. Thanks to the FIP-400, checking connectors and other fiber terminations for polish quality and cleanliness has never been easier. Benefit from the best optical resolution in the industry and see scratches and dirt particles as small as 1 µm.

> › Easy back-panel connector inspection
>
> › Truly rugged and lightweight solution for the field
>
> › Image-capture capability for report documentation
>
> › Ideal for all types of connectors: APC, UPC, MTP and more

This product is available as a standalone or as part of our "Make your own kit" offer (see page 18).
This product is available with connector tips (see Accessories section, page 52).

PRODUCT CODE: FIP-400-XX

MAKE YOUR OWN KIT

FTTx Test Solutions

FIP-400 PROBE—FLEXIBILITY AND COMPATIBILITY (with any of the following products)	
EXFO Connect Ecosystem	**PC and Benchhtops**
	with USB2 converter
FTB-1 FTB-200 FTB-500	Laptop/PC IQS-600
Handheld Testers	**Display Only**
AXS-100/110 AXS-200 series FOT-930	FIP-400

Fiber Connector Inspection Solutions

ConnectorMax Analysis Software

Connectors are key components that interconnect all the network elements, which is why maintaining them is essential to ensuring that the equipment will operate at maximum performance and catastrophic network failure may be avoided. A reliable network begins with good connector care and EXFO's cleaning kits will help you achieve this:

> › Results in seconds through simple one-touch operation
> › Automatic pass/fail analysis in the portable FTB-1, FTB-200 and FTB-500 platforms
> › Full test reports for future referencing
> › Compatible with EXFO's FIP-400 series probes

PRODUCT CODE: **FPSA**

FPSAMF (Multifiber)

ConnectorMax—FLEXIBILITY AND COMPATIBILITY

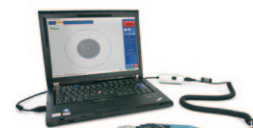| EXFO Connect Ecosystem			PC Version
FTB-1	FTB-200	FTB-500	Laptop/PC

Summary of Recommendations—Test Gear for Successful Connector Maintenance

Product Name and Complementary Products			Use for	Main Characteristics	Compare to	Advantages	Disadvantages
Solution no.	Main Production Solution	Complementary products					
1	FIP-400-D-SINGLE or FIP-400-D-DUAL	None	Connector inspection	› Basic solution allowing manual inspection › Includes a video inspection probe and a handheld field display	2	› Easy to carry in the field › Inspection solution at an affordable entry-level price	› No automated analysis › No data storage capability › Requires technician with a good understanding of connector maintenance
2	FIP-400-USB2-DUAL-FPSA or FIP-400-USB2-SINGLE-FPSA	Require extra PC	Connector inpsection with automated analysis	› Complete solution allowing inspection with automated diagnostics (ConnectorMax software)	1	› Eliminates guesswork › Ensures consistent acceptance criteria (based on IEC/IPC) throughout the company › Help eliminate unnecessary truck rolls › Allows for work documentation (data saving)	› Requires an extra PC (or laptop for field application) › Can be hard to operate in some field applications
3	FP4S-FPSA or FP4D-FPSA	Portable Platform: FTB-1 or FTB-200 or FTB-500	Connector inspection with automated analysis	› Complete solution allowing inspection with automated diagnostics (ConnectorMax software), in a field-adapted platform	1	› Eliminates guesswork › Ensures consistent acceptance criteria (based on IEC/IPC) throughout the company › Help eliminate unnecessary truck rolls › Allows for work documentation (data saving) › Can be combined with other testing needs (e.g., OTDR) for an all-in-one solution	
					2	› Platforms are easier to carry in the field compared to ordinary laptops. › Can be combined with other testing needs (e.g., OTDR) for an all-in-one solution	

Fiber Connector Inspection Solutions

TK-1-FIP-400 Intelligent Fiber Inspection and Certification Test Set

A versatile combination: the fiber inspection probe with analysis software, optical power meter and a complete IP test suite—all housed in 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.

> Fiber connector endface cleaning and maintenance

> Fiber inspection with automated connector endface analysis

> FTTx service activation and troubleshooting (physical and IP layers)

> Triple-play service certification—outside and inside the home

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

PRODUCT CODE: TK-1-FIP-400-XX

ConnectorMax EXpert TEST TOOLS | IP IPTV VoIP

STANDARD TEST KIT INCLUDES:

FIP-400 Fiber Inspection Probe
> Single magnification probe [1]
> 400x resolution

FTB-1 Platform
> Integrated optical power meter and VFL
> Large seven-inch touch screen color display
> 8 GB built-in memory capacity
> EXFO Connect compatibility

FTB Empty Backplane Module
▮ > Locking the space for future module upgrades (optical and Ethernet)

[1] Upgradable to dual magnification as an option

➕ ENHANCE YOUR TEST SET BY ADDING:

ConnectorMax ANALYSIS SOFTWARE

Connector Max Analysis Software
> Automatic pass/fail analysis of endfaces

EXpert TEST TOOLS | IP IPTV VoIP

EXpert Test Tools
> IP, VoIP and IPTV testing offered separately or in a bundle

High-Power Power Meter
> For high power and CWDM testing, ideal for CATV

Connector Cleaning Supplies
> Basic cleaning devices or
> Deluxe cleaning devices

FTB-1 Utility Glove with Shoulder Strap

Fiber Connector Inspection Solutions

Standalone Cleaning Kits*

Basic Cleaning Kit

› 1 x QbE™ Dry Fiber Optic Wipes

› 1 x Electro-Wash® MX Cleaning Pen

› 25 x 2.5 mm Swabs (6" long)

› 25 x 1.25 mm Swabs (6" long)

› Watertight Transit Protector Case's

PRODUCT CODE: CLEANING-KIT-BASIC-XX

Deluxe Cleaning Kit

› 1 x QbE™ Dry Fiber Optic Wipes

› 1 x Electro-Wash® MX Cleaning Pen

› IBC™ Brand Cleaner for 1.25 mm connectors

› IBC™ Brand Cleaner for 2.5 mm connectors

› CLETOP ® Ferrule Cleaning Cassette, Blue Tape Reel (Type B), Green

› Watertight Transit Protector Case's

PRODUCT CODE: CLEANING-KIT-DELUXE-XX

MPO Cleaning Kit

› 1 x QbE™ Dry Fiber Optic Wipes

› 1 x Electro-Wash® MX Cleaning Pen

› IBC™ Brand Cleaner for MPO connectors

› IBC™ Brand Cleaner for 1.25 mm connectors

› IBC™ Brand Cleaner for 2.5 mm connectors

› CLETOP ® Ferrule Cleaning Cassette, Blue Tape Reel (Type B), Green

› Watertight Transit Protector Case's

PRODUCT CODE: CLEANING-KIT-MPO-XX

Utility Glove Cleaning Kit

› IBC™ Brand Cleaner for 1.25 mm connectors

› IBC™ Brand Cleaner for 2.5 mm connectors

› FIP-400 Utility Glove

PRODUCT CODE: CLEANING-KIT-UTILITY-XX

Cleaning kits are optional with any FTB platform or FIP-400 Fiber Inspection Probe order – kit may differ slightly based on platform configuration.

Handheld Optical Testers
Power Meters, Light Source and OLTS

Choosing the right power meter, light sources or OLTS.

Power meters, light sources and optical loss test sets are part of the toolbox essentials for all technicians installing or maintaining any type of fiber network. While some fall under the multipurpose category, providing automated features, others are built for specific tasks such as detecting faults, breaks and microbends. Still others are optimized for certain types of networks, such as FTTx or LAN/WAN architectures. The key is choosing the right tool for the job.

All these test sets offer different features and perform a variety of functions. Below are quick reference charts to help you choose the right fit for your needs.

LIGHT SOURCES AND POWER METERS

	Reference feature	Tone detection 270Hz, 1kHz, 2kHz	Auto-wavelength	Semi-automated (Toggle mode)	Data storage (power meter)	Backlit screen	Calibrated wavelengths (power meter)	Warranty	Batteries	Connector types
FLS/FPM-600	●	●	●	●	●	●	40	3 years	Rechargeable	Wide range EUI/FOA
FLS/FPM-300	●	●	●				10	3 years	AA	Wide range EUI/FOA
ELS/EPM-50	●	●					5	1 year	AA	Limited U2,5mm/FC/SC/ST

OLTS

	Reference feature	Tone detection 270Hz, 1kHz, 2kHz	Auto-wavelength	Semi-automated (Toggle mode)	Fully automated	Data storage (power meter)	Backlit screen	VFL Option	ORL measurement	Length measurement	Taskset Option	Calibrated wavelengths (power meter)	Warranty	Batteries	Connector types
FOT/FTB-3930	●	●	●		●	●	●	●	●	●	●	FOT-932: 40 FOT-932X: 42 FOT-933: 40	3 years	Rechargeable	Wide range EUI/FOA
FOT-600	●	●	●	●		●	●	●				40	3 years	Rechargeable	Wide range EUI/FOA
FOT-300	●	●	●									10	1 year	AA	Wide range EUI/FOA

Handheld Optical Testers

FiberBasix 50 Handheld Testers

The FiberBasix 50 Handheld Testers deliver simple, accurate measurement of signal attenuation during fiber-optic cable installation. The ELS-50 Light Source or EPM-50 Power Meter can be purchased individually or in one of five test kits* designed for specific user/testing needs: LAN, outside plant, contractors, FTTH and CATV.

> › Easy-to-use interface for error-free testing

> › Interchangeable connectors for first-class flexibility

> › Cost-effective, rugged and highly reliable

> › Ideal for testing and troubleshooting optical premises networks

> › Five test kits to choose from: LAN, outside plant, contractors, FTTH and CATV

MAKE YOUR
OWN KIT

FTTx
TEST SOLUTIONS

ELS-50 Light Source: Multiwavelength Capability**

EXFO's ELS-50 Light Source provides excellent stability and high measurement accuracy for up to three singlemode wavelengths or two multimode wavelengths. It is the perfect complement to the EPM-50 Power Meter to measure attenuation in fiber-optic links.

PRODUCT CODES: ELS-50-XX-LSA-89-RB

EPM-50 Power Meter**

The EPM-50 Power Meter provides highly accurate power measurements, as well as reference value setting capabilities. Plus, it offers power autonomy of 300 hours, for reliable, long-lasting performance in the field.

PRODUCT CODES: EPM-50-XX-PMA-22-XX

This product is available as a standalone or as part of the FiberBasix 50 kit (see next page).

** This product can also be ordered with other handheld test equipment as part of our "Make your own kit" offer (see page 18).*

Handheld Optical Testers

FiberBasix 50 Kits

For all your basic fiber-testing needs—one kit does it all

RELIABLE
Offers powerful stability and reliability to perform loss measurement in telco, CATV and FTTH applications using dual and triple wavelengths

POWERFUL
Allows for power measurements up to 26 dBm with battery autonomy of over 300 hours and high-power configuration for CATV and telco markets.

VERSATILE
Equipped with interchangeable connector adapters and enable tone-generation for fiber identification.

FBK-51 LAN Test Kit

› EPM-53-RB Power Meter, InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot

› ELS-50-12C-RB Light Source, 850/1300 nm LED (one port), FC adapter, rubber boot

FBK-52 Outside Plant Test Kit

› EPM-53-RB Power Meter, InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot

› ELS-50-23BL-RB Light Source, 1310/1550 nm laser (one port), FC adapter, rubber boot

FBK-54 FTTH Test Kit

› EPM-53X-RB Power Meter, high-power InGaAs detector, Universal 2.5 mm push-pull adapter and FC adapter, Rubber boot

› ELS-50-235BL-RB Light Source, 1310/1490/1550 nm laser (one port), FC adapter, rubber boot

FBK-55 CATV Test Kit

› EPM-53X-RB Power Meter, high-power InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot

› ELS-50-23BL-RB Light Source, 1310/1550 nm laser (one port), FC adapter, rubber boot

FBK-53 Contractor Kit

› EPM-53-RB Power Meter, InGaAs detector, universal 2.5 mm push-pull adapter and FC adapter, rubber boot

› ELS-50-12C-RB Light Source, 850/1300 nm LED (one port), FC adapter, rubber boot

› ELS-50-23BL-RB Light Source, 1310/1550 nm laser (one port), FC adapter, rubber boot

ALL THESE KITS INCLUDE:

› Carrying case GP-10-061

› Each power meter comes with extra power-meter adapters: PMA-54 (SC) and PMA-32 (ST)

› Each light source comes with extra light-source adapters: LSA-91 (SC) and LSA-90 (ST)

› Soft pouch

Note: These FiberBasix 50 kits replace the phased-out FiberBasix 100 kits.

Handheld Optical Testers

FOT-300 Optical Loss Test Set*

The FOT-300 Optical Loss Test Set (OLTS) is the most optimized OLTS on the market. It offers up to three singlemode or two multimode wavelengths on a single port and transmits with a wavelength-identification digital encrypted protocol, allowing any compatible unit to automatically use the proper calibration parameters.

> › No offset nulling required
> › Power autonomy of 260 hours
> › Three-year warranty and recommended calibration interval, for dramatically reduced cost of ownership

PRODUCT CODE: FOT-30X-XX

FLS-300 Light Source*

The FLS-300 is the most versatile, complete light source available with up to three singlemode wavelengths on a single port or four wavelengths (two multimode and two singlemode) on two ports.

> › Wavelength-identification digital encrypted protocol transmission such that any compatible unit will automatically use the proper calibration parameters
> › Autonomy of 120 hours
> › Instrument identification available in six languages
> › Highest output power in the industry

PRODUCT CODE: FLS-300-XX

FPM-300 Power Meter*

The FPM-300 Power Meter automatically uses the proper calibration parameters when combined with the FLS-300 or FOT-300 source units.

> › Highly accurate unit offering 10 calibrated wavelengths and reference values
> › No offset nulling required, reducing measurement time
> › Three-year warranty and recommended calibration interval, for dramatically reduced cost of ownership
> › Autonomy of over 300 hours

PRODUCT CODE: FPM-30X-XX

MAKE YOUR
OWN KIT

FTTx
Test Solutions

This product is available as a standalone or as part of our "Make your own kit" offer (see page 18).

Handheld Optical Testers

FOT-600 Optical Loss Test Set*

The FOT-600 Optical Loss Test Set (OLTS) combines the light source and power meter features from EXFO's 600 series. It offers pass/fail test functions, user-definable thresholds and a memory capacity of more than 1000 data items—ideal for link/system qualification.

> › Error-free, time-saving features: automatic wavelength recognition and no offset nulling required
> › Easy data management and USB transfer to PC
> › Automatic wavelength switching function for multiwavelength testing
> › Standard VFL for quick and easy troubleshooting

PRODUCT CODE: FOT-60X-XX

FLS-600 Light Source*

The FLS-600 Light Source offers laser, LED and VCSEL models, as well as various wavelength options. It helps you save time by building a list of your favorite wavelengths, allowing a faster sweep when testing.

> › Up to three singlemode wavelengths (1310, 1550, and 1490 or 1625 nm) on a single port, or four wavelengths (850/1300 nm and 1310/1550 nm) on two ports
> › Three-year warranty for low cost of ownership
> › Error-free, time-saving test features
> › Controlled multimode launching output

PRODUCT CODE: FLS-600-XX

FPM-600 Power Meter*

The FPM-600 Power Meter offers a memory capacity of 1000 data items as well as converter software, for easy data management and USB transfer. It comes with more than 40 calibrated wavelengths.

> › Adapts to all network types: LAN, CWDM, DWDM, etc.
> › Error-free, time-saving features: automatic wavelength recognition and no offset nulling required
> › High accuracy, wide dynamic range and high power measurement capability (up to 26 dBm)
> › User-configurable pass/fail thresholds with LED indicator

PRODUCT CODE: FPM-60X-XX

MAKE YOUR OWN KIT

This product is available as a standalone or as part of our "Make your own kit" offer (see page 18).

Handheld Optical Testers

FOT-930 MaxTester Multifunction Loss Tester*

The FOT-930 MaxTester Multifunction Loss Tester delivers fully automated loss results in 10 seconds for up to three wavelengths, as well as automatic ORL and fiber-length measurements with complete, high-quality test documentation. Combined with its video FIP, this unit also enables the easy detection of dirty or damaged connectors, providing a clear view of connectors and fiber ends on a high-resolution display screen.

› Combines a powerful light source, a power meter, a visual fault locator, a full-duplex digital talk set and a video fiber inspection probe

› High-resolution color display and battery autonomy: 9 hours

› Ideal for testing FTTx-based cable TV, POTS and high-speed data services

› Cost of ownership: lowest in the industry, thanks to three-year warranty and recommended calibration interval, error-free testing and minimized training time

PRODUCT CODE: FOT-93X-XX

PPM-350C PON Power Meter*

The PPM-350C PON Power Meter enables quick, on-site testing of all PON signals, anywhere on the network. Its workflow management capabilities and enhanced ruggedness will increase the efficiency of your daily deployment activities. Moreover, its visual fault locator port allows for easy fiber identification and macrobend location. The PPM-350C also features pass/warning/fail LED indicators with user-defined thresholds.

› Enables fast deployment, through quick reporting and workflow management

› Simultaneous measurement of all PON signals, anywhere on the network

› Innovative workflow management, for boosted test routine efficiency

› Enhanced rugged and weatherproof design

PRODUCT CODE: PPM-35XC-XX

THE REFERENCE IN PON MEASUREMENT

Handheld Optical Testers

FLS-240 Pocket Pal Visual Fault Locator*

The FLS-240 Pocket Pal Visual Fault Locator is a straightforward solution for identifying breaks, bends, faulty connectors or splices, as well as other causes of signal loss. The convenient FLS-240 locates faults visually by creating a bright red glow at the exact location of the fault on singlemode or multimode fibers.

> › Detects faults over distances of up to 5 km
> › Bright red laser at 635 nm
> › Pulsed and CW operation for up to 50 hours (typical)
> › Universal connector for 2.5 or 1.25 mm ferrule

PRODUCT CODE: FLS-24X-univ

This product is available as a standalone or as part of our "Make your own kit" offer (see page 18).

MAKE YOUR
OWN KIT

FVA-600 Variable Attenuator*

Designed for optimal flexibility and field usability, the FVA-600 delivers the highest performance of all handheld optical attenuators on the market.

> › Most compact and rugged portable attenuator on the market
> › Low cost of ownership: three-year warranty and recommended calibration interval
> › Three operating modes: Absolute, Relative and Power Input
> › Backlit display, optimized for low-light environments
> › USB-based remote control capability, for easy test routine integration
> › Rechargeable li-ion battery

PRODUCT CODE: FVA-600-B-XX

This product is available as a standalone or as part of our "Make your own kit" offer (see page 18).

MAKE YOUR
OWN KIT

Live Fiber Identifiers

LFD-200 Live Fiber Detector

The LFD-200 Live Fiber Detector detects traffic and measures signals anywhere on singlemode fibers without having to disconnect them. What's more, it uses a safe, reliable macrobending technique that does not disrupt traffic, nor damage or overstress the fiber.

> › Traffic, optical tone and continuous signal detection
> › Direct dBm measurements
> › LFD-200E model: wide power range of 23 to –50 dBm

PRODUCT CODE: `LFD-20X-X`

LFD-250B Live Fiber Detector

The LFD-250B Live Fiber Detector combines live-fiber detection and dark fiber pinpointing in one cost-effective tool, in addition to introducing step-motor-activated bending, making fixed-angle bending a thing of the past.

> › Induces minimal loss: ≤1 dB
> › Fail-safe detection and results
> › Detects if a fiber is active or not prior to maintenance
> › Locates a particular dark fiber using tone recognition (270 Hz, 1 kHz, 2 kHz)
> › Identifies traffic direction on a live fiber
> › Displays the power transmitted through the fiber
> › Three times faster test time

PRODUCT CODE: `LFD-250B`

LFD-300B/TG-300B FiberFinder
Live Fiber Identifier/Tone Generator

The LFD-300/TG-300 FiberFinder Live Fiber Identifier/Tone Generator will pinpoint a specific live fiber without having to disconnect it and without having to guess. The end result: no more network outages caused by inadequate fiber detection/ identification, and a minimized need to access the network, helping to prevent errors.

> › Pinpoints a specific live fiber using EXFO's FiberFinder™ functionality
> › Induces minimal loss: ≤1 dB
> › Locates a particular dark fiber using tone recognition (270 Hz, 1 kHz, 2 kHz)

PRODUCT CODES: `LFD-300B`
`TG-300B`
`TK-FF` (Fiber Finder Kit)

FiberFinder™

FiberBasix

FiberBasix

EXFO

EXFO

ELS-50 Light Source

EPM-50 Power Meter

Make Your Own Kit

Handheld Optical Testers—
Make Your Own Kit

EXFO offers a whole variety of handheld test equipment built for specific applications. Keeping in mind that one size does not fit all, EXFO gives you the opportunity to build your personal testing tool kit based on your needs. Simply choose from a selection of various testing devices.

To complete the kit, a solid carrying case is provided with each "Make your own kit" bundle as well as a basic or deluxe cleaning tool package.

BUILD YOUR KIT TO MATCH SATISFY YOUR NEEDS

Choose any testing device from the following:

| EPM-50/ELS-50 | PPM-350C | FVA-600 | FIP-400 (max. 1 per kit) |

| LFD-200 | FLS-300/FPM-300/FOT-300 | FLS-600/FPM-600/FOT-600 | FLS-240 |

Note: Minimum of two units and maximum of four

Carrying case product designation locations

1 ELS-50
EPM-50
ELS-100
EPM-100
FLS-300
FPM-300
FOT-300
ELS-500
EPM-500
FLS-600
FPM-600
FOT-600
PPM-350C
FVA-600
FIP-400-D (display)
FIP-400-USB1
FIP-400-USB2

2 FIP-400-P-Single
FIP-400-P-Dual

3 FLS-240
LFD-200
ELS-50
EPM-50

4 Standard cleaning supplies

Deluxe cleaning supplies

Handheld Optical Testers—Best-Seller Kits

FTTx Service Activation Kit

Includes:
> › PPM-350C
>
> › FIP-400 with display
>
> › Cleaning kit

Test and Inspection Kit

Includes:
> › FLS-300
>
> › FPM-300
>
> › FIP-400 with display
>
> › FLS-240
>
> › Cleaning kit

Data Center/Contractor (QUAD) Kit

Includes:
> › Two ELS-50
>
> › EPM-50
>
> › FIP-400 with display
>
> › Cleaning kit

Network Qualification Kit

Includes:
> › FLS-600
>
> › FPM-600
>
> › FVA-600
>
> › Cleaning kit

OTDRs and iOLM Testing
Optical Time-Domain Reflectometers

OTDRs—Dedicated

AXS-100 Handheld OTDR

The AXS-100 is a powerful handheld unit designed for singlemode OTDR troubleshooting and in-service validation and troubleshooting of last-mile PON extensions.

› Wavelengths: 1310/1550/1625 nm

› Dynamic range: 29/28/28 dB

› In-service PON troubleshooting using 1625 nm port

› Battery autonomy: 8 hours

PRODUCT CODE: AXS-100-XX

AXS-110 All-Fiber Handheld OTDR

Combining singlemode and multimode functionalities, the AXS-110 All-Fiber OTDR is optimized for FTTx PON certification, as well as enterprise/premises network testing and troubleshooting. Test multimode fiber on premises—all with a single OTDR unit—and maximize your return on investment.

› Pass/fail features complying with standards such as TIA 568c and IEEE 802.3ah

› Highest dynamic range of the industry for a handheld OTDR

› Power meter option, for crosschecking the total loss using the built-in OTDR laser in continuous source mode

› PON-optimized (up to 1x64) to avoid turn up failures at splitters

PRODUCT CODE: AXS-110-XX

Model	Wavelengths (nm)	Dynamic ranges (dB)
AXS-100 Access OTDR Designed for singlemode OTDR troubleshooting (in-service PON troubleshooting option)	1310/1550/1625	29/28/28
AXS-110-SM Singlemode OTDR Ideal for FTTx/access and CATV testing	1310/1550	32/30
AXS-110-MM Multimode OTDR Optimized for enterprise/premises/private network testing on both 50 and 62.5 mm multimode fiber	850/1300	24/25
AXS-110 All-Fiber OTDR Combines singlemode and multimode capabilities for enterprise/campus/access networks	850/1300/1310/1550	24/25/32/30

OTDRs—Platform-Based

FTB-1 Platform—Empowering Frontline Technicians

The FTB-1 is a small, handheld, modular platform optimized for fast, powerful, dedicated FTTH and Ethernet test applications. Its lightweight, 7-inch touchscreen and unmatched connectivity make it the ideal tool for field technicians installing and maintaining fiber-optic networks.

> › Flexible connectivity: USB, mobile, Wi-Fi and Bluetooth capabilities

> › Utilities: supports third-party applications and tools that enable technicians to complete their work in the field

> › Test management/reporting: lets you take advantage of the EXFO Connect environment to monitor field operations (local and remote)

> › PC-oriented: Intel ATOM processor with Windows-embedded standard operating system, for optimized productivity and versatility

> › Power management: latest battery technology for unmatched operation autonomy

EXFO Connect Compatible

FTB-1 SUMMARY CONFIGURATION CHART

OTDR configuration	Wavelengths (nm)							Dynamic range at 20 µs (dB)	Event dead zone (m)	Attenuation dead zone (m)	Multimode (MM)	Singlemode (SM)
	850	1300	1310	1490	1550	1625	1650					
FTB-720	•	•	•		•	•		27/26/36/34/34	0.8	4/4.5/5/5/5	•	•
FTB-720-iOLM	•	•	•		•	•		27/26/36/34/34	0.8	4/4.5/5/5/5		•
FTB-730			•	•	•	•	•	39/35/37/39/37	0.8	4/4.5/4.5/4.5/4.5	•	•
FTB-730-iOLM			•	•	•	•	•	39/35/37/39/37	0.8	4/4.5/4.5/4.5/4.5		•

OTDRs—Platform-Based

FTB-720 LAN/WAN Access OTDR

Module for FTB-1

iOLM READY
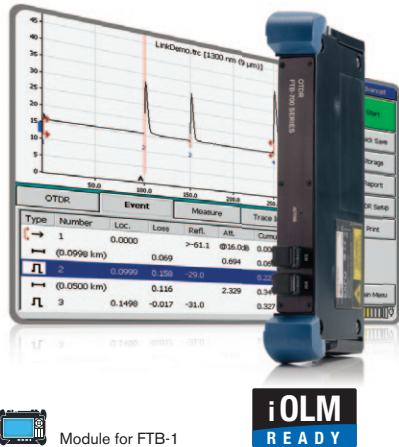
The FTB-720 module is the ideal construction OTDR for everyday testing in any access and LAN/WAN network.

› Dynamic range of up to 35 dB

› Event dead zone as low as 0.8 m

› Combined singlemode/multimode wavelengths (12CD-23B model)

› Integrated tool: combines a visual fault locator, inspection probe, broadband power meter and a CW source mode

› Controlled launch conditions for more accurate loss measurements

› Live fiber testing at 1625 nm

› iOLM Ready

PRODUCT CODE: FTB-720-XX

FTB-730 PON/MDU OTDR

Module for FTB-1

iOLM READY

The FTB-730 module is perfect for fiber installers to seamlessly characterize splitters in PON FTTx and MDU applications.

› Test through high-port-count splitters (up to 1x128)

› Singlemode port for in-service troubleshooting

› Dynamic range of up to 39 dB

› Short acquisition time to speed up the deployment process

› In-line optical power meter

› iOLM Ready

PRODUCT CODE: FTB-730-XX

SPECIFIC TEST SOLUTIONS
FOR SPECIFIC REALITIES

APPLICATIONS

LAN/WAN
DATA CENTERS
PRIVATE/ENTERPRISE
P2P ACCESS
CELLULAR BACKHAUL (FTTT/FTTA)

FTTx
PASSIVE OPTICAL (PON)
MDU
SHORT METRO

LONG-HAUL
METRO/CORE
CWDM
CATV
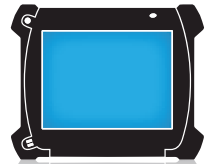

SUBMARINE CABLES
ULTRA-LONG-HAUL

AXS-100/AXS-110	FTB-1	FTB-200	FTB-500

OTDR AND iOLM SOLUTION

AXS-100/AXS-110	FTB-1	FTB-200	FTB-500
> **LIGHTWEIGHT, ON-THE-GO ALTERNATIVE** AXS-110	> **HIGH-EFFICIENCY FRONTLINE TESTING** FTB-1 + FTB-720 or FTB-1 + FTB-720-iOLM	> **QUAD POWERHOUSE** FTB-200 + FTB-7200D	
> **LAST-MILE, HANDHELD TROUBLESHOOTING UNIT** AXS-100 > **LIGHTWEIGHT, ON-THE-GO ALTERNATIVE** AXS-110	> **FASTER FTTx/MDU TESTING** FTB-1 + FTB-730 or FTB-1 + FTB-730-iOLM	> **COMPLETE NETWORK CONSTRUCTION SOLUTION** FTB-200 + FTB-7300E	
		> **NO-COMPROMISE METRO/ CWDM VERSATILITY** FTB-200 + FTB-7400E > **LONG-HAUL REACH** FTB-200 + FTB-7500E	> **TOTAL FIBER CHARACTERIZATION KIT** FTB-500 + FTB-7500E + FTB-5500B + FTB-5800
		> **ULTRA-LONG-HAUL PORTABLE COMBO** FTB-200 + FTB-7600E	> **ULTIMATE POWER FOR ULTRA-LONG DISTANCES** FTB-500 + FTB-7600E + FTB-5500B + FTB-5800

iOLM—intelligent Optical Link Mapper

An OTDR-based software application compatible with iOLM ready OTDR modules.

The iOLM lets you take advantage of the full power of your OTDR, bringing automation to a new level—and enabling even the untrained technician to become a test expert in no time.

iOLM READY

What is the iOLM?

Using an automated multipulse acquisition approach and advanced algorithms, the iOLM is an OTDR-based application that delivers detailed information on every element on the link, in a single button operation—providing maximum intelligence and simplicity for expert-level link characterization.

Powered by

WDM AWARE™
T E C H N O L O G Y

› Minimize training and avoid misconfiguration with a self-setting unit

› Turn complex OTDR information into simple and accurate analysis with Link-Aware technology

› Identify each event on the network and obtain a straightforward fiber link status with the Optical Link View

› Benefit from prompt diagnosis to fix network issues quickly and efficiently

› OTDR trace file generation (.sor)
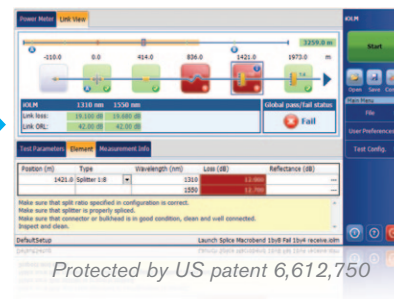
| **Launch multiple OTDR acquisitions** | → | **Analyze the traces** | → | **Compound the results** | → | **Display a schematic link view and prompt diagnosis** | → |

Protected by US patent 6,612,750

The iOLM software application is designed for FTB-1/FTB-200/730 OTDR hardware. There are three ways to benefit from it, choose yours:

1 iOLM ONLY — FTB-720/730 with iOLM application

2 OTDR COMBO — FTB-720/730 with iOLM and OTDR application combo

3 UPGRADE — iOLM Software option for your existing FTB-720/730 OTDR

PRODUCT CODES:

| FTB-720/730-iOLM | (iOLM only) |
| FTB-720/730-oi | (OTDR and iOLM) |

OTDRs—Platform-Based

FTB-200 Compact Platform—
The Intelligent Platform Built for the Supertech

The smaller, lighter platform built for the supertech, the FTB-200 combines singlemode and multimode fiber test functionalities—ideal for FTTx, metro/access and long-haul network testing in the field. Whether you are testing triple-wavelength insertion loss at the CO or data integrity at the core, the FTB-200 has the power, speed and modularity you need to accommodate two interchangeable modules ranging from OTDRs and loss testers to SONET/SDH and Ethernet analyzers.

› Flexible connectivity with USB, mobile, Wi-Fi and Bluetooth capabilities

› Fiber characterization and construction with OTDR loss, dispersion and multitest modules

› Business service activation with OTDR and Ethernet test modules

› Compatible with any of EXFO's industry-renowned OTDR modules, which offer the shortest dead zones available: the FTB-8105/8115/8120/8130 Transport Blazer next-generation SONET/SDH test modules as well as the FTB-8510/8510B/8510G Packet Blazer Ethernet test modules

› New software functionalities for simpler, faster OTDR testing

› Designed for the field: lightweight and compact; resistant to shock, water, dust and common chemicals; door panels for extra port protection

› Battery-powered solution for SONET/SDH, Ethernet, loss and OTDR testing

OTDRs—Platform-Based

FTB-7000 Series OTDRs

The FTB-7000 series delivers accurate detection and analysis of fiber splices, connectors, breaks and other events along a fiber link. Thanks to various models, this OTDR series provides dynamic ranges ideal for long-haul networks.

› Singlemode configurations at 1310, 14110, 1550 and 1625 nm

› Multimode configurations at 850 and 1300 nm

› Up to 52 000 acquisition points for sampling

› High-speed traces starting at 10 seconds

OTDR CONFIGURATION CHART

| OTDR configuration	Wavelengths (nm)													Dynamic range at 20 µs (dB)	Event dead zone (m)	Attenuation dead zone (m)	Multimode (MM)	Singlemode (SM)
	850	1300	1310	1383	1470	1490	1510	1530	1550	1570	1590	1610	1625	1650					
FTB-7200D	•	•	•						•						27/26/36/34	1	3/4/4.5/5		
FTB-7300E			•			•			•						39/35/37/39/37	0.8	4/4.5/4.5/4.5/4.5	•	•
FTB-7400E		•		•					•				•	•	42/40/41/41	0.8	4/4/4.5/4.5		•
FTB-7400-E-CWS					•	•	•	•					•		41/41/41/41	0.8	4.5		•
FTB-7400E-CWCL									•	•	•	•			41/41/40/40	0.8	4.5		•
FTB-7500E			•						•				•		45/45/45	0.8	4/4.5/4.5		•
FTB-7600E			•						•				•		50/50/48	1/1.5/1	5/5/5		•

FTB-7200D LAN/WAN Access OTDR

› Dynamic range of up to 36 dB

› Event dead zone as low as 1 m

› Four wavelengths (12CD-23B model) combined with an optional visual fault locator

› Controlled launch conditions for more accurate loss measurements

PRODUCT CODE: FTB-7200D-XX
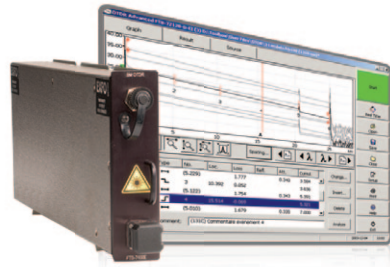

Module for FTB-200 and FTB-500

FTB-7300E PON/MDU OTDR

› Test through high-port-count splitters of (up to 1x128)

› Singlemode port for in-service troubleshooting

› Dynamic range of up to 39 dB

› Short acquisition time to speed up deployment process

PRODUCT CODE: FTB-7300E-XX

40 Gbit/s TEST SOLUTIONS

FTTx TEST SOLUTIONS
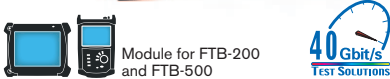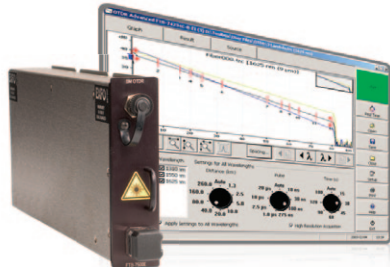
Module for FTB-200 and FTB-500
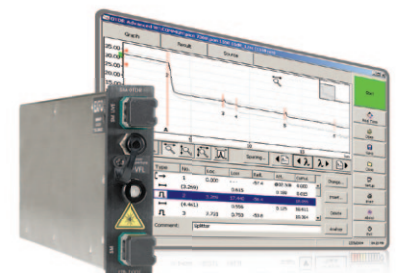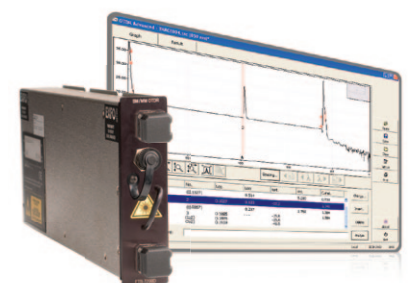
OTDRs—Platform-Based

FTB-7400E Metro/CWDM OTDR

› Up to 256 000 sampling points for higher trace resolution

› Event dead zone of 0.8 m and attenuation dead zone of 4 m for pinpoint event location

› Low water peak fiber testing at 1383 nm to characterize new fiber or assess the degradation of legacy fiber

› Up to four test wavelengths (1310/1383/1550/1625 nm) for legacy, CWDM and DWDM link characterization

› Dynamic range of up to 42 dB for long-haul testing

› Tests through CWDM-based multiplexers and demultiplexers at ITU-recommended wavelengths

PRODUCT CODE: FTB-7400E-XX

Module for FTB-200 and FTB-500

FTB-7500E Metro/Long-Haul OTDR
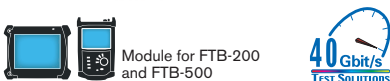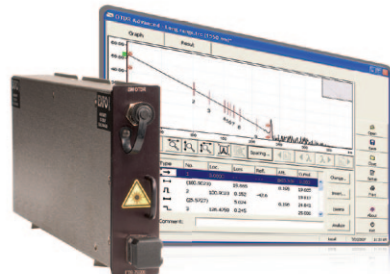
› Up to 256 000 sampling points for higher trace resolution

› Event dead zone of 0.8 m and attenuation dead zone of 4 m for pinpoint event location

› Dynamic range of up to 45 dB for long-haul testing

› Linearity of ±0.03 dB/dB (best in the industry)

PRODUCT CODE: FTB-7500E-XX

Module for FTB-200 and FTB-500

FTB-7600E Ultra-Long-Haul OTDR

› Single and dual wavelength configurations (1310/1550/1625 nm)

› Up to 256 000 sampling points for higher trace resolution

› Dynamic range of up to 50 dB

› Linearity of ±0.03 dB/dB (best in the industry)

PRODUCT CODE: FTB-7600E-XX

Module for FTB-200 and FTB-500

OTDRs—Complementary products

FastReporter 2 Data Post-Processing Software

A consolidated data management and post-processing tool designed to increase the reporting productivity for connector endface inspection and all types of optical-layer testing: optical link mapper (iOLM), OTDR, ORL, loss, PMD and CD.

> › Intuitive graphical user interface (GUI)
>
> › Live templating for OTDR testing
>
> › Powerful batch processing
>
> › Bidirectional batch analysis
>
> › Automatic tool for duplicated measurement verification

PRODUCT CODE: FR2-XX

FTB-LTC/PSB/SPSB Launch Test Cable/Pulse Suppressor Box

Used in conjunction with an OTDR, the FTB-LTC/PSB/SPSB covers the OTDR's dead zone, enabling loss measurement on the first and last connections of a tested fiber.

> › Singlemode and multimode fiber models
> › Wide selection of connectors for quick connection to most OTDR and patch panel ports
> › Modular launch test cable (FTB-LTC) and stand-alone pulse suppressor box (PSB): available in lengths of 300, 500, 1000 and 1500 m

PRODUCT CODES:

| Model	Description
FTB-LTC-B-300-XX-YY	Launch test cable single module for FTB platform, singlemode fiber 9/125, 300 meters, with pigtails
FTB-LTC-B-500-XX-YY	Launch test cable single module for FTB platform, singlemode fiber 9/125, 500 meters, with pigtails
FTB-LTC-B-1000-XX-YY	Launch test cable single module for FTB platform, singlemode fiber 9/125, 1000 meters, with pigtails
FTB-LTC-C-300-XX-YY	Launch test cable single module for FTB platform, multimode fiber 50/125, 300 meters, with pigtails
FTB-LTC-D-300-XX-YY	Launch test cable single module for FTB platform, multimode fiber 62.5/125, 300 meters, with pigtails
PSB-B-500-XX-YY	Carrying case pulse suppressor box, singlemode fiber 9/125, 500 meters, with pigtails
PSB-B-2200-XX-YY	Carrying case pulse suppressor box, singlemode fiber 9/125, 2200 meters, with pigtails
PSB-C-300-XX-YY	Carrying case pulse suppressor box, multimode fiber 50/125, 300 meters, with pigtails
PSB-D-300-XX-YY	Carrying case pulse suppressor box, multimode fiber 62.5/125, 300 meters, with pigtails
SPSB-B-150-XX-YY	Soft pulse suppressor box, singlemode fiber 9/125, 150 meters, with pigtails
SPSB-B-500-XX-YY	Soft pulse suppressor box, singlemode fiber 9/125, 500 meters, with pigtails
SPSB-C-300-XX-YY	Soft pulse suppressor box, multimode fiber 50/125, 300 meters, with pigtails
SPSB-D-300-XX-YY	Soft pulse suppressor box, multimode fiber 62.5/125, 300 meters, with pigtails

CWDM/DWDM

CWDM/DWDM

FTB-7400E Metro/CWDM OTDR

High-resolution OTDR covering longer metro distances and ITU-based CWDM networks.

› Achieve end-to-end characterization by testing through CWDM-based multiplexers and demultiplexers at ITU-recommended wavelengths

› No service window required by performing in-service testing from the headend

› Convenience and flexibility: eight wavelengths in one platform

› Commercial and metro services

› Cell backhauls (CBH)

› Bandwidth extension

› CWDM network testing

Module for FTB-200
and FTB-500
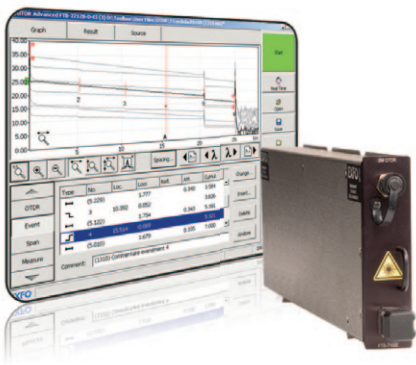
	CWS	CWCL
Wavelength (nm)	1470 ± 3/1490 ± 3/1510 ± 3/1530 ± 3	1550 ± 3/1570 ± 3/1590 ± 3/1610 ± 3
Dynamic range at 20 μs (dB)	41/41/41/41	41/41/40/40
Event dead zone (m)	0.8	0.8
Attenuation dead zone (m)	4/4.5/4.5	4/4.5/4.5
Distance range (km)	1.25, 2.5, 5, 10, 20, 40, 80, 160, 260, 400	1.25, 2.5, 5, 10, 20, 40, 80, 160, 260, 400
Pulse width (ns)	5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000	5, 10, 30, 100, 275, 1000, 2500, 10 000, 20 000
Linearity (dB/dB)	±0.03	±0.03
Sampling points	Up to 256 000	Up to 256 000

PRODUCT CODE: FTB-7400E-CWS   FTB-7400E-CWCL

CWDM/DWDM

FOT-5200 CWDM Analyzer

An innovative, low-cost alternative for the activation and troubleshooting of any CWDM network.

› All CWDM essential testing features in one unit:
  › CWDM channel analyzer
  › Broadband power meter
  › Loss test set
› Fastest and smallest CWDM tester on the market
› Activation, commissioning and troubleshooting of any CWDM network
› Cellular backhaul activation for telco and CATV operators

FOT-5200 Specifications	
Number of channels	16 + wide band
Calibrated wavelength (nm)	1270/1290/1310/1330/1350/1410/1430/1450/1470/1490/1510/1530/1550/1570/1590/1610
Measurement uncertainty (dB)	±0.5
Measuring units	dBm/dB/mW
Standards Accessories	Soft pouch, certificate of calibration, certificate of compliance, battery charger, USB cable, installation CD, user manual

PRODUCT CODE: FOT-5200-C16-XX

FTB-5240S Optical Spectrum Analyzer

Highly accurate OSA for current and next-generation networks.

› High-power option, ideal for multiservice operators and CATV operators
› Truly portable spectral characterization for CWDM and DWDM network commissioning
› One-button operation for easy setup and automatic measurement

Future-proof your CATV broadband and hybrid networks.

WDM AWARE™
TECHNOLOGY

40G

EXFO Connect
Compatible

Module for FTB-200
and FTB-500

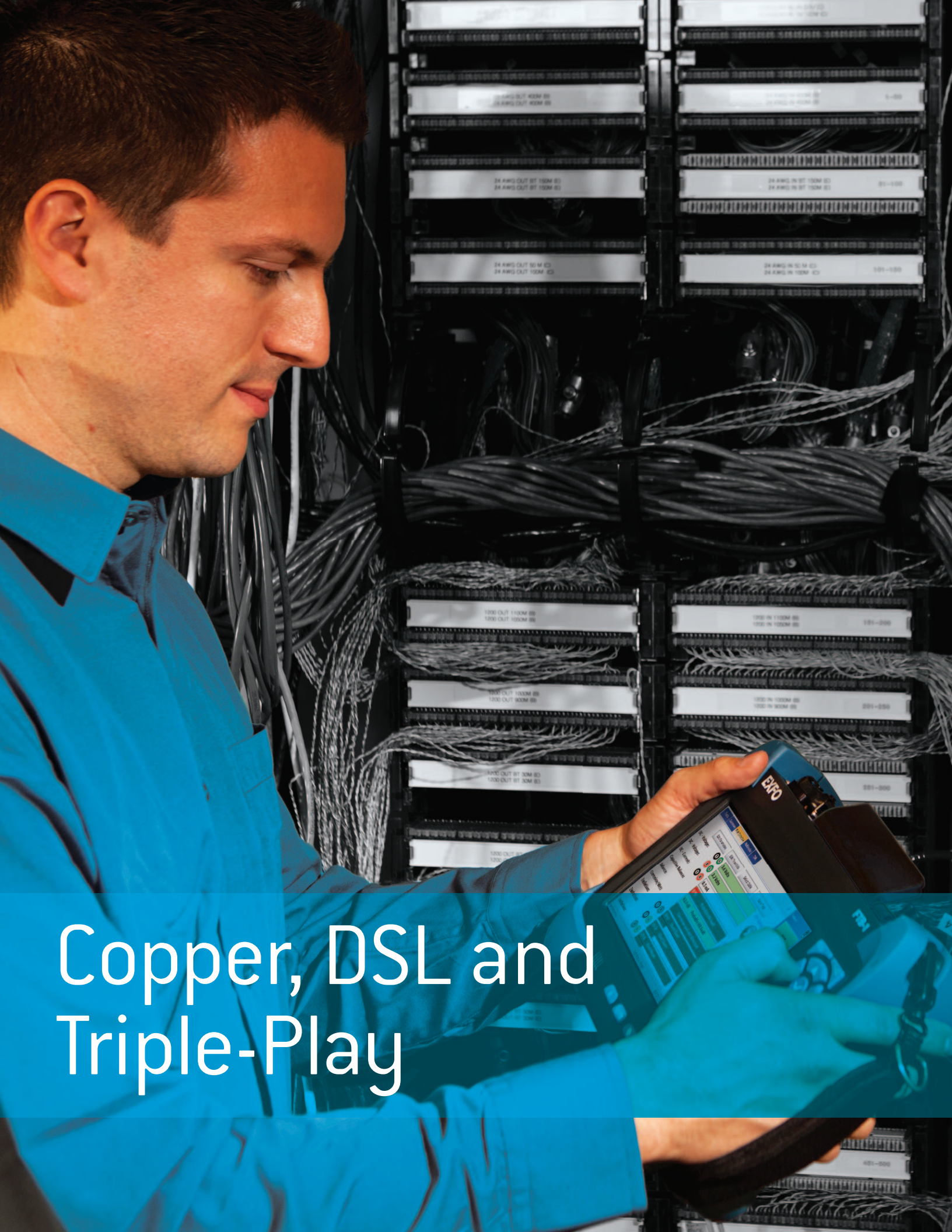| FTB-5240S and FTB-5240S/BP Specifications		
Spectral Measurement	Wavelength range (nm)	1250 to 1650
	Resolution bandwidth (FWHM) (nm)	0.065
Power Measurement	Dynamic range (dBm) (per channel)	−80 to +18
	Maximum total safe power (dBm)	+23
Optical Measurement	Optical rejection ratio at 1550 nm (dB) at 0.2 nm (25 GHz) at 0.4 nm (50 GHz)	35 (40 typical) 45 (50 typical)
	Channel spacing	50 to 200 GHzCWDM
	Measurement time (s) (analysis and display)	<1

PRODUCT CODE: FTB-5240XX-XX

Copper, DSL and Triple-Play

The most intelligent field test solution for FTTN/FTTx and VDSL2 circuits and services.

DEDICATED POINT SOLUTION	FIELD-MODULAR SOLUTIONS	
Perfect for the tier-1 technician performing installation and service turn-up.	**Perfect for the tier-2/tier-3 technician performing FTTx advanced troubleshooting and multiplay testing.**	

PERFORMANCE ▲

smart **R** ™

FTB-1 / FTB-600 Series

›FTB-610 Copper
›FTB-635 Copper/DSL

smart **R** ™

AXS-200/600 Series

›AXS-200/610 Copper
›AXS-200/635 Copper/DSL
›AXS-200/650 Triple-Play
 Test Set

smart **R** ™

MaxTester 600 Series

›MAX-610 Copper
›MAX-630 DSL
›MAX-635 Copper/DSL

Installation and Repairs **Installation, Repairs and Troubleshooting** **Advanced Troubleshooting**

TECHNICIAN EXPERTISE ▶

FROST & SULLIVAN

2011 BEST
PRACTICES
AWARD

GLOBAL xDSL TEST EQUIPMENT
GROWTH LEADERSHIP AWARD

Copper, DSL and Triple-Play – MaxTester Series

MaxTester 610 Copper Test Set

Smarter verification of copper pairs and location of faults during the installation and repair of voice and DSL circuits.

› Focus on single-ended testing minimizes repair time and costs

› Full suite of digital multimeter measurements to quickly and effectively determine the electrical health of the network

› Optional TDR and RFL allow service providers to scale the product based on existing or new methods and procedures

› SmartR™ features allow users to quickly and accurately determine physical copper circuit quality and locate faults

› Designed to face the challenges of the outside plant environment with an IEC IP54 rating

› Configurable pass/fail results for automated testing

PRODUCT CODE: **MAX-610-XX**   smart R™

MaxTester 630 DSL Test Set

A fast, easy-to-use and cost-effective solution for installing multiplay services over DSL and Ethernet.

› Supports ADSL2+ and VDSL2 bonding, allowing service providers to recover and grow wireline revenues

› Supports ADSL2+ ATM/PTM and VDSL2 single-pair testing for hybrid networks

› IPTV test suite for automated quality of service (QoS) testing

› Data testing and Web browser for complete service qualification

› Configurable pass/fail results for automated testing

› Designed to face the challenges of the outside plant environment with an IEC IP54 rating

PRODUCT CODE: **MAX-630-XX**

MaxTester 635 Copper and DSL Test Set

A fast, easy-to-use and cost-effective solution for the installation and activation of multiplay services over copper/ADSL2+/VDSL2 and Ethernet.

› Support ADSL2+ and VDSL2 bonding, allowing service providers to recover and grow wireline revenues

› Supports ADSL2+ ATM/PTM and VDSL2 single-pair testing for hybrid networks

› Ethernet testing for qualifying FTTx services at the customer premises

› IPTV test suite for automated quality of service (QoS) testing

› SmartR™ features allow users to quickly and accurately determine physical copper circuit quality and locate faults

› Data testing and Web browser for complete service qualification

› Configurable pass/fail results for automated testing

› Designed to face the challenges of the outside plant environment with an IEC IP54 rating

PRODUCT CODE: **MAX-635-XX**   smart R™

Copper, DSL and Triple-Play — AXS-200 Series

AXS-200/610 — 30 MHz Copper Test Set

Identify copper problems affecting triple-play quality using the AXS-200/610—part of the SharpTESTER Access Line.

› Visual reports, graphs and histograms, displaying signal and noise issues

› 30 MHz spectrum analysis for VDSL2 and video prequalification and troubleshooting

› Single-ended tests minimizing repair time and costs

› Automated clear, pass/fail results speeding up and simplifying test cycles

PRODUCT CODE: **AXS-610-XX**

AXS-200/635 — Copper, VDSL2, ADSL2+ and IP Triple-Play Test Set

Based on industry-leading Broadcom DSL chipset for proven VDSL2 and ADSL2+ interoperability and support for impulse noise protection (INP) and Broadcom PhyR™ configurations.

› Multilayer copper, DSL and triple-play analysis, for minimized CAPEX and OPEX

› Affordable triple-play testing over VDSL2 and ADSL1/2/2+ including Ethernet in/out operation for FTTx deployments

› 30 MHz spectrum analysis for single-ended VDSL2, for a truck roll reduction

› DSL, IPTV and VoIP service assurance using a comprehensive range of metrics such as DSL link speeds, multilayer fault analysis histogram, MDI as well as IP packet loss and jitter

› VDSL2 and ADSL2+ Annexes A, B, L and M support for ultimate network flexibility

PRODUCT CODE: **AXS-635-XX**

AXS-200/650 — IP Triple-Play Test Set

Offers a quick, yet thorough method for deploying triple-play services—IP-based data, VoIP and IPTV—facilitated by pass/fail-driven automated tests.

› Optimized for FTTH IP triple-play service commissioning and verification

› Simple, affordable residential IP triple-play testing with pass/fail indication

› IPTV and VoIP service assurance using a comprehensive range of QoS metrics

› Internet connectivity assessment using ping, traceroute and HTTP/FTP speed testing

› Feature-rich and cost-effective: Ethernet 10/100 termination and

› Ethernet 10/100 pass through with triple-play QoS measurements

PRODUCT CODE: **TK-AXS-650-XX**

Copper, DSL and Triple-Play – FTB-600 Series

Coming Soon to the FTB Ecosystem

Smart and powerful test modules ideal for advanced wideband copper troubleshooting of FTTN circuits as well as the troubleshooting of high-value multiplay services over FTTN, ADSL2+/VDSL2 and Ethernet.

COMING SOON

FTB-610 Wideband Copper Test Module

The easiest and smartest tool for advanced wideband copper troubleshooting of FTTN circuits.

› SmartR™ technology automatically identifies and locates common circuit faults using intuitive graphical displays and plain language

› High-voltage isolation tests for long wire pairs and power span circuits

› Advanced wideband frequency and time-domain noise tests to clearly understand the triple-play noise environment

› Advanced wideband copper test module and built-in optical power meter and VFL—the ideal tool for skilled engineers troubleshooting FTTN circuits

PRODUCT CODE: Coming soon!

EXFO Connect Compatible

smart R™

FTB-635 Wideband Copper and DSL Test Module

Powerful, total tool kit to troubleshoot high-value multiplay services over FTTN/ADSL2+/VDSL2 and Ethernet.

› Complete FTTN troubleshooting tool kit, with optical, copper, DSL and Ethernet test features—all in one

› SmartR™ features automatically analyze metallic test results using plain language and graphics to identify and locate faults

› ADSL2+ and VDSL2 bonding allows service providers to recover and grow wireline revenues

› Ethernet interfaces up to 1 GB for qualifying FTTN services at the customer premises

› IPTV test suite with live video preview

› Full Web browser for complete service qualification

› Large, colorful touchscreen for clear and intuitive testing

PRODUCT CODE: Coming soon!

EXFO Connect Compatible

smart R™

Cable Qualification and Attenuators

CableSHARK P3 – VF/DSL Cable Qualifier

Designed for the qualification and troubleshooting of twisted-pair local loops carrying DSL-based voice, video and data services. Performs every voiceband and broadband measurement needed to qualify and troubleshoot a local loop.

› Loop current measurement

› Stress/leakage testing with programmable soak time

› Single-ended insertion loss measurement/frequency response to 6 MHz

› Single-ended DMT rate prediction for full-rate ADSL1/2/2+ and G.Lite

› ADSL auto-testing with pass/fail indication and user modifiable thresholds

› Single-ended SHDSL rate prediction for G.SHDSL

› G.SHDSL auto-testing with pass/fail indication and user modifiable thresholds

› Power spectral density (PSD) noise with spectrum analysis to 6 MHz

PRODUCT CODES: **CSK-MCM-G** (monochrome)

CSK-MCM-G (color)

DSL Multiload Attenuator

Variable-position, multirange signal attenuator used with DSL test sets that works in line with test leads to attenuate ADSL1/2/2+ signals.

› Tests ADSL2+ port performance with technology-specific attenuation (simulated length)

› Simulates attenuation of six different lengths and bypass upon ADSL1/2/2+ signals

› Safe for use at the central office (CO) or at the exchange: no electronics to fail or batteries to replace, no electronic emissions

› Light, compact handheld device that is easy to carry anywhere

› No special cables required: accepts most common test leads

› Easy to operate: intuitive, simple manipulation

PRODUCT CODES: **ACC-DSLATNv1** (correlates to length)

ACC-DSLATNv2 (correlates to common DSL rates)

EXpert Test Tools on the FTB-1 Platform

EXpert Test Tools is a series of platform-based software testing tools that enhance the value of the FTB-1 platform, providing additional testing capabilities without the need for additionnal modules or units.

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

EXpert VoIP Test Tool   EXpert IP Test Tool   EXpert IPTV Test Tool

Ethernet/DSn

Ethernet Testing—Handheld Units

AXS-200/850 Multilayer Access Test Set

The AXS-200/850 delivers comprehensive, yet straightforward test functionalities for installing, turning up or maintaining Ethernet and IP services.

> Bidirectional RFC 2544 testing with independent results for each direction tested simultaneously
> Traffic generation and monitoring for network performance testing
> Multiple background streams traffic for Carrier Ethernet services testing
> Bit-error-rate testing (BERT) up to layer 4
> Cable testing
> Intelligent network autodiscovery for simplified loopback testing
> Configurable VLAN and Q-in-Q capability
> QoS, ToS and diffserv capabilities
> Pass/fail results (LED indicators) with user-defined thresholds
> Compact, rugged, lightweight unit

PRODUCT CODE: AXS-850-XX

ETS-1000 Ethernet Analyzer

The ETS-1000 is a cost-effective handheld Ethernet analyzer that enables service providers to turn-up and install Carrier Ethernet services.

> Two 10/100/1000BaseT and GigE independent test ports
> Throughput, back-to-back, latency and frame loss measurements as per RFC 2544 (asymmetric results)
> Multistream, up to layer 4 traffic generation and analysis, allowing QoS verification through VLAN, TOS/DSCP prioritization testing
> MPLS route prioritization validation with up to three MPLS labels (MPLS option)
> Cable diagnostics
> Through mode testing for troubleshooting applications
> TCP/IP network configuration test suite including TCP client, DNS lookup and ARP monitor

PRODUCT CODE: ETS-1000-XX

EtherSAM

Ethernet Testing—
Handheld Units

FTB-860/860G NetBlazer Series Ethernet Testers

Housed in the powerful FTB-1 Platform, the FTB-860 NetBlazer Series offers field technicians comprehensive, yet simple test suites to quickly and easily turn up, validate and troubleshoot Ethernet services, with full EtherSAM capabilities, from 10 Mbit/s to 10 Gbit/s.

EtherSAM

Modules for FTB-1

FTB-860 GIGABIT ETHERNET	FTB-860G 10 MBIT/S TO 10 GBIT/S
If the need is purely for Gigabit Ethernet coverage, then the FTB-860 is your tester, offering the same testing capability as the FTB-860G minus the higher-end 10 GigE interfaces.	If the need is for full Ethernet coverage from 10 Mbit/s up to 10 Gbit/s, the FTB-860G has all the bases covered.
Two 100/1000 optical ports	Two 100/1000 optical ports
Two 10/100/1000 electrical ports	Two 10/100/1000 electrical ports
10 BaseT to 1 gigabit testing	One 10 GigE port (LAN/WAN software option)
EtherSAM (bidirectional)	10 BaseT to 10 gigabit testing
RFC 2544 (bidirectional)	EtherSAM (bidirectional)
Traffic generation and monitoring	RFC 2544 (bidirectional)
Through mode	Traffic generation and monitoring
Intelligent autodiscovery	Through mode
IPv6 testing	Intelligent autodiscovery
Ping/traceroute	IPv6 testing
Cable testing	Ping/traceroute
Dual Test Set mode	Cable testing
Smart loopback	Dual Test Set mode
	Smart loopback

PRODUCT CODES: FTB-860-XX   FTB-860G-XX

Multiservice Testing—
Handheld Units

AXS-200/805/855 Multilayer Access Test Set

EXFO's AXS-200/805/855 is the industry's first all-in-one handheld solution for dual E1/DS1, DS3, ISDN PRI and Ethernet testing.

› Compact, lightweight platform purpose-built for harsh field environments

› Eliminates errors in data interpretation with radically simple, intuitive interface

› Validates test results with real-time insertion of voice traffic using talk-set capability

› Increases technician efficiency by allowing to run up to three tests simultaneously

› Turnkey Ethernet testing, including simultaneous bi-directional RFC 2544, multistream traffic generation, BERT and intelligent autodiscovery for end-to-end single-technician testing

PRODUCT CODES: AXS-805-XX

AXS-855-XX

FTB-880 NetBlazer Multiservice Tester

Housed in the FTB-1 platform, the FTB-880 offers comprehensive, yet simple test suites for field technicians to easily turn up, validate and troubleshoot DSn/PDH, SONET/SDH and Ethernet services up to 10 Gbit/s.

› Comprehensive testing for DSn/PDH, SONET/SDH and Ethernet interfaces up to 10 Gbit/s

› Simplified BER testing with pass/fail indicators based on user-defined thresholds

› Faster Ethernet service activation with bidirectional EtherSAM (ITU-T Y.1564) and RFC 2544 test suites, multistream traffic generation, through mode and bit-error-rate (BER) testing

› Unprecedented configuration simplicity with hybrid touchscreen/keypad navigation and data entry

› Higher technician autonomy and productivity with intelligent discovery of remote EXFO Ethernet testers, as well as in-service Ethernet testing via dual-port through mode

› No data interpretation errors with revolutionary new GUI on 7-inch TFT screen, historical event logger, visual gauges and 3D-icon depictions of pass/fail outcomes

› Simpler reporting with integrated Wi-Fi and Bluetooth connectivity capabilities

› Centralized support for injection/monitoring of errors and alarms, trace messaging, overhead monitoring/manipulation and performance monitoring statistics

› Integrated applications to test VoIP services, and additional IP test utilities, including VLAN scan and LAN discovery via EXpert VoIP and EXpert IP test tools

› Support for packet capture and analysis, wireless troubleshooting and TCP throughput testing

› Extended field autonomy with compact, lightweight platform equipped with long-duration battery pack

PRODUCT CODE: FTB-880-flex-XX

EtherSAM

Module for FTB-1

Ethernet Testing—
IP Service Test Heads

RTU-310 IP Services Test Head

The RTU-310 enables carriers to ensure the reliability and performance of their Ethernet-based services. It provides all the necessary measurement tools for service turn-up, troubleshooting as well as verifying service-level agreements (SLAs).

› Complete EtherSAM (ITU-T Y.1564) test suite is the new standard for turning up and troubleshooting mobile backhaul and business Ethernet services

› Throughput, back-to-back, latency and frame loss measurements as per RFC 2544 (bidirectional results)

› Multistream generation and analysis, allowing quality of service (QoS) verification through VLAN and ToS/DSCP prioritization testing

› True wire-speed, stateful TCP throughput test for undisputable SLA reinforcement of Ethernet services

› SLA reinforcement for Ethernet services

› IPTV testing and analysis

› Complete Carrier Ethernet services portfolio: PBB-TE (MAC-in-MAC), MPLS, MPLS-TP 802.3ah and IPv4/IPv6

› 1x and 2x Fibre Channel testing

› Interoperable with the FTB-8510B Packet Blazer Ethernet Test Module and the AXS-200/850 Ethernet Test Set

› Fully remote controllable via EX-Vu application

› Integrated into Brix System for Ethernet SLA monitoring, service birth certificates, turn up and troubleshooting

PRODUCT CODE: RTU-310-XX

Ethernet Testing—
IP Service Test Heads

RTU-310G IP Services Test Head

The RTU-310G is a Carrier-grade test device that offers performance assurance capabilities for 10 Gigabit Ethernet-based services.

> Complete EtherSAM (ITU-T Y.1564) test suite is the new standard for turning up and troubleshooting mobile backhaul and business Ethernet services

> LAN/WAN PHY capability in a single unit

> Comprehensive functionality for assessing the performance of Ethernet transport networks

> Throughput, back-to-back, latency and frame loss measurements as per RFC 2544 (bidirectional)

> Multistream generation and analysis, allowing quality of service (QoS) verification through VLAN and ToS/DSCP prioritization testing

> MPLS and PBB-TE support for complete carrier Ethernet validation

> Interoperable with the FTB-8510B Packet Blazer Ethernet Test Module, the FTB-8510G Packet Blazer 10 Gigabit Ethernet Test Module and the AXS-200/850 Ethernet Test Set

> Fully remote controllable via EX-Vu application

PRODUCT CODE: RTU-310G-XX

Ethernet Testing—Loopback Devices

ETS-1000L Ethernet Loopback Device

The ETS-1000L is a cost-effective, compact Ethernet loopback tool that can be used as a remote unit to return test traffic, enabling service providers to turn up and install Carrier Ethernet services.

› 10/100/1000BaseT and GigE ports

› Remote loopback/reflector for all Carrier Ethernet validation tests including RFC 2544, BER and QoS

› Selectable loopback at layers 1 through 4

› Complete interoperability with EXFO's Ethernet analyzers and test modules

› 802.3ah remote loopback support

PRODUCT CODE: ETS-1000L

BV10 Performance Endpoint Unit

The BV10 is a highly cost-effective Ethernet performance monitoring device providing complete network visibility for mobile backhaul, Carrier Ethernet and PTN networks.

› Fully integrated into EXFO's end-to-end mobile backhaul solution for service turn-up, troubleshooting and performance monitoring

› Offers complete network visibility at a third of the cost of traditional Ethernet NID solutions

› Simple and remote management for zero-truck-roll network maintenance

› Completely standards-based, supporting Ethernet OAM, with 802.1ag and Y.1731 message response as a performance endpoint, as well as TWAMP (RFC 5357)

› Full-line-rate loopback from layer 2 up to layer 4 with rates of 10/100/1000 Mbit/s

PRODUCT CODE: BV10-XX-XX

FTB-860GL NetBlazer Ethernet Tester

Housed in the powerful FTB-1 platform, the FTB-860 NetBlazer Series offers field technicians comprehensive, yet simple test suites to quickly and easily turn up, validate and troubleshoot Ethernet services, with full EtherSAM capabilities, from 10 Mbit/s to 10 Gbit/s.

FTB-860GL 10 Mbit/s to 10 Gbit/s LOOPBACK ONLY	
Combined with the FTB-860G or FTB-860, the FTB-860GL is the most cost-effective solution for GigE and 10 GigE intelligent loopback testing; it supports bidirectional EtherSAM and RFC 2544 testing and offers five loopback modes.	
One 100/1000 optical port	BERT loopback
One 10/100/1000 electrical port	Intelligent autodiscovery
One 10 GigE port	IPv6 testing
10 BaseT to 10 gigabit loopback	Ping/traceroute
EtherSAM (bidirectional partner)	Cable testing
RFC 2544 (bidirectional partner)	Smart loopback
Traffic generation loopback	

PRODUCT CODE: FTB-860GL-XX

EtherSAM

EtherSAM

Module for FTB-1

Ethernet Testing—Modules

FTB-8510B Packet Blazer Ethernet Test Module

The FTB-8510B Packet Blazer is a fully integrated test solution for performance assessment of Ethernet transport networks.

> › Complete EtherSAM (ITU-T Y.1564) test suite is the new standard for turning up and troubleshooting mobile backhaul and business Ethernet services
>
> › Throughput, back-to-back, latency and frame loss measurements as per RFC 2544 (bidirectional results)
>
> › Multistream generation and analysis, allowing QoS verification through VLAN and ToS/DSCP prioritization testing
>
> › True wire-speed, stateful TCP throughput test for undisputable SLA reinforcement of Ethernet services
>
> › IPTV testing and analysis
>
> › Up to 1 Gbit/s full-line-rate data capture and decode
>
> › Complete Carrier Ethernet services portfolio: PBB-TE (MAC-in-MAC), MPLS, MPLS-TP, 802.3ah and IPv4/IPv6
>
> › 1x and 2x Fibre Channel testing

PRODUCT CODE: FTB-85XX

EtherSAM

Module for FTB-200 and FTB-500

FTB-8510G Packet Blazer 10 Gigabit Ethernet Test Module

The FTB-8510G Packet Blazer offers performance assurance for Ethernet-based services, supporting 10 Gigabit Ethernet WAN and LAN rates for total network testing. It provides all the test and measurement functionalities required to verify service-level agreement (SLA) conformity.

> › Complete EtherSAM (ITU-T Y.1564) test suite is the new standard for turning up and troubleshooting mobile backhaul and business Ethernet services
>
> › LAN/WAN PHY capability in a single module
>
> › Fully integrated functionality for assessing the performance of Ethernet transport networks
>
> › Packet jitter measurement to qualify Ethernet transport networks for transmission of delay-sensitive traffic such as video and voice-over-IP (VoIP)
>
> › Throughput, back-to-back, latency and frame loss measurements as per RFC 2544 (bidirectional)
>
> › Multistream generation and analysis, allowing QoS verification through VLAN and ToS/DSCP prioritization testing
>
> › Up to 10 Gbit/s full-line-rate data capture and decode
>
> › MPLS, MPLS-TP, PBB-TE and IPv4/IPv6 support for complete Carrier Ethernet validation

PRODUCT CODE: FTB-8510G-XX

EtherSAM

Module for FTB-200 and FTB-500

Multiservice Testing—Modules

FTB-8120NGE/8130NGE Power Blazer
Next-Generation Multiservice Test Modules

The FTB-8120NGE/8130NGE Power Blazer provide SONET/SDH, OTN, Ethernet and Fibre Channel test functions in the industry's smallest and most efficient form factor—a new standard in multiservice field testing.

EtherSAM

Module for FTB-200 and FTB-500

› DS0/E0 to OC-192/STM-64/OTU2; 10 Mbit/s to 10 Gbit/s LAN/WAN as well as 1x, 2x, 4x and 10x Fibre Channel testing in the industry's smallest form factor

› Fully integrated solution for assessing the performance of Ethernet transport networks, including RFC 2544, BER testing and multistream generation and analysis

› Comprehensive Fibre Channel test capabilities, including framed and unframed BERT, buffer-to-buffer credit estimation and round-trip latency measurements

› OTN forward error correction (FEC) and optical channel data unit (ODU) multiplex testing capabilities as per ITU-T G.709

› Offers ODU0 (1.25 Gbit/s) container with Gigabit Ethernet and SONET/SDH client signals to qualify newly and efficiently mapped transport and datacom services over OTN

› Supports circuit and packet ODUflex testing capabilities for optical transport network (OTN) bandwidth optimization

› Ethernet-over-SONET/SDH (EoS) testing via GFP, VCAT and LCAS software options

› Complete EtherSAM (ITU-T Y.1564) test suite is the new standard for turning up and troubleshooting mobile backhaul and business Ethernet services

› Complete Carrier Ethernet services portfolio: PBB-TE, MPLS and IPv4/IPv6

› True wire-speed, stateful TCP throughput test for undisputable SLA reinforcement of Ethernet services

PRODUCT CODE: FTB-81XX-XX

Ethernet Testing— Synchronization Tester

SyncWatch-110 Synchronization Testing Unit

The SyncWatch-110 is a highly versatile test and monitoring system for next-generation synchronization technologies, including performance assessment of SyncE and Precision Time Protocol (IEEE 1588v2).

› Fully integrated solution for performance validation of IEEE 1588v2, SyncE and traditional TDM synchronization technologies

› Highly flexible with support for multiple built-in measurement interfaces

› Adapted to lab and field environments with optional internal measurement references—GPS and internal rubidium

› Addressing network synchronization for network turn-up, monitoring and troubleshooting applications through three modes of operation: Stand-Alone, Managed and USB mode

PRODUCT CODE: SyncWatch-110-XX-XX

Accessories

Accessories

Universal Interface

EXFO's Universal Interface (EUI) is designed to easily interchange one connector type for another. It is compatible with all common connectors with angled (APC/EA) or non-angled (UPC/EI) polishing. Simply push and turn to separate the removable part from the fixed baseplate. The ferrule is then easily accessed and cleaned, ensuring excellent optical conditions.

> › Direct access to connector endface for convenient cleaning and inspection
> › Precise manufacturing guarantees ferrule concentricity
> › Low insertion loss, low backreflection and excellent repeatability
> › Available in FC, SC, ST, LC, DIN47256, HMS-10/AG and E-2000 models

Bare Fiber Adapters

These adapters easily and quickly connect bare fibers, thanks to their push-button locking system. Designed for both field applications and component testing, they ensure reliable connections and are the ideal complement to EXFO's complete range of fiber-optic test instruments.

> › Excellent repeatability
> › Manufactured
> › Easy to use

Fiber-Optic Adapters

These fiber-optic adapters can be used with all EXFO power meters to precisely align the ferrule end with the detector when performing optical measurements.

> › Compatible with all types of connectors including E-2000, LC, MT-RJ, OptiFit® and MU
> › Outstanding repeatability (±0.02 dB typical) and durability
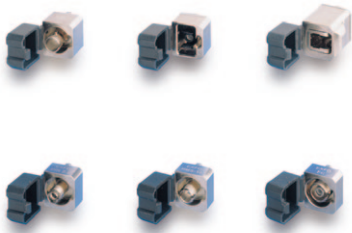
Accessories

Tip Connectors

Model	Description	Tips	FIPT-400-AD-P5 Compatibility Status
FIPT-400-Adapter	Adapter tip (to attach any Westover probe tip to EXFO's probe)		
FIPT-400-D4	D4 tip for bulkhead adapter		•
FIPT-400-E2000	E2000 tip for bulkhead adapter		•
FIPT-400-E2000-APC	E2000 APC tip for bulkhead adapter		•
FIPT-400-FC-SC	FC/SC tip for bulkhead adapter		•
FIPT-400-FC-SC-APC	FC/APC tip for bulkhead adapter		•
FIPT-400-LEMO	Lemo bulkhead adapter		•
FIPT-400-LC	LC tip for bulkhead adapter		•
FIPT-400-LC-A6	LC angled tip for bulkhead adapter (60°)		•
FIPT-400-LC-APC	LC/APC tip for bulkhead adapter		
FIPT-400-LX5-APC	LX.5/APC tip for bulkhead adapter		•

Accessories

Model	Description	Tips	FIPT-400-AD-P5 Compatibility Status
FIPT-400-MTP2	MTP tip for bulkhead adapter (extended, reversible)		•
FIPT-400-MTP2-TIP	MTP tip for bulkhead adapter (extended, reversible)		•
FIPT-400-MTPA2	MTP/APC tip for bulkhead adapter (extended, reversible)		•
FIPT-400-MTPA-TIP	MTPA tip for bulkhead adapter (extended)		•
FIPT-400-MTP2-K	MTP/APC/UPC tip for bulkhead adapter (extended, reversible)		•
FIPT-400-MU	MU tip for bulkhead adapter		•
FIPT-400-MU-L	Extended MU tip for PC bulkhead adapter		•
FIPT-400-ODC-S	ODC Socket (male) tip		•
FIPT-400-ODC-U	ODC Universal Guide tip		•
IPT-400-ODC-2PIN-P	ODC 2-Pin Plug (female) Guide tip		•
FIPT-400-ODC-4PIN-P	ODC 4-Pin Plug (female) Guide tip		•
FIPT-400-ODC-2PIN-P-K	ODC 2-Pin Plug (female) Guide and Universal tip		•
FIPT-400-ODC-4PIN-P-K	ODC 4-Pin Plug (female) Guide and Universal tip		•

Accessories

Model	Description	Tips	FIPT-400-AD-P5 Compatibility Status
FIPT-400-ODC-2&4PIN-P-K	ODC 2 and 4 Pin Plug (female) Guides & Universal tip		•
FIPT-400-SC-APC	SC APC tip for bulkhead adapter		•
FIPT-400-OTAP-APC	OptiTap™ bulkhead adapter		•
FIPT-400-OTIP-MT-APC	MT/APC type OptiTip™ multifiber adapter for male and female connectors; comes in a kit compatible with male and female cable ends		
FIPT-400-OTIP-MT-APC/M	Male adapter tube for FIPT-400-OTIP-MT-APC tip		
FIPT-400-FC-SC-A6	FC and SC angled tip for bulkhead adapter (60°)		•
FIPT-400-SC-L	SC tip for PC bulkhead adapter (extended)		•
FIPT-400-ST	ST tip for bulkhead adapter		•
FIPT-400-U12M	Universal patchcord tip for 1.25 mm ferrule		•
FIPT-400-U12MA	Universal patchcord tip for 1.25 mm APC ferrule		•
FIPT-400-U20M2	Universal patchcord tip for 2.0 mm ferrule (D4, Lemo)		•
FIPT-400-U25M	Universal patchcord tip for 2.5 mm ferrule		•
FIPT-400-U25MA	Universal patchcord tip for 2.5 mm APC ferrule		•

Accessories

Model	Description	Tips	FIPT-400-AD-P5 Compatibility Status
FIPT-400-SMA	SMA tip for bulkhead connector		•
FIPT-400-SMAM	SMA tip for male connector		•
FIPT-400-LX.5	LX.5 PC tip for bulkhead connector		•
FIPT-400-U16M	Universal 1.6 PC tip for male connector		•
FIPT-400-MTRJ	MTRJ tip for MTRJ bulkhead		•
FIPT-400-SC-APC-L	SC angled tip for bulkhead connector (extended)		•
FIPT-400-AD-P5	Adapter tip (allows the user to attach EXFO's FIP-400 probe tips to the old Westover probe)		•

INDEX

ACCESSORIES

FTB Ecosystem

## The Future of Network Deployment

Imagine test tools that actually help you deliver services with speed and quality. Imagine if you could institutionalize operational efficiencies, eliminate silos and make every component of your deployment, turn-up and monitoring part of one tightly woven fabric.

You can. With the FTB-Ecosystem.

EXFO | C∷nnect

EXFO | Apps

FTB Platforms
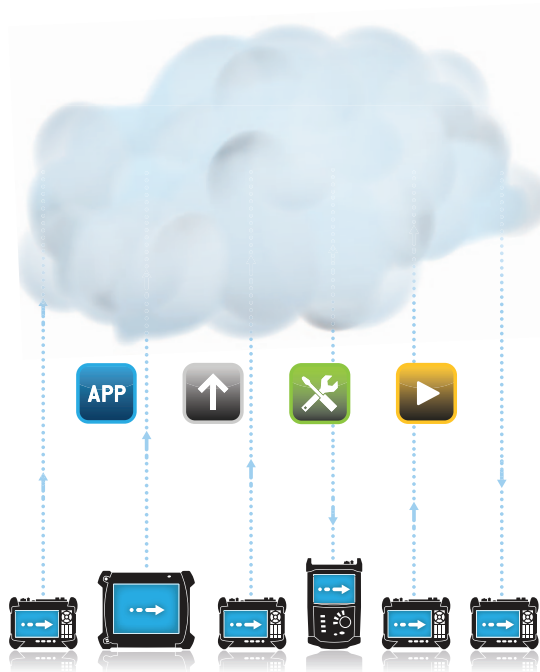
Test data transformed into business intelligence
› Store and push equipment and test data automatically to our cloud-based servers, allowing you to streamline test operations, from build-out to maintenance.

Software applications that boost productivity
› There's an application to help you be more productive in the field—whatever your field.

Connected test tools
› Smart, modular test platforms that evolve with the operator's needs.

DELIVERING OPERATIONAL EFFICIENCIES

The FTB Ecosystem takes the performance and efficiency of a best-in-class technician, and extends it to thousands of others, through standardized methods and procedures as well as easy back-office integration.

When you roll out FTTH, Ethernet backhaul or packet optical networks, the FTB Ecosystem helps you boost the workforce output to meet the demand associated with such large-scale deployments. What's more, it gives you the time to focus on developing better methods and procedures, and instill them in your teams so they can work much more effectively.

EXPLORE THE FTB ECOSYSTEM

www.futureofdeployments.com

Complementary Support Material

OTDR and iOLM Selection Guide

Understand the specific test requirements of the different network applications, select the right form factor and choose the best testing technology, OTDR or iOLM, for a perfect tool fit.

Fiber Inspection Solutions

Even with fiber optic technology reaching a high level of maturity, the #1 cause of network failure still remains contaminated connectors. Browse the different EXFO solutions to secure this simple, but essential first step in any fiber deployment or maintenance.

Smarter Copper Testing

EXFO's SmartR™ technology brings a unique test approach that delivers intelligent and automated copper fault analysis, enhanced with graphical results and plain-language interpretation. Learn more today.

You've Got the Instrument. Now Get the Training.

You want to improve your testing skills? Here's the right place to start: our Be-an-Expert program has cutting-edge training tools to get you up to speed with easy-to-understand courses.

We've designed our training program to provide you with multiple learning resources on our most popular products, whether to improve your efficiency and productivity, or simply to get started on your new EXFO test equipment.

EXFO