

MULTITEST MODULE

3930

FTB-3930

NETWORK TESTING

- FasTesT: three-wavelength measurement of optical loss, ORL and fiber length in 10 seconds
- All-in-one portable test solution: up to eight instruments combined in a single module housed in the FTB-400 Universal Test System
- FTTx ready: allows for the testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs
- Cost of ownership: lowest in the industry, thanks to three-year warranty and recommended calibration interval, error-free testing and minimized training time



EXFO's Next-Generation MultiTest Module: Much More Features, Much Bigger Performance

The new FTB-3930 MultiTest Module is designed to help network service providers address CAPEX and OPEX issues, enable installers to easily adapt to all network types, and provide CATV operators with a single-module solution to their backreflection, fiber-length, high-power and bidirectional loss measurement needs. Combined with a video fiber inspection probe and an OTDR, this solution lets you easily detect dirty or damaged connectors, providing a clear view of connectors and fiber ends and enabling complete link characterization.

All-in-one unit: combines up to eight instruments

- Loss meter
- Power meter
- Optical return loss (ORL) meter
- Visual fault locator
- Multimode and singlemode light sources
- Digital talk set
- Fiber-length meter

FasTesT function: one-touch, automated measurements in 10 seconds

- Bidirectional loss and ORL testing at up to three singlemode wavelengths
- Bidirectional loss testing at two multimode wavelengths
- Fiber-length measurement

Flexible solution: five-wavelength multimode and singlemode configurations meeting the requirements of installers/contractors for all test situations

- Up to three singlemode wavelengths—1310 nm, 1550 nm and a choice between 1490 nm and 1625 nm—on one port
- Two multimode wavelengths—850 nm and 1300 nm—on a second port

Future-proof: next-generation features meeting the latest industry requirements

- User-configurable pass/fail thresholds that can be adjusted to different industry standards
- FTTx ready, allowing for the testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs

Cost of ownership: lowest on the market

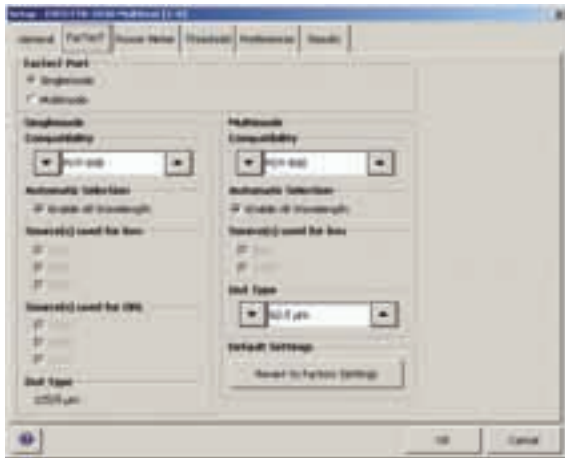
- Three-year warranty and recommended calibration interval
- Error-free testing achieved through visual loss and ORL pass/fail analysis
- Minimized training time, thanks to a single user interface for the eight instruments included in this all-in-one unit

With countless configurations and combinations available, the FTB-3930 is ideal for today's network service providers, fiber-optic network installers/contractors and CATV operators.

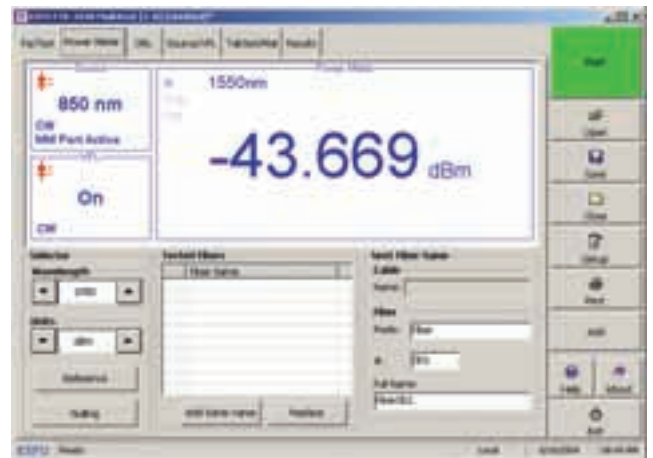


KEY FEATURES

- Two FasTesT ports: a three-wavelength singlemode port, including either 1625 nm or 1490 nm, and a two-wavelength multimode port, for a total of up to five wavelengths
- Automatic measurement of ORL and fiber length during FasTesT
- Visual loss and ORL pass/fail analysis
- Field-swappable rechargeable batteries
- Easily accessible connectors
- Options: high-power detector, talk set and visual fault locator (VFL)
- No offset nulling required



While performing FasTesT measurements, the FTB-3930 can launch automated loss and ORL measurements on all three wavelengths and perform fiber-length measurements.



Power meter, source and VFL functionalities can be activated—and respective data displayed—all at once.



The FTB-3930's intuitive communication functionalities—full-duplex talk set and message exchange—increase user efficiency.

Network Service Providers: Addressing CAPEX and OPEX Concerns

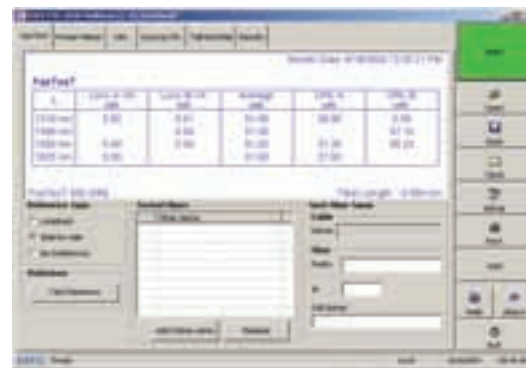
Currently, the first order of business for telecom operators is reducing capital expenses (CAPEX) and operating expenses (OPEX)—without compromising quality of service. In today's ultra-competitive telecom industry, network service providers (NSPs) have to constantly come up with new, more affordable programs for fast Internet, as well as long-distance and local phone services. This makes it difficult for them to upgrade and even maintain their networks, and to meet the challenge of keeping costs down while maintaining high quality.

One way to do it is to choose more efficient network testing gear, which can help minimize CAPEX by doing more, faster, with a more simple approach, considerably reduce OPEX by cutting testing and training time and significantly lowering error potential.

The FTB-3930 MaxTester fits this description: its flexibility enables the user to perform the required tests and validation for various network types and environments.

Key Advantages for NSPs

- Fast, three-wavelength loss and ORL testing
- User-configurable pass/fail thresholds
- Ease of use for faster testing, reduced training, minimum error potential, etc.



In 10 seconds, the FTB-3930's FasTesT function provides insertion loss and ORL values for up to three wavelengths—including either 1490 nm or 1625 nm—on a single port.

Installers and Contractors: A Single Tool for All Network Types

In today's market conditions, installers and contractors face critical challenges. For instance, since they never know where their next assignment will take them, they need to be proficient on both private and public networks. This is why their test crews should be versatile, and should carry test equipment that offers built-in flexibility.

Because learning how to operate only one instrument is easier and much faster, test specialists should choose an all-in-one tool that enables them to perform tasks such as high-speed long-haul network installation, 1310/1490/1550 nm transmission testing in FTTH networks, multimode testing in enterprise networks, etc.—a do-it-all solution such as the FTB-3930.

Key Advantages for Installers and Contractors

- The only unit designed for testing both multimode and singlemode fiber
- User-configurable pass/fail thresholds for error-free testing
- Complete report generation capabilities



Talk Set Port

For crystal-clear voice communication.

Power Meter Detector Port

Compatible with almost every connector on the market. Manually and efficiently perform power and loss testing. Accurately measure power up to +26 dBm.

FasTesT Ports

Perform loss, ORL and fiber-length measurements for up to three singlemode wavelengths on one port, and for two multimode wavelengths on a second port.

VFL

Built-in 650 nm visual fault location on a universal connector.

CATV Operators: One Unit for All Backreflection, Fiber-Length and Loss Measurement Needs

As video-on-demand is on the verge of becoming the next big thing, bandwidth and distance are increasing and fiber tolerances are becoming more and more stringent. Related analog transmission systems use high power up to +26 dBm. As a result, network engineers need to worry about potentially high backreflection—mostly caused by dirty or damaged connectors—and perform fiber-length measurements.

In short, CATV test crews need a backreflection meter, an OTDR (for measuring fiber length) and a bidirectional, dual- or triple-wavelength loss meter. Choosing the FTB-3930 combines all these functionalities in a single modular solution.

Key Advantages for CATV Operators

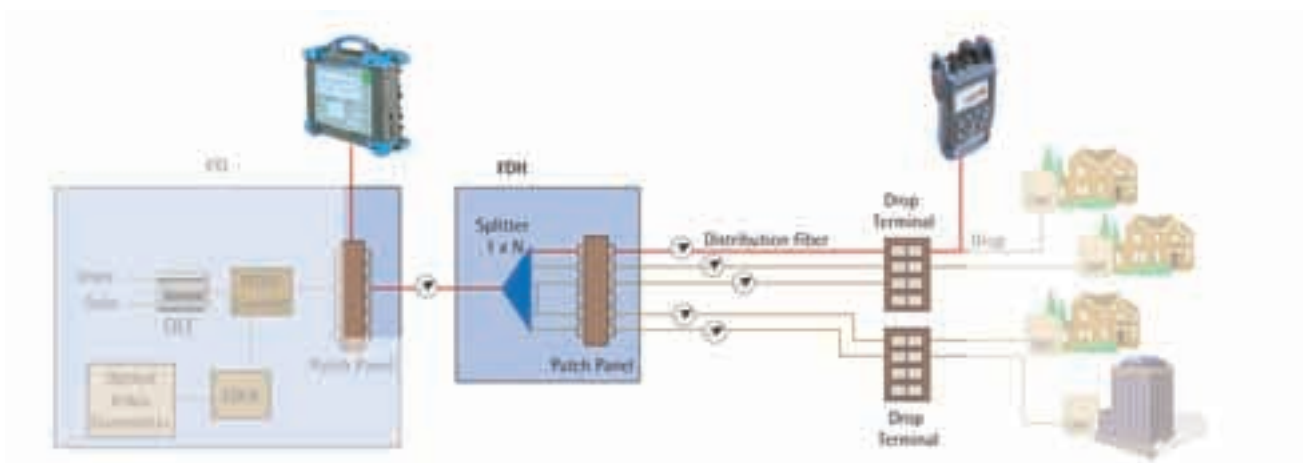
- Automated ORL measurement based on pass/fail thresholds
- GeX detector, for high-power measurement up to +26 dBm
- Automated fiber-length measurement



The FTB-3930 comes standard with a high-accuracy ORL meter.

FTTx Ready: The Ultimate Certification Tool for PONs

The FTB-3930 allows for automated, bidirectional loss and ORL testing of passive optical networks (PONs) at 1310 nm, 1490 nm and 1550 nm, the three wavelengths recommended by the ITU-T (G.983.3) for PONs. Combined with an optical switch and the FOT-930 MaxTester Multifunction Loss Tester, it lets you test all routes easily and efficiently. All data is saved and stored directly on the FTB-400 platform.



Testing the bidirectional loss and ORL from the CO to the drop terminal in a passive optical network.

Full Report Generation in a Snap

The FTB-3930's software automatically sets up test data in an easy-to-read, well-organized table. What's more, thousands of test results can be saved directly on the FTB-400 platform. Testing is simplified thanks to the highly intuitive user interface and integrated test functions, taking software user-friendliness to the next level.

- Select predefined test parameters and pass/fail thresholds
- Customize user settings and cable identification parameters
- Add operator comments
- Generate reports for ORL, bidirectional loss (three wavelengths) and fiber-length measurement

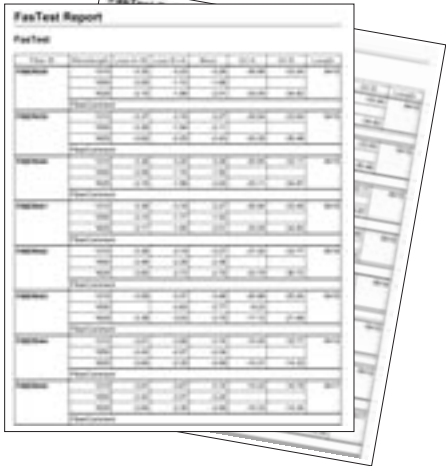
Report Generation

Growing fiber deployment in NSP and CATV networks sometimes leads installation companies to hire subcontractors. These subcontractors must produce proper test documentation to corroborate the tests were performed as specified.

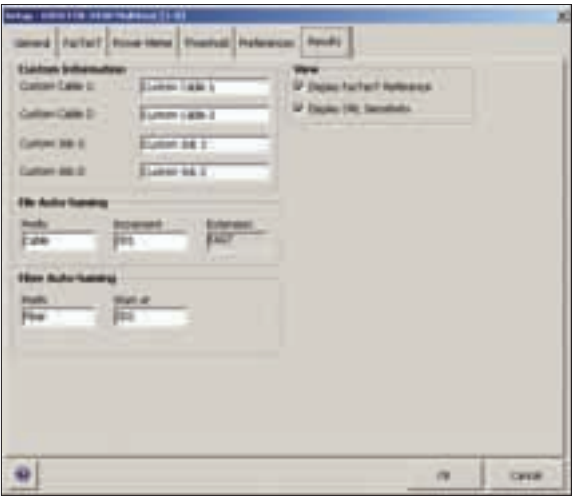
EXFO's FTB-3930 MultiTest Module easily and efficiently provides complete, high-quality test documentation. Its data logging and management features help users quickly access test results for in-depth analysis and first-class report generation.



Display comprehensive test results thanks to the FTB-3930's data management software.



The FTB-3930 quickly provides you with full FasTesT reports.



Customize your test reports to suit your specific needs.

Online Help Menu, for Enhanced User-Friendliness

The FTB-3930 MultiTest Module features a comprehensive, easy-to-use on-line help menu providing all the necessary information required for highly efficient instrument operation. This feature contributes to the FTB-3930's unequalled user-friendliness.

SPECIFICATIONS¹

External Power Meter	FTB-3932	FTB-3932X	FTB-3933		
Detector type	Ge	GeX	InGaAs		
Measurement range (dBm)	10 to -70	26 to -55	6 to -73		
Uncertainty ^{2,3}	± 5 % ± 0.1 nW	± 5 % ± 3 nW	± 5 % ± 0.05 nW		
Wavelength range (nm)	800 to 1650	800 to 1650	800 to 1650		
Display resolution ² (dB)	0.01	0.01	0.01		
Calibrated wavelengths	40	42	40		
Recommended recalibration period (years)	3	3	3		
Automatic offset nulling ⁴	Yes	Yes	Yes		
Sources	Standard	-4	-5	-12C (second port)	-12D (second port)
Wavelengths ⁵ (nm)	1310 ± 20 1550 ± 20	1310 ± 20 1550 ± 20 1625 ± 10	1310 ± 20 1490 ± 10 1550 ± 20	850 ± 25 1300 +50/-10	850 ± 25 1300 +50/-10
Emitter type Laser	Laser	Laser	Laser	LED	LED
Minimum output power ⁵ (dBm)	-1/-1	-1/-4/-7	-1/-7/-4	-30/-30 (50/125 μm)	-24/-24 (62.5/125 μm)
Spectral width ⁶ (nm)	≤ 5/≤ 5	≤ 5/≤ 5/≤ 5	≤ 5/≤ 5/≤ 5	50/135	50/135
Stability ⁷ (8 hours) (dB)	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05
FasTesT	Standard	-4	-5	-12C (second port)	-12D (second port)
Wavelengths (nm)	1310 1550	1310 1550 1625	1310 1490 1550	850 1300	850 1300
Loss range ⁸ (dB)	60	56	56	40	46
Loss precision ⁹ (repeatability) (dB)					
Side-by-side	0.15	0.15	0.15	0.15	0.15
Loopback	0.25	0.25	0.25	0.25	0.25
Length measurement range (km)	200	200	200	5	5
Length measurement uncertainty ¹⁰			± (10 m + 1 % x length)		
Dedicated ORL	All SM Wavelengths	Talk Set		VFL⁹	
ORL range (APC / UPC) (dB)	65/55	Emitter type	Laser	Emitter type	Laser
ORL uncertainty ⁹ (dB)	± 0.5	Wavelength (nm)	1550 ± 20	Wavelength (nm)	650
Resolution ² (dB)	0.01	Dynamic range at 1550 nm (dB)	45	Output power (dBm)	3
		Dynamic range MM ¹¹ (dB)	40		

General Specifications

Size (H x W x D)	9.6 cm x 2.5 cm x 26 cm	(3 3/4 in x 1 in x 10 1/4 in)
Weight	0.5 kg	(1.1 lb)
Temperature		
operating	0 °C to 50 °C	(32 °F to 122 °F)
storage ¹²	-40 °C to 70 °C	(-40 °F to 158 °F)
Relative humidity	0 % to 95 % non-condensing	
Warranty (years)	3	

Standard Accessories

User guide, Certificate of Calibration, connector adapter (FOA) according to chosen connector, mandrel and alcohol cleaning pads.

Notes:

- At 23 °C ± 1 °C and 1550 nm with FC connector and on batteries, unless otherwise specified.
- Resolution, uncertainty and linearity are functions of input power; uncertainty is valid at calibration conditions.
- Traceable to NIST; up to 20 dBm for GeX.
- Power of > -45 dBm for Ge, > -30 dBm for GeX and > -57 dBm for InGaAs.
- In High source mode.
- As defined by Telcordia TR-TSY-000887, rms for lasers and at -3 dB for LEDs; typical values for LEDs.
- After a warmup time of 6 minutes, in CW source mode.
- Typical value, at 1550 nm for SM and 850 nm for MM.
- Typical value.
- For fiber length ≤ 120 km.
- For graded-index MM fibers; typical.
- Without batteries.

ORDERING INFORMATION

FTB-393X-XX-XX-XX-XX

Model

FTB-3932 = Ge detector, dual-wavelength 1310/1550 nm
 FTB-3932-4 = Ge detector, triple-wavelength 1310/1550/1625 nm
 FTB-3932-5 = Ge detector, triple-wavelength 1310/1490/1550 nm
 FTB-3932X = GeX detector, dual-wavelength 1310/1550 nm
 FTB-3932X-4 = GeX detector, triple-wavelength 1310/1550/1625 nm
 FTB-3932X-5 = GeX detector, triple-wavelength 1310/1490/1550 nm
 FTB-3933 = InGaAs detector, dual-wavelength 1310/1550 nm
 FTB-3933-4 = InGaAs detector, triple-wavelength 1310/1550/1625 nm
 FTB-3933-5 = InGaAs detector, triple-wavelength 1310/1490/1550 nm

Second Source

00 = Without second source
 12C = 850/1300 nm LED 50/125 μm
 12D = 850/1300 nm LED 62.5/125 μm

Talk Set and Visual Fault Locator²

00 = Without talk set and VFL
 VFL = With visual fault locator
 VFT = With talk set and VFL³ (universal 2.5 mm connector)

Example : FTB-3932-5-VFT-FOA-22-EI-EUI-89

Note:

1. Not available with second source.
2. Connector type for the talk set is the same as the one specified for the main source.
3. Not available when equipped with second source.

Safety

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001:

Emitters used for sources, FasTesT, ORL and talk set
 CLASS 1 LASER PRODUCT
 CLASS 1 LED PRODUCT

The FTB-3930's optional VFL is a Class 3R laser product. Output power level is lower than the maximum specified on label. Refer to specifications for output power.

† If VFL option is available



Connector

EI-EUI-28 = UPC/DIN 47256
 EI-EUI-76 = UPC/HMS-10/AG
 EI-EUI-89 = UPC/FC narrow key
 EI-EUI-90 = UPC/ST
 EI-EUI-91 = UPC/SC
 EI-EUI-95 = UPC/E-2000
 EA-EUI-28 = APC/DIN 47256¹
 EA-EUI-89 = APC/FC narrow key¹
 EA-EUI-91 = APC/SC¹
 EA-EUI-95 = APC/E-2000¹

Connector Adaptor (description standard)

FOA-12	FOA-34	FOA-68
FOA-14	FOA-40	FOA-76
FOA-16	FOA-42	FOA-78
FOA-22	FOA-44	FOA-84
FOA-24	FOA-48	FOA-96B
FOA-28	FOA-52	FOA-98
FOA-32	FOA-54	FOA-99

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at www.exfo.com.



Rugged Handheld Solutions

- OLTS
- Power meter
- Light source
- Talk set



Optical Fiber

- OTDR
- OLTS
- ORL meter
- Switch

DWDM Test Systems

- OSA
- PMD analyzer
- Chromatic dispersion analyzer
- Multiwavelength meter

Telecom/Datacom

- 10/100 and Gigabit Ethernet
- SONET/SDH (DS0 to OC-192c)
- SDH/PDH (64 kb/s to STM-64c)

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EXFO is certified ISO 9001 and attests to the quality of these products. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. 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. **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 <http://www.exfo.com/specs> In case of discrepancy, the Web version takes precedence over any printed literature.

