



FTB-730 OTDR

Precise, rapid PON/FTTx and MDU
splitter characterization

Jimmy Gagnon
Product Specialist
jimmy.gagnon@exfo.com
October 2010

EXFO | Assessing
Next-Gen Networks

1. FTB-1 Platform
2. ConnectorMax Software
3. FTB-730 PON OTDR
4. FTB-860x Ethernet Tester


FTB-1 Platform



FTB-1 PLATFORM

EMPOWERING
FRONTLINE TECHNICIANS

- › 7-INCH TOUCHSCREEN DISPLAY
- › UNIQUE HYBRID-TOUCH CONTROL
- › SMALLEST AND LIGHTEST FTTX/10G PLATFORM (33% THINNER)
- › UNMATCHED BATTERY LONGEVITY
 - › OTDR: 8 hours
 - › 10 Gbit/s Ethernet: 4 hours



MODULAR

SWITCH AND SWAP IN A SNAP

The image shows three modular components of a device, including a blue printed circuit board (PCB) with various connectors and a grey plastic housing, set against a blue gradient background.



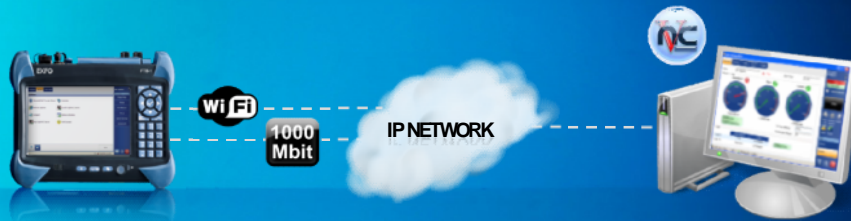
**UNMATCHED
CONNECTIVITY**

 2x 

The image features a modular device with a keypad and various ports. It is surrounded by logos for Intel Atom, Bluetooth, Wi-Fi, 1000 Mbit, and 2x USB 2.0, all set against a blue gradient background.

REMOTE CONTROL



- › QUICK ONE-BUTTON CONFIGURATION
- › ENABLES WEB-BASED REMOTE ASSISTANCE
- › BASELINE FEATURE; THERE WHEN YOU NEED IT

INTELLIGENCE



- › INTEGRATED TEST TOOLS
- › FULL COMPLEMENT TO TEST MODULES
- › PROVIDES EASY, QUICK SERVICE LEVEL TEST TOOLS

EXpert VoIP TEST TOOLS

- › Live and Synthetic VoIP Calls
- › SIP, H.323, SCCP, MEGACO, R-FACTOR, MOS metrics

EXpert IP TEST TOOLS

- › Six Tools in One
LAN discovery, VLAN scan,
FTP, HTTP, ping, traceroute



- › Protocol Capture and Decode



- › TCP Performance Validation

INTELLIGENCE

INTEGRATED TEST TOOL FOR RAPID VERIFICATION
OF VOICE QUALITY AND VoIP SERVICES

EXpert VoIP TEST TOOLS

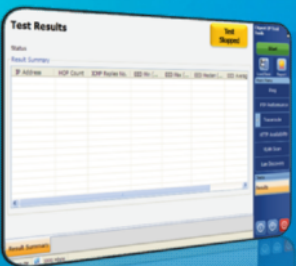


- › Perform live and synthetic VoIP calls
- › SIP, H.323, SSCP, MEGACO
- › R-FACTOR and MOS metrics
- › Configurable pass/fail thresholds

INTELLIGENCE

THE INDISPENSIBLE IP TEST TOOL KIT:
SIX TESTS IN ONE EASY-TO-USE TEST SUITE

EXpert IP TEST TOOLS



- › Ping
- › Traceroute
- › VLAN scan
- › LAN discovery
- › FTP performance
- › HTTP availability

INCREASED PRODUCTIVITY



- › INTEGRATED UTILITIES FOR WORKFLOW EFFICIENCY
- › LEVERAGING CONNECTIVITY TO INCREASE AUTONOMY
- › EFFORTLESSLY RECEIVE AND TRANSFER FILES/DATA



Bluetooth Data Mover

- › Quick data file transfer to smartphones and PCs for upload to central office



Update Manager

- › Simple, quick and intuitive software upgrade wizard



Wi-Fi Wizard

- › View/connect to Wi-Fi networks and save profiles for quick configurations



Internet Explorer

- › Browse the web, access online info and web e-mail accounts

INCREASED PRODUCTIVITY

FIP-400 CONNECTORMAX: ELIMINATE GUESSWORK AND ACHIEVE CLEAR-CUT ENDFACE ANALYSIS




- › Automated pass/fail analysis
- › Results in four seconds with simple one-touch operation
- › Full test reports for future referencing



The screenshot shows the FTB-860G NetBlazer software interface. It features a 'Start Time' field set to 11:29, a 'Latency' gauge with a green needle pointing to approximately 15, and a text display showing '<math>< 0.015\text{ ms}</math>'. Below the gauge, there are input fields for 'TX Rate (Mbit/s)' set to 7516 and 'Frame Size (Bytes)' set to 90. A 'Pause Frame' button is visible. The right-hand side of the interface includes a 'FAIL' status indicator, a 'No Alarm' message, a '0d:00:09:56' timer, a 'Stop' button, and a menu with options: 'Save Load', 'Remote Jockey', 'Report', 'Laser', and 'Reset'. At the bottom, there are buttons for 'Test Setup' and 'Results'.

SIMPLICITY

- › SIMPLE, ONE-CLICK NAVIGATION
- › INTUITIVE UI WITH GRAPHICAL RESULTS
- › SAVE AND LOAD TEST CONFIGURATIONS
- › LOCAL PDF, TXT AND HTML REPORTING



The image shows the FTB-100 Series OTDR module, which is a rugged, handheld device with a black and blue color scheme. It has a carrying handle on top, a screen on the front, and various ports and buttons. The text 'OTDR FTB-100 SERIES' is visible on the top edge of the device.

FTB-1 MODULES

- › FTB-730 OTDR
- › FTB-860x Ethernet Tester
- › Fiber inspection probe with ConnectorMax (optional)
- › Power meter and VFL (optional)

ConnectorMax Software

INCREASED PRODUCTIVITY

FIP-400 CONNECTORMAX:
ELIMINATE GUESSWORK AND ACHIEVE
CLEAR-CUT ENDFACE ANALYSIS

- › Automated pass/fail analysis
- › Results in four seconds with simple one-touch operation
- › Full test reports for future referencing



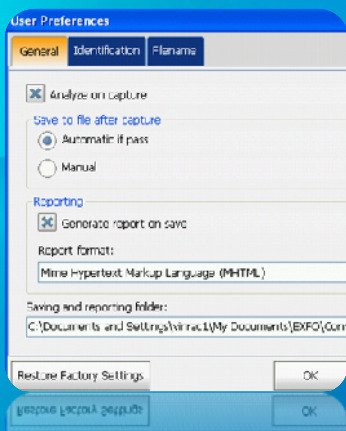
FOLLOW THE STANDARDS



All network types applicable

- › Connector inspection and certification
- › Network troubleshooting
- › Network acceptance testing
- › Create your own standards
- › IEC 6100-3-35 Standard
- › IPC 8497-1 standard

REDUCE MANIPULATIONS



› FEATURE SET

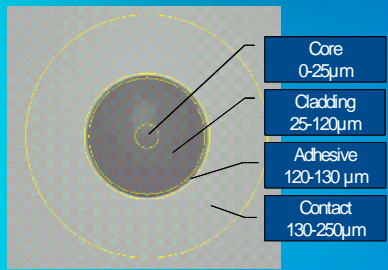
- › **Focus indicator** for optimal results
- › Auto Naming
- › Auto Saving
- › Report generation
- › Re-Test function

FULLY COMPATIBLE



- › Works with your FTB-500, FTB-200V2, FTB-1
- › Completes your FIP-400 inspection probes

PRE-SET PARAMETERS

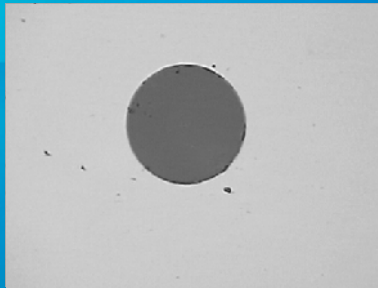


- › Default settings follow IEC & IPC standards
- › Connector end-face is divided into multiple zones
- › Size will depend on connector type
- › Tolerances will differ per zone
 - › Number of defects
 - › Number of scratches
 - › Size of defects and scratches

Zones	Scratches	Defects
A: Core	None	None
B: Cladding	No limit ≤ 3µm None > 3µm	No limit <2µm 5 from 2 - 5µm None > 5µm
C: Adhesive	No limit	No limit
D: Contact	no limit	None ≥ 10µm

ELIMINATE GUESS WORK

2



› Can you rely on everybody's judgment ?

ELIMINATE GUESS WORK

1

Graphics

Results Summary

	Scratches				Defects			
	Criteria	Threshold	Count	Status	Criteria	Threshold	Count	Status
A: Core 0-25um	0+um	0	0	Pass	0+um	0	0	Pass
B: Cladding 25-120um	0sw<3um	any	0	Pass	0sw<2um	any	0	Pass
	3+um	0	0		2sw<5um	5	3	
					5+um	0	0	Pass
C: Adhesive 120-130um	-	-	-	-	-	-	-	-
D: Contact 130-250um	0+um	any	0	Pass	0sw<10um	any	16	Pass
						10+um	0	

ELIMINATE GUESS WORK

2

Graphics

Results Summary

	Scratches				Defects			
	Criteria	Threshold	Count	Status	Criteria	Threshold	Count	Status
A. Core 0-25um	0+um	0	0	Pass	0+um	0	2	Fail
B. Cladding 25-120um	0+um	any	0	Pass	0+um	any	2	Fail
	3+um	0	0	Pass	20+um	3	10	Fail
C. Adhesive 120-130um	-	-	-	-	3+um	0	0	-
	0+um	any	1	Pass	0+um	any	12	Fail
D. Contam. 130-200um	0+um	any	1	Pass	0+um	0	1	Fail

GET RESULTS IN THE FIELD

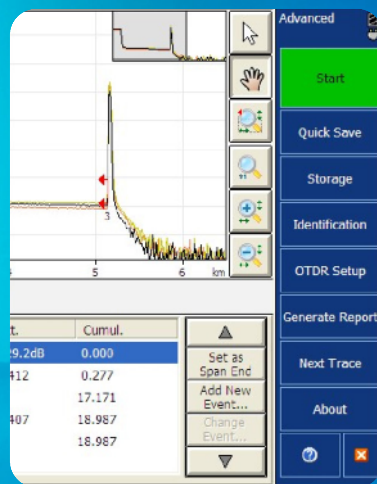


ConnectorMax

Pass/Fail analysis software

On the platform!

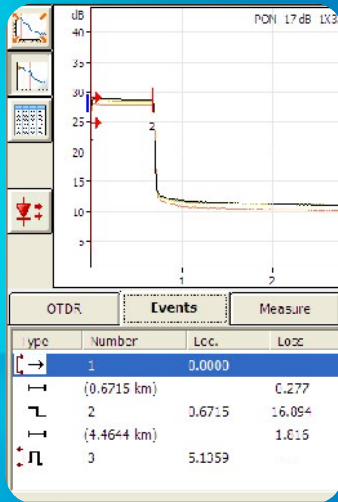
FTB-730 PON OTDR



SIMPLICITY

- › Simple, One-Click Navigation
- › Windows based INTUITIVE UI with GRAPHICAL RESULTS
- › LOCAL HTML and pdf reporting

PERFORMANCES



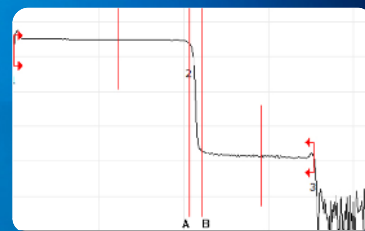
- › PON-OPTIMIZED (UP TO 1:128)
- › Avoid turn-up failures at splitters
- › SAME GUI AS FTB-200 OTDR
- › You already know how to use it
- › ONLINE BI-DIRECTIONAL ANALYSIS
- › In-field diagnostic on splice repair

FTB-730 OTDR

BENCHMARK SPECIFICATIONS

TECHNICAL SPECIFICATIONS	FTB-730C*	FTB-730B*
Wavelength (nm)	1310/1490/1550/1625	1310/1490/1550/1625
Dispersion range at 25 ps/nm	3000/3500/3500	3000/3500
Pulse width (ns)	0.8	0.8
Average dead zone (m)	4.4/5.4/5.4/5	4/5.4/5.4/5
Minimum range (m)	1.2/1.2/1.2/1.2	1.2/1.2/1.2/1.2
Pulse width (ns)	0.8/0.8/0.8/0.8	0.8/0.8/0.8/0.8
Resolution (dB)	±0.40	±0.40
PON dead zone (m)	0.5	0.5
Loss resolution (dB)	0.05	0.05
Loss resolution (dB)	0.05	0.05
Sampling resolution (m)	0.04 m	0.04 m
Sampling rate (m)	10/10/10/10	10/10/10/10
Dynamic range (dB)	39/35/37/39	39/35/37/39
Measurement time (s)	1/1/1/1	1/1/1/1
Typical resolution (dB)	4	4
SMR (noise floor) (dB)	-25	-25
Visual fault location (m)	1000/1000/1000/1000	1000/1000/1000/1000
Resolution (m)	0.5	0.5

- › Wavelengths: 1310/1490/1550/1625 nm
- › Dynamic ranges: 39/35/37/39 dB
- › Dead zones: 0.8/4.5 m





FTB-730 OTDR

THE WORLD'S NO. 1 OTDR SOLUTION
IS SETTING A NEW BENCHMARK
IN PERFORMANCE

- › Zero repeat jobs—first-time accurate
- › Refined analysis capabilities based on 17 years of proven in-field OTDR expertise
- › A proven product design for unmatched specifications



FTB-730 OTDR

ERROR-FREE FTTx/MDU FIBER
DEPLOYMENTS WITH UNPRECEDENTED
DATA EXCHANGE CAPABILITIES

See the smallest details

- › Seamlessly characterize splitters
- › Designed for finding closely spaced events

Integrated, adaptable

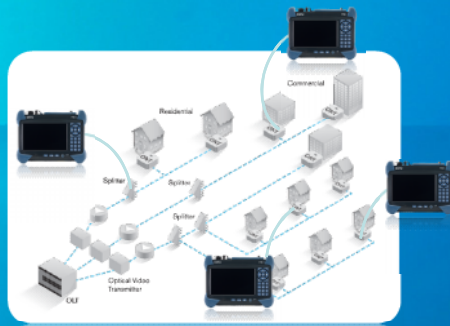
- › Multiple add-ons and connectivity for maximum autonomy
- › Built for your reality : over 15 languages to choose from

Efficient in-field tasks

- › Validate splice repairs with on-board bi-directional analysis
- › Take control of the unit wherever you are with TightVNC
- › Transfer files to your mobile and get instant support from the office

FTB-730 OTDR

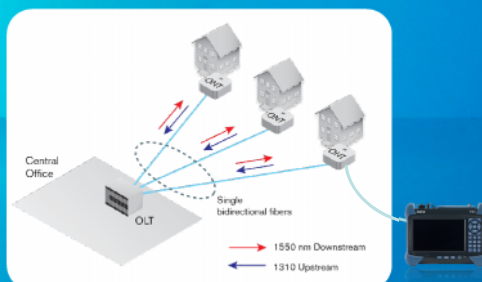
READY FOR WORLDWIDE FTTx DEPLOYMENTS



- › Ideal construction tool
- › Perfect form factor
- › Practical landscape screen
- › High-performance

FTB-730 OTDR

INDISPENSIBLE IN CHARACTERIZING POINT-TO-POINT ACCESS NETWORKS



- › Test direct links up to 80 km
- › In-service troubleshooting via live 1625 nm filtered port

FTB-730 OTDR

FTTX OTDR PRODUCT POSITIONING



THE FTTx FAMILY EXPANDS

THE FTB-730 & FTB-7300E

**FTB-730 and FTB-7300E—
PON FTTx/MDU OTDRs**
OPTIMIZED FOR ACCESS FIBER DEPLOYMENTS
AND TROUBLESHOOTING

SAVE SPECSHEET!

Perfect for fiber installers to seamlessly characterize splitters in PON FTTx and MDU applications

- › Same applications
- › Same GUI
- › Same specifications

THE PLATFORM IS THE DIFFERENTIATOR

CHOOSE THE BEST FIT



FTB-1/FTB-730

Manager 1

> Has single-task technicians doing mainly OTDR testing

Single-module for dedicated application

Manager 2

> Requires multi-applications support such as :
OTDR+Ethernet, OTDR+OLTS, OSA,
CD/PMD

2-slot modular for combined applications

**FTB-200
FTB-7300E**



A LIBRARY OF KNOWLEDGE

RIGHT AT YOUR FINGERTIPS...

ONLINE OTDR DEMO TOUR

ONLINE OTDR E-BROCHURE

NEW SPEC SHEET
FORMAT

FTB-860x Ethernet tester



FTB-860x SERIES

POWERFUL, FAST, INTUITIVE
10M-TO-10G ETHERNET TESTING

Investment Protection

- › Field-upgradeable software to 10GigE
- › Loopback-only configuration
- › Optional software features

Increased Productivity

- › Streamlined test set-up, results access and reporting
- › Single-click transition between test interfaces
- › Intelligent auto discovery

Rapid, Accurate Test Results

- › Bidirectional EtherSAM and RFC 2544
- › Multi-stream traffic generation testing and results
- › Simple, intuitive and graphical results display

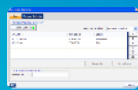
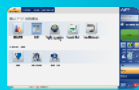


FTB-860X SERIES

TURNKEY DEPLOYMENT, VALIDATION
AND TROUBLESHOOTING OF ACCESS
AND METRO ETHERNET SERVICES

- › Multistream T-Gen (10 streams)
- › EtherSAM (ITU-TY.156sam)
- › RFC 2544
- › BERT (to layer 4)
- › Through mode/monitor
- › Real-time, asymmetrical results (EtherSAM, RFC 2544)
- › IPv4/IPv6 support (all tests)
- › Cable test
- › Ping/ Traceroute

FTB-860X SERIES



Revolutionary GUI

- › Side panel and status bar provide key information at all times
- › Automatic summary screens, and report generation
- › Persistent settings remembering past configurations for quick recall

Intelligent Discovery

- › Automatic discovery of remote tester
- › All remote information (IP, MAC, etc.) retrieved and used for test communication
- › Asymmetrical results for EtherSAM and RFC2544 tests via Dual Test Set mode

Unique EtherSAM

- › Standards based service activation test
- › Fully automated, ensure accurate and repeatable results
- › Verifies all critical SLA metrics, including throughput, latency, jitter, loss, and out-of-sequence for all services in parallel

Traffic Generation

- › Simultaneous testing of up to 10 streams/services
- › Independent configuration of each stream
- › Visual gauges for easy results interpretation

Smart Loopback

- › Most flexible loopback configuration modes:
 - Transparent Ethernet -- all unicast Ethernet -- My MAC IP -- My IP UDP/TCP
- › Easy interoperability with 3rd party portable testers, and rack mounted test heads

THANK YOU
