

FTB-4 Pro platform

VERSATILE MULTITECHNOLOGY PORTABLE TEST PLATFORM



- The most flexible solution to test multiple technologies and high speed networks.

PART OF THE
EXFO|FTB ecosystem

EXFO Connect
compatible

TestFlow

KEY FEATURES

Connects anywhere: USB, WiFi, Bluetooth, mobile and virtual private network (VPN)

Loaded with utilities: equipped with all the tools required to maximize field testing

Like a PC: quad-core processor with Windows 10 operating system

EXFO Connect-compatible: automated asset management; data goes through the cloud and into a dynamic database

RELATED PRODUCT



Fiber inspection scope
FIP-400B (WiFi or USB)

THE POWER AND FLEXIBILITY YOU NEED FOR ADVANCED APPLICATIONS

The FTB-4 Pro delivers all the power of a high-end platform in a go-where-you-need field-testing tool.

| APPLICATIONS |
|--|
| <p>ROADM and PTN turn-up testing Combines SONET/SDH, OTN, Ethernet and Fibre Channel analysis, as well as an optical spectrum analyzer (OSA) with built-in polarization controller.</p> |
| <p>Gigabit/10 Gigabit Ethernet configurations Gigabit Ethernet analyzer, OTDR and optical spectrum analyzer with polarization controller.</p> |
| <p>Fibre Channel Fibre Channel is the protocol for the communication structure dedicated to carrying different types of traffic for applications that require first-rate capabilities of storage and technologies.</p> |
| <p>ROADM commissioning Insert an OSA within this compact, portable solution for fast and accurate DWDM commissioning and turn up of high-speed networks up to 100/200/400 Gbit/s.</p> |
| <p>Multiservice testing Easily turn up, validate and troubleshoot DS_n/PDH, SONET/SDH and Ethernet services up to 10 Gbit/s in converged optical networks. Delivering IPTV test capabilities and transmission control protocol (TCP) throughput assessment.</p> |
| <p>Fiber characterization and troubleshooting OTDR/iOLM testing combined with fiber endface inspection and optical power measurement for fiber characterization and troubleshooting of any network, including access, LAN/WAN, data center, FTTx, metro, long-haul and ultra-long-haul.</p> |
| <p>FTTH testing With a dynamic range of up to 42 dB and enabling power meter and visual fault locator functionalities, the PON FTTx/MDU OTDR module allows fiber installers to seamlessly characterize splitters in PON FTTx and multiple dwelling unit (MDU) applications.</p> |
| <p>Ethernet testing from 10 Mbit/s to 100 Gbit/s 100% line-rate testing of IP traffic at up to 100G; RFC 2544 and ITU-T Y.1564 Ethernet service activation with full statistics, and packet capture, traffic filtering, ping and traceroute with clear pass/fail verdicts.</p> |
| <p>CWDM turn-up testing Integrate CWDM OTDR to test through CWDM-based MUX/DEMUX at ITU-recommended wavelengths.</p> |
| <p>DWDM testing Highly accurate and reliable DWDM network commissioning, troubleshooting and channel analysis.</p> |
| <p>400+ Gbit/s testing applications Advanced future-proof hardware, ready for today's and tomorrow's 400+ Gbit/s applications.</p> |
| <p>Distributed PMD analysis Single-ended, span-by-span measurement of PMD, enabling targeted fiber upgrades and cost-effective deployment of transmission speeds at 10, 40 and 100 Gbit/s.</p> |

| OPTICAL TEST MODULES | |
|---|--|
| Optical spectrum analyzer | FTBx-5235 FTBx-5243-HWA FTBx-5245 FTBx-5255 |
| OTDR | FTB-7400E FTB-7600E FTBx-720C FTBx-730C FTBx-735C FTBx-750C |
| OTDR CWDM/DWDM | FTB-7400E FTBx-740C |
| OLTS | FTBx-940 FTBx-945 |
| Single-ended dispersion analyzer | FTB-5700 |
| Chromatic dispersion (CD) | FTB-5800 |
| Polarization mode dispersion (PMD) | FTB-5500B |
| Distributed PMD analyzer | FTB-5600 |

| TRANSPORT AND DATACOM TEST MODULES | |
|------------------------------------|------------------------|
| 400G multiservice | FTBx-88460 |
| 1G-to-100G testing | FTBx-88260 |
| Advanced 100G multiservice | FTBx-88200NGE |
| Versatile 10G multiservice | FTBx-8870 FTBx-8880 |

OPTICAL PLUG-AND-PLAY OPTIONS

The platform can host optical plug-and-play options that can be purchased whenever you need them, at the time of your order or later on. In either case, installation is a snap. You can do it by yourself. No software update required.

Optical power meter

A high-level power meter (GeX) that can measure up to 27 dBm, the highest in the industry. This is essential for HFC networks or high-power signals. If used with an auto-lambda/auto-switching compatible light source, the power meter automatically syncs on the same wavelength, avoiding any risk of mismatched measurement.

- Extensive range of connectors
- Auto-lambda and Auto-switching
- Offers measurement storage and reporting
- Choice of seven standard or CWDM calibrated wavelengths

Visual fault locator (VFL)

The plug-and-play VFL easily identifies breaks, bends, faulty connectors and splices, in addition to other causes of signal loss. Basic yet essential, this troubleshooting device should be part of every field technician's toolbox. Visually locating faults by creating a bright-red glow at the exact location of the fault on singlemode or multimode fibers, the VFL detects faults over distances of up to 5 km. (Available with the optical power meter only)



DO MORE!

The Windows 10 operating system allows for a wide choice of third-party applications and supports an extensive range of USB devices.

- Start faster and multitask
- Use the Office suite
- Connect to printers, cameras, keyboards, mice, and more

Bring your own apps



Share your desktop
(e.g., using
TeamViewer)



Antivirus
software



Communicate
via email and
over-the-top
(OTT) apps



Record and
automate
actions



Share files via
cloud-based
storage

FIBER CONNECTOR INSPECTION AND CERTIFICATION – THE ESSENTIAL FIRST STEP BEFORE ANY OTDR TESTING

Taking the time to properly inspect a fiber-optic connector using an EXFO fiber inspection scope can prevent a host of issues from arising further down the line, thus saving you time, money and trouble.

The first fully automated fiber inspection scope for the field

Housing a unique automatic focus adjustment system, the FIP-430B USB and FIP-435B WiFi scopes automate each operation in the connector endface inspection sequence, transforming this critical process into one quick and easy step, which can be performed by technicians of all skill levels.

100% automated^a | **1-step** process | **57%** shorter test time^b



| FEATURES | USB WIRED | | | WIRELESS | |
|--|--------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| | Basic FIP-410B | Semi-automated FIP-420B | Fully automated FIP-430B | Semi-automated FIP-425B | Fully automated FIP-435B |
| Three magnification levels | • | • | • | • | • |
| Image capture | • | • | • | • | • |
| Five-megapixel CMOS capturing device | • | • | • | • | • |
| Automatic fiber image-centering function | | • | • | • | • |
| Automatic focus adjustment | | | • | | • |
| Onboard pass/fail analysis | | • | • | • | • |
| Pass/fail LED indicator | | • | • | • | • |
| WiFi connectivity | | | | • | • |

For more information, visit www.EXFO.com/fiberinspection.

a. FIP-430B and FIP-435B models.

b. Data sourced from EXFO's case study, with calculation based on typical analysis time.

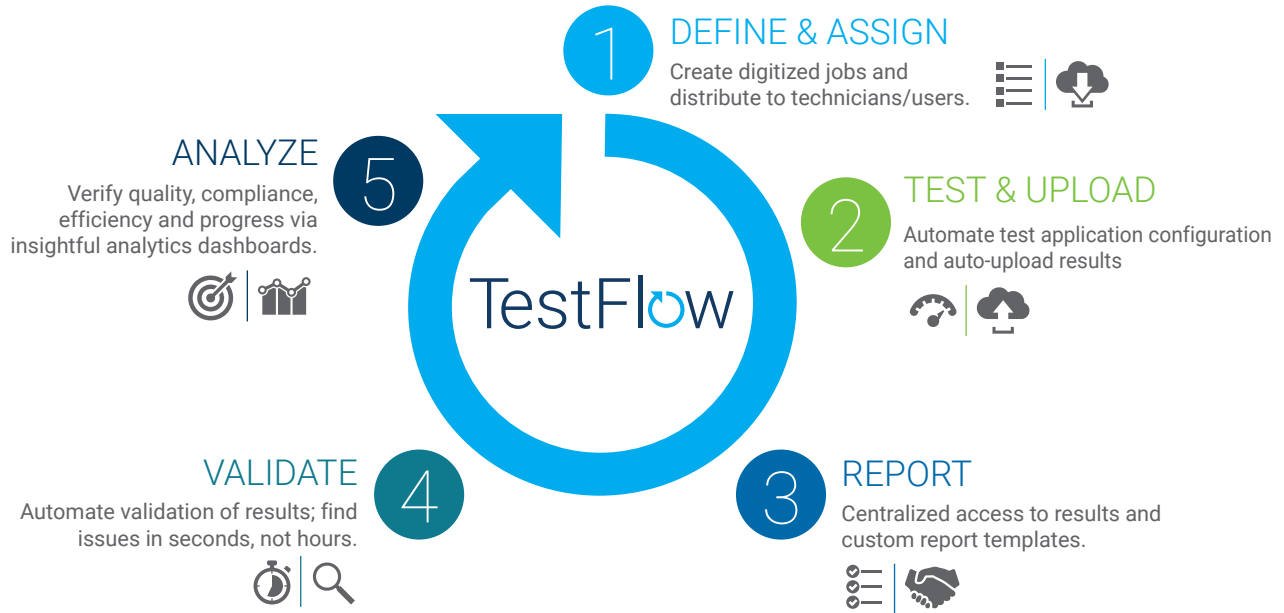


**CLOUD-BASED FIELD TEST MANAGEMENT SOLUTION—
GET MORE FROM FastReporter WITH TestFlow**



The TestFlow process

Whether you are a field technician, a site lead or a project manager, you can benefit from TestFlow.



- ENSURE 100% COMPLIANCE
- RIGHT THE FIRST TIME
- AUTOMATE REPORTING AND BATCH AUDITING
- FASTER INVOICING AND DEPLOYMENTS
- INFORMED BUSINESS DECISIONS

Get your free trial today or for more info: EXFO.com/TestFlow



SOFTWARE TEST TOOLS

This series of platform-based software testing tools enhance the value of the FTB-4 Pro platform, providing additional testing capabilities without the need for additional modules or units.

EXFO Remote ToolBox

The Remote ToolBox application remotely controls T&D modules installed on the platform using a remote PC and an Ethernet connection.

Wireshark—Third-party test tools

This live-network packet-capture utility makes it possible to look *inside* the packets and obtain data, including transmission time, source, destination and protocol type. Users can then diagnose a problem or root out suspicious behavior.

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 mean-opinion-score (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 file-transfer-protocol (FTP) performance and hypertext-transfer-protocol (HTTP) availability

EXpert IPTV TEST TOOLS

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

- Real-time video preview
- Analyzes up to 10 video streams
- Comprehensive quality-of-service (QoS) and quality-of-experience (QoE) metrics, including the MOS score

Software applications

ConnectorMax

Providing lightning-fast results during the first step of fiber-link testing, ConnectorMax2 is a powerful, platform-based automated inspection application that delivers quick pass/fail assessment of connector endfaces, and which is specifically designed to save both time and money in the field.

FastReporter

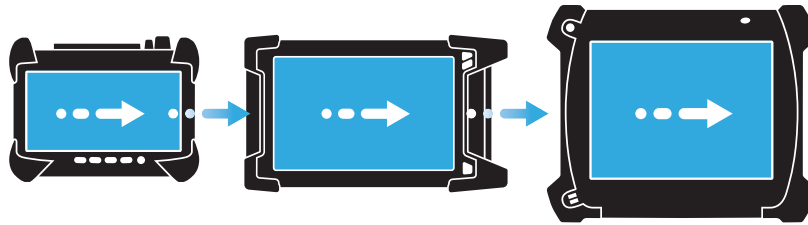
Consolidated data management and post-processing tool designed to increase reporting productivity for connector endface inspection and all types of optical-layer testing: intelligent Optical Link Mapper (iOLM), OTDR, ORL, loss, PMD and chromatic dispersion (CD).

EXFO MULTILINK

EXFO Multilink is a multi-user, multimodule and multiplatform client software application for remote controlled access of each platform and T&D module through a centralized dashboard featuring an easy-to-use GUI.

CONNECTED ANYWHERE, ANYTIME

The value of connectivity resides in the ability to connect your platform anywhere, at any time. This is why we've equipped our platforms with technology offering unprecedented flexibility. Whether you need to transfer data to the cloud or interface with a smart device, you'll have the capability needed.



Bluetooth® Wi-Fi 3G LTE GPS



Secure VPN communications

With Microsoft VPN on the FTB platforms, or the ability to install and configure any VPN client solution defined by your IT department on it, secure communications are now within your reach.



3G/LTE mobility

Get connected wherever you are: choose any Windows-supported 3G/LTE USB dongle and connect to your wireless service provider.



Remote control

Use remote assistance to troubleshoot units in the field, trigger tests remotely, or help a technician with a problem. Working without it is hard to imagine.



Instant messaging

Because our platforms are Windows-based, they function just like PCs. You can even use chat tools to quickly communicate with your team members (Skype comes preinstalled).

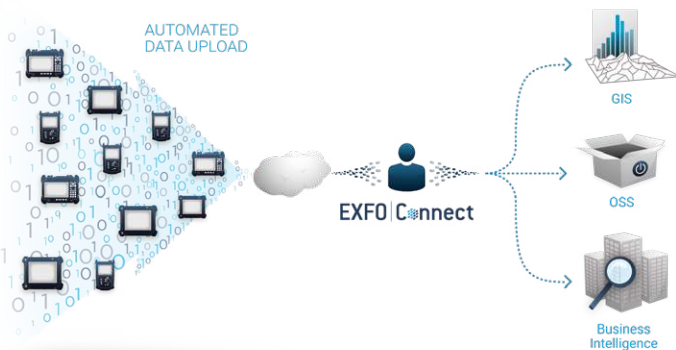
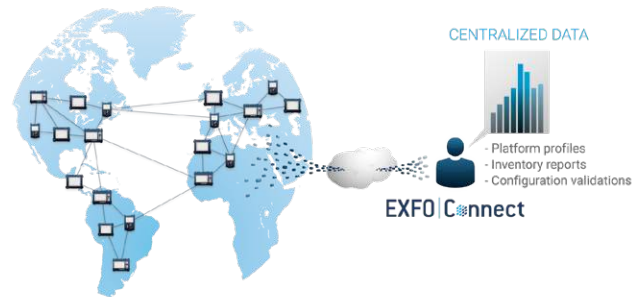
EXFO | C_onnect

EXFO CONNECT MAKES YOUR DATA MEAN BUSINESS

EXFO Connect completely redefines integrated testing with its cloud-hosted solution. Equipped with a powerful database and application technologies, EXFO Connect provides an automated, secure environment that links together your EXFO test instruments, and centralizes captured data across your organization.

Test Equipment Manager

EXFO Connect's Test Equipment Manager is an automated application that centralizes the management of all EXFO test instruments. It is a repository for software loads, licenses and platform profiles to help managers handle constant demands for software updates. It keeps track of equipment and ensures field technicians are equipped with up-to-date capabilities.

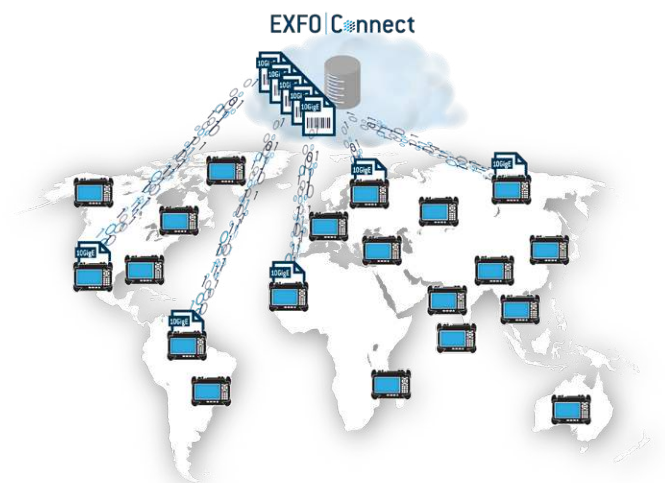


Test Data Manager

EXFO Connect's Test Data Manager is an automated application that provides a secure and centralized environment in which test data is collected, archived and referenced for future use. With test results at their fingertips, managers can create birth certificates, generate reports and set benchmarks.

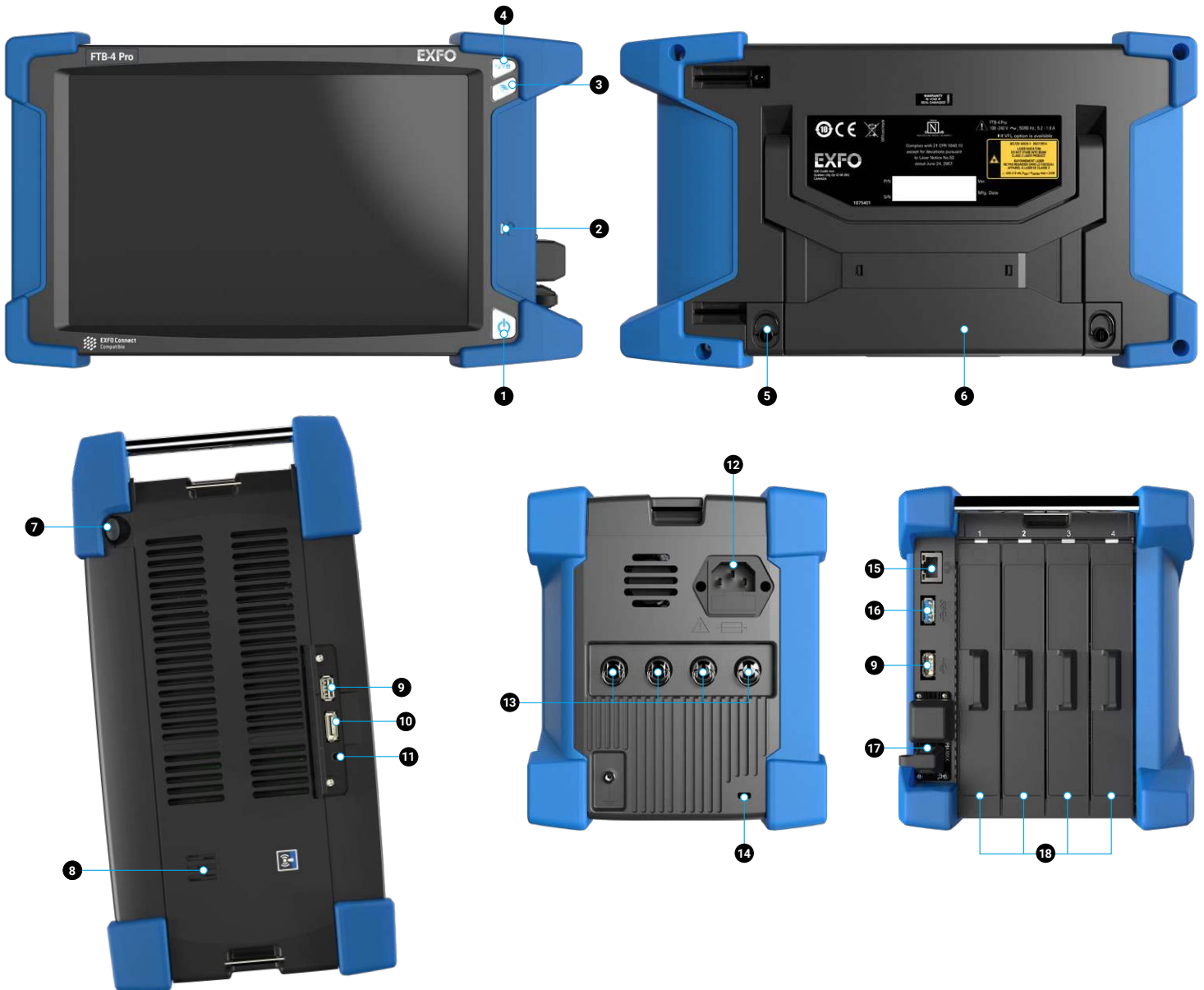
FTB Anywhere™: Floating test licenses

FTB Anywhere enables the sharing of test licenses. It is a feature of the award-winning FTB platform ecosystem. FTB Anywhere enables network operators to purchase a certain number of cloud-hosted licenses that can be shared instantly with their technicians, wherever they are.



DESIGNED FOR HIGH-SPEED AND MULTISERVICE

- 1 Power on/off
- 2 Battery LED
- 3 Switch application
- 4 Keyboard/screen capture
- 5 Battery compartment
- 6 Back stand
- 7 Stylus
- 8 Speaker
- 9 USB 2.0 port
- 10 Display port
- 11 Mic/Headset jack
- 12 Internal power supply
- 13 Module screws
- 14 Kensington security lock slot
- 15 1 GigE port
- 16 USB 3.0 port
- 17 Power meter and VFL
- 18 Four (4) slots to house modules



TECHNICAL SPECIFICATIONS^a

| | |
|---------------------------------|--|
| Mainframe | Quad-core processor / 4 GB RAM / Windows 10 |
| Display | Touchscreen, color, 1280 × 800 TFT 256 mm (10.1 in) |
| Interfaces | RJ45 LAN 10/100/1000 Mbit/s USB 2.0 ports (2) USB 3.0 port (1) Display port 3.5 mm headset/microphone port |
| Storage (internal flash memory) | 128 GB |
| Battery (not included) | Two rechargeable Li-ion smart batteries (optional) |
| Power supply | AC input: ~ 100 – 240 V; 50/60 Hz; 5.2 – 1.9 A |

GENERAL SPECIFICATIONS

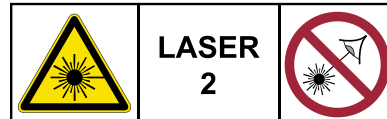
| | |
|---------------------|---|
| Size (H x W x D) | 199 mm × 333 mm × 170 mm (7 ^{13/16} in × 13 ^{1/8} in × 6 ^{11/16} in) |
| Weight ^b | 4.6 kg (10 lb) |
| Temperature | Operating Storage ^c |
| | 0 °C to 40 °C (32 °F to 104 °F) –40 °C to 60 °C (–40 °F to 140 °F) |

BUILT-IN POWER METER SPECIFICATIONS (GeX) (optional)^d

| | |
|---|--|
| Calibrated wavelengths (nm) | 850, 1300, 1310, 1490, 1550, 1625, 1650 |
| Optional CWDM calibrated wavelengths (nm) | 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1383, 1625 |
| Power range (dBm) ^e | 27 to –50 |
| Uncertainty (%) ^{e,f} | ±5 % ± 10 nW |
| Display resolution (dB) | 0.01 = max to –40 dBm 0.1 = –40 dBm to –50 dBm |

VISUAL FAULT LOCATOR (VFL) (optional)

| |
|--|
| Laser, 650 nm ± 10 nm |
| CW/Modulate 1 Hz |
| Typical P _{out} in 62.5/125 μm: > –1.5 dBm (0.7 mW) |
| Laser safety: Class 2 |

LASER SAFETY

The test modules that you use with your unit may have different laser classes. Refer to the module's documentation for exact information.

a. All specifications valid at 23 °C (73 °F).

b. Platform without batteries or modules.

c. Not including internal batteries. Battery storage temperatures: –20 °C to 60 °C (–4 °F to 140 °F) for shipping, and –20 °C to 45 °C (–4 °F to 113 °F) for long-term storage.

d. At 23 °C ± 1 °C, 1550 nm and FC connector. With modules in idle mode. Battery-operated after warm-up.

e. Typical.

f. At calibration conditions.

ORDERING INFORMATION

FTB-4-Pro-XX-XX-XX-XX-XX-XX-XX-XX-XX

Display

- S1 = Standard display
- S2 = Enhanced display for outdoor use

Memory

- 128G = 128 GB internal memory (flash)

Batteries

- 00 = without batteries
- BTY = with batteries

WiFi/Bluetooth option

- 00 = Without RF option enabled
- RF = With RF option/capability (WiFi and Bluetooth)
- NRF = Without RF hardware components^a

Power meter/VFL

- 00 = Without power meter
- VPM2X = VFL platform; PM; GeX detector
- VPM2X-CWDM = VFL platform; PM; GeX detector; CWDM wavelengths calibrated

Connector adapter

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

Software option

- 00 = Without any software option
- IP = Ping and traceroute functionalities
- EXpert-VoIP = RTP-based call testing software application, including packet loss analysis, jitter measurement and complete voice quality metrics
- EXpert-IP = IP/Ethernet test suite, with tests including FTP performance, HTTP availability, VLAN scan, LAN discovery, ping, traceroute and IP/Ethernet port statistics (license for a single platform)
- EXpert-IPTV = IPTV test suite
- EXpert-TPP-Bundle = Triple-play bundle for voice, video and data testing; includes EXpert IP Test Tools, EXpert IPTV Test Tools, EXpert VoIP Test Tools and EXpert SIP
- EXpert-SIP = SIP call-signaling support^c
- EXpert-SCCP = SCCP call-signaling support^c
- EXpert-H.323 = H.323 call-signaling support^c
- EXpert-H.248 = H.248/Megaco call-signaling support^c
- FR2-PL = FastReporter 2 Software
Fiber characterization package
- FR2-PL-LB = FastReporter 2 Software
Fiber characterization package and iOLM Loopback mode

Inspection probe base tips

- APC = Includes FIPT-400-U25MA and FIPT-400-SC-APC
- UPC = Includes FIPT-400-U25M and FIPT-400-FC-SC

Inspection probe models

- 00 = Without inspection probe
- FP410B = Digital video inspection probe^e
Triple magnification
- FP420B = Analysis digital video inspection probe^e
Automated pass/fail analysis
Triple magnification
Autocentering
- FP425B = Wireless digital video inspection probe^{e,f}
Automated pass/fail analysis
Triple magnification
Autocentering
- FP430B = Automated analysis digital video inspection probe^e
Automated focus
Automated pass/fail analysis
Triple magnification
Autocentering
- FP435B = Wireless analysis digital video inspection probe^{e,f}
Automated focus
Automated pass/fail analysis
Triple magnification
Autocentering

Example: FTB-4-Pro-S1-128G-RF-VPM2X-FOA-54B-FP420B-APC-EXpert-IP

- a. Only available with S1 standard display.
- b. Available if power meter is selected.
- c. Available if EXpert VoIP selected.
- d. Available if inspection probe is selected.
- e. Includes ConnectorMax2 software.
- f. Requires RF capability (WiFi/Bluetooth option).

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