

# FTB-4 Pro Platform

VERSATILE MULTITECHNOLOGY PORTABLE TEST PLATFORM



PART OF THE  
**EXFO | FTB Ecosystem**



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

## 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 PRODUCTS



**Fiber Inspector Probe**  
FIP-400B (Wi-Fi 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		OPTICAL TEST MODULES	
<p><b>ROADM and PTN turn-up testing</b></p> <p>Combines SONET/SDH, OTN, Ethernet and Fibre Channel analysis, as well as an optical spectrum analyzer (OSA) with built-in polarization controller.</p>		<p><b>Optical channel analyzer</b> FTB-5230S-OCA</p>	
<p><b>Gigabit/10 Gigabit Ethernet configurations</b></p> <p>Gigabit Ethernet analyzer, OTDR and optical spectrum analyzer with polarization controller.</p>		<p><b>Optical spectrum analyzer</b> FTB-5230S FTB-5240S FTB-5240BP</p>	
<p><b>Fibre Channel</b></p> <p>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><b>OTDR</b> FTB-7200D FTB-7300E FTB-7400E FTB-7500E FTB-7600E FTBx-720C FTBx-730C FTBx-735C FTBx-750C</p>	
<p><b>ROADM commissioning</b></p> <p>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 Gbit/s.</p>		<p><b>OTDR CWDM/DWDM</b> FTB-7400E FTBx-740C</p>	
<p><b>Multiservice testing</b></p> <p>Easily turn up, validate and troubleshoot DSn/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><b>OLTS</b> FTB-3930 FTBx-940 FTBx-945</p>	
<p><b>Fiber characterization and troubleshooting</b></p> <p>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><b>Single-ended dispersion analyzer (CD/PMD)</b> FTB-5700</p>	
<p><b>FTTH testing</b></p> <p>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><b>Chromatic dispersion (CD)</b> FTB-5800</p>	
<p><b>Ethernet testing from 10 Mbit/s to 100 Gbit/s</b></p> <p>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><b>Polarization mode dispersion (PMD)</b> FTB-5500B</p>	
<p><b>CWDM turn-up testing</b></p> <p>Integrate CWDM OTDR to test through CWDM-based mux/demux at ITU-recommended wavelengths.</p>		<p><b>Distributed PMD analyzer</b> FTB-5600</p>	
<p><b>DWDM testing</b></p> <p>Highly accurate and reliable DWDM network commissioning, troubleshooting and channel analysis.</p>			
<p><b>100 Gbit/s testing applications</b></p> <p>Advanced future-proof hardware, ready for today's and tomorrow's 100 Gbit/s applications.</p>			
<p><b>Distributed PMD analysis</b></p> <p>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>			
TRANSPORT AND DATACOM TEST MODULES			
<b>Multiservice</b>		FTB-8830NGE	
<b>10M-to-100G high-speed multiservice</b>		FTB-88100NGE	
<b>40G/100G high-speed multiservice</b>		FTB-88100G	
<b>DSn/PDH and SONET/SDH electrical</b>		FTB-8805	
<b>Advanced 100G multiservice</b>		FTBx-88200NGE	
<b>Versatile 10G multiservice</b>		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  
e-mail services  
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 probe 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 Probe for the Field

Housing a unique automatic focus adjustment system, the FIP-430B USB and FIP-435B WiFi Probes 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<sup>a</sup>

**1-step**  
process<sup>a</sup>

**57%**  
shorter test time<sup>b</sup>



### FIVE MODELS TO FIT YOUR BUDGET

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	X	✓	✓	✓	✓
Automatic focus adjustment	X	X	✓	X	✓
Onboard pass/fail analysis	X	✓	✓	✓	✓
Pass/fail LED indicator	X	✓	✓	✓	✓
Wi-Fi connectivity	X	X	X	✓	✓

For more information, visit [www.EXFO.com/fiberinspection](http://www.EXFO.com/fiberinspection).

**Notes**

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

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

## SOFTWARE TEST TOOLS

This series of platform-based software testing tools enhances the value of the FTB-4 Pro Platform, providing additional testing capabilities without the need for additional 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 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

### THIRD-PARTY TEST TOOLS

#### Wireshark

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.

### SOFTWARE APPLICATIONS

#### ConnectorMax2

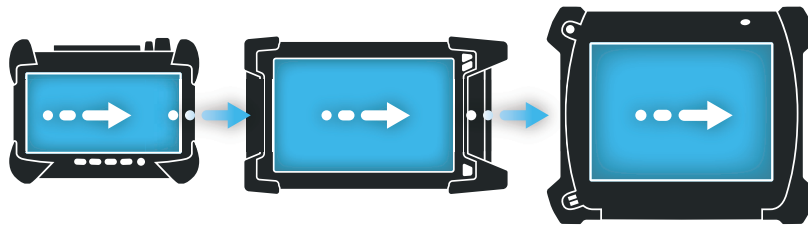
Providing lightning-fast results in the first step of fiber-link testing, ConnectorMax2 is a powerful, platform-based, automated inspection application that delivers quick pass/fail assessment of connector endfaces, and which is specifically designed to save both time and money in the field.

#### FastReporter2 EFFICIENT POST-PROCESSING SOFTWARE

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

## 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  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 can provide some functions just like PCs. You can even use chat apps to quickly communicate with your team members (Skype comes preinstalled on the FTB-4 Pro).

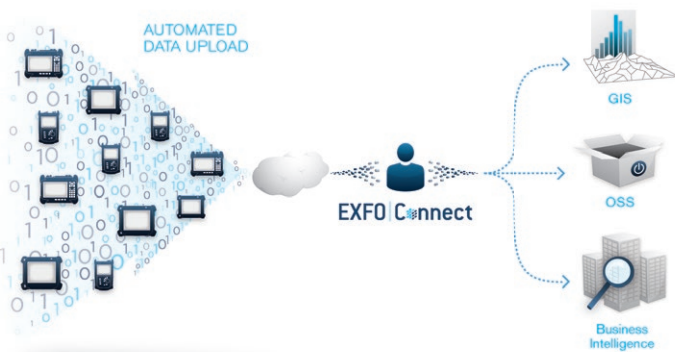
# EXFO | Connect

## 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.

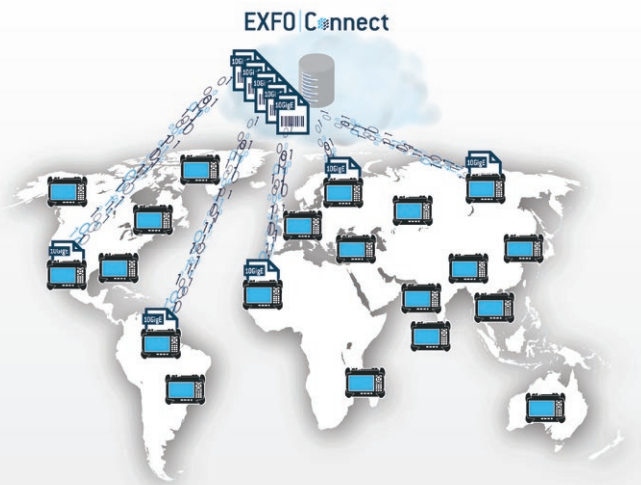


### Test Data Manager

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.

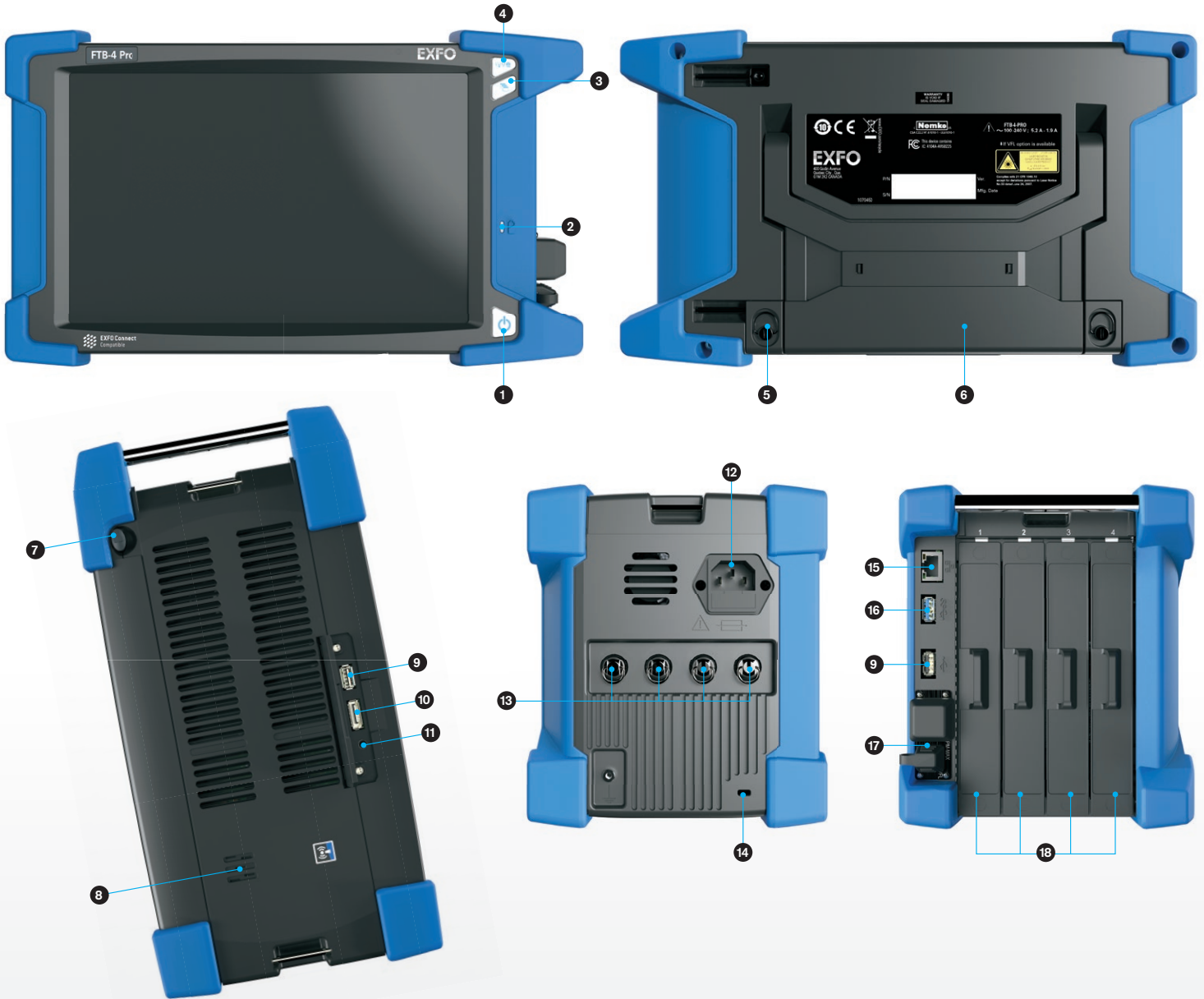
### FTB Anywhere™: Floating Test Licenses

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 <sup>a</sup>

Display	Touchscreen, color, 1280 × 800 TFT 256 mm (10.1 in)
Interfaces	RJ45 LAN 10/100/1000 Mbit/s Two USB 2.0 ports One USB 3.0 port 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
Computer	Quad Core processor / 4 GB RAM / Windows 10

## GENERAL SPECIFICATIONS

Size (H × W × D)	199 mm × 333 mm × 170 mm (7 <sup>13</sup> / <sub>16</sub> in × 13 <sup>1</sup> / <sub>8</sub> in × 6 <sup>11</sup> / <sub>16</sub> in)
Temperature	
Operating	0 °C to 50 °C (32 °F to 122 °F)
Storage <sup>b</sup>	-40 °C to 60 °C (-40 °F to 140 °F)
Weight <sup>c</sup>	4.6 kg (10 lb)

## BUILT-IN POWER METER SPECIFICATIONS (GeX) (OPTIONAL) <sup>d</sup>

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) <sup>e</sup>	27 to -50
Uncertainty (%) <sup>e,f</sup>	±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 <sub>out</sub> 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.

### Notes

- All specifications valid at 23 °C (73 °F).
- 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.
- Platform without batteries or modules.
- At 23 °C ± 1 °C, 1550 nm and FC connector. With modules in idle mode. Battery-operated after warm-up.
- Typical.
- At calibration conditions.

**ORDERING INFORMATION**

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

**Model**

FTB-4-Pro = Modular platform

**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<sup>a</sup>

**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<sup>b</sup>**

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  
IPT = Ping and traceroute functionalities  
EXpert-VolIP = 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<sup>c</sup>  
EXpert-SCCP = SCCP call-signaling support<sup>c</sup>  
EXpert-H.323 = H.323 call-signaling support<sup>c</sup>  
EXpert-H.248 = H.248/Megaco call-signaling support<sup>c</sup>  
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<sup>d</sup>**

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<sup>e</sup>  
Triple magnification  
FP420B = Analysis digital video inspection probe<sup>e</sup>  
Automated pass/fail analysis  
Triple magnification  
Autocentering  
FP425B = Wireless digital video inspection probe<sup>e,f</sup>  
Automated pass/fail analysis  
Triple magnification  
Autocentering  
FP430B = Automated analysis digital video inspection probe<sup>e</sup>  
Automated focus  
Automated pass/fail analysis  
Triple magnification  
Autocentering  
FP435B = Wireless analysis digital video inspection probe<sup>e,f</sup>  
Automated focus  
Automated pass/fail analysis  
Triple magnification  
Autocentering

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

**Notes**

- 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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