

# FIP-400B Fiber Inspection Scope Series

AUTOMATED WiFi AND WIRED INSPECTION TOOL WITH EMBEDDED ANALYSIS

■ Fully automated fiber inspection solution delivers both fast and consistent test results for single fiber and multifiber connectors from a single tool. Simplifies the overall process, provides accurate and consistent test results and provides pass/fail assessments quickly and easily.



## KEY FEATURES

- 100% automated for single fiber connectors, one step inspection process
- Screenless operation enabled by pass/fail LED indicator
- On-board connector endface analysis (IEC or custom standards)
- Feature-rich ConnectorMax2 mobile application compatible with Android™ and iOS™ devices<sup>1</sup>
- Full reporting capabilities on mobile devices and EXFO test platforms
- All-day battery life that will never let you down<sup>1</sup>
- MF-ready scopes compatible with single-fiber and automated multifiber tips
- Manufacturing automation using REST API available upon request

## RELATED PRODUCTS AND OPTIONS



Fiber inspection scope FIP-500

Stand-alone display kit TK-MAX-FIP

Cleaning kits

Adapter tips, bulkhead adapters

## APPLICATIONS

- Central offices, exchanges and headends
- Data centers
- Wireless (e.g., 5G, FTTA, DAA, small cells)
- Fiber-to-the-home (FTTH)

## SUPPORTED CONNECTORS

- Single-fiber connectors such as SC, LC, FC, ST and others
- MPO, MTP<sup>®2</sup>, Q-ODC-12<sup>®3</sup>, HMFOC<sup>®4</sup>, OptiTip<sup>®5</sup> and MT connectors
- Single- and dual-row multifiber connectors (12/24 or 16/32)

**Notes**

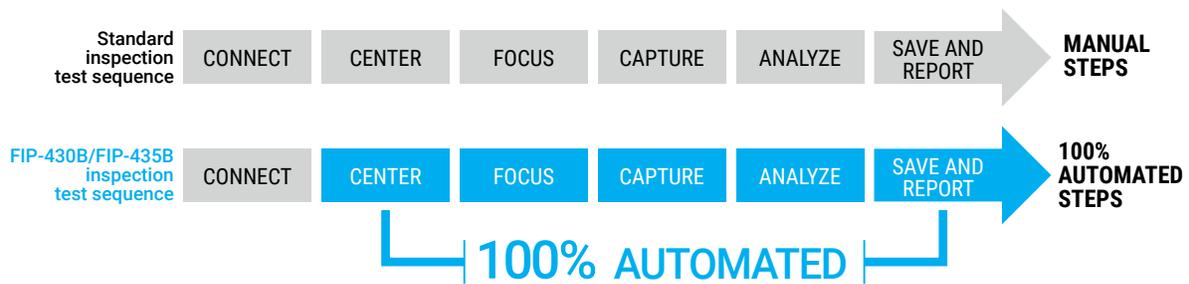
- <sup>1</sup> Wireless models FIP-435B
- <sup>2</sup> MTP is a registered trademark of US Conec Ltd.
- <sup>3</sup> Q-ODC is a registered trademark of Huber+Suhner
- <sup>4</sup> HMFOC is a registered trademark of CommScope Inc.
- <sup>5</sup> OptiTip is a registered trademark of Corning Cable Systems



## AUTOMATING THE COMPLETE INSPECTION PROCESS

### Turning fiber inspection into a one-step process

Enabled by a unique automatic focus-adjustment system, the FIP-430B and FIP-435B automate each operation in the test sequence, transforming the critical inspection step into a quick and simple one-step process accessible to technicians of any skill level.



### Automated focus adjustment

Ensures that each connector image is captured at maximum quality for enhanced identification of defects.

### Focus protection

Prevents image capture if focus is not adjusted properly. This ensures that no performance-affecting defects or residues are ignored in the analysis, thus preventing the reporting of false-positive results.

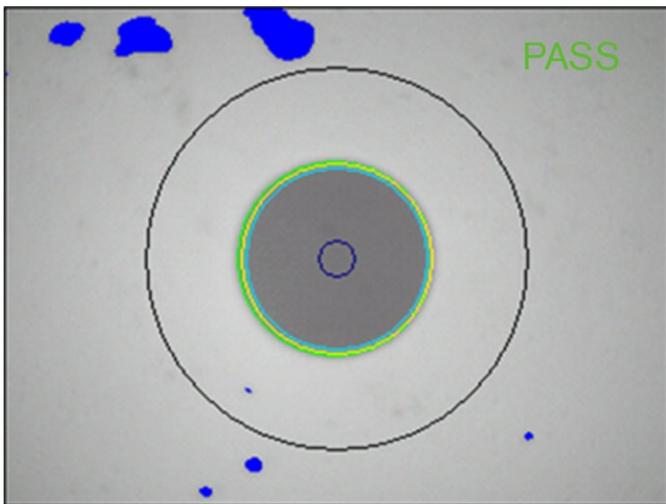


Figure 1. An out-of-focus image can hide critical defects capable of delivering a "pass" verdict.

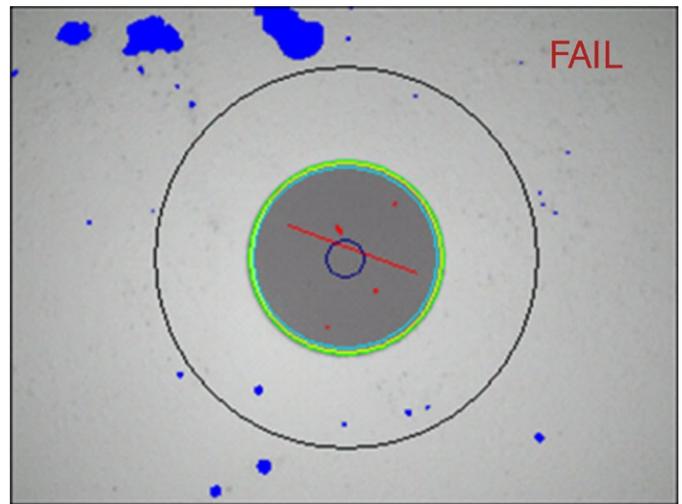


Figure 2. An optimized focus adjustment will ensure that all defects affecting performances are seen.

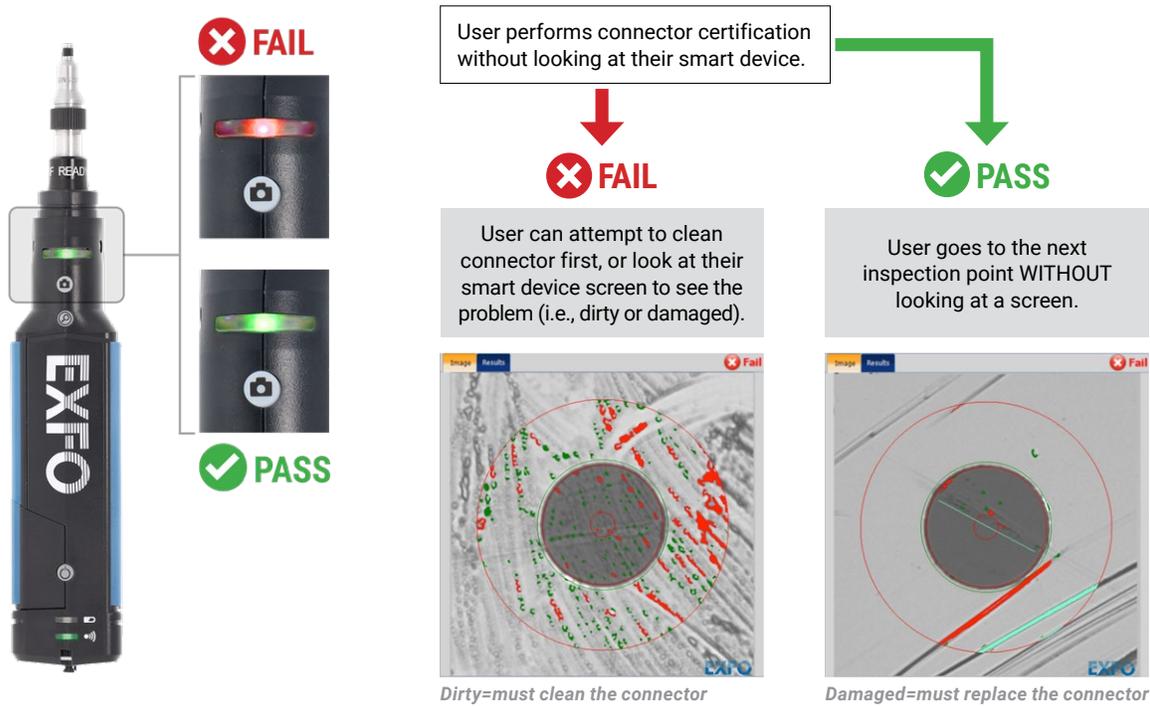
### Operation modes

The FIP-435B scope is compatible with iOS and Android devices. Live video feed is streamed via WiFi without any wired connection required between the scope and the smart device. The wireless scope is also compatible with EXFO's FTB and MaxTester platforms (connected via USB cable or WiFi) as well as ConnectorMax2 software (on a Windows-based PC).

The FIP-4X0B Series scopes (FIP-410B/FIP-420B and FIP-430B) are USB-wired inspection scopes compatible with EXFO's FTB and MaxTester platforms as well as ConnectorMax2 software (on a Windows-based PC).

## SCREENLESS OPERATION

Thanks to the pass/fail LED, users can perform connector certification without having to look at their smartphone or MaxTester display screen to view the results. Users can simply focus on getting ready for their next inspection while being able to use both hands in the process.



## FIP-400B UNIVERSAL COMPATIBILITY

Thanks to its USB port, the FIP-400B Series is compatible with the entire FTB ecosystem, the MaxTester 700B OTDR Series, the MaxTester 940/945 OLTS, the MAX-FIP display, LTB platforms and PCs and laptops.



FTB ecosystem



MaxTester 700B OTDR Series



MaxTester 940/945 OLTS



Stand-alone MAX-FIP display



iOS and Android smartphones and tablets<sup>a</sup>



PC and laptops



LTB platforms

a. FIP-435B Series

## GET ACCURATE INSPECTION RESULTS

The autofocus feature in the FIP-430B and FIP-435B not only greatly facilitates inspection, but also enables optimized focus adjustment to ensure detection of all defects capable of affecting connector performance.

The system self-adjusts the image centering to ensure that all inspection zones are visible, and then automatically adjusts the focus to achieve the best optical resolution. Next, the IEC (or custom) standard is applied to deliver accurate certification results in a snap. Fussing with image focusing, centering and inaccurate analysis results are now things of the past.

## FIP-400B FIBER INSPECTION SCOPE SERIES

- |   |                          |                                    |
|---|--------------------------|------------------------------------|
| 1 Interchangeable adapter tip (FIPT-400-XX) | 6 Power button           | 11 Battery compartment             |
| 2 Retaining nut                             | 7 Battery status LED     | 12 Wrist-strap eyelet              |
| 3 Activity and pass/fail status LED         | 8 WiFi status LED        | 13 Micro-USB port (power/recharge) |
| 4 Image capture control                     | 9 Focus adjustment wheel | 14 USB interface                   |
| 5 Magnification control                     | 10 Finger grip           |                                    |

### Wireless scope: FIP-435B



### USB wired scopes: FIP-4X0B Series



## DISCOVER THE INDUSTRY'S FIRST FULLY AUTOMATED FIBER INSPECTION SCOPES

Housing a unique automatic focus adjustment system, EXFO's fiber inspection scope series automates each operation in the sequence of inspecting a connector endface. The result: **fiber inspection is now a quick, one-step process that can be performed by technicians of all skill levels.**

### Automated models

**The FIP-500:** wireless, autonomous and fully automated scope featuring the fastest inspection in the industry for both multifiber and single-fiber connectors. All-day testing without the need to recharge batteries or offload results.

**The FIP-435B:** connected to EXFO platforms or your smart device, this fully automated wireless scope enables connector certification in one step. View and store results on your EXFO platform or smart device.

**The FIP-430B:** fully automated inspection scope featuring USB wired connectivity to PC and EXFO platforms.

### Semi-automated and manual models

**The FIP-420B:** semi-automated scope featuring a manual focus adjustment. USB wired connectivity to PC and EXFO platforms.

**The FIP-410B:** basic inspection features for manual inspection. USB wired connectivity to PC and EXFO platforms.



| FEATURES   | USB WIRED |          |          | WIRELESS | AUTONOMOUS |
|--|-----------|----------|----------|----------|------------|
|  | FIP-410B  | FIP-420B | FIP-430B | FIP-435B | FIP-500    |
| Image capture  | •         | •        | •        | •        | •          |
| Five-megapixel CMOS capturing device                           | •         | •        | •        | •        | •          |
| Automatic fiber image-centering function and focus adjustment  |           | •        | •        | •        | •          |
| Automatic fiber image-focus adjustment                         |           |          | •        | •        | •          |
| Onboard pass/fail analysis                                     |           | •        | •        | •        | •          |
| Pass/fail LED indicator  |           | •        | •        | •        | •          |
| USB connectivity to an EXFO platform or PC                     | •         | •        | •        | •        |            |
| Wireless connectivity to an EXFO platform or PC                |           |          |          | •        |            |
| Wireless connectivity to a smartphone                          |           |          |          | •        | •          |
| Semi-automated multifiber / MPO inspection                     | •         | •        | •        | •        |            |
| Fully automated multifiber / MPO inspection                    |           |          |          |          | •          |
| Onboard touch screen and data storage                          |           |          |          |          | •          |
| SmarTips with automated thresholds and quick-connect mechanism |           |          |          |          | •          |

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

## SEMI-AUTOMATED MULTIFIBER INSPECTION

Users can quickly and easily inspect all multiple- and single-row MPO connectors on densely populated panels without missing any fibers or dealing with the hassle of manipulating one or multiple scanning knobs—and do it right the first time.

The FIPT-400-MF uses a trigger to efficiently scan all fibers. These features make it possible to inspect densely populated panels without having to disturb adjacent fibers that may be carrying information. Users can easily operate the FIPT-400-MF with just one hand—it provides automated and fumble-free fiber inspection.

## COMPATIBLE WITH VARIOUS SINGLE-FIBER AND MULTIFIBER CONNECTORS

EXFO offers multiple patchcord tips and bulkhead adapters for both single fiber and multifiber applications.

These tips and adapters are built to fit a wide range of fiber connector types and designs that are currently used in the field including FC, SC, LC, ST for UPC and APC or FTTH/FTTA connectors. The MPO tip is compatible with single- and dual-row multifiber connectors regardless of the connector type.

For further information, please refer to our tip adapter guide.



Thanks to its removable nozzle, the solution can easily and quickly be adapted to various multifiber connector models:

- APC or UPC polishing type
- 12-fiber-row ferrule type for 12-24 fiber connectors
- 16-fiber-row ferrule type for 16-32 fiber connectors

Applications also include Q-ODC-12<sup>®</sup>, OptiTip<sup>®</sup> and HMFOC<sup>®</sup> connectors.

Simply swap tips for an easy transition from single to multifiber using the same MF-ready inspection scope.



Watch it in action: [MPOvideo](#)

## AUTOMATIC PASS/FAIL CONNECTOR CERTIFICATION

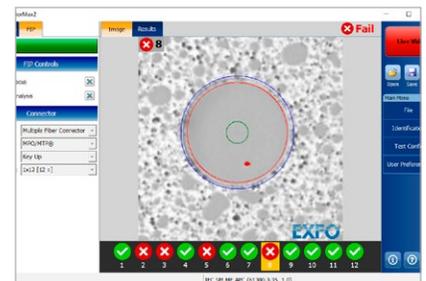
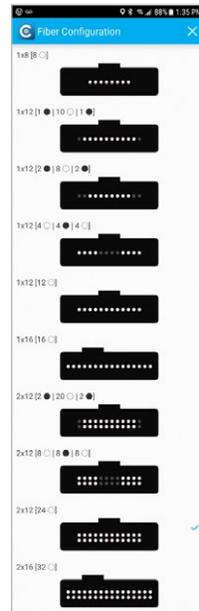
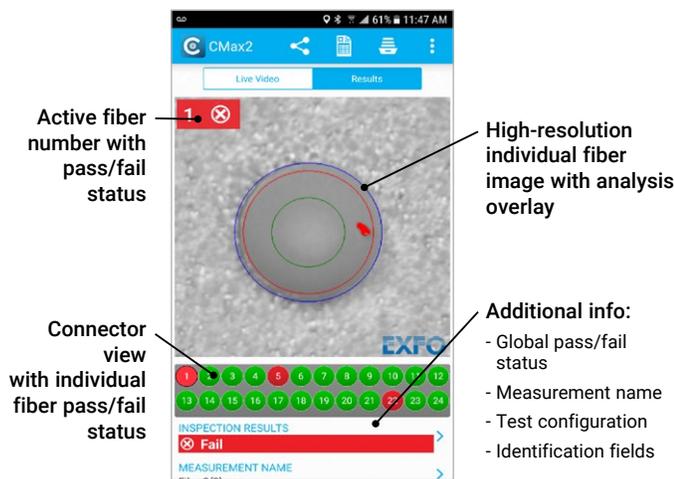
Thanks to its advanced onboard software algorithm, ConnectorMax2 performs automated pass/fail analysis within seconds and ensures that no fibers are skipped.

- No need to follow fibers and count them manually: the interface numbers each fiber automatically and assesses the pass/fail status of the entire connector as well as each individual fiber.

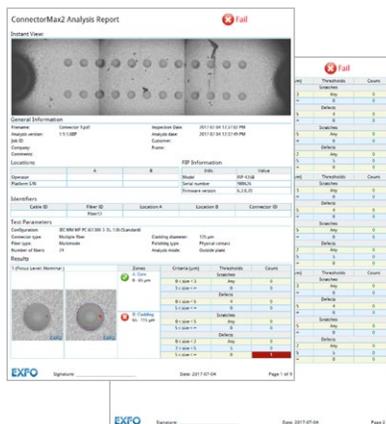
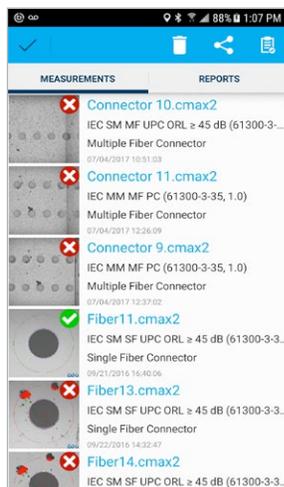
EXFO's interface enables a quick assessment of the entire multifiber connector in a single view.

- Access single fiber as well as the entire connector pass/fail status all at once by means of a simple interface without encountering fail status that could be caused by unused or missing fibers.
- Quickly navigate through individual high-resolution fiber images on demand by selecting fibers in the connector view or simply by swiping over the fiber image.

ConnectorMax supports various fiber configurations within multifiber connectors. This feature speeds up the inspection and analysis process by skipping unused fiber locations.



ConnectorMax includes complete documentation capabilities, accessible in the palm of your hand from your mobile device. You can archive your results and easily create and share reports within seconds.



## MAX-FIP TEST UNIT

The MAX-FIP features the largest screen in the industry, providing the highest magnification level for precise viewing of even the smallest defects on fiber endfaces. Its bright 7-inch touchscreen ensures fast and easy operation.

The MAX-FIP kit can also be equipped with a power meter and visual fault locator (plug-and-play options).

## MAX-FIP KEY FEATURES

- Bright, 7-inch touchscreen display
- Rugged, compact tablet-inspired form factor
- Power meter and visual fault locator (VFL) (plug-and-play options)
- Full-day rechargeable Li-ion battery
- WiFi and Bluetooth connectivity (plug-and-play options)



The easy-to-install power meter and VFL pieces attach to the MAX-FIP display using four screws.

## PACKAGED FOR EFFICIENCY

- |                               |   |
|-------------------------------|---|
| 1 Stylus                      | 6 AC adapter  |
| 2 Power meter                 | 7 Home/switch application and screen capture (hold) |
| 3 Visual fault location       | 8 Power on/off/standby                              |
| 4 10/100 Mbit/s Ethernet port | 9 Battery LED status                                |
| 5 Two USB 2.0 ports           |   |



## EXTENSIVE STORAGE CAPABILITY

The MAX-FIP standard 2 GB internal memory offers extensive storage of up to 4000 fiber certification results, and is expandable using USB memory sticks, optional WiFi and Bluetooth capability for cloud-based storage and wireless FIP-435B connectivity.



## BEST-IN-CLASS AUTONOMY

Take full advantage of the MAX-FIP's amazing eight-hour battery operation that never lets you down, and enables you to complete full-day jobs without having to recharge the unit. Also, save money by avoiding high battery replacement costs associated with other handheld inspection kits on the market that operate on standard alkaline batteries.



## TURN YOUR FIP-430B INTO A BENCHTOP SOLUTION WITH THE DESKTOP SUPPORT STAND (OPTIONAL)

### GP-2182 <sup>a</sup>

The FIP-430B can be quickly transformed into a benchtop inspection solution by mounting the scope on a desktop support stand. This leaves your hands free for repetitive manipulations and inspection of fiber jumpers and connectors. This makes the FIP-430B scope a handy solution for the production floor for inspection of both patch cords and bulkheads.

- Stable hold and rugged design
- Adjustable angle up to 7 different positions
- Allows male and female connector inspection using the same tool
- Quick release handle
- Manufacturing automation using REST API available upon request



Inspecting and analyzing fiber connector endfaces has never been easier than with the FIP-430B digital fiber inspection scope.

## BRING IT EVERYWHERE WITH THE BELT HOLSTER (OPTIONAL)

### GP-2224 <sup>a</sup>

The perfect accessory to carry:

- 1 x FIP-435B unit
- 2 x IBC cleaner tools
- A selection of fiber inspection tips
- Smartphone
- FLS-140 VFL (or pen)



## HANDS-FREE UTILITY BAG (OPTIONAL)

### GP-2177 <sup>a</sup>

To help optimize your test process and get maximum performance from your MAX-FIP solution, EXFO offers a hands-free utility bag that enables secure, hands-free operation of the unit when you work with fibers, connectors and inspection tools.



## MAX-FIP HOOK SUPPORT (OPTIONAL)

### GP-2176 <sup>a</sup>

The MAX-FIP hook support is an optional accessory that fits any type of fiber cabinet door perfectly, enabling hands-free operation for easier and faster fiber manipulation during the connector certification test process.



Using the optional GP-2176 hook for the MAX-FIP.

a. Accessories not included.

## FIP-400B SPECIFICATIONS

| WiFi FIBER INSPECTION SCOPE SPECIFICATIONS (FIP-435B) <sup>b</sup> |   |
|--|---|
| Size (H x W x D)   | 55 mm x 39 mm x 207 mm (2 <sup>3</sup> / <sub>16</sub> in x 1 <sup>1</sup> / <sub>2</sub> in x 8 <sup>1</sup> / <sub>8</sub> in) <sup>c</sup> |
| Weight   | 0.3 kg (0.66 lb)  |
| Resolution   | 0.55 μm   |
| Camera sensor  | Five-megapixel CMOS   |
| Visual detection capability <sup>h</sup>                           | <1 μm   |
| Field of view <sup>h</sup>   | 304 μm x 304 μm (high magnification)<br>608 μm x 608 μm (mid magnification)<br>912 μm x 912 μm (low magnification)                            |
| Light source   | Blue LED  |
| Lighting technique   | Coaxial   |
| Capture button   | Available on all models   |
| Magnification button   | Available on all models   |
| Digital magnification  | Three levels  |
| Connector  | Micro USB   |
| Connectivity   | WiFi 802.11g  |
| Frequency band   | 2.4 GHz   |
| Smart device OS compatibility <sup>d</sup>                         | Android 4.4 and above, iOS 9 and above  |
| Power  | 1 x removable battery   |
| Autonomy <sup>e</sup>  | ≥8 hours  |
| Recharge time <sup>f</sup>   | ≤ 4 h   |
| Distance range <sup>g</sup>  | 2.5 m (8.2 ft)  |

| USB FIBER INSPECTION SCOPE SPECIFICATIONS (FIP-4X0B) <sup>b</sup> |  |
|---|--|
| Size (H x W x D)  | 47 mm x 42 mm x 162 mm (1 <sup>7</sup> / <sub>8</sub> in x 6 <sup>1</sup> / <sub>8</sub> in x 2 in)                |
| Weight  | 0.3 kg (0.66 lb)   |
| Resolution  | 0.55 μm  |
| Camera sensor   | Five-megapixel CMOS  |
| Visual detection capability                                       | <1 μm  |
| Field of view   | 304 μm x 304 μm (high magnification)<br>608 μm x 608 μm (mid magnification)<br>912 μm x 912 μm (low magnification) |
| Light source  | Blue LED   |
| Lighting technique  | Coaxial  |
| Capture button  | Available on all models  |
| Magnification button  | Available on all models  |
| Digital magnification   | Three levels   |
| Connector   | Minimum USB 2.0  |

a. -20 °C to 60 °C (-4 °F to 140 °F) with the battery pack.

b. Typical.

c. Measurement excluding tip and including strain relief.

d. Software is qualified with Google Nexus, Apple iPhone and Apple iPad devices. Other models are not guaranteed to be 100% compatible.

e. One (1) test per minute. The scope remains in live mode for 20 seconds during each test.

f. Using USB AC adapter. When scope is in use it may take more time to fully recharge.

g. WiFi interference and physical obstacles may affect distance range.

h. Single fiber connector mode.



GP-2175



FIPT-BOX



GP-3108



GP-2225



GP-2226



GP-2227

### INCLUDED ACCESSORIES

| FIP-410B, FIP-420B, FIP-430B (USB wired scope)      |   | FIP-435B (wireless scope)                           |   |
|---|---|---|---|
| Video inspection scope, bulkhead and patchcord tips |   | Video inspection scope, bulkhead and patchcord tips |   |
| ConnectorMax 2 software                             |   | ConnectorMax 2 software                             |   |
| FIPT-BOX  | Compartmentalized plastic case for tips | FIPT-BOX  | Compartmentalized plastic case for tips |
| GP-3108   | Soft pouch                              | GP-3108   | Soft pouch                              |
| GP-2175   | Protective cap and cord assembly        | GP-2175   | Protective cap and cord assembly        |
|   |   | GP-2225   | USB to Micro USB cable                  |
|   |   | GP-2226   | Rechargeable battery (quantity: one)    |
|   |   | GP-2227   | USB AC adapter                          |

### GENERAL SPECIFICATIONS

|                       |  |
|-----------------------|--|
| Temperature operating | Unit powered by batteries: -10 °C to 40 °C (14 °F to 104 °F)<br>Unit connected to USB adapter: 0 °C to 40 °C (32 °F to 104 °F) |
| Temperature storage   | Unit without batteries: -40 °C to 70 °C (-40 °F to 158 °F)<br>Unit with batteries: -20 °C to 60 °C (-4 °F to 140 °F)           |
| Relative humidity     | Unit: 0% to 95% non-condensing<br>USB Adapter: 5% to 95% non-condensing for storage. 8% to 90% for operating temperature       |

### MAX-FIP SPECIFICATIONS

#### MAX-FIP OPTIONAL ACCESSORIES

|         |                                 |           |  |
|---------|---------------------------------|-----------|--|
| GP-302  | USB mouse                       | GP-2177   | Hands-free bag for MAX-FIP   |
| GP-1008 | VFL adapter (2.5 mm to 1.25 mm) | GP-2178   | Right-angle USB adapter cable for MAX-FIP (USB male to USB female) |
| GP-2001 | USB keyboard                    | GP-2205   | DC vehicle battery-charging adapter (12 V)                         |
| GP-2016 | 10-foot RJ45 LAN cable          | GP-10-072 | Semi-rigid carrying case   |
| GP-2144 | USB 16G microdrive              | GP-10-061 | Soft carrying case   |
| GP-2176 | Hook for MAX-FIP                |           |  |



GP-302



GP-1008



GP-2001



GP-2016



GP-2144



GP-2176



GP-2177



GP-2178



GP-2205



GP-10-072



GP-10-061

**BUILT-IN POWER METER SPECIFICATIONS (GeX) (optional) <sup>a</sup>**

|  |   |
|--|---|
| Calibrated wavelengths (nm)                    | 850, 1300, 1310, 1490, 1550, 1625, 1650           |
| Power range (dBm) <sup>b</sup>                 | 27 to -50   |
| Uncertainty (%) <sup>c</sup>                   | ±5 % ± 10 nW                                      |
| Display resolution (dB)                        | 0.01 = max to -40 dBm<br>0.1 = -40 dBm to -50 dBm |
| Automatic offset nulling range <sup>b, d</sup> | Max power to -34 dBm                              |
| Tone detection (Hz)                            | 270/330/1000/2000                                 |

**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 (for optional VFL on MAX-FIP)**



**ConnectorMax 2 SOFTWARE**

The following minimum requirements must be met in order to install and run ConnectorMax 2 on a computer:

**PC OPERATING SYSTEM COMPATIBILITY AND REQUIREMENTS**

| System requirements | Minimum requirements Windows 7 (32 bit and 64 bit)                    | Minimum requirements Windows 8 (32 bit and 64 bit)  | Minimum requirements Windows 10 (32 bit and 64 bit) |
|---------------------|---|---|---|
| Processor           | Pentium (1.6 GHz or higher recommended)                               | Pentium (1.6 GHz or higher recommended)             | Pentium (2 GHz or faster)                           |
| RAM                 | 512 MB (2 GB recommended)   | 1 GB for 32; 2 GB for 64 (2 GB or more recommended) | 2 GB for 32; 4 GB for 64                            |
| Disk space          | 40 MB   | 40 MB   | 40 MB   |
| Other               | Latest version of .NET Framework 3.5<br>DirectX 9.0; USB 2.0, minimum | Desktop applications supported                      | Desktop applications supported                      |

At 23 °C ± 1 °C, 1550 nm and FC connector. Battery-operated after 20-minute warm-up.

a. Typical.

b. At calibration conditions.

c. For ±0.05 dB, from 10 °C to 30 °C.

## ORDERING INFORMATION

## Single fiber and multifiber configuration

FIP-4XXB-XX-FIPT-400-XX-XX

WiFi and USB inspection scope model<sup>a</sup>

- FIP-410B = Digital video inspection scope  
Triple magnification
- FIP-420B = Digital video inspection scope  
Automated pass/fail analysis  
Triple magnification
- FIP-430B = Automated analysis digital video  
inspection scope  
Automated focus  
Automated pass/fail analysis  
Triple magnification
- FIP-435B = Wireless analysis digital  
video inspection scope  
Automated focus  
Automated pass/fail analysis  
Triple magnification  
Autocentering

## Base tips

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

Extra FIP-400B tips<sup>b</sup>

## Bulkhead tips

- FIPT-400-FC-APC = FCAPC tip for bulkhead adapter
- FIPT-400-FC-SC = FC and SC tip for bulkhead adapter<sup>c</sup>
- FIPT-400-LC = LC tip for bulkhead adapters
- FIPT-400-LC-APC = LC/APC tip for bulkhead adapter
- FIPT-400-MU = MU tip for bulkhead adapters
- FIPT-400-SC-APC = SC APC tip for bulkhead adapter<sup>d</sup>
- FIPT-400-SC-UPC = SC UPC tip for bulkhead adapter
- FIPT-400-ST = ST tip for bulkhead adapter

## Patchcord tips

- FIPT-400-U12M = Universal patchcord tip for 1.25 mm ferrules
- FIPT-400-U12MA = Universal patchcord tip for 1.25 mm ferrules APC
- FIPT-400-U16M = Universal patchcord tip for 1.6 mm ferrules
- FIPT-400-U20M2 = Universal patchcord tip for 2.0 mm ferrules (D4, Lemo)
- FIPT-400-U25M = Universal patchcord tip for 2.5 mm ferrules<sup>c</sup>
- FIPT-400-U25MA = Universal patchcord tip for 2.5 mm ferrules APC<sup>d</sup>

## Tip kits

- FIPT-400-LC-K = LC tip kit including: FIPT-400-LC: LC tip for bulkhead adapters, FIPT-400-LC-APC: LC/APC tip for bulkhead adapter, FIPT-400-U12M: Universal patchcord tip for 1.25 mm ferrules, FIPT-400-U12MA: Universal patchcord tip for 1.25 mm ferrules APC
- FIPT-400-LC-K-APC = LC tip kit including: FIPT-400-LC-APC: LC/APC tip for bulkhead adapter and FIPT-400-U12MA: Universal patchcord tip for 1.25 mm ferrules APC
- FIPT-400-LC-K-UPC = LC tip kit including: FIPT-400-LC: LC tip for bulkhead adapters and FIPT-400-U12M: Universal patchcord tip for 1.25 mm ferrules

## Automated multifiber tips

- FIPT-400-MF-MPO-UPC = For MPO/UPC connectors 12-24 fibers  
Includes: FIPT-400-MPO-BLK and FIPT-400-NZ-MPO
- FIPT-400-MF-MPO-APC = For MPO/APC connectors 12-24 fibers  
Includes: FIPT-400-MPO-BLK and FIPT-400-NZ-MPO-APC
- FIPT-400-MF-MPO-X = For MPO/APC connectors 16-32 fibers  
Includes: FIPT-MPO-X-BLK and FIPT-NZ-MPO-X

## Extra nozzle for FIPT-400-MF tip

- FIPT-400-NZ-MPO = For MPO/UPC connectors 12-24 fibers
- FIPT-400-NZ-MPO-APC = For MPO/APC connectors 12-24 fibers
- FIPT-400-NZ-MPO-X = For MPO/UPC connectors 16-32 fibers
- FIPT-400-NZ-OTIP-APC = For OptiTip/APC connectors male and female
- FIPT-400-NZ-QODC-12 = For Q-ODC-12/UPC connectors male and female
- FIPT-400-NZ-QODC-12-APC = For Q-ODC-12/APC connectors male and female

Example when ordering scope with single fiber (SF) tip: FIP-435B-APC-FIPT-400-FC-SC-FIPT-400-U25M

Example when ordering scope with MPO and SF tips: FIP-435B-APC-FIPT-400-MF-MPO-APC-FIPT-400-U25M

a. ConnectorMax2 Mobile software available on the App Store and Google Play™.

b. This list represents a selection of fiber inspection tips that covers the most common connectors and applications but does not reflect all the tips available. EXFO offers a wide range of inspection tips, bulkhead adaptors and kits to cover many more connector types and different applications. Please contact your local EXFO sales representative or visit [www.EXFO.com/FIPTips](http://www.EXFO.com/FIPTips) for more information.

c. Included when UPC base tips are selected.

d. Included when APC base tips are selected.

**ORDERING INFORMATION**

**Stand-alone units**

**MAX-FIP-XX-XX-XX**

**Power meter**

- 00 = Without power meter
- P2X = Power meter; GeX detector
- VP2X = VFL and power meter; GeX detector

**WiFi and Bluetooth**

- 00 = Without RF components
- RF = With RF capability (WiFi and Bluetooth)

**Connector adapter<sup>a</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-54 = SC: SC/PC, SC/SPC, SC/UPC, SC/APC
- FOA-78 = Radiall EC
- FOA-96B = E-2000/APC
- FOA-98 = LC
- FOA-99 = MU

Example: MAX-FIP-VP2X-FOA-54-RF

a. Available if power meter selected.

## ORDERING INFORMATION

## Kits

TK-MAX-FIP-XX-XX-XX-XX-XX-XX

## Power meter

00 = Without power meter  
 P2X = Power meter; GeX detector  
 VP2X = VFL and power meter; GeX detector

Connector adapter<sup>a</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-54 = SC: SC/PC, SC/SPC, SC/UPC, SC/APC  
 FOA-78 = Radiall EC  
 FOA-96B = E-2000/APC  
 FOA-98 = LC  
 FOA-99 = MU

## WiFi and Bluetooth

00 = Without RF components  
 RF = With RF capability (WiFi and Bluetooth)

Inspection scope model<sup>b</sup>

FIP-410B = Digital video inspection scope  
 Triple magnification  
 FIP-420B = Digital video inspection scope  
 Automated pass/fail analysis  
 Triple magnification  
 FIP-430B = Automated analysis digital video  
 inspection scope  
 Automated focus  
 Automated pass/fail analysis  
 Triple magnification

## Base tips

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

Extra FIP-400B tips<sup>c</sup>

## Bulkhead tips

FIPT-400-FC-APC = FC/APC tip for bulkhead adapter  
 FIPT-400-FC-SC = FC and SC tip for bulkhead adapter<sup>d</sup>  
 FIPT-400-LC = LC tip for bulkhead adapters  
 FIPT-400-LC-APC = LC/APC tip for bulkhead adapter  
 FIPT-400-MU = MU tip for bulkhead adapters  
 FIPT-400-SC-APC = SC APC tip for bulkhead adapter<sup>e</sup>  
 FIPT-400-SC-UPC = SC UPC tip for bulkhead adapter  
 FIPT-400-ST = ST tip for bulkhead adapter

## Patchcord tips

FIPT-400-U12M = Universal patchcord tip for 1.25 mm ferrules  
 FIPT-400-U12MA = Universal patchcord tip for 1.25 mm ferrules APC  
 FIPT-400-U16M = Universal patchcord tip for 1.6 mm ferrules  
 FIPT-400-U20M2 = Universal patchcord tip for 2.0 mm ferrules (D4, Lemo)  
 FIPT-400-U25M = Universal patchcord tip for 2.5 mm ferrules<sup>d</sup>  
 FIPT-400-U25MA = Universal patchcord tip for 2,5 mm ferrules APC<sup>e</sup>

## Multifiber tips

FIPT-400-MTP2 = MTP/MPO UPC tip for bulkhead adapter  
 FIPT-400-MTPA2 = MTP/MPO APC tip for bulkhead adapter  
 FIPT-400-MTP-MTR = MTP/MPO multirow UPC tip for bulkhead adapter  
 FIPT-400-MTP-MTRA = MTP/MPO multirow APC tip for bulkhead adapter

## Tip kits

FIPT-400-LC-K = LC tip kit including:  
 FIPT-400-LC: LC tip for bulkhead adapters,  
 FIPT-400-LC-APC: LC/APC tip for bulkhead adapter,  
 FIPT-400-U12M: Universal patchcord tip for 1.25 mm ferrules,  
 FIPT-400-U12MA: Universal patchcord tip for 1.25 mm ferrules APC  
 FIPT-400-LC-K-APC = LC tip kit including:  
 FIPT-400-LC-APC: LC/APC tip for bulkhead adapter  
 FIPT-400-U12MA: Universal patchcord tip for 1.25 mm ferrules APC  
 FIPT-400-LC-K-UPC = LC tip kit including:  
 FIPT-400-LC: LC tip for bulkhead adapters  
 FIPT-400-U12M: Universal patchcord tip for 1.25 mm ferrules

Example: TK-MAX-FIP-VP2X-FOA-54-RF-FIP-430B-UPC-FIPT-400-FC-SC-FIPT-400-U25M

a. Available if power meter selected.

b. Includes ConnectorMax 2 software.

c. This list represents a selection of fiber inspection tips that covers the most common connectors and applications but does not reflect all the tips available. EXFO offers a wide range of inspection tips, bulkhead adaptors and kits to cover many more connector types and different applications. Please contact your local EXFO sales representative or visit [www.EXFO.com/FIPtips](http://www.EXFO.com/FIPtips) for more information.

d. Included when UPC base tips are selected.

e. Included when APC base tips are selected.

f. RF option mandatory and included with this model.

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