

## FIBER INSPECTION PROBE

# FIP-S/FIP-USB/FP and Accessories

NETWORK TESTING—OPTICAL



- Back panel connector inspection
- Lightweight and ergonomic
- Handheld or FTB-400/PC display or FOT-930
- FTB-400/IQS-500/PC image-capture capability
- Compatible with EXFO products
- Solutions for all types of connectors, APC and UPC

## Innovative Image-Capture Technology

Checking connectors and other fiber terminations for polish quality and cleanliness is crucial in modern high-bandwidth systems. Neglect may lead to signal loss in networks, leading to further troubleshooting, lost time and greater expense.

### INSPECT HARD-TO-REACH CONNECTORS

Avoid these problems with the FIP-S/FIP-USB Video Fiber Inspection Probe, a handheld video microscope. Unlike traditional microscopes, the inspection probe facilitates the examination of hard-to-reach connectors on the back of patch panels and bulkhead adapters. It also lets you check the inside of connectors without taking them apart. EXFO offers two ways to achieve clear, sharp images of termination dirt and damage—a convenient handheld display, or our market-leading FTB-400 Universal Test System.



FTB-400 with FIP-USB4

#### KEY FEATURES

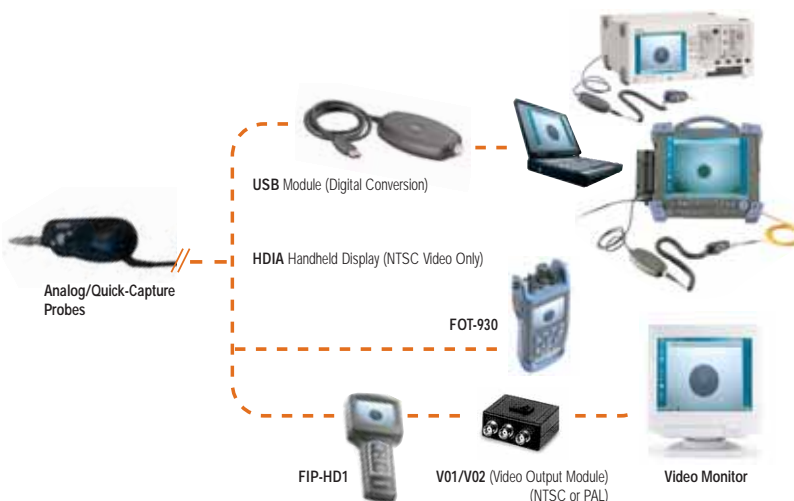
- Direct USB output port
- Simple one-cable design
- Basic capture and image-sharpening software
- Save digital images directly to your PC
- (Windows 2000 compability only or FTB-400/IQS-500)



FIP-USB (USB module)

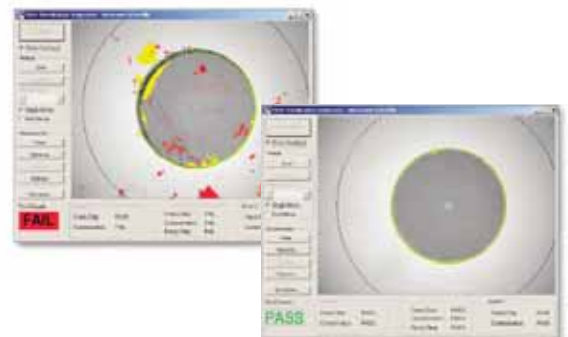
### FTB-400/IQS-500: SEE THE POSSIBILITIES

Connect the probe to an FTB-400 Universal Test System and IQS-500 with its 12.1-inch screen or a PC via an image-capture unit to view the fiberendface. This innovative technology draws its power from the USB port and requires no additional battery packs or cabling. Use the unit with specialized software for digital image-capture and sharpening, as well as data storage.



### SOFTWARE ANALYSIS FEATURES AND BENEFITS:

- Automatic debris and defect detection, including fine scratches
- Measurement of epoxy ring for out-of-tolerance conditions
- Printable/archivable inspection results, including image data
- Based on industry standards or user-defined threshold settings



Soft Analysis Software

## EXCELLENT IMAGES IN HAND

Connect the probe directly to the compact, handheld active matrix LCD screen for safe, efficient inspection. The probe's high-magnification optics project a 530-micron field of view onto the handheld's bright, high-contrast 3.5-inch TFT active matrix LCD display. The handheld display features an Auto-Shutoff interval switch with three settings to ensure long-lasting battery life.



FOT-930 with P5 option

## OUTSTANDING FIBER PROBE FEATURES

This compact, lightweight fiber inspection probe contains a coaxial LED light source and a mini CCD video camera, (1/3 in), with a 530 μm field of view and a choice of 200x, 400x or 500x magnification. The probe handle has a small, conveniently positioned focusing device. Simply turn the mechanism until you reach the desired sharpness. The tip of the handle mates with the female bulkhead connector on the patch panel or mating connector and pre-centers the image on the screen. The small probe holds itself in place for hands-free operation. The instrument comes with a standard, built-in NiMH rechargeable battery for use with the handheld active matrix LCD screen.



FIP-S15

## ACCESSORIES—MAXIMUM FLEXIBILITY



**FIPT-FC**  
FC tip for bulkhead adapters.



**FIPT-U12M**  
Universal Patchcord tip for 1.25-mm ferrules (LC and MU) used to view MALE connectors.



**FIPT-SC**  
SC tip for bulkhead adapter.



**FIPT-ST**  
ST tip for bulkhead adapters.



**FIPT-LC**  
LC tip for bulkhead adapters.



**FIPT-SC/APC**  
SC-APC tip for bulkhead adapter.



**FIPT-ST-L**  
Long-reach ST tip for bulkhead adapters with extended reach and narrow barrel.



**FIPT-LC-L**  
Long-reach LC tip for bulkhead adapters with extended reach and narrow barrel (recommended for extensive LC use).



**FIPT-UFMA**  
Universal flare tip. Allows you to attach any MOA adapter from our handheld fiber microscopes (used to view MALE connectors).



**FIPT-FC-P**  
Pro Version FC tip for bulkhead adapters, threads onto bulkhead for true hands-free operation.



**FIPT-FC-APC**  
FC-APC tip for bulkhead adapters; threads onto bulkhead for hands-free operation.



**FIPT-MU**  
MU tip for bulkhead adapters.



**FIPT-U25M**  
Universal Patchcord tip for 2.5-mm ferrules (SC, ST, FC and SMA) used to view MALE connectors.



**FIPT-LC-A6**  
60° angle connector for transceiver and other hard to reach connectors.



**FIPT-E2000**  
E-2000 tip for bulkhead adapters.



**FIPT-U25MA**  
Universal Patchcord tip for APC 2.5-mm ferrules (SC, ST, FC and SMA) used to view MALE connectors.



**FIPT-D4**  
D4 tip for bulkhead adapters.



**FIPT-MTP**  
MTP tip for bulkhead adapters.

**FIPT-MTRJ**  
MTRJ tip for bulkhead adapters.

ORDERING INFORMATION

SPECIFICATIONS

Handheld Display

FIP-HD1: Handheld video display (comes with US, Euro or UK plugs)	
Weight	0.4 kg (0.8 lb)
Display	9 cm (3 1/2 in) TFT active matrix (320 x 240 pixels)
Video input	NTSC, 4-pin interface probe or conversion cable for 6-pin interface and USB interface
Power	Rechargeable NiMH battery or AC power adapter (comes with US, EURO or UK plugs)(110 and 220 VAC)
Battery life	2 h
Charging time	2 h
Dimensions (H x W x D)	5.3 cm x 10 cm x 22 cm (2 1/8 in x 4 in x 8 11/16 in)

Video Inspection Probe

Weight	0.18 kg (0.4 lb)
Optical magnification	200x, 400x or 500x
Camera type	CCD, 1/3 in
Light source	Blue LED, internal to probe
Lighting technique	Coaxial
Focus control	Adjustable in probe
Dimensions (H x W x D)	4.3 cm x 4.6 cm x 14 cm (1 11/16 in x 1 13/16 in x 5 1/2 in)

GENERAL SPECIFICATIONS

Temperature	operating	0 °C to 40 °C	(32 °F to 104 °F)
	storage	-10 °C to 60 °C	(14 °F to 140 °F)
Relative humidity	0 % to 95 % non-condensing		

FIP-SXX-XX

Model

FIP-S1	(FIP-P1 200x magnification) power supply for North America
FIP-S1-EU	(FIP-P1 200x magnification) power supply for Europe
FIP-S1-UK	(FIP-P1 200x magnification) power supply for UK
FIP-S15	(FIP-P5 200x, 400x magnification) power supply for North America
FIP-S15-EU	(FIP-P5 200x, 400x magnification) power supply for Europe
FIP-S15-UK	(FIP-P5 200x, 400x magnification) power supply for UK

STANDARD ACCESSORIES

Handheld display (FIP-HD1), probe (FIP-P1 or FIP-P5), adapters: FC tip (FIPT-FC), ST tip (FIPT-ST), SC tip (FIPT-SC), universal 2.5 mm patchcord tip (FIPT-U25M), carrying case (FIPP-HSC1). Example: FIP-S15

FIP-USBX

Model

FIP-USB2	(FIP-P1 200x magnification)
FIP-USB4	(FIP-P5 200x and 400x magnification)

STANDARD ACCESSORIES

USB module (FIP-USB) and software (Windows 2000 compability only), probe (FIP-P1 or FIP-P5), FC tip (FIPT-FC), ST tip (FIPT-ST), SC tip (FIPT-SC), universal 2.5 mm patchcord tip (FIPT-U25M). Example: FIP-USB4

FOT-930 ADD-ON

FP1	(FIP-P1 200x magnification)
FP5	(FIP-P5 200x and 400x magnification)

STANDARD ACCESSORIES

Probe (FIP-P1 or FIP-P5), FC tip (FIPT-FC), SC tip (FIPT-SC), universal 2.5 mm patchcord tip (FIPT-U25M).

OPTIONAL ACCESSORIES

Video Inspection Probe

FIP-P1 200x
FIP-P5 200x and 400x
FIP-P7 500x

Video Output Module

FIP-VO2	for USA
FIP-VO2-EU	for Europe
FIP-VO2-UK	for UK

Handheld Display

FIP-HD1	for USA
FIP-HD1-EU	for Europe
FIP-HD1-UK	for UK

USB Module and Software

FIPP-USB3	Includes standard application software (Fiber Check)
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Adapter Tips

FIPT-ST:	ST tip for bulkhead adapter	FIPT-LC-APC:	LC-APC tip for bulkhead adapter	FIPT-SC/APC:	SC tip for bulkhead adapter with angled connector
FIPT-ST-L:	Long-reach ST tip for bulkhead adapter	FIPT-LC-L:	Long-reach LC tip for bulkhead adapter	FIPT-E2:	Tip for E-2000 bulkhead adapter
FIPT-SC:	SC tip for bulkhead adapter	FIPT-U25M:	Universal patchcord tip for all 2.5 mm ferrules	FIPT-BIC:	Biconic tip for bulkhead adapter
FIPT-SC-APC:	SC-APC tip for bulkhead adapter	FIPT-U25MA:	Universal patchcord tip for all APC 2.5 mm ferrules	FIPT-D4:	D4 tip for bulkhead adapter
FIPT-FC:	FC tip for bulkhead adapter	FIPT-U12M:	Universal patchcord tip for all 1.25 mm ferrules	FIPT-MPX:	MPX tip with X axis pan control knob
FIPT-FC-P:	Pro-version FC tip for bulkhead for hands-free operation	FIPT-MU:	MU tip for bulkhead adapter	FIPT-MTP:	MTP tip with X axis pan control knob
FIPT-FC-APC:	FC tip for bulkhead adapter with angled connector	FIPT-MUL:	MU tip for bulkhead adapter long reach	FIPT-UFMA:	Universal flare adapter, to attach to any MOA adapter
FIPT-LC:	LC tip for bulkhead adapter				

**Rugged Handheld Solutions**

- OPTICAL**
  - OTDRs
  - OLTSs
  - Power meters
  - Light sources
  - Talk sets
- COPPER ACCESS**
  - ADSL/ADSL2+, SHDSL, VDSL test sets
  - VoIP and IPTV test sets
  - Ethernet test sets
  - POTS test sets

**Platform-Based Solutions**

- OPTICAL FIBER**
  - OTDRs
  - OLTSs
  - ORL meters
  - Variable attenuators
- DWDM TEST SYSTEMS**
  - OSAs
  - PMD analyzers
  - Chromatic dispersion analyzer
- TRANSPORT AND DATACOM**
  - Next Generation SONET/SDH and OTN testers
  - SONET/DSn (DS0 to OC-192) testers
  - SDH/PDH (64 kbit/s to STM-64) testers
  - T1/T3, E1 testers
  - 10/100 M and Gigabit Ethernet testers
  - Fibre Channel testers
  - 10 Gigabit Ethernet testers

Find out more about EXFO's extensive line of high-performance portable instruments by visiting our website at [www.EXFO.com](http://www.EXFO.com).

EXFO Corporate Headquarters > 400 Godin Avenue, Quebec City (Quebec) G1M 2K2 CANADA | Tel.: 1 418 683-0211 | Fax: 1 418 683-2170 | [info@EXFO.com](mailto:info@EXFO.com)

Toll-free: 1 800 663-3936 (USA and Canada) | [www.EXFO.com](http://www.EXFO.com)

<b>EXFO Montreal</b>	2650 Marie-Curie	St-Laurent (Quebec) H4S 2C3 CANADA	Tel.: 1 514 856-2222	Fax: 1 514 856-2232
<b>EXFO Toronto</b>	160 Drumlin Circle	Concord (Ontario) L4K 3E5 CANADA	Tel.: 1 905 738-3741	Fax: 1 905 738-3712
<b>EXFO America</b>	3701 Plano Parkway, Suite 160	Plano, TX 75075 USA	Tel.: 1 800 663-3936	Fax: 1 972 836-0164
<b>EXFO Europe</b>	SOUTHAMPTON > Omega Enterprise Park, Electron Way	Chandlers Ford, Hampshire SO53 4SE ENGLAND	Tel.: +44 2380 246810	Fax: +44 2380 246801
<b>EXFO Asia</b>	151 Chin Swee Road, #03-29 Manhattan House	SINGAPORE 169876	Tel.: +65 6333 8241	Fax: +65 6333 8242
<b>EXFO China</b>	No.88 Fuhua, First Road Central Tower, Room 801, Futian District	Shenzhen 518048, CHINA	Tel.: +86 (755) 8203 2300	Fax: +86 (755) 8203 2306
	Beijing New Century Hotel Office Tower, Room 1754-1755 No. 6 Southern Capital Gym Road	Beijing 100044 P. R. CHINA	Tel.: +86 (10) 6849 2738	Fax: +86 (10) 6849 2662

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. All of EXFO's manufactured products are compliant with the European Unions WEEE directive. For more information, please visit [www.EXFO.com/recycle](http://www.EXFO.com/recycle). 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.

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