MAX-FIP

INTELLIGENT CONNECTOR AND FIBER CERTIFIER

ConnectorMax2
ANALYSIS SOFTWARE

SPEC SHEET

Rugged, tablet-inspired design featuring the latest innovations in automated connector and fiber certification. Ensures that workflow and best practices are followed by simplifying and speeding up the critical inspection phase.

KEY FEATURES

- Bright, 7 inch touchscreen display
- Highest magnification level in the industry
- Fast and reliable IEC or custom standards certification through on-board connector endface analysis
- Automatic fiber-image centering reducing test time and unnecessary manipulations
- Power meter and visual-fault-locator (VFL) options
- Full-day, rechargeable Li-ion battery
- Optional Wi-Fi and Bluetooth connectivity
- Re-engineered, rugged probe design with ergonomic access to all controls

COMPLEMENTARY PRODUCTS

ConnectorMax2 Analysis Software

Cleaning Kits

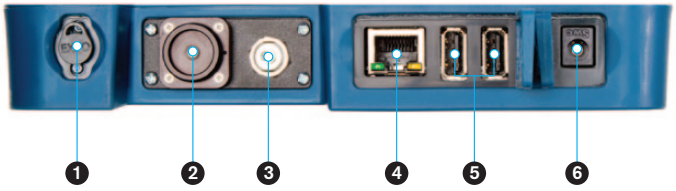
EXFO

SMALL ENOUGH TO BE HANDHELD. LARGE ENOUGH FOR FULL-SCREEN VIEWING.

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 tablet-inspired design featuring an icon-based GUI makes it easy to navigate and toggle between the different applications (Inspection, Connector Analysis, Power Measurement and VFL troubleshooting). Additionally, its bright, 7-inch touchscreen ensures fast and easy operation of the instrument even in the brightest daylight, in turn eliminating eye fatigue associated with prolonged connector inspection (typically experienced during full-day fiber-patch panel-certification routines).

PACKAGED FOR EFFICIENCY

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



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 and optional Wi-Fi and Bluetooth capability for cloud-based storage.

BEST-IN-CLASS AUTONOMY

Take full advantage of the MAX-FIP's amazing 8-hour battery life, which will never let you down, enabling you to complete full-day jobs without have to recharge the unit. Also, save money by not having to pay expensive battery replacement costs associated with other handheld inspection kits on the market operating on standard alkaline batteries.

8 HOURS

THE FIP-400B SERIES: AUTOMATED AND INTELLIGENT FIBER INSPECTION PROBES

Neglecting to clean, inspect and certify connectors can lead to serious, time-consuming problems accounting for up to 80% of network failures. Years of experienced in the field have provided EXFO with the expertise to re-engineer a major, patent-pending fiber-inspection probe, the FIP-400B, which is designed to both simplify and speed up this step of network construction.

When paired with ConnectorMax2, the FIP-400B can objectively analyze connector cleanliness based on IEC, IPC and user-defined standards. In addition, the auto-centering feature cuts inspection time in half, especially for patch panel and hard-to-reach connectors. This exclusive EXFO inspection tool is equipped with a pass/fail LED indicator that provides clear diagnosis from the palm of your hand.

FAST-TRACKING CONNECTOR INSPECTION

When outsourcing fiber testing, you need to be certain that your technician will apply best practices and properly certify every single connector. Neglecting to address these critical tasks can lead to serous, time-consuming problems. The new FIP-400B Series is the result of years of fiber-inspection experience in the field. The FIP-400B's patent-pending, re-engineered design was developed based on actual enduser feedback, with the aim of optimizing and speeding up the inspection process.

THE FIP-400B'S HASSLE-FREE AUTO-CENTERING FEATURE SAVES PRECIOUS TIME

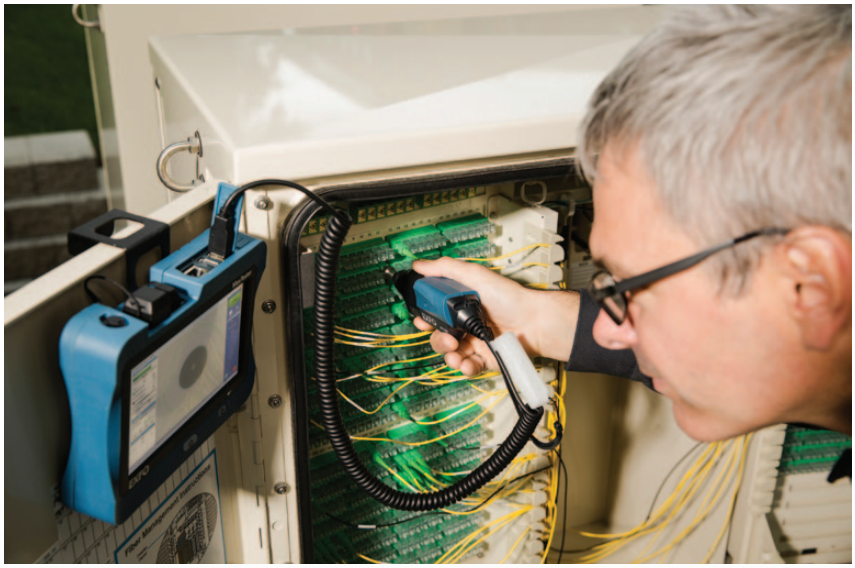
57%

shorter inspection time

- Save over two hours on a typical FTTH cabinet inspection - 432 fibers
- 14-second inspection time per port (down from 32 seconds) *
- $25 000 in potential savings in one year based on one cabinet inspection per day at a cost of $50 per hour

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

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. Inspecting and analyzing fiber connector endfaces has never been easier thanks to this automated and intelligent digital fiber inspection probe.



TWO PROBE MODELS TO FIT YOUR BUDGET

The FIP-420B offers a full feature set including the automatic, fiber image-centering system, the embedded ConnectorMax2 pass/fail connector analysis license, and LED indicator. These three features are not offered on the basic FIP-410B probe.

FEATURES

	FIP-410B	FIP-420B
Connector inspection	YES	YES
Image capture	YES	YES
Three magnification levels	YES	YES
Five-megapixel capturing device	YES	YES
Pass/fail LED indicator	NO	YES
Auto-centering function	NO	YES
Pass/fail connector certification	NO	YES

AUTOMATIC PASS/FAIL CONNECTOR CERTIFICATION WITH CONNECTORMAX2 ANALYSIS SOFTWARE

- Automatic pass/fail analysis of the connector endfaces
- Save time and money
- Lightning-fast results in seconds with simple one-touch operation
- Complete test reports for future referencing
- Stores images and results for recordkeeping

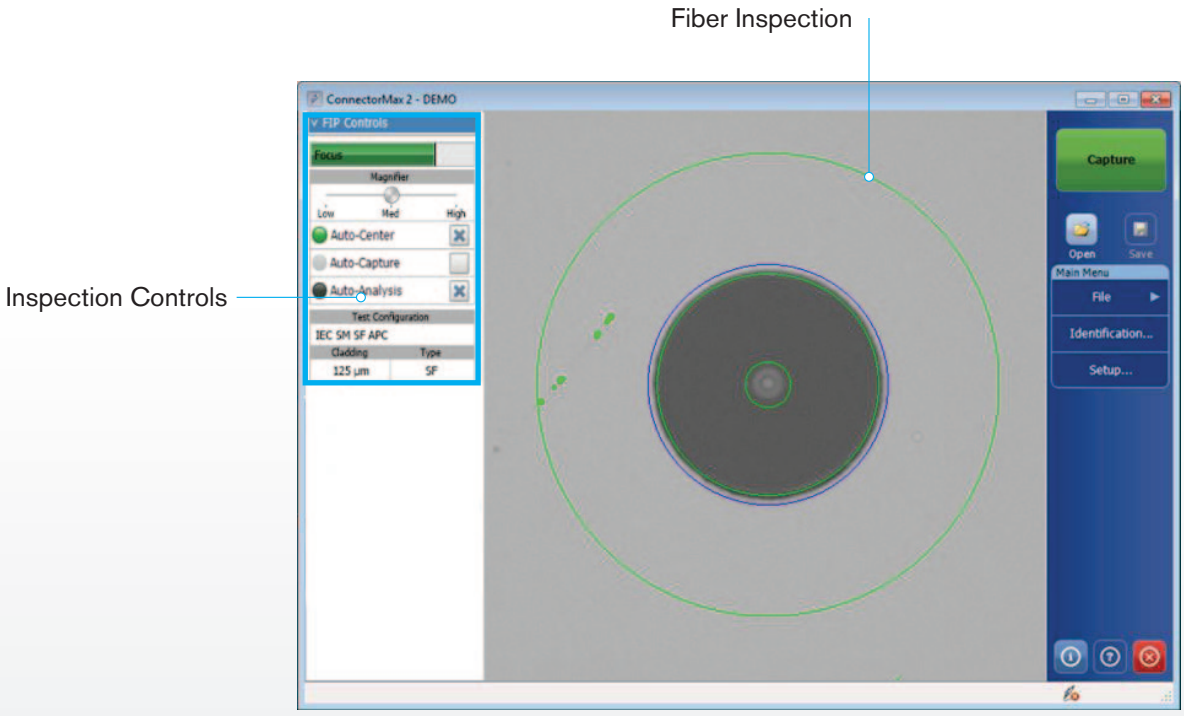
ConnectorMax2 ANALYSIS SOFTWARE

Delivering fast pass/fail assessment of connector endfaces, EXFO's ConnectorMax2 Analysis Software is designed to save both time and money in the field. ConnectorMax2 is an automated inspection application that eliminates guesswork by providing clear-cut connector endface analysis.

Using ConnectorMax2, field technicians are able to analyze defects and scratches, and measure their impact on connector performance. Results are then compared against preprogrammed IEC/IPC standards or user-defined criteria, leading to accurate pass/fail verdicts established right on-site.

ConnectorMax2 therefore helps avoid two-time, money-draining situations (i.e., undetected connector defects requiring that technicians return to the site at a later date) and unnecessary replacement of connectors with slight defects too small to provide a "fail" verdict.

Thanks to the ConnectorMax2's newly redesigned interface, the unit features a unique all-in-one integrated GUI. The touchscreen provides quick access to all of the instrument's main functionalities.



INTEGRATED OPTICAL POWER METER (OPTIONAL)

- Extensive range of connectors
- Auto-Lambda and Auto-Switching
- Offers measurement storage and reporting
- Seven standard calibrated wavelengths

VISUAL FAULT LOCATOR (OPTIONAL)

The integrated VFL easily identifies breaks, bends, faulty connectors and splices, in addition to other causes of signal loss. This basic, yet essential troubleshooting tool, 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, it can detect faults over distances of up to 5 km.

HANDS-FREE UTILITY BAG (OPTIONAL)

Inspecting fiber connectors on an occasional basis is one thing, but having to inspect numerous connectors day in and day out in the field (e.g., when installing an FTTH cabinet or inspecting crowded data-center patch panels) can be quite challenging. To help you optimize your test process and get maximum performance from your MAX-FIP solution, EXFO is offering a hands-free utility bag for secure, hands-free operation of the unit when working with fibers, connectors and inspection tools. In addition to protecting the unit from various environmental conditions, the utility bag accommodates all essential tools and accessories required for intensive certification work (connectors, inspection tips, cleaning devices, fiber jumpers, etc.) in one handy and lightweight soft bag.

MAX-FIP SPECIFICATIONS

Size (H x W x D)		200 mm x 155 mm x 68 mm (7 7/8 in x 6 1/8 in x 2 11/16 in)
Weight (with battery)		1.29 kg (2.8 lb)
Temperature	Operating	–10 °C to 50 °C (14 °F to 122 °F)
	Storage	–40 °C to 70 °C (–40 °F to 158 °F) [a]
Relative humidity		0 % to 95 % noncondensing

FIBER INSPECTION PROBE SPECIFICATIONS [b]

Size (H x W x D)	47 mm x 42 mm x 162 mm (1 7/8 in x 1 5/8 in x 6 3/8 in) [g]
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 mag) 608 µm x 608 µm (mid mag) 912 µm x 912 µm (low mag)
Light source	Blue LED
Lighting technique	Coaxial
Capture button	Available on all models
Magnification button	Available on all models
Digital magnification	Three levels
Connector	USB 2

BUILT-IN POWER METER SPECIFICATIONS (GeX) (optional) [d]

Calibrated wavelengths (nm)	850, 1300, 1310, 1490, 1550, 1625, 1650
Power range (dBm) [b]	27 to –50
Uncertainty (%) [e]	±5 % ± 10 nW
Display resolution (dB)	0.01 = max to –40 dBm 0.1 = –40 dBm to –50 dBm
Automatic offset nulling range [b, f]	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_{out} in 62.5/125 µm: > –1.5 dBm (0.7 mW)
Laser safety: Class 2

LASER SAFETY

COMPLIES WITH 21 CFR 1040.10 EXCEPT FOR DEVIATIONS PURSUANT TO LATSER NOTICE NO.50, DATED JUNE 24, 2007.

Notes

a. –20 °C to 60 °C (–4 °F to 140 °F) with the battery pack.
b. Typical.
c. Typical output power is given at 1550 nm.
d. At 23 °C ± 1 °C, 1550 nm and FC connector. With modules in idle mode. Battery operated after 20-minute warm-up.
e. At calibration conditions.
f. For ±0.05 dB, from 10 °C to 30 °C.
g. Measurement excluding tip and strain relief.

ACCESSORIES

GP-302	USB mouse	GP-2176	Hook for MAX-FIP
GP-1008	VFL adapter (2.5 mm to 1.25 mm)	GP-2177	Hands-free bag for MAX-FIP
GP-2001	USB keyboard	GP-2205	DC vehicle battery-charging adaptor (12 V)
GP-2016	10-foot RJ-45 LAN cable	GP-10-092	Semi-Rigid Carrying Case
GP-2144	USB 16G micro-drive		

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

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

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

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
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

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

Model
FIP-410B = Digital Video Inspection Probe
Triple Magnification

FIP-420B = Analysis Digital Video Inspection Probe
ConnectorMax2 Analysis Software
Triple Magnification
Auto Center

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
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 1.25mm ferrules APC
FIPT-400-SCA-K= 2,5 mm APC tip kit including: FIPT-400-U25MA, FIPT-400-SC-APC
FIPT-400-ADAPTER = Adapter tip
FIPT-400-D4 = D4 tip for bulkhead adapter
FIPT-400-E2000 = E-2000 tip for bulkhead adapter
FIPT-400-E2000-APC = E2000 APC tip for bulkhead adapters
FIPT-400-FC-APC[a] = FCAPC tip for bulkhead adapter
FIPT-400-FC-SC[b] = FC and SC tip for bulkhead adapter
FIPT-400-FC-SC-A6 = FC and SC angled tip for bulkhead adapter, 60 degree
FIPT-400-LC = LC tip for bulkhead adapters
FIPT-400-LC-A6 = LC angled tip for bulkhead adapters, 60 degree
FIPT-400-LC-APC = LC/APC tip for bulkhead adapter
FIPT-400-LC-L = Extended LC tip for PC bulkhead adapter
FIPT-400-LC-L-137 = 137 mm, Extended LC tip for PC bulkhead adapter
FIPT-400-LEMO = Lemo bulkhead adapter
FIPT-400-LX.5 = LX.5 PC Tip for bulkhead connector
FIPT-400-LX5-APC = LX.5/APC tip for bulkhead adapter
FIPT-400-MTP2 = MTP/MPO UPC tip for bulkhead adapter (includes a bulkhead adapter for patch cord inspection)
FIPT-400-MTP2-K = MTP/MPO tip kit including: Tip for MTP/MPO bulkhead adapter, Nozzle for MTP/MPO APCconnectors, Nozzle for MTP/MPO UPC connectors, Bulkhead adapter for patch cord inspection
FIPT-400-MTP2-TIP = MTP/MPO UPC replaceable nozzle for FIPT-400-MTP2 or FIPT-400-MTPA2 tip
FIPT-400-MTPA2 = MTP/MPO APC tip for bulkhead adapter (includes a bulkhead adapter for patch cord inspection)
FIPT-400-MTPA-TIP = MTP/MPO APC replaceable nozzle for FIPT-400-MTP2 or FIPT-400-MTPA2 tip
FIPT-400-MTRJ = MTRJ tip for MTRJ bulkhead
FIPT-400-MU = MU tip for bulkhead adapters
FIPT-400-MU-L = Extended MU tip for PC bulkhead adapter
FIPT-400-MU-L-149 = 149 mm, Extended MU tip for PC bulkhead adapter
FIPT-400-ODC-4PIN-P = ODC 4 Pin Plug (female) Guide tip
FIPT-400-ODC-4PIN-P-K = ODC 4 Pin Plug (female) Guide & Universal tip
FIPT-400-ODC-2&4PIN-P-K = ODC 2 & 4 Pin Plug (female) Guides & Universal tip
FIPT-400-ODC-S = ODC Socket (male) tip
FIPT-400-ODC-U = ODC Universal Guide tip
FIPT-400-ODC-2PIN-P = ODC 2 Pin Plug (female) Guide tip
FIPT-400-ODC-2PIN-P-K = ODC 2 Pin Plug (female) Guide & Universal tip
FIPT-400-OTAP-APC = Optitap bulkhead adapter
FIPT-400-OTAP-MTP-APC = MT/APC type OptiTip(tm) and OptiTap multifiber adapter for male and female connectors. Comes into a kit compatible with male and female cable ends.
FIPT-400-OTAP-MTP-APC/M = Male adapter tube for FIPT-400-OTAP-MTP-APC tip
FIPT-400-OTIP-MT-APC/M = Male adapter tube for FIPT-400-OTIP-MT-APC tip
FIPT-400-SC-APC = SC APC tip for bulkhead adapter
FIPT-400-SC-APC-L = SC Angled extended tip for bulkhead connector
FIPT-400-SC-L = Extended SC tip for PC bulkhead adapter
FIPT-400-SC-L-149 = 149 mm, Extended SC tip for PC bulkhead adapter
FIPT-400-SC-UPC = SC UPC tip for bulkhead adapter
FIPT-400-SMA = SMA Tips for bulkhead Connector
FIPT-400-SMAM = SMA Tip for male connector
FIPT-400-ST = ST tip for bulkhead adapter
FIPT-400-U12M = Universal patchcord tip for 1.25 mm ferrules
FIPT-400-U12MA = Universal patchcord tip for 1.25mm ferrules APC
FIPT-400-U16M = Universal 1.6 PC tip for male connector
FIPT-400-U20M2 = Universal patchcord tip for 2.0mm ferrules (D4, Lemo)
FIPT-400-U25M[b] = Universal patchcord tip for 2.5 mm ferrules
FIPT-400-U25MA[a] = Universal patchcord tip for 2,5 mm ferrules APC

Example: TK-MAX-FIP-VP2X-FOA-54-RF-FIP-420B-UPC-FIPT-400-FC-SC-FIPT-400-U25M

Notes

a. Included when APC base tips selected.

b. Included when UPC base tips selected.

EXFO Headquarters > Tel.: +1 418 683-0211 | Toll-free: +1 800 663-3936 (USA and Canada) | Fax: +1 418 683-2170 | info@EXFO.com | **www.EXFO.com**

EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to **www.EXFO.com/contact**.

SPMAXFIP.1AN

Printed in Canada 13/10