AXS-200/360

FIBER CERTIFICATION TEST SET
part of the SharpTESTER Line LAN Applications

FROST & SULLIVAN
2011 BEST PRACTICES AWARD
GLOBAL PORTABLE FIBER OPTIC TEST EQUIPMENT MARKET SHARE LEADERSHIP AWARD

SPEC SHEET

As part of the SharpTESTER Line LAN Applications, this tool performs simple and accurate fiber certification and troubleshooting tasks

KEY FEATURES

- Fiber loss wizard ensures step-by-step user-friendliness
- Editable and user-definable thresholds, consistent with all the latest industry standards
- Fiber inspection probe (FIP) support for assessing connector cleanliness and condition
- Pass/fail results on a bright, transflective screen for optimal viewing
- Compliant with the IEC 61280-4-1 standard—a first in the industry*

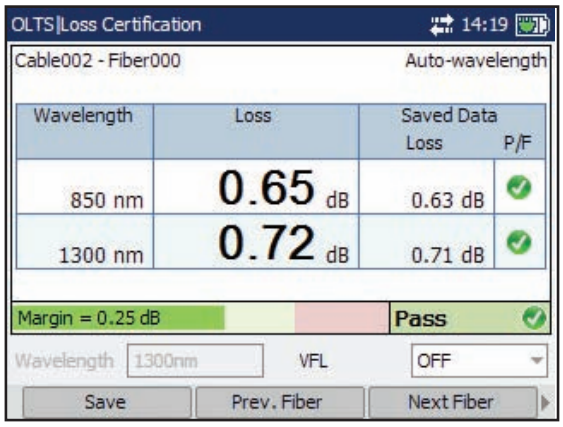
* Loss measurements performed on 50/125 µm multimode fiber using an external conditioner comply with the encircled flux requirements for launch conditions of the IEC 61280-4-1 standard.

EXFO | Assessing Next-Gen Networks

SIMPLIFYING CERTIFICATION TESTING

To validate that network performance meets the all industry standards, installers and contractors must make sure that fiber links are installed properly and within specifications. The AXS-200/360 Fiber Certification Test Set not only makes it easier to perform the required fiber certification tests prior to network commissioning, it also provides the documentation required to fully assess the quality of the fiber installation.

Combined with the AXS-200 Handheld Modular Platform, the AXS-200/360 offers a user-friendly interface and many features. Optimized for various applications such as 10 Gbit/s transmission, this test set automatically delivers optical loss measurements at multiple wavelengths, verifies user-entered fiber lengths, inspects connectors with the optional fiber inspection probe (FIP) and detects breaks with the optional visual fault locator (VFL).



Quick access to all test results.

Multimode and singlemode fiber certification

This instrument allows you to qualify the physical layer for Ethernet transmission at up to 10 Gbit/s on singlemode and multimode fibers. Therefore, even though your network may be comprised of multimode and singlemode fibers, thanks to EXFO's complete test set, you can now test both fiber types without changing module. All you need is one tester–the AXS-200/360.

A complete fiber certification solution

In addition to a power meter, fiber certification requires a light source, namely the FLS-600 Light Source, which comes with the AXS-200/360 kit.

› Up to three singlemode wavelengths (1310, 1550 and 1490 or 1625 nm) on a single port, or four wavelengths (850/1300 nm and 1310/1550 nm) on two ports

› New controlled multimode launching conditions for reliable loss measurements

› 3-year warranty for low cost of ownership

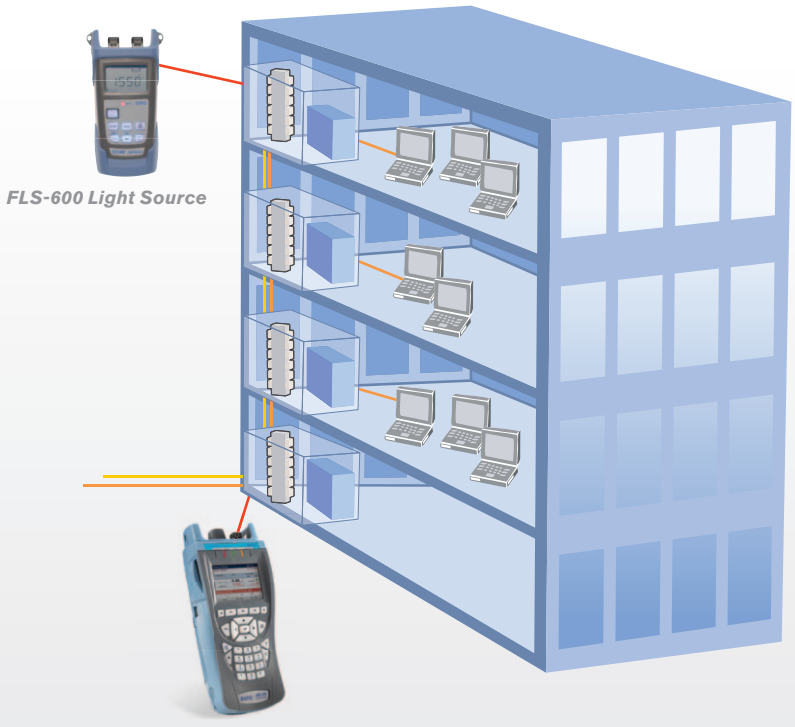
› Full-fledged unit that can be used for other test applications

AXS-200/360
Fiber Certification Test Set

FLS-600
Light Source

EASY OPERATION. CLEAR RESULTS. ERROR-FREE TESTING.

BUILT FOR LAN NETWORKS.



AN ESSENTIAL FIBER CERTIFICATION TOOL FOR NETWORK INSTALLERS AND CONTRACTORS

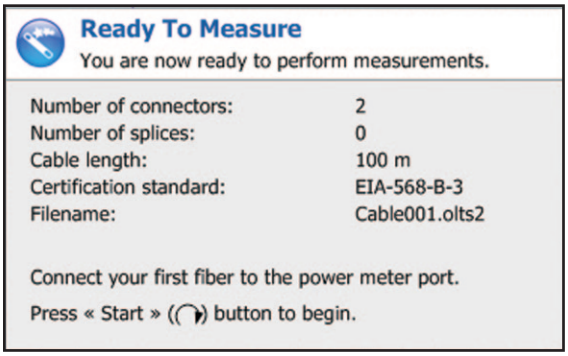
AXS-200/360 KEY FEATURES AND BENEFITS	
Industry standards support	Offers user-configurable thresholds, consistent with industry standards: TIA/EIA-568-B.3, ISO/IEC-11801, 10GBASE-LX4, 10GBASE-L, 10GBASE-E, 10GBASE-S, 1000BASE-SX, 1000BASE-LX, 100BASE-FX, 10BASE-FB, 10BASE-FL, FDDI, ATM-155, ATM-622, Token Ring 4 and 16 Mbit/s, Fibre Channel 1062 Mbit/s, Corning plug and play.
Main SharpTESTER platform characteristics include modularity, connectivity, weather-proofness and color display	Expands with your network and service test requirements, covering copper/DSL/triple-play, Ethernet and other optical applications; transflective screen for optimal viewing; easy data transfer via USB connection.
FIP support	Ensures that you perform a connection with clean connectors/adapters, exempt from any defect.
Step-by-step fiber loss wizard	Guides the user through quick procedures, limiting testing time and operator errors.
User-friendliness	Displays straightforward, automated test results with user-definable pass/fail criteria, without requiring interpretation; interchange connectors for a perfect, referencing setup.
Low cost of ownership	Allows you to bid on more contracts, thanks to the dedicated fiber tester that certifies singlemode and multimode fiber networks; comes with a 3-year warranty and recommended calibration interval; is less expensive than major competitors' instruments.

FLS-600 KEY FEATURES AND BENEFITS	
Automatic wavelength switching	Offers automated toggling between wavelengths thanks to the Auto-Switching mode; this feature enables the AXS-200/360 to recognize the wavelength in use and switch to the proper calibration parameters.
Distant referencing	Sends a signal remotely, giving the power meter information on the source wavelength and output power to be used as a reference and helping ensure efficient referencing–even when the source and power meter are far apart.
Controlled multimode	Designed to provide reliable loss measurements.

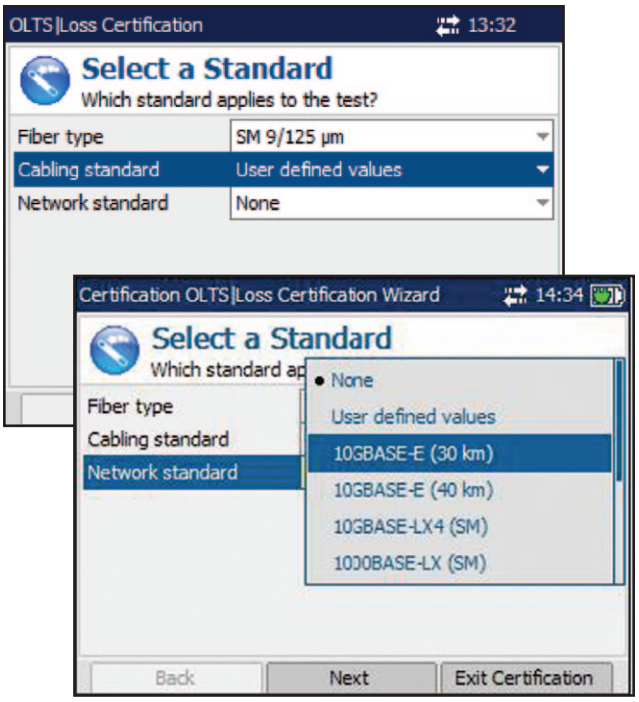
FIBER TESTING MADE EASY

Network certification in four easy steps:

1. Select a standard or an application
2. Follow the step-by-step fiber loss wizard
3. Set the reference
4. Start the test



Step-by-step loss wizard.



Select a standard or an application.

The AXS-200/360 automatically completes loss measurements at 850 and 1300 nm (MM) or 1310 and 1550 nm (SM), compares results to industry standards such as TIA-568-B and provides pass/fail analysis in compliance with those standards.

Retest fibers as needed

If the loss measured is above the budget, the fiber can be easily retested.

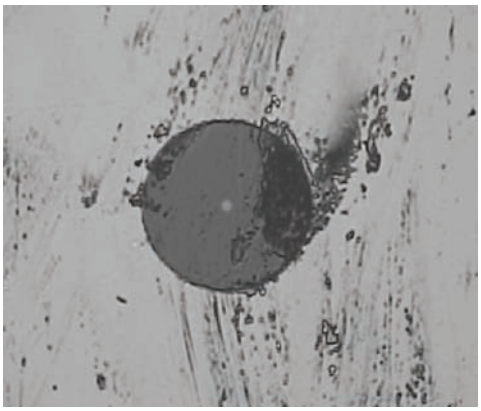
View all results at a glance

Once the cable is completely tested, the AXS-200/360 displays a table of all measurement values along with a pass/fail status, based on user-entered fiber lengths.

Connector inspection and cleaning

It's a fact: most fiber network problems are caused by dirty, damaged or improperly installed connectors, which can lead to erroneous test results or poor transmission. Using a FIP to ensure connectors/adapters are clean and exempt from any defect is where accurate testing starts.

Simply plug the FIP-400 Fiber Inspection Probe into the FIP port on the AXS-200/350 to take advantage of unmatched optical resolution and therefore, avoid failed certification testing.



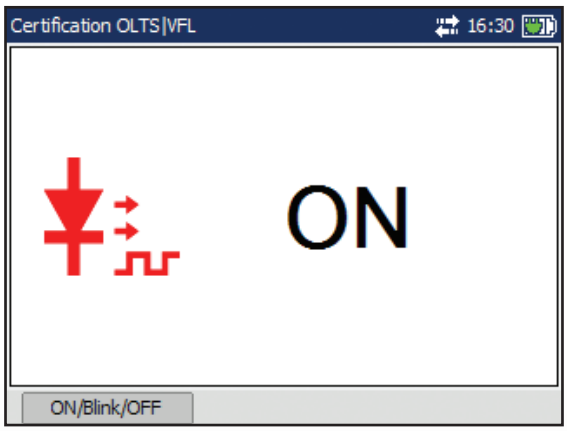
Dirty connector.

Clean connector.

AXS-200/360 with FIP-400.

Simpler troubleshooting

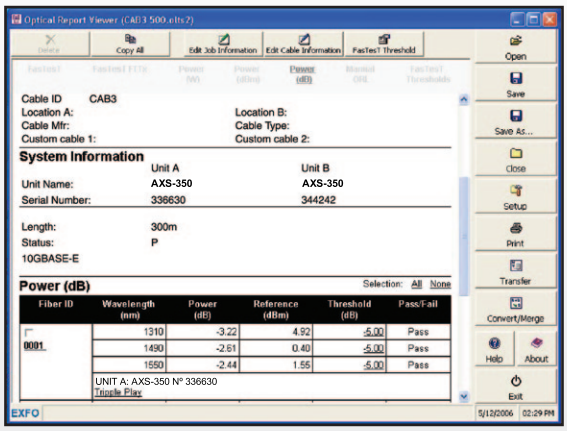
Troubleshoot link problems such as bad splices, macrobends and fiber breaks, using EXFO's visual fault locator. The VFL's bright red light helps you visually locate many near-end fiber faults and tests polarity. With this valuable and cost-effective option, you will benefit from another opportunity to expand your business.



Visual fault locator.

Comprehensive certification reports using Optical Report Viewer

Save, upload, manage and print comprehensive certification reports with EXFO's Optical Report Viewer. This software offers many feaures, including pass/fail thresholds, that are active during download, automatically activated and displayed in the viewer. It also allows you to generate professional-quality reports and detailed documentation.



Optical Report Viewer: main window.

AXS-200/360 SPECIFICATIONS [a]

Power Meter [b]	**AXS-200/362**
Detector	Ge
Power range (dBm) [c]	10 to –75
Wavelength range (nm)	800 to 1650
Calibrated wavelengths (nm)	800, 820, 830, 840, 850, 860, 870, 880, 910, 980, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1370, 1390, 1410, 1430, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650
Power uncertainty [d]	±5 % ± 31 pW
Resolution (dB)	±0.01 (10 dBm to –60 dBm)
Automatic offset nulling [e]	Yes
Display units	dB, dBm, W
Tone detection	270 Hz, 1 kHz and 2 kHz
Auto-switching [f]	Yes
Warm-up period (min) [e]	0
Data storage (items)	More than 10 000
Battery life (hours) (typical)	8
Recommended calibration interval (years)	3

GENERAL SPECIFICATIONS

Module and plateform size (H x W x D)	284 mm x 125 mm x 82 mm (11 $^{3}/_{16}$ in x 4 $^{15}/_{16}$ in x 3 $^{1}/_{4}$ in)
Module and plateform weight (with battery)	1.45 kg (3.2 lb)
Temperature operating storage	 –10 °C to 50 °C (14 °F to 122 °F) –40 °C to 70 °C (–40 °F to 158 °F)
Humidity	5 % to 95 % relative, non-condensing
Power supply input	100 V to 240 V to AC at 1.8 A, 50 Hz to 60 Hz
Power supply output	18 V to 24 V DC at 3.3 A to 2.50 A, 60 W
Battery	Internal rechargeable Li-Ion battery, with battery state indication
Self-test	Routine on power-up
Results storage	128 MB
Languages	English, French, German, Spanish, Chinese (Simplified and Traditional), Russian, Korean
Warranty (years)	3

STANDARD ACCESSORIES

CD-based user guide, Certificate of Calibration, quick reference guide, AC adapter/charger, connector adapter (FOA-XX), lithium ion battery, shoulder strap, carrying case, USB cable, reporting software

VISUAL FAULT LOCATOR (VFL)

Emitter type	Laser
Wavelength (nm)	650
Output power (dBm) [g]	3

LASER SAFETY

♦ If VFL option is available

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001: CLASS 3R LASER PRODUCT FOR VFL

Notes

a. At 23 °C ± 1 °C, with an FC connector.
b. At 1550 nm, unless otherwise specified.
c. Sensitivity defined as 6 x RMS noise level.
d. For calibrated wavelengths, valid up to 5 dBm for AXS-200/362.
e. For a variation of ±0.05 dB from 18 °C to 28 °C, for power > –50 dBm.
f. At 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1650 nm; for power > –50 dBm.
g. Typical values in 62.5/125 µm fiber.

FLS-600 SPECIFICATIONS [a]

Model	12D	23BL	234BL	235BL
Central wavelength (nm)	850 ± 25 1300 +50/–10	1310 ± 20 1550 ± 20	1310 ± 20 1550 ± 20 1625 ± 15	1310 ± 20 1490 ± 10 1550 ± 20
Spectral width (nm) [b]	50/135	≤ 5	≤ 5	≤ 5
Output power (dBm)	≥ –20/≥ –20 (62.5/125 µm)	≥ 1/≥ 1	≥ 1/≥ –3/≥ –5	≥ 1/≥ –4.5/≥ –3
Power stability (dB) [c] 15 min 8 h	±0.05 ±0.1	±0.03 ±0.1	±0.03 ±0.1	±0.03 ±0.1
Auto-switching	Yes	Yes	Yes	Yes
Tone generation	270 Hz, 1 kHz, 2 kHz	270 Hz, 1 kHz, 2 kHz	270 Hz, 1 kHz, 2 kHz	270 Hz, 1 kHz, 2 kHz
Battery life (hours) (typical in Auto mode)	50	50	50	50
Warranty	3	3	3	3

LASER SAFETY

♦If VFL option is available

21 CFR 1040.10 and IEC 60825-1:1993+A1:1997+A2:2001: CLASS 3R LASER PRODUCT FOR VFL

Notes

a. Guaranteed unless otherwise specified. All specifications valid at 23 °C ± 1 °C, with an FC connector.

b. RMS for FP lasers and –3 dB width for LEDs (typical values for LEDs).

c. After a 15-minute warm-up, and using an APC connector on the power meter (except for multimode sources, for which a PC connector is used). Expressed as ± half the difference between the maximum and minimum values measured during the period.

ORDERING INFORMATION

TK-AXS-360-XX-XX-XX-XX-XX-XX-XX-XX-XX

Model
TK-AXS-360

Probe Option
00 = Without probe
FP4D = 200X/400X video inspection probe
FP4S = 400X video inspection probe

Platform Software Option
00 = Without FIP software
FPS = With FIP software [a]

Module
A1 = AXS-362 fiber certification Ge detector

VFL
00 = Without VFL
VFL = With VFL

Connector Adapter
FOA-12 = Biconic
FOA-14 = D4, D4/PC
FOA-16 = SMA/905, SMA/906
FOA-22 = FC (PC/SPC/UPC/APC), NEC-D3
FOA-28 = DIN 47256 (LSA): DIN 47256 (PC/APC)
FOA-32 = ST (PC/SPC/UPC)
FOA-54 = SC (PC/SPC/UPC/APC)
FOA-78 = Radiall EC
FOA-96B = E-2000
FOA-98 = LC
FOA-99 = MU

Documentation Language
A = English
C = Chinese (Simplified)
E = Spanish
F = French
G = German
K = Korean
R = Russian
V = Chinese (Traditional)

Connector
EI-EUI-28 = UPC/DIN 47256
EI-EUI-76 = UPC/HMS-10/AG
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000

Source Option
B1 = FLS-600-12D, 850/1300 nm
B2 = FLS-600-23BL, 1310/1550 nm
B3 = FLS-600-12D-23BL, 850/1300/1310/1550 nm

Example: TK-AXS-360-FP4D-FPS-A1-FOA-54-B1-EI-EUI-89-A

Note

a. Mandatory with FP4D or FP4S.

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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. 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. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit www.EXFO.com/recycle. **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.**

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