

# AXS-200/360

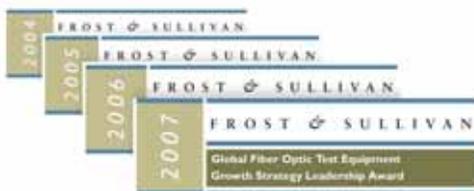
part of the SharpTESTER Line  
LAN Applications

NETWORK TESTING—OPTICAL



## Features/Benefits

- Complete cost-efficient test set for Tier-1 certification, based on EXFO's revolutionary modular platform AXS-200 SharpTESTER
- Editable and user-definable thresholds, consistent with all and latest industry standards
- Fiber inspection probe (FIP) support for clean and in good condition connectors
- Fiber loss wizard for step-by-step user-friendliness
- Pass/fail results on a bright, transfective screen for optimal viewing



## Simplifying Certification Testing

Private network operators as well as contractors and installers must make sure the fiber link is installed properly and within specification prior to commissioning the network. This will always be their responsibility. Fiber certification and documentation are also key to ensuring the quality of network installation and meeting industry standards.

The AXS-200/360 Fiber Certification Test Set provides unparalleled ease of use and accuracy to perform all fiber certification and troubleshooting tasks. Moreover, it makes it simple to certify fiber to the latest standards.

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

OLTS   Loss Certification			
Cable002 - Fiber000		Auto-wavelength	
Wavelength	Loss	Saved Data Loss	P/F
850 nm	<b>0.65</b> dB	0.63 dB	✓
1300 nm	<b>0.72</b> dB	0.71 dB	✓
Margin = 0.25 dB			Pass ✓
Wavelength	1300nm	VFL	OFF
Save		Prev. Fiber	
		Next Fiber	

Quick access to test results.

### Multimode and singlemode fiber certification

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. You only need one tester—the AXS-200/360. This instrument allows you to qualify the physical layer for up to 10 Gigabit Ethernet transmission on singlemode and multimode fibers.

### 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.

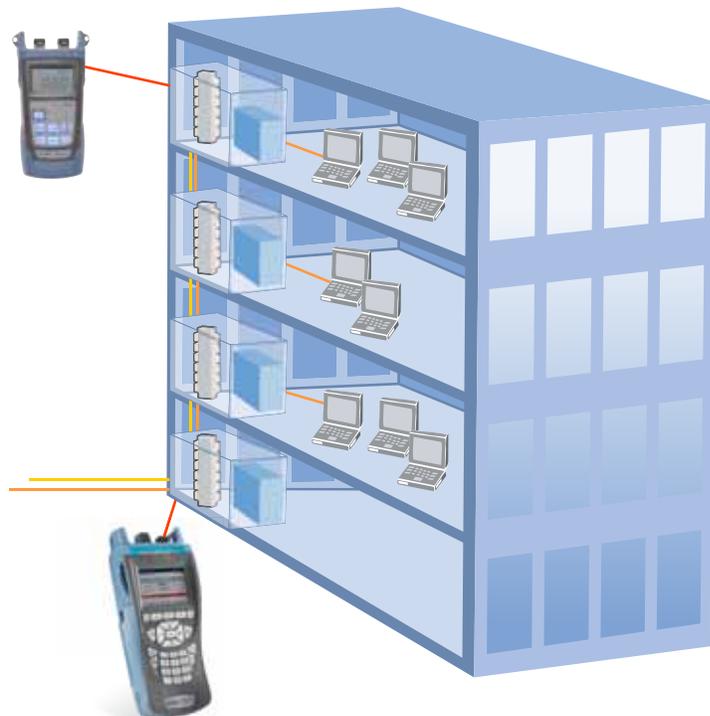
- Up to three singlemode wavelengths (1310, 1550, and 1490 or 1625 nm) on a single port, or four wavelengths (850/1300 nm and 1310/1550 nm) on two ports
- New controlled multimode launching conditions for reliable loss measurements
- Three-year warranty for low cost of ownership
- Full-fledged unit that can be used for other test applications



Easy operation. Clear results. Error-free testing.



Built for LAN networks.



# An Essential Fiber Certification Tool for Enterprise, 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.
AXS-200 SharpTESTER platform main characteristics: modularity, connectivity, weather-proof and color display	Expands with your network and service test requirements, covering copper/DSL/triple-play, Ethernet and other optical application; optimal viewing with the transreflective screen; easy data transfer via Bluetooth or USB connection.
FIP support	Ensures that you perform a connection with clean connectors/adapters, exempt of 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, no interpretation is required; possibility to interchange connectors for perfect referencing setup.
Low cost of ownership	Allows you to bid on more contracts, thanks to this dedicated fiber tester that certifies singlemode and multimode fiber networks; offers a three-year warranty and recommended calibration interval; is less expensive than the major competitor's instruments.

## FLS-600 key features and benefits

Automatic wavelength switching	Offers automated toggling between wavelengths thanks to the Auto-Switching mode; using this source with the AXS-200/360, the latter recognizes the wavelength in use and switches 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 reference and helps ensure efficient referencing—even when the source and power meter are far apart.
Controlled multimode launching conditions	Complies with the latest developments in encircle flux standards, providing the most 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 reference
- 4 Start the test

**Ready To Measure**  
You are now ready to perform measurements.

Number of connectors:	2
Number of splices:	0
Cable length:	100 m
Certification standard:	EIA-568-B-3
Filename:	Cable001.olts2

Connect your first fiber to the power meter port.  
Press « Start » ( ) button to begin.

Step-by-step loss wizard.

OLTS Loss Certification 13:32

**Select a Standard**  
Which standard applies to the test?

Fiber type: SM 9/125 µm  
Cabling standard: User defined values  
Network standard: None

Certification OLTS Loss Certification Wizard 14:34

**Select a Standard**  
Which standard applies to the test?

• None  
User defined values  
10GBASE-E (30 km)  
10GBASE-E (40 km)  
10GBASE-LX4 (SM)  
10GBASE-LX (SM)

Back Next Exit Certification

Select a standard or an application.

The AXS-200/360 automatically completes loss measurements at 850 and 1300nm wavelengths (MM) or 1310 and 1550 nm wavelengths (SM), compares results against 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 easily be retested.



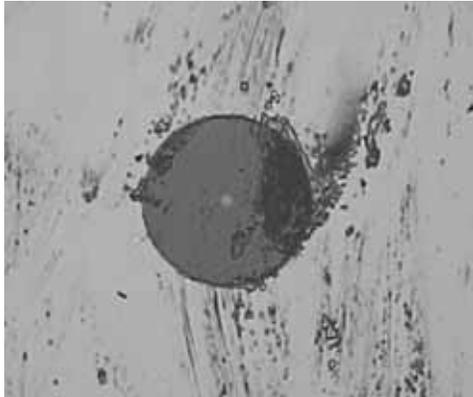
## View all results at a glance

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

## 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 of any defect is where accurate testing starts.

Avoid failing certification testing thanks to the FIP port on the AXS-200/360. Just plug EXFO's efficiently designed, unmatched FIP-400 Fiber Inspection Probe and you are all set! You will get the best ever optical resolution. Moreover, keep snap shots of your connectors for future reference and documentation.



Dirty connector.



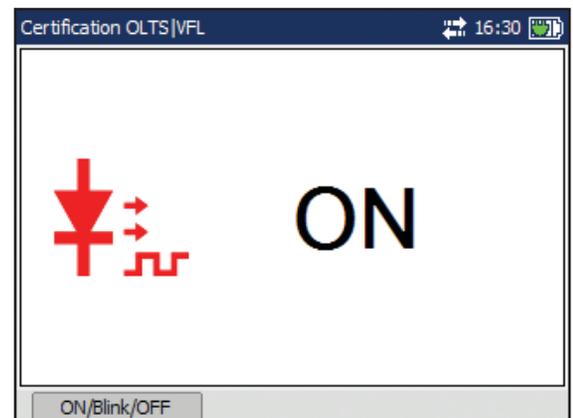
Clean connector.



AXS-200/360 with FIP-400.

## Facilitating troubleshooting

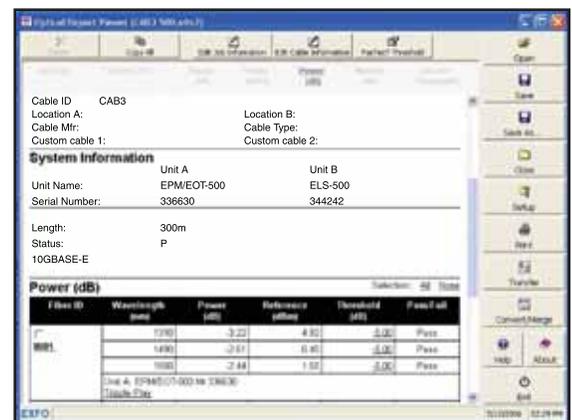
Troubleshoot link problems such as bad splices, macrobendings and fiber breaks using EXFO's visual fault locator. The VFL's bright red light helps you visually locate many near-end fiber faults and tests polarity. With this valuable and cost-efficient option, you will benefit from another opportunity 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. Among its numerous features, this software's pass/fail thresholds, which are active during download, are automatically activated and displayed in the Report Viewer. It also enables you to produce professional-looking reports with detailed documentation.



Optical Report Viewer: main window.

**AXS-200/360 SPECIFICATIONS <sup>a</sup> PRELIMINARY**

<b>Power Meter</b>	AXS-200/362	
Detector	Ge	
Power range (dBm) <sup>b</sup>	10 to -70	
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 <sup>c</sup>	±5 % ± 0.1 nW	
Resolution (dB)	±0.01 (10 dBm to -60 dBm)	
Automatic offset nulling <sup>d</sup>	Yes	
Display units	dB, dBm, W	
Tone detection	270 Hz, 1 kHz and 2 kHz	
Auto-switching <sup>e</sup>	Yes	
Warm-up period (min) <sup>d</sup>	0	
Data storage (items)	more than 10000	
Battery life (hours) (typical)	7.5	
Recommended calibration interval (years)	3	

**GENERAL SPECIFICATIONS**

Module size (H x W x D)	284 mm x 125 mm x 78 mm	(11 <sup>3</sup> / <sub>16</sub> in x 4 <sup>15</sup> / <sub>16</sub> in x 3 <sup>1</sup> / <sub>16</sub> in)
Module weight (with battery and transceivers)	0.98 kg	(2.16 lb)
Temperature		
operating	0 °C to 50 °C	(32 °F to 122 °F)
storage	-20 °C to 70 °C	(-4 °F to 158 °F)
Humidity	5 % to 95 % relative, non-condensing	
Power supply input	110-240 V to AC at 1.8A, 50 Hz to 60 Hz	
Power supply output	18 V to 24 V DC at 3.33 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 Mbyte	
Languages	English, French, German, Spanish, Chinese (Simplified)	
Warranty (years)	3	

**VFL <sup>f</sup>**

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

**SAFETY**

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



**FLS-600 SPECIFICATIONS <sup>g</sup>**

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) <sup>h</sup>	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) <sup>i</sup>				
15 min	±0.05	±0.03	±0.03	±0.03
8 h	±0.1	±0.1	±0.1	±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

**SAFETY**

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



**NOTES**

- a. Preliminary specifications valid at 1550 nm and 23 °C ± 1 °C, with an FC connector.
- b. In CW mode; sensitivity defined as 6 x rms noise level.
- c. For calibrated wavelengths. Valid up to 5 dBm for AXS-200/362.
- d. For a variation of ±0.05 dB from 18 °C to 28 °C, for power > 35 dBm for AXS-200/362.
- e. At 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1650 nm; for power > -50 dBm (typical) for AXS-200/362.
- f. Typical values 62.5/125 μm fiber.
- g. Guaranteed unless otherwise specified. All specifications valid at 23 °C ± 1 °C, with an FC connector.
- h. rms for FP lasers; and -3 dB width for LEDs (typical values for LEDs).
- i. After a 15-minute warm-up period, 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

**AXS-36X-XX-XX**

**Model** ■  
AXS-362 = Fiber Certification, Ge detector

**Option** ■  
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-40 = Diamond HMS-OHFS-3 (3.5 mm)
  - FOA-54 = SC (PC/SPC/UPC/APC)
  - FOA-76 = FSMA HMS-10/AG, HFS-10/AG
  - FOA-78 = Radiall EC
  - FOA-84 = Diamond HMS-10, HFS-13
  - FOA-96B = E-2000
  - FOA-98 = LC
  - FOA-99 = MU

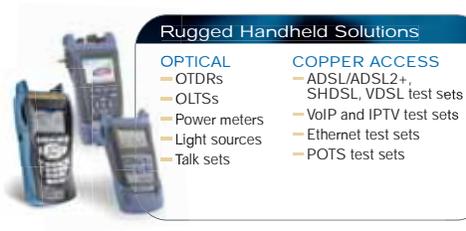
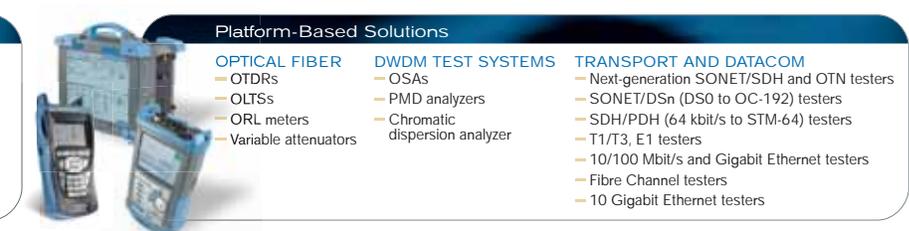
Example: AXS-200/362-VFL-FOA-54

**FLS-600-XX-XX**

**Model** ■  
FLS-600-23BL = 1310/1550 nm laser 9/125 μm  
FLS-600-234BL = 1310/1550/1625 nm laser 9/125 μm  
FLS-600-235BL = 1310/1490/1550 nm laser 9/125 μm  
FLS-600-12D-23BL = 850/1300 nm LED source 62.5/125 μm,  
1310/1550 nm laser 9/125 μm

- 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

Example: FLS-600-234BL-EI-EUI-89

 <p><b>Rugged Handheld Solutions</b></p> <ul style="list-style-type: none"> <li><b>OPTICAL</b> <ul style="list-style-type: none"> <li>— OTDRs</li> <li>— OLTs</li> <li>— Power meters</li> <li>— Light sources</li> <li>— Talk sets</li> </ul> </li> <li><b>COPPER ACCESS</b> <ul style="list-style-type: none"> <li>— ADSL/ADSL2+, SHDSL, VDSL test sets</li> <li>— VoIP and IPTV test sets</li> <li>— Ethernet test sets</li> <li>— POTS test sets</li> </ul> </li> </ul>	 <p><b>Platform-Based Solutions</b></p> <ul style="list-style-type: none"> <li><b>OPTICAL FIBER</b> <ul style="list-style-type: none"> <li>— OTDRs</li> <li>— OLTs</li> <li>— ORL meters</li> <li>— Variable attenuators</li> </ul> </li> <li><b>DWDM TEST SYSTEMS</b> <ul style="list-style-type: none"> <li>— OSAs</li> <li>— PMD analyzers</li> <li>— Chromatic dispersion analyzer</li> </ul> </li> <li><b>TRANSPORT AND DATACOM</b> <ul style="list-style-type: none"> <li>— Next-generation SONET/SDH and OTN testers</li> <li>— SONET/DSn (DS0 to OC-192) testers</li> <li>— SDH/PDH (64 kbit/s to STM-64) testers</li> <li>— T1/T3, E1 testers</li> <li>— 10/100 Mbit/s and Gigabit Ethernet testers</li> <li>— Fibre Channel testers</li> <li>— 10 Gigabit Ethernet testers</li> </ul> </li> </ul>
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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  
Toll-free: 1 800 663-3936 (USA and Canada) | www.EXFO.com

<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>	Omega Enterprise Park, Electron Way Chandlers Ford, Hampshire S053 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 Beijing New Century Hotel Office Tower, Room 1754-1755 No. 6 Southern Capital Gym Road	Shenzhen 518048 P. R. CHINA Beijing 100044 P. R. CHINA	Tel.: +86 (755) 8203 2300 Tel.: +86 (10) 6849 2738 Fax: +86 (755) 8203 2306 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. 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](http://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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In case of discrepancy, the Web version takes precedence over any printed literature.