



Designed with the installers and operators of enterprise communication networks in mind, the FiberXpert OTDR 5000 troubleshoots fiber optic networks, measures distance to fault, and documents findings. The FiberXpert OTDR 5000 provides very high resolution with one of the shortest dead zones available for testing multimode and single-mode fibers, thus enabling measurement of very short fiber links. Automatic analysis features will simplify your troubleshooting and measurement task.

Identify fiber optic cable components, faults, and distance to fault

IT Networks



### Characteristics

- Optical Time Domain Reflectometer (OTDR) for 850/1300nm multi-mode and 1310/1550nm single-mode
- Compliant to Tier 2 Standards of fiber optic cabling, which includes both Tier 1 Light Source Power Meter (LSPM) and Tier 2 Optical Time Domain Reflectometer (OTDR)
- Automatic Pass/Fail analysis of the test results compared to limits specified by TIA/IEC
- Graphical display of OTDR trace provides on-screen images of discovered distance between connectors, splices, and end of cable using reflection and attenuation analysis
- All fiber link events and analysis conveniently listed in a table of results
- Automatic macro-bend detection, increasingly important as installation space gets tighter
- Built-in optical loss test set to help you formally accept end to end loss specifications
- Optional fiber inspection probe for detecting dirty and damaged connectors with great precision
- Large color LCD touch screen, and hands-free neck strap
- Generate professional reports with Softing's included eXport software, part of the FiberXpert and WireXpert platform

### What is an OTDR?

Fiber optic cable connectors, bends, breaks, and splices can all contribute to degraded performance or faulty network communications. The FiberXpert OTDR 5000 uses an optical radar to inject a signal at one end of the cable and then measure the reflected signal profile to determine the component, fault type, and distance to fault. Whether it's a cable bend that exceeds best practices during installation, or a cable break months after installation, the FiberXpert OTDR 5000 will analyze the fiber, describe the fault type, and graphically show you the distance to the fault and components throughout the cable run.

### Easy handling and analysis

A special carrying case with neck strap allows for hands-free convenient operation in the field and eliminates the need to mount the measurement tool while troubleshooting. The results are displayed on the 5 inch touch screen and can be analyzed and saved. Featuring automatic event detection, all events on the fiber optic link are automatically displayed with a Pass/Fail evaluation.

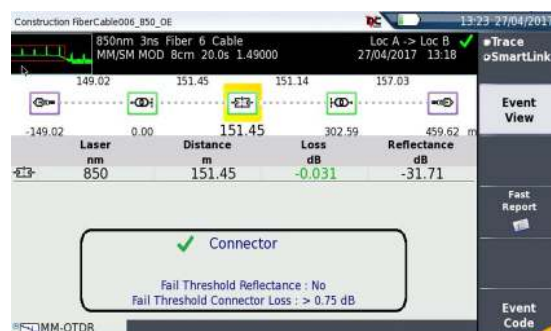
### Expanded measurement capabilities

Functions such as attenuation measurement and an optical power meter provide for accurate analysis of the total link loss and of the output power of active equipment such as switches. The optional fiber inspection microscope enables you to document the quality and cleanliness of the connector end-face before and after installation. This is helpful in instances of faults or warranty claims.

### Consolidate the measurement results of your projects in one software package

Cabling projects commonly have both fiber optic and copper cabling links. Softing's included eXport software manages the test results of both FiberXpert and WireXpert, consolidating all results of your project in one software package.

Graphical display of component, fault, and distance to fault



# FIBERXPERT OTDR 5000



## Contents of the kit

**FiberXpert OTDR 5000 Quad**

**Multi-mode/Single-Mode**

**850/1300/1310/1550nm Optical Time Domain Reflectometer**

Includes FiberXpert, SC compatible Multimode module,

SC compatible Single-Mode module,

Li-Polymer batteries, power supplies, soft case with shoulder

strap, hard carry case, calibration certificate

Part number: FX5000-QU

## FIBER MICROSCOPE

Before testing any fiber run and before plugging connectors together, you should check to ensure they are clean. Dirt will degrade data transfer or can permanently damage the contact area. With the new fiber microscope from Softing IT Networks you can quickly and easily check connector ends and automatically evaluate to IEC 61300-3-35. Did you know that when pulling off a connector end cap, a vacuum is drawn, and dust is sucked onto the end face? Did you know that making a dirty connection can crush dust into the end face? The USB interface allows connection to WireXpert or FiberXpert.

Part number: WX-FX-INSP-KIT

- One-click test and evaluation of fiber surfaces
- Automatic evaluation conforming to IEC 61300-3-35
- Compatible with WireXpert and FiberXpert
- Adapters for common fiber connectors



## FIBERXPERT LAUNCH CORD

Multi-mode and Single-mode launch cords neatly arranged and ready to use FiberXpert launch cords ensure order in the measuring case. Launch cords are coiled gently and can be easily rolled up and stored. The fiber itself is protected and can be stored in the hard case of the FiberXpert OTDR 5000.

Economy Launch Cord:  
FX-AC-ECO-MM-LC



Automatic roll-up PRO with SC to LC connectors: FX-AC-PRO-MM-SC



- Optimum protection for your launch cord
- Multi-mode and Single-Mode launch cords available
- Common connector combinations available
- Automatic roll-up in the PRO version



Hands-free FiberXpert strap

<http://itnetworks.softing.com>

For more information please contact:

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### General (Typical at 25°C)

Weight	0.4 kg (0.88 lb)
Dimensions (w × h × d)	128x134x40 mm (5x5.28x1.58 in)
<b>Optical Interfaces</b>	
Optical connector	SC (Launch cords available: SC to LC, SC to ST, SC to SC)

### Technical Characteristics

Laser safety class (21 CFR)	Class 1
Distance units	Kilometers, feet, and miles
Group index range	1.300000 to 1.700000 in 0.00001 steps
Number of data points	Up to 128,000 data points
Distance measurement	Automatic or dual cursor
Display range	3.25 m to 260 km
Cursor resolution	1 cm
Sampling resolution	4 cm
Accuracy	± 1 m ± 10 <sup>-5</sup> × distance ± sampling resolution (Excluding group index uncertainties)

### Attenuation Measurement

Automatic, manual, 2-point, 5-point, and LSA	
Display range	1.25 dB to 55 dB
Display resolution	0.001 dB
Cursor resolution	0.001 dB
Linearity	±0.03 dB/dB
Threshold	0.01 to 5.99 dB in 0.01 dB steps

### Reflectance/ORL Measurements

Reflectance accuracy	±2 dB
Display resolution	0.01 dB
Threshold	-11 to -99 dB in 1 dB steps

### CW Source

CW Source output power level	-3.5 dBm
Operating modes	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINTest

### Power Meter

Power level range	MM: -3 to -30 dBm SM: -2 to -50 dBm
Calibrated wavelengths	MM: 850 and 1300 nm SM: 1310, 1490, 1550, 1625, and 1650 nm
Measurement accuracy	MM <sup>1</sup> : ±1 dB (At -15 dBm)      SM: ±0.5 dB (At -30 dBm)

### Multimode and Quad OTDR Modules (Typical at 25°C)

Central wavelength <sup>2</sup>	850/1300 ±30 nm	1310/1550 ±20 nm
Pulse width	3 ns to 1 μs	3 ns to μs
RMS dynamic range <sup>3</sup>	26/24 dB	37/35 dB
Event dead zone <sup>4</sup>	0.8 m	0.9 m
Attenuation dead zone <sup>5</sup>	4 m	4 m

1 Using a mode conditioner

2 Laser at 25°C

3 The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level after 3-minutes averaging

4 Measured at ±1.5 dB down from the peak of an unsaturated reflective event

5 Measured at ±0.5 dB from the linear regression using an F/UPC-type reflectance