

Best.nr: 20100632 (FS200-100-BAS-P1-W1) & 20100633 (FS200-300-BAS-P1-W1)

FLEXSCAN OTDR with SmartAuto™ and LinkMap™

Pocket-sized, Performance-packed, User-friendly, *and* Affordable



Features

- Fast, accurate SmartAuto OTDR network characterization or fault location
- Easy to understand LinkMap results with pass/fail indications
- 1550 nm only version for cost-effective troubleshooting
- 1310/1550 nm version for complete network characterization
- Alerts users to live fibers and poor launch conditions
- Integrated Source, Power Meter, VFL (visual fault locator)
- Bluetooth and Wi-Fi communications
- Compatible with FOCIS Flex connector inspection system
- Rugged, lightweight, hand-held for field use
- Large, bright touchscreen display easily viewed indoors and out
- Internal / external data storage via USB, Bluetooth, or Wi-Fi
- 12-hour Telcordia battery operation

Applications

- Optical network installation, troubleshooting and maintenance
- OTDR testing plus Insertion Loss and Power measurements
- Locate faults exceeding industry or user pass/fail thresholds
- Visually pinpoint location of macro-bends or breaks inside cabinets and splice closures

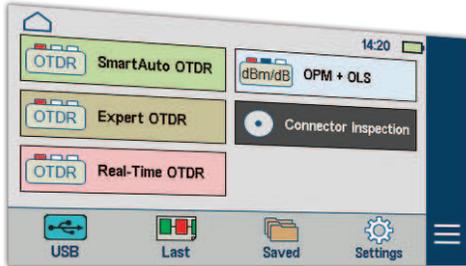
FLEXSCAN OTDRs enable both novice and expert technicians to quickly and reliably troubleshoot optical networks or fully characterize newly installed or repaired networks. Using FLEXSCAN's innovative SmartAuto mode, multiple OTDR scans quickly and accurately detect, locate, identify and measure network components and faults. After applying industry-standard or user-set pass/fail criteria, the characterized network is displayed using FLEXSCAN's intuitive, icon-based LinkMap view.

FLEXSCAN automates test setup, shortens test time and simplifies results interpretation, improving efficiency and reducing the cost of test. Acquired results may be stored internally or externally. Internally stored results are easily accessed via USB, Bluetooth or WiFi.

With optional connector inspection, integrated source, power meter and VFL, FLEXSCAN offers an all-in one solution, ensuring technicians have everything they need to locate and resolve optical network issues.

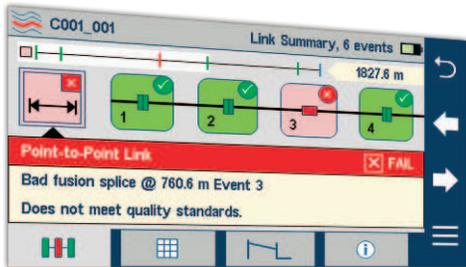
Designed for field use, FLEXSCAN is robust, rugged, lightweight, powerful and flexible.

FLEXSCAN OTDR with SmartAuto™ and LinkMap™



SmartAuto Provides Network-optimized Test Settings

In SmartAuto mode, a FLEXSCAN OTDR automatically determines the characteristics of the network under test and rapidly completes multiple scans using a variety of network-optimized acquisition settings. It precisely locates and identifies network events, as well as measures loss and reflectance for each detected event. SmartAuto supports two test modes: Locate End & Faults (for fast network troubleshooting) and Characterize Fiber (for more complete installation verification). For even greater ease-of-use, FLEXSCAN checks for live fiber and verifies the OTDR launch connection before initiating a test. Dual wavelength FlexScan OTDRs also provide automatic macro-bend detection.



LinkMap Simplifies Network Troubleshooting

LinkMap with Pass/Fail enables even novice users to easily and accurately troubleshoot optical networks. LinkMap presents an icon-based view of the tested network clearly identifying fiber start, end, connectors, splices and macro-bends.

A LinkMap Summary provides end-to-end link length, loss, loss per distance and ORL. Loss and reflectance of detected events is compared to industry-standard or user-settable pass/fail thresholds and displayed with clear pass/fail indications. Users can instantly toggle between LinkMap and Trace views.

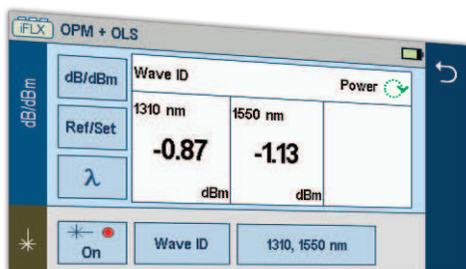


Bluetooth and Wi-Fi for Faster Connectivity

Pair FLEXSCAN with AFL's FOCIS Flex connector inspection probe for fast, easy connector end-face inspection.

FOCIS Flex provides auto-focus, auto-centering, integrated IEC pass/fail analysis, and automatic Bluetooth transfer of images and pass/fail results to FLEXSCAN for display and archiving.

FLEXSCAN's built-in Wi-Fi also supports wireless remote control and file transfer to/from Windows PCs, Android and iOS mobile devices.



Multi-Functionality Ensures Complete Testing Accuracy

FLEXSCAN integrates a Visual Fault Locator (VFL) plus an optional optical laser source (OLS) and optical power meter (OPM) supporting AFL's unique Wave ID capability. With Wave ID, the power meter automatically synchronizes to a single or multi-wavelength Wave ID optical signal sent by an AFL light source. The power meter automatically identifies received wavelengths and measures power and loss at each wavelength, saving significant test time and eliminating setup errors. The VFL's eye-safe red laser enables users to visually pinpoint the location of macro-bends and fiber breaks often found in splice closures and fiber cabinets.

FLEXSCAN OTDR with SmartAuto™ and LinkMap™

FLEXSCAN OTDRs are available with 1310/1550 nm or 1550 nm only wavelengths. Both versions are available with integrated Optical Light Source (OLS), Optical Power Meter (OPM), Visual Fault Locator (VFL) and Bluetooth/Wi-Fi.

Specifications^a

| OTDR | |
|------------------------------------|--|
| Emitter Type | Laser |
| Safety Class | Class 1 FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03 |
| Fiber Type | Single-mode |
| Available Wavelengths | FS200-50: 1550 ±20 nm FS200-100: 1310/1550 ±20 nm |
| Wavelength Tolerance | ±20 nm |
| Dynamic Range (SNR=1) ^b | 32/30 dB @1310/1550 nm |
| Event Dead Zone ^c | 0.8 m |
| Attenuation Dead Zone ^d | 3.6 m |
| Pulse Widths | 3, 5, 10, 20, 30, 50, 100, 200, 300, 500 ns; 1, 2, 3, 10 µs |
| Range Settings | 250 m to 240 km |
| Data Points | Up to 2,300,000 (SmartAuto mode) Up to 300,000 (Expert mode .SOR file) |
| Data Spacing | 5 cm to 16 m |
| Group Index of Refraction | 1.4000 to 1.7000 |
| Distance Uncertainty (m) | ±(1 + 0.005% x distance + data point spacing) |
| Linearity | ±0.05 dB/dB |
| Trace File Format | Telcordia SR-4731 Issue 2 |
| Trace File Storage Medium | 4 GB internal memory (>1000 traces); External USB memory stick |
| Data Transfer to PC | USB cable or Bluetooth® or Wi-Fi (option) |
| Standard OTDR Modes | SmartAuto, Expert, Real Time |
| Display Modes | LinkMap Summary, LinkMap Events, Trace |
| Real-time Refresh Rate | Up to 4 Hz |
| Live Fiber Protection | No OTDR damage with input power ≤ +3 dBm for wavelength(s) in range 1260 to 1675 nm |
| Live Fiber Detection: | Reports live fiber with input signal ≥ -35 dBm for wavelength(s) in range 1260 to 1675 nm |

| VISUAL FAULT LOCATOR (VFL) | |
|----------------------------|--|
| Emitter Type | Visible red laser, 650 ±20 nm |
| Safety Class | Class II FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03 |
| Output Power (nominal) | 0.8 mW into single-mode fiber |
| Modes | CW, 2 Hz flashing |

| OPTICAL LASER SOURCE - OLS (Optional) | |
|---------------------------------------|--|
| Emitter Type | Laser |
| Safety Class | Class I, FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03 |
| Fiber Type | Single-mode |
| Available Wavelengths | FS200-50: 1310 ±20 nm FS200-100: 1310/1550 ±20 nm |
| Spectral Width (FWHM) | 5 nm (maximum) |
| Internal Modulation | 270 Hz, 330 Hz, 1 kHz, 2 kHz, CW, Wave ID |
| Wave ID (1-3 wavelengths) | Compatible with AFL OPM/OLS |
| Output Power Stability | ≤ ±0.1 dB (15 minutes); ≤ ±0.15 dB (8 hours) |
| Output Power | -3 dBm ±1.5 dB |

| OPTICAL POWER METER - OPM (Optional) | |
|--------------------------------------|---------------------------------|
| Calibrated Wavelengths | 1310, 1490, 1550, 1625, 1650 nm |
| Detector Type | InGaAs, 2 mm diameter |
| Measurement Range | +23 to -50 dBm |
| Tone Detect Range | +3 to -35 dBm |
| Wavelength ID Range | +3 to -35 dBm |
| Accuracy ^e | ±0.25 dB |
| Resolution | 0.01 dB |
| Measurement Units | dB, dBm or Watts (nW, µW, mW) |

| GENERAL | |
|-------------------------|---|
| Size (in boot) | 86 x 160 x 43 mm |
| Weight | 0.4 kg |
| Operational Temperature | -10 °C to +50 °C, 0 to 95 % RH (non-condensing) |
| Storage Temperature | -40 °C to +70 °C, 0 to 95 % RH (non-condensing) |
| Power | Rechargeable Li-Ion or AC adapter |
| Battery Life | >12 hours, Telcordia test conditions |
| Display | Color touchscreen 4.3 in LCD, 480x272, backlit |
| USB Ports | 1 host; 1 micro-USB function |
| Bluetooth (optional) | Compatible with Windows PC, Apple iOS, Android |
| WiFi (optional) | IEEE 802.11 / WLAN |

Notes:

- All specifications valid at 25 °C unless otherwise specified.
- Measured using 240 km range, 10 µs pulse and 3 minutes averaging.
- Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -45 dB event using 5 ns pulse width.
- Typical distance from the location of a -45 dB reflective event to the point where the trace falls and stays within 0.5 dB of backscatter, using a 5 ns pulse width.
- At calibration wavelengths and power levels of approximately -10 dBm.

FLEXSCAN OTDR with SmartAuto™ and LinkMap™

FLEXSCAN Kit Configurations

FLEXSCAN is available in three kit configurations: Basic, Plus and PRO. All kits include FLEXSCAN with AC charger, battery, carry strap, SC connector adapters and soft carry case. Plus Kits add a 150 m fiber ring (launch cable) plus One-click cleaner. PRO kits expand on the Plus Kit by adding a FOCIS Flex auto-focusing connector inspection probe with IEC pass/fail analysis and two adapter tips.

Ordering Information

FS200-[MOD]-[KIT]-[PW]-[C]-[LNG]-[AC]-[FR1]-[FR2]-[TIP] where:

| [MOD] | FS200 FLEXSCAN OTDR Configuration |
|-------|--|
| 50 | 1550 nm only Troubleshooting OTDR |
| 100 | 1310/1550 nm Verification & Troubleshooting OTDR |

| [KIT] | FS200 FLEXSCAN Kit Configuration |
|-------|--|
| BAS | Basic kit with soft case, TRM 2.0 Basic, USB cable |
| PLUS | PLUS kit adds 150 m SMF Fiber Ring and One-click cleaner |
| PRO | PRO kit adds Fiber Ring, One-click cleaner, FOCIS Flex |

| [PW] | Power Meter / Wireless option |
|-------|---------------------------------------|
| P0-W0 | No Power Meter; No Bluetooth/WiFi |
| P1-W1 | Includes Power Meter & Bluetooth/WiFi |

| [C] | OTDR / Source Connector Type |
|-----|------------------------------|
| A | APC |
| U | UPC |

| [LNG] | Language Option |
|-------|-----------------|
| ENG | English |

| [AC] | Destination Country | AC Plugs |
|------|---------------------|------------|
| US | USA | 2-pin, US |
| EU | European Union | 2-pin, EU |
| UK | United Kingdom | 2-pin, UK |
| CN | China, Australia | 2-pin, SAA |

| [FR] | 150 m SMF Fiber Ring |
|--------|----------------------|
| Blank | N/A in BASic kits |
| SC/SC | FR1-SM-150-SC-SC |
| SC/FC | FR1-SM-150-SC-FC |
| SC/LC | FR1-SM-150-SC-LC |
| SC/ST | FR1-SM-150-SC-ST |
| SC/ASC | FR1-SM-150-SC-ASC |
| SC/AFC | FR1-SM-150-SC-AFC |
| SC/ALC | FR1-SM-150-SC-ALC |
| LC/LC | FR1-SM-150-LC-LC |
| LC/ASC | FR1-SM-150-LC-ASC |
| LC/ALC | FR1-SM-150-LC-ALC |

| [FR] | 150 m SMF Fiber Ring |
|---------|----------------------|
| ASC/FC | FR1-SM-150-ASC-FC |
| ASC/ST | FR1-SM-150-ASC-ST |
| ASC/ASC | FR1-SM-150-ASC-ASC |
| ASC/AFC | FR1-SM-150-ASC-AFC |
| ASC/ALC | FR1-SM-150-ASC-ALC |
| ALC/ALC | FR1-SM-150-ALC-ALC |
| FC/FC | FR1-SM-150-FC-FC |
| FC/ST | FR1-SM-150-FC-ST |
| FC/LC | FR1-SM-150-FC-LC |
| FC/AFC | FR1-SM-150-FC-AFC |
| AFC/AFC | FR1-SM-150-AFC-AFC |

| [TIP] | FOCIS Flex Tips & Cleaning (PRO only) |
|-------|--|
| Blank | Option not available in BASic & PLUS kits |
| SC | SC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning |
| FC | FC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning |
| LC | LC-UPC bulkhead tip, 1.25 mm UPC ferrule tip, 1.25 mm cleaning |
| ASC | SC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning |
| AFC | FC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning |
| ALC | LC-APC bulkhead tip, 1.25 mm APC ferrule tip, 1.25 mm cleaning |

Connector Adapters

| DESCRIPTION | AFL NO. |
|--|----------------|
| FC adapter for OTDR/OLS port | 2900-50-0002MR |
| SC adapter for OTDR/OLS port | 2900-50-0003MR |
| LC adapter for OTDR/OLS port | 2900-50-0006MR |
| FC adapter for OPM port | 2900-52-0001MR |
| SC adapter for OPM port | 2900-52-0002MR |
| LC adapter for OPM port | 2900-52-0004MR |
| 2.5 mm Universal adapter for OPM port | 2900-52-0005MR |
| 1.25 mm Universal adapter for OPM port | 2900-52-0006MR |
| 2.5 mm Universal adapter for VFL port | 2900-53-0001MR |
| 1.25 mm Universal adapter for VFL port | 2900-53-0002MR |