

T-BERD®/MTS-2000/-4000 Platforms

FiberComplete™ Module



Key Features

- Combined bidirectional OTDR, insertion loss and return loss measurements capability
- One connection, one-touch automated measurements
- Real-time continuity check and automatic product pairing
- Immediate troubleshooting with FaultFinder mode
- Acceptance testing with bidirectional OTDR mode
- Fiber or cable results management
- Step-by-step wizard for initial IL/ORL test referencing
- Compatible with Metro-Access (MA) and Metro-PON (MP) OTDRs
- Offer ideal test solution for use in the installation, maintenance and troubleshooting of Metro, Wireless Backhaul, ROADM and PON networks

Key Benefits

- Equip each field technician with a single piece of equipment that fulfill all traditional fiber testing requirements
- Cut down testing time by 40% with fewer connections and disconnections, automatic continuity check, and an intelligent fault finder
- Minimize training time and provide reliable measurements using a single connection port combined with a fully automated process and easily readable results
- Optimize workflow by compiling test results into one complete cable view and automatically storing all measurements in one folder

FiberComplete offers the first solution of its kind that performs all the fundamental fiber qualification tests, such as bidirectional insertion loss (IL), optical return loss (ORL), and optical time domain reflectometry (OTDR), with one module and from one optical port.

Now equip each technician with a single piece of equipment that can fulfill all of the traditional testing requirements. This platform offers the most complete fiber testing solution for installers to quickly and easily characterize point-to-point or point-to-multipoint passive optical networks (PON).

PLATFORM COMPATIBILITY

T-BERD 2000 / MTS-2000



One-Slot Handheld Modular Platform
Fiber Networks Testing

T-BERD 4000 / MTS-4000



Two-Slot Handheld Modular Platform
Fiber/Copper & Multiple Services Testing

Reduce the Number of Tools Carried

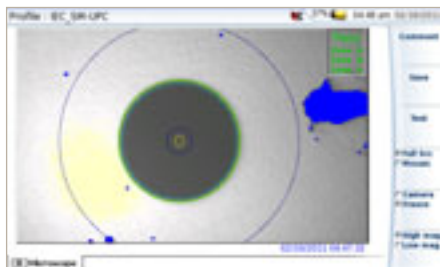
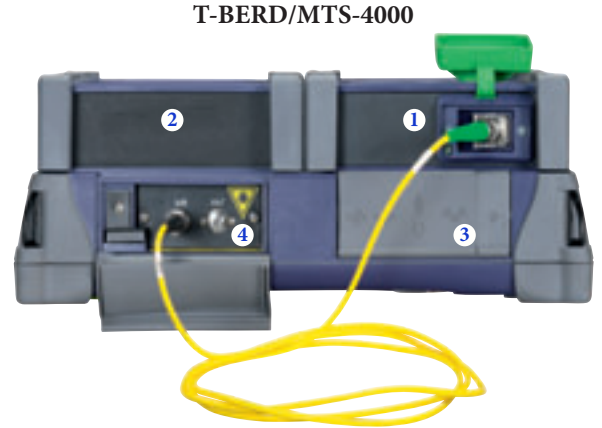
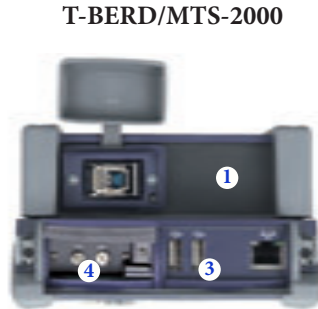
FiberComplete integrates up to six instruments into one test module and combined with all the T-BERD/MTS-2000/4000 features, such as visual fault location (VFL), talk set, broadband power meter, and digital analysis microscope, provides the most integrated and versatile solution for any fiber optic network testing.

- 1 FiberComplete™**
- Continuity check
 - Loss meter
 - Light source
 - ORL meter
 - Length meter
 - OTDR/FaultFinder

- 2 Second slot for :**
- Multimode OTDR
 - PON Power meter
 - CWDM Analyzer

- 4 Built-in options :**
- VFL
 - Talk set
 - High power or broadband power meter

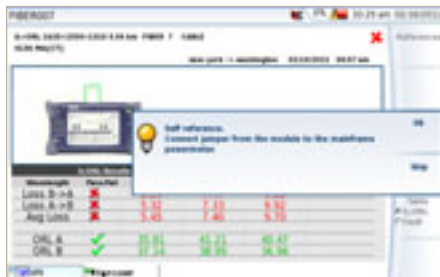
- 3 USB Port:**
Plug for digital pass/fail analysis microscope (P5000i)



Eliminate the guess work with on-board FiberChekPRO pass/fail analysis

Improve Productivity and Cut Operating Expenses

- FiberChekPRO™ pass/fail fiber inspection software
 - Instantly captures and analyzes fiber end faces
 - Provides pass/fail criteria based on IEC 61300-3-35 standards
- A single connection port for all your tests
 - Avoids multiple connection/disconnection of the patch cords
 - Reduces manipulation errors and testing time
- Automatic measurement process
 - Enables one-button operation for bidirectional OTDR, IL and ORL, and distance measurements
 - Enables auto-configuration of acquisition parameters
 - Enables auto-storing results with auto-increment of the fiber number



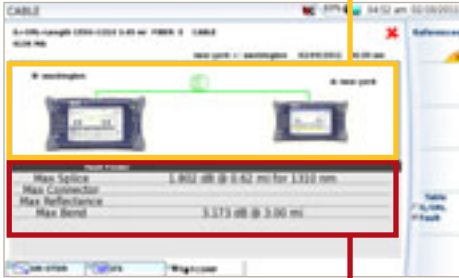
Referencing process

Reduce Training Expenses

- Single push-button operation
- Step-by-step wizard guides technicians through the referencing process
- Common test platform and user interface

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Continuity check



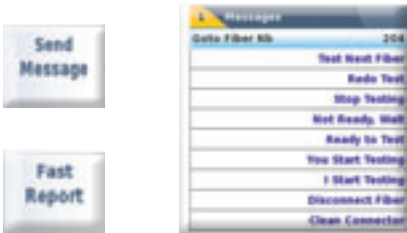
FaultFinder result table

FIB #	Req Loss	Req Loss	ORL A	ORL A	ORL B	ORL B
	dB	dB	dB	dB	dB	dB
1	2.53	7.30	13.99	14.17	23.21	28.82
2	2.12	6.99	14.83	20.81	36.26	38.50
3	3.58	7.10	14.83	20.71	26.71	28.29
4	3.52	7.48	25.73	42.21	36.21	38.34
5	3.54	7.54	36.54	42.46	36.26	38.34

Cable View

Measurement	Pass/Fail	1550 nm	1310 nm	1470 nm
Loss B → A	✗	5.29	7.47	8.50
Loss A → B	✗	5.32	7.33	8.32
Avg Loss	✗	5.45	7.40	8.41
ORL A	✓	23.21	18.21	28.82
ORL B	✓	23.21	18.21	28.82

Fiber View



Pre-defined short messages

Increase Efficiency and Minimize Testing Time and Troubleshooting

- Real-time continuity check and product pairing
 - Optical continuity confirmation for immediate testing
 - Troubleshoot fiber mismatches or broken links before testing
- The only loss test set (LTS) with FaultFinder that enables locating faults
 - Eliminates the need for an additional OTDR
 - Saves time locating the root cause of loss/ORL issues
 - Displays easy-to-interpret results tables to quickly identify issues

Control Workflows and Optimize Daily Jobs

- Simplifies the testing process
 - Sequences measurements: bidirectional IL/ORL, OTDR, and distance
 - Tunes the test sequence according to the required job
- Cable or fiber results view
 - Optimizes the results display by job type
 - Indicates pass/fail
 - Cable View permanently tracks all the fiber and easily generates reports
- Simplifies communication between different locations
 - Communicate at no cost and out of cell phone coverage zone with built-in optical talkset
 - Send pre-defined short messages/sms using the fiber under test

Automate Report Generation

- Creates instantaneous text report during the test process
- Generates PDF reports in the field with "Fast Report" key. No need for a PC, create directly IL, ORL, OTDR and Fiber connector reports on site

The screenshot shows a PDF report with the following data:

FIB #	Req Loss	Req Loss	ORL A	ORL A	ORL B	ORL B
	dB	dB	dB	dB	dB	dB
101	2.14	7.15	18.82	18.52	21.14	21.15
102	2.15	7.16	18.83	18.53	21.15	21.16
103	2.16	7.17	18.84	18.54	21.16	21.17
104	2.17	7.18	18.85	18.55	21.17	21.18
105	2.18	7.19	18.86	18.56	21.18	21.19
106	2.19	7.20	18.87	18.57	21.19	21.20
107	2.20	7.21	18.88	18.58	21.20	21.21
108	2.21	7.22	18.89	18.59	21.21	21.22
109	2.22	7.23	18.90	18.60	21.22	21.23
110	2.23	7.24	18.91	18.61	21.23	21.24
111	2.24	7.25	18.92	18.62	21.24	21.25
112	2.25	7.26	18.93	18.63	21.25	21.26
113	2.26	7.27	18.94	18.64	21.26	21.27
114	2.27	7.28	18.95	18.65	21.27	21.28
115	2.28	7.29	18.96	18.66	21.28	21.29
116	2.29	7.30	18.97	18.67	21.29	21.30
117	2.30	7.31	18.98	18.68	21.30	21.31
118	2.31	7.32	18.99	18.69	21.31	21.32
119	2.32	7.33	19.00	18.70	21.32	21.33
120	2.33	7.34	19.01	18.71	21.33	21.34



The screenshot shows a PDF report with a "PASS" status and an inspection summary table:

Zone	Diameter	Inner	Outer	Result	Count	Result	Count
Zone A	0.000	20.000	FAL	0	PASS	0	
Zone B	7.25000	130.000	FAL	1	PASS	0	
Zone C	130.000	130.000	FAL	1	PASS	0	
Zone D	130.000	200.000	FAL	0	PASS	0	



Generate instantaneously and on site IL, ORL, OTDR and Fiber connector PDF reports

Fiber Trace reports

For off-site report generation, Fiber Trace software enables generation of detailed, professional and customized reports

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Technical Specifications (Typical at 25°C)

General

Weight	0.35 kg (0.77 lb)
Dimensions (w × h × d)	128 × 134 × 40 mm (5.04 × 5.28 × 1.58 in)
Applicable fiber	SMF 9/125 μm
Interchangeable optical connectors	FC, SC, DIN, LC (PC or APC), and ST (PC)

Bidirectional Test Set

Source Function (also valid for CW source mode)

Laser safety class (21 CFR)	Class 1
Wavelength at 25°C	1310±20 nm, 1490±20 nm, 1550±20 nm, 1625±20 nm
Spectral bandwidth	10 nm maximum
Output level into 9/125 μm fiber (CW mode)	-3.5 dBm
Modulated output average level	3 dB less
Modulation frequencies	Continuous wave, 270 Hz, 330 Hz, 1 kHz, 2 kHz
TWINtest and Auto-λ	All wavelength activated one after the other

Loss Test Set Function

Absolute uncertainty	±0.25 dB ¹
Repeatability	<0.05 dB ²
Result resolution	0.01 dB

Optical Return Loss

ORL measurement range	Up to 55 dB
Absolute uncertainty	±0.5 dB ³
Repeatability	<0.1 dB ⁴

Length Function

Measurement range	150 km ⁵
Absolute uncertainty	±30m ⁶

Built-in Power Meter (Mainframe)

The T-BERD/MTS mainframes must be ordered with a broadband power meter option, which is necessary for the reference stage.

	Standard	High Power
Measurement range	+5 to -50 dBm	+27 to -30 dBm
Absolute uncertainty	±0.2 dB	±0.25 dB
Wavelength range		800 to 1650 nm

OTDR

	Central Wavelength	Pulse Width	RMS Dynamic Range	Event Dead Zone	Attenuation Dead Zone
Metro-Access (MA)	1310/1550/1625 nm	3 ns to 20 μs	37/35/35 dB	0.9 m	4 m
Metro-PON (MP)	1310/1490/1550/1625 nm	3 ns to 20 μs	42/40/40/40 dB	0.8 m	4 m

- (1) Using side-by-side reference
- (2) Without disconnection
- (3) From 10 to 45 dB range
- (4) From 20 to 40 dB range
- (5) Typical at 1550 nm
- (6) From 50 m to 20 km range

Ordering Information

All FiberComplete modules come as standard with SC, LC, and FC non-reflective terminations for zero ORL referencing (equivalent to a mandrel), and built-in light source option.

FiberComplete Module with OTDR and FaultFinder Functions

1310/1550 nm FiberComplete with 37/35 dB MA OTDR /with 42/40 dB MP OTDR	E4126FCOMP-MA / E4126FCOMP-MP
1310/1550/1625 nm FiberComplete with 37/35 /35 dB MA OTDR /with 42/40/40 dB MP OTDR	E4136FCOMP-MA / E4136FCOMP-MP
1310/1550/ Filtered 1625 nm FiberComplete with 37/35/35 dB MA OTDR /with 42/40/40 dB MP OTDR	E4136FCOMP-RMA / E4136FCOMP-RMP
1310/1490/1550 nm FiberComplete with 42/40/40 dB MP OTDR	E4138FCOMP-MP
1310/1550 FiberComplete Fault Finder	E4126FCOMP-FF
1310/1550/1625 nm FiberComplete Fault Finder	E4136FCOMP-FF
1310/1490/1550 nm FiberComplete Fault Finder	E4138FCOMP-FF

Accessories

Digital videoscope kit, including P5000i probe, soft case, and 7 inspection tips	EDFSCOPE5Ki
Optical Fiber Trace software	EOF5100
SC/PC & SC/APC non-reflective terminators - FC/PC & FC/APC non-reflective terminators - LC/PC non-reflective terminator	ENRTERMSC - ENRTERMFC - ENRTERMLC
LC mating sleeve - FC mating sleeve - SC mating sleeve	EMSSMLC - S3101 - S3111

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