

# FTS500 Series

## Handheld OTDR Test Set



FTS500 Series OTDR Tester is entirely new pad product released by OPWILL. It has rapid start technology and supports automatic and real-time test mode, which can guarantee engineers to examine and detect optical fibres or cables in core, metro, and access network with high flexibility, efficiency, and convenience.

Meanwhile, its operation system interface has high similarity with Android GUI, significantly simplifies the test procedure.

- ALL-IN-ONE with OTDR, iOTA, iNET, PM, LS, VFL and Fibre Scope;
- More comprehensive test features with higher performance-to-price ratio;
- 5.6-inch touchscreen, outdoor enhancement;
- Friendly keystroke designed for easy, friendly user interface and easy to use;
- Lightweight, rugged, flexible for field testing;
- Fast start-up, high resolution colour touch display.

### Entire New Design, One Button 'Auto' Test



FTS500 Series Handheld OTDR Test Set has 6 models to meet various test environment. Specific information has been demonstrated in below:

Product	Wavelength	Dynamic Range
FTS510N	1310/1550nm	35/34dB
FTS510L	1310/1550nm	32/30dB
FTS505	1310/1550nm	28/26dB

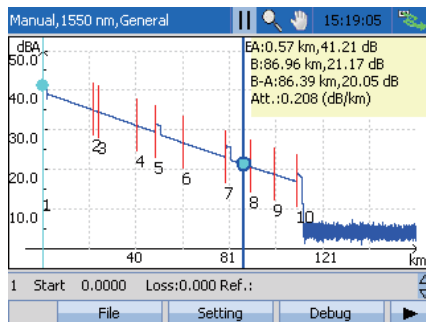
#### FEATURES

- Novice mode with automatic trace diagnostics, one-button setup and events detection;
- Markers for distance, attenuation, reflectance, and splice loss;
- Dynamic range up to 35dB;
- SR-4731.sor file formats;
- Support VFL;
- Support iOTA (Optional);
- Support power meter (Optional);
- Support light source (Optional);
- Event done zone is less than 3m;
- Attenuation dead zone is less than 12m;
- The minimum sampling resolution is 12.5cm and the sampling points up to 256,000;
- Remote measurement via RJ45 connection using OPWILL OTDR Desktop software.

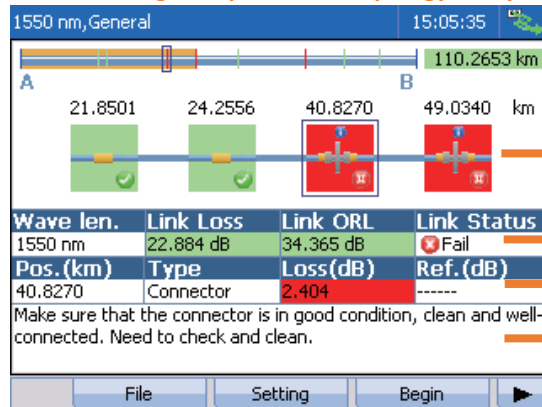
### iOTA —Intelligent Optical Link Topology Analysis

Traditional OTDR only can display loss and event list of fibre link. Event types and link topology requires an experienced engineer to analyse manually. However, rapid growth of FTTH deployment demand definitely increases engineer’s workload and operator’s labour cost. iOTA function of OPWILL provides more comprehensive analysis of fibre link, assists engineer to deploy, operate, and maintain optical fibre network more easily.

Traditional OTDR Trace Interface



iOTA—Intelligent Optical Link Topology Analysis



Link topology chart

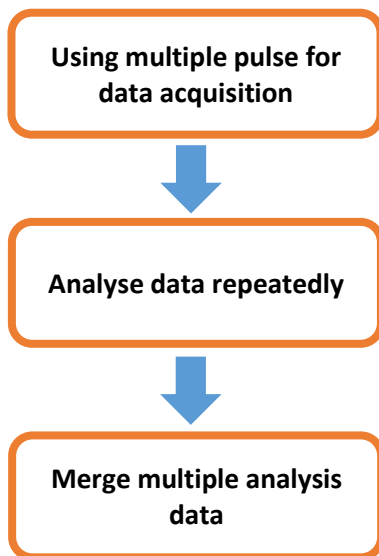
Link information

Link event

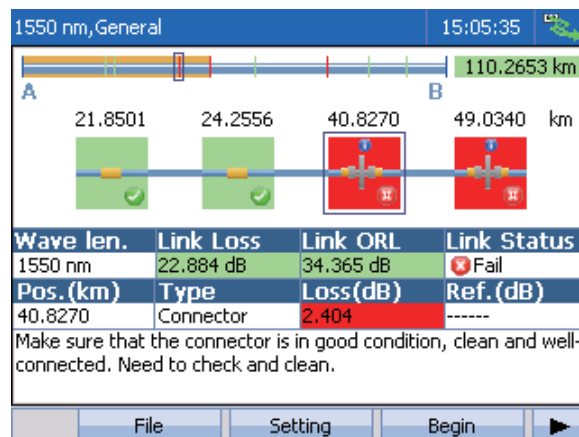
Event diagnostic

### iOTA Test Principles

iOTA intelligently combines different pulse widths, only needs one time and one button can get loss and return loss of fibre and splitter. Multiple pulse acquisition and algorithm can deliver more detail information of every element of the fibre link.



Multiple test only need to press ONE button, no longer need to analyse curve manually!



### FTS500 Series General Specifications

General SPECIFICATIONS	
Screen	5.6 inch TFT touch screen (640×480)
Other Interface	
USB	USB, type A port,1; Micro USB port, 1
Ethernet	10/100M Base-T, RJ45
Other Parameters	
Storage	8G
Size and Weight	161(H) x 210 (W) x 46(D) mm; 1.0kg
Temperature	Operating: -10°C to 50°C; Storage: -40°C to 70°C
Relative Humidity	0% to 95% (non-condensing)
EMC	EN55022/CIPSR22; EN61000-3-2; EN55024
Battery and Power Supply	
Battery	<ul style="list-style-type: none"> <li>• Rechargeable Li-Lon battery;</li> <li>• Working time: 8 hour;</li> <li>• Charging time: 2 hours (typical: 25°C)</li> </ul>
Power Supply	<ul style="list-style-type: none"> <li>• Input: 100-240V AC, 50-60Hz, 2A;</li> <li>• Output: 15V DC, 2A</li> </ul>

### FTS500 Series Technical Specifications

TECHNICAL SPECIFICATIONS			
Model	FTS510N	FTS510L	FTS505
Wavelength	1310 ± 20 /1550 ± 20 nm		
Dynamic Range (SNR=1) at 25°C	35/34 dB Typical at 20us	32/30 dB Typical at 20us	28/26 dB Typical at 20us
Distance Range	≤ 180 km	≤ 150 km	≤ 120 km
Fibre under Test	10µm/125µm single-mode optical fibre (ITU-T G.652)		
Pulse Width	3, 5, 10, 30, 50, 100, 275, 500, 1000, 5000, 10000, 20000 ns		
Distance range	0.5, 2.5, 5, 15, 40, 80, 120, 160, 200 km		
Event Dead Zone	≤3 m		
Attenuation Dead Zone	≤12 m		
Sampling Resolution	0.125~2 m		
Sampling Points	256K		
IOR	1.30000 to 1.80000		
Linearity	±0.03 dB/dB		
Distance Uncertainty	±(0.75+0.0050%×distance + sampling resolution) m		
Measurement Time	5s~180m, Real time, user defined		
OTDR Port	FC/PC(Standard), SC/PC(option), LC/PC(option), FC/APC(Standard with iOTA)		
VFL	Wavelength	650 ±20nm	
	Output Power	+10 dBm	
	Operation mode	CW, 1Hz	
Power Metre (Optional)	Wavelength	780 to 1800nm	
	Calibrated wavelengths	850, 1300, 1310, 1490, 1550, 1625nm	
	Measurement range	+10 to -60 dBm	
	Resolution	0.01 dB	
Light Source (Use OTDR port, Optional)	Wavelength	1310/1550 ±20nm	
	Output power	>-4 dBm	
	Operation mode	CW, 270Hz, 330Hz, 1KHz, 2kHz	
Intelligent optical link topology analysis (Option)	Intelligently combine different pulse width, one time get loss and return loss of fibre and splitter. Multiple pulse acquisitions and algorithms to deliver detail information of every element on the fibre link.		
Intelligent network test tools (Option)	The iNET include PING, Trace Route, FTP upload and download, HTTP and Packet Capture and Decode features for Ethernet Link Fault check testing.		
Laser safety	IEC 60825-1: 2007: CLASS 1; 21 CFR 1040.10		

### FTS500 Series Ordering Information

OTP6123 Series OTDR STANDARD CONFIGURAIOTN	
Mode	Description
FTS510N	1310/1550nm; 35/34dB; VFL
FTS510L	1310/1550nm; 32/30dB; VFL
FTS505	1310/1550nm; 28/26dB; VFL
Accessories Code	Accessories Description
16090170	FC/APC to FC/PC half-duplex single-mode fibre, 3m, one; If user order option iOTA, use this fibre;
43170030	FTS500 100-240V input and 15V output AC/DC power adapter, one;
47110030	FTS500 lithium polymer rechargeable battery, 10.8V, one;
18080010	FTS500 disc include user manual and OPWILL OTDR analysis PC software;
19070080	FTS500 package, one;
18010010	Factory test report, one;
18010020	Calibration certification, one;
18040011	One year warranty card, one.
OTP6123 Series OTDR OPTIONAL CONFIGURATION	
Optional Software	
OPAP-PMatOTDR	1310/1550nm power meter, rang between +10 to -60 dBm( <i>PON OTDR does not have</i> );
OPAP-LSatOTDR	1310/1550nm > -4 dBm light source capability;
OPAP-iOTAatOTDR	Intelligent fibre link topology analysis option;
OPAP-iNETatOTDR	Intelligent network performance tools, include PING, Trace Route, FTP, and HTTP;
Optional Hardware	
OPAP-Twowarranty	Two years extended warranty service;
47110030	FTS500 lithium polymer rechargeable battery, 10.8V, one.

Notes: Product ordering information may update along with the product upgrade, please refer to the final version provided by our sales.

Please visit our website for the further information: [www.OPWILL.com](http://www.OPWILL.com)

**OPWILL** OPWILL TECHNOLOGIES (BEIJING) CO., LTD.

Add: Room 415, Digital Media Building, No.7 Shangdi Information Road,  
Haidian District, Beijing, PRC. 100085

Tel: +86(10)8277-1386/2866/3382

Fax: +86(10)8277-1782

Copyright © OPWILL Technologies (Beijing) Co., Ltd. 2011-2017. All Rights Reserved.

