

OTP6123 Series

Handheld OTDR Test Set



OTP6123 Series OTDR Test Set is designed and manufactured by OPWILL. It can provide comprehensive optical test for metro, access/FTTx, and LAN network.

In addition, OTP6123's portable and durable features can satisfy various test environment requirement whatever indoor laboratory test or outdoor field examination. OTP6123 is the best option for service provider to install or maintain optical fibre network.

- Compact and durable, specialised for outdoor field test;
- User friendly interface, with high resolution colour touch screen;
- Fast boot up technology;
- High quality, but reasonable price;
- Support FTTx/LAN PON network test;
- New accessories: iOTA and iNET;
- Support all OTDR functions, four-wavelength in maximum, and 200Km test distance in maximum.

Portable Structure Design, Simple and Efficient Test



OTP6123 Series Handheld OTDR Test Set has 6 models to meet various test environment. Specific information has been demonstrated in below:

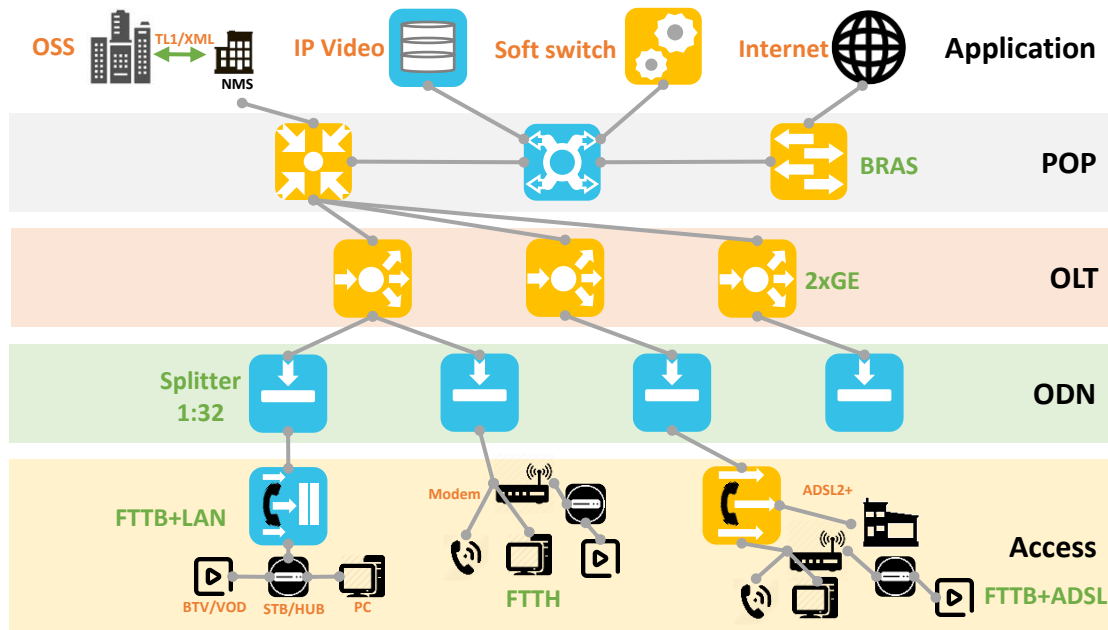
Product	Wavelength	Dynamic Range
OTP6123H	1310/1550nm	40/39dB
OTP6123N	1310/1550nm	35/34dB
OTP6123L	1310/1550nm	30/28dB
OTP6123P	1310/1550/1625nm	39/37/38dB
OTP6123-a	1310/1490/1550nm	39/37/37dB
OTP6123-c	1310/1490/1550/1625nm	39/37/37/38dB

FEATURES

- Novice mode with automatic trace diagnostics, one-button setup and events detection;
- Markers for distance, attenuation, reflectance, and splice loss;
- FTTx/PON optimised parameters for best dead zones for 1xN splitters and normal reflective events;
- SR-4731.sor file formats;
- Support VFL;
- Support iOTA (Optional);
- Support iNET (Optional);
- Support power meter (Optional);
- Support light source (Optional);
- Event done zone is less than 2m;
- Attenuation dead zone is less than 10m;
- 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.

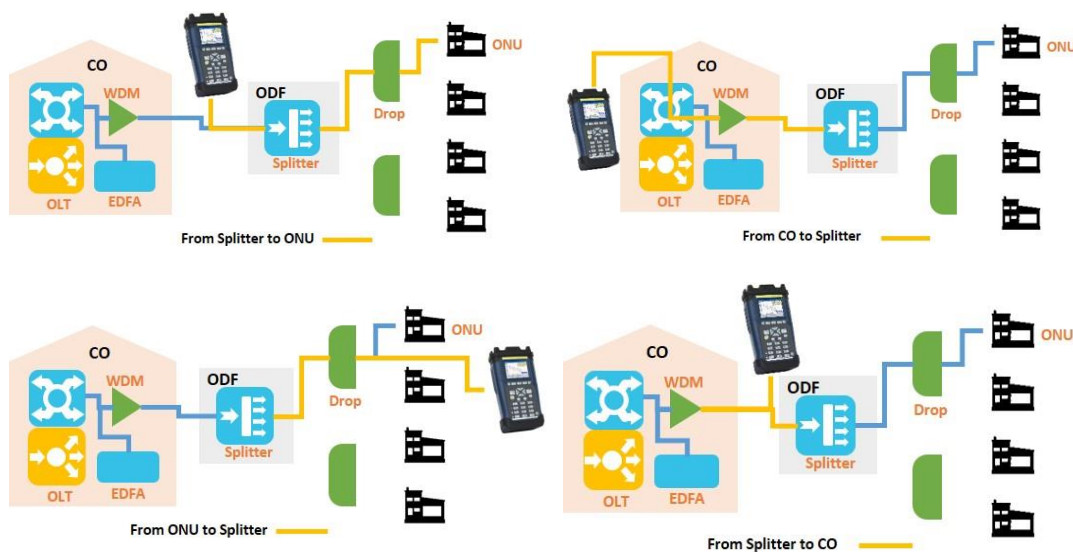
Optical Fibre Network Test

Since the internet service demands increasingly high speed bandwidth, Optical Fibre Network has been expanding rapidly. Hence, OTDR tester became an essential test equipment for service provider to install; monitor; and maintain Optical Fibre Network.



OTDR Tests

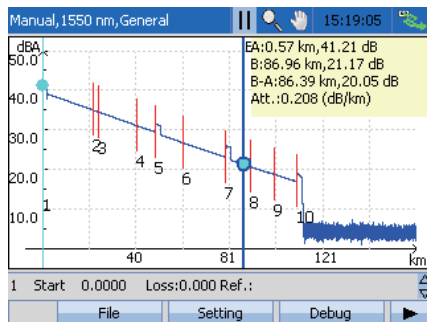
OTP6123 Series Handheld OTDR Test Set supports comprehensive fibre test functions, and generates the test result with higher accuracy and higher speed. It can be the top option for Optical Fibre Network installation; operation; and maintenance.



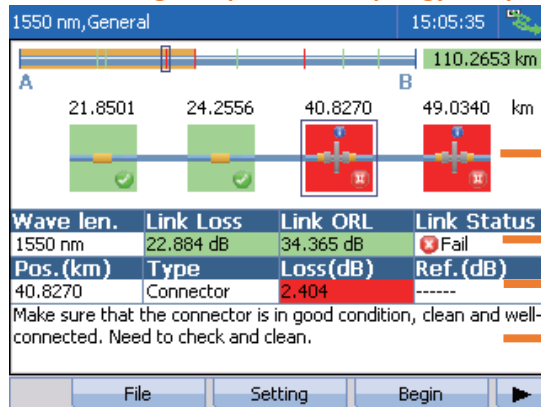
iOTA —Intelligent Optical Link Topology Analysis

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

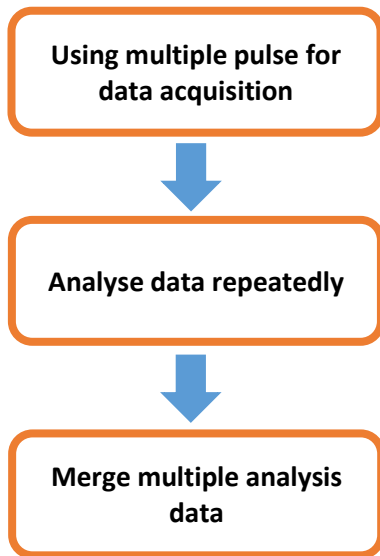
Link information

Link event

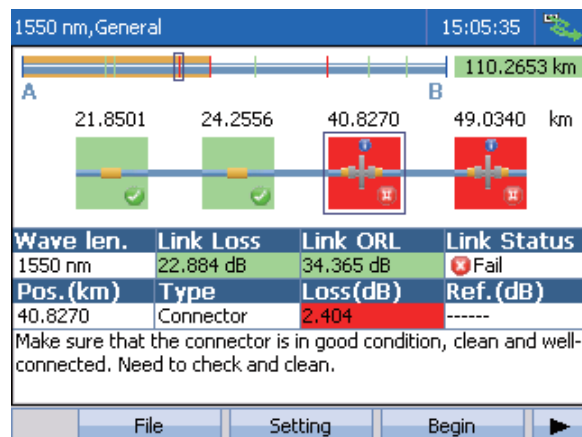
Event diagnostic

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.



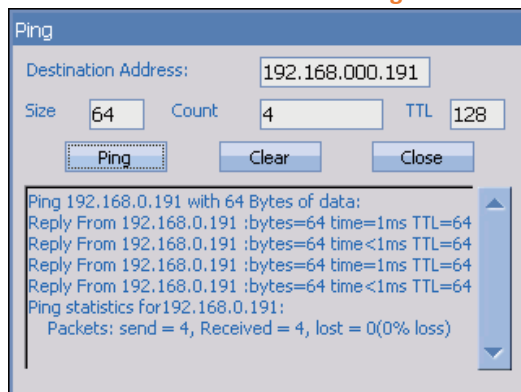
Multiple test only need to press ONE button, no longer need to analyse curve manually!



iNet – Intelligent Network Test Tool

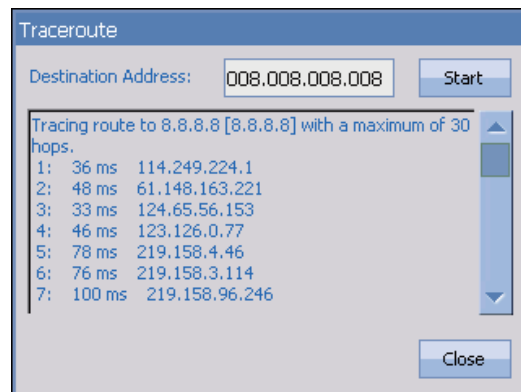
Traditional OTDR only can determine the defects occurred in physical optical fibres. However, during the installation and maintenance of FTTH, it always requires to determine the defects which occurred in data layer. The iNET function of OPWILL integrates common Ethernet testing methods, such as Ping, Traceroute, FTP, HTTP, Capture and other; can verify Ethernet performance with high efficiency and reduce operation cost greatly.

Network test tool—Ping



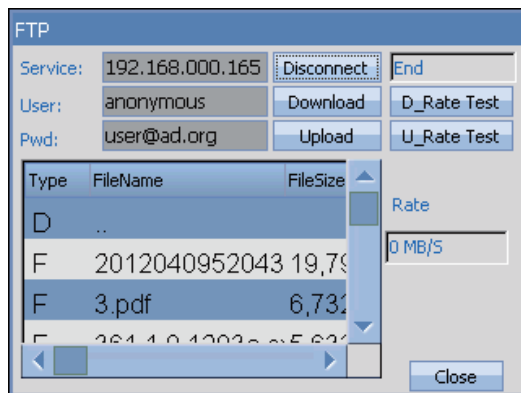
Ping—quick verification whether network connect

Network test tool—Traceroute



Traceroute—quick search network route path

Network test tool—FTP



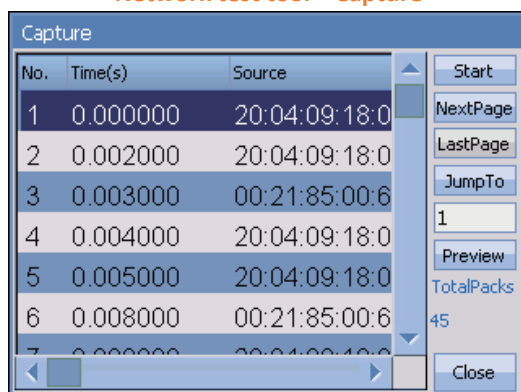
FTP—quick test FTP upload、download speed

Network test tool—HTTP



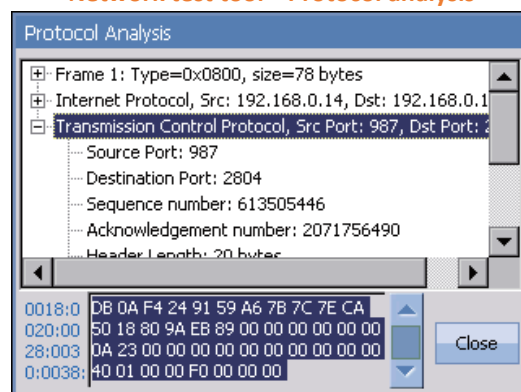
HTTP—HTTP protocol testing

Network test tool—Capture



Capture—packet capture and analysis

Network test tool—Protocol analysis



Protocol analysis — packet content analysis

OTP6123 Series Specifications (Regular)

REGULAR OTDR SPECIFICATIONS			
Screen	3.5 inch TFT touch screen(320×240)		
Other Interface			
USB	USB, type A port,1; USB type B port, 1		
Ethernet	10/100M Base-T, RJ45		
Other Parameters			
Storage	128M		
Size and Weight	80(H)× 135 (W) × 250(D) mm;1.1kg		
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"> • Rechargeable Li-Ion battery; • Working time: 4 hour; • Charging time: <3 hours (typical: 25°C) 		
Power Supply	<ul style="list-style-type: none"> • Input: 100-240V AC, 50-60Hz, 2A; • Output: 15V DC, 2A 		
Models			
	OTP6123H	OTP6123N	OTP6123L
Wavelength	1310 ± 20 /1550 ± 20 nm		
Dynamic Range (SNR=1) at 25°C	40/39 dB Typical at 20us	35/34 dB Typical at 20us	32/30 dB Typical at 20us
Distance Range	≤ 200 km	≤ 180 km	≤ 150 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	≤2 m		
Attenuation Dead Zone	≤10 m		
Sampling Resolution	0.125~2 m		
Sampling Points	256K		
IOR	1.30000 to 1.80000		
Linearity	±0.05 dB/dB		
Distance Uncertainty	±(1+0.0050%×distance + sampling resolution) m		
Measurement Time	10s~180m, Real time, user defined		
OTDR Port	FC/PC(Standard), SC/PC(option), LC/PC(option), FC/APC(Standard with iOTA)		

REGULAR OTDR SPECIFICATIONS		
VFL	Wavelength	650 ±20nm
	Output Power	+10 dBm
	Operation mode	CW, 1Hz
Power Meter (Optional)	Wavelength range	780 to 1800nm
	Calibration wavelength	850,1300,1310,1490,1550,1625nm
	Measurement range	+10 -- -60 dBm
	Resolution	0.01dB
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

OTP6123 Series Specifications (PON)

PON OTDR SPECIFICATIONS			
Screen	3.5 inch TFT touch screen(320×240)		
Other Interface			
USB	USB, type A port,1; USB type B port, 1		
Ethernet	10/100M Base-T, RJ45		
Other Parameters			
Storage	1G		
Size and Weight	80(H)x 135 (W) x 250(D) mm; 1.1kg		
Temperature	Operating: -10°C to 50°C; Storage: -40°C to 70°C		
Relative Humidity	0% to 95% (non-condensing)		
EMC	EN55022/CISPR22, EN61000-3-2,EN55024		
Battery and Power Supply			
Battery	<ul style="list-style-type: none"> • Rechargeable Li-Lon battery; • Working time: 4 hour; • Charging time: <3 hours (typical: 25°C) 		
Power Supply	<ul style="list-style-type: none"> • Input: 100-240V AC, 50-60Hz, 2A; • Output: 15V DC, 2A 		
Models			
	OTP6123P	OTP6123-a	OTP6123-c
Wavelength	<ul style="list-style-type: none"> • 1310 nm • 1550 nm • 1625 nm 	<ul style="list-style-type: none"> • 1310 nm • 1490 nm • 1550 nm 	<ul style="list-style-type: none"> • 1310 nm • 1490 nm • 1550 nm • 1625 nm
Dynamic Range (SNR=1) at 25°C	39/37/38 dB Typical at 20us	39/37/37 dB Typical at 20us	39/37/37/38 dB Typical at 20us
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	≤2 m		
Attenuation Dead Zone	≤10 m		
Sampling Resolution	0.125~2 m		
Sampling Points	256K		
IOR	1.30000 to 1.80000		
Linearity	±0.05 dB/dB		
Distance Uncertainty	±(1+0.0050%×distance + sampling resolution) m		
OTDR Port	FC/PC(Standard), SC/PC(option), LC/PC(option), FC/APC(Standard with iOTA)		

PON OTDR SPECIFICATIONS		
Measurement Time		10s~180m, Real time, user defined
VFL	Wavelength	650 ±20nm
	Output Power	+10 dBm
	Operation mode	CW, 1Hz
Light Source (Use OTDR port, Optional)	Wavelength	1310/1490/1550/1625 ±20nm, according to model
	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

OTP6123 Series Ordering Information

OTP6123 Series OTDR STANDARD CONFIGURATION	
Mode	Description
OTP6123H	1310/1550nm; 40/39dB; VFL
OTP6123N	1310/1550nm; 35/34dB; VFL
OTP6123L	1310/1550nm; 30/28dB; VFL
OTP6123P	1310/1550/1625nm (PON); 39/37/38dB; VFL
OTP6123-a	1310/1490/1550nm (PON); 39/37/37dB; VFL
OTP6123-c	1310/1490/1550/1625nm (PON); 39/37/37/38dB; 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	OTP6100 100-240V input and 15V output AC/DC power adapter, one;
43160020	OTP6100 lithium polymer rechargeable battery, 10.8V, one;
18080010	OTP6100 disc include user manual and OPWILL OTDR analysis PC software;
19070021	OTP6100 package, one;
	Factory test report, one;
	Calibration certification, one;
	One year warranty card, one.
OTP6123 Series OTDR OPTIONAL CONFIGURATION	
Optional Software	
OPAP-PMatOTDR	1310/1550nm power meter, rang between +10 to -60 dBm(PON OTDR does not have);
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;
OPAP-PMatOTDR	1310/1550nm power meter, rang between +10 to -60 dBm;
Optional Hardware	
OPAP-Twowarranty	Two years extended warranty service;
43160020	OTP6100 lithium polymer rechargeable battery, 10.8V.

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

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