MTP-50 Series Handheld OTDR

Compact, Versatile, Easy-to-use, Cost-effective OTDR

MTP-50 series OTDR offers more testing capacities, flexibility and value with combination of optical fiber testing and RJ45 cable testing functions together which includes Auto OTDR, Expert OTDR, Link Image, Optical Power Meter, Stabilized Laser Source, Optical Loss Test, Visual Fault Locator, RJ45 Cable Length, RJ45 Cable Sequence and RJ45 Cable Tracker. With considerate function of LED flashlight and high capacity of 6600mAh lithium battery, it helps the technicians operate OTDR in dark environment and at remote work site without worrying about running out of battery power. MTP-50 series OTDR is your ideal test instrument for optical fiber installation and maintenance which meets various testing requirements of entire fiber network.

Key Features:

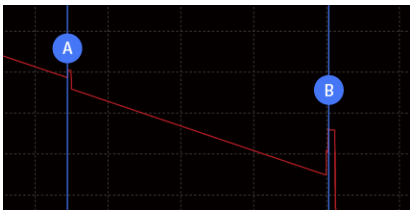
- Compact, handheld, lightweight & easy to use
- 5 inch capacitive touch screen for easily operation and quick response
- Fast boot-up for fiber troubleshooting and restoration
- Multi-tasking operation which can perform OTDR, OPM and VFL function simultaneously
- Dual wavelength testing with dynamic range of 24/22dB
- Short-distance performance with 1.5m event dead zone and 8m attenuation dead zone
- Auto OTDR/Expert OTDR/Averaging/Real time test
- Link Image – smart Icon-based map view by multi pulse widths acquisition
- Built-in Stabilized Laser Source, Optical Power Meter, Optical Loss Testing and VFL
- Optional RJ45 cable testing function supported: RJ45 cable length, RJ45 cable sequence and RJ45 cable tracker(Available for ADVANCED models)
- Pass/Fail assessment and ORL test function
- 8G memory card, supporting more than 200,000 test records storage
- OTDR trace file generation (.sor)
- PC software for batch data processing
- USB power charging and data transfer
- Screenshot easily in any interface
- 8 hrs continuous operation/20 hrs standby

Multi-touch Touchscreen

5.0 inch multi-touch capacitive touchscreen can make OTDR operations simple and intuitive. The technicians can easily tap, pinch and drag by fingers with quick OTDR response

OTDR View Modes

MTP-50 series OTDR can generate and display events by traditional TRACE view and MAP view. Traditional TRACE view is showed by OTDR waveforms and event markers while MAP view is with simple, icon-based map for easy interpretation of fiber network events.



TRACE View

MAP View

Auto OTDR

Simply pressing one single button, powering by fully automated and optimized test parameter setup, MTP-50 series OTDR can process OTDR measurement, detects and comprehensively analyze network events with PASS/FAIL judgement based on user-defined thresholds. It greatly helps OTDR beginners operate OTDR more efficiently.

Expert OTDR

OTDR test parameters can be set manually depending on test requirements or the technicians skill level. The fiber trace is displayed and results are listed in event table including total fiber length, total link loss, fiber attenuation, etc.

Link Image

Link Image software helps technicians use an OTDR more efficiently, without the need to understand or interpret OTDR results. Measurement acquisitions with multi pulse widths and smart algorithm enable the technicians to detect and comprehensively characterize network events by pressing one single button. Simple icon-based map view for easy interpretation of network events with PASS/FAIL judgement as per user-defined thresholds.

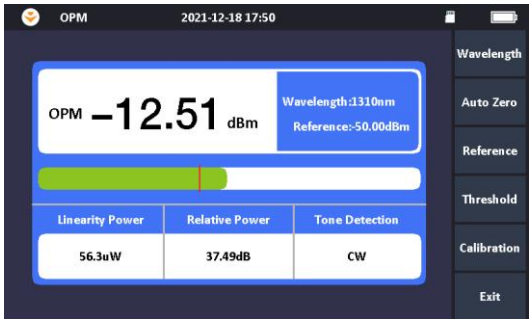
- Icon-based fiber link view of all events
- Automatic pass/fail results
- Eliminates the need for OTDR expertise

Visual Fault Locator

Outputs red light for checking continuity of launch fibers or short patch cord. Breaks and bending in fiber can be identified visually.

Optical Power Meter

- No warm-up
- High accuracy, zero shift
- Reference setting
- Absolute power value and power loss measurement



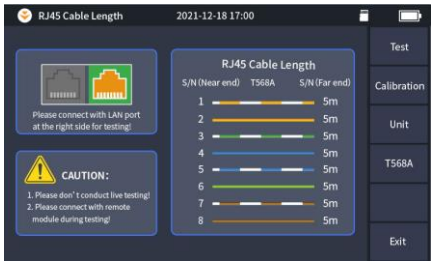
Stabilized Laser Source

Stabilized Laser Source shares OTDR optical port and work on the same working wavelength of OTDR. The output power can be adjustable for different testing applications. With modulated light at 270Hz/330Hz/1kHz/2kHz, it can be used for fiber identification or continuity check purpose on a live fiber network.

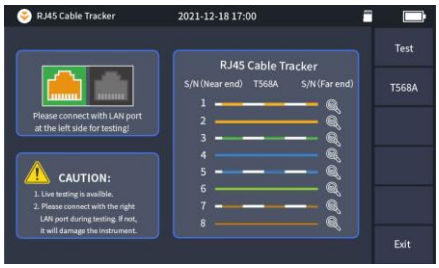
Optical Loss Test

Optical loss test is a key basic function for confirming the optic fiber installation condition and fault status. Light source shares with OTDR ports outputs laser light. The optical power meter function is embedded into a separate port which supports optical loss measurement by one single tester.

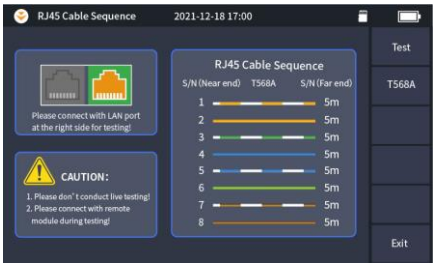
RJ45 Cable Test (Available for ADVANCED models)



RJ45 Cable Length

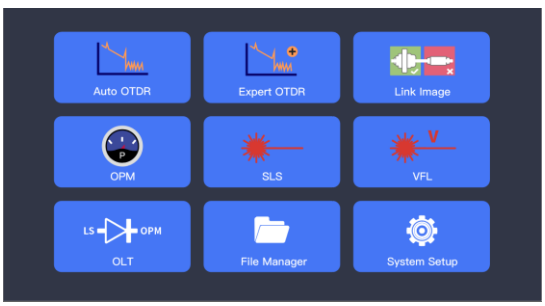


RJ45 Cable Sequence

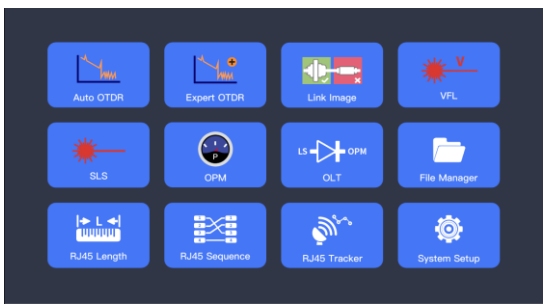


RJ45 Cable Tracker

Optimized Interface design



Main Menu of ADVANCED models



Main Menu of BASIC models

USB Power Charging and Data Transfer

USB port can be used for power charging and data transfer which is very convenient for technicians operation in the filed. No need to carry a bulky AC adaptor anymore and even can be charged by portable power bank.

Multi-tasking

Leveraged by excellent hardware design, the technicians can perform multiple functions simultaneously. For example, the technicians can conduct OTDR testing on a particular fiber while checking the power level by OPM function or identifying the fiber with VFL function simultaneously on other fiber cores.

Multi-language User Interface

Supported with Mutli-language user interface, the technicians can operate MTP-50 series OTDR with their native language easily and smoothly.

Simple Firmware Upgrades

Firmware upgrades can be performed easily via USB Type C port which connecting with PC.

OTDR PC Software

OTDR PC software can display, analyze and edit trace files, generate and print comprehensive test and analysis reports.

- Trace viewing, events analysis
- Flexible batch printing

Specifications

Model (1)	BASIC	ADVANCED
	MTP-50-S20A	MTP-50-S20A-R
Wavelength	1310/1550nm±20nm	
Dynamic Range(2)	24/22dB	
Event Dead Zone(3)	1.5m	
Attenuation Dead Zone(3)	8m	
Distance Range	0.5,1,2,4,8,16,32,64,100KM	
Pulse Width	3ns~20us	
Averaging Time	5s, 15s, 30s, 1min, 2min, 3min	
Distance Measure Accuracy	±(1m + 5×10^{-5}×distance + sampling space)	
Attenuation Detect Accuracy	±0.05 dB/ dB	
Reflection Detect Accuracy	±3 dB	
Sampling Resolution	0.05~8m	
Refractive Index	1.00000~2.00000	
Loss Resolution	0.001dB	
Loss Threshold	0.01dB	

Connector	FC/UPC(Interchangeable SC, ST)
Multi-tasking	Support
General Specifications	
Display	5 inch color LCD, Multi-touch capacitive touchscreen
Power Supply	Lithium Battery: 3.7V, 6600mAh AC Adapter: 5VDC, 2A
Battery Life	8 hours continuous operation, 20 hours standby
Data Storage	8G, ≥200,000 records
Data Interface	USB Type C
Operating Temperature	-10℃ ~ 50℃
Storage Temperature	-40℃ ~ 70℃
Relative Humidity	0~95% (non-condensing)
Weight	0.7kg(Including battery)
Dimensions (H×W×T)	190×130×65mm
Visual Fault Locator	
Wavelength	650nm±20nm
Output Power	≥10mW
MOD	CW/1Hz/2Hz
Connector	Universal 2.5mm
Stabilized Laser Source	
Wavelength	Same as OTDR working wavelength(4)
Output Power	≥ -5dBm (adjustable)
MOD	CW/270/330/1K/2KHz
Stability	CW, ±0.5dB/15min(After 15 min warming up)
Connector	FC/UPC(Interchangeable SC, ST)
Optical Power Meter	
Calibrated Wavelength	850,980,1300,1310,1490,1550,1625,1650nm
Power Range	-50 ~ +26dBm
Detector Type	InGaAs
Display Resolution	0.01dB
Accuracy	± 5%
Frequency Identification	CW/270/330/1K/2KHz
Connector	Universal 2.5mm
Optical Loss Test	
Stabilized Laser Source	Same as SLS Module
Optical Power Meter	Same as OPM Module
Detector Type	InGaAs
Display Resolution	0.01dB
Accuracy	± 5%
Frequency Identification	CW/270/330/1K/2KHz

Connector	Universal 2.5mm
Optical Loss Test	
Stabilized Laser Source	Same as SLS Module
Optical Power Meter	Same as OPM Module
IL Test	Support
RJ 45 Cable Length Test (5)	
Test Distance	≥300m
RJ 45 Cable Sequence Test (5)	
Sequence Test	Support
RJ 45 Cable Tracker (5)	
Mode	Digital tracking
Distance	≥300m
Online/Line Pair Tracking	Support

**** Specifications subject to change without notice***

Notes:

(1) Specifications describe the instrument's warranted performance, measured with typical UPC type connectors. Uncertainties due to the refractive index of fiber are not considered.
(2) The dynamic range is measured at maximum pulse width and averaging time of 3 minutes.
(3) Conditions for dead zone measurement: minimum range, minimum pulse width, reflection intensity is less than -45dB, typical value.
(4) Stabilized laser source shares OTDR optical port and work on the same OTDR wavelength.
(5) Visual Fault Locator, Stabilized Laser source, Optical Power Meter, Optical Loss Test is standard on BASIC and ADVANCED models. RJ45 cable length, RJ45 cable sequence and RJ45 cable tracker is standard on ADVANCED models only.

Ordering Information

Standard Package Includes:

Instrument, Lithium Battery, USB Data cable, AC adaptor, Warranty Card, Certificate of calibration, Soft Carrying Case