FRAME
communications

MTP-50 Handheld OTDR

COMPACT, VERSATILE, EASY-TO-USE & COST-EFFECTIVE

Product Overview

The MTP 50 Series OTDR offers enhanced testing capabilities, flexibility, and value by combining optical fibre testing and RJ45 cable testing functions. It includes **Auto OTDR, Expert OTDR, Link Image, Optical Power Meter, Stabilised Laser Source, Optical Loss Test, Visual Fault Locator, RJ45 Cable Length Measurement, RJ45 Cable Sequence Testing, and RJ45 Cable Tracking**.

With a built-in LED flashlight and a high-capacity 6600mAh lithium battery, it enables technicians to operate efficiently in dark environments and remote locations without worrying about battery life. The MTP 50 Series OTDR is the ideal testing instrument for optical fibre installation and maintenance, meeting the diverse requirements of fibre network testing.

Key Features

- Lightweight, compact, handheld & easy to use
- 5-inch capacitive touch screen for easy operation and quick response
- Quick boot-up for fibre troubleshooting and restoration
- Simultaneous multi-tasking operations: OTDR, OPM, and VFL functions.
- 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 Stabilised 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)

- Includes: 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
- Capture Screenshots easily in any interface
- 8 hrs continuous operation/20 hrs standby

MULTI-TOUCH TOUCHSCREEN

The 5.0-inch multi-touch capacitive touchscreen enables simple and intuitive operation, allowing technicians to easily tap, pinch, and drag with their fingers for a quick OTDR response.

OTDR View Modes

The MTP-50 Series OTDR can generate and display events using both the traditional TRACE view and the MAP view. The TRACE view presents OTDR waveforms with event markers, while the MAP view provides a simple, icon-based representation for easy interpretation of fibre network events.
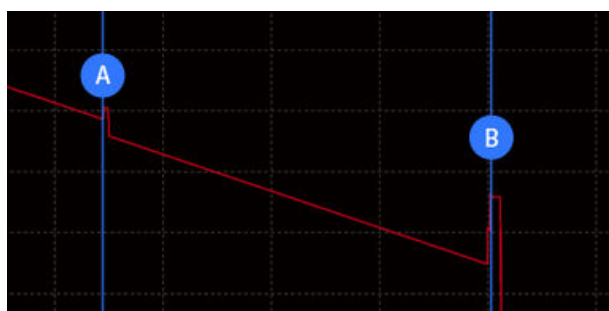
TRACE VIEW

MAP VIEW

Auto OTDR

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 shown with simple, icon-based map for easy interpretation of fibre network events.

Expert OTDR

OTDR test parameters can be set manually depending on test requirements or the technicians skill level. The fibre trace is displayed and results are listed in event table including total fibre length, total link loss, fibre 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 algorithms enable the technicians to detect and comprehensively characterise 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 fibre 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 fibres or short patch cord. Breaks and bending in fibre can be identified visually.

Optical Power Meter

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

Stabilised Laser Source

Stabilised 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 fibre identification or continuity check purpose on a live fibre network.
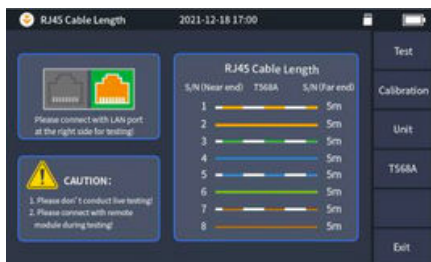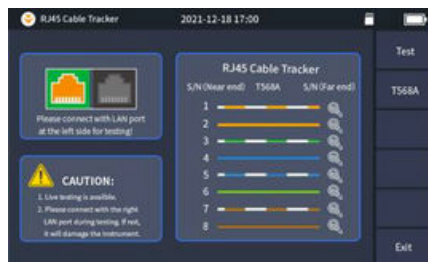
Optical Loss Test

Key function for verifying fibre installation conditions and fault status. The light source shares the OTDR port, outputting laser light, while the optical power meter is embedded in a separate port, allowing for precise optical loss measurement using a single tester.
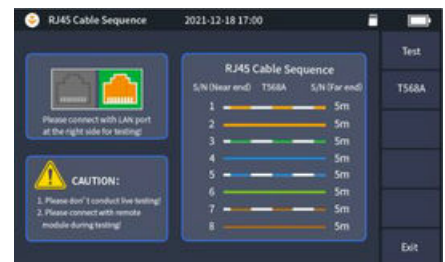
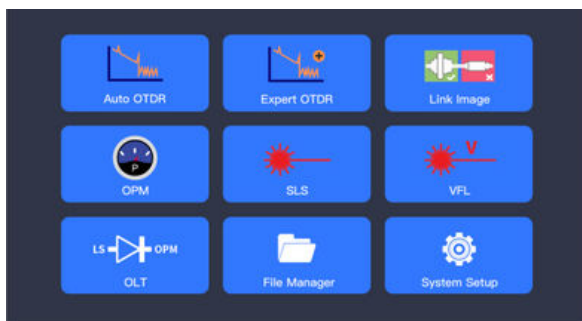# ► RJ45 Cable Test (Available for ADVANCED models)
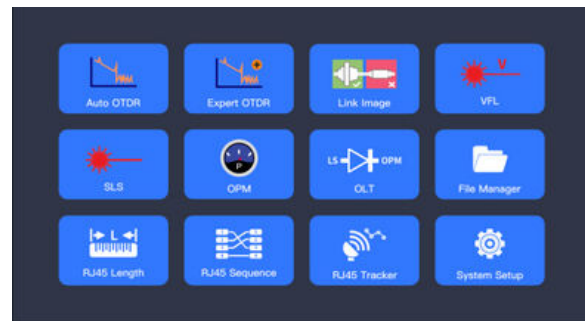

RJ45 Cable Length   RJ45 Cable Sequence   RJ45 Cable Tracker

► Optimised 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 operating in the field. No need to carry a bulky AC adaptor anymore and it can also be charged using a 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 fibre while checking the power level by OPM function or identifying the fibre with VFL function simultaneously on other fibre 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	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	
DistanceRange	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	±0.05dB/dB	
Reflection Detect Accuracy	±3dB	
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 colour LCD, Multi-touch capacitive touchscreen	
Power Supply	LithiumBattery: 3.7V, 6600mAh	
	AC Adapter: 5VDC, 2A	
Battery Life	8hours continuous operation, 20 hours standby	

Data Storage	8G, ≥200,000records
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
Stabilised 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

stabilised 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	
stabilised Laser Source	Same as SLS Module
Optical Power Meter	Same as OPM Module
IL Test	Support
RJ45 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

Notes:
(1) Specifications describe the instrument's warranted performance, measured with typical UPCtype connectors. Uncertainties due to the refractive index of fibre are not considered.
(2) The dynamic range is measured at maximum pulse width andaveraging time of 3 minutes.
(3) Conditions for dead zone measurement: minimum range, minimum pulse width, reflection intensity is less than -45dB, typical value.
(4) stabilised laser source shares OTDR optical port and work on the same OTDR wavelength.
(5) Visual Fault Locator, stabilised 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.

Product Overview

Standard Package Includes:
MTP-50 OTDR, LithiumBatter,USB Data cable, AC adaptor, Warranty Card, Certificate of calibration, Soft Carrying Case