

# Hybrid TDR for optic & metallic cables



(Model No: OMTDR-1000)

## Introduction

NanoTronix Hybrid TDR (Model No.: OMTDR-1000) is a compact and lightweight portable Optical Time Domain Reflectometer (OTDR) with Metallic Time Domain Reflectometer (MTDR) integrated in one unit to be used for either optic fiber or metallic cable network.

The OTDR mode can be used for analyzing the physical condition of optical fibers in the installation and maintenance of optical communication networks. It provides users with the complete information on the attenuation and reflective or non-reflective loss of optical fibers so as to locate faults, connectors and splices along the fibers.

The MTDR mode is suitable for installation, maintenance and fault-finding (complete open & short, partial open & short, loading coils, loose connection, broken lines etc.) of metallic cables whatever consist of at least two conductors. Its application covers coaxial cables (for CATV and CCTV) and UTP/STP cables (for LAN and Telephone) together with power cables.

NanoTronix Hybrid TDR (Model No.: OMTDR-1000) will provide network installers and maintenance personnel with a complete solution for testing, troubleshooting, certifying and documenting the mixed network of optical and metallic cables (especially LAN, CATV, HFC and FTTx networks) in any industrial sites.

## Features

- ◆ mini OTDR + MTDR
- ◆ 1310/1550nm
- ◆ Realtime measurement
- ◆ One button scan
- ◆ 5.6" Color TFT LCD
- ◆ Easy-to-use, light weight and compact
- ◆ PC software for further analyzing, reporting and printing
- ◆ Rugged and waterproof packing
- ◆ Optional spare battery for doubling operating time
- ◆ Extremely economical multi purpose TDR for both optic cables and metallic cables.

## Applications

NanoTronix Hybrid TDR (Model No.: OMTDR-1000) can be applicable for both optic and metallic cable by interchanging of OTDR mode or MTDR mode

- |   |                             |
|---|-----------------------------|
| ◆ OTDR mode Optical cables : FTTx and HFC | ◆ MTDR mode Metallic cables |
| - Fiber-to-the-Curb(FTTC)                 | - Coaxial cables            |
| - Fiber-to-the-Home(FTTH)                 | - Telephone cables          |
| - Fiber-to-the-Premises(FTTP)             | - UTP cables                |
| - Fiber-to-the-Office(FTTO)               | - Electric power cables     |

Two in One  
**mini OTDR + MTDR**



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Optical specifications (OTDR mode)	Dynamic range	34 / 32dB
	Measurement range	100km
	Minimum display resolution	10cm
	Distance accuracy	±0.1% ±10cm of reading < 100m ±0.1% of reading > 100m
	Attenuation detect accuracy	±0.1dB
	Pulse width	10ns, 40ns, 100ns, 200ns, 500ns, 1µs, 2µs, 5µs, 10µs, 20µs
	Average time	15s, 30s, 1min, 2min, 3min real time
	Attenuation deadzone	18m
	Event deadzone	8m
	IOR	1.0000 ~ 1.9999 (in 0.0001 step)
	Wavelength	1310/1550nm
	Fiber type	Single-mode
	Connector type	SC/PC (FC/PC optional)
Maximum data storage capacity	50 waveforms	
Metallic specifications (MTDR mode)	Measurement range	3.2m ~ 20,000m (10.4ft ~ 65,000ft) for Coax. <b>*Maximum testable cable length will vary with pulse width and cable type</b>
	Minimum display resolution	10cm (variable up to 50m)
	Distance accuracy	±0.1% of reading ±0.1m for Coax. <b>*Accuracy will vary with VOP of cable being tested</b>
	Pulse width	5ns, 15ns, 45ns, 100ns, 200ns, 500ns, 1µs, 2µs, 5µs, 10µs
	Input bandwidth	300MHz
	Effective sampling rate	1GS/s
	VOP (PVF)	Variable from 30.0 to 99.9% (in 0.1% step) V : 90 to 300m/µs V/2 : 45 to 150m/µs
	Output impedance	Available to set 50 ohm or 75 ohm
	Gain	Over 66 dB(@full scale, 34 steps)
	Test mode	L1, L1&M, L1-M, M
Connector type	BNC female	
Maximum data storage capacity	100 waveforms	
General specifications	Display type	5.6" Color TFT LCD
	Communication port	USB
	Power supply	7.6V Li-ion chargeable battery pack 8,800mAh / AC adapter
	Battery life	5 hours (extendable up to 10 hours by using optional spare battery)
	Recharging time	6 hours
	Adaptor input	Voltage : AC 110 ~ 240V (auto adjusting) Frequency : 50/60Hz (auto adjusting)
	Adaptor output	Voltage : DC 15V (+5%) Current : Max.1A
	Operating temperature	- 10°C (+14°F) ~ +50°C (122°F)
	Storage temperature	- 20°C (-4°F) ~ +70°C (158°F)
	Relative humidity	< 95%
	Weight	2.7kg(5.9lbs)
Dimensions	267mm(10.5") x 247mm(9.7") x 127mm(5")	

\* Except where otherwise stated, this specification applies at an ambient temperature of 20°C(68°F).

\* NanoTronix Co., Ltd. reserves the right to change the specification or design without prior notice.