

# Metro.OTDR-F2

*in Test we Trust*

**Metro.OTDR-F2 is a pocket-sized OTDR designed for testing optical networks.** It is small, light and robust, has three wavelengths and VLF and is mounted on a very portable instrument operated by batteries that make it especially suitable for testing PON networks.

A reliable fiber plant is necessary for any application based on high speed and reliable transmission infrastructures. OTDRs are necessary to install, discover faults, measure the performance and create advanced reports. Field engineers can troubleshoot running manual or automated tests. Most of the tests are tailored for each type of fiber and users may execute and save curves ready to be transferred for further analysis. All together will facilitate the identification and analysis of the anomalies found in the optical layer.

Optical layer surveillance. Technicians can now verify the quality of the optic installations by examining components such as cables, good and bad connections of FTTH/PON, Medium and Ultra long haul fiber plants.

## Features and Benefits

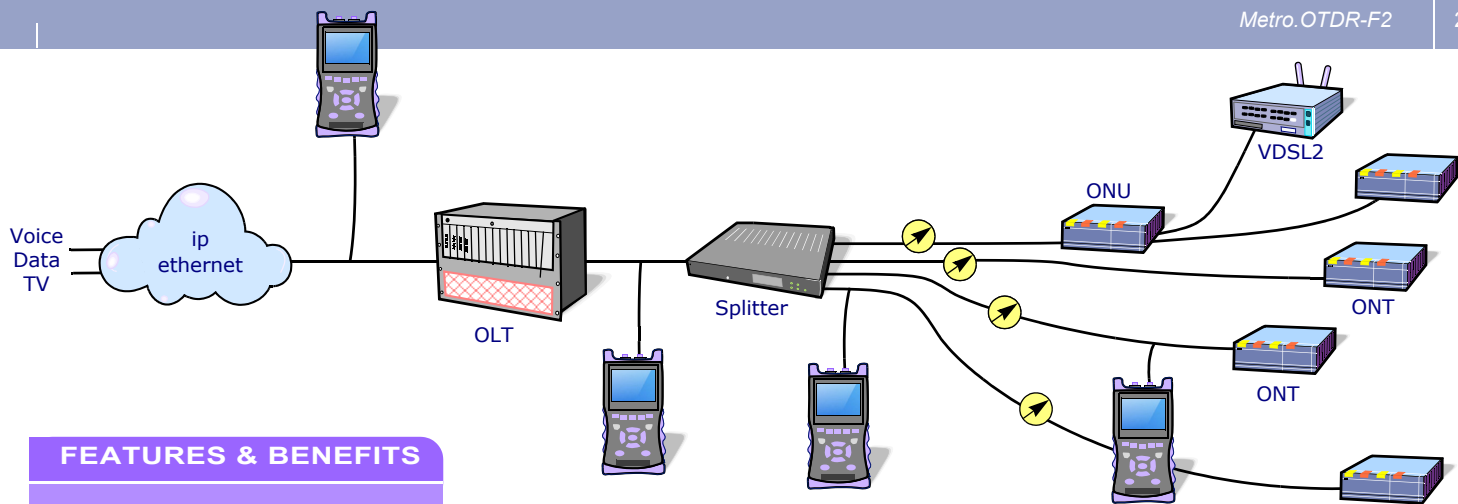
- **Extra-short event dead zone,** This OTDR has extra-short event dead zone making it suitable for testing short optical fiber and pigtails.

- **Automation,** the unit can search and locate the events and faults precisely listing all events in table. This improves efficiency does not require high profile experts.
- **Powerful file management,** now printing results directly is easier by means of PCL therefore testing reports can be printed rapidly and easily. It can be connected to a PC using ActiveSync via USB cable, and files are moved rapidly.
- **Adaptable VFL,** a built-in 650nm visual fault location is ideal for easily identifying bad splice, bad connector, break or macro bend.

## “All-in-one OTDR, VFL, Power Meter and Light Source”

- **Communication light check,** when measuring a fiber in service, the measuring result by an OTDR is not precise, and there is a potential risk of permanent damage to the internal photoelectric of OTDR receiver. Metro.OTDR-F2 detects automatically and stops if communication light is present after the fiber under test is connected, once the light is verified present, simultaneously, a warning message will be displayed and internal OTDR protection will be active instantly.

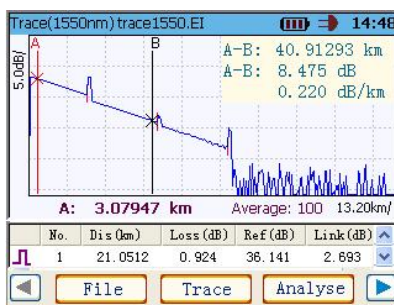




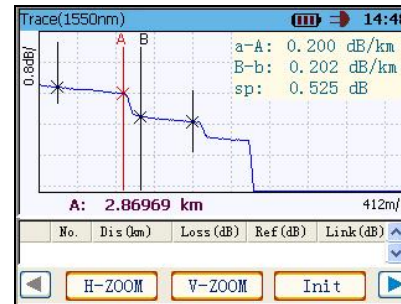
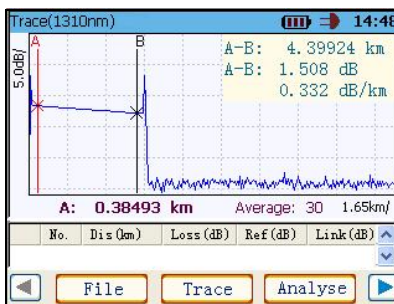
Metro.OTDR-F2

**FEATURES & BENEFITS**

- 1.6m dead zone
- 0.25m resolution
- 65535 points
- Built-in VFL
- Large storage: 500 traces
- 10h on replaceable batteries
- Bellcore GR196 format
- Trace analyzing software
- Advanced test reports
- TFT anti-reflection
- Rugged case for daily, and heavy, outdoors use



Event Table				
	Dis(km)	Loss(dB)	Ref(dB)	Link(dB)
1	1.0357	0.030	-----	0.087
2	1.3788	0.649	-----	0.285
3	2.4074	-0.032	-----	1.169
4	2.9104	0.513	-----	1.316
5	3.7577	0.333	-----	2.003
6	4.3168	2.430	-----	2.477
7	7.3260	-----	33.847	5.382



**OTDR in Operation**

Metro.OTDR-F2 is mainly used to measure FTTx network, it provides a low cost solution offering measuring modes:

- **Manual mode:** for skilled users that have two options (a) in real-time dynamic changes of the optical layer are detected timely allowing to observe the effects of fibers that being spliced and connected, (b) average in this case noise can be suppressed and SNR is improved making the result more accurate. The more average is executed the more noise is suppressed however longer time is spent for processing. In practice, the average should be set properly according to necessity.
- **Auto mode:** measurement conditions are set automatically then low profile engineer may use and know the fiber conditions very quickly.
- **Dead-zone mode:** this mode is suitable for testing optical fiber at short distances while the settings of range, pulse width and attenuator are programmed automatically. To get the best result, the terminal return loss should be guaranteed less than -40dB.

**Metro.OTDR-F2 specs**

Wavelength (nm)	1310nm / 1550nm (±15nm), Singlemode
Dynamic Range	28 / 26dB
Pulse Width	10, 30, 80, 160, 320, 640, 1280, 5120, 10240ns
Linearity	0.05dB/dB
Loss Threshold	0.01 to 30.00dB
Loss Resolution	0.001dB
Loss Testing Accuracy	±0.02 dB/km
Sampling Resolution	0.25m - 16m
Sampling Points	up to 65k points
Event Dead Zone	1.6m (pulse 10ns, fiber reflection loss ≥ 40 dB)
Distance Accuracy	±(1m + sampling space + distance × 0.003%)
Loss Accuracy	±0.02 dB/km (SMF)
Distance Range	4, 8, 16, 32, 64, 128, 256km
Storage Capacity	800 traces, export USB / Min-USB
Visual Fault Locator	650nm±10nm, 2mW CW/1Hz
Optical Connector	FC/PC (universal connector, option)
Power Supply	AC/DC adapter / Lithium battery 10h. (field replaceable)
Ergonomics	Touchscreen 320×240 pixels, 3.5-inch color LCD 210×100×60 mm, 1kg USB, Mini USB