

Metro.OTDR-F7

in Test we Trust

Metro.OTDR-F7 is a high-performance OTDR for the installation and maintenance of optical infrastructures and FTTH networks. It can measure physical characteristics such as length, transmission and joint loss. It can also locate fiber optic faults or breakages. Ergonomics is also excellent making it ideal for everyday work in locating and troubleshooting the optical layer.

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. 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 transmission.

Features and Benefits

- **Shortest dead zone ($\leq 1\text{m}$)** and 0.05 m resolution makes it suitable for short optical fiber and pigtails test.
- **FTTH/CATV/ WAN testing** it can measure through 1x32 even 1x64 splitters of PON networks to characterize all events from the ONT to the OLT.
- **Adaptable VFL** built-in 650nm / 2 mW allows to identify bad splice, bad connector, break or macro bend up to 5km.

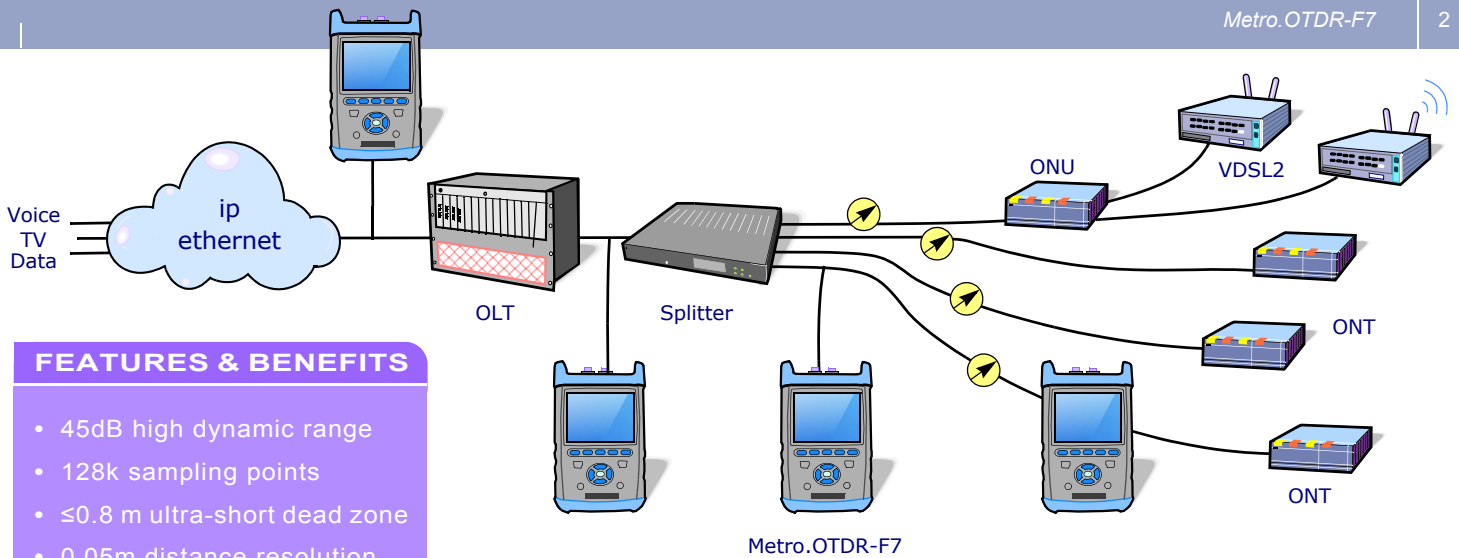
“All-in-one OTDR, VFL, Power Meter and Light Source”

- **Light check**, when measuring a fiber there is a risk of damage the optical receiver. Metro.OTDR-F7 stops if light is present and a protection will be active instantly.
- **Multiple interface and accessories are** provided for the following functions: 4 x wave lengths simultaneously, Training via multimedia, Remote controlling, Direct printing of trace / event table
- **Fast analysis** to determine and locate the faults precisely and listing all events just pressing Start improving efficiency while not requiring high profile experts.



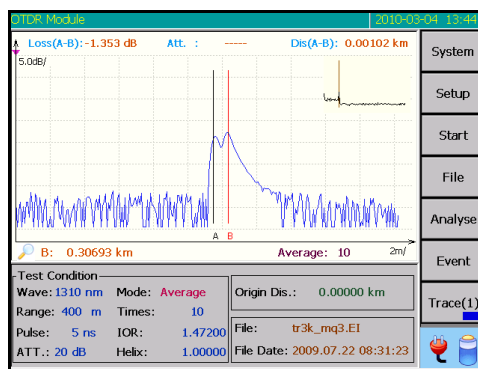
METRO.OTDR-F7

ALBEDO
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FEATURES & BENEFITS

- 45dB high dynamic range
- 128k sampling points
- ≤0.8 m ultra-short dead zone
- 0.05m distance resolution
- One-button test
- up to 4 wavelengths in 1 unit
- Remote Control
- Direct printer
- GR196 & SR-4731 support
- 8h operation on batteries
- VFL & Optical Power Meter
- Universal optic connector
- Rugged OTDR in a solid case for daily and heavy use



OTDR in Operation

Metro.OTDR-F7 is a high end solution widely used in engineering construction, maintenance test, optical fiber troubleshooting, manufacturing and installation of optical fiber and cables.

- **Manual mode:** for skilled users have two options (a) *real-time* when dynamic changes 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.

Model	A	B	C	D
Fiber Type	Singlemode			
Wavelength (nm)	1310 / 1550			1310/1550/1625
Dynamic Range (dB)	37 / 35	42 / 40	45 / 43	37 / 36 / 34
Event death zone (m)	0.8m (range ≤ 1.6km, pulse 5ns, fiber reflection loss ≥ 40dB)			
Attn. death zone (m)	10m (range ≤ 1.6km, pulse 5ns, fiber reflection loss ≥ 50dB)			

Metro.OTDR-F7 specs	
Distance Accuracy	±(0.75m + sampling space + distance × 0.0025%)
Distance Resolution	0.05, 0.1, 0.2, 0.5, 1, 2, 4, 8, 16, 32m
Distance Range	0.4, 0.8, 1.6, 3.2, 6.4, 16, 32, 64, 128, 256, 512km
Pulse Width	5, 10, 30, 80, 160, 320, 640, 1280, 5120, 10240, 20480ns
Loss Threshold	0.01dB
Sampling Points	128k points
Linearity	0.03dB/dB
Loss Resolution	0.001 dB
Storage Capacity	≥ 800 traces (internal) or ≥ 65500 traces (2GB SD card)
Group Refractive	1.00000 to 2.00000 (0.00001 steps)
Visual Fault Locator	650nm ±10nm, 2mW, CW / 1Hz
Optical Power Meter	Wavelength range: 1200nm to 1650nm Measurement range: -60 to 0dBm Measurement accuracy: 5% (-10dBm, CW)
Optical Connector	FC/UPC (options: SC/UPC, LC/UPC, ST/UPC)
Power Supply	AC/DC adapter / Lithium battery ≥ 8h (field replaceable)
Ergonomics	Touchscreen 640×480 pixels, 6.5 inch TFT-LCD 295×186×75 mm, 2.5kg USB, Mini USB, Ethernet, earphone, SD card