# ALBEDO Metro Catalog 2016

**ALBEDO Telecom** is an International manufacturer of Telecom Solutions that are being used in more than 110 countries all over the world.

ALBEDO's core expertise range from Synchronization, Test & Measurement, Transmission, WAN emulation, SIP trunking and Lawful interception. Our customers are Manufacturers, R&D labs, Universities, Military, Power Utilities, Railways, Mobile and Telecom operators willing to install, analyze or maintain telecom infrastructures supporting critical voice, video and data applications.

## Enterprise to Telco

Whether you need help with a specific network problem now, or you are still at the planning stage, ALBEDO has a solution for you. From tailored on-site monitoring systems, to any kind of telecom testers we may meet your needs.

Our experts provide customized answers large telecom operators to and small and middle size organizations. We are more than willing to share their tricks of the trade with your organization's system engineers.

## Commitments

ALBEDO products and services integrate with your business ever since the beginning, and we will work with you to get solutions to questions such as:

- Do you need a next generation Isolation multimeter?

- Is your cable a bundle of non standard lines but you need a TDR?

- Do you require a PTP Master, Boundary, Transparent or Client Clocks?

- Do you need to a tester for 10GbE, PTP, SyncE, IP, VoIP, IPTV, Datacom, T1, E1, C37.94?

- What about a WAN emulator to verify your new telecom services?

- Do you need to emulate an IPBX or checking an SIP trunk for call operation and call quality

Our experts will help you to find the weak spots of your network, offer alternatives and tell you on what to do, when and why.

We understand how essential networking and telecoms are to your business. We also know that there are so many different technology solutions that it may be very difficult to decide which one better fits your requirements.

# Metro.ISO M1 (analog testing)

Metro.ISO.M1 is an Insulation Measuring instrument with the ability to measure cable insulations up to 20 GΩ and user selectable test voltage: 100, 250, 500 V DC. It can be configured to test Resistance, Capacitance, AC / DC Voltage and Cable length.

## Applications

- Insulation-Resistance (analog & digital)
- AC/ DC-Voltage measurement
- Capacitance measurement
- Resistance measurement

## Benefits

- Automatically discharging
- Rearmable Fusible based on PTC

# Metro.ISO (protective testing)

Metro.ISO it is a next generation Insulation up to 50 MΩ. It cantest Insulation-Resistance, Capacitance, AC / DC Voltage, Cable test. Protective procedure to avoid accidents caused by a wrong selection (i.e. isolation instead of insulation).

| Code | Description |
|---|---|
| AT.Metro.ISO M1 | Metro.ISO.M1 multimeter to measure Insulation-Resistance, Capacitance, AC / DC Voltage, Cable test, Selectable measuring lead pairs with the ability to measure cable insulations up to 20 GΩ and user selectable test voltage: 100, 250, 500 V DC. |
| AT.Metro.ISO | Metro.ISO multimeter to measure Insulation-Resistance, Capacitance, AC / DC Voltage, Cable test, Selectable measuring lead pairs. |

# Metro.FLB (Fault Location Bridge)

The Metro.FLB is an automatic fault detector particularly designed for telephone cables. Insulation faults on copper lines can either be permanent or due to deterioration, or caused by external agents such as weather. All the impairments are detected rapidly to repair and service restoration.

Metro.FLB uses a measurement method based on a Hector bridge, which facilitates handling and speedy operating. This method allows detection of differential fault isolation with resistors (RF) and leakage between unbalanced branches. Moreover is immunity fault between the same branches, which often it occurs simultaneously having insulation faults. For this, it is synchronized with a switch Automatic called Loop (SW) at the end of the line that connects and disconnects each true time, thus changing the topology of the circuit formed by the lines and Metro.FLB, allowing detect faults and the same distance with high accuracy.

Hector bridge functionally allows the detection of several type of fault.

- Failure of a single cable, using a thread external aid
- Failures caused by crosses between pairs by proper routing of lines to the different terminals.
- Detection of differences in resistance between the lines.

## Features

- Operating modes: Loop resistance, Bypass, Single-wire, Crossing, Difference between branches
- Measurement of Resistance: 0.1 to 2 kOhm, Accuracy: 0.5%, Resolution: 0.1 Ohm
- Troubleshooting: RF 10 MOhm, Accuracy: 1%; RF MOhm Accuracy: 0.15%

| Code | Description |
|---|---|
| AT.Metro.FLB | Metro.FLB is an automatic fault detector particularly designed for telephone cables. |
| AT.Metro.FLB.bag | Professional plastic bag for field transport. |

# Metro.Cable (custom TDR)

Metro.Cable is a customizable time-domain reflectometer (TDR) to characterize and locate faults in metallic cables of any nature (i.e. untwisted lines, twisted pair wire, coaxial cable, non-standard bundle, etc.). It can also be used to locate discontinuities, bandwidth, FEXT, or any other impairment in the electrical path. It has two default interfaces BNC and RJ45 for coaxial cables and Ethernet cables, while the third interface can be adapted to any demand to satisfy the necessity of fault location in non-standard cables.

## Features

Metro.Cable has native interfaces for the most popular cables used in telecoms, coaxial & twisted pairs, that are connected to the board by means of BNC and RJ45 conectors. Metro.Cable can also satisfy the need of testing special cables made of two, three or any number of conductors. In order to make it possible Metro cable uses two adapters: the Near-end and the Far-end Active Loop that facilitate the selection of each pair and the generation of special test signals.

- Near-end adapter. Near-end adapter is a switching matrix that allow the selection of any pair of conductors to execute the TDR test.
- Far-end Active Loop adapter. Far-end adapter communicated with an independent media with the Metro.Cable board can open/close any two circuits, generate a tone or a special impedance
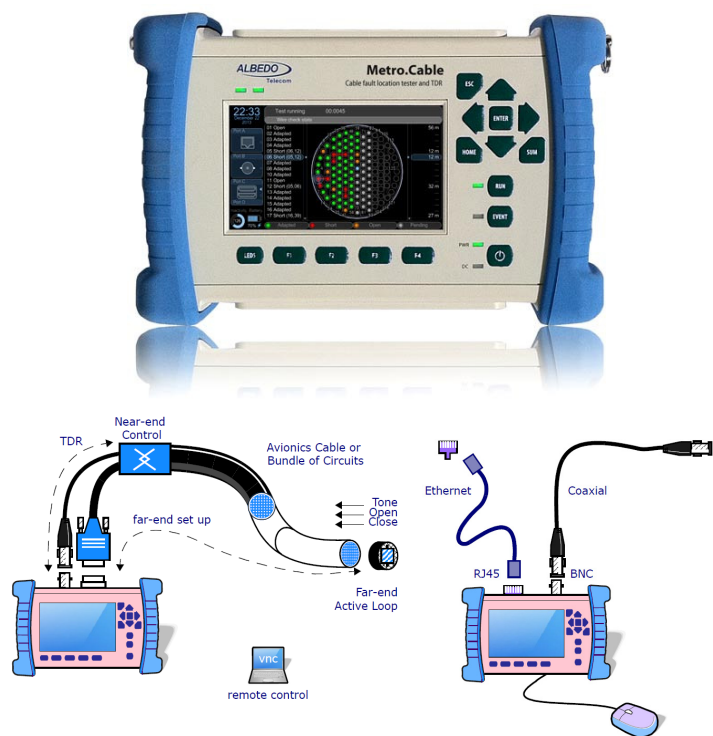
# Metro.F2 (palm OTDR)

Metro.F2 Palm-OTDR is handheld, compact, lightweight, long battery life that supports auto test, manual averaging, manual real time test mode. It offers three wavelengths and VLF in one handheld unit. It locate events and faults in trace rapidly and then lists all events ina table. It can save and transfer the measurement data to PC. To prevent Metro.F2 can detect and silently if light is present to avoid any damage to the internal photoelectric receiver and a warning message will be displayed.

## Features

- There are several model available and up to 28dB high dynamic range
- Linear (mW) and nonlinear index (dBm) display on the same screen
- ≤ 1.6m extra-short event dead zone
- 0.25m high resolution,65534 sampling points
- Supporting Bellcore GR196 file format in writing or reading
- Universal FC/PC,FC/SC,FC/ST connector type
- Ergonomics: 100x210x60mm, 1.1kg, 4.3' touchscreen
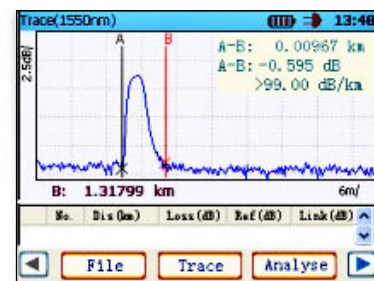
# Metro.F7 (top-end OTDR)

Metro.L7 is a top performance OTDR tha can Test up to four wavelengths with a single unit. L7 is excellent for PON testing because it enables you to test through 1x32 even 1x64 splitters then you can characterize all events between the transmitter and the central office's fiber distribution panel. L7 can determine and locate the events and faults in trace precisely, then lists all events in even table, so it's very useful to maintainers to improving efficiency and it's unnecessary to know about the relative background knowledge.

## Features

- There are several model available and up to 45dB high dynamic range
- ≤0.75m dead zone, suitable for short optical fiber, pigtail optical fiber
- 0.05m high distance resolution,128k sampling points
- Remote function via Ethernet
- Supporting Bellcore GR196 file format in writing or reading
- Battery for monre than 8 hours of full operation
- Visible fault locating (VFL) and Optical Power Meter (OPM)
- Universal FC/PC,FC/SC,FC/ST connector type
- Ergonomics: 186x295x75mm, 2.5kg, 6.5' touchscreen
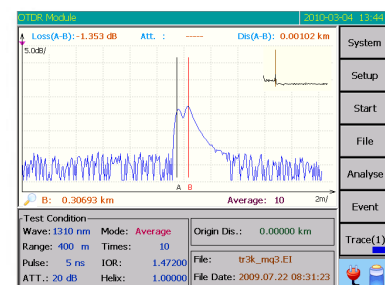
# ALBEDO Telecom

ALBEDO Telecom delivers solutions that enable Telecom infrastructures of all sizes to troubleshoot, monitor, and migrate mission critical networks.

From the desktop to the data centre, from Access Network, Ethernet, Sync-E, PTP, Optical backbones, LTE, VoIP or IPTV applications.

On local segments and across distributed networks, ALBEDO enable Telecom Organizations, Telecom Installers, Network Operators, Internet Service Providers and Contents Suppliers to quickly check the health of your network, verify SLA, or find and fix problems.

## Benefits

**Results**. The ALBEDO Telecom to help Telecom industry to make the most of the investment on network infrastructure.

**Expertise**. ALBEDO trainers, auditors, engineers and consultants provide industry-leading knowledge to address the unique needs of customers.

**Integration**. ALBEDO integrates disparate telecom resources and applications, realizing new business efficiencies.

**Agility**. ALBEDO increases the ability of customers to respond quickly to new market opportunities and requirements.

**Coverage**. ALBEDO offers solutions that facilitates the migration and the roll-out to new telecom architectures.

**ALBEDO**
**Telecom**

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aims

**+ LEARN** from business models and case studies
**+ UNDERSTAND** the potential of interoperability with legacy services
**+ EXPERIENCE** specialised synchronization network solutions
**+ ASSESS** different solutions for installation and maintenance