professional **TELECOM** solutions
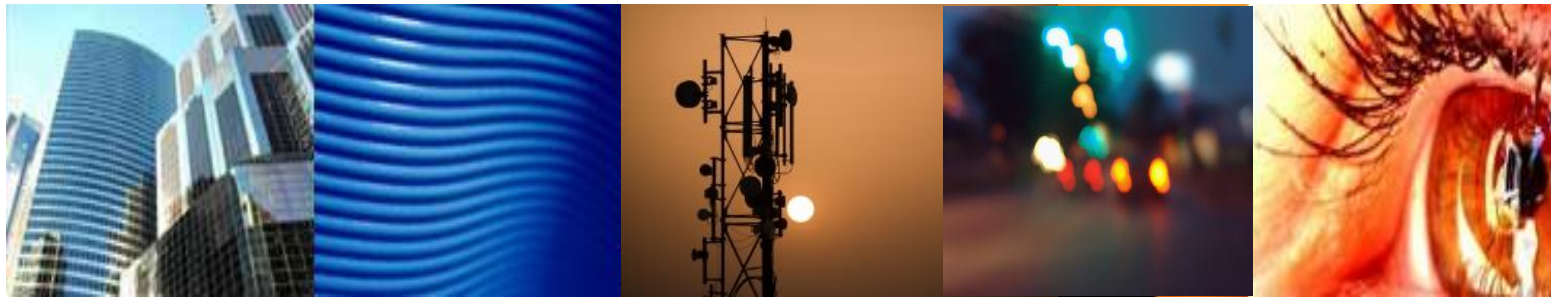
Corporate Presentation – July 2018

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Telecom
the Path to Excellence

Global Manufacturer telecom nodes & instruments
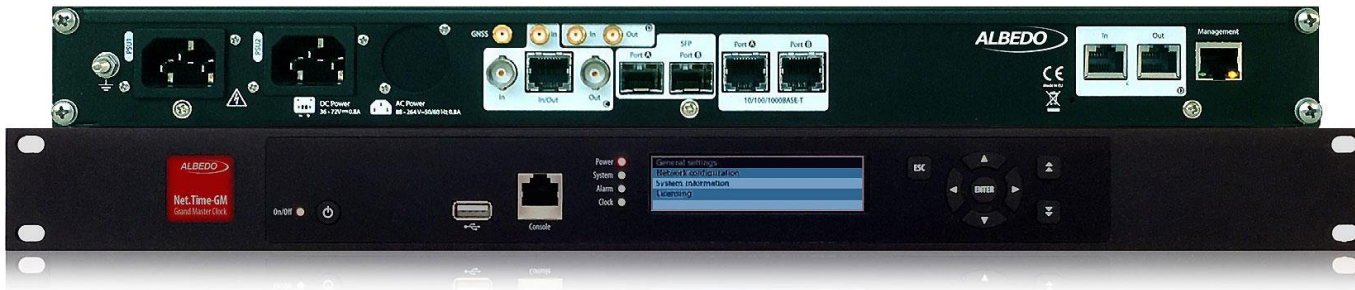
Insulation Measuring tester

◆ Insulation-Resistance

◆ Capacitance

◆ AC / DC Voltage

◆ Cable test

◆ Selectable measuring lead pairs

Metro.ISO is compliant with IEC61010 CATIII 600V

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AT.**2048** & AT.**One**

The AT-2048 is an excellent tester for network operators, contractors and enterprise users that have to manage fixed and mobile networks that are using E1 and Datacom backhaul circuits

- Non-stop tester 24h on batteries
- 2 x port BNC and 2 x port RJ45
- Extra rugged but lightweight
- Monitor and Pass Through modes
- Jitter / Wander tests (with all masks)
- Pulse Mask
- Cisco Data Cables
- 2xUSB & RJ45Ports
- VNC remote control

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Ether.**Giga**

Field tester to check Connectivity and Performance of Ethenet / IP networks

- 2xSFP + 2xRJ45 ports
- Y.1564 (e-SAM) FTD, 2-way FDV, FDV, FTD, FLR, SES, PEU and PEA
- Sym/Asymmetrical RFC2544 test
- FCS error insertion
- PoE detection / transparency
- Multistreams for IPTV, VoIP, Data
- Q-in-Q for demarcation tests
- Full MPLS support
- Scan MAC/IP/VLAN/QinQ
- Advanced Counts: Up to 8 filters at MAC, IP, TCP/UDP, Arbitrary [mask + offset]

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Both are loop-back devices with two optical/electrical ports for looping back Ethernet/IP L1-L4 packets

- Ether.DuaLoop up to 1Gb/s
- Ether10.DuaLoop up to 10Gb/s
- 2xRJ-45 + 2xSFP Port
- L1/L2/L3/L4 loopback
- Q-in-Q VLAN support
- MPLS support
- Scan MAC/IP/VLAN/QinQ
- Up to 8 filters at MAC, IP, TCP/UDP
- LEDs all events at a glance

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Ether.**Genius**: 6-in-1 tester @ 1Gb/s

Multitechnology tester equipped with all the features to install or maintain GbE, SyncE, T1/E1, Datacom, PTP & C37.94

- 2SFP, 2RJ45, 2BNC, DTE/DCE, 4xSMA
- SyncE MTIE/TDEV measurement
- Wander analysis / generation
- PTP master / slave, support decoding
- T1/E1 test Jitter/Wander, Pulse
- One-way delay test (GPS accuracy)
- Datacom with Standard cables
- DTE+DCE for all operation modes

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Ether.**10Genius**: 6-in-1 tester @ 10Gb/s

It deal for LTE/5G and Power Utilities as it has all engineers need to install and maintain base stations and power sub-stations:

- 2SFP+, WIS, 2RJ45, 2BNC, DTE/DCE, 4xSMA
- Ext. Clock: 10 MHz, 2048/1544 Mb/s, 2048/1544 MHz, 1 pps
- Int Clock: Rubidium, OCXO, GPS/GLONASS
- Synch: G.8261, G.8262, G.8264
- SyncE MTIE/TDEV measurement & generation
- C37.94: BER, events, nx64, one-way delay
- PTP master / slave, support decoding
- PTP wander analysis/generation
- T1/E1 test Jitter/Wander, Pulse
- One-way delay test (GPS accuracy)
- Datacom with CISCO standard cables
- DTE+DCE for all operation modes

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x**Genius** the new dimension

xGenius is a handheld transmission and synchronization tester equipped with multiple interfaces and a large capacitive screen

- 2SFP+, 2RJ45, 2BNC, RJ48, 4xSMA
- RFC 2544, eSAM (Y.1564), SLA
- Ext. Clock: 10 MHz, 2048/1544 Mb/s, 2048/1544 MHz, 1 pps
- Int Clock: Rubidium, OCXO, TCXO,
- Synch: G.8261, G.8262, G.8264
- SyncE MTIE/TDEV test & generation
- PTP master / slave and decoding
- PTP wander analysis/generation
- T1/E1 test Jitter/Wander, Pulse
- One-way delay test (GNSS accuracy)
- SNMP/MIB support
- [Datacom & C.3794]

This is a rack mounted synchronization appliance, configurable as Grand-Master or Slave PTP clock, capable of monitoring the quality of the provided timing services.

- PTP master / slave clock one client
- 2SFP, 2RJ45, 2BNC, DTE/DCE, 4xSMA
- SyncE MTIE/TDEV measurement
- Wander analysis / generation
- One-way delay test (GPS accuracy)

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Net.**Shark** : hand-held field tap

It captures, forwards & saves packets at wirespeed without generating jitter, delays and loss.

- Wirespeed operation nsec accuracy
- Non-stop packet tap 24/7/365
- Filter/Capture/Tap and aggregation
- NTP Synchronised
- Wireshark friendly
- No MAC or IP: Undetectable
- Monitor and Pass Through modes
- Captures CRC errored frames
- 16+16 Programmable Filters
- Save on SD card in PCAP format

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Net.Hunter is a stream-to-disk device that can capture packets without disturbing the live traffic


- Wirespeed operation nsec accuracy
- Non-stop packet tap 24/7/365
- Filter/Capture/Tap at full duplex GbE
- Storage size: 512 GB disk
- NTP Synchronised
- Wireshark friendly
- No MAC or IP: Undetectable
- Monitor and Pass Through modes
- Captures CRC errored frames
- 16+16 Programmable Filters

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Net.Storm: **compact** WAN emulator

Generates those perturbances typical of Metro Ethernet / IP networks:

- ◆ Impairments
  - ■ Packet Delay / Packer Jitter
  - ■ Packet Loss
  - ■ Frame Duplication
  - ■ Errored Frames
- ◆ Switch Simulation
  - ■ Bandwidth Policing
  - ■ Bandwidth Shaping
- ◆ 16+16 Programmable Filters
 - ■ MAC / IPv4 / TCP / UDP Selection
- ◆ Wirespeed operation nsec accuracy

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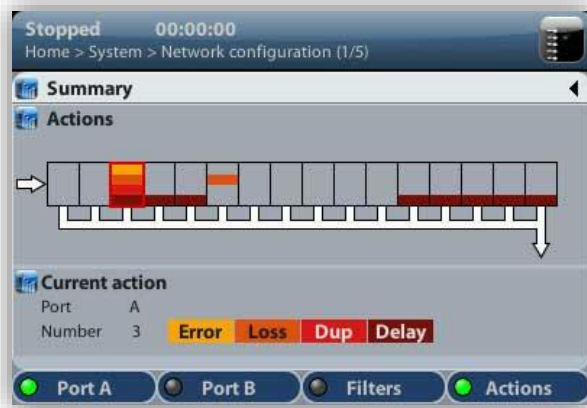
This is an advanced turn-up and maintenance solution to test and deploy VoIP trunks and hosted services, VoIP servers, VoIP PBX.

- PBX and Network Trunk SIP Emulation
- PBX and ITSP Mass Call Mode
- T.38 Fax and Gateway Emulation
- MOS indication
- Detailed RTP statistics
- Test Pass/Fail thresholds
- PDF Call Log and Test Statistics
- Emulate VoIP infrastructure

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Metro.TR69

Metro.TR69   Ether / IP   Router / CPE
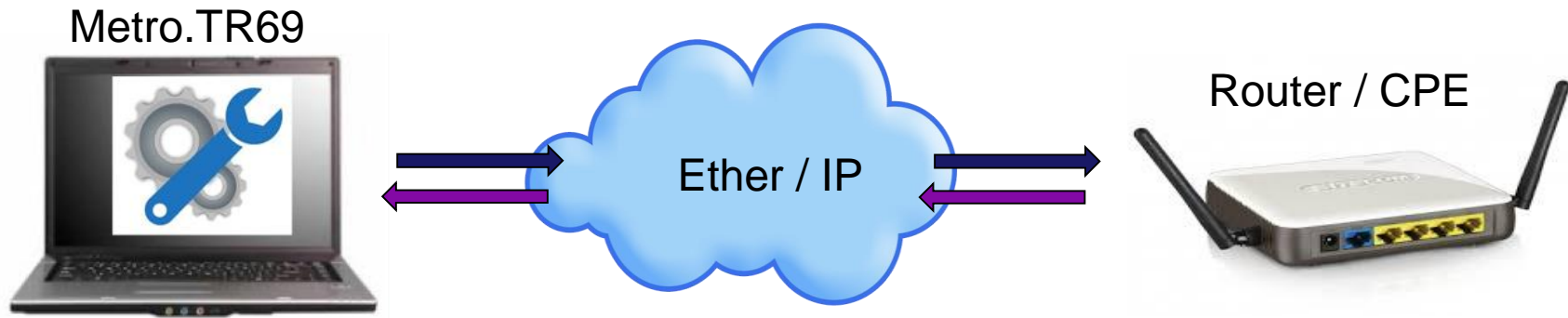
- ◆ Tool that validates TR-069 protocol behavior of a router and CPE
- ◆ Includes auxiliary tools to provide full testing scenarios where users can generate test cases without the need of a SW engineer
    - ■ ftp, http and STUN servers
    - ■ BBF compliant ACS, traffic generator and analyzer
    - ■ WireShark connection for debugging
- ◆ Independent from CPE vendor or CPE type

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That's all

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