Ether10.DuaLoop (more than that)

in Test we Trust

ALBEDO Ether10.DuaLoop is a traffic reflector equipped with two independent ports that can be set up and operate independently and simultaneously. Any remote tester loopback functions can relay on this advanced device when installing, maintaining or commissioning telecom services.

2 x 10Gbit/s reflector

Ether10.DuaLoop is really advanced because includes a friendly navigation with touchscreen to implement the L1-L4 loopback functionality resulting ideal for engineers willing to execute test such as BER, RFC-2544 or eSAM. Moreover, additional functions such as traffic analysis and statistics, filters, SNMP and VNC remote control have also been included.

This outstanding device is built in a powerful platform, the same used by the Gigabit Ethernet testers manufactured by ABEDO. Therefore it is an excellent option to consider for those operators and contractors willing to manage and troubleshoot fixed and mobile networks.

New: 2xSFP+ and 2xRJ45

Ether10.DuaLoop has two ports that provide a complete set of electrical and optical interfaces from 10Mb/s to 10Gb/s by means of new SFP+. Save time and costs conducting bench testing with this excellent instrument. An interesting configuration is to connect the unit as a media converter, passing electrical to optical, or optical-optical using different fibre types.

Connect it at demarcation points

Pass-through mode is included therefore it can be installed permanently at any place of the network (i.e. at a demarcation or an interconnection point) working as a media and bit rate adapter. During normal operation Ether10.DuaLoop will be totally transparent to the service.

However if something goes wrong the unit can be switched to loopback mode in order to execute performance and quality test. When this happens the unit will loop back packet to both sides simultaneously and will help to find out at what side the fault is avoiding disputes and litigation between operators and customers while accelerating the deployment of quality and competitive services.

Advanced Reports

A complete set of traffic statistics and counters is provided in separate reports classified per each port sorted by MAC address, Type/Length, C-VID, S-VID, CoS and Priority with selection mask. Also by IPv4 and IPv6 Selection including address, protocol, DSCP; and TCP/UDP selection or ports.

Network Discovering

Ether10.DuaLoop can quickly scan the network traffic to select those flows to be tested and choose whether you want to monitor o execute any test. Consequently not anymore slow set up, or deep expertise.
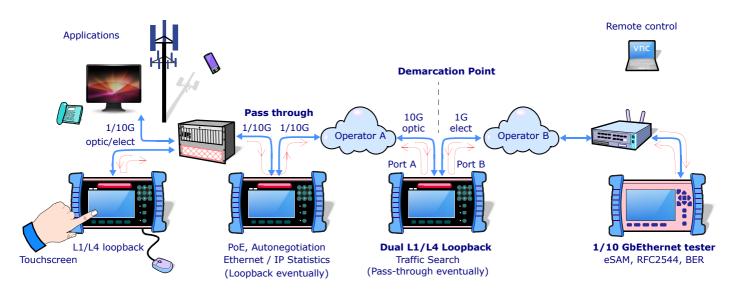
USERS

- Operators / Contractors
- Commission
- Troubleshooting

TOP FEATURED

- 2xSFP+ and 2xRJ45 ports
- Two simultaneous loops
- Touch + keybrd + mouse
- SNMP and VNC control
- Advanced statistics
- L1, L2, L3, L4 loopback
- Multivendor reflector

Applications

Remote control

Demarcation Point

Pass through
1/10G   1/10G

10G
optic

1G
elect

Operator A   Operator B

Port A   Port B

1/10G
optic/elect

L1/L4 loopback
Touchscreen

PoE, Autonegotiation
Ethernet / IP Statistics
(Loopback eventually)

Dual L1/L4 Loopback
Traffic Search
(Pass-through eventually)

1/10 GbEthernet tester
eSAM, RFC2544, BER

Ethernet Testing

Interfaces	• 2 x SFP / SFP+ ports: 10GBASE-SR, 10GBASE-LR, 10GBASE-ER, 10GBA SE-SW, 10GBASE-LW, 10GBASE-EW • 2 x SFP / SFP+ ports: 1000BASE-T, 1000BASE-SX, 1000BASE-LX, 1000BASE-ZX, 1000BASE-BX, 100BASE-FX, 100BASE-TX, 10BASE-T • Dual RJ-45 port for electrical connection 10/100/1000BASE-T; PoE detection and PoE transparency • Autonegotiation: Bit rate at 10, 100, and 1000 Mbit/s, Disable autonegotiation and direct set up • EtherType II (DIX v.2), IEEE 802.3, IEEE 802.1Q, and IEEE 802.1ad • IEEE 802.2–LLC1 and IEEE 802.3–SNAP • IIPv4 (RFC791), IPv6 RFC2460)
Operation Modes	• Pass-through • Loop-back (single port and double port)
Loop-back	• L1 (wire loopback) at the far end Rx is forwarded to Tx • L2 (frame), MAC addresses are swapped • L3 (packet) IP addresses are swapped • L4 (application) ports are swapped • Loop controls for broadcast and ICMP frames
Results	• SFP: Presence current interface, Vendor, Part number • Optical power (over compatible SFP) • PoE (IEEE 802.3af), PoE+ (IEEE 802.3at), none; PoE voltage between pairs in endpoint; Voltage and current in through mode • Twisted Cable: MDI/MDI-X status, Open (fault distance), Cable Length Test, Short (distance), Polarities, Pair Skew, Crosstalk • Autonegotiation: Current bit rate, Duplex mode
Filters	Up to 8 filters for Counts and Statistics at MAC, IP, TCP/UDP, Arbitrary [mask + offset] • Ethernet Selection: MAC address, Type/Length, C-VID, S-VID, CoS and Priority with selection mask • IPv4 and IPv6 Selection: address, protocol, DSCP, Flow (v6): single value or range • TCP/UDP Selection: port: single value or range
Statistics	Separate reports per Port A & B, Tx/Rx (transmit & receive), Active filter, Automatic filtering blocks for top talkers • Top 16 talkers: Sour/Dest MAC / IPv4 / IPv6 addresses, VID (VLAN), C-VID (Q_in_Q), S-VID (MPLS) • Ethernet Frame Counts (RFC 2819): VLAN, Q-in-Q, Priority, Control, Pause, BPDUs • Tx/Rx Uni-Multi-Broadcast, Errors, Undersized, Oversized, Fragments, Jabbers, Runts, (Late) Collisions, Sizes, MPLS stack length • Bandwidth Statistics: (in bit/s, frame/s, %) Rate, Max, Min, Aver, Occupancy, Unicast, Multicast, Broadcast • IPv4 & IPv6 counts: (in bit/s, frame/s, %) Unicast, Multicast, Broadcast, Errors, TCP, UDP, ICMP

Operation and Management

Performance	• Full Duplex operation at 1 Gbit/s or 1,5 Mframes/s, Accuracy better than 10^{-6} secs. at 1 Gbit/s • Performance and accuracy 100% independent of the line bit rate

Platform

Hand-held Instrument	• Touchscreen 480 x 272 TFT, Mouse, USB & Ethernet ports; 1.0 kg, 223 x 144 x 65mm; IP-54 • Soft LEDS All events at a glance • Rechargeable Batteries continuous working up to 12 hours continuous operation (fast recharging time) • AC Power Adapter Input: 100 ~ 240 V AC, 50/60 Hz, • Operating Temperature 0ºC ~ 50º C Storage Temperature -20ºC ~ 70ºC Humidity 5% ~ 95%; IP rating 54 • SNMP, MIB and VNC remote control

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