



Ether-Loop is a battery GbE loopback unit that can operate over optical/electrical SFP and RJ45 interfaces. Pairs with ALBEDO testers or any compatible device. It is and probably the most cost-effective solution to test end-to-end SLAs.

ALBEDO Ether.Loop

Ether.Loop is an Ethernet loop-back reflector, flexible and low cost. It has both a electrical RJ-45 and optical SFP interfaces. Ether.Loop provides Ethernet loop back for all levels of service testing and monitoring in a compact, battery operated unit that can manage Ethernet frames, IP and TCP/UDP (Layer 1 to 4) at wirespeed operation.

Each Ethernet frame and IP packet received is inspected and the following parameters are automatically swapped and returned including Source/Destination MAC, IP address, and TCP/UDP ports.

It is lightweight, rugged design protected with rubber boot, and can operate either with ALBEDO Ether.XX family of tester or any of the industry test and measurements devices.

1. ETHERNET PHYSICAL LAYER

1.1 Ports and Interfaces

- One RJ-45 Port for 10/100/1000BASE-T
- One SFP Port supporting 10BASE-T, 100BASE-TX, 100BASE-FX, 1000BASE-T, 1000BASE-SX, 1000BASE-LX, 1000BASE-ZX and 1000BASE-BX
- The following Ethernet interfaces are supported by the RJ-45 ports: 10BASE-T, 100BASE-TX, 1000BASE-T

1.2 Autonegotiation

- Bit rate at 10, 100, and 1000 Mbit/s
- Disable autonegotiation to force line settings

2. MAC LAYER

- EtherType II (DIX v.2), IEEE 802.3, IEEE 802.1Q, and IEEE 802.1ad supported frame formats
- IEEE 802.2-LLC1 and IEEE 802.3-SNAP
- Jumbo frames with MTU up to 10 kBytes

3. IP LAYER

- IP packet: IPv4 (IETF RFC 791)
- UDP packet

4. CONFIGURATION

- Set up by means of an external device such a PC
- Connected to the serial interface RJ45

4.1 Parameter set up

- Custom MAC address
- Reset to factory MAC address
- Custom Local IP address

5. OPERATION

5.1 Modes

- Loopback Only frames sent to the MAC address
- Loopback Only packets sent to the IP address
- Loopback All
- Discard All

5.2 Levels

- Multilayer operation 1 to 4 layer
- Enable / Disable looping of ICMP packets
- Enable / Disable looping of Broadcast packets

6. RESULTS

- Represented by LEDs
- 2 x LED per interface: one status and activity

6.1 Status LED

- Off: No link detected
- On: Link detected
- Blinking: Discard All mode

6.2 Operation LED

- Off: No activity detected
- On: Activity detected. Ordinary network traffic
- Blinking: Activity detected or test traffic detected

7. GENERAL

7.1 Operation

- AD/DC adapter
- LED indicating AC power
- LED indicating device in operation
- NiMH battery > 4h. of operation

7.2 Environmental conditions

- Operational range: -10°C to +50°C
- Operation humidity: 10%~90%

7.3 Ergonomics

- Size 210 x 110 x 60mm
- Weight 0.8 kg

8. RF/EMI, ESD AND SAFETY

- Radiated EMI: UNE-EN 55022
- Immunity to EMI: UNE-EN 55024
- ESD: UNE-EN 61000-4-2
- Electrical safety: UNE-EN 60950
- RoHS compliant

