



*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.*

## Datasheet

# 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

