

# OBE-LAN 1000 / 100 / 10 Mbps Ethernet Optical extender



## OVERVIEW

Gigabit Ethernet is a version of the Ethernet technology broadly used in local area networks (LANs) for transmitting Ethernet frames at 1 Gbps. It supports 1,000 Mbps while maintaining full compatibility with the 100 / 10 Mbps.

TESEO OBE-LAN extenders are designed to operate in EMC harsh environments.

The OBE-LAN converts to optical transmission Gigabit Ethernet signals up to 1Gbit/s. It is back compatible to 100 / 10 BaseT LAN's.

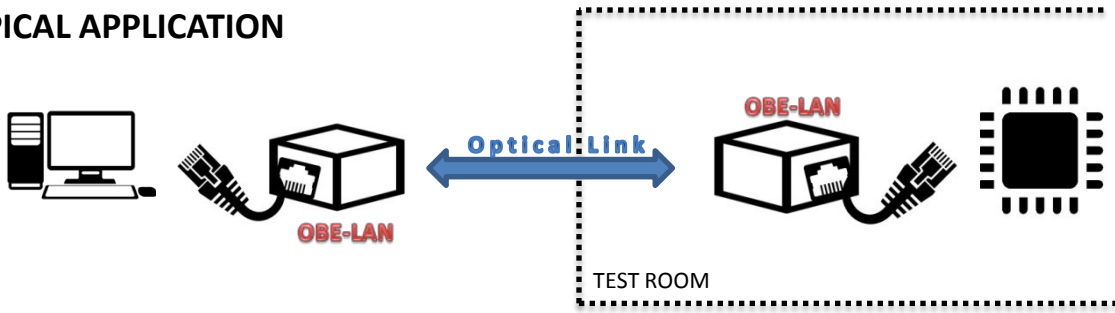
The link is made with two OBE-LAN devices connected with a pair of optical fibers.

Thanks to the unibody frame technology developed by TESEO over the past 30 years, the system has a high immunity to interference for fields up to 200 V/m for frequencies up to 18 GHz.

The reasons for utilizing a OBE-LAN bus optical extender in an EMC hostile environment are more than one:

- *you may have part of the bus and attached equipment in the chamber being radiated from an antenna and part of the same bus and related equipment to be kept out of the high field zone in the control room*
- *you may need to monitor and/or stimulate the bus during an immunity test from a remote terminal unit outside the anechoic chamber (LAN analyzer)*
- *you have to isolate a portion of the bus*
- *you have to reach devices far from the anechoic chamber*

## TYPICAL APPLICATION



## TECHNICAL CHARACTERISTICS

Each OBE-LAN kit consists of:

- *two identical Rx/Tx units. They are shielded and battery powered.*
- *two battery chargers, model CB7.*
- *one bifiber cable, P/N FF020, 20 meters long.*
- *two 1meter FTP CAT.6 patch*
- *a bifiber cable, part number FFxxx, with xxx equal to the length expressed in meters can be ordered separately. The maximum supported cable length is 50 meters.*

<b>Data rate</b>	1000 / 100 / 10 Mbit/s (1000BaseT) IEEE 802.3 std <sup>1</sup>
<b>LAN interface</b>	RJ45
<b>Optical connectors</b>	FSMA
<b>CHANNELS</b>	1 (each channel uses two OBE-LAN devices)
<b>Power supply</b>	Internal rechargeable 7.2V Li-ion battery pack
<b>Battery operating time</b>	up to 10 hours (fully charged battery)
<b>Battery connector</b>	Shielded 5 pole LEMO
<b>Optical fiber cable</b>	Standard twin FSMA multimodes
<b>Fiber cable length</b>	50 mt at max data rate
<b>Size of OBE</b>	110 x 80 x 60 mm
<b>Operating temperature</b>	0 to 50 °C
<b>Shielding</b>	200 V/m up to 18GHz

<sup>1</sup> 1000BaseX auto-negotiation is under development

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