

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.

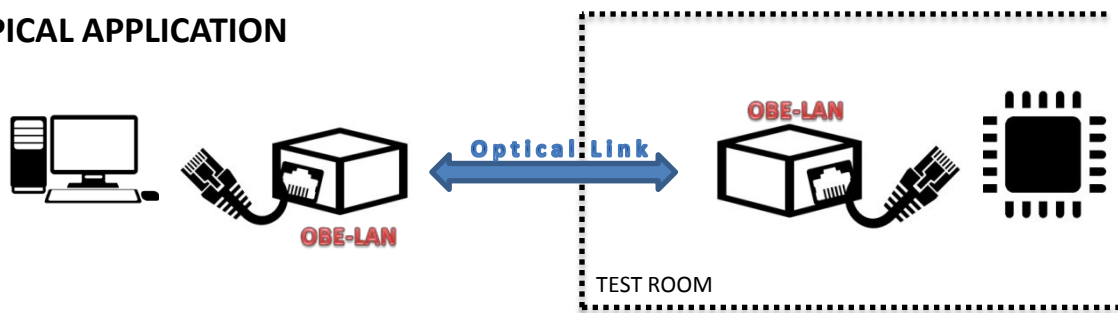
The link is made with two OBE-LAN devices connected with a pair of optical fibers.

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.*

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

¹ 1000BaseX auto-negotiation is under development

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