LAMBDASCOPE

Pluggable Optical Testing Solutions
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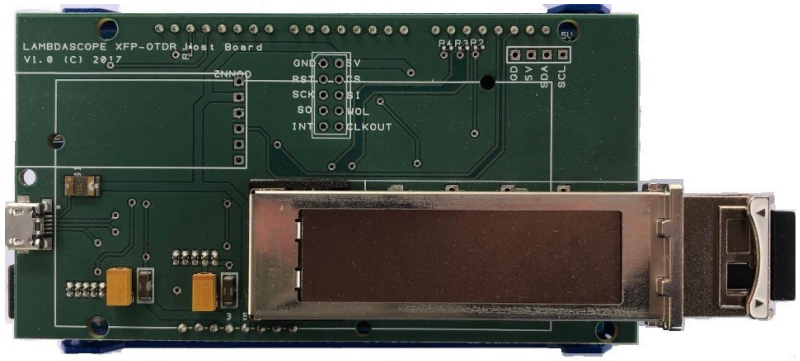
4-in-1 OTDR FPGA Solution Specifications

(OTDR, Fiber Length, Light Source and Power Meter)



Introduction

Traditional OTDRs can only measure the events (loss, bending, connections, fiber end, etc.) along the fiber length. Each time when taking a measurement, the reflectance and loss results cannot be repeated due to inherent nature of optical pulse instability. At LAMBDASCOPE, we have developed a unique solution that not only it provides OTDR trace like the traditional OTDR, it also offers additional benefits of highly accurate fiber length measurement based on our proprietary algorithm, and can be independently acting as a light source and/or power meter. This unique 4-in-1 solution is packed in a very small foot print with standard USB interface. It can be conveniently integrated into any optical systems.

The mechanical dimension of the FPGA measures 4 x 2.1 x 1.0 in. Standard USB interface is used for OTDR and other data transmission and reporting.

Key Features

- Full OTDR functions in small pluggable XFP form factor
- Compliance with GR-196 and SR-4731 OTDR Testing Standards

- ROHS compliant
- High accurate fiber length measurement (+/-0.3cm)
- Light source mode available
- Power meter mode available
- Operational temperature range 0 to 70 ^{o}C
- No additional special equipment needed, plug-'n-play

Applications

- Physical layer fault detection
- Distributed remote fiber status monitoring
- OLT integration of OTDR functions for FTTX application
- ROADM integration of OTDR functions
- Multi-Gigabit Ethernet for data centers
- Fiber Channel for storage networks
- Wireless backhaul
- Electrical power utilities
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Optical Specifications

Emitter Type	DFB LD
Center Wavelength (λc) (nm) (select one)	1510, 1590, 1610, 1625
Wavelength Band	λc+/- 10nm
Fiber Type	Single Mode or Multimode
Average Tx Power (dBm)	Typ. 0 Max. 3
OTDR Distance (km)	60
Distance Accuracy (m)	+/- 0.3
Power Meter Dynamic Range (dB)	25

General Characteristics

Mechanical Dimensions (in.)	4 x 2.1 x 1.0
Laser Safety	Class I
Connector Type	LC
Warm-up Time (min)	4
Interfaces	USB or BlueTooth
Power Consumption	3 W (peak), 0.5 W (idle)
Operating Temperature (^{o}C)	0 to 70
Storage Temperature (^{o}C)	-40 to 85

Ordering Information

The part numbering scheme for LAMBDASCOPE products is as follows.

XFP-OTDR-xxxx-LC (where xxxx is wavelength in nm)

XFP-OTDR-HOST (for evaluation board and Data Reader software)

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