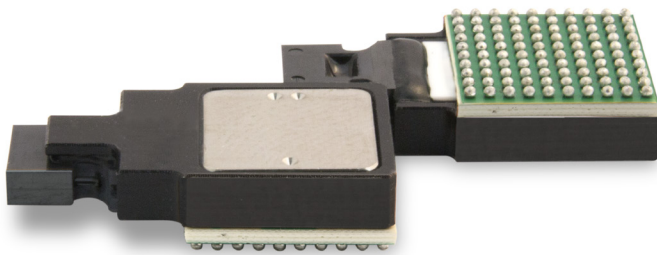


LightABLE 10G LM 4TRX

Rugged optical transceiver



Product Summary

The *LightABLE™* LM 4TRX pluggable module is a four[1]lane, full-duplex optical transceiver in a small, ruggedized package.

The electrical interfaces are based on CML logic levels and support per channel data rates of up to 10.3125 Gbps (a total bandwidth over 40 Gbps full-duplex).

The module integrates an industry –standard, 1x12 MT, optical interface using the QSFP+-compatible (4-TX/4-n.c./4-RX) channel configuration.

The module is offered with an Amphenol/FCI 10x10 MegArray® mezzanine connector. The module mates to a connector on the host board.

The module contains a preprogrammed internal microcontroller for configuration – only power and high-speed signaling is required.

An I2C serial interface is provided to interrogate the module.

Rugged, low-SWaP,
multichannel optical
transceivers for
defense applications

Qualification

MIL-STD-883:

- Vibration tests, Method 2007.3
- Mechanical shock tests, Method 2002.5
- Thermal shock tests, Method 1011.9
- Thermal cycling tests, Method 1010.8

JEDEC-STD-22:

- Damp heat - Method A101

MIL-STD-810:

- Cold storage tests, Method 502.5

Summary Specifications

- Industrial temperature range: -40 °C to 85 °C
- Sensitivity up to -12 dBm
- Up to 10.3125 Gbps per channel
- Short-reach 850 nm VCSELs
- Standard, 1x12 MT, optical interface
- 4 differential CML inputs
- 4 differential CML outputs
- Pluggable MegArray® connector
- Link distance up to 100 m (OM3 fiber)
- I2C communication interface
- Asynchronous channel operation
- Data protocol-agnostic, balanced code

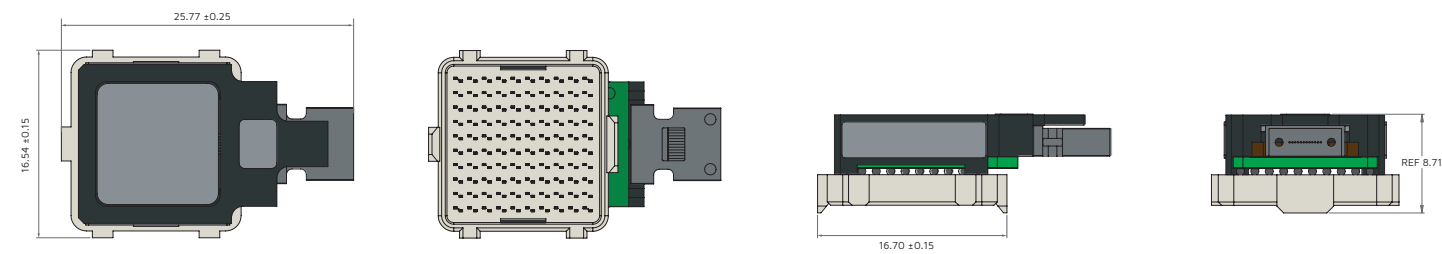
Application

The *LightABLE* LM 4TRX module targets the following applications:

- Phased array radars
- CCD/CMOS imaging sensor systems
- FPGA SerDes applications

Mechanical Layout

Part Numbering and Ordering Information



Part number	Description	Sensitivity (dBm)	Mounting	Soldering
Transceiver				
LMX04P4182321AA	LightABLE 10G LM 4TRX transmit/receive	-9	Pluggable	RoHS
LMX04P4183321AA	LightABLE 10G LM 4TRX transmit/receive		Pluggable	RoHS
LMX04P4184323AA	LightABLE 10G LM 4TRX transmit/receive		Pluggable	Tin lead
Accessories				
322-00030	MicroClip™			
706-00003	Dowel pins			
314-00054	Dust cap (Included with each <i>LightABLE</i>)			
500-00002	1.2 m MT to MT multimode fiber cable			
500-00007	1.8 m MT to MPO multimode fiber cable / MPO optical fiber ribbon cable			
600-00006	FCI MegArray mate connector for pluggable version			
Evaluation board and related parts				
LMK040018300001	LM 4TRX evaluation board			
865-00003	I2C host adapter (AARDVARK)			
500-00017	12-fiber multimode breakout cable with MTP (female) to ST connectors			
500-00020	Loopback fiber cable MPO			
500-00250	1.8 m MT to MPO multimode fiber cable			
600-00024	MPO to MPO adapter			