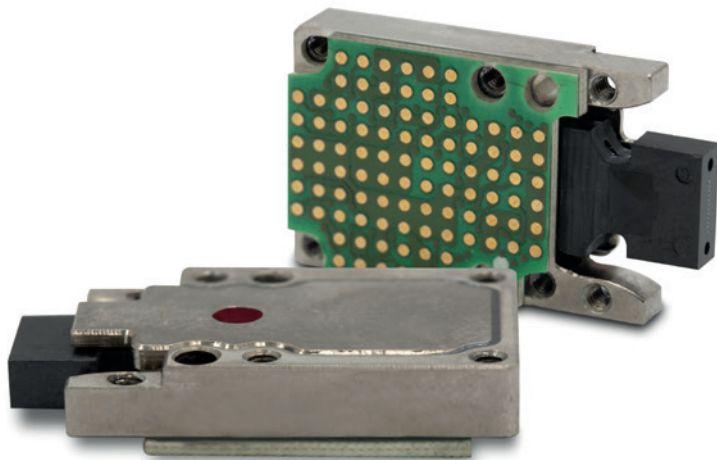


SpaceABLE 10G LGA 12TX or 12RX

Rugged optical transceiver



Product Summary

The SpaceABLE® 10G LGA 12TX or 12RX modules are 12-channel half-duplex optical transmitters or receivers respectively, in a small ruggedized package

The electrical interfaces are based on CML logic levels and support data rates per channel of up to 10.3125 Gbps (a total bandwidth of over 120 Gbps half duplex).

The module integrates an industry standard 1x12 MT optical interface compatible with 12-channel parallel optical fiber ribbon cables. The module uses LGA type electrical interface connector with 96 pins to be integrated on to a host board.

An I2C serial interface is provided to interrogate the module.

Radiation-resistant,
low-SWaP,
multichannel optical
transceivers for space
applications.

Qualification

Radiation test

- Heavy ion
- Gamma ray/Cobalt60
- Proton bombardment

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

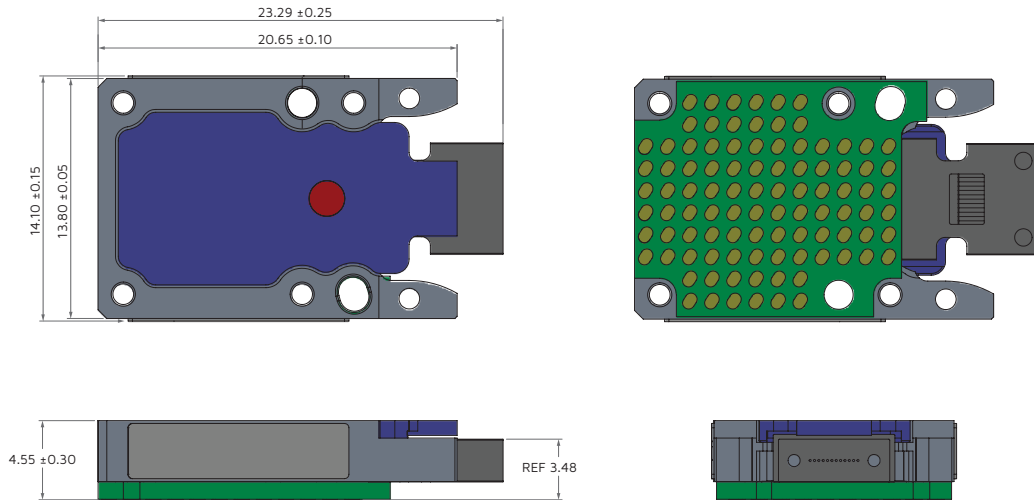
- Industrial Temperature -40 °C to 85 °C
- Sensitivity up to -9 dBm
- Up to 10.3125 Gbps per channel
- Short-reach 850 nm VCSELs
- Standard 1x12 MT optical interface
- 12 differential CML inputs
- 12 differential CML outputs
- LGA electrical interface
- Link distance up to 100 m (OM3 fiber)
- I2C communication interface
- Asynchronous channel operation
- Data protocol agnostic

Application

The SpaceABLE 10G 12TX or 12RX LGA modules target the following applications:

- LEO and GEO satellites

Mechanical layout



Part Numbering and Ordering Information

Part number	Description
Transceiver	
SLT12P918533002	SpaceABLE SL 12TX, 10G, LGA
SLT12P9185330F4	SpaceABLE SL 12TX, 10G, LGA (Flight model)
SLR12P918530102	SpaceABLE SL 12RX, 10G, LGA
SLR12P9185301F4	SpaceABLE SL 12RX, 10G, LGA (Flight model)
Accessories	
415-00018	1 mm, 96-position LGA interposer kit (700-00106 interposer + 4 × ¼ in. screws)
700-00106	1 mm, 96-position LGA interposer
700-00120	1 mm, 96-position LGA space grade interposer: (Please refer to document 970-00479 for product grade description)
322-00030	MicroClip
706-00003	Dowel pins
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
600-00037	MT dust cap (Included with the SpaceABLE)
Evaluation boards and related parts	
SLK120018500001	SpaceABLE 10G LGA 12TX or 12RX evaluation board
865-00003	I2C host adapter (AARDVARK)
500-00017	12-fiber multimode breakout cable with MT-to-FC/PC connectors