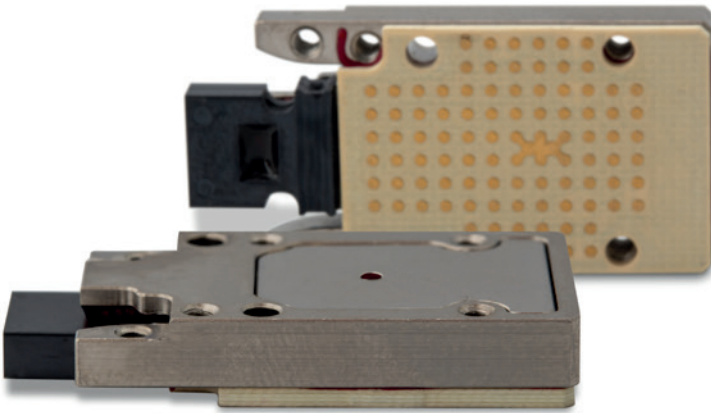


SpaceABLE 28G LGA 4TRX

Rugged optical transceiver



Product Summary

The SpaceABLE 28G LGA 4TRX module is a four-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 28.05 Gbps (a total bandwidth of over 100 Gbps full-duplex).

The module integrates an industry –standard, 1x12 MT, optical interface using the QSFP28-compatible (4-TX/4-n.c./4-RX) channel configuration. The module uses a 96-pin, LGA-type electrical interface connector to attach to the 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
- Cobalt 60 gamma rays
- 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

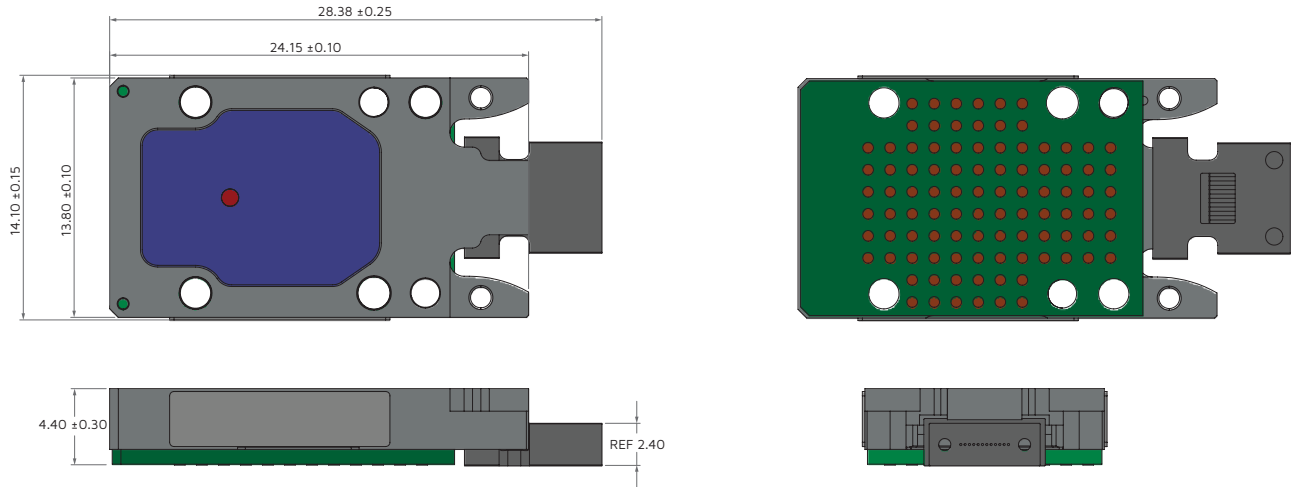
- Industrial temperature: –40 °C to 85 °C
- Sensitivity of –6 dBm
- Up to 28.05 Gbps per channel
- Short-reach, 850 nm VCSELs
- Standard, 1x12 MT, optical interface
- Four differential CML inputs
- Four differential CML outputs
- cLGA socket mount
- Link distance of up to 70 m with OM3 fiber, and 100 m with OM4
- I2C serial communication interface
- Asynchronous channel operation
- Data protocol-agnostic, balanced code

Application

The SpaceABLE 28G 4TRX applications include:

- LEO and GEO satellites

Mechanical layout



Part Numbering and Ordering Information

Part number	Description
Transceiver	
SLX04P528532102	SpaceABLE 28G SL 4TRX transceiver
SLX04P5285321F2	SpaceABLE 28G SL 4TRX transceiver, Flight model
Accessories	
700-00121	1.55 mm space grade interposer
700-00115	1.55 mm interposer
304-00288	Retainer for 28G thru-hole devices
415-00043	Retainer with screws for thru-hole modules, kit
322-00030	MicroClip
706-00003	Dowel pin (flat dual assembly)
314-00054	Dust cap (included with the SpaceABLE).
Optical cables	
500-00002	1.2 m MT-to-MT ribbon fiber cable
500-00007	1.8 m MT-to-MT ribbon fiber cable
Evaluation boards and related parts	
SLK040028500001	SpaceABLE 28G 4TRX evaluation board
865-00003	I2C host adapter (AARDVARK)
600-00024	MPO-to-MPO adapter
500-00017	12-fiber multimode breakout cable with MT-to-FC/PC connectors
500-00020	Loopback ribbon fiber cable (MPO)
500-00250	1.8 m MT-to-MPO multimode fiber cable