

10+ Gbps transceivers



High Speed Data Links for Demanding Environments

To expand the D-Lightsys® range of existing ruggedized optical transceivers, Radiall introduces new transceivers with performance up to 10 Gbps and higher.



Since 2007, D-Lightsys® transceivers have been flying on military and commercial aircrafts and have proven to be the perfect solution for demanding applications. The new 10+ G range utilizes D-Lightsys® technology and offers the unique benefits, including a very small footprint and extended link budget for applications where long term data transmission reliability is required. The low power consumption makes these modules especially suited for on board applications (aircraft, UAV, satellites).

Directly compatible with most digital balanced signal protocols, the 10+ G range meets IEEE std 10G Base-SR10, Fiber Channel, Infiniband, SFPDP, sRIO and VSR requirements as well as ARINC 818 and DVI video standards.



The two available versions, pluggable and solderable, feature a small footprint on the host board. The solderable option offers an ultra slim profile of 3.6 mm, making it especially useful for high density board chassis or FPGA mezzanine board configurations. Both solutions are qualified for shock and vibration and are in compliance with MIL standards.

The unique embedded controller provides wide operating parameters including independent channel control, equalization/pre-emphasis and link survey data. These 10+ G devices include an internal control loop to ensure a constant link budget within an extended temperature range of -40/+85°C.

Single channel devices can use LuxCis® ARINC 801 contacts to connect to MIL-DLT-38999, NSX ARINC 600 or EPX® EN4644 multipin connectors or to the expanded beam interconnect range. Multichannel devices can also end with a MT interface and C-MTitan™ and Q-MTitan™ contacts.



Radiall's 10+ G range of transceivers offer very high data rate links in harsh environment applications not currently offered through standard commercial telecom components.

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Product range:

- One channel transceiver (1Tx + 1 Rx)
- Four channel transceiver (4Tx + 4 Rx)
- Twelve channel emitters (12Tx)
- Twelve channel receivers (12Rx)

Main performance:

- Storage temperature: -55/+125°C
 - Operational qualified temperature: -40/+85°C
 - Data rate: up to 16 Gbps per channel (depending on the reference)
 - Emitters comply with class 1 laser product (IEC 60825-1)
 - Receiver sensitivity: < -14 dBm @10.3 Gbps
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- Stand alone mode available with internal link budget compensation for simpler user interface
 - I2C interface available to provide users with advanced driving parameter capacities

Features & Benefits

- Proven technology
- Small footprint
- Low consumption
- Qualified for harsh environments
- Wide operating parameters
- Benefits of Radiall's optical interconnect range

Applications

- Camera data transfer
- Cockpit display video transmission
- Board-to-board communication for embedded computers
- Massive parallel data processing for radars
- Sensors interconnection