LightCONEX28 LC rugged VPX blind mate optical interconnect.

**Key advantages**

- **Performance**: up to 28 Gbps/lane from −40 °C to 85 °C
- **Standards**: VITA 66.5 standard (forthcoming)
- **Maintenance**: Supports two-level maintenance
- **Integration**: Board-edge mount
- **Reach**: 100 m over OM3 fiber
- **BER**: As low as 10⁻⁹
- **Sensitivity**: −9 dBm
- **Low power consumption**: 120 mW/lane (<10 pJ per bit).
  - Includes equalizers and pre-emphasis to compensate trace impedance.

**Configurations**

- 4TRX (100G, full duplex)

**Applications**

- VPX single board computers
- All digital AESA radars
- High I/O density, high BW communication links
- ISR embedded systems

**LightCONEX28 LC product summary**

The LightCONEX28™ LC revolutionary active blind mate optical interconnect for VPX systems, consists of a plug-in module connector and a backplane connector compatible with the forthcoming VITA 66.5 standard. A LightCONEX28 LC optical transceiver is directly integrated into the plug-in module connector, saving board space and eliminating fiber cable handling. The backplane connector is VITA 66.4 backplane cut-out compatible and includes springs to ensure a secure MT to MT mating connection under extreme shock and vibration conditions. The LightCONEX28 LC is offered with a (4+4)-lane transceiver in industrial operating temperature. Each lane operates at up to 28 Gbps.
Plug-in module connector features
- Compact transceiver (LxWxH): 26 mm × 14 mm × 3.5 mm
- Bandwidth: 28 Gbps/lane
- Temperature: −40 ºC to 85 ºC
- Reach: 100 m, OM3 fiber
- BER: as low as 10⁻⁹
- Low power consumption: 1.5 W
- Data interface: CML
- Board Mount: LGA connector

Backplane connector features
- VITA 66.4 backplane cut-out compatible
- Spring-loaded MT ferrule
- Coarse and fine mating alignment
- Compatible with 12-lane OM3 or OM4 fiber ribbon cable

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**LightCONEX28 LC ordering information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Product Description</th>
<th>Lanes</th>
<th>Bandwidth (Gbps/lane)</th>
<th>Sensitivity (dBm)</th>
<th>BER</th>
<th>Mounting</th>
<th>Operating Temperature (ºC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCX04P428532101</td>
<td>LightCONEX28 LC 4TRX transmit/receive</td>
<td>4+4</td>
<td>28</td>
<td>−9</td>
<td>E⁻⁹</td>
<td>RoHS LGA</td>
<td>−40 to 85</td>
</tr>
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**ACCESSORIES**

| 415-00012        | 2.74 mm 96-positions nLGA interposer kit (Interposer + screws) |

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**LightCONEX28 LC 4+4-lane active module on a 3U VPX board.**

**Close-up of the LightCONEX28 LC 4+4-lane plug-in module connector.**

**Close-up of the LightCONEX28 LC 4+4-lane backplane connector.**

ELMA 3U VPX backplane with LightCONEX28 LC backplane connector.