Key advantages

• **Performance**: up to 28 Gbps/lane from –40°C to 85°C
• Compatible with the forthcoming VITA 66.5 standard
• No fiber management
• **Rugged**: withstands radiation doses >100 krad (Si) and qualified per MIL-STD 883 shock and vibration.
• **Expected life**: up to 20 years
• **Cold start temperature**: –55°C
• **BER**: As low as 10^{-12}
• **Sensitivity**: –9 dBm
• Low power consumption: 120 mW/lane (<10 pJ per bit).

Configurations

• 4TRX (100G, full duplex )
• 12TX (300G), in development
• 12RX (300G), in development

Applications

• High-throughput communication satellites
• LEO satellite constellations
• GEO satellites
• Space VPX single board computers

SpaceCONEX28 SC product summary

The SpaceCONEX28™ SC revolutionary active blind mate optical interconnect for Space VPX systems, consists of a plug-in module connector and a backplane connector compatible with the forthcoming VITA 66.5 standard. A SpaceCONEX 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.
Plug-in module connector features

- Compact transceiver (L×W×H): 27 mm × 14 mm × 3.5 mm
- Low power consumption: 1 W
- Data interface: CML
- Board Mount: LGA connector
- Equalizer, pre-emphasis, adjustable output

Backplane connector features

- VITA 66.4 backplane cut-out compatible
- Spring-loaded MT ferrule (12-lane or 24-lane)
- Coarse and fine mating alignment
- Compatible with 12-lane or 24-lane OM3 or OM4 fiber ribbon cable

The SpaceCONEX28 SC optical modules will be tested under heavy ions, protons, and Cobalt 60 electrons sources.

- Heavy-ion tested (Single Event Effect & Latch-up (SEE and SEL)).
- Cobalt 60 electron source tested (MIL-STD-883G, method 1019.7) Total Ionizing Dose (TID).
- High and low energy protons tested (Total Non-Ionizing Dose (TNID)).

**SpaceCONEX28 SC 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>SLX04P528532101</td>
<td>SpaceCONEX28 SC 4TRX transmit/receive</td>
<td>4+4</td>
<td>28</td>
<td>−9</td>
<td>E−12</td>
<td>RoHS LGA</td>
<td>−40 to 85</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>415-00012</td>
<td>2.74 mm 96-positions nLGA interposer kit (Interposer + screws)</td>
</tr>
</tbody>
</table>

**THE Light on Board**

**Reflex Photonics Inc.**

16771, Chemin Ste-Marie
Kirkland, QC
H9H 5H3, Canada

For information on Reflex Photonics products, contact:

sales@reflexphotonics.com
+1.514.842.5179 (Montreal)
+1.408.715.1781 (USA)

Reflex Photonics is certified to ISO 9001

*All specifications are subject to change without notice. All brands are trademarks or registered trademarks of their respective owners and third party entities. Copyright © 2018 by Reflex Photonics.