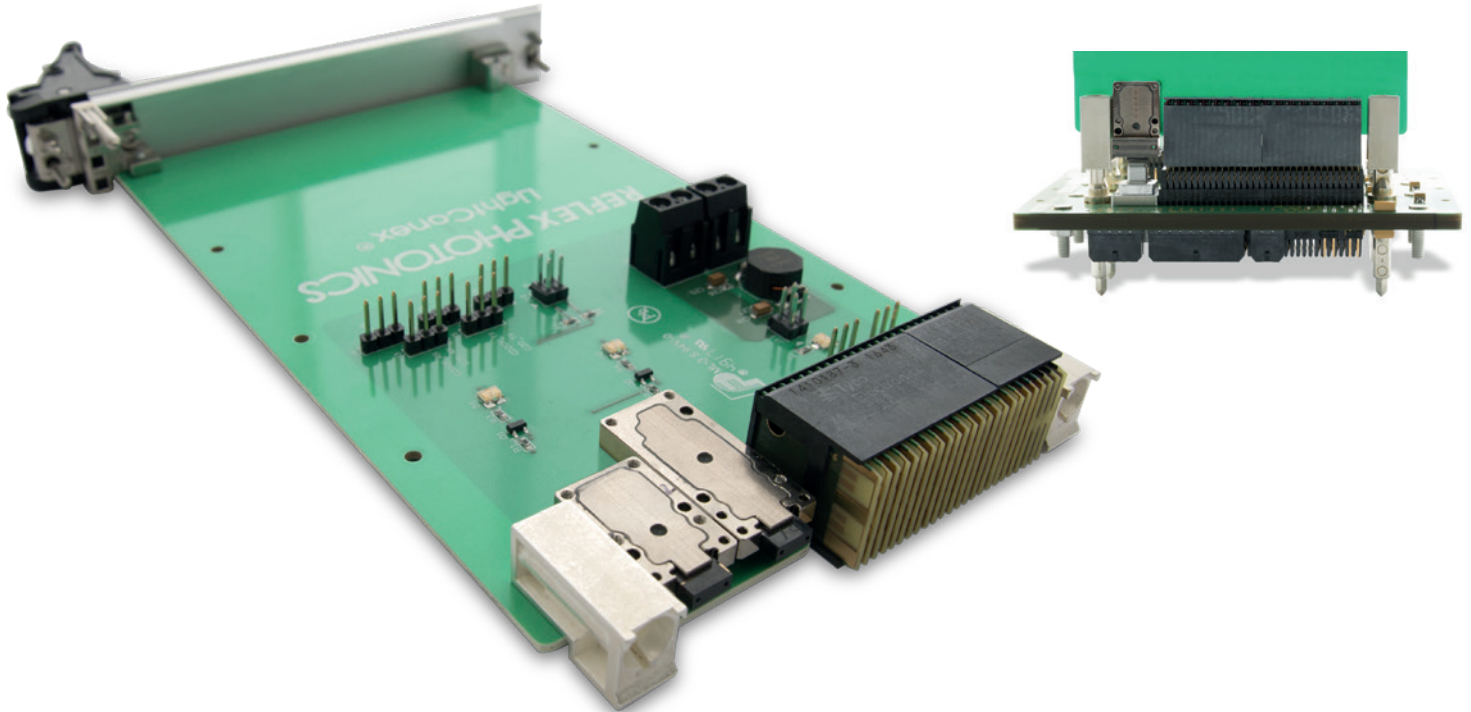


LightCONEX LC: A rugged VPX blind mate optical interconnect



LightCONEX LC 50G, 150G, and 300G

Key advantages

- Compatible with the forthcoming VITA 66.5 standard
- Supports two-level maintenance
- Board-edge mount
- Reach: 300 m over OM3 fiber
- Operates at 12.5 Gbps per lane from -40°C to 100°C with ultra-low bit error rate of 10^{-15} .
- Includes equalizers and pre-emphasis to compensate trace impedance.

LightCONEX LC product summary

The *LightCONEX*® 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 *LightABLE*™ LL optical transceiver is directly integrated into the plug-in module connector, saving board space and eliminating fiber cable handling. The backplane connector is a low profile drop-in replacement for the VITA 66.4 standard but includes springs to ensure a secure MT to MT mating connection under extreme shock and vibration. The *LightCONEX* LC is offered with a 12-lane transmitter, a 12-lane receiver, a (4+4)-lane transceiver or a (12+12)-lane transceiver in commercial or industrial operating temperatures. Each lane operates at up to 12.5 Gbps.

Configurations

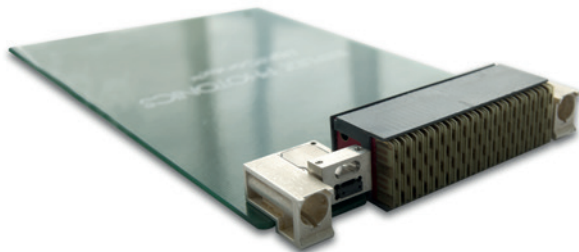
- 4TRX (50G)
- 12TX or 12RX (150G)
- 12TRX (150G, full duplex) **NEW!**
- 24TX or 24RX (300G), in development.

Applications

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

Plug-in module connector features

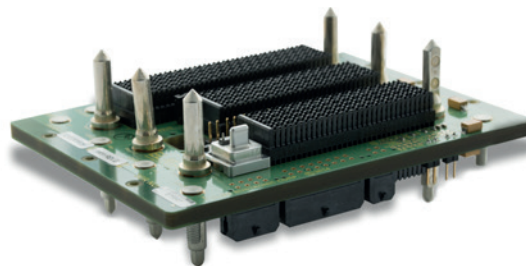
- **Compact transceiver (LxWxH):**
23 mm x 14 mm x 5 mm (12-lane)
32 mm x 14 mm x 5 mm (24-lane)
- **Bandwidth:** 12.5 Gbps/lane
- **Temperature:** -40°C to 100°C
- **Reach:** 300 m, OM3 fiber
- **BER:** 10⁻¹⁵
- **Low power consumption:**
1.4 W (12-lane)
2.8 W (24-lane)
- **Data interface:** CML
- **Board Mount:** LGA connector



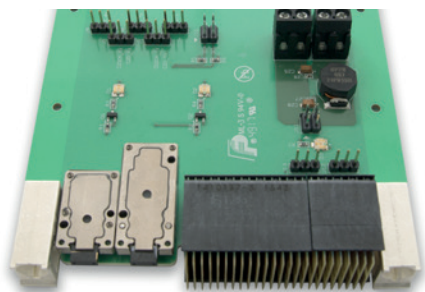
3U VPX board with VITA 46 and *LightCONEX* LC plug-in connectors.

Backplane connector features

- VITA 66.4 drop-in replacement
- Spring-loaded MT ferrule (12-lane or 24-lane)
- Coarse and fine mating alignment
- Low profile: 10 mm height
- Compatible with 12-lane or 24-lane OM3 or OM4 fiber ribbon cable



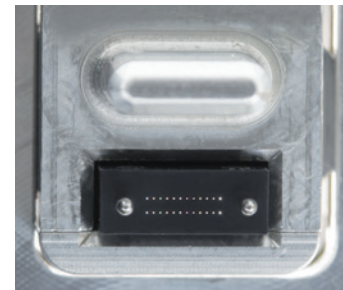
ELMA 3U VPX backplane with *LightCONEX* LC backplane connector.



Side-by-side single 12-lane active module and 24-lane active modules on a 3U VPX board (shrouds are removed),



Close-up of the *LightCONEX* LC 12-lane plug-in module connector.



Close-up of the *LightCONEX* LC 24-lane backplane connector.

LightCONEX LC ordering information

Part Number	Product Description	Lanes	Bandwidth (Gbps/lane)	Sensitivity (dBm)	BER	Mounting	Operating Temperature (°C)
LCT12P418533001	<i>LightCONEX</i> LC 12TX Transmitter	12	12.5	n.a.	E ⁻¹²	RoHS LGA	-40 to 85
LCR12P418530301	<i>LightCONEX</i> LC 12RX Receiver	12	12.5	-12	E ⁻¹²	RoHS LGA	-40 to 85
LCX04P418532301	<i>LightCONEX</i> LC 4TRX Transceiver	4+4	12.5	-12	E ⁻¹²	RoHS LGA	-40 to 85
LCX12P418532301	<i>LightCONEX</i> LC 12TRX Transceiver	12+12	12.5	-12	E ⁻¹²	RoHS LGA	-40 to 85

ACCESSORIES

415-00005	<i>LightCONEX</i> LC Amphenol adapter kit
415-00004	<i>LightCONEX</i> LC Amphenol VITA 66.5 backplane connector kit

THE *Light* on Board® Company

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