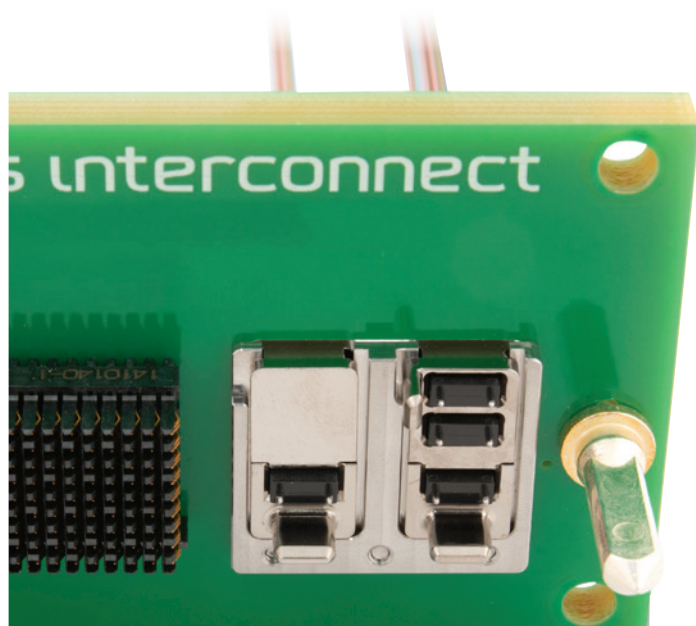


VITA 66.5-compliant optical backplane connectors

For OpenVPX systems



The *LightCONEX*[®] series of optical backplane module connectors for VPX systems is Smiths Interconnects' answer to the stringent SWaP requirements of today's defense and industrial applications in which fiber optics are replacing high bandwidth copper interconnects.

Smiths Interconnect backplane optical connectors with Reflex Photonics technology have been developed to be compliant with the forthcoming VITA 66.5 standard and in alignment with the SOSA™ technical standard.

The inserts are available in VITA 66.5 Styles A, C (with one MT ferrule that mates to an active plug-in transceiver), and D, which has three MT ferrules. Style D offers additional backplane bandwidth port density by including two passive feedthrough optical connectors for midboard-mounted *LightABLE*[™] transceivers.

A backplane insert can be used in a half-width aperture (VITA 67.3 Module Type D or F) or in combinations of two or three inserts for Module Types C and E, respectively. Backplane connector shells attach the inserts to the backplane for any of the defined module apertures. Optical cables easily assemble into the backplane inserts, and include an integrated spring to ensure proper MT-to-MT mating.

VPX optical interconnect designed to meet the defense, commercial aerospace, and industrial market requirements.

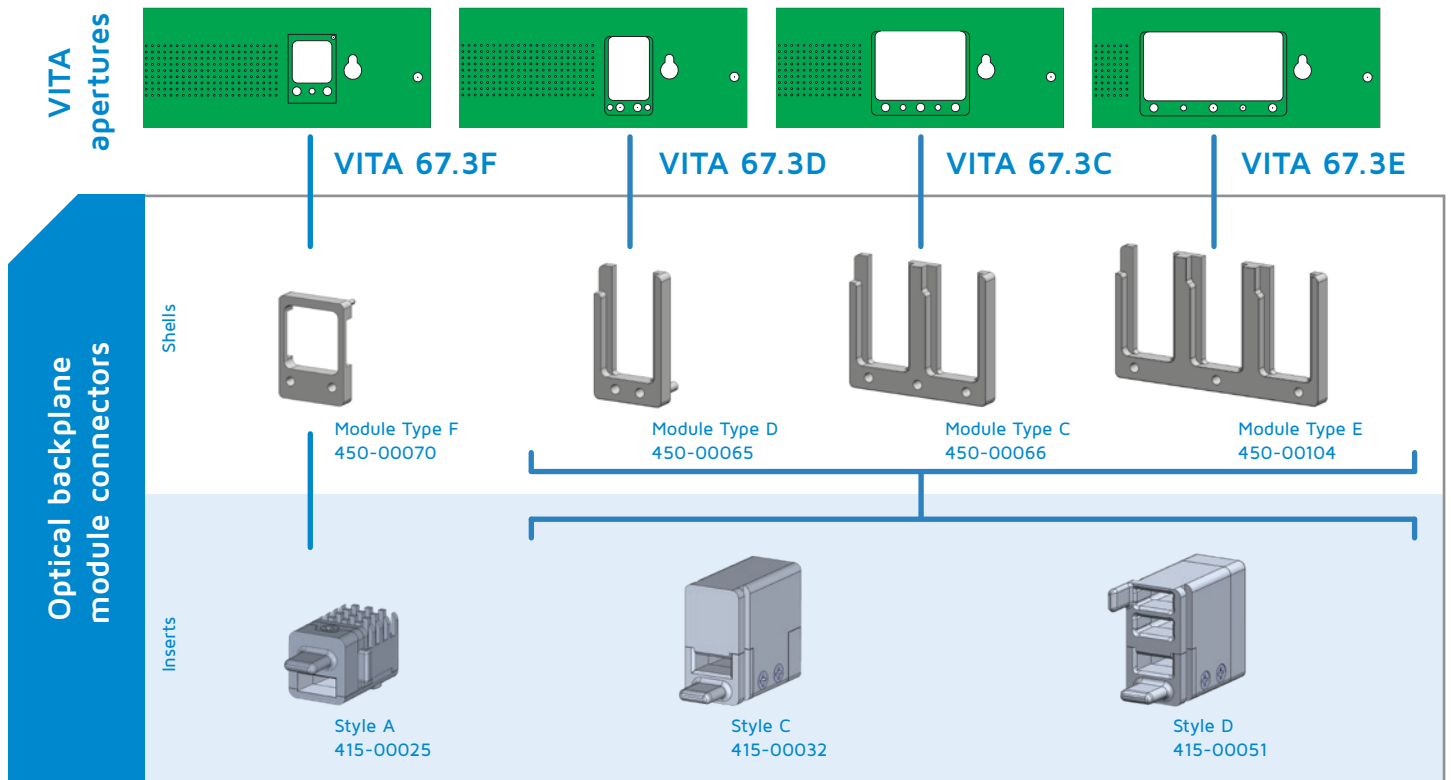
Key advantages

- Increases volumetric density of 3U and 6U high-speed switch and payload VPX boards by integrating optical transceiver into plug-in connector.
- Intermateability with VITA 66.5-defined plug-in modules enables multiple sources and drives faster design cycles.
- Enables ultra-high port bandwidth density of up to 720 Gbps full-duplex in a half-width slot.

Applications

- VPX single board computing
- C4ISR embedded systems
- AESA radars
- High-throughput Ethernet switches

SOSA-aligned optical backplane connectors product line



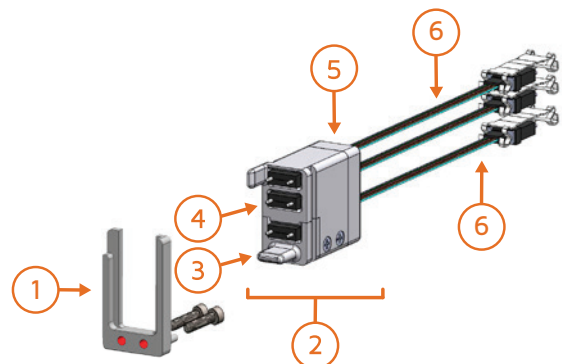
Optical backplane module connector features

The *LightCONEX*® optical backplane module connector consists of a connector shell and insert. The shell is designed to provide float for the insert in both the X- and Y-directions to enable alignment of the MT ferrule mating interfaces. The design complies with the ANSI/VITA 66.4 mating requirements with the MT ferrule displacement occurring within the backplane connector.

- Tab guiding feature provides coarse alignment
- Spring-loaded MT ferrule (12-channel or 24-channel)
- Compatible with 12-channel or 24-channel OM3 or OM4 fiber ribbon cable

The main components of the backplane module connector are:

1. Connector shells for VITA 67.3 Module Types C, D, and F.
2. Connector inserts available in VITA 66.5 Styles A, C, and D. The main components of the insert are:
 3. Tab primary guiding feature
 4. MT ferrule(s) with alignment pins
 5. Removable fiber back-clamp
6. Optical cable assembly with spring (several cable options are available).



LightCONEX backplane module connector. Style D shown here. (The Style D connector includes a secondary guiding feature).

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