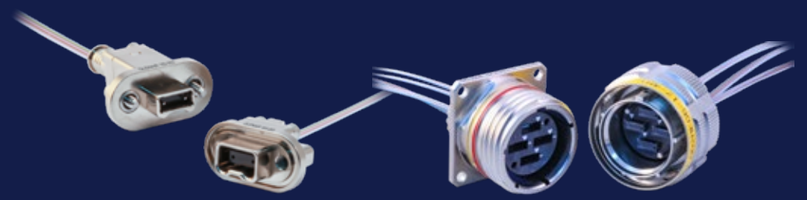
Ruggedized Photonics for Free Space Optical and Digital Datalinks

For reduced weight and increased bandwidth in satellite applications—plus complete electrical isolation and immunity from RF interference

- Selected components subjected to Gamma, proton, and heavy ion radiation testing
- Data transmission rates up to 10 – 25 Gbps per channel
- Zero EMI / ground loop susceptibility
- Harsh-environment: high temperature, high vibration and shock tolerant

HIGH-DENSITY, RUGGEDIZED MULTI-CHANNEL MT FIBER OPTIC CONNECTORS AND CABLE ASSEMBLIES

- Ruggedized connectors / cables with MT optical ferrules
- SuperNine™ MIL-DTL-38999; 1, 2, 3 or 4 MT ferrules
- Series 79 Rectangular and Micro-D Subminiature packaging
- -40°C to +85°C operating temperature range



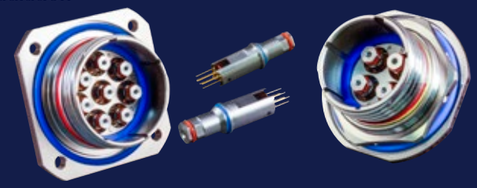
Radiation-tolerant and other aerospace photonics

PCB-MOUNTED RUGGEDIZED PHOTONIC TRANSCEIVERS

- 50 Mbps to 5 Gbps: SpaceFiber, sRIO, GB Ethernet, and FiberChannel
- -40°C to +85°C; Gamma, proton, and heavy ion radiation

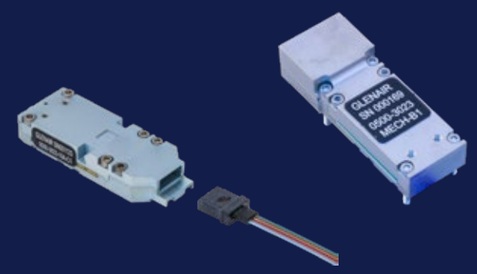
SIZE #8 OPTO-ELECTRONIC CONTACTS / CONNECTORS

- Fiber-optic transmitter or receiver in a size #8 contact
- 50 Mbps to 5 Gbps
- Supports balanced CML protocols: SpaceFibre, sRIO, GB Ethernet, and Fiber Channel
- -40°C to +85°C; Gamma, proton, and heavy ion radiation

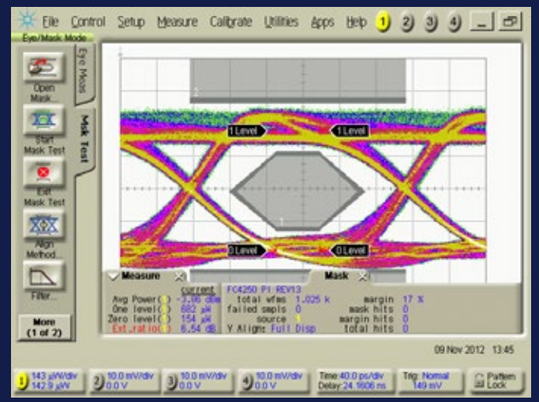


PARALLEL OPTICAL 28GBPS PCB-MOUNT PHOTONIC TRANSCEIVER

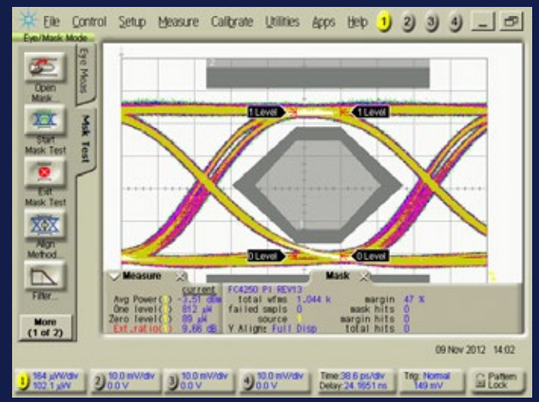
- Compact, low-profile package: 7.6 mm × 14 mm × 29.7 mm
- Secure PCB screw-mounting ensures excellent shock and vibration performance
- -40°C to +100°C operating case temperature
- Configurable fiber packaging options: MPO/MTP®, pigtail, MT ferrule
- Class 1M laser output power for higher link margin
- Lensed array for 3dB link improvement



FILTERED EYE DIAGRAM TEST RESULTS



-40°C



+90°C

Performance of Glenair Size #8 optoelectronic contact filtered eye diagrams at 4.25Gbps demonstrates suitability of the technology for high throughput, high-bandwidth demand satellite applications including remote sensing and earth observation (climate, vegetation, forest biomass, aridity, ice caps, wind speeds, sea levels, magnetics), communication, quantum key, telecoms, and worldwide expansion of internet coverage.