



DataStar Photonics and Optoelectronics: ruggedized for land, sea, air, and space applications



DataStar Photonics are optimized for reduced weight and increased bandwidth in ruggedized land, sea, air, and space applications. Low-profile Tx and Rx designs facilitate compact board layouts. Parallel optic Xcvrs boost datarate performance.

- Selected components subjected to Gamma, proton, and heavy ion radiation testing
- Data transmission rates up to 10 28Gbps per channel
- Zero EMI / ground loop susceptibility
- Harsh-environment: high temperature, high vibration and shock tolerant
- Plug-and-play MT F/O interface

MT FIBER OPTIC CONNECTORS AND CABLE ASSEMBLIES FOR USE WITH GLENAIR DATASTAR PHOTONICS

- 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



TEMPERATURE / SHOCK RESISTANT

DataStar Parallel Optic Transceivers, DWDM Transceivers, Tx/Rx Connectors and Contacts

Harsh environmental, mission-critical performance

PCB-MOUNTED RUGGEDIZED PHOTONIC TRANSCEIVERS / DWDM TRANSCEIVER MODULES

- 50 Mbps to 5 Gbps: SpaceFiber, sRIO, Gb Ethernet, and FibreChannel
- -40°C to +85°C; Gamma, proton, and heavy ion radiation
- 300-400 mA at 3.3V over temperature
- Shock-resistant Samtec electrical connector and four-point mounting





SIZE #8 OPTO-ELECTRONIC Tx-Rx CONTACTS AND 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



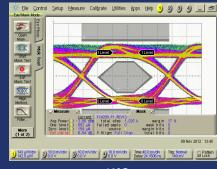
PARALLEL OPTICAL 28GBPS PCB-MOUNT PHOTONIC TRANSCEIVER

- 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
- Aerospace-grade and radiation-tolerant grade options



FILTERED EYE DIAGRAM TEST RESULTS

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.



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General Machine Model

Machine

Model

Machine

Model

Machine

Model

Mode

-40°C +90°C

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